



Archaeological Services
University of Durham

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

Excavation at East Bearford (TEB02) Data Structure Report

on behalf of

**Historic Scotland
Dickinson College
University of Durham**

ASUD Report 966
March 2003

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1. Summary

The project

- 1.1 This report presents the results of an excavation of a cropmark enclosure at East Bearford, East Lothian 2002. The excavation formed part of Phase 2 of the wider Traprain Law Environs Project.
- 1.2 The aims of the excavation 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 Excavation of two trenches over a rectilinear enclosure took place; Trench A was located across the northern side of the enclosure ditch and continued to the north, and Trench B was located outside the north-east corner of the enclosure.
- 1.5 A gully containing Iron Age pottery was discovered, as well as a number of undated features believed by association to be of similar date. The main enclosure ditch was identified, 2m deep and c.4m wide. Post-medieval land drains and plough furrows were also excavated. Environmental samples were collected from appropriate deposits.

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.

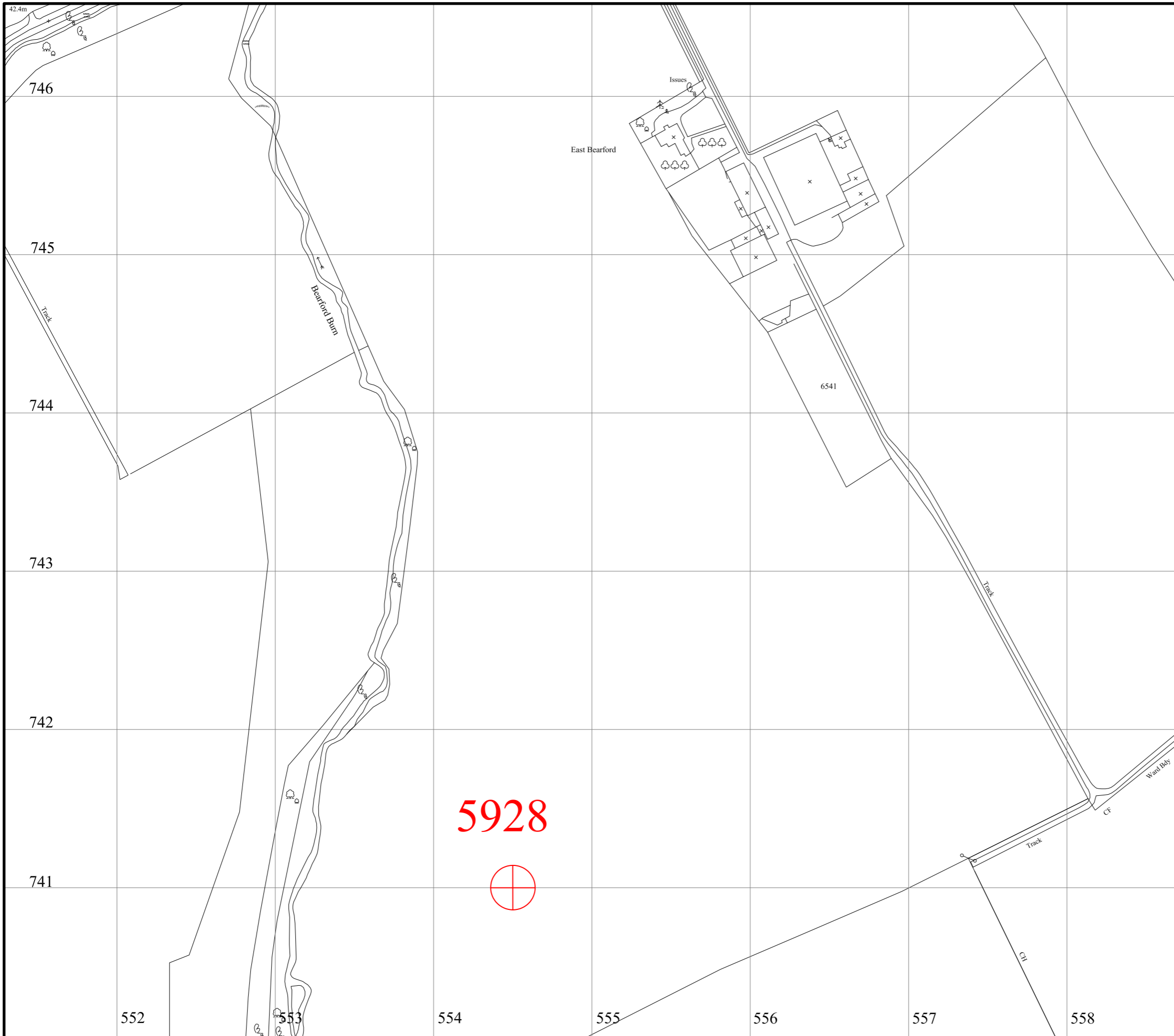
2. Project background

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 (including East Bearford) and 13 curvilinear enclosures, as well as 2 ring-ditches and 1 possible building cropmark (Hale *et al.* 2001 & in press). Phase 2 of the TLEP, a programme of excavation of a sample of these sites, began in 2002. The excavation at East Bearford formed a part of this phase.

Site description and status

- 2.2 The enclosure at East Bearford, 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 rectilinear enclosure type in this area.
- 2.3 The site is located at NGR: NT 5545 7410 and comprises a rectilinear cropmark enclosure of *c.*0.5 ha. The site occupies the top of a terrace at *c.*55m AOD in an arable field, 100m east of Bearford Burn and 500m south-south-west of East Bearford farm. The solid geology at the site is Carboniferous extrusive trachyte, which forms part of the Garleton Hills Volcanic Series. This is overlain by glacial till.
- 2.4 During the last fifty years the site has been recorded on numerous aerial photographs 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 Despite the extrusive trachyte geology of this area, the survey confirmed the presence and location of a very regular, rectilinear enclosure. The magnetic susceptibility contrasts between the materials within the enclosure ditch and the surrounding soils are sufficiently high that a very clear image of the enclosure was produced. In addition to the main enclosure ditch, the geophysical survey also indicated a number of internal and external features, perhaps indicating more than one phase of activity at the site (Figure 3).
- 2.6 The enclosure ditch is evident as a strong positive magnetic anomaly, measuring approximately 75m by 65m, with rounded corners. The anomaly reflects high magnetic susceptibility materials, such as organic-rich sediments, within a ditchfill. The ditch appears to vary in width, being only *c.*2m across on the western side of the enclosure and up to 4m across on the eastern side. A causewayed entrance is clearly visible in the eastern side of the enclosure.
- 2.7 Within the enclosure there is evidence for internal features, represented by both positive and dipolar magnetic anomalies. These anomalies may reflect both cut, soil-filled, features such as pits and gullies, and hearths or



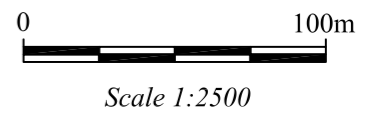
**The Traprain Law Environs
Project Phase 2**


East Bearford excavation

Figure 1

Location of the East Bearford site

On behalf of
**Historic Scotland
Dickinson College
University of Durham**



 site location

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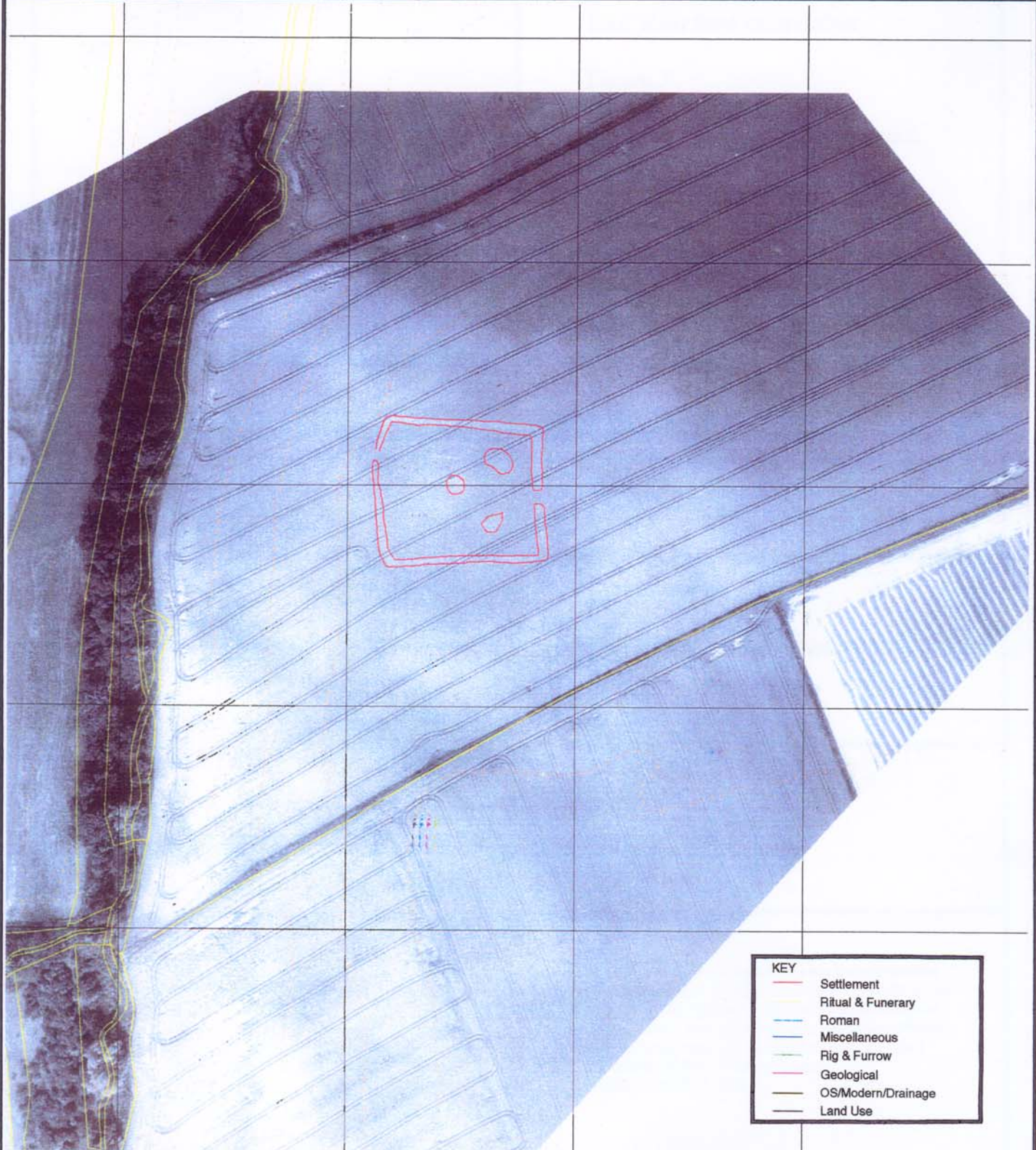
Traprain Law Environs Project Phase 2
East Bearford excavation

Figure 2
Rectified aerial photograph



Computer plot from aerial photographs.
Use only with caution.
Copyright R.C.A.H.M.S.
John Sinclair House
16 Bernard Terrace
Edinburgh EH8 9NX

Plot origin 355300 673800
AP Neg. No. C1867
Mapsheet NT57SE
Site East Bearford
Region Lothian
District Edinburgh
Scale 1:2500
Date 30.5.02
SGS PTO K.H.J. Macleod



KEY	
—	Settlement
—	Ritual & Funerary
—	Roman
—	Miscellaneous
—	Rig & Furrow
—	Geological
—	OS/Modern/Drainage
—	Land Use

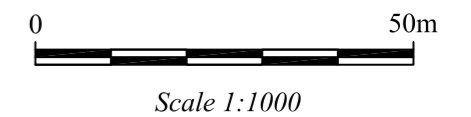
**The Traprain Law Environs
Project Phase 2**

East Bearford excavation

Figure 3

*Location of the evaluation trench
on the geophysical survey
greyscale*

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 trench location

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ferrous/fired materials respectively. A probable roundhouse is situated in the north-eastern corner of the enclosure; other possible roundhouses are located in the southern half of the enclosure.

- 2.8 Additional weak positive magnetic lineations were detected outside the main enclosure, which do not appear on the APs. These anomalies almost certainly reflect the remains of more ditches. The most apparent of these ditches is aligned parallel to, and 20m north of, the northern enclosure ditch, forming a possible annex. Other ditch features are evident on both the southern and eastern sides of the enclosure, including possible structures outside the south-east corner. To the west of the main enclosure the land falls away fairly steeply to Bearford Burn. Without excavation it could not be determined whether the external ditches are contemporary with the main enclosure, or if they represent the remains of earlier or later features. The survey also detected a series of very weak magnetic lineations, aligned broadly east-west. These lineations are interpreted as reflecting a former plough direction.
- 2.9 The site is a Scheduled Ancient Monument (number 5928), and is recorded on the NMRS as number NT 57 SE 016.

Objectives

- 2.10 The specific objectives for this excavation 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

- 2.11 The excavation was conducted in October 2002 and February 2003. This report was completed in March 2003.

Personnel

- 2.12 The excavation was carried out by Catherine Bell, Amanda Brend, Peter Carne, Mark Douglas and David Graham, under the supervision of Andy Platell. This report was prepared by Andy Platell, Duncan Hale and Peter Carne with illustrations by Linda Bosveld and David Graham. The environmental samples were processed by Claire Pickin and analysed by Jacqui Huntley; finds were examined by Pam Lowther and Cath McGill; animal bone was examined by Louisa Gidney.

Acknowledgements

- 2.13 Funding for the excavation was generously provided by Historic Scotland, with help in kind from the University of Durham. We are very grateful to the farmer, Mr Hugh Elder, 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.

Archive

- 2.14 The site code is TEB02, for Traprain East Bearford 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 excavation

Standards

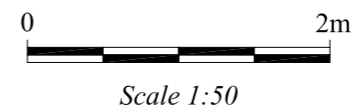
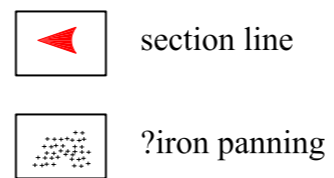
- 3.1 The excavation and reporting has been conducted in accordance with the Institute of Field Archaeologists *Standard and guidance for archaeological excavation* (revised 2001) and in accordance with Scheduled Monument Consent granted by Historic Scotland (dated 18th April 2002) under the Ancient Monuments and Archaeological Areas Act 1979.

Excavation methods and results

- 3.2 Two trenches were excavated to the base of the ploughsoil, using a mechanical excavator fitted with a toothless, ditching blade under strict archaeological supervision.
- 3.3 Trench A, which measured *c.*3.8m x 3m, sampled the northern side of the enclosure ditch and the area to the north. Trench B measured 6m by 4.5m and sampled a magnetically quiet area to the north-east of the enclosure. No attempt was made to investigate the ground inside the enclosure on this small-scale excavation.
- 3.4 All trench sections were cleaned and feature sections drawn at 1:10. Environmental samples were collected from suitable contexts. The trench plans were drawn at 1:20 and tied-in to known, mapped Ordnance Survey points using a Wild T1000 total station survey instrument and SDR33 datalogger.
- 3.5 The excavation was recorded using the ASUD Iconic Formation Process Recording System. Photography was by bracketed colour transparency and monochrome 35mm stills, which were processed by our in-house photographer, Mr T. Woods.
- 3.6 On completion of the excavations, Trenches A and B were backfilled and re-instated as agricultural land.

4. Excavated features

- 4.1 The natural subsoil across both trenches was an orange-brown silty sand (10) of glacial origin; over this was 0.3m of ploughsoil (01). All excavated features lay beneath the ploughsoil and were cut into the natural subsoil (Figures 4, 5 & 6).



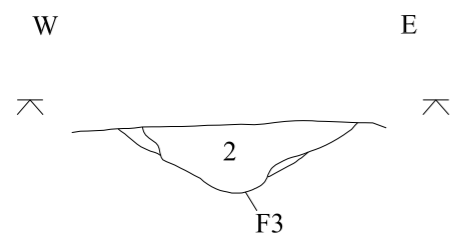
**The Traprain Law Environs
 Project Phase 2**

East Bearford excavation

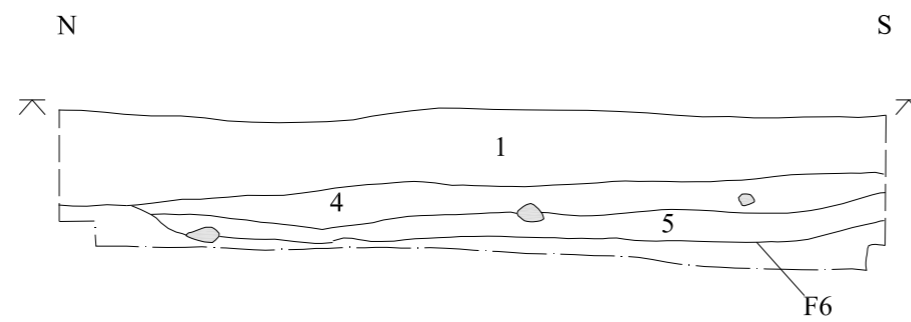
Figure 5

Trench A Sections 1, 2, 3, 4, 5, 6 and 7

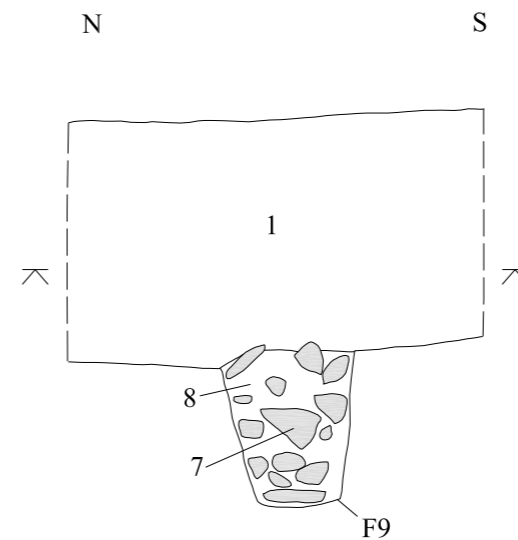
Section 1



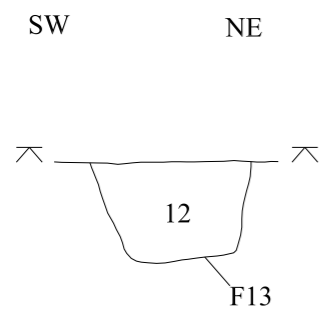
Section 2



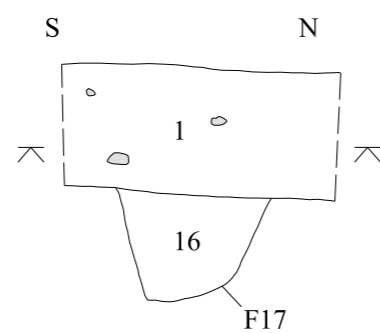
Section 3



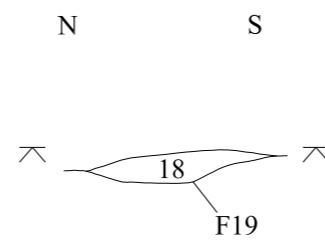
Section 4



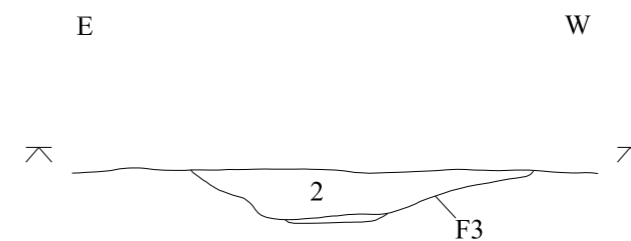
Section 5



Section 6



Section 7

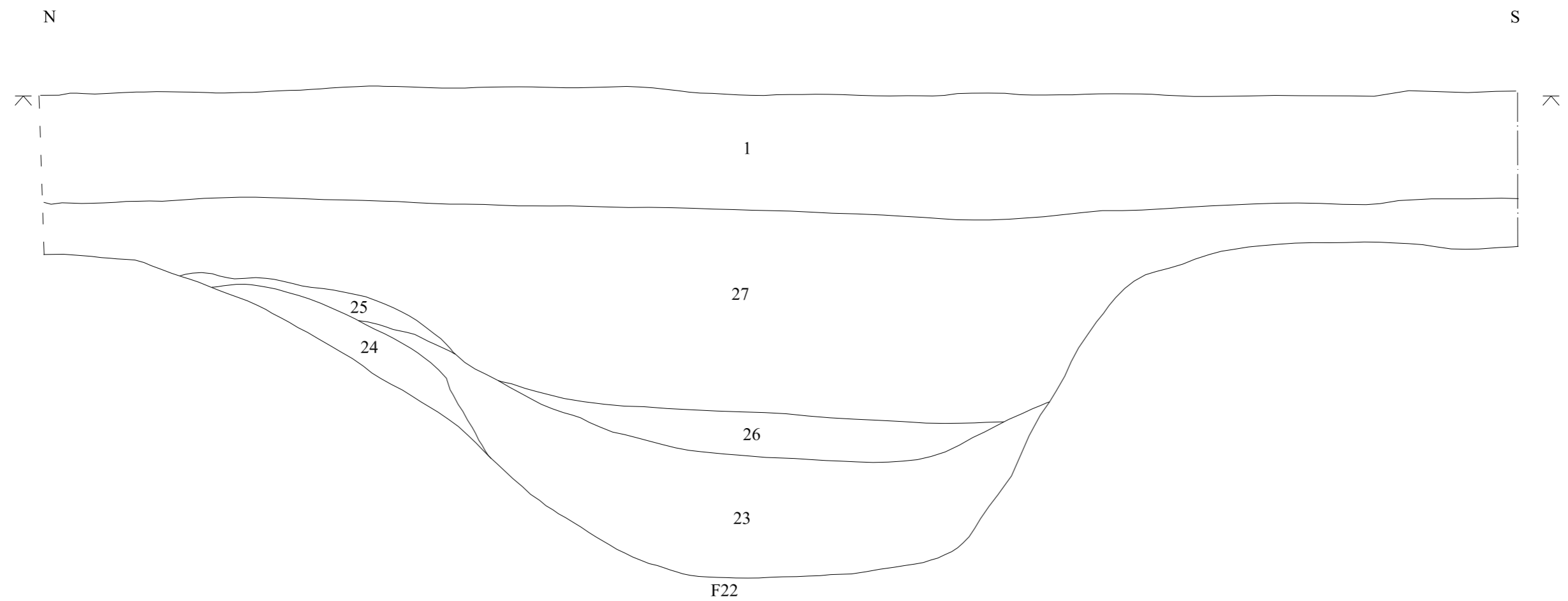


Scale 1:20



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Section 10



Trench A

- 4.2 The main ditch of the rectilinear enclosure [F22] was uncovered at the southern end of Trench A. The ditch was identified cut into the natural subsoil. The ditch cut had a total depth of *c.*2m and was *c.*4m wide, with a sharply sloping southern edge (interior), a more gently sloping edge on the northern side (exterior), and a flattish bottom. A deposit of yellow-grey silt [24] was present on the northern edge, through which a recut may have been made before the bottom of the ditch became filled with a thick deposit of black organic clay material [23]. Over this material a layer of grey-black silty clay [26] had formed, and a small deposit of yellow natural subsoil [25] had collapsed in from the northern edge. The majority of the ditch was subsequently filled with a stoney deposit of grey-brown gritty clay [27] which is likely to represent bank material.
- 4.3 At the southern end of Trench A a gully (F03) traversed the trench on a north-east/south-west alignment. This gully probably cut through the ditch although this relationship was unconfirmed. The gully had a terminal at its northern end and varied in profile along its length, being narrower and deeper towards the north and shallower and wider towards the south. Its fill was a dark brown silty sand containing occasional charcoal flecks (02). A large rim sherd of Iron Age tradition pottery was recovered from this deposit.
- 4.4 Feature F13, to the north-west of gully F03, was only partially exposed against the baulk and its full extent was not determined. It could have been a pit or alternatively the butt end of a continuation to gully F03. It was 0.4m wide and 0.25m deep and filled with a dark brown silty sand (12). In the base was a possible small posthole (F15), 0.18m in diameter and 0.23m deep, filled with a slightly darker grey silt (14).
- 4.5 A circular lens of charcoal (18), possibly the remains of a fire, lay in a shallow, 70mm deep, hollow (F19) to the east of feature F13. It was collected for environmental analysis.
- 4.6 Towards the northern end of the trench was a small ditch or gully (F17) 0.4m wide and 0.3m deep, running in an east-west direction. It was filled by mid-grey/brown silty sand (16). The concentration of stones in this fill increased towards the east, although too little was exposed to determine whether this was significant or not. No dateable artefacts were recovered from the fill; from its alignment, the ditch could either be associated with the Iron Age enclosure or with the later plough and drainage features discussed below.
- 4.7 Northwards from this ditch, a shallow (less than 0.1m deep) but distinct cut (F06) crossed the trench on the same orientation. It was filled with a grey-brown silty sand (05), partially overlain by redeposited natural (04) and is likely to be a plough furrow of recent date.
- 4.8 A French drain (F09) traversed east-west across the central part of the trench. It was filled with stones (07), which were covered with silt (08). A sherd of post-medieval pottery was recovered from this silt, confirming the late date of the feature. A second drain (F21), this time of the fired clay type, traversed the

trench in a south-west/north-east direction, 8m to the north, and was also identified in Trench B. This drain, and an area of iron-panning to its immediate south, broadly correspond to the location of a geophysical anomaly previously interpreted as a possible annex ditch. These were the only land drains found during the excavation.

Trench B

- 4.9 Apart from the field drain, only one feature was found in Trench B. This comprised a very mixed deposit of stone, silt and sand, all containing much iron panning (11). On the surface this was grave-shaped, measuring 1.5m by 1.2m. However, on excavation this proved to be a natural feature, extending under the more typical subsoil at depth. It is assumed to be glacial in origin.

5. The finds

Pottery

- 5.1 A large rim sherd was recovered from context 02, the fill of ditch F03. The sherd is from a coarse, thick-walled proto-historic vessel and has a carbonized residue/sooting on its exterior face. The sherd is of Iron Age tradition Cool Type II, and is currently with Ms C McGill.
- 5.2 A brown-glazed base sherd was recovered from context 08, the silt component of a land drain (F09) fill. The sherd is post-medieval/modern in date.

Animal bone

- 5.3 Fragments of a single animal bone were recovered, the remains of a large mammal longbone in poor condition. Since this came from a late context (08) no further work is recommended on this bone. The general paucity of bones found, and the poor condition of the recovered bone, in spite of its late date, suggests that local soil conditions are not conducive to survival of such material.

Flint

- 5.4 A gunflint and a small flint chip were recovered from the surface of the field during settingout of the trench.

6. The environmental evidence

The samples

- 6.1 Seven bulk sediment samples were recovered from four contexts at the site:
- 02 – fill of ditch F03 (2 samples)
 - 12 – fill of gully F13 (2 samples)
 - 16 – fill of gully F17 (2 samples)
 - 18 – fill of hollow F19 (1 sample)

Further bulk sediment samples were recovered from the main enclosure ditch, F22 (contexts 23, 24 & 27). Processing and assessment of these samples is ongoing.

Objectives

- 6.2 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

- 6.3 5,000ml sub-samples from contexts 02, 12, 16 and 18 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 x40 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

- 6.4 **Context 02:** Very small flot and small fragments of mineral-encrusted charcoal and modern seeds. A very few fragments of wood charcoal, some of which might be suitable for radiocarbon. 1 fragment of cereal grain - not picked out. No further action.
- 6.5 **Context 12:** Small flot of flaky, crazed and mineral-encrusted charcoal, mineral, coal and lots of modern seeds. No charred contemporary seeds and doubtful if anything would be suitable for radiocarbon dating.
- 6.6 **Context 16:** Tiny flot - mineral, coal, minimal charcoal. No further action.
- 6.7 **Context 18:** Whole bag processed. Small flot of organic debris with a little charcoal and coal, occasional bone fragments, shell fragments and 1 fish scale. Modern seeds and earthworm egg cases. No further action.

Discussion

- 6.8 Despite context types being ditch and gully fills, often rich in plant remains, other than one indeterminate cereal grain the sub-samples were barren of seeds. The charcoal that was present was tiny and flaky suggesting oak or ash as the most likely species. The former would almost certainly be unsuitable for dating unless it could be confidently identified as being at the bark edge. There may be diffuse porous, shorter-lived species present but nothing suitable for standard dating methods in the material processed. Context 18 contained a variety of other biological material - bone and fish scale – thus might indicate either an area of disposal of domestic waste. However, this could simply be midden spreading.

Recommendations

- 6.9 No further action is required for any of these samples. If further excavation was undertaken it would, nonetheless, be worth continuing the broad sampling strategy adopted for this evaluation. Processing 5 litres is cost-effective and would quickly show any rich samples which would contribute to discussions of the economic practices on this site.

7. Discussion and conclusions

- 7.1 The excavation was carried out to determine the suitability and potential of the site for larger scale excavation at a later date as part of the Traprain Law Environs Project as well as for cultural resource management purposes.
- 7.2 The possible outer ditch identified during the geophysics was not identified during the excavation. This anomaly broadly corresponds to iron-panning and an adjacent land drain.
- 7.3 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.

8. 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.

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	Fill of gully F03	•					
F03	Ditch cut						
04	Redeposited subsoil in furrow F06						
05	Silty sand fill of furrow F06						
F06	Plough furrow						
07	Stone fill of drain F09						
08	Silt fill of drain F09	•	•				
F09	Cut for stone-filled land drain						
10	Natural subsoil						
11	Glacial subsoil deposit						
12	Pit/gully fill of F13						
F13	Pit/gully cut						
14	Posthole fill						
F15	Posthole cut						
16	Gully fill						
F17	Gully cut						
18	Charcoal fill of F19						
F19	Hollow cut						
20	Fill of land drain cut F21						
F21	Cut for land drain						
F22	Cut for enclosure ditch						
23	Lower fill of ditch F22						
24	Silt in side of ditch F22						
25	Collapsed side of ditch F22						
26	Fill of ditch F22						
27	Upper fill of Ditch F23						

Appendix 2: Finds register

Context	Small find no.	Material	Assessment
02	1	Pottery; large rim sherd, coarse, thick-walled proto-historic vessel with carbonised residue on exterior.	Iron Age Tradition, Cool Type II. To pot specialist, Ms C McGill. ?analysis of residue Do not wash yet
08	2	Animal bone	Late context - nfa
08	3	Pottery; brown-glazed base sherd.	Post-medieval/modern - nfa
u/s	-	Flint, plus chip	Gunflint and undiagnostic chip - nfa

Appendix 3: Sample register

Context	No. of bags
02	2
12	2
16	2
18	1
23	4
24	1
27	2

Appendix 4: Plans and sections register

No	Scale	Description
1	1:10	Ditch section F3
2	1:10	Section F6
3	1:10	Section 7/8/F9
4	1:10	Gully and Post-hole Section F13
5	1:10	Gully F17
6	1:10	18/F19 Section
7	1:10	Section F3
8	1:20	Plan of Trench A
9	1:20	Plan of Trench A continued
10	1:10	Section through ditch F22

Appendix 5: Photographic register

Colour slide: film 1

Frame no.	Context/plan/section	Looking N S E W
4-6	General area shot - Trench A	N
7-9	General area shot - Trench A	S
10-12	General area shot - Trench B	N
13-15	General area shot - Trench B	S
16-18	Section through 2 and 3	NW
19-21	Section through possible ditch	ESE
22-24	Drain/Ditch	ESE
25-26	Drain/Ditch	ESE
27-29	Possible grave, Trench B 11	N
30-32	French drain section F9	S
33-35	Post-ex 11	N

Colour slide: film 2

Frame no.	Context/plan/section	Looking N S E W
1-3	Post-ex 11	S
4-6	Post-hole and gully F13; F15	NW
7-9	Gully F17	W
10-12	F13; F15 post-ex	NW
13-15	F19/18	E
16-18	F3 section	SE
19-21	F3 post-ex	NW
22-24	F17 post-ex	E
25-27	F17 post-ex	W

Colour slide: film 3

Frame no.	Context/plan/section	Looking N S E W
1-6	Ditch F22 section (west side)	E

B/W: film 1

Frame no.	Context/plan/section5	Looking N S E W
5-7	General area shot – Trench A	N
8-10	General area shot – Trench A	S
11-13	General area shot – Trench B	N
14-16	General area shot – Trench B	S
17-19	Section F3/2	NW
20-22	Section of possible ditch	ESE
23-25	Drain/ditch	ESE
26-27	Drain/ditch	ESE
28-30	Possible grave 11	N
31-33	French drain section F9	S
34-36	Post-ex 11	N

B/W: film 2

Frame no.	Context/plan/section5	Looking N S E W
1-3	11 post-ex	S
4-6	Gully and post-hole F13;F15	NW
7-9	Gully F17	W
10-12	F13;F15 post-ex	NW
13-15	F19/18 Section	E
16-18	F3 post-ex	SE
19-21	F3 post-ex	NW
22-24	F17 post-ex	E
25-27	F17 post-ex	W

B/W: film 3

Frame no.	Context/plan/section	Looking N S E W
1-6	Ditch F22 section (west side)	E