UNIVERSITY OF LEICESTER
Archaeological Services

An Archaeological Field Evaluation at Lockington Quarry, Extension Phases 6 and 8, Lockington, Lockington and Hemington, Leicestershire SK 4820 2830

James Patrick

ULAS Report No 2016-027

An Archaeological Field Evaluation

At Lockington Quarry Extension Phases 6 and 8, Lockington, Lockington and Hemington, Leicestershire

SK 4820 2830

James Patrick

for

Tarmac Trading Ltd

Checked by Project Manager

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An archaeological field evaluation at Lockington Quarry Extension Phases 6 and 8, Lockington, Lockington and Hemington, Leicestershire (SK 4820 2830)

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Summary

An archaeological field evaluation by trial trenching was carried out by University of Leicester Archaeological Services (ULAS) on land at Lockington Quarry Extension Phases 6 and 8, Lockington, Leicestershire (NGR: SK4820 2830). This was commissioned by Tarmac Trading Ltd. in advance of continuing sand and gravel extraction (PA: 2007/1361/07 (2007)).

The site consists of a rectangular area of arable land which is generally flat and low lying. A north-west to south-east aligned hedgerow separates Phases 6 to the south-west and 8, a slightly larger field, to the north-east.

The trench plan was formulated by Archaeologica Ltd. in consultation with the Leicestershire County Council Principal Planning Archaeologist as advisor to the planning authority. The trenches targeted features shown by various survey methods, including geophysical anomalies, cropmarks, LiDAR survey and fieldwalking and also included trenching to test 'blank areas'.

In total 69 trenches were positioned across the two fields. In Phase 8, many trenches targeted palaeochannels associated with discrete raised gravel terraces including a larger terrace where there was potential for archaeological remains.

Twenty of the trenches contained archaeological remains. The other 49 were either completely empty or contained geological features, tree throw pits, palaeochannels and tree clearance burning. In Trench 36 a palaeochannel was located adjacent to a feature which contained fire cracked stones of possible Neolithic/ Bronze-Age date. Scattered tree clearance with burning was present within Trenches 18, 19 and 20 in the south-western edge of the Site.

Although the fieldwalking survey carried out by ULAS in 2000 at the Fulcrum Site, on land to the west of the Site, recovered a number of flints of Late Mesolithic to Bronze Age date along the northern side of the site, flint was only present in two evaluation trenches. A concentration of Neolithic pottery and flint was present in a pit in Trench 62 Phase 8.

In Phase 6 a series of probable enclosure ditches connected with Romano-British field system ditches and occasional post-holes were located. All the features had been heavily truncated by ploughing.

1. Introduction

In accordance with NPPF Section 12: Enhancing and Conserving the Historic Environment. University of Leicester Archaeological Services (ULAS) were commissioned by Tarmac Trading Ltd. to carry out an archaeological field evaluation at Lockington Quarry Extension Phases 6 and 8, Leicestershire (NGR: SK4820 2830) in advance of the sand and gravel extraction.

The area around Lockington Quarry is situated on a low lying landscape with the confluence of the River Trent and Soar less than a kilometre to the north-east (Figure 1). The Historic Environment Record (HER) for Leicestershire and Rutland indicates that the archaeological landscape in and around the study area is rich in archaeological remains.

Fieldwalking has shown flint scatters in Phase 7 within the plough soils (**MLE7623**) along with Phases 8 and 6 (**MLE4714** and **MLE4857**). Within Phases 7 and 9 are the remains of a ploughed out barrow (**MLE4669**) with linear cropmarks interpreted as field system ditches/cattle enclosures (Lisboa 2015). In Phase 10, *c*.500 metres to the north-west of the application area, a Bronze Age pit alignment and Roman field system have been recorded (Coward 2011) while excavations within Phase 5 revealed Iron Age settlement (Watkins 2015). As gravel extraction progresses into Phases 6-9, there was therefore potential for further archaeological remains in the form of settlement and/or agricultural land use.

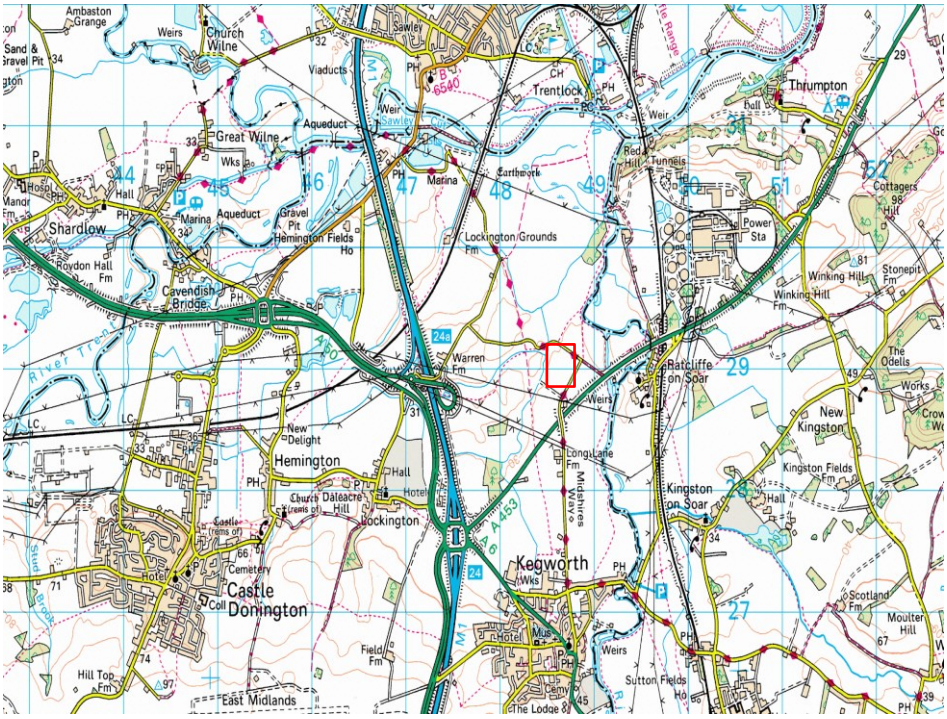

Figure 1: Site Location

2. Location and Geology

The application area lies in Lockington and Hemington parish and is bounded by the unclassified roads of Long Lane and Ratcliffe Lane on the north-east side. To the north-west lie extraction Phases 9 and 7. The Ordnance Survey Geological Survey of Great Britain Sheet 141 indicates that the underlying geology of the area comprises drift deposits of alluvium over gravel terrace deposits of the river system. The site lies at a maximum height of *c*.31.5m OD at the south-west to below 29.5m in the north-east.

The site consists of two arable fields, Phase 6 to the south-west, separated by a north-west to south-east aligned hedgerow from Phase 8 to the north-east. Phases 6 and 8 cover a rectangular area of *c*.12 hectare. At the north–eastern end of Phase 8, natural earthworks can clearly be seen as a series of palaeochannels with well-defined contours while Phase 6 is flat. An electricity pylon, with high voltage overhead cables running east – west crosses Phase 6 while a low voltage overhead cable runs parallel to the hedgerow dividing Phase 5 from Phase 6.

3. Historical and Archaeological Background

A desk-based assessment has been prepared for the site (Lisboa *et al.* 2005) and summarised the archaeological work undertaken in the application area including the use of non-destructive techniques. The Historical Environment Record (HER) for Leicestershire and Rutland indicates that Lockington lies in an area rich in archaeological remains from the prehistoric through to the medieval, post-medieval and modern periods.

The quarry extension lies within a kilometre of the confluence of the River Soar and River Trent. Phases 6 and 8 are at the south-east limit of the application area where it is bounded by Long lane and Ratcliffe lane. Fieldwalking has revealed flint scatters in Phases 6 and 8: a widespread scatter including three scrapers, three retouched pieces, seven cores and seventeen flakes (**MLE4657**) extended to Phase 5, where no *in situ* flints were recovered. A dense flint scatter (**MLE4714**) has been recorded north of Phase 8, including scrapers, a piercer, blade cores and blade and blade-like flakes. Aerial photography shows a ploughed out Barrow (**MLE4669**) in Phase 9. This may be part of the dispersed Lockington Barrow cemetery to the west (Hughes 2000; Cooper 2006).

Extensive archaeological excavations carried out by ULAS in 2007 and 2008 (Thomas 2011) approximately 1km to the north-west of Phases 6 and 8, in Warren Lane, have shown an extensive agricultural landscape of fields, paddocks and enclosures in close association with a system of trackways on extraction Phases 5 and 6. The excavations at Warren Lane, together with a Watching Brief (Coward 2011) in Phase 10, which included Romano-British ditches in addition to a north to south orientated pit alignment, have been linked to a large Late Iron Age/Romano-British agglomerated settlement and enclosures which includes a villa situated just north of Ratcliffe Lane (Scheduled Monuments **SM126** and **SM140**). The linear cropmarks in Phases 7 and 9, south-east of Phase 10, have been interpreted as a continuation of field system ditches and cattle enclosures, possibly connected with **SM126** and **SM140** (Lisboa 2015).

Excavations on quarry extension Phase 5, some 300 metres to the west of the application area, have a revealed a linear feature on an east-west alignment which contained a small assemblage of Middle Iron Age pottery (Watkins 2015).

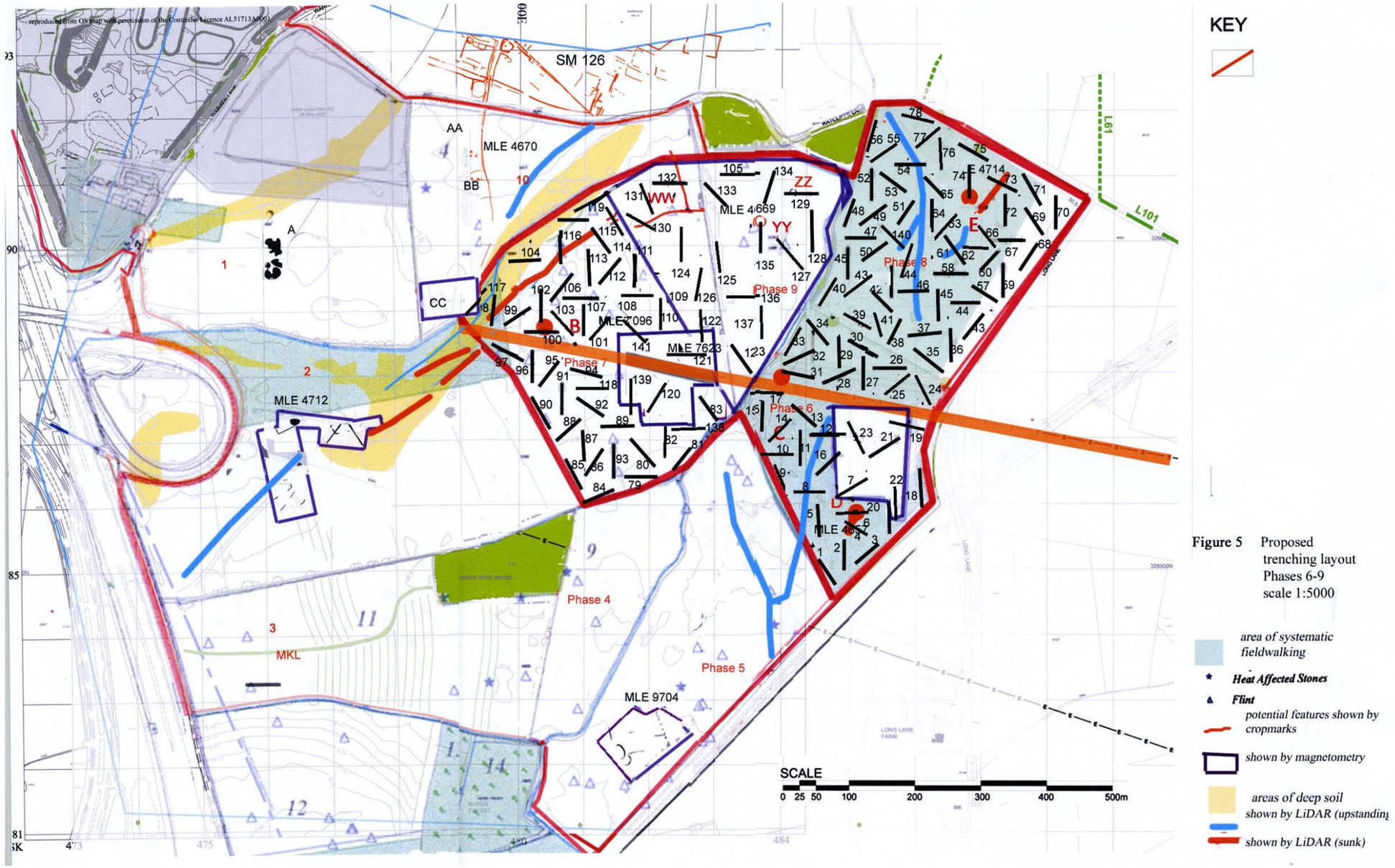

Figure 5 Proposed trenching layout Phases 6-9 scale 1:5000

Figure 2: Proposed Trench Locations in Phases 6 and 8 (from Lisboa, 2015)

4. Archaeological Objectives

The site and its setting make it possible to place the evaluation within a specific research framework set out in several documents both at national and regional level. At national level English Heritage's *Exploring Our Past* and the Archaeological Division's *Research Agenda* and *Society for the Promotion of Roman Studies* (Potter 1992; Draft 1997). These lists are descriptive and often overlap, but a synthesis of the relevant topics related to this project is presented here (as per WSI).

The following topics are of relevance to the national and regional objectives:

- Protection and management of the archaeological resource
- Establishment of a chronological framework for the occupation of each area
- Study of Mesolithic occupation sites
- Investigation of the character and development with the documentation of a ground plan and sequence of land use
- Study of the development of boundaries
- Analysis of the organisation and change in Late Bronze Age and Iron Age landscapes
- Analysis of the nature of distribution of rural settlements and agricultural production from Late Neolithic onwards
- Understanding of the chronological development of the local landscape
- Analysis of the process of change in the Iron Age/Roman transition, with particular reference to continuity/discontinuity and the degree of Romanisation

The evaluation allows to place the results in the regional context, in particular with relation to:

- Known settlements to the north of the Site, the Scheduled Monument of the villa complex and the Late Iron Age settlement and Romano-British field systems
- The Lockington Bronze Age cemetery to the west of the M1

The evaluation can contribute to the following themes set out in the *East Midlands Research Agenda* (Cooper 2006):

Late Prehistoric period

- Can we obtain a clearer understanding of temporal and spatial variability in the duration of settlement activity?
- Can we shed further light upon the development of field and boundary systems?
- How do pit alignments relate to agricultural practice?

Romano-British period

- How did field and boundary systems relate to earlier systems of land allotment and how did these boundary networks develop over time?
- Can we chart more closely the processes of agricultural intensification, expansion and development of field systems?

More detailed regional objectives have been established in *East Midlands Heritage: An Updated Research Agenda and Strategy for the Historic Environment of the East*

Midlands (Knight, Vyner and Allen 2012). Some of these questions are related to this project:

Neolithic and Early to Middle Bronze Age

1. How may we characterise more effectively the structural traces that might relate to settlement activity?
2. Can we obtain a clearer understanding of temporal and spatial variability in the duration of settlement activity?
3. What may analyses of surface lithic scatters teach us about developing settlement patterns in the region?

Late Bronze Age and Iron Age

4. Why were settlements increasingly enclosed during this period and to what extent may the progress of enclosure have varied regionally?
5. Why did large nucleated settlements emerge?
6. How are the nucleated settlements related to one another and to other settlements of the period? Is there evidence for a developing hierarchy?
7. How may nucleated and other settlements have developed in the Roman period?
8. Can we she further light upon the development of field and boundary systems?
9. What were the economic, social and political roles of the pit alignments and linear ditch systems that characterised many areas of the East Midlands?
10. What may we deduce from studies of linear boundaries with respect to changes in the agrarian landscape?
11. Can we chart more closely the processes of woodland clearance and agricultural intensification, their impact upon alluvation and colluvation and variations between different areas?

Roman

12. How did rural settlements relate to each other and to towns and military sites, and how may this have varied regionally and over time?
13. How did field and boundary systems relate to earlier systems of land allotment, and how did these boundary networks develop over time?
14. What patterns can be discerned in the location of settlements in the landscape?

5. Methodology

All work followed the Chartered Institute for Archaeologists (CIfA) *Code of Conduct* 2014) in accordance with their *Standard and Guidance for Archaeological Field Evaluation* (2014). The archaeological work followed the directives set out in the *Trenching Layout Addendum to an Approved Written Scheme of Works for and Archaeological Evaluation* by Archaeologica Ltd. (2015).

Although palaeochannels were revealed by aerial photographic plotting/ LiDAR and geophysical survey, along with the flint scatters recorded through field walking, and the areas shown by magnetometer survey, some trenches were not targeting anything specifically. Initially all 50m x 2.0m 141 trenches were going to be opened equating to 5% (24ha) covering Phases 6-9. However, because Phases 7 and 9 were under crop, 78 50m x 2.0m trenches were to be excavated equating to *c*.6.5% sample of the approximate 12 hectare area of Phases 6 and 8 (*c*.7800m²). However, time constraints related to the use of 360 tracked excavator and driver provided by Tarmac Ltd. reduced the trench total to 63 50m x 2.5 m trenches (*c*.7875m²). In order to fill the gaps within Phase 8, a JCB wheeled excavator was used to open a further six 30m x 1.60m trenches at the request of the Leicestershire County Council Principal Planning Archaeologist, making a total of 69 trenches (*c*.8163m² providing a *c*.6.8% sample).

Constraints included east to west overhead high voltage cables dissecting Phase 6 with pylon and low voltage cables running parallel to the hedgerow between Phases 5 and 6. As a result some trenches were re-positioned.

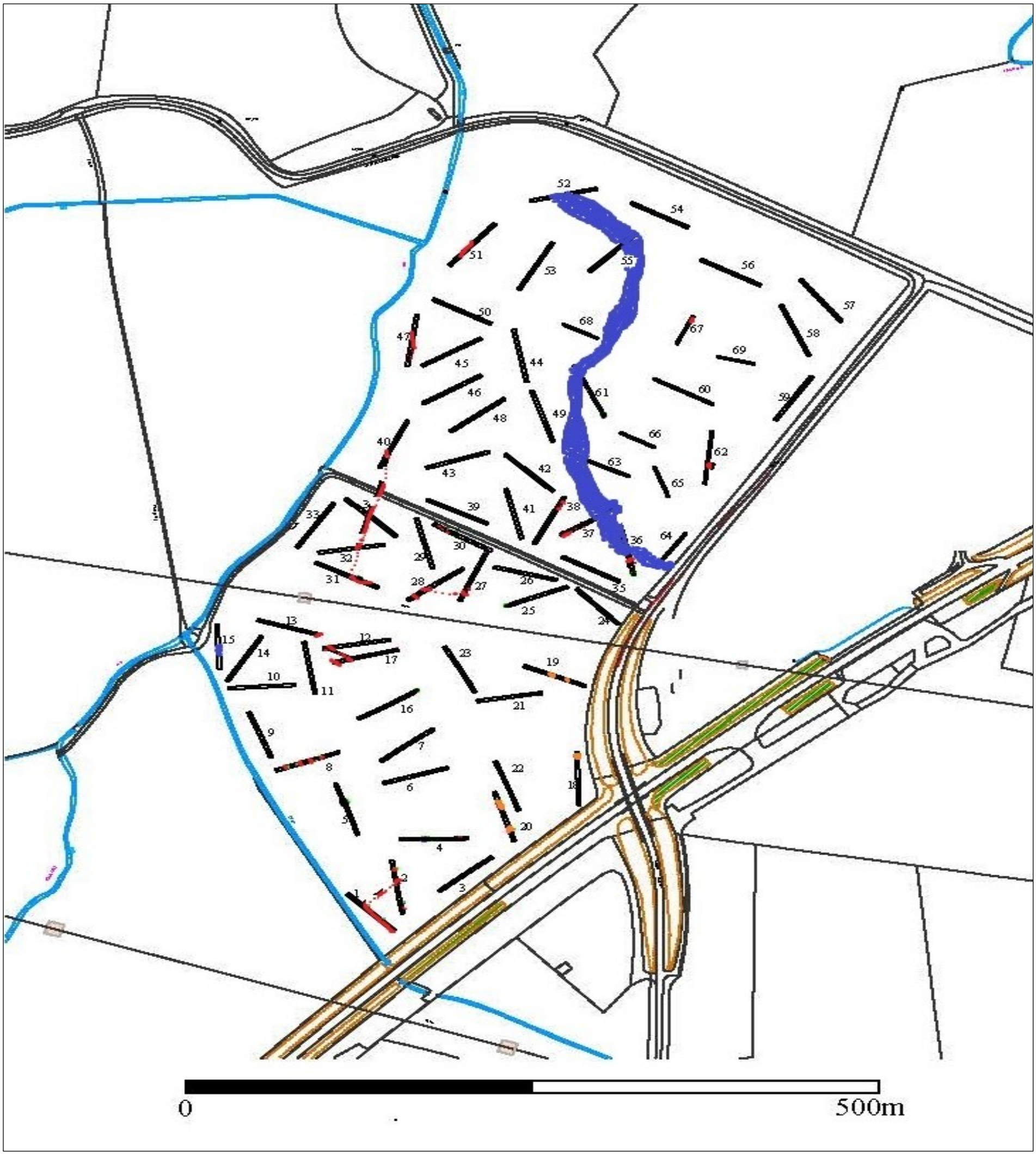

Figure 3: Phases 6 and 8 Trench Locations (red= archaeological features, blue= paleochannel, orange=tree clearance burning

Figure 4: Trench Locations 35-69, Phase 8

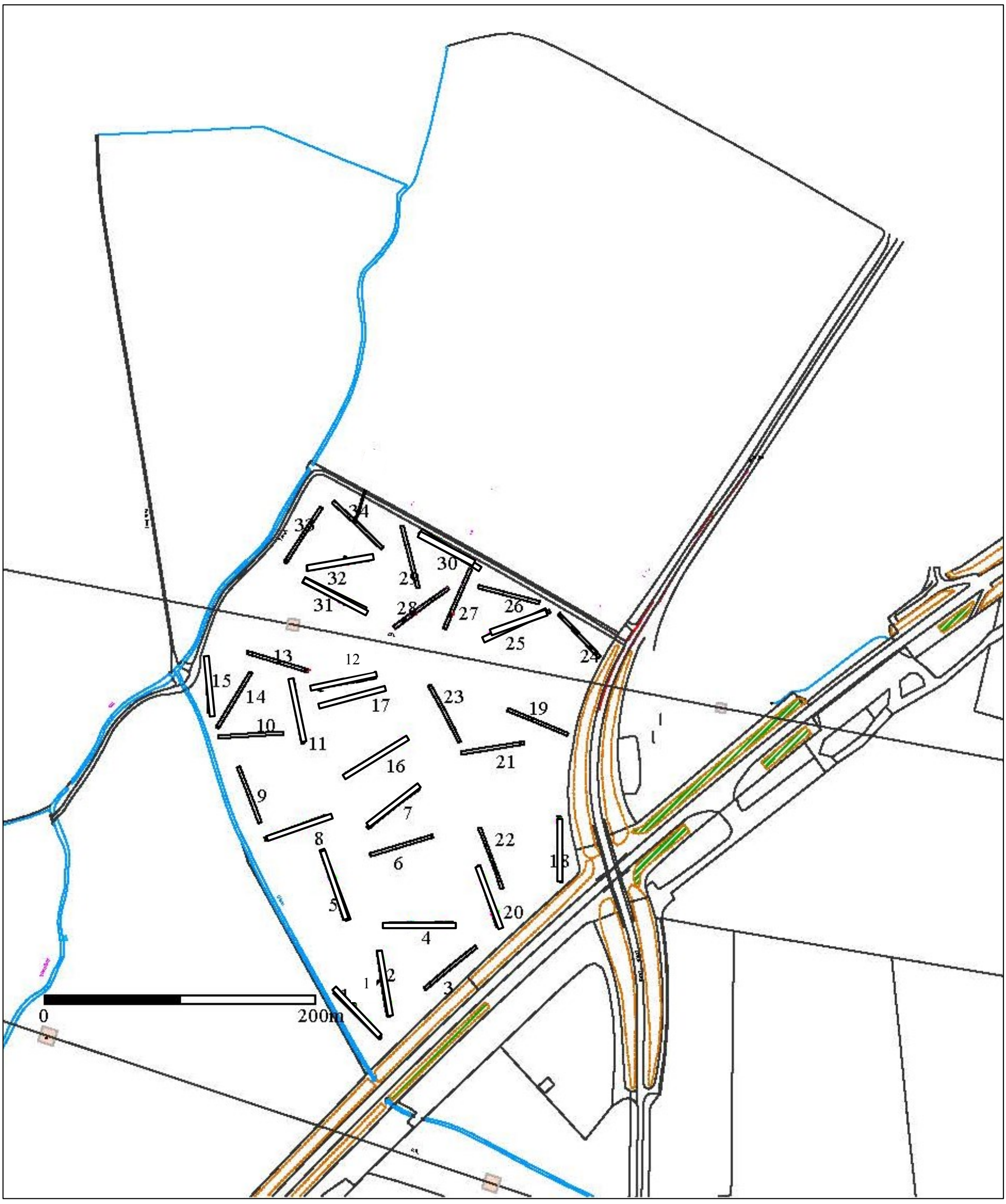

Figure 5: Trench Locations 1-34, Phase 6

Figure 6: View of recording in Trench 38

Figure 7: View of recording in Trench 62

6. Results

Table 1 (below) lists all 69 trenches recorded in both Phases 6 and 8. Twenty trenches contained archaeological remains (see Figure 3).

Table 1. Trench Descriptions

Trench	Orientation	Length and Width (Metres)	Topsoil Thickness (Metres)	Subsoil Thickness (Metres)	Description	Trench Depth (Min-Max Metres)
1	NW-SE	48 x 2.50	0.25- 0.38	0.10- 0.24	NW-SE Ditch [1], possible NE-SW ditch return [3]	0.43- 0.55
2	N-S	48.70 x 2.50	0.22- 0.35	0.20– 0.32	E-W Ditch [9], post hole [7], pit [11]	0.55- 0.75
3	SW-NE	49.70x 2.50	0.20- 0.30	0.12-0.26	No archaeology	0.34- 0.62
4	SE-NW	49.50x 2.50	0.25- 0.35	0.30-0.35	Modern ditch,	0.67-0.85
5	N-S	50.20x 2.50	0.27- 0.50	0.10- 0.46	No archaeology	0.55- 0.75
6	E-W	48.40 x 2.50	0.30- 0.40	0.25- 0.45	No archaeology	0.60- 0.82
7	NE-SW	49 x 2.50	0.25- 0.38	0.30-0.59	No archaeology	0.58- 1.00
8	W-E	49x 2.50	0.25- 0.27	0.18- 0.30	N-S Ditches [17], [19], [15], post/ stake holes [13], [54], [56], [58]	0.43- 0.60
9	NW-SE	46.50 x 2.50	0.24- 0.35	0.19- 0.40	No archaeology	0.45- 0.84
10	E-W	48.50 x 2.50	0.23- 0.32	0.19- 0.36	No archaeology	0.42- 0.65
11	N-S	48.70 x 2.50	0.24- 0.30	0.18- 0.26	No archaeology	0.44- 0.60
12	E-W	49.30 x 2.50	0.26- 0.30	0.13- 0.20	NW-SE Ditch [27], post hole [25]	0.35- 0.47
13	NW-SE	48.20 x 2.50	0.20- 0.32	0.17- 0.27	NE- SW Gully [31]	0.43- 0.80
14	NE-SW	49 x 2.50	0.15- 0.30	0.15- 0.25	No archaeology	0.36- 0.56
15	N-S	42 x 2.50	0.26- 0.35	0.15- 0.31	Palaeochannel, no archaeology	0.42- 0.75
16	NE-SW	48 x 2.50	0.20- 0.26	0.14- 0.30	No archaeology	0.39- 0.56
17	E-W	49 x 2.50	0.20- 0.30	0.10- 0.20	Two parallel ditches [21] and [23]	0.34- 0.50
18	N-S	49.50 x 2.50	0.20- 0.28	0.12- 0.30	Tree clearance burns	0.35- 0.59
19	E-W	49 x 2.50	0.23- 0.30	0.14- 0.19	Tree clearance burning and modern linears	0.40- 0.55
20	N-S	47.90 x 2.50	0.23- 0.30	0.12- 0.23	Tree clearance burns	0.37- 0.60
21	NE-SW	47.90 x 2.50	0.25- 0.30	0.11- 0.15	Modern linears	0.31- 0.40
22	N-S	49 x 2.50	0.25- 0.30	0.09- 0-13	No archaeology	0.31- 0.43
23	NW-SE	49 x 2.50	0.22- 0.28	0.24- 0.60	No archaeology	0.55- 1.13
24	NW-SE	44.50- 2.50	0.20- 0.30	0.10- 0.20	No archaeology	0.35- 0.53
25	NE-SW	48 x 2.50	0.25- 0.30	0.12- 0.40	No archaeology	0.35- 0.74
26	E-W	47.70 x 2.50	0.20- 0.34	0.17- 0.39	No archaeology	0.39- 0.87
27	N-S	49 x 2.5 0	0.30- 0.35	0.20- 0.39	NW- SE Ditch [29]	0.53- 0.69
28	NE-SW	50 x 2.50	0.25- 0.30	0.15- 0.27	E-W Ditches [33], [60]	0.40- 0.57
29	S-N	48.20 x 2.50	0.26- 0.33	0.03- 0.27	No archaeology	0.31- 0.57
30	NW-SE	49 x 2.50	0.20- 0.27	0.13- 0.20	Post holes [35], [37]	0.41- 0.50
31	E-W	51 x 2.50	0.20- 0.28	0.18- 0.27	Enclosure ditch [39], [41], [43], [49], and curvilinear ditch [47]	0.45- 0.60
32	NE- SW	48.70 x 2.50	0.22- 0.30	0.20- 0.32	N-S Ditch [45]	0.42- 0.62
33	NE-SW	49.50 x 2.50	0.15- 0.27	0.12- 0.30	No archaeology	0.39- 0.55
34	NW-SE	50 x 2.50	0.23- 0.30	0.20- 0.35	N-S Ditch [85]	0.45- 0.72
35	NW-SE	47.60 x 2.50	0.26- 0.30	0.15- 0.34	No archaeology	0.50- 0.90

Trench	Orientation	Length and Width (Metres)	Topsoil Thickness (Metres)	Subsoil Thickness (Metres)	Description	Trench Depth (Min-Max Metres)
36	N-S	50 x 2.50	0.16- 0.30	0.09- 0.30 (upper)	Burnt stone pit with deep palaeochannel at north end, (unbottomed)	0.39- 2.50m +
37	E-W	50 x 2.50	0.19- 0.27	0.18- 0.27	NE-SW gully [73], and post holes [75], [77]. Palaeochannel at east end	0.42- 0.65
38	NE- SW	48 x 2.50	0.24- 0.30	0.22- 0.32	Pits [79] and [81]	0.60- 0.75
39	SE- NW	50 x 2.50	0.20- 0.30	0.18- 0.26	No archaeology	0.49- 0.67
40	NE-SW	49 x 2.50	0.22- 0.26	0.25- 0.35	N-S ditch [62]and [64]	0.54- 0.80
41	N-S	49.50 x 2.50	0.22- 0.28	0.30- 0.60	No archaeology	0.70- 1.05
42	NW-SE	49 x 2.50	0.24- 0.30	0.20- 0.34	No archaeology	0.49- 0.70
43	E-W	50 x 2.50	0.22- 0.30	0.12- 0.21	No archaeology	0.42- 0.57
44	N-S	50 X 2.50	0.20- 0.27	0.18- 0.41	No archaeology	0.46- 0.66
45	NE-SW	48.50 x 2.50	0.20- 0.26	0.14- 0.38	No archaeology	0.31- 0.65
46	E-W	50 x 2.50	0.20- 0.24	0.15- 0.30	No archaeology	0.43- 0.76
47	S-N	49 x 2.50	0.25- 0.35	0.16- 0.41	N-S gully [66]	0.49- 0.81
48	NE-SW	50 x 2.50	0.23- 0.30	0.12- 0.38	No archaeology	0.40- 0.70
49	S-N	50 x 2.50	0.20- 0.30	0.26- 0.31	No archaeology	0.52- 0.72
50	E-W	49 x 2.50	0.22- 0.30	0.18- 0.30	No archaeology	0.54- 0.71
51	NE-SW	50 x 2.50	0.24- 0.32	0.17- 0.32	N-S gully (not excavated)	0.47- 0.86
52	E-W	50 x 2.50	0.20- 0.29	0.22- 0.42	Palaeochannel, no archaeology	0.30- 1.0m
53	NE-SW	49 x 2.50	0.24- 0.32	0.36- 0.60	No archaeology	0.59- 1.10
54	SE-NW	50 x 2.50	0.25- 0.34	0.27- 0.70	No archaeology	0.71- 1.07
55	SW-NE	50 x 2.50	0.20- 0.35	0.10- 0.40	Palaeochannel, no archaeology	0.39- 0.94
56	E-W	50 x 2.50	0.25- 0.32	0.24- 0.40	No archaeology	0.60- 0.73
57	SE-NW	50 x 2.50	0.28- 0.37	0.22- 0.30	No archaeology	0.54- 0.70
58	SE- NW	50 x 2.50	0.22- 0.28	0.32- 0.60	No archaeology	0.60- 0.90
59	NE- SW	50 x 2.50	0.26- 0.34	0.29- 0.80	No archaeology	0.70- 1.07
60	NW-SE	50 x 2.50	0.22- 0.33	0.11- 0.40	No archaeology	0.45- 0.71
61	S-N	49 x 2.50	0.24- 0.34	0.12- 0.26	Palaeochannel. No archaeology	0.41- 0.56
62	S-N	49 x 2.50	0.21- 0.31	0.10- 0.22	Pit [70]. Contained high concentrations of Neolithic pottery and flint	0.36- 0.60
63	NW-SE	49 x 2.50	0.20- 0.34	0.10- 0.27	Palaeochannel. No archaeology	0.43- 0.80
64	N-S	30 x 1.50	0.20- 0.32	0.14- 0.23	No archaeology	0.40- 0.55
65	N-S	30 x 1.50	0.26- 0.35	0.02- 0.20	No archaeology	0.30- 0.50
66	NW-SE	29 x 1.50	0.25- 0.34	0.10- 0.27	No archaeology	0.36- 0.60
67	NE-SW	30 x 1.50	0.28 - 0.33	0.14- 0.30	Pit [83]	0.47- 0.63
68	NW- SE	29 x 1.50	0.26- 0.31	0.10- 0.20	No archaeology	0.30- 0.58
69	E-W	29 x 1.50	0.30- 0.33	0.22- 0.36	No archaeology	0.55- 0.70

The topsoil throughout most of the site consisted of a mid to dark orangey-brown friable silty /sandy-clay with frequent small rounded pebbles and gravel. The sub-soil, although patchy in some trenches was of a mid yellowish brown made up of a friable silty-clay. The sub-soil was more of an alluvial clay closer to the north-eastern limit of Phase 8. The topsoil generally becomes a darker brownish grey. The natural substratum was mainly light to mid orange brown silty-clay with a high gravel

content. There were variations to silty-sand and gravel towards the north-eastern limit of Phase 8.

Archaeological features described in the text below are identified by their cut numbers, in square brackets i.e. [2], whereas their fills are identified by numbers in round brackets i.e. (1).

Figure 8: Excavating the Neolithic pottery pit in Trench 62, looking north

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The tables below show only the details of trenches which have archaeological remains, where palaeochannels are present, where tree clearance burning occurs and with post-medieval field boundary ditches. All negative trenches are detailed in the summary table above.

Trench 01

Orientation: NE-SW
Length: 48m
Width: 2.5m

Interval	0m (SE)	10m	20m	30m	40m	48m (NW)
Topsoil	0.28m	0.28m	0.38m	0.30m	0.36m	0.35m
Subsoil	0.15m	0.24m	0.10m	0.15m	0.12m	0.20m
Top of Natural substratum	0.43m	0.52m	0.48m	0.45m	0.48m	0.55m
Base of trench	0.45m	0.52m	0.48m	0.50m	0.48m	0.55m

Figure 9: Trench 1 looking North

Contexts: [01] (02), [03] (04), [05] (06) (Figure 10)

A ditch [01] was identified running across the trench from south-east to north-west and appeared to turn north-east towards Trench 2 [03]. Therefore the trench was extended north-east by approximately 3 metres to clarify this. The trench extension only showed the ditch running at a slight angle into the north-west side of the extension. The ditch had a visible length of 35m running along the centre of the trench with an average width of 0.70m. Two slots were excavated, both having straight, steep sloping sides with an average depth of 0.30m onto a concave base. The fill of the ditch (02) consisted of a mid yellowish brown silty-clay with sparse small

pebbles/ flint. The possible return of ditch [03] had straight sides with a moderate gradient. A slot was taken through this at the trench extension with a possible pit [05]. However this turned out to be a tree throw. The ditch fill [04] was the same as (02).

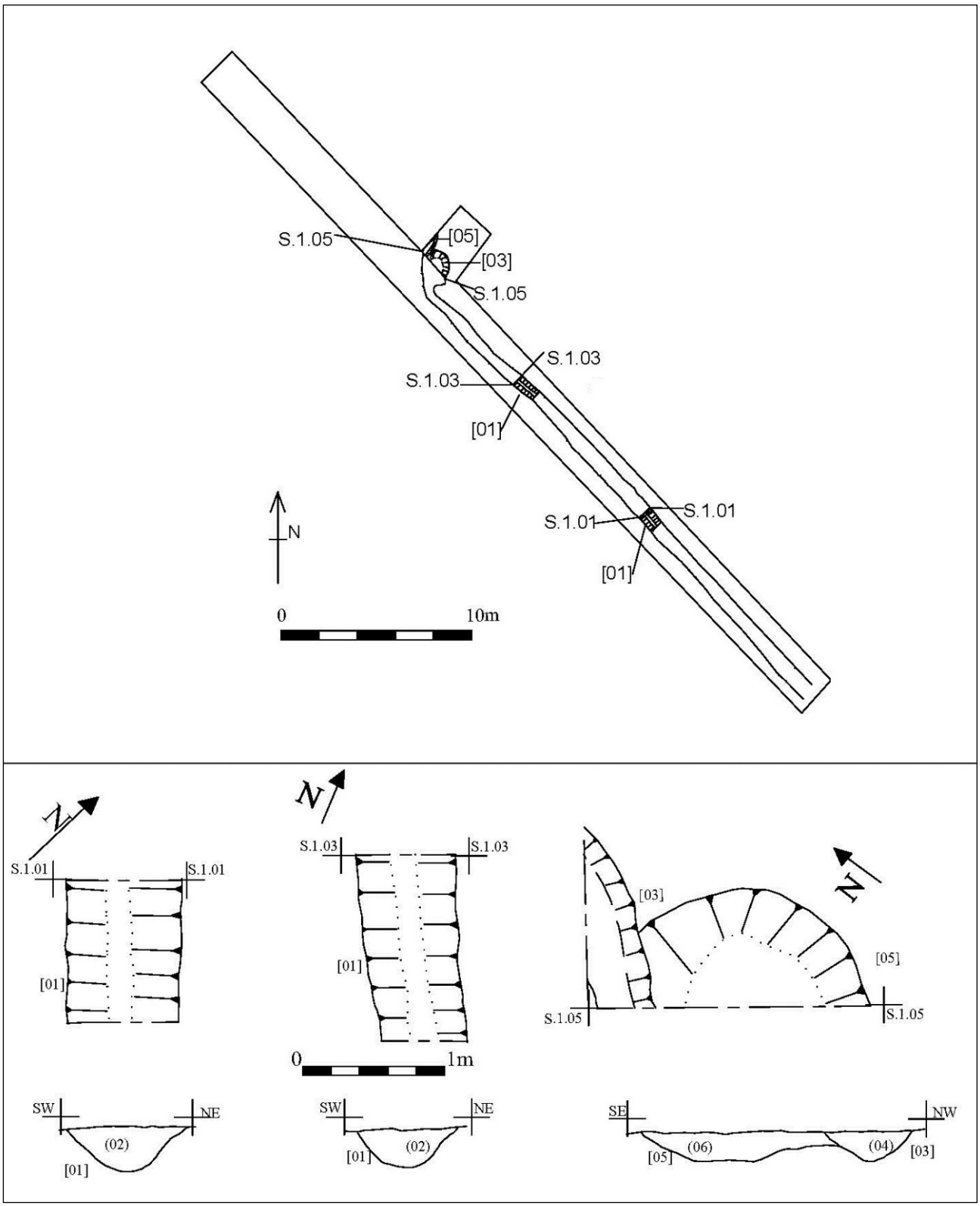

Figure 10: Trench 1. Plans and sections of [01], [03] and [05]

Trench 02

Orientation: N-S
Length: 48.70m
Width: 2.5m

Interval	0m (S)	10m	20m	30m	40m	48.70m(N)
Topsoil	0.50m	0.25m	0.25m	0.22m	0.35m	0.35m
Subsoil	0.20m	0.30m	0.30m	0.32m	0.24m	0.26m
Top of Natural	0.50m	0.55m	0.55m	0.54m	0.64m	0.61m
Base of trench	0.55m	0.70m	0.64m	0.55m	0.75m	0.65m

Figure 11: Trench 2 looking north

Contexts: [07] (08), [09] (010), [011] (012) (Figure 12)

Ditch [09] was revealed crossing the trench width running north-north-east to south-south-west. This had 'U' shaped sides with a moderate to steep gradient with a depth of 0.24m onto a concave base. The fill (10) was of a dark reddish brown firm sandy-clay with sparse small pebbles. The ditch was cut by a tree throw pit on the east side. Two discrete features were also found. A sub-rectangular shaped pit [11] had moderate to steep sides and measured 1.27m x 0.43m with a depth of 0.12m onto a flat base. This was situated at the north end of the trench. The fill (12) was of yellowish brown sandy-clay with sparse gravel. At the southern end of the trench was

a well-defined post-hole [07] which was circular in shape with shallow sides. The diameter was 0.41m and 0.11m deep onto a concave base. This had a similar fill to (12).

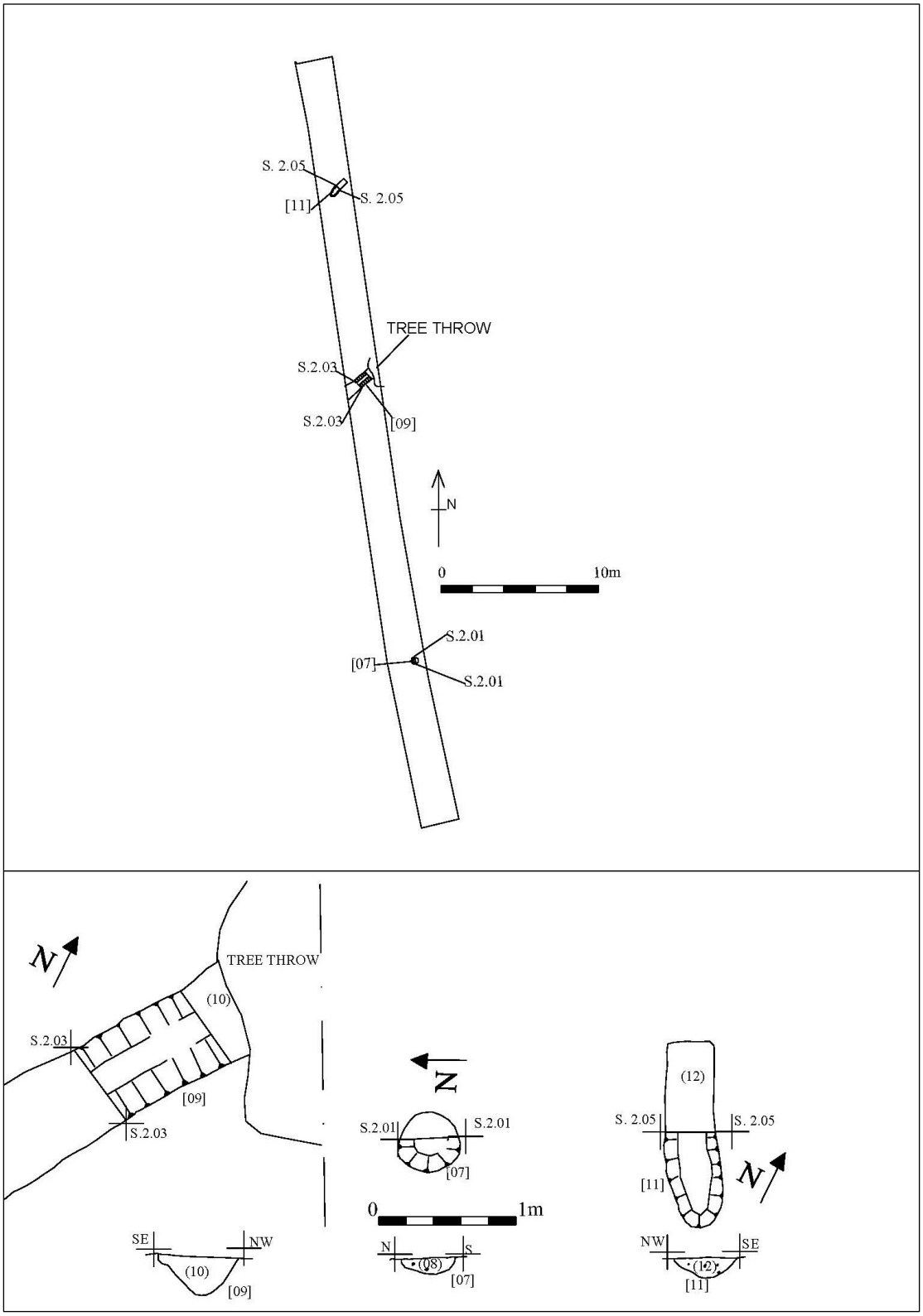

Figure 12: Trench 2. Plans and sections of [07], [09] and [11].

Trench 04

Orientation: NW-SE
Length: 49.50m
Width: 2.5m

Interval	0m (S)	10m	20m	30m	40m	48.70m(N)
Topsoil	0.35m	0.32m	0.35m	0.25m	0.30m	0.25m
Subsoil	0.30m	0.35m	0.45m	0.40m	0.45m	0.45m
Top of Natural substratum	0.65m	0.67m	0.80m	0.65m	0.75m	0.70m
Base of trench	0.85m	0.82m	0.85m	0.67m	0.80m	0.70m

Figure 13: Trench 4 looking east

No archaeological remains were located except a north-east to south-west aligned modern field boundary ditch.

Trench 08

Orientation: E-W
Length: 49m
Width: 2.5m

Interval	0m (W)	10m	20m	30m	40m	49m(E)
Topsoil	0.26m	0.25m	0.26m	0.26m	0.27m	0.25m
Subsoil	0.25m	0.30m	0.23m	0.24m	0.18m	0.18m
Top of Natural	0.51m	0.55m	0.49m	0.50m	0.45m	0.43m
Base of trench	0.51m	0.60m	0.53m	0.52m	0.45m	0.43m

Figure 14: Trench 8, Looking east

Contexts: [13] (14), [15] (16), [17] (18), [19] (20), [54] (55), [56] (57), [58] (59)
(Figure 15)

Three parallel ditches [17], [19], and [15] (numbered west to east) were located crossing the trench width approximately orientated north to south. Each of the ditch's sides varied in gradient from shallow in [19], moderate in [17], to steep in [15]. All of the ditches had concave bases, each with an average depth of 0.30m. The widths varied from 0.74m in ditch [15], 1.04m in ditch [17] and 1.10m in ditch [19]. All ditches appear to terminate to the south-east. The ditch fills (16) and (18) varied from light yellow brown to grey silty clay, while ditch fill (19) consisted of a mid bluish grey alluvium with high clay content. All had sparse rounded pebbles.

One post-hole [13] (14) was situated adjacent to ditch [15]. This was circular cut with gently sloping sides and a depth of just 0.10m onto a concave base and contained a light yellow brown silty-clay fill with sparse rounded pebbles. Three additional stake holes were found [54] (55), [56] (57), and [58] (59), following further weathering. All cuts were circular, 0.12m deep with gently sloping sides in [56], whilst [54] and [58] having steeper sides. The average diameter was 0.20m and all contained the same mid yellow brown silty-clay fill.

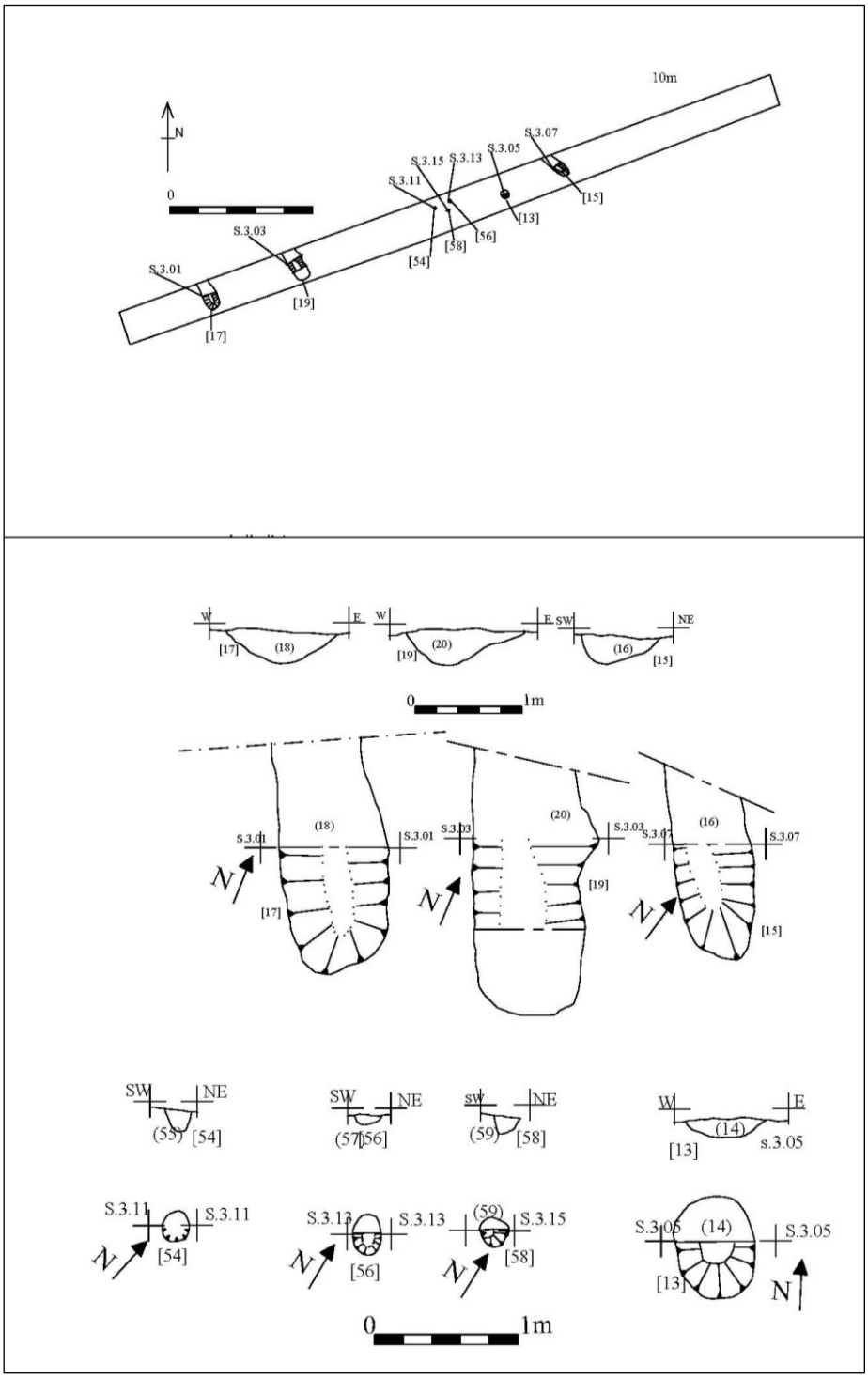

Figure 15: Trench 8. [15], [17], [19]

Trench 12

Orientation: E-W
Length: 49.3m
Width: 2.5m

Interval	0m (W)	10m	20m	30m	40m	49.3m(E)
Topsoil	0.27m	0.27m	0.27m	0.29m	0.30m	0.26m
Subsoil	0.13m	0.14m	0.20m	0.12m	0.15m	0.18m
Top of Natural substratum	0.40m	0.41m	0.47m	0.41m	0.35m	0.43m
Base of trench	0.40m	0.44m	0.47m	0.44m	0.35m	0.43m

Figure 16: Trench 12, Looking east

Contexts: [25] (26), [27] (28) (Figures 17-18)

A well-defined single ditch [27] aligned north-west to south-east measured 0.08m deep onto a flat base. It had a width of 0.64m with fill (28) of a mid yellowish brown plastic silty-clay with sparse rounded pebbles. This was well defined in plan but heavily plough truncated. Less than 0.5 metres away from the ditch was a well-defined post-hole [025] (026) which was just a metre away to the west. It was circular, 0.52m in diameter. It had moderate sides and measured 0.14m deep onto a concave base. The fill was dark yellowish grey silty-clay.

Figure 17: Trench 12, looking north east showing contexts [25] and [27] (0.50m scale)

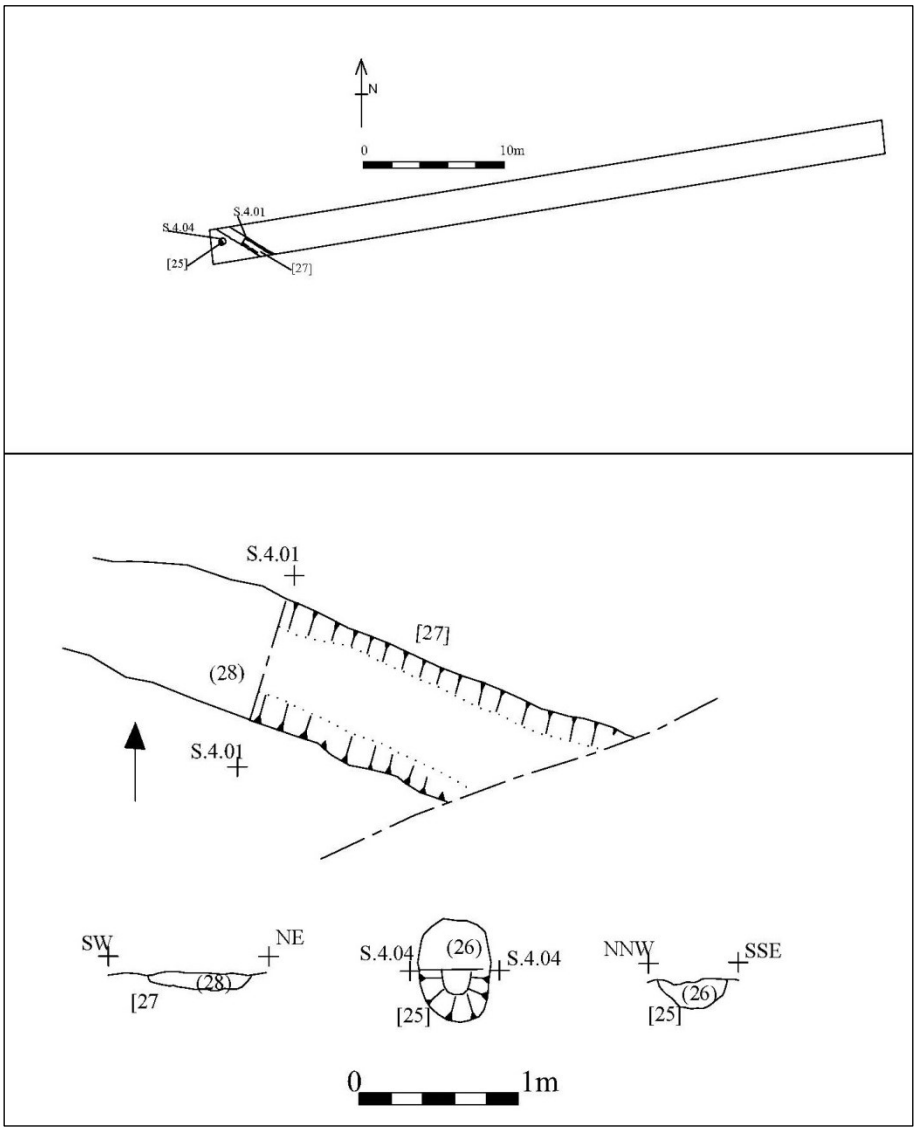

Figure 18: Trench 12. Plans and sections of [25] and [27]

Trench 13

Orientation: NW-SE
Length: 48.2m
Width: 2.5m

Interval	0m (SE)	10m	20m	30m	40m	49.3m(NW)
Topsoil	0.27m	0.23m	0.20m	0.24m	0.23m	0.32m
Subsoil	0.17m	0.27m	0.20m	0.25m	0.23m	0.20m
Top of Natural	0.44m	0.50m	0.40m	0.49m	0.46m	0.62m
Base of trench	0.44m	0.52m	0.43m	0.51m	0.55m	0.80m

Figure 19: Trench 13, Looking west

Contexts: [31] (32)

A single north-east to south-west gully [31], (32) ran across the trench width at the south-east end measured a width of 0.42m with a shallow depth of 0.10m onto a flat base. It had a mottled yellow brown silty-clay.

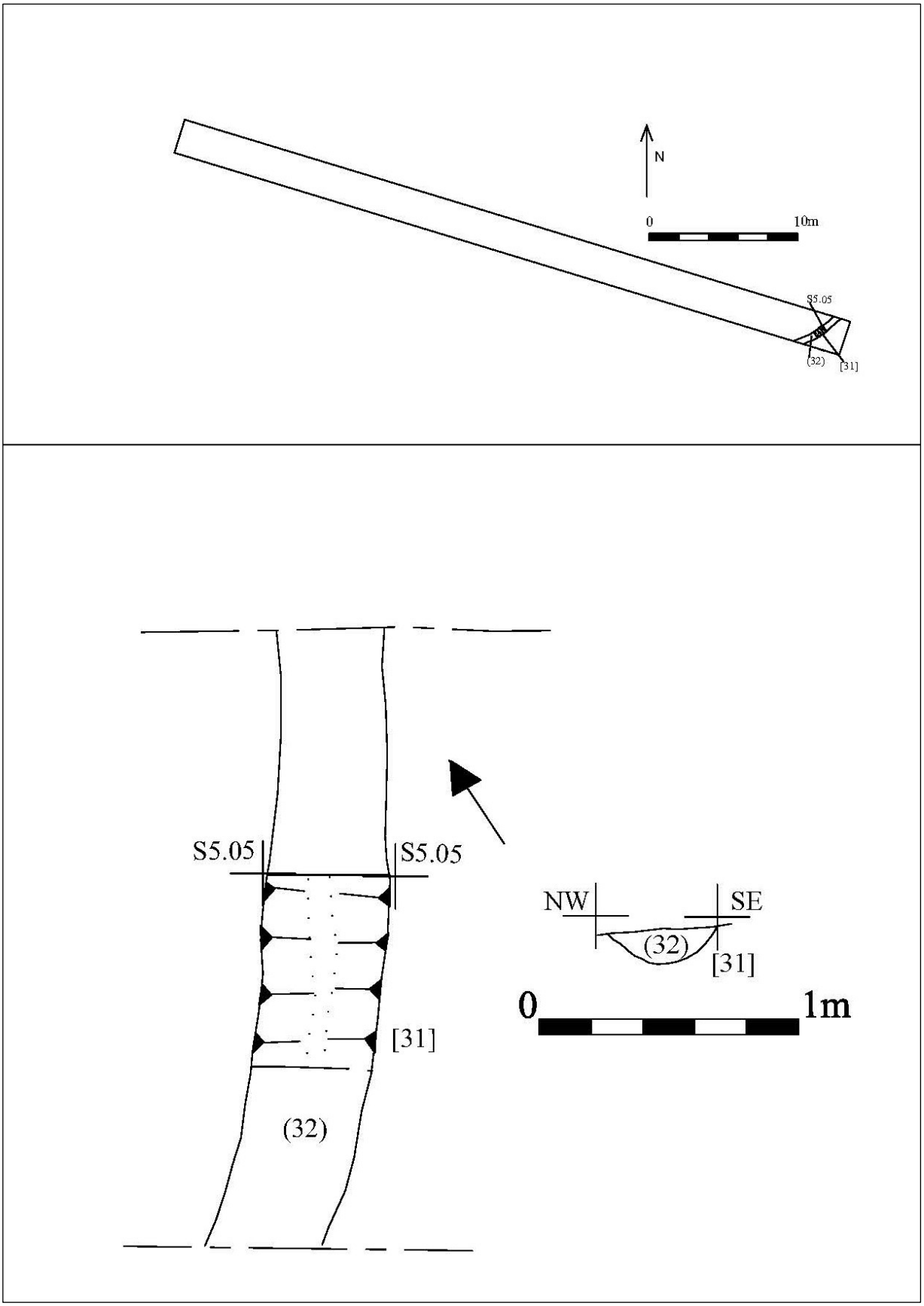

Figure 20: Trench 13. Plan and section of [31]

Trench 15

Orientation: N-S
Length: 42m
Width: 2.5m

Interval	0m (N)	10m	20m	30m	40m	42m (S)
Topsoil	0.30m	0.30m	0.30m	0.35m	0.30m	0.26m
Subsoil	0.31m	0.29m	0.30m	0.29m	0.20m	0.15m
Top of Natural substratum	0.61m	0.59m	0.60m	0.64m	0.50m	0.41m
Base of trench	0.61m	0.63m	0.62m	0.75m	0.60m	0.42m

Figure 21: Trench 15, looking north

No archaeological remains except for an east to west palaeochannel crossing the trench width.

Trench 17

Orientation: E-W
Length: 49m
Width: 2.5m

Interval	0m (E)	10m	20m	30m	40m	49m (W)
Topsoil	0.30m	0.26m	0.25m	0.30m	0.20m	0.20m
Subsoil	0.20m	0.20m	0.12m	0.17m	0.20m	0.10m
Top of Natural	0.50m	0.46m	0.39m	0.47m	0.40m	0.30m
Base of trench	0.50m	0.50m	0.50m	0.47m	0.40m	0.34m

Figure 22: Trench 17. Looking north-east

Contexts: [21] (22), [23] (24) (Figure 17)

Two parallel linear features were evident at the west end of trench 17 orientated north-east to south-east. Ditch [21], (22) had a width of 0.70m with moderate sloping sides measuring a depth of 0.11m onto a flat base. Gully [23], (24) a few metres to the west had a width of 0.50m with shallow sides with a depth of 0.10, also onto a flat base. Both had similar yellowish grey / brown sandy-clay fills with frequent small stones.

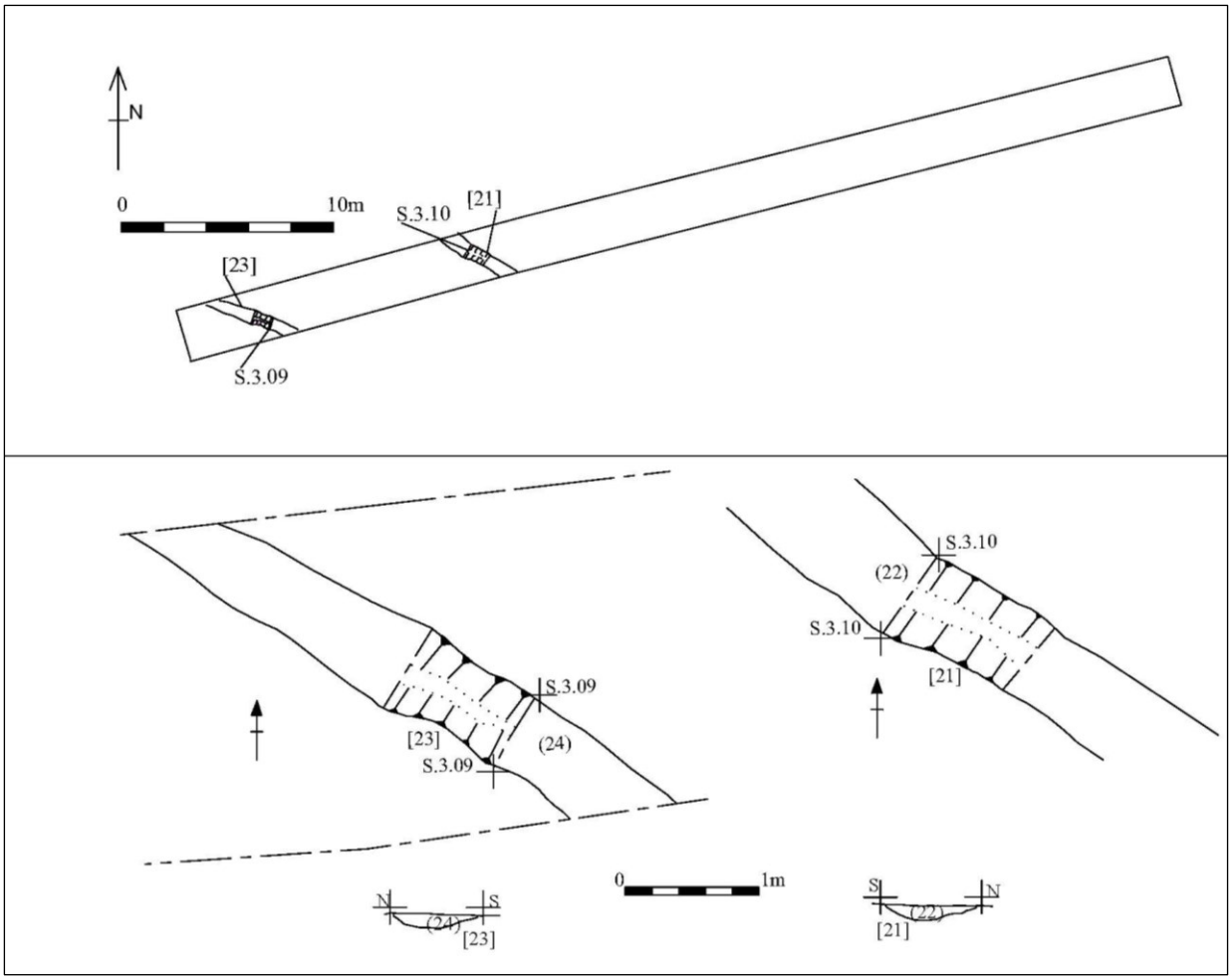

Figure 23: Trench 17. Plans and sections of [21] and [23]

Trench 18

Orientation: N-S
Length: 49m
Width: 2.5m

Interval	0m (N)	10m	20m	30m	40m	49m (S)
Topsoil	0.20m	0.20m	0.25m	0.22m	0.30m	0.28m
Subsoil	0.15m	0.20m	0.15m	0.30m	0.15m	0.12m
Top of Natural substratum	0.35m	0.40m	0.40m	0.52m	0.45m	0.40m
Base of trench	0.35m	0.41m	0.40m	0.56m	0.59m	0.40m

Figure 24: Trench 18. Looking south

No archaeological remains except evidence for tree clearance burning at the north end of the trench

Trench 19

Orientation: E-W
Length: 49m
Width: 2.5m

Interval	0m (N)	10m	20m	30m	40m	48m (S)
Topsoil	0.33m	0.23m	0.33m	0.30m	0.25m	0.30m
Subsoil	0.44m	0.18m	0.17m	0.19m	-	-
Top of Natural	0.47m	0.41m	0.50m	0.49m	0.23m	0.30m
Base of trench	0.47m	0.50m	0.55m	0.49m	0.48m	0.40m

Figure 25: Trench 19. Looking north-west

No archaeological remains except evidence for tree clearance burning at the north end of the trench

Trench 20

Orientation: N-S
Length: 49m
Width: 2.5m

Interval	0m (N)	10m	20m	30m	40m	48m (S)
Topsoil	0.10m	0.25m	0.23m	0.29m	0.20m	0.25m
Subsoil	0.12m	0.12m	0.17m	0.22m	0.23m	0.20m
Top of Natural substratum	0.42m	0.35m	0.40m	0.51m	0.53m	0.45m
Base of trench	0.49m	0.37m	0.44m	0.60m	0.60m	0.45m

Figure 26: Trench 20. Looking south. Clearance burning in centre

No archaeological remains were present except for evidence of tree clearance burning in three locations.

Trench 21

Orientation: SW-NE
Length: 48m
Width: 2.5m

Interval	0m (E)	10m	20m	30m	40m	48m (W)
Topsoil	0.25m	0.27m	0.28m	0.25m	0.25m	0.30m
Subsoil	0.11m	0.11m	-	0.15m	-	-
Top of Natural	0.35m	0.38m	0.28m	0.40m	0.10m	0.10m
Base of trench	0.35m	0.38m	0.31m	0.40m	0.35m	0.32m

Figure 27: Trench 21. Looking west

No archaeological remains other than a modern field boundary crossing the trench width.

Trench 27

Orientation: N-S
Length: 49m
Width: 2.5m

Interval	0m (E)	10m	20m	30m	40m	49m (W)
Topsoil	0.32m	0.34m	0.30m	0.34m	0.30m	0.35m
Subsoil	0.20m	0.20m	0.27m	0.30m	0.34m	0.26m
Top of Natural substratum	0.53m	0.54m	0.57m	0.64m	0.69m	0.61m
Base of trench	0.50m	0.50m	0.50m	0.47m	0.40m	0.34m

Figure 28: Trench 27. Looking north-east

Contexts: [29] (30) (Figure 29)

A single linear feature interpreted as ditch [29], (30) after initially appearing to be of natural origin was orientated north-west to south-east and located at the southern end of trench 27. It had moderately sloping sides which are stepped and becoming very steep measuring a depth of 0.42m onto a narrow, concave base. The width measured 0.80m. The fill was a firm light yellow brown (alluvial) clay with sparse small rounded pebbles.

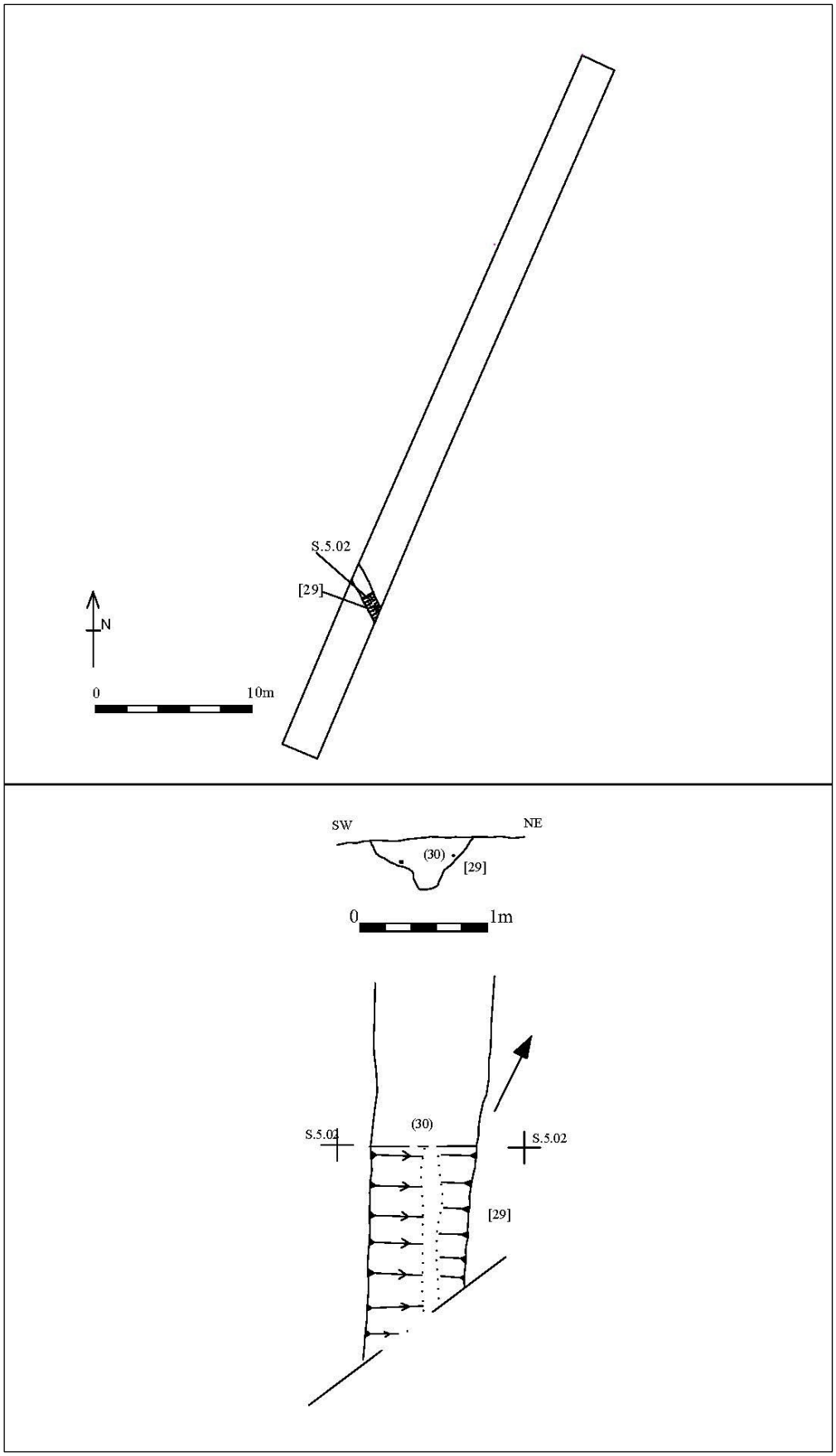

Figure 29: Trench 27. Plan and elevation of [29]

Trench 28

Orientation: NE-SW
Length: 50m
Width: 2.5m

Interval	0m (NE)	10m	20m	30m	40m	50m (SW)
Topsoil	0.25m	0.26m	0.25m	0.27m	0.23m	0.30m
Subsoil	0.15m	0.20m	0.20m	0.22m	0.29m	0.27m
Top of Natural substratum	0.40m	0.46m	0.45m	0.49m	0.52m	0.57m
Base of trench	0.40m	0.46m	0.48m	0.50m	0.52m	0.57m

Figure 30: Trench 28, looking north-east

Contexts: [33] (34), [60] (61) (Figure 32)

Two ditches [33] (34) and [60] (61) were both located at the southwest end of Trench 28. Both had varying profiles with [33] having steep sides onto a 'v' shaped base with a 0.90m width and depth of 0.28m. Ditch [60] is slightly deeper with a depth of 0.38m onto a concave base with a width of 1 metre with moderate sides. Both ditches have slight differences in orientation with [33] aligned east-west and ditch [60] north-west to south-east. Both fills, (34) and (61), were a yellowish brown colour, although (34) differs by having a sandy-clay rather than silty-clay fill as in (61). Both contain sparse small pebbles/ gravel.

Figure 31: Trench 28, Feature [60] looking south-east

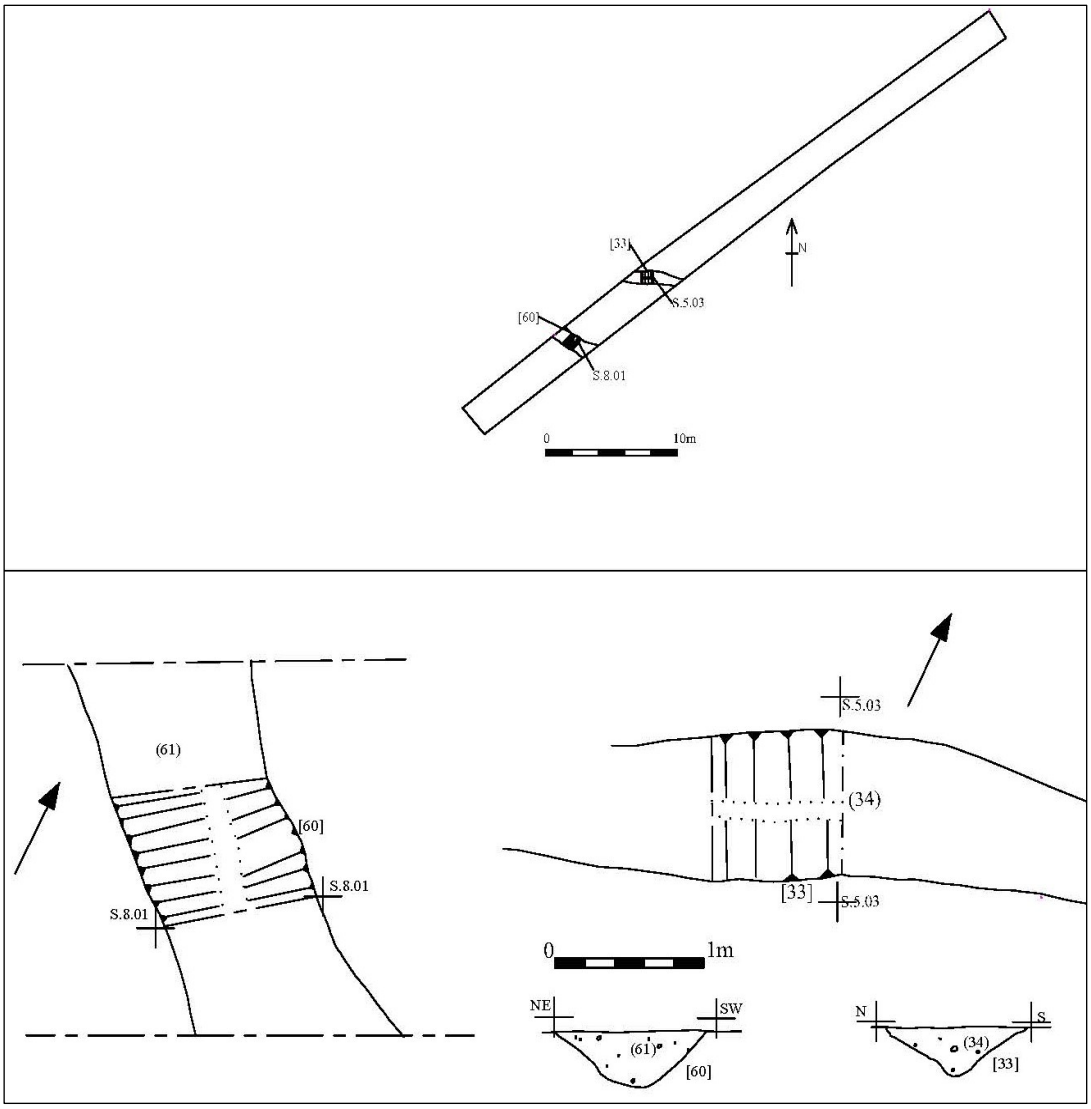

Figure 32: Trench 28. Plans and sections of [33] and [60]

Trench 30

Orientation: NW-SE
Length: 49m
Width: 25m

Interval	0m (NW)	10m	20m	30m	40m	49m (SE)
Topsoil	0.25m	0.27m	0.22m	0.30m	0.20m	0.24m
Subsoil	0.16m	0.21m	0.20m	0.13m	0.17m	0.20m
Top of Natural	0.41m	0.48m	0.42m	0.43m	0.37m	0.44m
Base of trench	0.41m	0.48m	0.45m	0.50m	0.46m	0.50m

Figure 33: Trench 30, looking south-east

Contexts: [35] (36), [37] (38) (Figure 34)

Two post-holes [35] (36) and [37] (38) were situated at the north-western end of Trench 30. Post-hole [35] which was southeast of [37] was the deeper of the two and better defined. It was circular with a diameter of 0.42m and had steep (near vertical sides) measuring 0.24m onto a flat base. Post-hole [37], in contrast, although circular,

had a more shallow side to the northwest which sloped down to the steeper south-eastern side. It had a similar diameter of 0.46m with a depth of 0.14m.

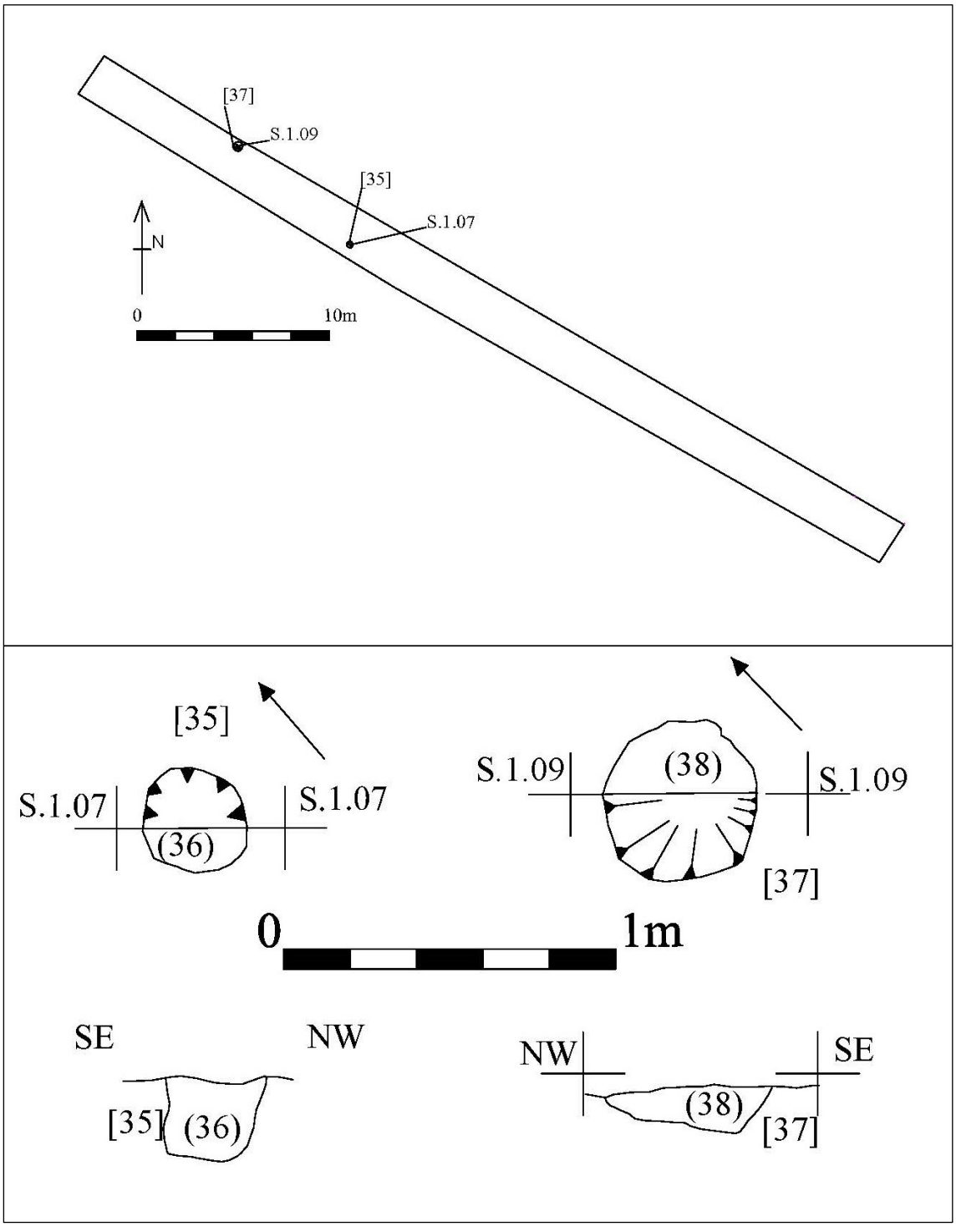

Figure 34: Trench 30. Plans and sections of [35] and [37].

Trench 31

Orientation: E-W
Length: 51m
Width: 2.5m

Interval	0m (W)	10m	20m	30m	40m	51m (E)
Topsoil	0.28m	0.27m	0.20m	0.20m	0.20m	0.25m
Subsoil	0.18m	0.27m	0.25m	0.25m	0.26m	0.20m
Top of Natural substratum	0.46m	0.54m	0.45m	0.45m	0.46m	0.45m
Base of trench	0.46m	0.58m	0.51m	0.52m	0.60m	0.45m

Figure 35: Trench 31, looking north-west

Contexts: [39] (40), [41] (42), [43] (44), [47] (48), [49] (50) (Figure 38)

A well-defined enclosure ditch of three phases was identified forming an 'L' shape at the eastern end of Trench 31. A possible drip gully [47] and [39] is unphased in the sequence. It had a narrow width of 0.30m – 0.60m with a depth of 0.10m – 0.30m and curved round the inside of later ditch phase re-cut [49]. This was curvilinear in shape with [47] having steep sides onto a flat base orientated north-south. It contained a single fill which was a mid yellowish brown clay with moderate pebbles while the slot through the gully [39] further to the east (although the same feature) varied from [47]

having moderately sloping sides onto a 'u' shaped base. Three flint flakes were recovered from the gully fill (40). Although no physical relationship was visible, the drip gully may be the earliest in the sequence. The original ditch cut [41], ran alongside ditch re-cut [43] with only the southern side visible with moderately sloping sides and a concave base. With a width of 0.30m and a shallow depth of 0.10m, the fill (42) was of a yellowish grey silty-clay and only varied in colour from the yellow brown of ditch re-cut fill (44). The latest in the sequence of three, [43] was well defined in plan, had a width of 0.80m with a depth of 0.30m with steep to moderately sloping sides onto a concave base. A sliver of gravel separated [43] from the original ditch [41]. A re-cut was visible in section, suggesting the gravel sloped into re-cut [43].

Figure 36: Trench 31 looking south showing [47] and [49]

Figure 37: Trench 31 looking west showing ditch [41] and re-cut [43]

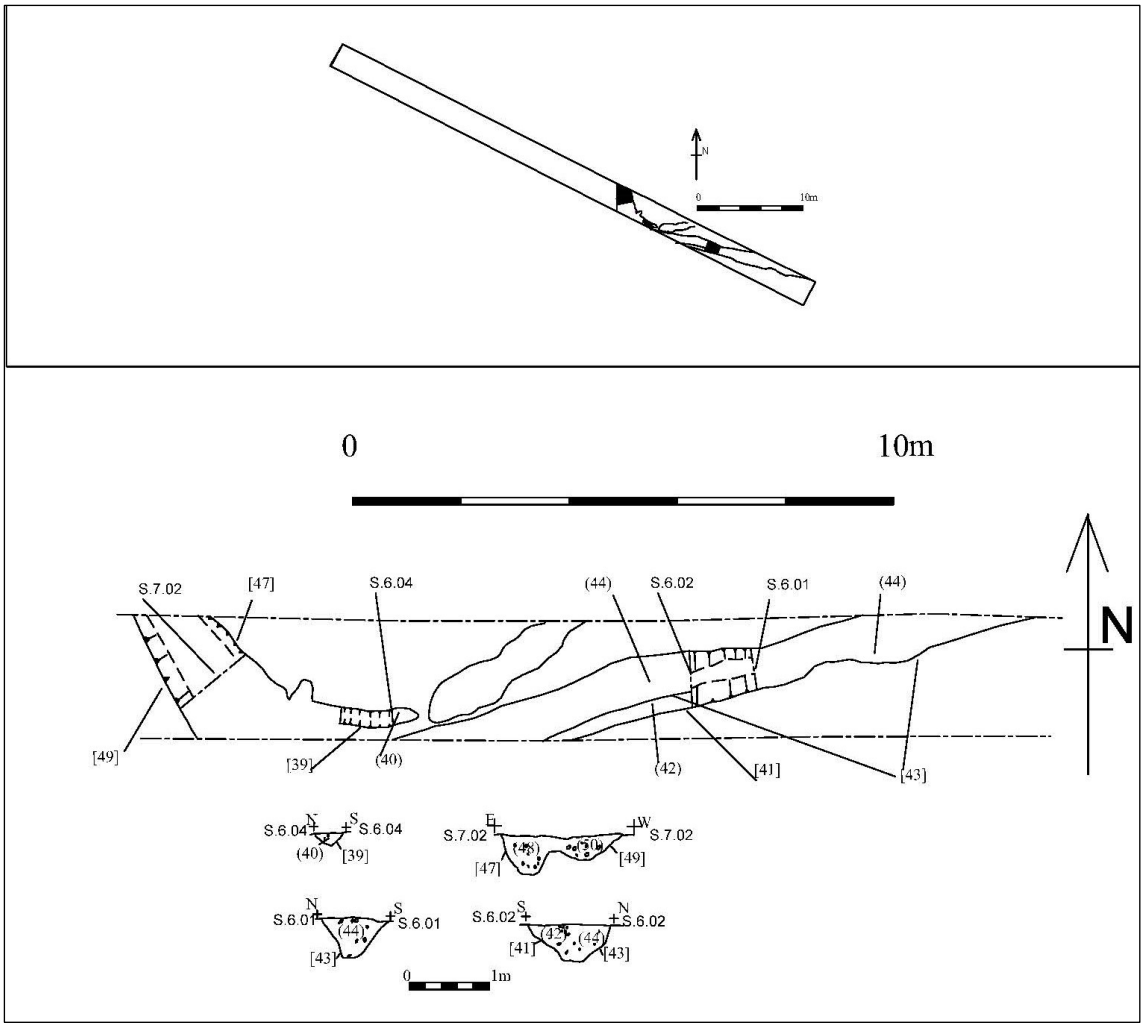

Figure 38: Trench 31. Plan and sections of [39], [41], [43] and [49]

Trench 32

Orientation: SW-NE
Length: 48.70m
Width: 2.5m

Interval	0m (SW)	10m	20m	30m	40m	48.70m (NE)
Topsoil	0.22	0.26	0.22	0.24	0.26	0.30
Subsoil	0.20	0.32	0.24	0.22	0.23	0.20
Top of Natural	0.42	0.58	0.46	0.51	0.49	0.50
Base of trench	0.42	0.62	0.56	0.52	0.50	0.50

Figure 39: Trench 32, looking west

Contexts: [45] (46) (Figure 40)

A single ditch was located in the approximate centre of Trench 32. This had moderately sloping sides with a width of 0.93m and a depth of 0.29m onto a flat base. It was oriented north to south and probably continued into Trench 31 and possibly forms part of the same enclosure. It had the same yellowish brown colour silty-clay as (44) in Trench 31.

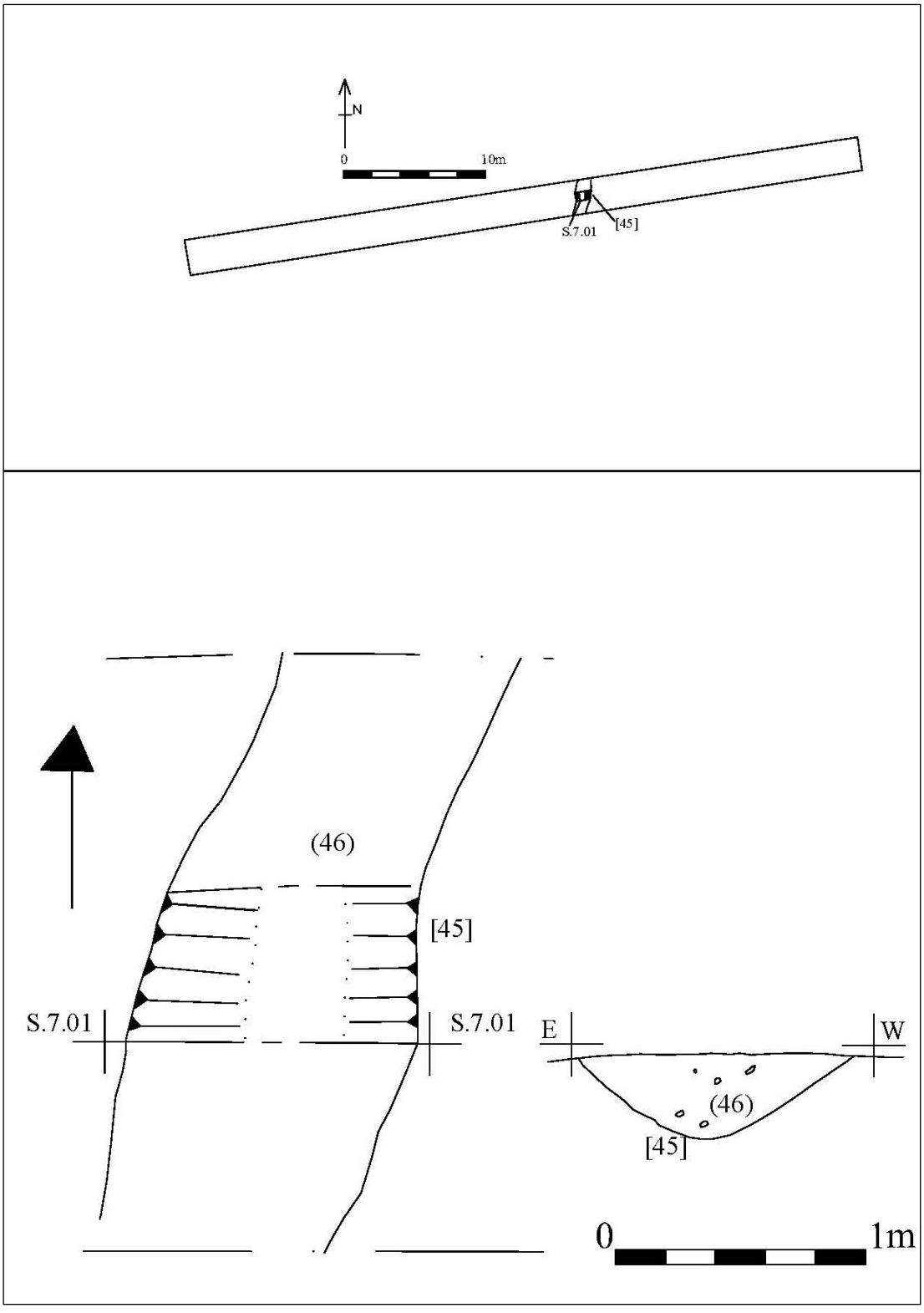

Figure 40: Trench 32. Plan and section of [45].

Trench 34

Orientation: NW-SE
Length: 50m
Width: 2.5m

Interval	0m (NW)	10m	20m	30m	40m	50m (SE)
Topsoil	0.30	0.23	0.26	0.24	0.25	0.30
Subsoil	0.24	0.33	0.26	0.20	0.27	0.20
Top of Natural substratum	0.54	0.58	0.52	0.44	0.52	0.50
Base of trench	0.54	0.72	0.62	0.45	0.53	0.50

Figure 41: Trench 34, looking south-east

Contexts: [85], (86)

A single ditch [85] ran across the centre of the trench and is possibly the same as ditch [45] in Trench 33 which continues into Trench 40 in Phase 8. The sides vary from shallow on the north-west to steep on the south-east onto a 'u' shaped uneven base. The single fill (86) was yellowish brown in colour and consisting of a compacted silty-clay.

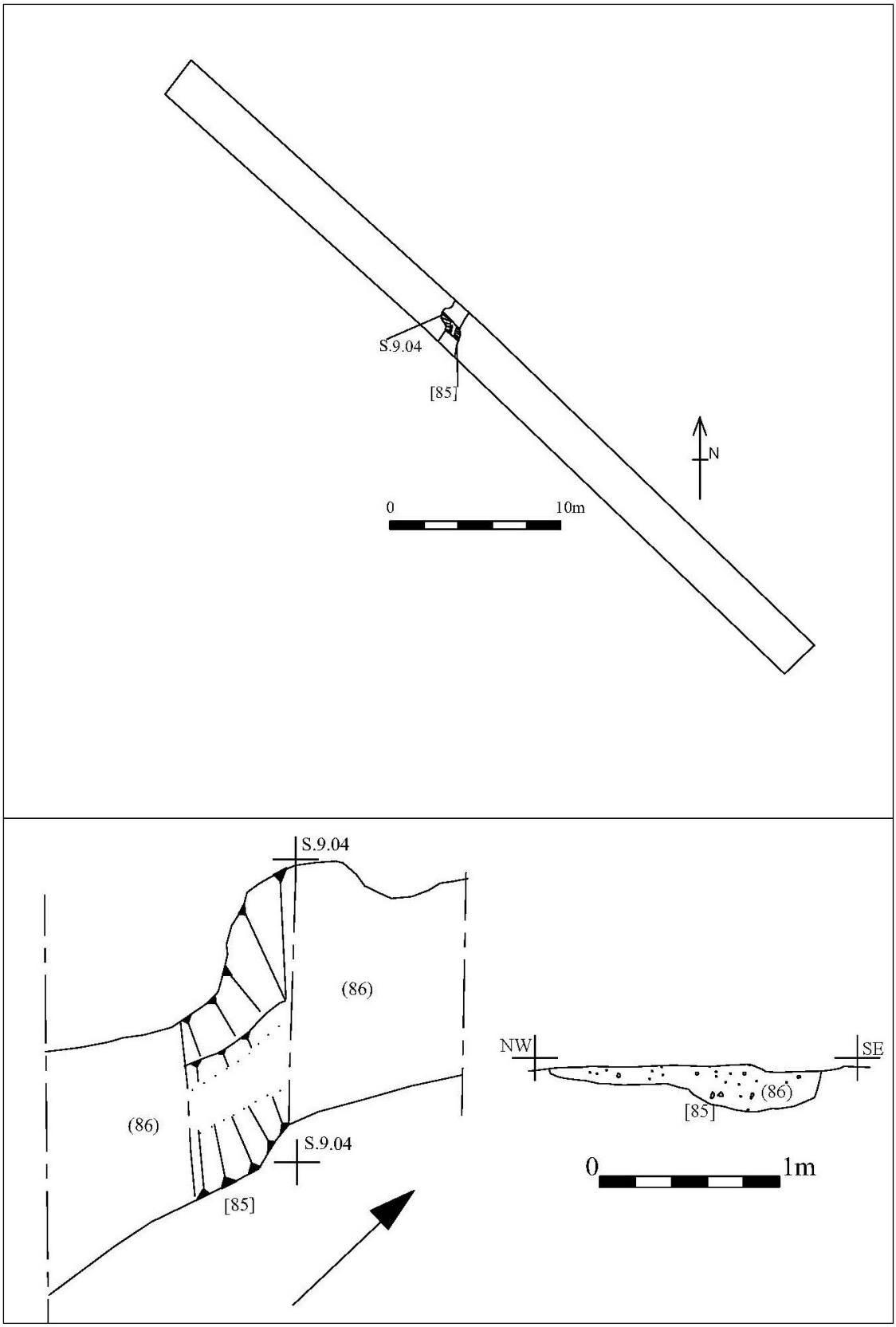

Figure 42: Trench 34. Plan and section of [85]

Trench 36

Orientation: N-S
Length: 50m
Width: 2.5m

Interval	0m (S)	10m	20m	30m	40m	50m (N)
Topsoil	0.30	0.20	0.28	0.24	0.23	0.16
Subsoil	0.09	0.30	0.28	0.29	0.24	0.21
Top of Natural	0.39	0.50	0.56*	0.53*	0.47*	0.37*
Base of trench	0.39	0.50	0.65	0.60	0.59	0.39

*- denotes sub-soil onto to surface of burnt stone feature and palaeochannel alluvial.

Figure 43: Trench 36. Looking North

Contexts: [51], (52), (53) (Figure 46)

At the southern end of trench 36 was a rectangular shaped pit with a north-west to south-east length of 3.7m, partially obscured by the trench baulk. It had shallow sides with a maximum depth of 0.16m onto an uneven base. The fill (52) was reminiscent of burnt mound material consisting of frequent burnt stones with charcoal within a dark grey silty-clay fill. Below this was another similar fill (53) which also consisted of numerous fire cracked pebbles in a dark greyish brown sandy-silt matrix. This feature was sealed by the sub-soil and situated in close proximity to a wide east to west section of palaeochannel running across the trench width. This had an upper light

yellow grey clay deposit. A machine slot was excavated to gain a column sample and reach the base of the channel. However, this proved unsafe due to a depth in excess of two metres without the base being reached and flooding. A bulk sample, (1) and (2), was taken of the channel fill, contexts (68) and (69) respectively, for assessment of the potential for pollen analysis (see below) but the potential was judged to be low.

Figure 44: Trench 36. Burnt stone feature [51] pre-excavation looking south-east (1m scale)

Figure 45: Trench 36. South-west to north-east section across -Burnt stone feature [51]. (1m scale – 20cm divisions)

Figure 46: Trench 36, Excavation of palaeochannel

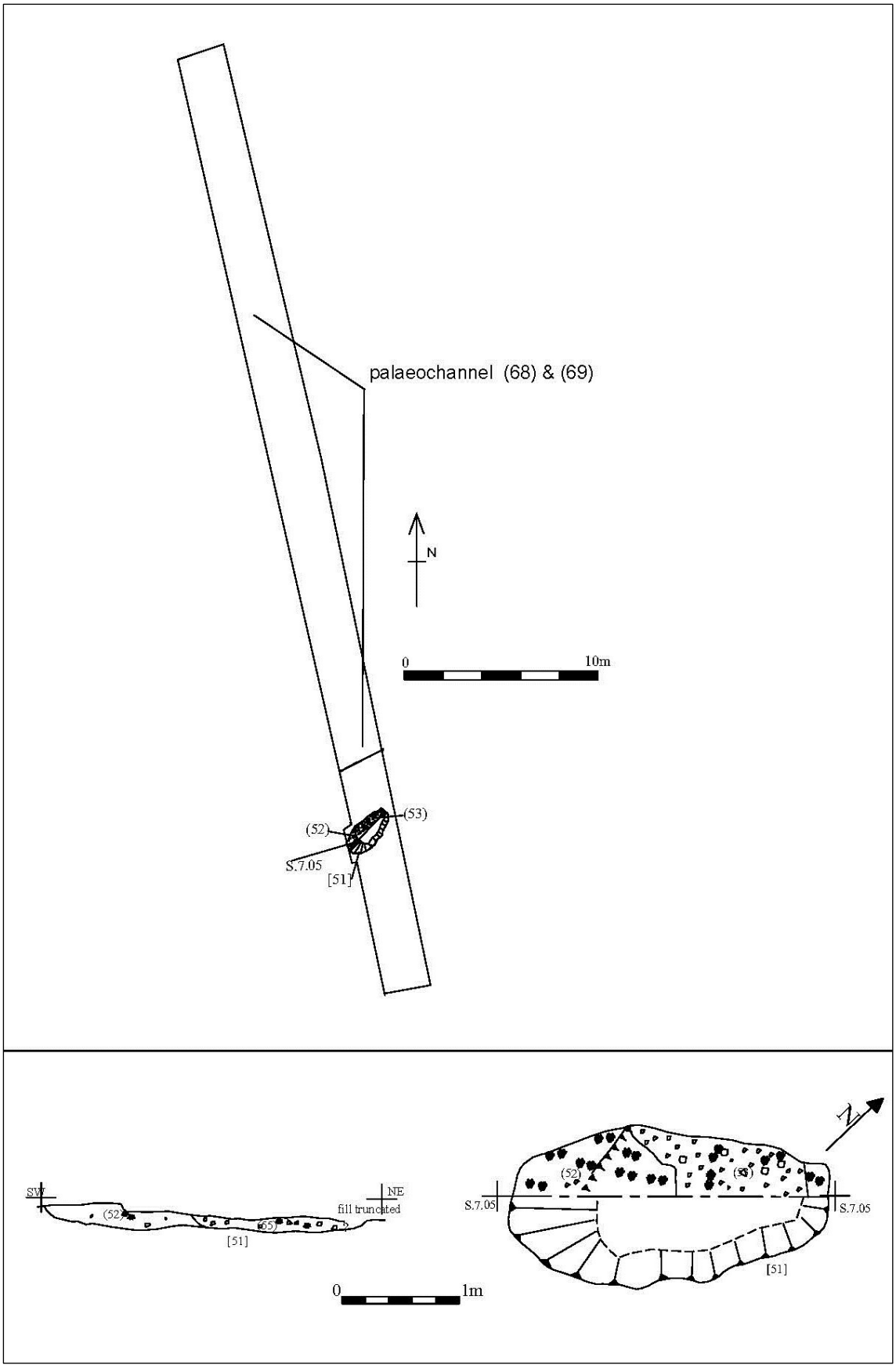

Figure 47: Trench 36. Plan and section of [51]

Trench 37

Orientation: W-E
Length: 50m
Width: 2.5m

Interval	0m (W)	10m	20m	30m	40m	50m (E)
Topsoil	0.29m	0.20m	0.16m	0.19m	0.22m	0.27m
Subsoil	0.20m	0.19m	0.18m	0.24m	0.26m	0.27m
Top of Natural substratum	0.49m	0.39m	0.44m	0.43m	0.48m	0.54m
Base of trench	0.52m	0.42m	0.50m	0.44m	0.62m	0.65m

Figure 48: Trench 37, looking west

Contexts: [73] (74), [75] (76), [77] (78). (Figure 49)

The palaeochannel is orientated north to south in this trench and located at the east end. The geophysical and LiDAR surveys, and aerial photography, indicate that the palaeochannel then continued north into Trench 36, where it curves eastwards. The burnt stone spread [51] appeared to be on the outside meander of the former river. At

the west end of Trench 37, on a slightly higher gravel terrace, was an east-west orientated gully [73]. This was heavily truncated with shallow sides, a width of 0.50m and a depth of 0.18m onto a generally flat base. The two circular post-holes, [75] and [77] to the east of the gully, both had similar diameters, 0.30m, and depth of 0.10m. They were heavily truncated with [77] having shallowly sloping sides with a concave base, while [75], a few metres to the west, had steep sides but a similar concave base. Both contained the same mid orange brown silty-clay with occasional small rounded pebbles.

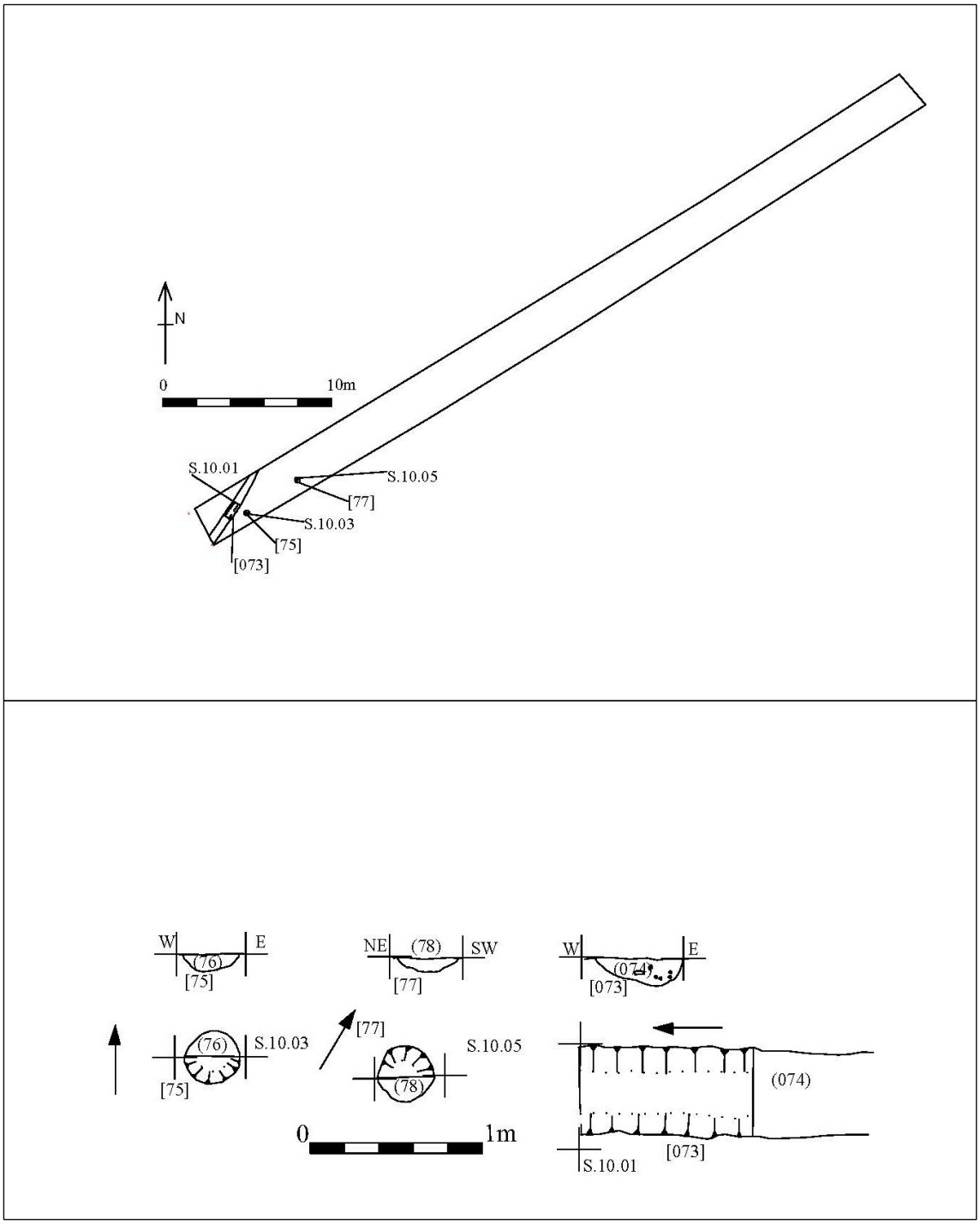

Figure 49: Trench 37. Plans and sections of [73], [75] and [77]

Trench 38

Orientation: SW-NE
Length: 48m
Width: 2.5m

Interval	0m (S)	10m	20m	30m	40m	48m (N)
Topsoil	0.30m	0.24m	0.30m	0.30m	0.30m	0.30m
Subsoil	0.22m	0.32m	0.32m	0.23m	0.24m	0.27m
Top of Natural	0.52m	0.56m	0.62m	0.53m	0.54m	0.57m
Base of trench	0.60m	0.60m	0.70m	0.58m	0.65m	0.75m

Figure 50: Trench 38, looking west

Contexts: [79] (80), [81] (82)

Two small pits were excavated in the north side of the trench, [79] and [81]. Pit [79] was a small shallow subcircular feature with concave base, measuring 0.60mx0.30m and orientated on a N-S alignment. [79] contained a mid yellow brown silty clay fill (80) with rare small pebbles. Approximately one metre north of [79] a larger (0.96mx054m), well defined shallow flat-bottomed pit was recorded at the north-east end of the trench (Figure 50) also on a N-S alignment. It contained a friable mid

yellow brown silty clay fill (82) with small pebbles. No artefacts were recovered from these features and their date is uncertain.

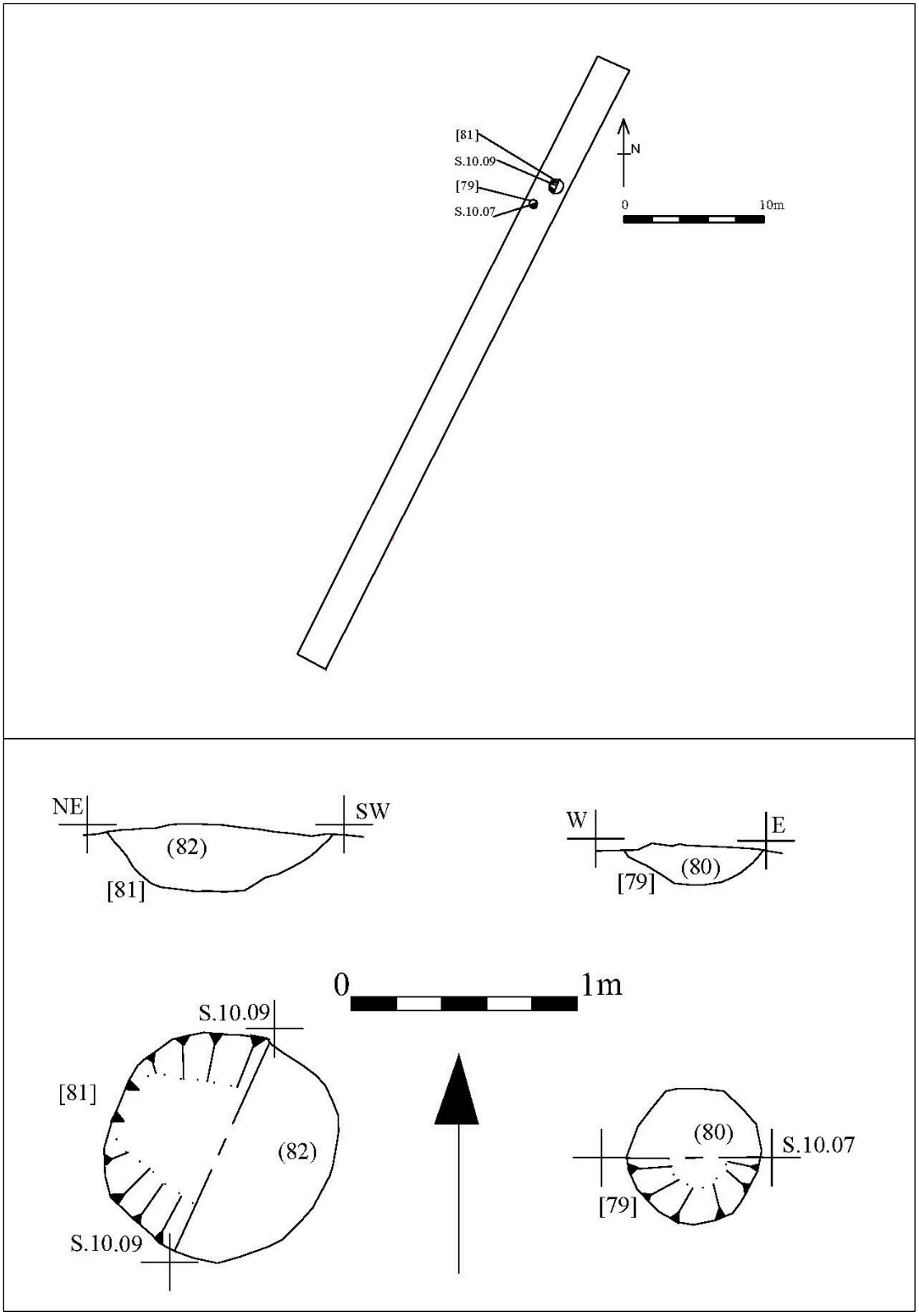

Figure 51: Trench 38. Plans and sections of [79] and [81]

Trench 40

Orientation: SW-NE
Length: 49m
Width: 2.5m

Interval	0m (SW)	10m	20m	30m	40m	49m (NE)
Topsoil	0.20m	0.30m	0.28m	0.31m	0.40m	0.40m
Subsoil	0.15m	0.22m	0.12m	0.21m	0.23m	0.10m
Top of Natural substratum	0.35m	0.52m	0.40m	0.52m	0.63m	-
Base of trench	0.36m	0.60m	0.60m	0.61m	0.67m	0.86m

Figure 52: Trench 40, looking north-east

Contexts: [62] (63), [64] (65) (Figure 54)

Appearing as a wide ditch in plan, following excavation it was identified as two shallow ditches orientated north to south across the trench. No clear relationship could be defined as the two fills were the same yellowish brown sandy-clay. Ditch [62] which ran along the eastern side of [64] had moderate to steep sides onto a 'V' shaped base. It was 0.44m wide and 0.29m deep. Ditch [64] was wider at 0.74m but shallower with a depth of 0.19m onto a flattish base. The ditch appears to continue to the hedgerow and into Phase 9 and may represent a long boundary ditch running from Phase 6 to the west connecting enclosures.

Figure 53: Trench 40, looking north-east, showing [64] and [62]

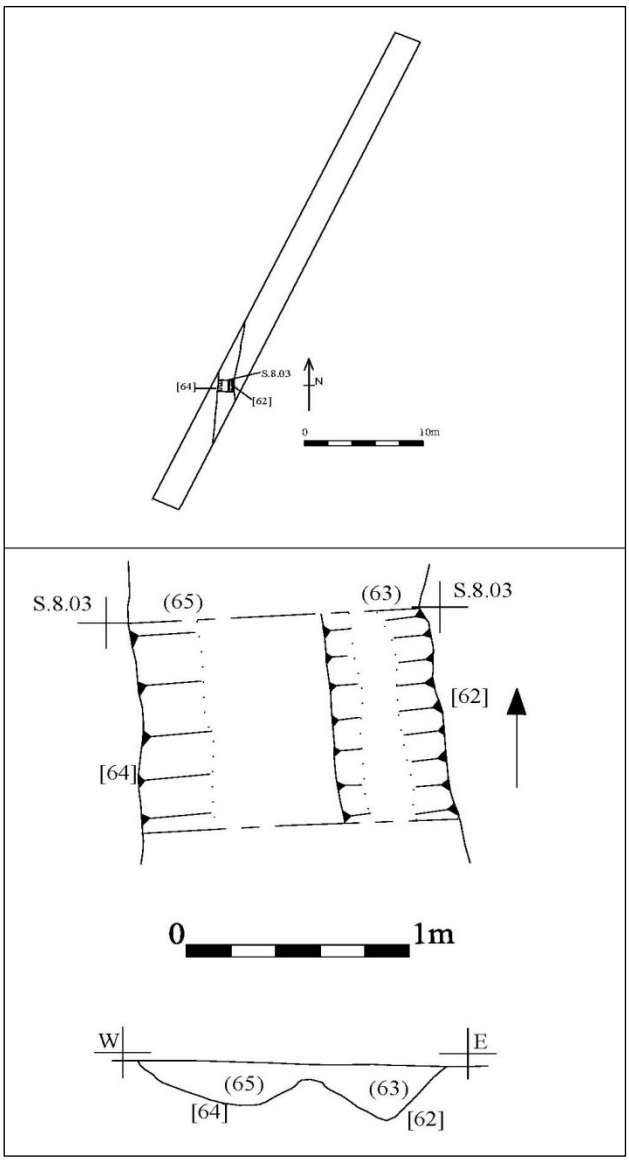

Figure 54: Trench 40. Plan and section of [62] and [64]

Trench 47

Orientation: S-N
Length: 49m
Width: 2.5m

Interval	0m (S)	10m	20m	30m	40m	49m (N)
Topsoil	0.35m	0.29m	0.28m	0.26m	0.25m	0.25m
Subsoil	0.41m	0.16m	0.20m	0.19m	0.20m	0.17m
Top of Natural	0.76m	0.45	0.49m	0.47m	0.46m	0.42m
Base of trench	0.81m	0.56m	0.59m	0.50m	0.49m	0.49m

Figure 55: Trench 47, looking north

Contexts: [66] (67) (Figure 56)

A narrow truncated gully orientated north to south with moderate to steep sides was located in the southern half of Trench 47. This had a width of 0.35m and a depth of 0.16m onto a concave base. The fill consisted of a compacted orange brown sandy-clay with very frequent gravel/small pebbles.

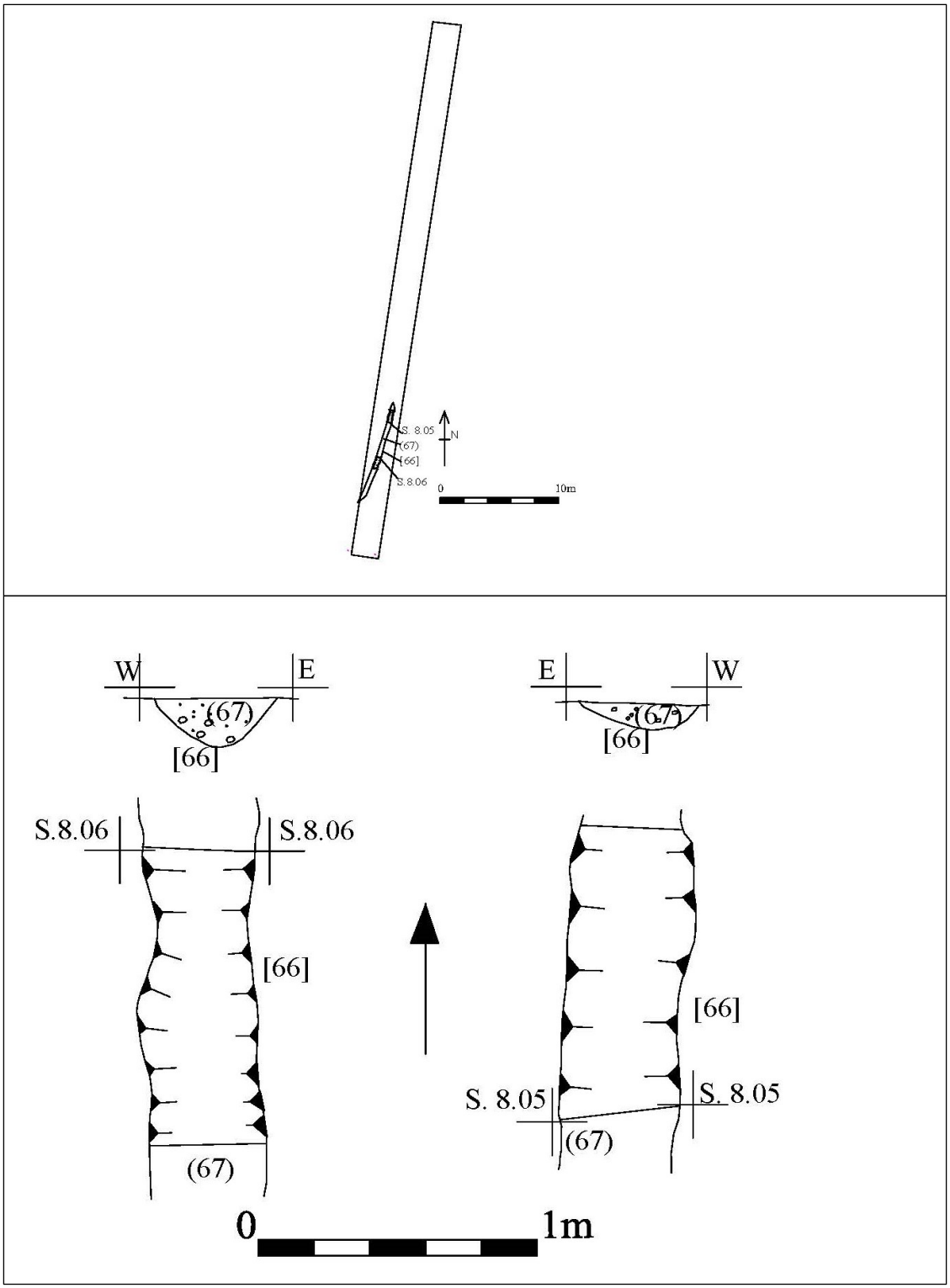

Figure 56: Trench 47. Plans and sections of [66]

Trench 51

Orientation: NE-SW
Length: 50m
Width: 2.5m

Interval	0m (NE)	10m	20m	30m	40m	50m (SW)
Topsoil	0.30m	0.32m	0.25m	0.30m	0.25m	0.24m
Subsoil	0.32m	0.27m	0.32m	0.17m	0.44m	0.30m
Top of Natural substratum	0.62m	0.59	0.57m	0.47m	0.69m	0.54m
Base of trench	0.67m	0.62m	0.60m	0.47m	0.86m	0.54m

Figure 57: Trench 51, looking North

An un-excavated heavily truncated gully which continued north from Trench 47 may be the same as [66].

Trench 52

Orientation: W-E
Length: 50m
Width: 2.5m

Interval	0m (W)	10m	20m	30m	40m	50m (E)
Topsoil	0.26m	0.24m	0.27m	0.30m	0.29m	0.20m
Subsoil	0.40m	0.40m	0.42m	0.30m	0.22m	-
Top of Natural substratum	0.66m	0.64	0.69m	0.60m	0.51m	0.20m
Base of trench	0.70m	0.96m	1.0m	0.79m	0.66m	0.30m

Figure 58: Trench 52, looking East

No archaeological remains were present although an north to south orientated palaeochannel crossed the western half of the trench.

Trench 55

Orientation: NE-SW
Length: 50m
Width: 2.5m

Interval	0m (NE)	10m	20m	30m	40m	50m (SW)
Topsoil	0.30m	0.35m	0.25m	0.22m	0.20m	0.26m
Subsoil	0.30m	0.22m	0.25m	0.40m	0.20m	0.10m
Top of Natural substratum	0.60m	0.59m	0.50m	0.62m	0.40m	0.36m
Base of trench	0.80m	0.77m	0.80m	0.94m	0.41m	0.39m

Figure 59: Trench 55, looking north-east

No archaeological remains were present although a south-east to north-west orientated palaeochannel crossed the north–east half of the trench.

Trench 61

Orientation: S-N
Length: 50m
Width: 2.5m

Interval	0m (S)	10m	20m	30m	40m	50m (N)
Topsoil	0.30m	0.28m	0.30m	0.24m	0.34m	0.24m
Subsoil	0.26m	0.23m	0.20m	0.20m	0.12m	0.12m
Top of Natural substratum	0.56m	0.51m	0.56m	0.44m	0.46m	0.36m
Base of trench	0.56m	0.54m	0.52m	0.45m	0.49m	0.41m

Figure 60: Trench 61, looking North

No archaeological remains were present although an east to west orientated palaeochannel crossed the north end of the trench.

Trench 62

Orientation: N-S
Length: 49m
Width: 2.5m

Interval	0m (N)	10m	20m	30m	40m	49m (S)
Topsoil	0.24m	0.29m	0.26m	0.31m	0.24m	0.21m
Subsoil	0.18m	0.13m	0.20m	0.20m	0.22m	0.10m
Top of Natural substratum	0.42m	0.42m	0.46m	0.51m	0.46m	0.31m
Base of trench	0.52m	0.50m	0.49m	0.60m	0.52m	0.38m

Figure 61: Trench 62, looking south

Contexts: [70] (71) (72) (Figures 62-63).

In the southern half of this trench was a large pit [70], which was clearly visible. In order to place this pit in context, the trench was extended eastwards to ascertain whether this pit formed part of an alignment. Although the extension was wide enough to cover all angles of direction, the exercise proved negative with the pit seemingly isolated. The pit was sub-circular with vertical sides with a maximum diameter of 1.64m north to south and it was 0.32m deep on to a flat base.

It consisted of two fills: the upper fill (71) was of a dark reddish brown loose silty-sand with frequent charcoal flecks and gravel. This contained a number of well-preserved Carinated Bowl sherds of early Neolithic date (see Appendix II). The fill

also contained worked flint and animal bone. The lower fill (72) consisted of reddish brown loose silty-sand with frequent gravel but contained no charcoal. No finds were recovered from this fill. In view of the presence of early Neolithic pottery, this pit was fully excavated with more pottery, flint, and bone being recovered.

Figure 62: Trench 62, showing half sectioned pit [70]

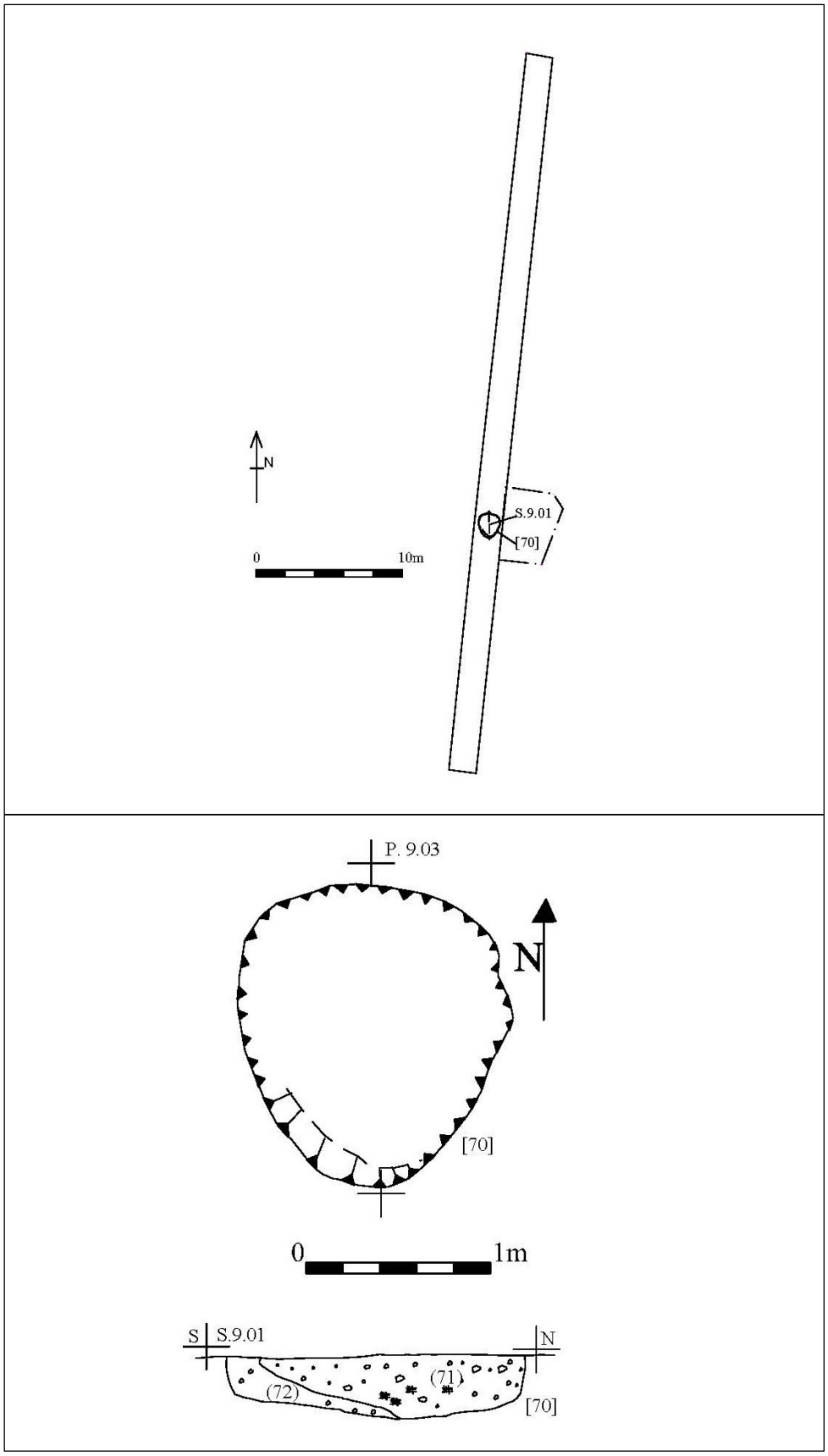

Figure 63: Trench 62. Plan and section of [70].

Trench 63

Orientation: SE-NW
Length: 50m
Width: 2.5m

Interval	0m (SW)	10m	20m	30m	40m	50m (NE)
Topsoil	0.33m	0.34m	0.26m	0.27m	0.20m	0.21m
Subsoil	0.10m	0.27m	0.23m	0.27m	0.26m	0.15m
Top of Natural Substratum	0.43m	0.61m	0.59m	0.49m	0.46m	0.36m
Base of trench	0.43m	0.80m	0.62m	0.54m	0.48m	0.52m

Figure 64: Trench 63, looking north-west

No archaeological remains were present although east to west orientated palaeochannel crossed the western half of the trench.

Trench 67

Orientation: SW-NE
Length: 30m
Width: 1.5m

Interval	0m (SW)	5m	10m	15m	20m	25m	30m (NE)
Topsoil	0.30m	0.30m	0.30m	0.30m	0.33m	0.32m	0.24m
Subsoil	0.30m	0.30m	0.28m	0.27m	0.14m	0.20m	0.20m
Top of Natural substratum	0.60m	0.60m	0.58m	0.57m	0.47m	0.52m	0.48m
Base of trench	0.60m	0.62m	0.58m	0.63m	0.47m	0.52m	0.48m

Figure 65: Trench 67, looking south-east

Contexts: [83] (84) (Figure 67)

This trench represents one of the six additional 30m trenches, and the only one to contain archaeological remains, a pit [83] having some similarities to pit [70] in trench 62, and seemingly quite isolated. However unlike [70], this pit contained no pottery in the half excavated deposit. It was situated at the north-eastern end of trench 67 running into the trench baulk. It had a maximum diameter of 1.50m north-east to south-west with a depth of 0.30m and was sealed by the sub-soil. It was circular in shape with moderate sides onto a concave base. The fill consisted of a dark orange brown loose sandy-silt with sparse rounded pebbles.

Figure 66: Trench 67, showing pit [83]

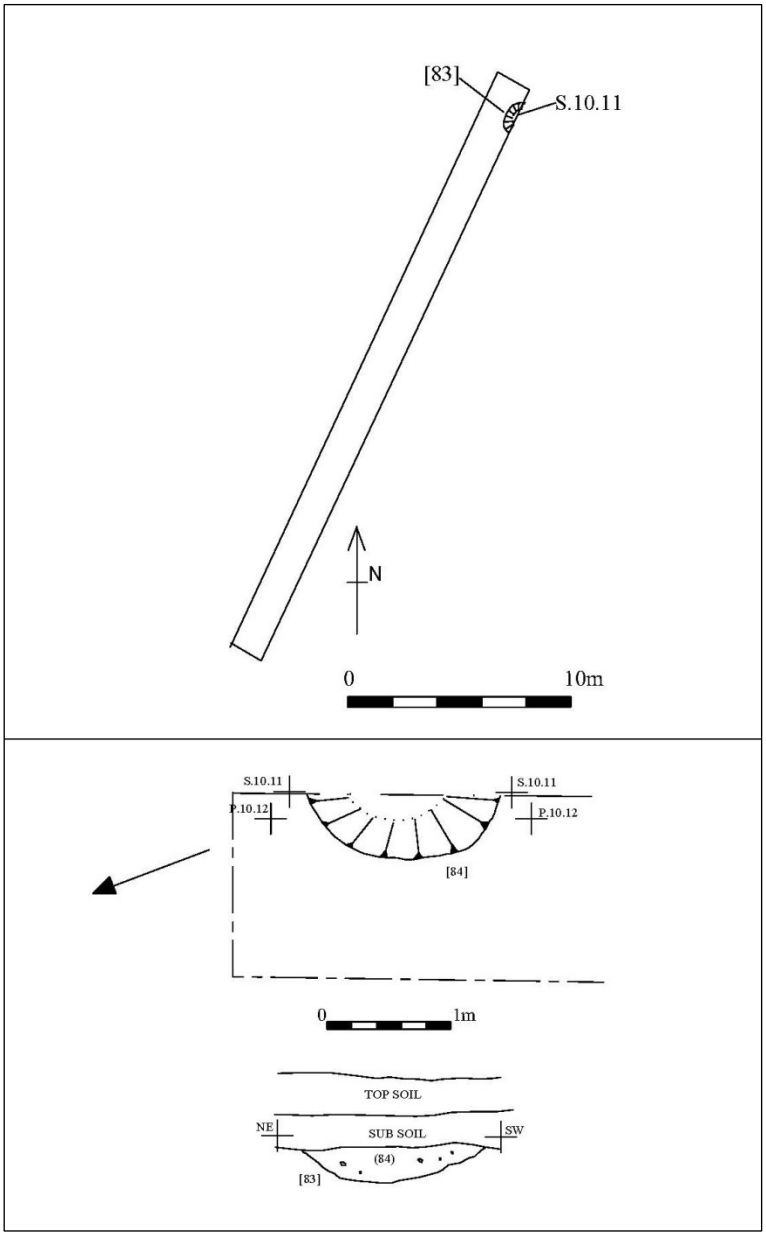

Figure 67: Trench 67. Plan and section of [83]

6.1. *The Early Neolithic Pottery* *Nicholas J. Cooper*

A fragmentary assemblage of 51 sherds (140g) belonging to a single Carinated Bowl was recovered from Pit [70] (71). Forty of the sherds came from hand excavation and a further 11 from the sieving of bulk samples. The pottery is associated with an assemblage of fresh flint flakes, a little poorly-preserved animal bone and some charred plant remains.

The vessel is manufactured in a fabric opened with angular, crushed white pebble quartz up to 5mm (Leicestershire prehistoric fabric Q5; Marsden 2011, 62) and is typical of the material found in the Trent Valley, for example at Aston on Trent (Gibson 2012, 91) , and also upstream on the Soar at Temple Grange, Rothley (Cooper 2015, 14). Both the internal and external surfaces of the vessel have been smoothed or lightly burnished and there is one sherd from the rim which is out-curving and slightly angled and rolled into a tapering bead at the tip, in a similar fashion to a vessel from Temple Grange (Cooper 2015, 16, fig.13.1). Carinated Bowl is the earliest pottery tradition in Britain and the review of the radiocarbon dating places it in the period *c*. 4000- 3500 BC (Gibson 2012, 96). Alongside the slight later 'modified' Carinated Bowl assemblage from Temple Grange, this could be the earliest Neolithic assemblage from the county.

6.2. *The Flint* *Lynden Cooper*

The small assemblage of 26 items cannot be used to provide a specific date as the group has no formal tools. Twenty-two pieces (84.6%) were from a pit [70] associated with early Neolithic pottery which is not inconsistent with the lithics although the bladelet technological indications suggest that there may be evidence of some Mesolithic activity.

Table 2 Flint

Context	ID	No
(71) [70]	Bladelet	1
(40) [39]	2ry Flakes	3
(71) [70]	2ry Bladelet	1
(71) [70]	2ry Bladelet Burnt	1
(71) [70]	Flake Frag Calcined	1
(71) [70]	2ry Flake	1
(71) [70]	3ry Flake	1
(71) [70]	Shatter	1
(u/s)	Core (very crude)	1
(71) [70]	Flake Frag	6
(71) [70]	2ry Flake	3
(71) [70]	Core	1
(71) [70]	2ry Bladelet	2
(71) [70]	Chip	1
(71) [70]	Bladelet Frag	1
(71) [70]	3ry Blade	1

6.3. *The Animal Bone* *Jennifer Browning*

Animal bone was recovered from a single feature, (71) [70] associated with early Neolithic pottery in Trench 62. The bone was very poorly preserved; it had not retained its shape and was desintegrating into small splinters. Tooth enamel representing an ungulate molar, probably cattle, was identified within the assemblage and it is likely that most of the fragments consist of degraded tooth enamel. The assemblage indicates that the soil conditions at the site do not favour bone preservation. Further excavation is unlikely to produce an assemblage suitable for analysis, unless features with different burial environments are found e.g. waterlogged.

6.4. *The charred plant remains* *Rachel Small*

Introduction

This report presents the study of the charred plant remains recovered from environmental samples taken during the evaluation. Three samples were considered: samples 4 (52) and 5 (53) were taken from an undated burnt feature and sample 3 (71) from a pit [70] associated with Early Neolithic pottery. Plant remains, which may include cereal grains, chaff, and weed seeds, provide evidence for past food production, consumption, agricultural practice and environment.

Method

One part of each sample, approximately ten litres, was processed in a York tank using a 0.5mm mesh with flotation into a 0.3mm mesh sieve. The flotation fractions (flots) were transferred into plastic boxes and left to air dry and they were then sorted for plant remains using a x10-40 stereo microscope. The residues were also air dried and the fractions over 4mm (coarse fraction) sorted for all finds. The fractions under 4mm (fine fraction) were examined for plant remains and small bones. Plant remains were identified by comparison to modern reference material available at ULAS and names follow Stace (1991).

Results

Modern rootlets were present in the samples and worm egg-shell capsules in sample 5 (53) which suggests the contexts had been disturbed. Charcoal fragments, over 2mm in length, were common. A charred seed, possibly chickweed (*Stellaria media* L.), was found in sample 3 (71), and this plant typically grows on cultivated soils. Pot, worked flint and bone were retrieved from the coarse fraction of sample 3 (71).

Discussion

The charcoal fragments are large enough in size to be dated using radio-carbon methods (pers. comm. Graham Morgan 2015). Lockington is typical of Neolithic sites in the East Midlands; generally, plant remains are absent or present in very low numbers (Monckton 2006). It is recommended that a suitable sampling strategy is implementation if further excavation is carried out at the site or in the vicinity.

6.5. *Pollen presence/absence assessment* *Suzi Richer*

Summary

Four subsamples were examined from bulk samples taken through palaeochannel deposits from an excavation at Lockington, Leicestershire. Pollen within the sample was not preserved in a sufficient state or concentration to be able to draw any firm interpretations about the site.

Aims

The aims of the pollen presence/absence assessment were to determine the state of preservation, type, and quantity of remains recovered from the samples and information provided from palaeochannel in trench 36. This information will be used to assess the importance of the pollen remains.

Sampling policy

Bulk samples were taken from deposits considered to be of potential for the recovery of pollen by the excavator from contexts (68), (69), (71), (52) and (53). Subsamples were taken from four of the bulk samples, with sample 3, context (71), being excluded because the sediment was not deemed to be conducive to pollen survival.

Processing and analysis

Where preservation allows, a presence/absence assessment was undertaken whereby the preservation, abundance and predominant taxa in each sample were noted.

Four pollen samples of $2cm^3$ were selected. The samples were submitted to the laboratories of the Department of Geography and Environment at the University of Aberdeen for chemical preparation following standard procedures as described by Barber (1976) and Moore *et al.* (1991). The full methodology is described in Appendix 1.

A GS binocular polarising microscope at x400 magnification was used and identification was aided by the pollen reference slide collection maintained at the Worcestershire Archaeology office, and the pollen reference manuals by Moore *et al* (1991) and Beug (2004). Nomenclature for pollen follows Stace (2010) and Bennett (1994).

Fungal spores and parasite ova were noted with rapid identification being undertaken to genus level. Identifications were aided through reference material maintained at the Worcestershire Archaeology office and reference manuals, Kirk *et al.* (2008) and Grant-Smith (2000).

Pollen results

The results of the pollen analysis are summarised in Table 3.

Table 3 Summary of pollen survival

Subsample	Context	Pollen present	Pollen abundance	Pollen preservation	Observed taxa
[1]	68	Yes	Very low	Good	Poaceae, microcharcoal.
[2]	69	Yes	Extremely low	Good	Poaceae (single grain observed).
[3]	52	No	N/A	N/A	N/A
[4]	53	No	N/A	N/A	N/A

Preservation and abundance

Pollen was preserved within subsamples 1 and 2, but in extremely low numbers, with only one pollen grain being noted in sample 2. This pollen was well preserved, suggesting it was of local origin and not re-deposited (Tipping 2000), however its low quantity would preclude full analysis where counts of 300 land pollen grains are required.

Vegetational history and human activity

Given that so few pollen grains were noted, it is not possible to draw any firm conclusions about the nature of the local and/or regional environment or human activity. However, this limited pollen evidence, grass (*Poaceae*), is suggestive of an open environment.

Conclusion

Four subsamples were examined from bulk samples taken through palaeochannel deposits from Trenches 36 and 62. Pollen within the samples was not preserved in a sufficient state or concentration to be able to draw any firm interpretations about the site.

Recommendations

No further work is recommended based on the poor level of pollen survival.

7. Discussion

The trial trench evaluation did locate some dispersed archaeological remains.

The earliest and most significant discovery was of pit [70] associated with early Neolithic pottery. Although the fieldwalking survey at the neighbouring Fulcrum site, outside the evaluation area, recorded prehistoric flint scatters (SMR 42 NE BJ), little was recovered during excavation, with the exception of pit [70]. Lithic scatters often only show in the plough soil with no surviving prehistoric features as a consequence of repetitive ploughing (Lisboa 2015). This is typical of most lithic scatters in Britain which have resulted from discard over long periods of time resulting in a 'background noise' of lithic material (Schofield 1991; English Heritage 2000).

The trenching exercise confirmed the geophysical and LiDAR surveys' findings of palaeochannels, revealed for example in Trenches 37 and 36 which were associated with adjacent heavily truncated features. Of particular interest was a dense

concentration of fire cracked stones / fragments clearly defined within a dark filled shallow sub- rectangular shaped shallow pit, [51] having some affinities with a burnt mound with a burnt stone deposit. Similar pits have been found at the Stretton Extension, Willington Quarry (Morris and Beamish 2013). Four subsamples were examined from bulk samples taken through palaeochannel deposits from Trench 36. Pollen within the samples was not preserved in a sufficient state or concentration to be able to draw any firm interpretations about the site.

Trenches 18, 19, and 20 showed the presence of tree clearance burning. No other clearance burning was found outside these trenches and they may continue outside the area to the east, possibly towards trench 36 and the meander of the palaeochannel revealed in Trenches 37 and 36. No archaeological or artefactual evidence was located in Trenches 7, 19, 21, 22, and 23 within the magnetometer survey area with exception to clearance burning in Trench 19.

Although many of the trenches were not targeting anything specific, a broad range of archaeological remains in the form of ditches, gullies, pits, and post-holes were dispersed thinly across Phase 6. In terms of the trench results, the archaeological remains are mainly within the western half of Phases 6 and 8 with some discrete features in the eastern half. An obvious reason for this would be the extensive palaeochannel activity and probable associated flooding which would make it increasing difficult to work the land and therefore be avoided for settlement. However although there was some potential identified on the westernmost of one of the nine raised gravel islands aligned along the southern margin of the northernmost stream in Phase 8 sizable enough for settlement (Lisboa 2015), nothing of significance was revealed. It is possible that any remains on this gravel terrace may have been eroded/ ploughed away. Plough erosion was evident for the few scattered shallow features, notably in Phase 8.

In general, the archaeological features were undated and with the exception of pit [70], no other artefacts were recovered from the evaluation. These features included field system ditches, stock enclosures, isolated pits, and post-holes, mostly disturbed by truncation. While evidence of land management was evident during excavations at Lockington Quarry Phase 5 excavations at Warren Lane, that was a more complex arrangement with extensive stock enclosures linked by a droveway (Thomas 2011). Here the absence of finds suggests a more remote field system away from the core settlement. Similar remains may be indicated by linear crop marks identified in Phases 7 and 9 which have been interpreted as field systems associated with cattle enclosures linked to the Romano-British Villa (**SM126**) north of Ratcliffe Lane (Lisboa 2015). It would therefore seem plausible that this field system continued into Phase 6 and a small part of Phase 8 as shown in Trench 40. However from the lack of artefactual evidence, it would be difficult to associate the archaeological remains in this evaluation in relation to the sites at Warren Lane or revealed in Phase 10. More information should be available following archaeological evaluation of Phases 7 and 9.

As indicated in the trench depths, along with the greater height above sea level on Phase 6, the land may have been easier to work on the better drained soils in this area.

To the west of Phase 6 no archaeological remains were identified during a recent watching brief undertaken by Trent and Peak Archaeology *(*TPA*)* which continues the trend from Phase 4. Only a 'Y' shaped palaeochannel was shown by LIDAR. However *c.* 300 metres west of Phase 6, and on the south side of Phase 5 was a possible middle Iron-age settlement (Watkins, 2015). The remains of a probable drip gully in trench 31 may be of comparable date.

8. Publication

Since 2004 ULAS has reported the results of all archaeological work through the *Online Access to the Index of Archaeological Investigations* (OASIS) database held by the Archaeological Data Service at the University of York.

A summary of the work will also be submitted for publication in a suitable regional archaeological journal in due course.

OASIS data entry

Project Name	Lockington Quarry Extension, Phases 6 and 8
Project Type	Evaluation
Project Manager	Dr Patrick Clay
Project Supervisor	James Patrick
Previous/Future work	Yes
Current Land Use	Arable
Development Type	Gravel extraction
Reason for Investigation	NPPF
Position in the Planning Process	Planning condition
Site Co ordinates	SK 48202830
Start/end dates of field work	17-09-2015-
Archive Recipient	Leicestershire Museums
Study Area	c.12ha

9. Archive

The archive for this project will be deposited with Leicestershire Museums. An accession number will be allocated forthwith.

The archive consists of the following:

1 Unbound copy of this report
69 Trench recording sheets
Context record
Context sheets
Photographic record
Contact sheets of digital photographs
CD digital photographs
Set BandW contact sheets
Set BandW negatives
Drawing record

A3 Sheets of permatrace containing primary drawings

10. Acknowledgements

ULAS would like to thank Ian Smith of Tarmac Ltd for his help and co-operation. The project was managed by Patrick Clay and the work carried out by James Patrick and Leon Hunt of ULAS. Machines were provided by Tarmac Ltd for the majority of the evaluation with the second machine for the latter half of Phase 8 provided by Planters Ltd. The work was monitored by Dr Isabel Lisboa on behalf of Tarmac Ltd. and Richard Clark, Principal Planning Archaeologist at Leicestershire County Council on behalf of the planning authority.

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Appendix 1 Pollen processing methodology (Tim Mighall, Department of Geography and Environment, University of Aberdeen)

ABSOLUTE POLLEN ANALYSIS: PREPARATION SCHEDULE

PRECAUTIONARY NOTES:All procedures, up to stage 25, should take place in the fume cupboard. Read precautionary notices on fume cupboard before starting. Ascertain whereabouts of First Aid equipment NOW. Please wear laboratory coat, gloves and goggles when dealing with all chemicals. Please organize fume cupboard carefully to maximize workspace. Use the containment trays provided. Always keep the fume cupboard door down as far as practically possible. Make sure the fume cupboard is switched on and functioning correctly.

A) SOLUTION OF HUMIC COMPOUNDS

1) Switch on hotFigure to heat water bath. Prepare 12 to 16 samples concurrently.

HCl. is an irritant and can cause burns. Wear gloves. Wash with water if spilt on your skin.

Using a clean spatula, place a known volume or weight of sediment (c. 2cm^3) and one spore tablet in each 50ml centrifuge tube. Add a few cm^3 of distilled water (enough to cover the pellet and tablets) and a few drops of 2M HCl. Wait until effervescence ceases, then half fill tubes with 10% KOH; place in a boiling water bath for 15 minutes. Stir to break up sediment with clean glass rod. Return HCl and KOH bottles to the chemical cabinet.

2) Centrifuge at 3,000 rpm for 5-6 minutes, ensuring first that tubes are filled to the same level. This applies throughout the schedule (Mark 7 on centrifuge).

3) Carefully decant, i.e. pour away liquid from tube, retaining residue. Do it in one smooth action.

4) Disturb pellet using vortex mixer; add distilled water, centrifuge and decant.

5) Using a little distilled water, wash residue through a fine (180 micron) sieve sitting in filter funnel over a beaker. NB Be especially careful in keeping sieves, beakers and all tubes in correct number order. Wash residue on sieve mesh into petri dish and label the lid. If beaker contains mineral material, stir contents, wait four seconds, then decant into clean beaker, leaving larger mineral particles behind. Repeat if necessary. Clean centrifuge tube and refill with contents of beaker.

6) Centrifuge the tubes and decant.

B) HYDROFLUORIC ACID DIGESTION

***(Only required** if mineral material clearly still present. Otherwise, go to stage 13)*

NB Hydrofluoric acid is extremely corrosive and toxic; it can cause serious harm on contact with eyes and skin. Rubber gloves and mask/ goggles MUST be worn up to and including stage 11. Please fill sink with H_20; have $CaCo_3$ gel tablets ready. Place pollen tube rack into tray filled with sodium bicarbonate.

7) Disturb pellet with vortex mixer. Add one cm^3 of 2M HCl.

8) With the fume cupboard sash lowered between face and sample tubes, very carefully one-third fill tubes with concentrated HF (40%). Place tubes in water bath and simmer for 20 minutes.

9) Remove tubes from water bath, centrifuge and decant down fume cupboard sink, flushing copiously with water.

10) Add 8cm^3 2H HCl to each tube. Place in water bath for 5 minutes. Do not boil HCl.

11) Remove tubes, centrifuge while still hot, and decant.

12) Disturb pellet, add distilled water, centrifuge and decant.

C) ACETYLATION

NB Acetic acid is highly corrosive and harmful on contact with skin. Wash with H_20 if spilt on skin.

13) Disturb pellet, add 10cm^3 glacial acetic acid, and centrifuge. Decant into fume cupboard sink with water running during and after.

14) Acetic Anhydride is anhydrous. Avoid contact with water. The acetylation mixture can cause severe burningif spilt on skin. Wash with water.

15) Make up 60cm^3 of acetylation mixture, just before it is required. Using a measuring cylinder; mix acetic anhydride and concentrated sulphuric acid in proportions 9:1 by volume. Measure out 54cm^3 acetic anhydride first, then add (dropwise) 6cm^3 concentrated H_2S0_4 carefully, stirring to prevent heat build—up. Stir again just before adding mixture to each tube.

Disturb pellet; then add 7cm^3 of the mixture to each sample.

16) Put in boiling water bath for 1-2 minutes. (Stirring is unnecessary—never leave glass rods in tubes as steam condenses on the rods and runs down into the mixture reacting violently). One minute is usually adequate; longer acetylation makes grains opaque. Switch off hot Figure.

17) Centrifuge and decant all tubes into large (1,000ml) beaker of water in fume cupboard. Decant contents of beaker down fume cupboard sink.

18) Disturb pellet, add 10cm^3 glacial acetic acid, centrifuge and decant.

19) Disturb pellet, add distilled water and a few drops of 95% ethanol centrifuge and decant carefully.

D) DEHYDRATION, EXTRACTION AND MOUNTING IN SILICONE FLUID

20) Disturb pellet; add 10cm^3 95% ethanol, centrifuge and decant.

21) Disturb pellet; add 10cm^3 ethanol (Absolute alcohol), centrifuge and decant. Repeat.

22) Toluene is an irritant. Avoid fumes.

Disturb pellet; add about 8cm^3 toluene, centrifuge and decant carefully into 'WASTE TOLUENE' beaker in fume cupboard (leave beaker contents to evaporate overnight).

23) Disturb pellet; then using as little toluene as possible, pour into labelled specimen tube.

24) Add a few drops of silicone fluid - enough to cover sediment.

25) Leave in fume cupboard overnight, uncorked, with fan switched on. Write a note on the fume cupboard *'Leave fan on overnight - toluene evaporation',* and date it. Collect specimen tubes next morning and cork them. Turn off fan.

26) Using a cocktail stick, stir Contents and transfer one drop of material onto a clean glass slide and cover with a cover slip (22mm x 22mm). Label the slide.

27) Wash and clean everything you have used. Wipe down the fume cupboard worktop. Remove water bath from fume cupboard if not needed by the next user. Refill bottles and replace them in chemical cabinets.

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