Highland Archaeology Services Ltd

Bringing the Past and Future Together

Arrie, North Kessock

Archaeological Trial Trenching

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Report No.	HAS141106
Site Code	HAS_ANK14
Client	Graeme Stewart
Planning Ref	14/02009/FUL
OS Grid Ref	NH 6797 5133
Date / revision	14/01/2015
Author	Peter Higgins

Summary

Highland Archaeology Services Ltd, acting on behalf of Graeme Stewart commissioned Peter Higgins of Archaeology North Ltd to undertake archaeological trial trenching at Arrie, near North Kessock, Inverness-shire prior to construction of a new dwelling.

Two land drains and eight undated post holes were recorded within 45m of a cairn on the southern edge of the development area. A watching brief is recommended on future ground works.

Contents

Illustrations

Cover photograph T8, SE end, showing F803, F805, F807 (Photograph 19)

Acknowledgements and Copyright

The fieldwork was undertaken by Pete Higgins. The report was written by Pete Higgins and edited and formatted by John Wood. Background mapping has been reproduced by permission of the Ordnance Survey under Licence 100043217. Historic maps are courtesy of the National Library of Scotland.

Location

The development is located at Arrie, south of Munlochy Bay, Highland, centred at approximate grid reference NH 6797 5133.

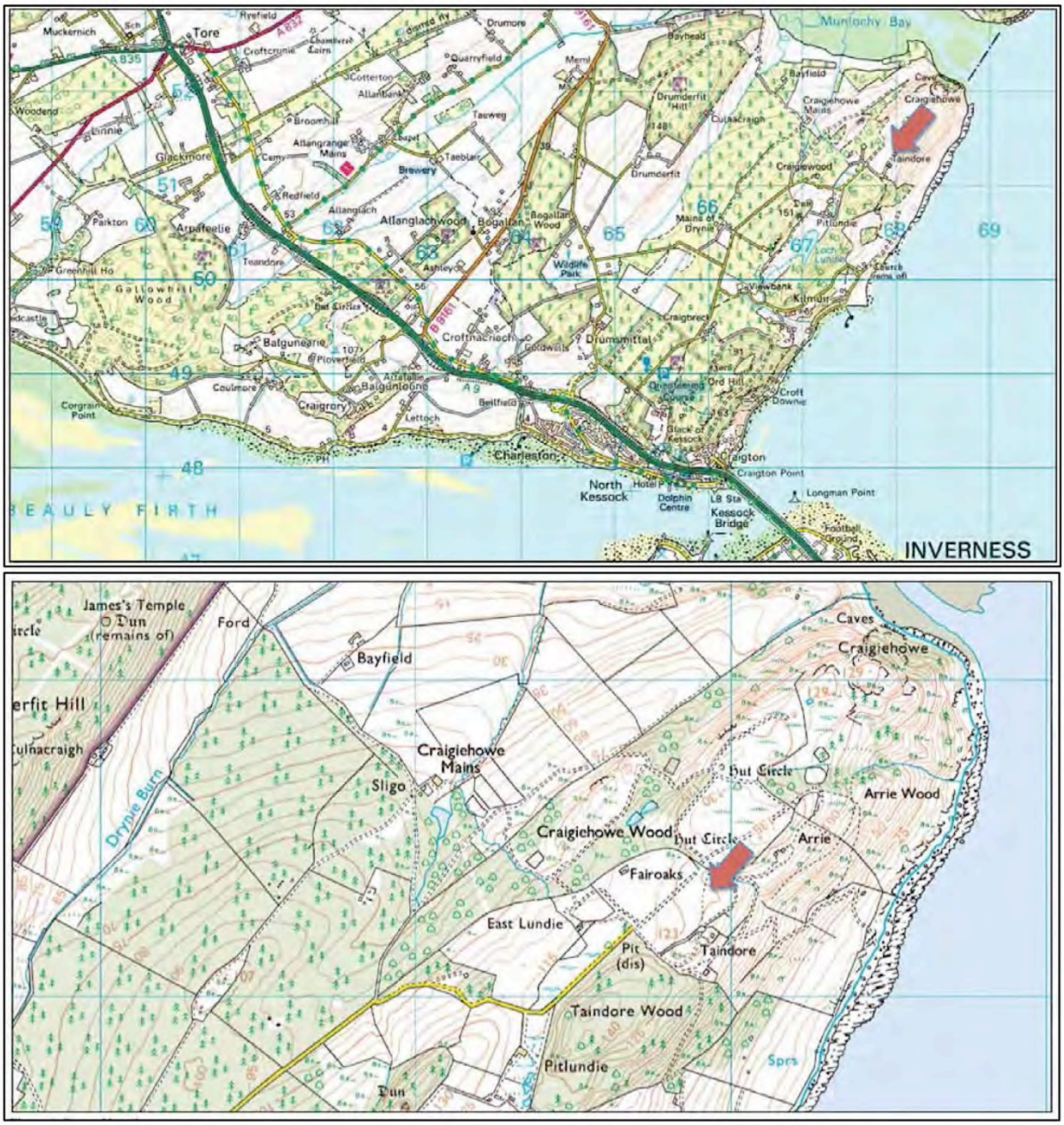

Figure 1 Project location (general)
From OS mapping. Reproduced under licence. Not to original scale.

Figure 2: Proposed Site Location (as initially supplied by client)

Aims and Objectives

The objectives of the work were to:

- Examine and establish the nature and extent of any features of archaeological significance that would be affected by the proposed development, and to record these to professional standards, in line with current legislation and policy.

- Minimise any possible delay or cost to the development by anticipating archaeological requirements as far as possible, timetabling and integrating archaeological recording work with the project, and dealing with any issues arising quickly and efficiently.

Background and Desk-based Assessment

The site lies on sloping ground of a rise along the south-eastern coast of the Black Isle, overlooking the Moray Firth. In the north of the site a sand school has been made by levelling some 1800sqm. The southern, western and part of the northern sides are cut into the slope, while the north-eastern corner is slightly built up. Local information suggests spoil was taken off site. Most of the remainder of the site is a permanent ley, with mature scrub and trees along the borders.

Archaeological fieldwork was carried out in response to a planning condition imposed by the Highland Council at the request of their Historic Environment Team. This required a desk-based assessment[1] and trial trenching to identify and record any archaeological features or finds discovered during site clearance.

The desk-based assessment identified eight cairns in the vicinity of the development, including one within the development area. Some of these are described as being most likely field clearance cairns, although this is not confirmed and some at least may well be burial cairns. The fact that some of these cairns appear on the 1st and later editions of the Ordnance Survey (OS) 1:2500 and 1:10560 scale mapping as being small areas of scrub within the fields indicates that they may be relatively undisturbed, as does the folklore noted in the Old Statistical Account that the cairns around Drumderfit are not disturbed by superstitious locals.

There are also two scheduled sites nearby; a hut circle and an enclosure, although they are both labelled as hut circles on modern maps. These features certainly indicate prehistoric activity within the wider vicinity. Three farmsteads are also recorded on the HER which highlight the longstanding agricultural use of the area. This is further emphasised by the historic OS maps, which show these buildings, their fields and also a pair of wells at the north eastern end of the proposed development site.'

An initial site walkover survey by Lynne McKeggie recorded two features: a pit resembling a golf bunker (F1); and F2, the cairn within the development area. It was suggested on the basis of form and size that this might be a burial cairn.

As a result of the desk-based assessment and walkover survey, a 'no-build' zone was delineated to protect F2 from disturbance.

British Geological Survey mapping records no superficial deposits, but the bedrock is shown as Kilmuir Congolmerate Formation.

[1] McKeggie, L and Wood, J, 2014, *Arrie, N Kessock: Proposed Archaeological Fieldwork: Project design, Risk Assessment and Method Statement* Highland Archaeology Services Report No. HAS141106, Cromarty

Trial trenching fieldwork took place on 8, 9 and 10 December 2014, in somewhat adverse weather conditions. Due to excellent co-operation from the client, the impact of the weather was mitigated, and confidence in the results is high.

Legislation and Policy

The common principles underlying international conventions, national legislation and local authority planning policies are that cultural heritage assets should be identified in advance of development and safeguarded where practicable; if disturbance is unavoidable appropriate recording of features and recovery of portable artefacts should take place. These have been set out in international and European Union agreements, and UK and Scottish legislation, as well as national and local planning policies[2].

Professional standards during the present project have been secured by adherence to the *Codes of Conduct and Approved Practice and Standards* of the Institute for Archaeologists and the Highland Council's *Standards for Archaeological Work*.

Methodology

The trial trenching aimed to open a 10% sample of the development area (red line area), estimated in the Project Design as 6456sqm. It became apparent during conversations with the client that some tree-covered areas within the red line would not be disturbed by the development, and it was agreed with Highland Council Archaeologist Andrew Puls, during a site visit, that these areas could be excluded from the development area, reducing the area to be sampled to some 4400sqm. One trench (T5) proposed to be located wholly within the trees was therefore not excavated.

Trenches were opened using a small back-acting machine with a toothless ditching bucket. Trench width varied between 1.4m and 1.2m, rather than the 1.5m anticipated. Some difficulty was experienced in maintaining straight lines with the digger, so some trenches were excavated with a noticeable curve, see plan. The combination of curved trenches and reduced study area made it necessary to adjust the trench positions, resulting in a further trench (T13) being deleted; other trenches were lengthened to compensate both for the loss of this trench and the narrower trench width. Total excavated area amounted to 448sqm, a sample of 10.2%.

All trench bottoms were cleaned by hand, as were sections of potential interest. Spoil was stored beside the trenches.

Contexts were recorded using a pro-forma system, although adverse weather conditions necessitated use of weather-proof notebooks in the field, the context sheets being written up afterwards. Context locations were recorded by a hand held GPS device capable of sub-metre accuracy, supplemented by taped offsets where possible.

[2] A summary of relevant international, EU, UK and Scottish legislation and policies is available from the HAS office on request.

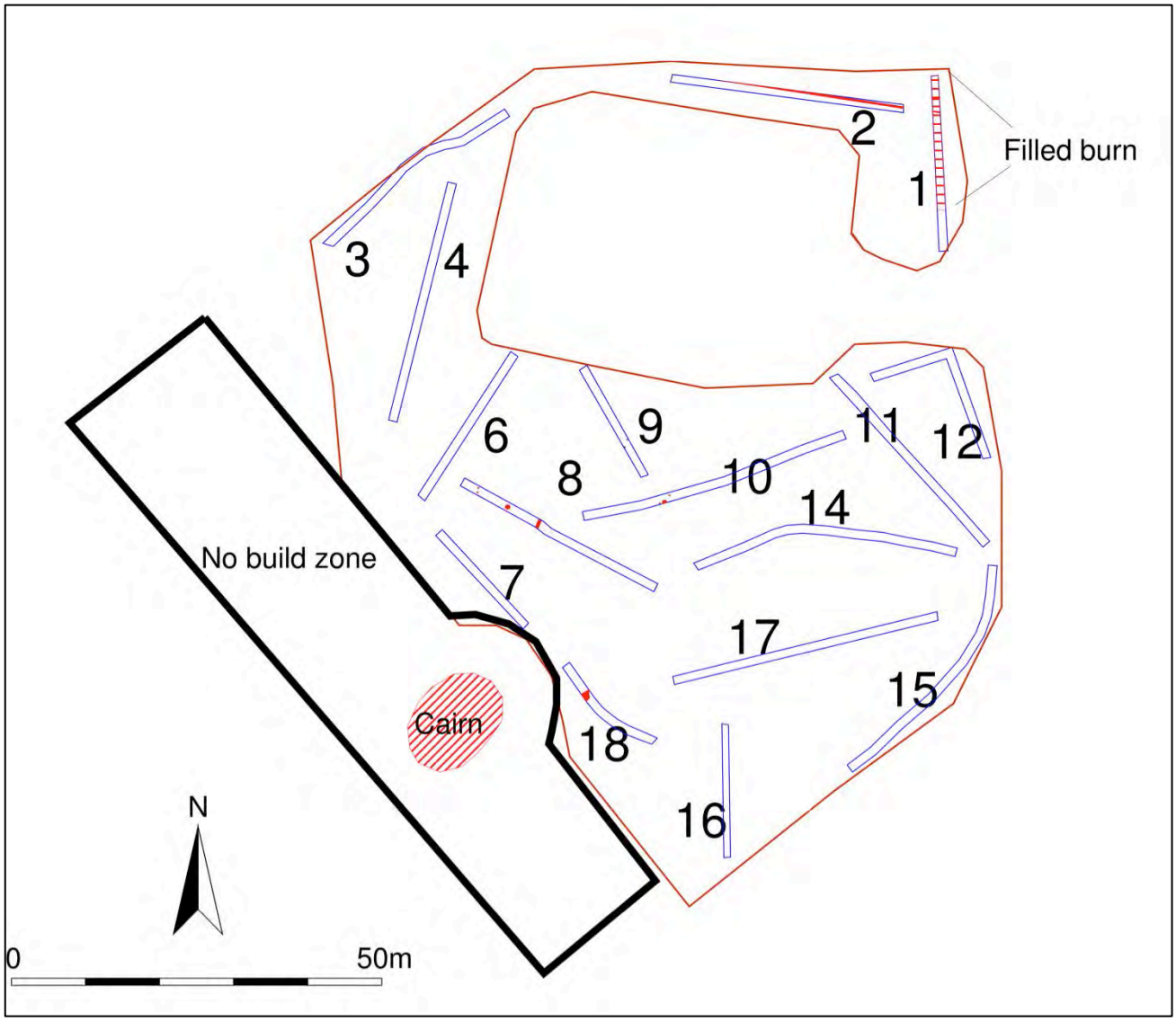

Figure 3 Plan of trenches as dug. Archaeological features in red.

Results

Topsoil. Recorded as (101), (201), (301), (401), (601), (701), (801), (901), (1001), (1101), (1201), (1401), (1501), (1601), (1701), (1801).

The topsoil, laid to grass, varied little across the site, and was a well-mixed plough soil, with little or no sorting even in areas of high vertical water movement. Where it lay above a land drain and a filled burn it showed few signs of recent disturbance. It was above and was partly derived from the glacial deposits. A modern, plastic, drain was found less than 1m N of the land drain in T1.

Subsoil. Recorded only in T3, as (302). This layer sat between the plough soil and the natural deposits and was undisturbed by cultivation. .

Glacial deposits. Recorded as (102), (202), (302), (402), (602), (702), (802), (902), (1002), (1102), (1202), (1402), (1502), (1602), (1702), (1802). This glacial till varied somewhat across the site, being redder in the higher and yellower in the lower reaches.

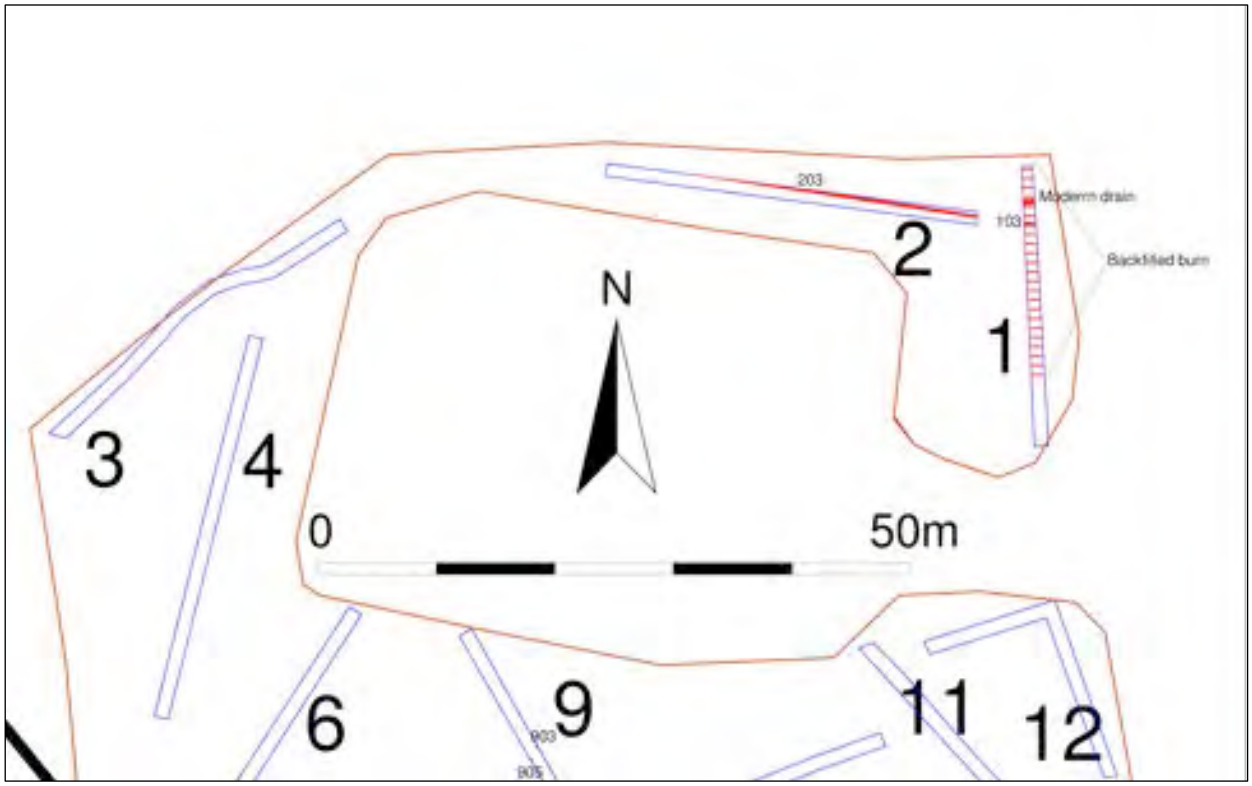

Figure 4 Features in the northern part of the site. Extent of fill of burn is hatched.

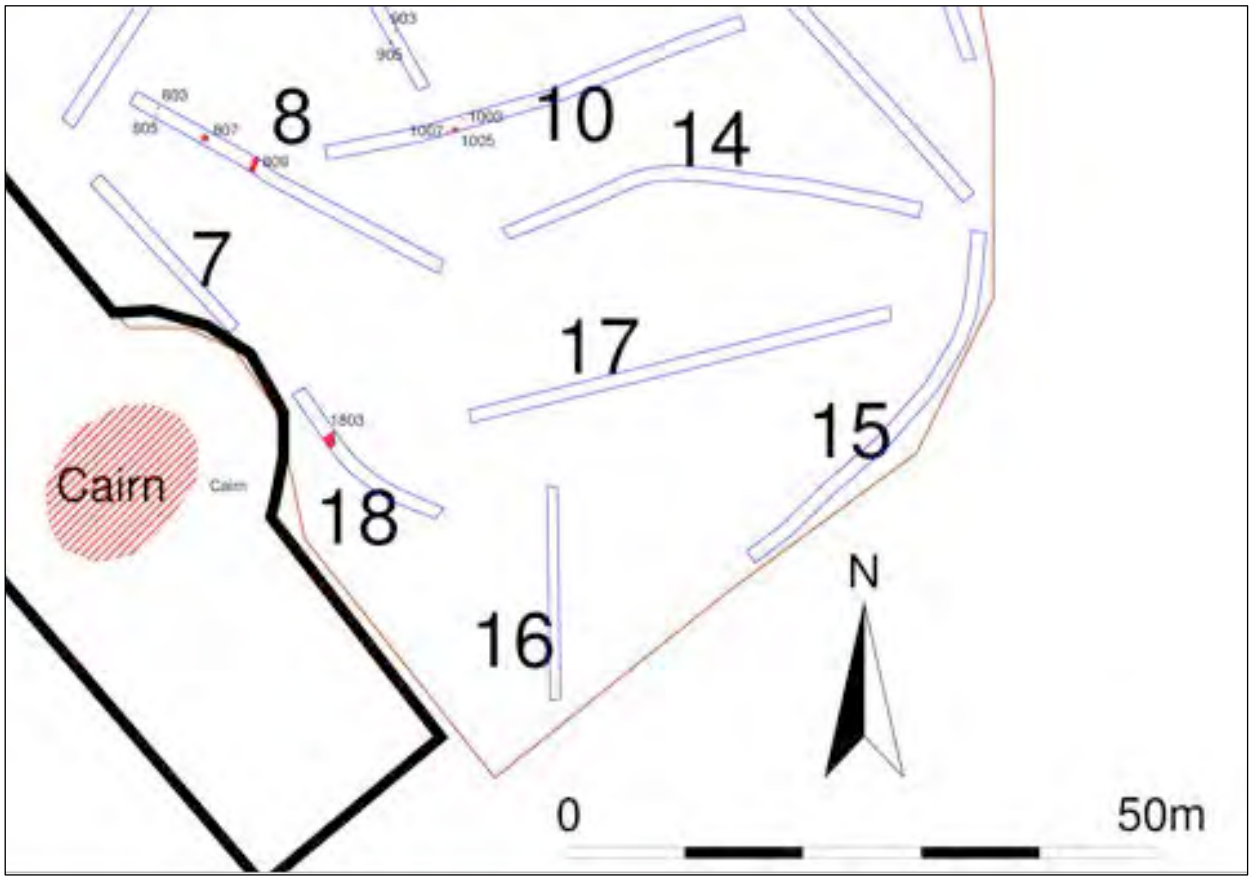

Figure 5 Features in the southern part of the site.

Small post holes. F803, F807, F903, F905, F1003, F1007

In view of their flat or concave bottoms, the lack of compaction of the base of their fills, and their size, these small features have been interpreted as postholes rather than stake holes. They were found in pairs, although given the restrictions of the trenches this may not be significant, and the pairs generally seem to be oriented NW-SE. Two pairs are associated with larger post holes; F803 and F805 with F807; and F1003 and F1007 with F1005. All three pairs run more or less N/S.

Large post holes. F809 and F1005

These two features are larger than the small post holes, and although their sloping sides may indicate they are remnants of pits rather than post holes, F809 had a central depression and slight central soil colour change; and F1005 had a more definite central soil colour change, (1009); in both cases suggesting a post had been removed.

The basal fills, (810) and (1006), differed; the former appeared to be a derivative of the plough soil at an early point in its formation, while the latter had more the character of a primary fill derived from weathering of natural deposits, suggesting it had been open for some time before filling.

Feature F1803. This feature was irregular in plan and only a few centimetres deep. It was most likely the trace of a tree burnt *in situ*.

Land drains (104), (203), (809)

(104) and (203) are the same drain, running above the filled burn. A modern, plastic drain runs parallel. (809) is a distinct drain, and may have no connection with the former.

Stone slabs Two tabular stones, both approximately 0.7m in their largest dimension, were found in T15, one in the topsoil and the other some way down in the glacial till (Plate 8). Their discovery coincided with dusk on 9 December, and with the possibility of a cist burial in mind further investigation was left until the following morning. The lower slab lay some 0.15m below the upper surface of the till. No trace could be found of a cut, and since no bone fragments were found in a sample of the topsoil immediately above its location, it was concluded that these slabs were not deliberately positioned. Parts of two other probable slabs can be seen about 70m and 100m south of the site, along the same slight crest line that T15 partly followed, so it seems likely that their positioning is the result of a natural process.

Discussion

The nature of the topsoil and its interface with underlying deposits suggest it has been formed over many years and was last cultivated fairly recently, certainly after the filling of the burn in T1 and construction of the modern drain there. The plough soil in T3 was deeper than in most other trenches, and it is likely that this depth has protected the subsoil, (302), which may formerly have extended over much of the rest of the site. Ploughing has truncated all the post holes found.

The burn running from West to East along the North side of the sand school has been rapidly filled with (102), and the land drain (104)/(203) was probably inserted at the same time. These works are probably associated with the creation of the sand school. It is possible that a separate drainage system was inserted to the South of the sand school, of which (809) is a part; (1803) may be a remnant of that system, possibly truncated by subsequent deeper ploughing.

The fills of the small post holes are generally less well-mixed, lighter in colour, and with less humic content than the plough soil, indicating they were deposited before that had fully developed. The distribution of

these features shows no clear pattern, although given their probable nature they may have formed land divisions. They do not cluster together closely enough to suggest a structure.

The larger post holes both show evidence of the removal of posts, and appear to have been open for some time before those posts were erected. These features differ from the small post holes both in size, and in the nature of their fills, and so may belong to a different phase of land use. Although it is possible they are the strainers of a post and wire fence, with the small post holes being the stobs, the alignments do not support this interpretation.

All the features recorded were undated, but it is assumed the land drains belong to the C19th or early C20th. The post holes, large and small, might be of almost any date. However, they all lie within 45m of the possible burial cairn in the south of the site and could possibly be associated with it.

Conclusions

The recording of eight undated post holes from the limited area opened demonstrates the potential of the site to yield more information. It is recommended that a watching brief be required on all ground works associated with the development, to identify any further features present and clarify their overall layout and any dating evidence that might be present.

Drawings

These are located on Figures 3,4,5.

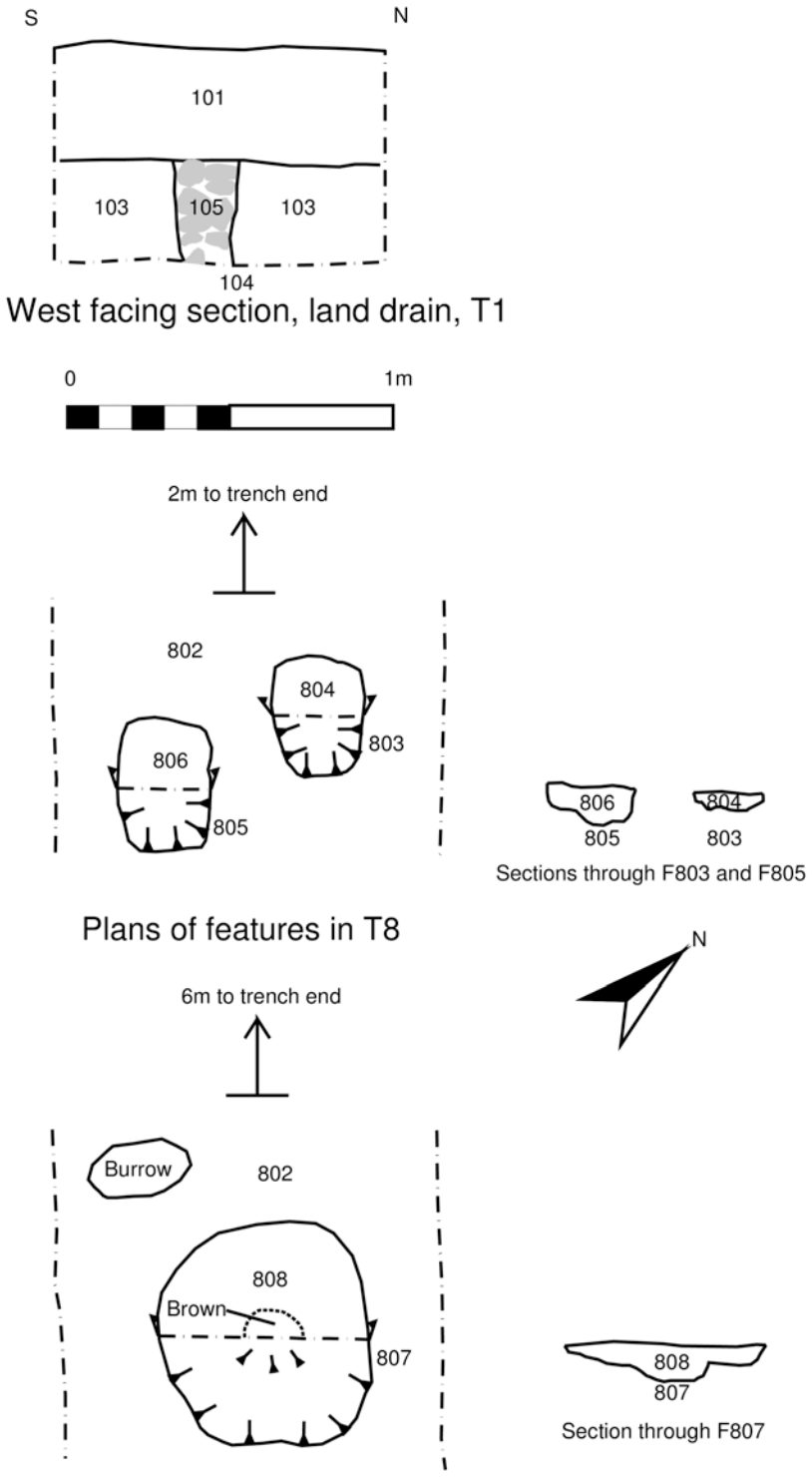

Figure 6 Features in T1 and T8

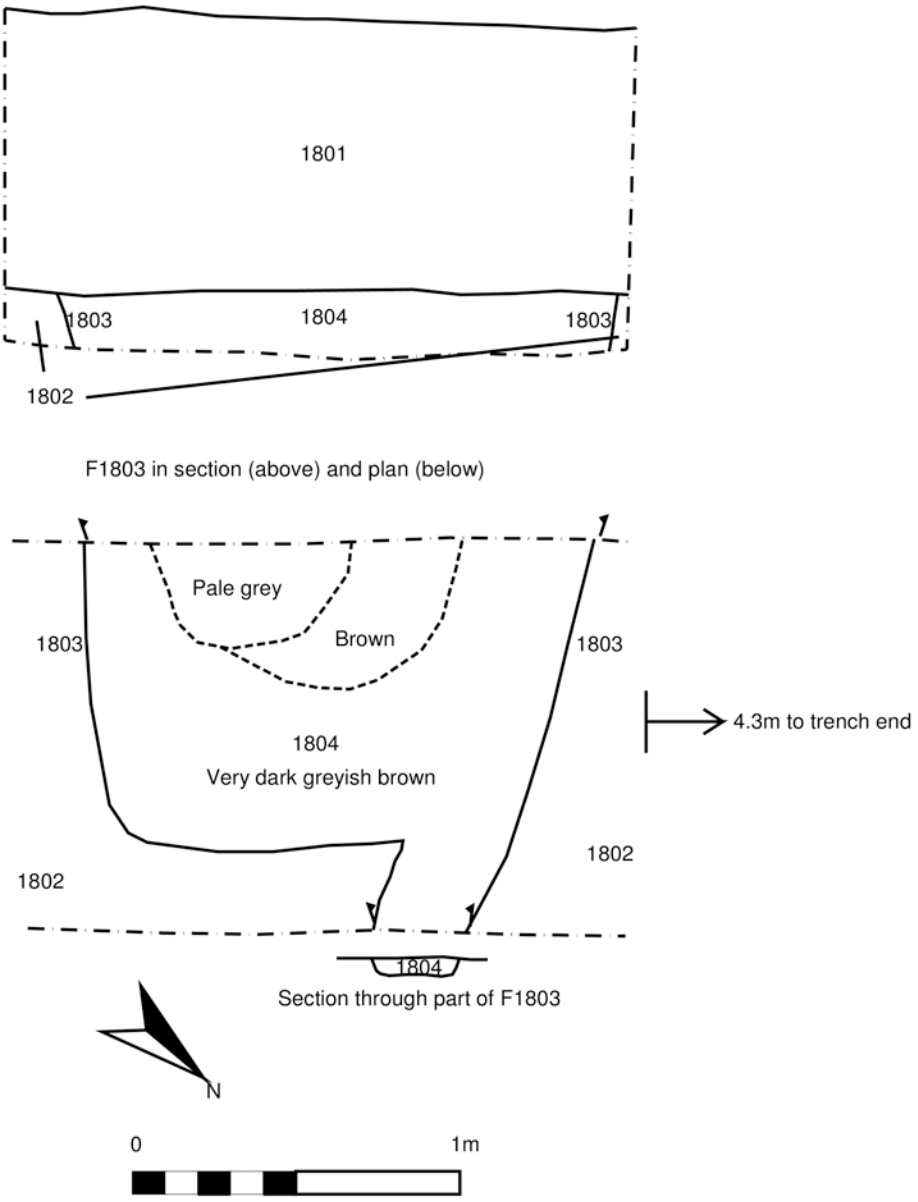

Figure 7 Feature F1803 in T18

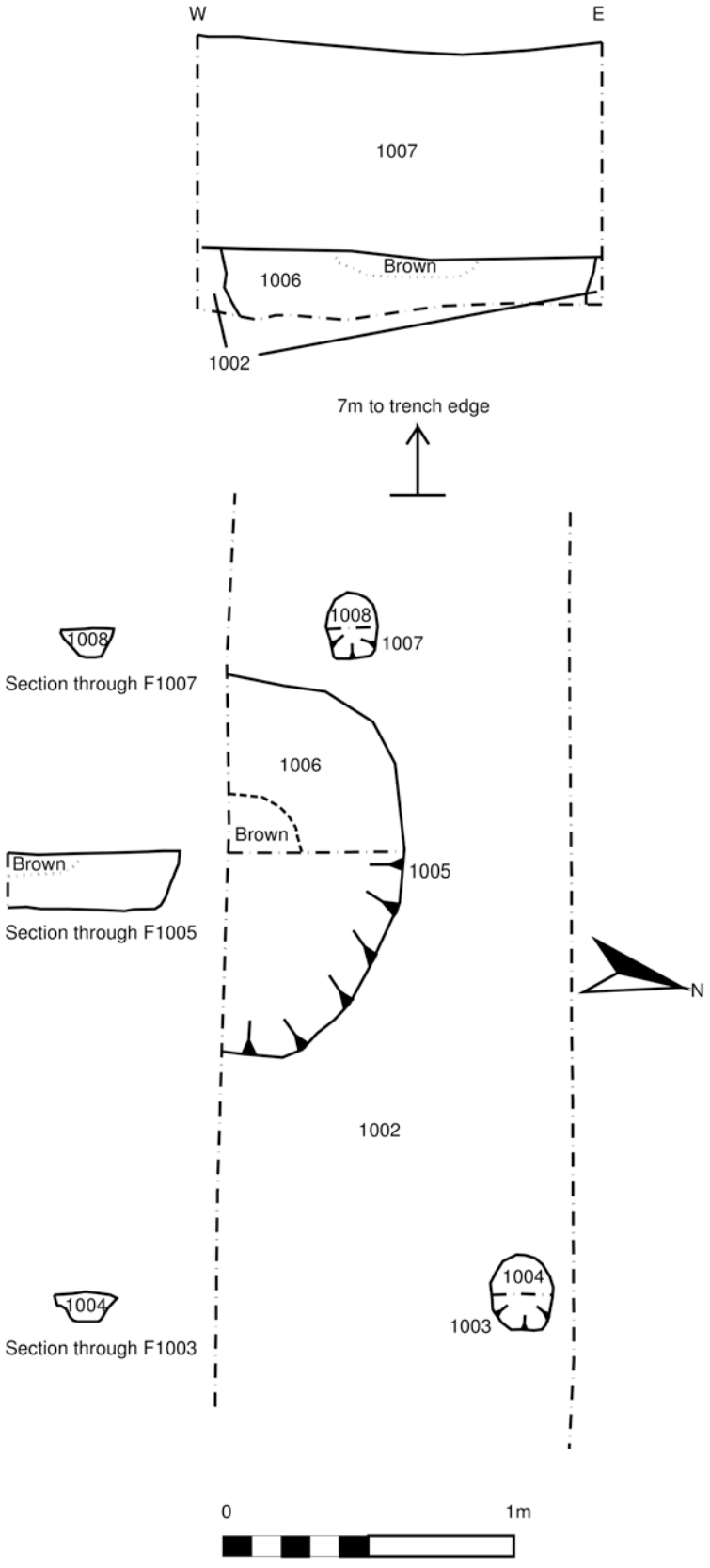

Figure 8 Features in T10

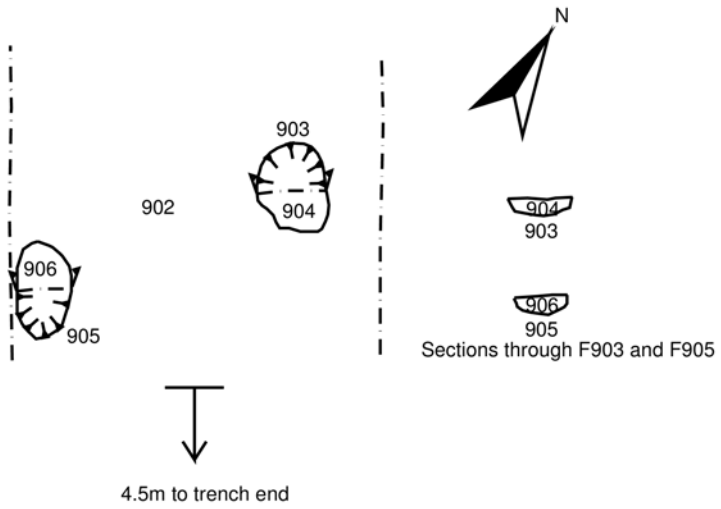

Figure 9 Features in T9

Tables

Table 1 Context Index

Trench	Context	Type	Description	Dimensions (m)			Before	After	Interpretation
				Length	Width	Depth			
1	(101)		Very well mixed, very dark greyish brown sandy loam. Interface with (102) mostly sharp, slightly diffuse in places. Single modern pavoir noted. Down to grass.	>23.57	>1.4	0.45	-	(105)	A ley on a recently (last 20 years?) ploughed topsoil. Virtually unchanging over whole site.
	(102)		Dark reddish brown to light yellowish brown gritty coarse sand with silty lenses. Occasional large sub-rounded to sub-angular stones; a few tabular stones noted throughout.	>23.57	>1.4	>0.25	(103)	UE	Glacial till.
	(103)		Almost unmixed very dark greyish brown sandy silt, restricted to the middle of the trench, aligned with a burn to the W. Not bottomed.	16.3	>1.4	>0.28	F104	(102)	Deliberate fill of a burn, possibly at the time of construction of the immediately adjacent sand school.
	F104	(105)	Almost vertically-sided cut running across the N end of the trench. In full working order with rapid water ingress into trench, so not fully excavated.	0.19	>1.4	>0.31	(105)	(103)	Land drain, cut after filling of the burn.
	(105)		Moderate sized (0.2 to 0.5m) sub-angular to sub-rounded stones in a very dark greyish brown silt matrix.	0.19	>1.4	>0.31	(101)	F104	Stone fill of land drain, F104.
2	(201)		Very well mixed, very dark greyish brown sandy loam. Down to grass.	>31.86	>1.2	0.42	-	(204)	Topsoil, as (101)
	(202)		As (102)	>31.86	>1.2	>0.12	F203	UE	Glacial till.
	F203	(204)	As F104	>28.5	>1.2	>0.15	(204)	(202)	Same land drain as F104

Trench	Context	Type	Description	Dimensions (m)			Before	After	Interpretation
				Length	Width	Depth			
	(204)		As (105)	>28.5	>1.2	>0.15	(201)	F203	Fill of F203
3	(301)		As (101). Burnt tree bole near NW end.	>25.68	>1.3	0.84	-	(302)	Topsoil, deeper than in T1
	(302)		Unmixed silty sand. Interface with (301) sharp, interface with (303) diffuse.	>25.68	>1.3	0.14	(301)	(303)	Uncultivated subsoil. Absent elsewhere so probably outwith or at edge of the formerly ploughed area.
	(303)		As (102)	>25.68	>1.3	>0.03	(302)	UE	Glacial till
4	(401)		As (101)	>33.28	>1.2	0.60	-	(402)	
	(402)		As (102)	>33.28	>1.2	>0.12	401	UE	
6	(601)		As (101)	>23.22	>1.2	0.41	-	(602)	Topsoil
	(602)		As (102)	>23.22	>1.2	>0.07	601	UE	Glacial till
7	(701)		As (101)	>17.29	>1.2	0.62	-	(702)	Topsoil
	(702)		As (102)	>17.29	>1.2	>0.02	701	UE	Glacial till
8	(801)		As (101)	>32.54	>1.4	0.62	-	(804), (806), (808), (810)	Topsoil
	(802)		As (102)	>32.54	>1.4	>0.20	F803, F805, F807, F809	UE	Glacial till

Trench	Context	Type	Description	Dimensions (m)			Before	After	Interpretation
				Length	Width	Depth			
	F803	(804)	Sub-oval, steep-sided, flat- to concave-bottomed cut.	0.41	0.31	0.12	(804)	(802)	Small posthole. No sign of primary fill, but no sign of compression of base, either.
	(804)		Partly-mixed very dark brown silty sandy loam.	0.41	0.31	0.12	(801)	F803	Fill of F803. Distinguished from topsoil by less sorting, higher silt content and slightly lower humic content.
	F805	(806)	Sub-oval, steep-sided, flat- to concave-bottomed cut.	0.42	0.30	0.11	(806)	(802)	Small posthole; as F803.
	(806)		Partly-mixed dark brown silty sandy loam.	0.42	0.30	0.11	(801)	F805	Fill of F805. Slightly pale than (804).
	F807	(807)	Sub-circular concave feature with moderately sloping sides and depression in centre. Animal burrow in SW.	0.69	0.63	0.09	(808)	(802)	Posthole. Either a different phase to F803 and F805, or a possible strainer.
	(808)		Partly-mixed dark greyish brown silty loam. Lower interface contains a few blobs of (802). Centre of context, above depression, slightly darker brown and possibly more mixed, but no obvious boundary delineating it from the bulk of the context.	0.69	0.63	0.09	(801)	F807	Signs of a possible post-pipe in the centre.
	F809	(810)	Vertically-sided cut.	>1.4	0.42	>0.18	(810)	(802)	Land drain
	(810)		Sub-rounded stones in a very dark greyish brown silt matrix.	>1.4	0.42	>0.18	(801)	F809	Fill of land drain
9	(901)		As (101)	>17.19	>1.3	0.51	-	(904), (905)	Topsoil

Trench	Context	Type	Description	Dimensions (m)			Before	After	Interpretation
				Length	Width	Depth			
	(902)		As (102)	>17.19	>1.3	>0.1	F903, F905		Glacial till
	F903		Sub-oval, steep-sided, concave-bottomed cut.	0.26	0.28	0.08	(904)	(902)	Small posthole
	(904)		Very dark greyish brown sandy loam; differs from topsoil in being slightly siltier and less well-sorted. No sign of a primary fill.	0.26	0.28	0.08	(901)	F903	Fill of F903
	F905		Sub-oval, steep-sided, concave-bottomed cut.	0.31	0.20	0.15	(906)	(902)	Small posthole
	(906)		Very dark greyish brown sandy loam; differs from topsoil in being slightly siltier and less well-sorted. No sign of a primary fill.	0.31	0.20	0.15	(901)	F905	Fill of F905
10	(1001)		As (101)	>37.05	>1.3	0.62	-	(1004) (1008) (1009)	Topsoil
	(1002)		As (102)	>37.05	>1.3	>0.21	F1003, F1005, F1007	UE	Glacial till
	F1003	(1004)	Sub-oval, steep-sided, flat-bottomed cut.	0.2	0.21	0.08	(1002)	(1004)	Small posthole
	(1004)		Dark brown silty sandy loam; heat-affected stone at top of what remains of the context; no signs of burning *in situ*. Differs from topsoil in lighter colour.	0.2	0.21	0.08	(1001)	F1003	Fill of posthole
	F1005	(1006), (1009)	Large, sub-circular, steep-sided, flat-bottomed cut. Partly in baulk.	1.23	>0.60	0.20	(1006)	(1002)	Large posthole
	(1006)		Pale brown gritty sand.	1.23	>0.60	0.20	(1009)	F1005	Appears to be weathered glacial till, so interpreted as a primary fill.
	F1007		Sub-oval, steep-sided, flat-bottomed cut.	0.19 diameter		0.21	(1008)	(1002)	Small posthole
	(1008)		Dark brown silty sandy loam. Differs from topsoil in lighter colour.	0.19 diameter		0.21	(1001)	F1007	Fill of posthole

Trench	Context	Type	Description	Dimensions (m)			Before	After	Interpretation
				Length	Width	Depth			
	(1009)		Very dark greyish brown silty loam in centre of F1005.	0.26	0.26	0.07	(1006)	(1001)	Post-pipe?
11	(1101)		As (101)	>31.06	>1.2	0.52	-	(1102)	Topsoil
	(1102)		As (102)	>31.06	>1.2	>0.04	(1101)	UE	Glacial till
12	(1201)		As (101)	>25.95	>1.2	0.25	-	(1202)	Topsoil
	(1202)		As (102)	>25.95	>1.2	>0.02	(1201)	UE	Glacial till
14	(1401)		As (101)	>36.79	>1.2	0.33	-	(1402)	Topsoil
	(1402)		As (102)	>36.79	>1.2	>0.05	(1401)	UE	Glacial till
15	(1501)		As (101). One large flat stone slab found just below grass, at an angle	>35.65	>1.3	0.71	-	(1502)	Topsoil
	(1502)		As (102). One large stone slab found 0.05m below surface, horizontal	>35.65	>1.3	>0.09	(1501)	UE	Glacial till
16	(1601)		As (101).	>18.1	>1.3	0.38	-	(1602)	Topsoil
	(1602)		As (102).	>18.1	>1.3	>0.03	(1601)	UE	Glacial till
17	(1701)		As (101).	>32,13	>1.3	0.60	-	(1702)	Topsoil
	(1702)		As (102).	>32,13	>1.3	>0.02	(1701)	UE	Glacial till
18	(1801)		As (101).	>16.09	>1.3	0.60	-	(1804)	Topsoil
	(1802)		As (102).	>16.09	>1.3	>0.02	F1803	UE	Glacial till
	F1803	(1804)	Large, severely truncated irregular feature, partly in baulk	>1.3	1,52	0.02	(1804)	(1802)	Uncertain. Possible burnt tree.
	(1804)		Unmixed deposit of topsoil and natural, with very rare charcoal flecks	>1.3	1,52	0.02	(1801)	F1803	No sign of primary fill. Possibly just a dump filling a burnt tree hole.

Table 2 Table of photographs

Photo No	Camera point	Description	Facing	Scale
1	1	T1, excavated	N	2 x 1m
2	2	T1, showing 103, 105, 105	NW	1 x 1m
3	3	T1, excavated	S	1 x 1m
4	2	T2, excavated	W	2 x 1m
5	4	T2, excavated	E	2 x 1m
6	5	T3, excavated	SW	1 x 1m
7	5	Burnt tree bole	S	2 x 1m
8	6	T3, excavated	NE	1 x 1m
9	7	T4, excavated	S	2 x 1m
10	8	T4, excavated	N	2 x 1m
11	9	T7, excavated	SE	2 x 1m
12	10	T7, excavated	NW	2 x 1m
13	11	T18 showing F1803	S	2 x 1m
14	11	F1803 sectioned	E	1 x 1m
15	12	T18, excavated	SE	2 x 1m
16	13	T18, excavated	NW	2 x 1m
17	14	T8, showing F803, F805 sectioned	NW	1 x 1m
18	15	T8, showing F807 sectioned	NW	1 x 1m
19	15	T8, SE end, showing F803, F805, F807	NW	1 x 1m
20	16	T8, NW end, showing F803, F805, F807	SE	2 x 1m
21	17	T8, SW end	NW	2 x 1m
22	18	T8, land drain	S	2 x 1m
23	19	T6, excavated	NE	2 x 1m
24	20	T6, excavated	SW	2 x 1m
25	21	T9, showing 903, 905 sectioned	NW	1 x 1m
26	22	T9, showing 903, 905 sectioned	SE	1 x 1m
27	23	T9, excavated	SE	2 x 1m
28	24	T9, excavated	NW	2 x 1m
29	25	T10, showing F1003, F1005, F1007 sectioned	SW	2 x 1m
30	25	T10, showing F1003 sectioned	SW	2 x 1m
31	25	T10, showing F1005 sectioned	SW	1 x 1m
32	25	T10, showing F1007 sectioned	SW	1 x 1m
33	26	T10, excavated	NE	2 x 1m
34	27	T10, excavated	SW	2 x 1m
35	28	T17, excavated	NE	2 x 1m
36	29	T17, excavated	SW	2 x 1m
37	30	T16, excavated	N	2 x 1m
38	31	T14, excavated	W	2 x 1m
39	32	T14, excavated	E	2 x 1m
40	33	T15, excavated	W	2 x 1m

Photo No	Camera point	Description	Facing	Scale
41	34	T15, excavated	E	2 x 1m
42	35	T11, excavated	NW	2 x 1m
43	36	T11, excavated	SE	2 x 1m
44	37	T12, excavated	SW	2 x 1m
45	37	T12, excavated	SE	2 x 1m
46	38	Slab in T15	NE	2 x 1m
47	39	Slab from topsoil, on spoil heap	NW	2 x 1m
48	39	Slab in trench removed	NE	2 x 1m

Selected Photographs

Plate 1 T1, showing fill of burn. Photograph 1

Plate 2 T1, showing functioning land drain. Photograph 3

Plate 3 T2, showing land drain. Photograph 4

Plate 4 T18. F1803 sectioned. Photograph 14

Plate 5 T9, showing 903, 905 sectioned. Photograph 26

Plate 6 T8. Land drain. Photograph 22

Plate 7 T10, showing F1003, F1005, F1007 sectioned. Photograph 29

Plate 8 Slab in topsoil, T15