nps archaeology

2018/1081

New Primary School Site, Mallard Way (North of Blue Boar Lane), Sprowston, Norfolk

Excavation through Informative Trial Trenching

Prepared for: NPS Group

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Overview	David Adams	
Draft	Joshua C White	28.08.2018
Graphics	David Dobson	09.08.2018
Edit	David Adams	01.10.2018
Issue 1		

Joshua C White BA, MSc	Author
Sue Anderson BA, MPhil, FSAScot, FSA	Pottery and CBM
Rebecca Sillwood BA	Glass, Metal, Flint, Clay Tobacco Pipe
Val Fryer BA	Plant Macrofossils
David Dobson HND	Graphics

nps archaeology
Townsend House
30 Crown Road
Norwich
NR1 3DT
T 01603 227193
E nau.mail@nps.co.uk
W nau.nps.co.uk

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Client:	NPS Group
Location:	New Primary School Site, Mallard Way (North of Blue Boar Lane), Sprowston, Norfolk
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Summary

NPS Archaeology carried out informative archaeological trial trenching in advance of the proposed development of a new primary school at Land off Mallard Way, Sprowston, Norfolk. The work was in response to a brief issued by Norfolk County Council Environment Service with fieldwork and reporting funded by NPS Group.

The trial trenching consisted of 10 trenches, five measuring 50.00m x 1.80m, two measuring 40.00m x 1.80m and three measuring 30.00m x 1.80m. Five of the trenches were targeted on north-east – south-west linear cropmarks recorded by the Norfolk Mapping Programme.

Archaeological features were present in seven of the ten trenches with no archaeological features or deposits in three trenches. Although Trench 2 contained no archaeological remains, significant ground intrusion and disturbance caused by the movement of mechanical plant across the extent of the trench had severely reduced the potential for any archaeological features to survive. Similar ground disturbance was also observed in Trenches 3, 5 and 8, but some archaeological features were present in these trenches.

A gully and large pit or hollow of probable prehistoric date, both sealed by a sequence of subsoils are considered the earliest archaeological features recorded at the site. A large ditch, targeted from an aerial photograph, was present in Trenches 3, 4, 5, 9 and 10. Excavation demonstrated this ditch turns towards the south-east; something not previously established from the aerial photographic evidence. This ditch was undated, however a recut of this ditch was dated to the Post-Medieval period, suggesting it may also be of a late medieval/Post-Medieval date.

A large pit, interpreted as a quarry, contained 18th century pottery in its fill, attesting to significant intrusive activity on the site during the Georgian period. A north-west –south-east aligned ditch in Trench 3 was also dated to this period. A small number of undated pits present across the site were not sealed by a subsoil and could be contemporary with this phase of activity.

Although heavily disturbed by modern machinery, the trial trenching has identified an area of the site which contains potentially significant, yet currently unquantifiable prehistoric archaeological remains. It has also provided an interpretation and suggested an alternative date to the linear cropmark seen from aerial photographs.

INTRODUCTION

Project Background

1 NPS Archaeology was commissioned and funded by NPS Group to undertake informative archaeological trial trenching on Land off Mallard Way, Sprowston, Norfolk (TG 2602 1211).

2 The site has potential historical interest, being situated on the former boundary of Mousehold Heath (shown on Faden's Map of Norfolk (1797)). Additionally, linear cropmarks of a possible late prehistoric date have been identified running across the proposed area of development (NHER 50998), which may respect the alignment of a potential palaeochannel (Percival 2018). Five trenches were set out to directly target these possible features (Figure 2).

3 Few previous archaeological investigations have taken place in the immediate vicinity of the site; however prehistoric and Post-Medieval features were discovered during excavations at Sprowston Manor Golf Course (Trimble 2002). There has also been an abundance of metal detecting/surface finds recovered from the neighbouring fields to the north-west of the site (Bronze Age to Post-Medieval in date).

4 The evaluated site covered an area of 1.52ha.

Planning Background

5 The current work was undertaken to fulfil planning requirements set by Norfolk County Council Environment Service (NCCES) on behalf of the planning authority, Broadland District Council.

6 The work was conducted in accordance with a Written Scheme of Investigation prepared by NPS Archaeology (Adams 2018) in response to the Brief for a Programme of Archaeological Mitigatory Work produced by NCCES (NCCES 2018).

7 The programme of work was designed to assist in defining the character and extent of both potential and unknown archaeological remains within the site, following guidelines set out in National Planning Policy Framework (Department for Communities and Local Government 2012).

8 The recipients of this report will be the client, Broadland District Council and NCCES.

GEOLOGY AND TOPOGRAPHY

Geology

9 The underlying bedrock geology of the site consists of Clag Group sand and gravel, a sedimentary deposit that formed around 5 million years ago during the Quaternary and Neogene periods (British Geological Survey 2018).

10 Superficial sand and gravel deposits of the Sheringham Cliffs Formation overlay the bedrock geology. These geologies originate from the deposition of moraines of till by Ice Age glaciers during the Quaternary (British Geological Survey 2018).

11 The topsoil across the site was a mid-brown slightly sandy silt, which had been heavily disturbed, moved around and compacted by recent groundworks. Across most of the site, a distinct subsoil was not present. A small area between Trenches 4 and 10, which appears to have undergone little interference revealed a fully preserved stratigraphic sequence with a secure topsoil and (in parts a series of) pale yellowish brown sandy silt subsoil(s) present. Recent deposits of rubble-rich silt were found to be sealing much of the topsoil across the site.

Topography

12 The site is located approximately 4.5km north-east of the centre of Norwich. It slopes towards the south-west from 30.53m OD to 29.39m OD. Surrounding the site are extensive recent housing developments; the site in question previously acting as the compound and stockpiling yard for materials used during these developments. Prior to development, the land was used for arable agriculture.

13 The nearest watercourses are located approximately 330m to the east of the site, 442m to the north-west and 625m to the north-east.

14 The development area is roughly square and measures approximately 1.52ha in size.

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Sources

15 The main source for archaeological evidence in the county of Norfolk is the Norfolk County Council Historic Environment Record (HER), which details both archaeological discoveries and sites of historical interest. In order to characterise the likely archaeological potential of the proposed development site, a 500km radius search of Historic Environment Records (HER) centred on TG 2602 1211 and Norfolk Mapping Project (NMP) data for a 2km radius was accessed. The search recovered 21 separate records within this area; those of the most relevance to the current site of excavation are discussed below. Additional information has been sourced from Copsey (2017) using a 1km search radius as well as the Norfolk Heritage Explorer Parish Summary for Sprowston (Norfolk Historic Environment Services 2018).

16 The earliest evidence of human activity within the vicinity dates to the Mesolithic period, with a tranchet axehead found approximately 700m north-west of the site (NHER 25453) (Copsey 2017).

17 Neolithic activity in the immediate vicinity of the site is attested by a flint scraper found during metal detecting in the neighbouring field during 2008 (NHER 52521). Numerous Neolithic axeheads have also been found in the parish of Sprowston; however the exact location of these discoveries is not known (NHER 8157, NHER 14892 and NHER 21482) (Norfolk Historic Environment Services 2018).

18 A flint borer found near to the site indicates the presence of Bronze Age activity in the area (NHER 37257). A probable prehistoric ditch was discovered during excavations at Sprowston Manor Golf Course (approximately 1km from the site) (NHER 36799), however this was not dated to an exact period (Copsey 2017). Linear cropmarks orientated north-east – south-west run across the length of the site and are suggested to be of later prehistoric date (NHER 50998). Other cropmarks of curvilinear ditches of a potentially similar date are located south-east of the site (NHER 50999).

19 The supposed route of the Roman road running from Brampton to Thorpe St Andrew is located approximately 400m south and east of the site (NHER 7598). Excavations along its path in 1973 failed to confirm the existence of the road (Norfolk Historic Environment Service 2018). Roman finds are generally very sparse in the area, however a number of coins and a late Roman military strap end has been found in the parish (NHER 21358) (Norfolk Historic Environment Service 2018). The only item dated to the Saxon period picked up within the search radius is that of a Style II decorated mount (NHER 25895).

20 With exception of the Church of St Mary and St Margaret which lies beyond the 1km search area (NHER 8138), little detail is known of the Medieval activity in the parish of Sprowston (Norfolk Historic Environment Service 2018). However a number of Medieval roads are known of, one of which, Ravensgate Way (NHER 8127) runs north-east – south-west approximately 400m to the south of the site.

21 As detailed in Faden's Map of Norfolk (1797), the site of excavation is situated on the former boundary of Mousehold Heath (NHER 53082), thought to have

been altered little between the 16th – 18th century (Norfolk Historic Environment Service 2018). Recent excavations within the former extent of Mousehold Heath that took place prior to the construction of the Norwich Northern Distributor Road identified a sparsely distributed amount of Medieval industrial and settlement activity within its confines (Percival 2018).

22 Little Post-Medieval activity is known within the immediate vicinity of the site. A World War Two searchlight battery and related structures are located approximately 400m to the south-east (NHER 18195) and a series of training facilities including a rifle range and practice tr enches are located at Sprowston Hall approximately 600m from the site (NHER 50997) (Copsey 2017).

METHODOLOGY

General

23 The methodology for the archaeological trial trenching followed the agreed Written Scheme of Investigation (Adams 2018), where the mitigation strategy for the works is presented in full (Appendix 5).

24 Archaeological procedures conformed to the *Standards For Development-Led Archaeological Projects in Norfolk* (Robertson et al. 2018) and the guidelines issued by the Chartered Institute for Archaeologists (CIfA 2014a). The trial trenching was conducted within the context of the regional archaeological framework (Medlycott 2011).

Objectives

25 The objective of the trial trenching was to determine as far as reasonably possible the presence or absence, location, nature, extent, date, quality, condition and significance of any surviving archaeological deposits within the development area.

26 The archaeological project aimed to provide appropriate and adequate data to permit informed decisions regarding any requirement for future archaeological mitigation work on Land off Mallard Way, Sprowston, and to make the results of the work accessible.

Methods

27 The Brief required that an approximate 5% sample of the proposed development area should be evaluated by trial trenching. In accordance with the requirements of the Brief issued by NCCES five trenches, (three measuring 50m x 1.80m, one measuring 40.00m x 1.80m and one measuring 30.00m x 1.80m) of the ten trial trenches were positioned to examine cropmarks recorded by the National Mapping Programme of potential later prehistoric linears.

28 A site survey was carried out by NPS Land Survey using a GS16 GPS. Trenches were situated according to the agreed WSI plan and located in relation to the Ordnance Survey National Grid.

29 Prior to mechanical excavation, each trench location was scanned with a CAT scan to check for buried services. Additionally, metal detecting of the trench locations was conducted to identify any potential UXO material (categorised as low risk across the site). The areas to be stripped of topsoil were examined for surface features and for archaeological artefacts prior to any excavation.

30 Machine excavation was carried out by a 7 tonne hydraulic 360˚ excavator equipped with a toothless ditching bucket. All mechanical excavation was constantly and directly monitored by a suitably experienced archaeologist. Machining was halted at the first identifiable archaeological deposits or natural geology.

31 All trench surfaces revealed by machine were hand-cleaned and any archaeological deposits were excavated by hand. On completion of the work all trenches were backfilled by machine.

32 Spoil, exposed surfaces and features were scanned with a metal-detector. All metal-detected and hand-collected finds, other than those that were evidently modern, were retained for examination. All retained finds were identified by context number to a specific deposit and were processed and recorded in line with relevant guidelines for archaeological finds (CIfA 2014b).

33 All archaeological features and deposits were recorded using NPS Archaeology pro forma. Trench locations, plans and sections were recorded at appropriate scales. Digital photographs were taken of all relevant archaeological features and deposits where appropriate.

34 Temporary benchmarks used during the course of this work were located at the ends of each of the trenches with spot heights recorded by the GS16 GPS.

35 Site conditions were good with little wind and no rain. Due to the dry conditions, dust levels were high across the site but not to a degree to which safety was impacted or archaeological interpretation hindered.

36 With the exception of Trench 2 as an example, trenches containing natural features only are solely illustrated in Figure 2.

Archive

37 The site archive is currently held at the offices of NPS Archaeology. Upon completion of the project, the documentary archive will be prepared and indexed following guidelines obtained from the relevant museum and relevant national guidelines (CIfA 2014c). The archive, consisting of all paper elements created during recording of the archaeological site, including digital material, will be deposited with Norfolk Museums Service.

38 Subject to written consent and donation by the landowner, all archaeological finds recovered by the current work will be deposited with Norfolk Museums Service.

39 A summary form of the results of this project has been completed for Online AccesS to the Index of archaeological investigationS (OASIS) under the reference Norfolka-1 311793, and this report will be uploaded to the OASIS database.

40 The contents of the site archive is summarised in Table 1.

Item	No.
Contexts	102
Files/paper record sheets	123
Plan and section sheets	20
Digital Images	209
Finds	121 (1 box)

Table 1. Site archive quantification

RESULTS

Trench 1

Figures 2, 3	
Location	
Orientation	North-east – south-west
Dimensions	
Length	38.9m
Width	1.80m
Depth	0.70m
Levels	
North-east top	29.25m OD
South-west top	29.21m OD

Context	Type	Description and Interpretation	Thickness
01	Deposit	Topsoil	0.37m
03	Cut	Small possible post-hole	0.08m
04	Deposit	Fill of **03** – A mid greyish brown slightly sandy silt with occasional small sub-rounded pebble inclusions.	0.08m
05	Deposit	Natural that appears in section 1 – A yellowish orange silty sand with occasional small – medium sub-rounded pebble inclusion.	0.11m
07	Deposit	Modern deposit of rubble rich silt above **01**. A light greyish brown silt with frequent rubble inclusions along with fragments of metal and plastic.	0.29m
17	U/S Finds	Unstratified Finds from Trench 1	N/A

Discussion

The only potential archaeological features in Trench 1 was possible post-hole **03**. Because the fill of **03** is identical to the overlying topsoil, it is thought highly likely this is a modern feature or represents a small depression associated with ground intrusions caused by machine plant during recent works. No finds were recovered from this feature.

The lack of subsoil in this trench also points towards significant disturbance of topsoil/subsoil deposits by groundworks. Alternatively, this lack of subsoil may relate to deep ploughing while the field was under arable agriculture. The topsoil that is present was heavily compacted and sealed by a layer of rubble-rich silt.

A fragment of glass, a small fragment of CBM and three fragments of pottery all dating to the Post-Medieval period were found unstratified from this trench. A single sherd of pot dating to the 15th-16th century was also recovered.

Trench 2

Figures 2, 4	
Location	
Orientation	North-west – south-east
Dimensions	
Length	39.5m
Width	1.80m
Depth	0.94m
Levels	
North-west top	28.70m OD
South-east top	27.94m OD

Context	Type	Description and Interpretation	Thickness
06	Deposit	Topsoil	0.43m
07	Deposit	Modern deposit of rubble rich silt above **06**. A light greyish brown silt with frequent rubble inclusions along with fragments of metal and plastic.	0.51m

Discussion

No archaeological features were present in this trench. This trench recorded the most extensive evidence of ground intrusion caused by machines on the site, with individual tracks and toothed-bucket scars (filled with compacted topsoil **06**) cutting into the natural geology.

This recent activity may be responsible for the absence of archaeological remains in this trench.

Trench 3

Figures 2, 5. Plates 1, 2	
Location	
Orientation	North-west–South-east
Dimensions	
Length	48.80m
Width	1.80m
Depth	1.07m
Levels	
North-west top	28.82m OD
South-east top	27.96m OD

Context	Type	Description and Interpretation	Thickness
09	Deposit	Topsoil.	0.4m
10	Deposit	Redeposited natural; a yellowish-orange slightly silty sand.	0.95m
11	Cut	North-west – South-east aligned ditch probably cut by **13**. 1.00m wide.	0.35m
12	Deposit	Dark greyish brown silty sand fill of ditch **11**. Identical to **14,** same as **18**.	0.35m
13	Cut	Large pit.	0.77m
14	Deposit	Dark greyish brown silty sand primary fill of pit **13**. Identical to **12/18**, same as **19**.	0.62m
15	Deposit	Pale yellowish brown sandy silt; secondary fill of pit **13**.	0.15
16	Deposit	Rubble and hard-core layer associated with a temporary road laid during recent ground works.	0.54m
18	Deposit	Dark greyish brown silty sand fill of ditch **11**. Same as **12**. Identical to **14/19**.	0.22m
19	Deposit	Dark greyish brown silty sand fill of Pit **13**. Same as **14**. Identical to **12/18**.	0.3m
20	Deposit	Churned topsoil slurry deposit, a mix of natural and topsoil associated with **10**.	0.98m
21	Unstratified	Unstratified Finds from Trench 3.	N/A
22	Cut	Arbitrary base of depression filled with topsoil.	0.12m
23	Deposit	Topsoil in depression **22**.	0.12m
24	Cut	Uncharacterised feature in the south-east end of Trench 3.	0.14m
25	Deposit	Mid greyish brown silty sand fill of **24**.	0.14m
26	Cut	North-east – south-west aligned ditch heavily truncated by intrusive machine tracks.	0.58m

Trench 3			
27	Deposit	Heavily compact mid yellowish brown sandy silt; secondary fill of ditch **26**. Heavy leaching from **28**.	0.44m
28	Deposit	Compacted topsoil filling the machine rut, which truncates **27**.	0.15m
29	Deposit	Dark greyish brown sandy silt; primary fill of ditch **26**.	0.14m
30	Deposit	Mid yellowish brown sandy silt fill of ditch **11**.	N/A

Discussion

From the north-west end of Trench 3 to approximately 30m down its length there was evidence of significant ground intrusion by heavy machine plant, identified as machine track ruts. Deep archaeological features surviving such as ditch **26**, which possessed a lower dark greyish brown silt fill **29** and an upper mid-yellowish brown silt fill **27**. Heavy leaching had occurred from the compressed topsoil **28** into ditch fill **27** below it. A single piece of glazed red earthenware dating to between the 16th and 18th centuries was recovered secondary ditch fill **27**; however, the risk that this find was intrusive is considerable. Sub-oval shaped depression **22** filled with topsoil **23** was excavated as an example, with a small collection of Post-Medieval/Modern glass and pottery being recovered from **23**.

Within this same area of the trench, the stratigraphy of the topsoil overburden suggested ground conditions were considerably wetter during the recent construction works, with a churned/mixed deposit of natural and topsoil **20** present from the top to base of the trench profile. This is interpreted as being caused by continuous machine tracking during wet conditions. Redeposited natural **10** also points towards a significant level of machine intrusion in the vicinity, likely representing the up-cast from the excavation of a sump or may alternatively represent a bank constructed to help with ground water management on site.

Towards the south-east end of the trench there was less evidence of modern disturbance, with the deposition of rubble/hardcore layer **16** across this end of the trench considered responsible for preventing this. Here north-west – south-east ditch **11** was identified, with moderate sloping sides and a gently sloping base. It was filled with a dark greyish brown silty sand **12** = **18** which had a humic content. It contained no finds. An additional distinct fill **30** was also observed in plan. Because few extant field boundary ditches possess such an alignment, and neither does ditch, it is thought likely **11** represents an internal minor drainage or corral ditch.

A large sub-circular pit, possibly a quarry, was also present in the south-east end of Trench 3. The primary fill **14** consisted of dark greyish brown humic silty sand from which a sherd of creamware plate dating to between 1730-1760 and a single Post-Medieval clay tobacco pipe stem were recovered. Excavation could only go 0.42m deep into this deposit from the top of the natural due to safe working restrictions; consequently, the deposit was hand-augured, recording a total feature depth of 0.77m from the top of the natural. A secondary fill **15** had no finds and appeared to be a silt layer accumulated after deposit **14** slumped.

The relationship between ditch **11** and pit **13** was not discernible from sections 8 or 9, nor from these features in plan. However, it appears fills **12** = **18** and **14** = **19** were identical and are considered the same. One interpretation is that pit **13** was dug into the side of ditch **11** while it was still open; they were then subsequently backfilled in the same event with a relatively humic silty sand. Because this backfilling was primarily of pit **13**, ditch **11** was only partially filled with this material (in places near to **13**); being backfilled with a different pale silt deposit **30** further away from pit **13**.

Only a small portion of feature **24** was present within the south-east of Trench 3 for excavation. It was filled with a mid-greyish brown slightly sandy silt containing no finds. Feature **24** remains largely uncharacterised and could represent the break of slope of either a ditch or pit.

Trench 3

Plate 1. Trench 3, showing Ditch 11 in the foreground and Pit **13**, 0.5m scale, looking south-east

Plate 2. Trench 3, Pit 13, 2m scale, looking north-east

Trench 4

Figures 2, 6, 7**; Plates 3, 4**	
Location	
Orientation	North-west – south-east
Dimensions	
Length	28.5m
Width	1.80m
Depth	1.00m
Levels	
North-west top	28.85m OD
South-east top	28.12m OD

Context	Type	Description and Interpretation	Thickness
07	Deposit	Modern deposit of rubble rich silt above **01**. A light greyish brown silt with frequent rubble inclusions along with fragments of metal and plastic.	0.14m
32	Cut	North-east – south-west aligned ditch	0.76m
33	Deposit	Dark greyish brown slightly sandy silt; primary fill of ditch **32**.	0.26m
34	Deposit	Mid yellowish brown slightly sandy silt; secondary fill of ditch **32**.	0.30m
35	Cut	Small pit.	0.35m
36	Deposit	Dark greyish brown silty sand fill of possible pit **35**.	0.35m
40	Cut	Recut of ditch **32**; part of **102**	0.37m
41	Deposit	Mid yellowish brown slightly sandy silt fill of ditch **40**.	0.37m
47	Cut	Curving gully	0.40m
48	Deposit	Dark brownish grey silty sand fill of gully **47**. Same as **62**.	0.40m
49	Cut	Large pit/hollow	0.82m
50	Deposit	Pale yellow fine sand; quaternary fill of pit **49**.	0.22m
51	Deposit	Dark brown slightly silty fine sand with occasional sub-rounded flint inclusions; tertiary fill of **49**.	0.25m
52	Deposit	Dark grey sandy silt with small-medium gravel inclusions; secondary fill of **49**.	0.17m
53	Deposit	Pale grey gravel rich silty sand with occasional pockets of brownish yellow sand; primary fill of **49**.	0.48m
54	Deposit	Natural at the north-west end of Trench 4	N/A
58	Deposit	Light greyish brown sandy silt; modern plough soil (topsoil).	0.40m

Trench 4			
59	Deposit	Dark greyish brown sandy silt; Post-Medieval 'improved soil' (subsoil)	0.30m
60	Deposit	Pale greyish brown fine sand; possible Medieval plough soil (subsoil)	0.11m
62	Deposit	Dark brownish grey silty sand fill of gully **47**. Same as **48**.	0.24m
63	Deposit	Ploughed out top of fill **62** (subsoil)	0.24m
64	Deposit	Pale greyish brown fine sand; possible Medieval plough soil (subsoil)	0.04m
65	Deposit	Mid brownish grey silt with frequent gravel inclusions; possible Medieval plough soil (subsoil)	0.10m

Discussion

A defining feature of Trench 4 is that it possessed the best-preserved and most complete stratigraphic soil sequence of the whole site, with little evidence of any intrusion by recent groundworks (with the exception of the deposition of silt **07**). Sealing archaeological remains in the north-west half of this trench was a distinct sequence of subsoils most probably representing separate phases of Medieval and Post-Medieval plough soils.

The north-east – south-west aligned ditch **32** was identified in this trench. As noted with this ditch in other trenches, it contained a dark greyish brown slightly sandy silt primary fill **33**, and mid-yellowish brown slightly sandy silt secondary fill **34**. Unfortunately, no finds were recovered from either fill. However, a fragment of Post-Medieval brick and a piece of clay tobacco pipe of the comparable date were present in the fill **41** of ditch **40**, a recut of ditch **32**.

The archaeological features of greatest interest in this trench and arguably the site were pit **49** and curving gulley **47**. A 1m wide slot was excavated into pit **49** to establish the sequence of deposits and its form. Excavation and observation of the feature in plan suggests what was present in Trench 4 was the north-eastern edge of a substantial pit/hollow **49** with an extrapolated diameter potentially in excess of 4.00m (only 1.5m of which appears within the trench). In order to not exceed safe working depths, it was not possible to reach the base of the feature by hand excavation; thus a hand-auger was used to establish a maximum feature depth of 0.82m. The primary fill **53** consisted of a damp pale-grey gravel-rich silty sandy, this was overlain by dark grey sandy silt **52** with small-medium gravel inclusions. Both these fills appear to be a redeposited natural slumping or deliberately backfilled into pit **49**. The tertiary fill of pit **49** was **51**, a dark brown slightly silty fine sand with occasional sub-rounded flint inclusions. No charcoal was present in this fill, however 462g of heat-altered flint was recovered from it. The final fill **50** consisted of a pale yellow fine sand which actually appeared to spread beyond the edge of pit **49**. The way in which this deposit was formed is not immediately apparent, but it may represent a remobilised wind-blown sand or the up-cast from the initial digging of the pit. Three pieces of worked flint came from this layer.

Small curving gulley **47** with a width of 0.6m was close to the south-east of pit **49**. It contained a single dark brownish grey silty sand fill from which 92g of heat-altered flint was recovered.

A small undated pit **35** was also present in Trench 4. Although there was an absence of heat-altered flint, the dark greyish brown silty sand fill **36** can be considered relatively similar to **48** and **51**, perhaps pointing towards an association with pit **49** and gulley **47**. A prehistoric date for these features appears to be most appropriate based on their form and the finds recovered from them.

Trench 4

Plate 3. Trench 4, Pit **49**, 1m and 2m scale, looking south-west

Plate 4. Trench 4, Pit/Hollow **49** in the foreground, Gulley **47**, Pit **35** and Ditch **32** in the distance, 2m and 1m scale, looking south-east

Trench 5

Figures 2, 8**; Plates 5, 6**

Location	
Orientation	North-east – south-west
Dimensions	
Length	46.00m
Width	1.80m
Depth	0.76m
Levels	
North-east top	27.85m OD
South-west top	28.26m OD

Context	Type	Description and Interpretation	Thickness
06	Deposit	Topsoil	0.24m
07	Deposit	Modern deposit of rubble rich silt above **06**. A light greyish brown silt with frequent rubble inclusions along with fragments of metal and plastic.	0.52m
82	Cut	Pit	0.30m
83	Deposit	Pale greyish brown sandy silt fill of pit **82**.	0.30m
84	Cut	Pit	0.48m
85	Deposit	Pale greyish brown sandy silt with pockets of orange silty sand redeposited natural abundant throughout; fill of pit **84**.	0.48m
89	Cut	East – west orientated ditch	0.48m
90	Deposit	Dark greyish brown slightly sandy silt; primary fill of ditch **89**.	0.19m
91	Cut	Recut of ditch **89**; part of **102**	0.29m
92	Deposit	Mid-yellowish brown slightly sandy silt fill of ditch **91**.	0.29m
93	Cut	Pit	0.18m
94	Deposit	Mid greyish-brown sandy silt fill of pit **93**.	0.18m
95	Deposit	Mid-yellowish brown slightly sandy silt; secondary fill of ditch **89**.	0.26m
96	Cut	Post-hole	0.24m
97	Deposit	Pale greyish brown sandy silt fill of post-hole **96**	0.24m
98	Cut	Possible post-hole	0.1m
99	Deposit	Mid-greyish brown sandy silt fill of possible post-hole **98**	0.1m
100	Cut	Possible post-hole	0.08m
101	Deposit	Mid-greyish brown sandy silt fill of possible post-hole **100**	0.08m

Trench 5

Discussion

The south-west end of this trench was devoid of archaeology and demonstrated minor evidence of intrusion caused by the recent groundworks. Towards the north-eastern end of the trench archaeological features were abundant and appeared to be well preserved. Ditch **89** was orientated east – west and contained two fills. Primary fill **90** was a dark greyish brown slightly sandy silt and secondary fill **95** consisted of mid-yellowish brown slightly sandy silt; no finds came from either fill. A recut **91** of this ditch to its north was on the same orientation as **89**. It had a single mid-yellowish brown slightly sandy silt fill **92** from which four fragments of Post-Medieval roof tile and a single piece of clay tobacco pipe of the same date were retrieved. The nature of the fills and the relationship between **89** and **91** indicates that this is a continuation of the ditches identified in Trenches 3, 4, 9 and 10.

Two undated circular in-plan pits (**82** and **84**) were located to the north-east of ditch **91**. They both had similar pale greyish brown sandy silt fills, however fill **85** of pit **84** also had pockets of orange silty sand redeposited natural abundant throughout. Pit **83** was filled with mid-greyish-brown sandy silt **84**; its shallow profile, lack of finds and amorphous shape in plan may point towards it being a tree throw.

Three possible post-holes were also identified in this trench; none of which possessed any finds and were thus unable to be dated. Post-hole **96** differed from **98** and **100** in both the colour of its fill and shape; possessing a deeper more conical profile and a pale greyish brown sandy silt fill. Possible post-holes **98** and **100** had mid greyish brown sandy silt fills, with fill **101** distinctly having a small amount of charcoal. Both features **98** and **100** had very shallow 'U'-shaped profiles and may alternatively be undulations in the natural geology.

Plate 5. Trench 5, Ditch **89** and **91**, 1m scale, looking north-west

Trench 5

Plate 6. Trench 5, Pits **82** and **84**, 2m scale, looking south

Trench 6

Figure 2

Location	
Orientation	North-west–South-east
Dimensions	
Length	35.00m
Width	1.80m
Depth	0.35m
Levels	
North-west top	28.35m OD
South-east top	28.78m OD

Context	Type	Description and Interpretation	Thickness
07	Deposit	Modern deposit of rubble rich silt above **38**. A light greyish brown silt with frequent rubble inclusions along with fragments of metal and plastic.	0.15m
38	Deposit	Topsoil.	0.20m

Discussion

No archaeological features were observed in Trench 6.

Trench 7

Figure 2

Location	
Orientation	North-west – south-east
Dimensions	
Length	35.00m
Width	1.80m
Depth	0.36m
Levels	
North-west top	28.70m OD
South-east top	29.15 m OD

Context	Type	Description and Interpretation	Thickness
06	Deposit	Topsoil	0.16m
07	Deposit	Modern deposit of rubble rich silt above **06**. A light greyish brown silt with frequent rubble inclusions along with fragments of metal and plastic.	0.20m

Discussion

No archaeological features were observed in Trench 7.

Trench 8

Figures 2, 9.

Location	
Orientation	North-east–South-west
Dimensions	
Length	47.00m
Width	1.80m
Depth	0.54m
Levels	
North-east top	27.94m OD
South-west top	29.41 m OD

Context	Type	Description and Interpretation	Thickness
06	Deposit	Topsoil	0.39m
16	Deposit	Rubble and hard-core layer associated with a temporary road laid during recent ground works.	0.15m
80	Cut	Large modern hollow.	0.65m
81	Deposit	Compact dark brown sandy silt with abundant sub-rounded pebbles and modern CBM inclusions	0.65m

Discussion

The only feature in Trench 8 consisted of an amorphous pit or hollow **80**, filled with a highly compact dark brown sandy silt **81** with abundant fragments of modern CBM. A small test slot was excavated into it, with a maximum depth of 0.65m. It may be a similar feature to possible quarry hollow **13** in Trench 3, perhaps of later date.

The recent rubble/hardcore layer **16** (deposited above topsoil **06**) also existed across the north-eastern extent of this trench. Towards the south-west when the deposit ended, significant intrusive machine ruts were present along the rest of the trenches length.

Trench 9

Figures 2, 10. Plates 7, 8		
Location		
Orientation	North-west – south-east	
Dimensions		
Length	50.00m	
Width	1.80m	
Depth	0.68m	
Levels		
North-west top		30.00m OD
South-east top		28.51m OD

Context	Type	Description and Interpretation	Thickness
66	Cut	North-east – south-west aligned ditch.	0.75
67	Deposit	Dark greyish brown slightly sandy silt; primary fill of ditch **66**.	0.33m
68	Deposit	Mid yellowish brown slightly sandy silt; secondary fill of ditch **66**.	0.42m
69	Cut	Pit	0.34m
70	Deposit	Mid greyish brown sandy silt primary fill of pit **69**	0.20m
71	Deposit	Pale brown sandy silt secondary fill of pit **69**	0.30m
72	Deposit	Topsoil	0.54m
73	Deposit	Subsoil	0.14m
74	Cut	Possible hedge line	0.25m
75	Deposit	Pale brown slightly sandy silt fill of possible hedge line **74**	0.25m
79	U/S	Unstratified metal detector spoil heap finds from Trench nine.	N/A

Discussion

The north-east – south-west aligned ditch (**66**) was again identified in Trench 9. As has been observed in other trenches, it possessed a lower dark greyish brown slightly sandy silt fill **67** and an upper mid yellowish brown slightly sandy silt **68**; finds being absent from both fills. Unlike other trenches, no recut of ditch **66** was observed.

Shallow, roughly north-east – south-west aligned linear depression **74** may represent the remnants of a possible hedge line respecting ditch **66**. It contained a pale yellowish brown silt containing no finds. Alternatively, this feature may represent an undulation in the natural filled with subsoil **73**.

A further feature identified in Trench 3 was that of undated pit **69**, which contained primary fill **70,** a mid-greyish brown sandy silt and secondary fill **71**, a pale brown sandy silt. Neither fill contained any finds and were devoid of charcoal. A Post-Medieval furniture fitting and button were found during metal detecting of the spoil from this trench.

Plate 7. Trench 9, Ditch **66**, 2m scale, looking south-west

Plate 8. Trench 9, Possible hedge line **74**, 1m scale, looking south-west

Trench 10

Figures 2, 11. **Plate 10**

Location	
Orientation	North-west–South-east
Dimensions	
Length	50.00m
Width	1.80m
Depth	0.60m
Levels	
North-west top	28.98m OD
South-east top	28.24 m OD

Context	Type	Description and Interpretation	Thickness
42	Cut	North-east – south-west aligned ditch.	0.68m
43	Deposit	Dark greyish brown slightly sandy silt; primary fill of ditch **42**.	0.23m
44	Deposit	Mid yellowish brown slightly sandy silt; secondary fill of ditch **42**.	0.45m
55	Deposit	Pale brown slightly sandy silt fill of possible hedge line **103**.	0.06m
56	Cut	Probable tree/burrow	0.32m
57	Deposit	Dark greyish brown sandy silt fill of tree/burrow 56	0.32m
76	Deposit	Topsoil	0.60m
77	Cut	Natural feature	0.16m
78	Deposit	Pale yellowish brown slightly sandy silt filling natural feature **77**	0.16m
88	Deposit	Subsoil	0.10m
103	Cut	Possible hedge line	0.06m

Discussion

The north-east – south-west aligned linear (here **42**) was also identified in this trench. As in other trenches, it contained a lower dark greyish brown slightly sandy silt fill **43** along with an upper fill **44** of mid yellowish brown slightly sandy silt; neither fill containing finds. As in Trench 9, no recut of **42** was observed, despite one being evident in trenches 4 and 5. The similarity of the upper fill of **42** and the fill of the recut **102** may make it indistinguishable. It is probable that the recut is centrally located within fill **44** and thus disguised.

A broadly north-east – south-west aligned very shallow depression **103** was north-east of ditch **42**. It is possible **103** may represent a hedge line associated with ditch **42**, similar to that of **74** in Trench 9. It was filled with pale brown slightly sandy silt **55**, very similar to fill **75** in Trench 9.

An amorphous roughly north-south orientated feature **56** in this trench had an asymmetrical undulating profile strongly suggesting a possible burrow or tree throw. Although it contained a distinct dark greyish brown fill, there was still an absence of charcoal or finds from within it. Although undated, because it was clearly sealed by subsoil **88**, it is likely that it at least predates the Post-Medieval (as none of the features dating to this period are sealed by such deposits).

Trench 10

A pale yellowish brown silt **78** occupying natural undulation **77** was also excavated in this trench. It has no archaeological significance.

Plate 9. Trench 10, Ditch **42**, 1x1m 1x2m scale, looking south-west

ARCHAEOLOGICAL FINDS

Ceramics

By Sue Anderson

Pottery

41 A total of 36 sherds of pottery weighing 399g was collected from nine contexts. Table 2 shows the quantification by fabric; a summary catalogue by context is included as Appendix 2c.

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Late medieval and transitional	LMT	15th-16th c.	1	28		1
Glazed red earthenware	GRE	16th-18th c.	2	64	0.05	2
Iron-glazed blackwares	IGBW	16th-18th c.	1	5		1
Chinese porcelain	PORCC	16th-20th c.	1	20		1
Creamwares	CRW	1730-1760	4	47	0.05	4
Pearlware	PEW	L.18th-M.19th c.	1	4		1
Refined white earthenwares	REFW	19th-20th c.	9	43	0.11	9
English Stoneware	ESW	17th-19th c.	4	62		4
English Stoneware Nottingham-type	ESWN	L.17th-L.18th c.	4	65	0.18	3
Late Post-Medieval unglazed earthenwares	LPME	18th-20th c.	3	14		3
Late slipped redware	LSRW	18th-19th c.	1	20		1
Porcelain	PORC	18th-20th c.	5	27		5
Totals			*36*	*399*	*0.39*	*35*

Table 2. Pottery quantification by fabric

42 Quantification was carried out using sherd count, weight, minimum number of vessels (MNV) and estimated vessel equivalent (eve). A full quantification by fabric, context and feature is available in the archive. All fabric codes were assigned from the Norfolk and Suffolk post-Roman fabric series, based on Jennings (1981). Form terminology follows MPRG (1998). Recording uses a system of letters for fabric codes together with number codes for ease of sorting in database format. The results were input directly onto an MS Access database, which forms the archive catalogue.

43 One base fragment of late Medieval and transitional ware with internal green glaze was recovered from Trench 1 (unstratified **17**). Two sherds of early Post-Medieval glazed red earthenware (GRE) comprised a fragment of a large bowl rim (unstratified **08**) and an abraded base fragment in ditch fill **27**. A fragment of iron glazed blackware from topsoil **06** was contemporary with the GRE sherds.

44 The majority of sherds were of modern date and included the typical range of fabrics of 18th to 20th-century date. Fragments of creamware represent the earliest vessels from this period, and included fragments of a bowl and a plate. One sherd of pearlware was also found, probably part of a cup, with blue transfer-printed decoration externally. Other refined whitewares included fragments of a cup and a plate with blue line decoration on the rims, a base fragment of a preserve jar, and several fragments of transfer-printed wares. A few fragments of plain and decorated European porcelain were also found, and there was one piece of a Chinese porcelain vessel with a pedestal base and hand-painted blue decoration. 'Coarsewares' of this period were represented by a fragment of a late slipped redware ?bowl, three pieces of plantpots, and fragments of utilitarian stonewares, most of which were from bottles and jars. Fragments of two Nottingham stoneware bowls and another vessel were also found.

Trench	Feature	Context	Type	Fabrics	No	Spotdate
1	-	17	U/S finds	LMT LSRW ESW PORC	5	19th c.?
2	-	06	Topsoil	IGBW LPME	2	19th-20th c.
3	13	14	Pit	CRW	1	18th c.
	-	21	U/S finds	ESW ESWN PORCC	3	19th c.
	22	23	Depression	CRW ESWN PORC REFW	8	19th-20th c.
	26	27	Ditch	GRE	1	16th-18th c.+
6	-	37	U/S finds	CRW PORC REFW	6	19th-20th c.
7	-	31	U/S finds	LPME PEW PORC REFW	5	19th-20th c.
-	-	08	U/S finds	GRE ESW ESWN REFW	5	19th c.

Table 3. Pottery types present by trench and feature

45 The majority of the assemblage was unstratified or from topsoil, with only small quantities recovered from feature fills. Most of the assemblage came from the area of Trench 3. A summary pf the pottery by feature is provided in Table 3.

46 This small assemblage is largely of Post-Medieval or modern date and comprises fabrics which are typically found in these periods across the region and beyond. The assemblage has been fully recorded and the sherds are of limited value in the study of ceramics in Norfolk, so could be discarded if required.

Ceramic Building Material

47 Eighteen fragments (484g) of fourteen CBM objects were collected from six contexts. Table 4 shows the quantities by form. A catalogue by context is included in Appendix 2d.

48 One small, abraded fragment of possible Roman tile in a fine sandy ferrous fabric (fsfe) was found in topsoil **06**.

49 All other brick/tile in this group was of Post-Medieval or early modern date. Three tiny fragments of a Post-Medieval red brick in a fine sandy flint and ferrous fabric (fsffe) were found in ditch fill **41**. Fragments of late/Post-Medieval plain tiles were

recovered from topsoil **06**, hollow fill **15**, ditch fill **92**, and as unstratified finds (**17**, **31**). These were generally in fine sandy fabrics (fs), some with clay pellets (fscp), grog, (fsg), grog and flint (fsgf) or ferrous (fsfe) inclusions, with the clay pellet type being the most frequent. Two pieces of pantile were unstratified **17**, one a handmade black-glazed type and the other machine made and probably of 19th-century date.

Form	Code	No	Wt (g)
Roman tile?	RBT?	1	13
Post-Medieval brick	LB?	3	6
Plain roof tile: late/Post-Medieval	RTP	9	338
	RTP?	3	41
Pantile	PAN	2	86
Total		*18*	*484*

Table 4. CBM quantities by form

Other Finds

By Rebecca Sillwood

Glass

50 Twelve pieces of Post-Medieval to modern glass were found in six contexts on the site. Almost all of the pieces were found in the spoil of various trenches, however, a single piece was recovered from depression fill **23**.

51 The glass is almost exclusively bottle glass, with three dark green body fragments from **17** (Trench 1), **31** (Trench 7) and **37** (Trench 6). These pieces are likely to be wine bottle fragments but have no further defining features. A cobalt blue body fragment was recovered from **21** (Trench 3).

52 A more diagnostic fragment of glass was found unstratified (**8**). The piece is probably a fragment of a Codd bottle, as there is also a glass marble in the same context. This bottle fragment is aqua in colour and has a maker's name on the base, which is not complete, but is traceable. The maker was either Dan or Ben Rylands, from Barnsley in Yorkshire, for which there were two factories in operation from 1867 through to 1919 (Toulouse, 1971, 448).

Clay tobacco pipe

53 Eleven fragments of clay tobacco pipe were recovered from seven contexts on the site, weighing 35g in total.

54 The fragments were mainly unstratified and undiagnostic stem pieces, which cannot be more closely dated than Post-Medieval. Only four pieces were from stratified contexts, including hollow fill **14**, depression **23**, ditch fill **41** and ditch recut **92**.

55 The only decorative piece was recovered from the spoil of Trench 7 (**31**), and consists of a small fragment of stem which is decorated on opposite sides with embossed stars and a letter on each side, one of which is a B, the other an L.

This may have been a maker's name but could equally be a popular phrase or a place name. The decoration is too incomplete to aid dating.

Metalworking debris

56 A single piece of tap slag was recovered from this site, weighing 20g. This fragment came from the spoil of Trench 7 (**31**). Tap slag is formed during the bloomery smelting process during ironworking, where the furnace is 'tapped' to release the slag, resulting in the distinctive 'flowed' surface. This piece is not dateable.

Metalwork

57 Only three pieces of metalwork were found on the site, two of copper alloy and one of lead.

58 All pieces were metal detected from the spoil of Trench 9 (**79**).

59 The copper alloy consists of an incomplete Post-Medieval button with the shank missing and a probable furniture fitting also of Post-Medieval date.

60 The lead consists of an undiagnostic piece of waste.

Flint

61 Thirty-four pieces of burnt flint and five pieces of worked flint were recovered from the site.

62 The burnt flint was recovered from hollow fills **14** and **15**, gully fill **48** and pit/hollow fill **51**. Heat affected flint is difficult to date as the use of hot stones to boil liquids is a practice of many periods. Many of the flint finds were recovered alongside Post-Medieval CBM or pottery, however, two contexts (**48** and **51**) exclusively contained flint and therefore could be the earliest features on the site. A prehistoric date for the flint seems most likely, however this cannot be verified.

63 The worked flint consists of undiagnostic tertiary flakes, one of which is unstratified (from Trench 6; **37**), another is from ditch fill **41** and the remaining three pieces are from pit/hollow fill **50**. Only the flakes from pit/hollow fill **50** were found in isolation, the other pieces were all recovered in association with Post-Medieval material.

ENVIRONMENTAL EVIDENCE

By Val Fryer

Introduction and method statement

64 During excavations, samples for the evaluation of the content and preservation of the plant macrofossil assemblages were taken from archaeological features at Mallard Way, Sprowston, with six being submitted for assessment.

65 The samples were processed by manual water flotation/washover, with the flots being collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16 and the plant macrofossils and other remains noted are listed below in Table 5. Nomenclature within the table follows Stace (2010). All plant remains were charred. Modern roots, moss fronds and arthropod remains were also recorded.

66 The non-floating residues were collected in a 1mm mesh sieve and sorted when dry. Artefacts/ecofacts were not recorded.

Results

67 All six assemblages are small (i.e. <0.1 litres in volume) and, perhaps somewhat unusually, all contain moderate to high densities of intrusive fungal sclerotia. This would appear to indicate that all features had suffered a high degree of post-depositional disturbance. Charred plant remains are exceedingly scarce, comprising a single oat (*Avena* sp.) grain from silt deposit **51** (Sample 4) in possible prehistoric pit **49** and a further indeterminate cereal from fill **48** of possible prehistoric gully **47** (Sample 3). Charcoal/charred wood fragments are recorded, but generally at a very low density.

68 Black porous and tarry residues are present throughout, and whilst some may be derived from the high temperature combustion of organic remains, most are hard and brittle, probably suggesting that they are bi-products of the burning of coal. Coal fragments are also recorded. Indeterminate vitreous globules are present within the assemblages from samples 2 (ditch **32**), 4 and 5 (ditch **66**).

Conclusions and recommendations for further work

69 In summary, the composition of these assemblages would appear to indicate that the integrity of most of the recorded features has been severely compromised by post-depositional activity. A high percentage of the recovered material could be derived from night soil, which was frequently deposited on the land surrounding major towns and cities during the later Medieval and Post-Medieval periods.

70 On the basis of the current assemblages, it is impossible to formulate any recommendations for a future sampling strategy, should further interventions be planned. However, it is suggested that additional samples could be taken at the discretion of the excavator, with attention being paid to features which are dated and which appear to be well-sealed or less disturbed.

Sample No.	**1**	**2**	**3**	**4**	**5**	**6**
Trench No.	**4**	**4**	**4**	**4**	**9**	**5**
Context No.	**33**	**34**	**48**	**51**	**67**	**83**
Feature No.	**32**	**32**		**49**	**66**	
Feature type	**Ditch**	**Ditch**	**Gully**		**Ditch**	**Pit**
Date	**U/D**	**U/D**	**?Preh.**		**U/D**	**U/D**
Plant macrofossils						
Avena sp. (grain)				x		
Cereal indet. (grain)			x			
Charcoal <2mm	xx	x	xxx	xxx	xx	x
Charcoal >2mm	x	x	xxx	xxx	x	x
Charcoal >5mm			xxx	xx		
Charcoal >10mm			x	x		
Charred root/stem	x	x		x	x	x
Other remains						
Black porous/tarry material	xx	xxx	xx	xxx	xxx	xxx
Burnt/fired clay		x				
Mineralised soil concretions	x	x				x
Small coal frags.	xx	xx	xx	xx	xxx	xxx
Vitreous material		x		x	x	
Fungal sclerotia	xxxx	xxxx	xx	xxxx	xxxx	xx
Sample volume (litres)	**20ss**	**20ss**	**10ss**	**20ss**	**20ss**	**20ss**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 5. Charred plant macrofossils and other remains from Mallard Way, Sprowston

Key to Table

x = 1 – 10 specimens xx = 11 – 50 specimens xxx = 51 – 100 specimens
xxxx = 100+ specimens

ss = sub-sample Preh = prehistoric U/D = undated

DISCUSSION

71 The archaeological evaluation by trial trenching carried out by NPS Archaeology at the New Primary School Site, Mallard Way (North of Blue Boar Lane), Sprowston, recorded features of archaeological interest in seven of the ten trial trenches. In three trenches, no archaeological features or deposits were found. Although Trench 2 is noted as not possessing any archaeology, significant ground intrusion and disturbance caused by mechanical plant occurred across the whole extent of the trench, which would have severely affected the survival of any archaeological features in it. A similar intensity of ground disturbance was observed in Trenches 3, 5 and 8, but here some archaeological features were present.

72 The most significant archaeological remains at the site were probable prehistoric features in Trench 4, and an extensive ditch present in five trenches.

73 Probable prehistoric activity was attested by large pit **49** and associated gulley **47**. Similar features containing sooty fills and heat-altered flint have been found during excavations at Postwick Hub, Norwich, which appear to date to the Late Neolithic/Early Bronze Age (Crawley 2014, 45). Such features have largely been interpreted as water-holding pits associated with the development of burnt mounds and frequently occur alongside a range of associated gullies, pits and post-holes (Crawley 2014). The similarity of the fill of undated pit **35** to that of pit **49**, along with its close juxtaposition may point towards some association. The location of this site however, some distance away from any known water source, might counter such an interpretation for the features in Trench 4. Perhaps they served an alternative currently unidentified purpose.

74 Five of the trenches targeted linear cropmarks recorded by the Norfolk Mapping Programme that extended in a north-east – south-west orientation across the site (**M39**). In Trenches 3, 4, 5, 9 and 10, a ditch was identified, with an average width of 1.75m and depth of 0.75m. It had a primary fill of dark sandy silt; potentially the remnants of accumulating organic-rich water lain deposits. The homogenous upper fill of mid-yellowish brown silt likely represents an episode of intentional backfilling. Neither of these fills contained reliable dating evidence.

75 Ditch **M39** was recut (**M102**), the recut possessing a single fill, almost identical to the upper fill of the earlier ditch, suggesting it too represents a deliberate backfilling with the same material undergoing the same processes. An abundance of Post-Medieval finds were recovered from the ditch recut; this, along with the fact that neither of the ditches are sealed by subsoil suggests that they both date to within the Post-Medieval period.

76 An aspect of this ditch not previously established from the aerial photograph is that north-east of Trench 3, it turns towards the east, with both ditch and recut being identified in Trench 5. A potential hedge line **74** = **103**, possibly respecting the same north-east – south-west alignment was identified in Trenches 9 and 10 to the south-east of the recut ditch. Such a feature, although somewhat ephemeral, may also represent one of the possible linear cropmarks identified from aerial photographs. Both the form of ditch **M39** and the potential existence of a hedge line together suggests that they constitute a significant Post-Medieval field boundary.

77 A scatter of other Post-Medieval activity was present on the site, most notably large pit **13**, which may represent a quarry hollow. A single north-west – south-east ditch, also dated as Post-Medieval by association, was present in Trench 3 and may represent a drainage or stock enclosure ditch. Some connection between this activity and the nearby 16th century Sprowston Hall may exist. The abundance of Post-Medieval finds in the topsoil along with environmental data suggest significant night soiling has occurred on this site.

78 No evidence for a suspected palaeochannel was identified in any of the trenches. A natural deposit of fine silt **78** of a pale brown tone (in Trench 10) may account for the creation of this cropmark.

79 Recommendations for further archaeological mitigation work (if required, based on the evidence presented in this report) will be made by NCCES.

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Finds were processed and reported on by Rebecca Sillwood, with environmental analysis by Val Fryer.

The report was illustrated by David Dobson and edited by David Adams.

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Appendix 1a: Context Summary

Context	Category	Cut Type	Fill Of	Description	Trench
1	Deposit			Topsoil	1
3	Cut	Post-hole		Post-hole	1
4	Deposit		3	Fill of post-hole [3]	1
5	Deposit			TR1 Natural	1
6	Deposit			Compressed topsoil/disturbed	2, 5, 7, 8
7	Deposit			Silt with rubble above (6)	1, 2, 4, 5, 6, 7
8	U/S			Site U/S finds	1 - 10
9	Deposit			Compressed topsoil/disturbed	3
10	Deposit			Redeposited natural	3
11	Cut	Ditch		North-South ditch	3
12	Deposit		11	Fill of Ditch [11]	3
13	Cut	Hollow		Quarry Pit	3
14	Deposit		13	Primary fill of [13]	3
15	Deposit		13	Secondary fill of [13]	3
16	Deposit			Modern construction rubble (road)	3, 8
17	U/S			U/S finds TR1	1
18	Deposit		11	Fill of [11] - Same as (12)	3
19	Deposit			Fill of [13] - Same as (14)	3
20	Deposit			Mixed Brown silt	3
21	Deposit			U/S finds TR3	3
22	Cut	Depression		Arbitrary base of soil compressed into natural by plant	3
23	Deposit		22	Fill of [22]	3
24	Cut	Unknown Feature		Small aspect of feature in SE of TR3	3
25	Deposit		24	Fill of [24]	3
26	Cut	Ditch		North-east – south-west ditch - Part of M39	3
27	Deposit		26	Secondary fill of [26]	3
28	Deposit			Topsoil in intrusive ruts on [26]	3
29	Deposit		26	Primary fill of [26]	3
30	Deposit		11	Pale Brown fill in [11]	3
31	U/S			U/S finds from TR7	7
32	Cut	Ditch		North-east – south-west ditch - Part of M39	4
33	Deposit		32	Primary fill of [32]	4
34	Deposit		32	Secondary fill of [32]	4
35	Cut	Pit		Possible Pit	4
36	Deposit		35	Fill of [35]	4
37	U/S			U/S finds from TR6	6

Context	Category	Cut Type	Fill Of	Description	Trench
38	Deposit			Topsoil	6
39	Master	Ditch		Master for Ditch [26, 32, 42	3, 4, 5, 9, 10
40	Cut	Ditch		Recut of Ditch [32] M39	4
41	Deposit		40	Fill of [40]	4
42	Cut	Ditch		North-east – south-west ditch - Part of M39	10
43	Deposit		42	Primary fill of [42]	10
44	Deposit		42	Secondary fill of [42]	10
47	Cut	Gully		Possible Gully	4
48	Deposit		47	Fill of [47]	4
49	Cut	Pit/Hollow		Large Pit/Hollow	4
50	Deposit		49	Yellow silt in [49]	4
51	Deposit		49	Mottled mixed black silt in [49]	4
52	Deposit		49	Grey silty sand in [49]	4
53	Deposit		49	Gravel dense silty sand in [49]	4
54	Deposit			Natural in TR 4	4
55	Deposit			Silt in natural depression/undulation	10
56	Cut	Probable tree		Probable tree/burrow	10
57	Deposit		56	Lower fill of [56]	10
58	Deposit			Modern Plough soil	4
59	Deposit			Post-med 'improved soil'	4
60	Deposit			Possible medieval plough soil	4
62	Deposit		49	Probable ploughed out upper fill of (47)	4
63	Deposit		49	Probable ploughed out upper fill of (47)	4
64	Deposit			Possible sandy Medieval plough soil above 63	4
65	Deposit			Dirty natural / possible subsoil or early surface?	4
66	Cut	Ditch		North-east – south-west ditch - Part of M39	9
67	Deposit		66	Primary fill of [66]	9
68	Deposit		66	Secondary fill of [66]	9
69	Cut	Pit		Pit	9
70	Deposit		69	Primary fill of [69]	9
71	Deposit		69	Secondary fill of [69]	9
72	Deposit			Mixed topsoil	9
73	Deposit			Subsoil/Medieval plough soil	9
74	Cut	Depression		Natural depression/undulation	9
75	Deposit		74	Silt in [74]	9
76	Deposit			Topsoil	10

Context	Category	Cut Type	Fill Of	Description	Trench
77	Cut			Undulation/depression containing 78	10
78	Deposit		77	Silt in (77)	10
79	U/S			Finds (metal detector) TR9 Spoil	9
80	Cut	Hollow		Late Post Med/Modern Hollow/sump	8
81	Deposit		80	Fill of [80]	8
82	Cut	Pit		Pit	5
83	Deposit		82	Fill of [82]	5
84	Cut	Pit		Pit	5
85	Deposit		84	Fill of [84]	5
86	Deposit			Upper fill of Pit [56]	10
87	Deposit			??	10
88	Deposit			Subsoil sealing fill of [56]	10
89	Cut			North-east – south-west ditch - Part of M39	5
90	Deposit		89	Primary fill of [89]	~~5~~
91	Cut			Recut of Ditch [89]	5
92	Deposit		91	Fill of [91]	5
93	Cut			Possible Pit	5
94	Deposit		93	Fill of [93]	5
95	Deposit		89	Secondary fill of [89]	5
96	Cut	Post-hole		Post-hole	5
97	Deposit		96	Fill of [96]	5
98	Cut	Post-hole		Post-hole	5
99	Deposit		98	Fill of [98]	5
100	Cut	Post-hole		Post-hole	5
101	Deposit		100	Fill of [100]	5
102	Master			Master for Recut of M39	4, 5
103	Cut	Possible hedge line		Possible hedge line	8

Appendix 1b: Feature Summary

Period	Category	Total
Modern	Post-hole	1
Post-Medieval	Ditch	3
Post-Medieval	Pit	2
Post-Medieval	Possible hedge line	1
Prehistoric	Pit	1
Prehistoric	Gully	1
Undated	Pit	5
Undated	Post-hole	3
Undated	Burrow/three throw	1
Undated	Uncharacterised feature	1

Appendix 2a: Finds by Context

Context	Material	Qty	Wt	Period	Notes
6	Ceramic building material	4	20g	Post-Medieval	
6	Ceramic building material	1	25g	Late Medieval	
6	Ceramic building material	1	13g	Roman?	
6	Pottery	1	5g	Post-Medieval	16th-18th c.
6	Pottery	1	4g	Post-med/Modern	16th-20th c.
8	Clay tobacco pipe	5	18g	Post-Medieval	16th – 19th c.
8	Glass	2	59g	Post-med/Modern	18th – 20th c.
8	Pottery	3	111g	Post-Medieval	
8	Pottery	2	29g	Post-Medieval	
9	Clay tobacco pipe	1	1g	Post-Medieval	
14	Burnt flint	1	50g	Unknown	
14	Clay tobacco pipe	1	3g	Post-Medieval	
14	Pottery	1	39g	Post-Medieval	1730-1760
15	Burnt flint	1	5g	Unknown	
15	Ceramic building material	1	31g	Med/Post-med	
17	Ceramic building material	3	104g	Post-Medieval	
17	Glass	1	7g	Post-Medieval	
17	Pottery	3	43g	Post-Medieval	17th – 19th c.
17	Pottery	1	9g	Post-med/Modern	18th – 20th c.
17	Pottery	1	28g	Med/Post-med	15th -16th c.
21	Glass	1	9g	Post-Medieval	
21	Pottery	3	50g	Post-Medieval	17th – 19th c.
23	Clay tobacco pipe	1	1g	Post-Medieval	

Context	Material	Qty	Wt	Period	Notes
23	Glass	6	2g	Post-Medieval	
23	Pottery	4	5g	Post-med/Modern	18th – 20th c.
23	Pottery	4	14g	Post-Medieval	17th – 18th c.
27	Pottery	1	19g	Post-Medieval	16th – 18th c.
31	Ceramic building material	2	58g	Post-Medieval	
31	Clay tobacco pipe	1	1g	Post-Medieval	
31	Glass	1	12g	Post-Medieval	
31	Metalworking debris	1	20g	Unknown	Tap slag
31	Pottery	5	28g	Post-med/Modern	18th – 20th c.
37	Glass	1	25g	Post-Medieval	
37	Pottery	1	5g	Post-Medieval	1730 -1760
37	Pottery	5	17g	Post-med/Modern	18th – 20th c.
37	Worked flint	1	3g	Prehistoric	
41	Ceramic building material	3	6g	Post-Medieval	
41	Clay tobacco pipe	1	5g	Post-Medieval	
41	Worked flint	1	16g	Prehistoric	
48	Burnt flint	7	92g	Unknown	
50	Worked flint	3	6g	Prehistoric	
51	Burnt flint	25	462g	Unknown	
79	Copper alloy	1	2g	Post-Medieval	Button
79	Copper alloy	1	11g	Post-Medieval	Furniture fitting
79	Lead	1	31g	Unknown	Waste
92	Ceramic building material	4	230g	Post-Medieval	
92	Clay tobacco pipe	1	6g	Post-Medieval	

Appendix 2b: Finds Summary

Period	Material	Total
Prehistoric	Worked flint	5
Roman?	Ceramic Building Material	1
Late Medieval	Ceramic building material	1
Medieval/Post-Medieval	Pottery	1
	Ceramic building material	1
Post-Medieval	Ceramic building material	17
	Clay tobacco pipe	11
	Glass	12
	Copper alloy	2
	Pottery	35
Unknown	Lead	1
	Burnt flint	34
	Metalworking debris	1

Appendix 2c: Pottery Catalogue

Context	Fabric	Form	Rim	No	Wt/g	Spot date	Fabric date range
6	IGBW			1	5		16th-18th c.
6	LPME	Plantpot		1	4		18th-20th c.
8	GRE	Bowl	complex bead	1	45		16th-18th c.
8	ESWN	Bowl	flaring	1	51		L.17th-L.18th c.
8	REFW			1	5		L.18th-20th c.
8	REFW	Preserve jar		1	24		L.18th-20th c.
8	ESW	Bottle		1	15		17th-19th c.
14	CRW			1	38		1730-1760
17	LMT			1	28		15th-16th c.
17	LSRW			1	20		18th-19th c.
17	ESW	Bottle/jar		1	13		17th-19th c.
17	ESW	Bottle/jar		1	10		17th-19th c.
17	PORC			1	9		18th-20th c.
21	ESWN			1	5		L.17th-L.18th c.
21	ESW			1	24		17th-19th c.
21	PORCC			1	20		
23	CRW			1	1		1730-1760
23	CRW	Bowl?	flaring	1	3		1730-1760
23	REFW	Cup?	upright plain	1	1		L.18th-20th c.
23	REFW			1	1		L.18th-20th c.
23	REFW			1	1		L.18th-20th c.
23	ESWN	Bowl	bead	2	9		L.17th-L.18th c.
23	PORC			1	2		18th-20th c.
27	GRE			1	19		16th-18th c.
31	LPME	Plantpot		2	10		18th-20th c.
31	PORC			1	8		18th-20th c.
31	PEW			1	4		L.18th-M.19th c.
31	REFW	Plate	everted	1	6		L.18th-20th c.
37	CRW	Plate	everted	1	5		1730-1760
37	REFW			1	2		L.18th-20th c.
37	REFW			1	2		L.18th-20th c.
37	REFW			1	1		L.18th-20th c.
37	PORC			1	5		18th-20th c.
37	PORC			1	3	19-20?	18th-20th c.

Appendix 2d: Ceramic Building Material Catalogue

context	fabric	form	no	wt/g	minno	abr	height	peg	comments	date
6	fs	RTP?	1	3	1				poss PAN	pmed
6	fscp	RTP	1	6	1	+				pmed
6	fs	RTP?	1	11	1	++		?	surfaces lost	pmed?
6	fsgf	RTP	1	25	1				reduced surfaces	lmed
6	fsfe	RBT?	1	13	1	+	20			Rom?
15	fsg	RTP	1	31	1	+				lmed/pmed
17	fscp	RTP	1	17	1	++				pmed
17	fsf	PAN	1	68	1	+			partial black 'glaze', burnt underside	18?
17	fs	PAN	1	18	1	+			machine-made	19+
31	fscp	RTP?	1	27	1	+			upper surface lost, poss FT? pink	pmed
31	fs	RTP	1	31	1	+				pmed
41	fsffe	LB?	3	6	1	++			no surfaces	pmed
92	fscp	RTP	3	208	1	+			buff	pmed
92	fsfe	RTP	1	20	1					pmed

Appendix 3: Historical Periods

Period	Date From	Date To
Prehistoric	-500,000	42
Early Prehistoric	-500,000	-4,001
Palaeolithic	-500,000	-10,001
Lower Palaeolithic	-500,000	-150,001
Middle Palaeolithic	-150,001	-40,001
Upper Palaeolithic	-40,000	-10,001
Mesolithic	-10,000	-4,001
Early Mesolithic	-10,000	-7,001
Late Mesolithic	-7,000	-4,001
Late Prehistoric	-4,000	42
Neolithic	-4,000	-2,351
Early Neolithic	-4,000	-3,001
Middle Neolithic	-3,500	-2,701
Late Neolithic	-3,000	-2,351
Bronze Age	-2,350	-701
Early Bronze Age	-2,350	-1,501
Beaker	-2,300	-1,700
Middle Bronze Age	-1,600	-1,001
Late Bronze Age	-1,000	-701
Iron Age	-800	42
Early Iron Age	-800	-401
Middle Iron Age	-400	-101
Late Iron Age	-100	42
Roman	42	409
Post Roman	410	1900
Saxon	410	1065
Early Saxon	410	650
Middle Saxon	651	850
Late Saxon	851	1065
Medieval	1066	1539
Post-Medieval	1540	1900
Modern	1900	2050
World War One	1914	1918
World War Two	1939	1945
Cold War	1945	1992
Unknown	--	--

after English Heritage Periods List, recommended by Forum on Information Standards in Heritage available at: http://www.fish-forum.info/inscript.htm

Appendix 4: Figures

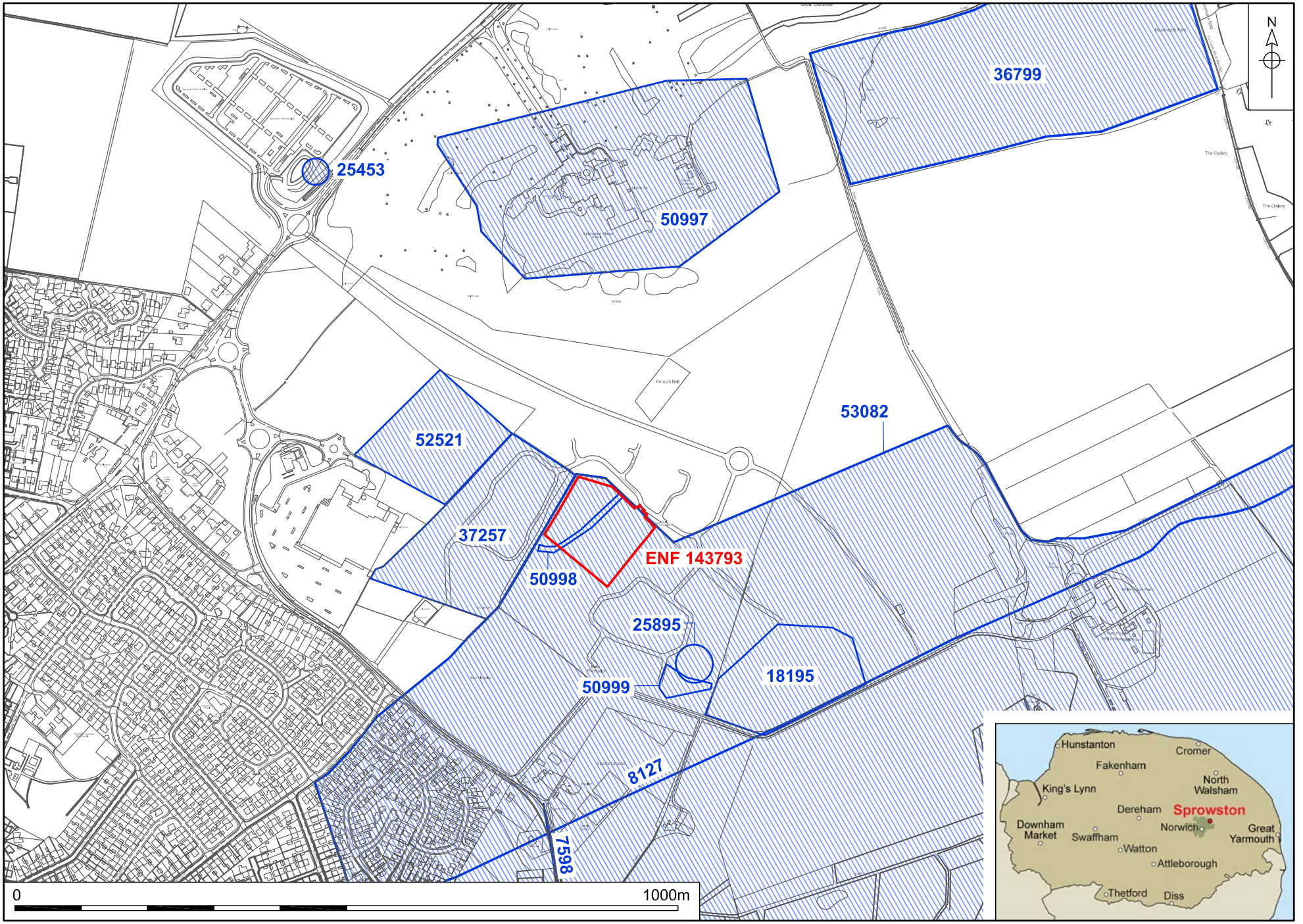

Figure 1. Site location with selected HER data. Scale 1:7500

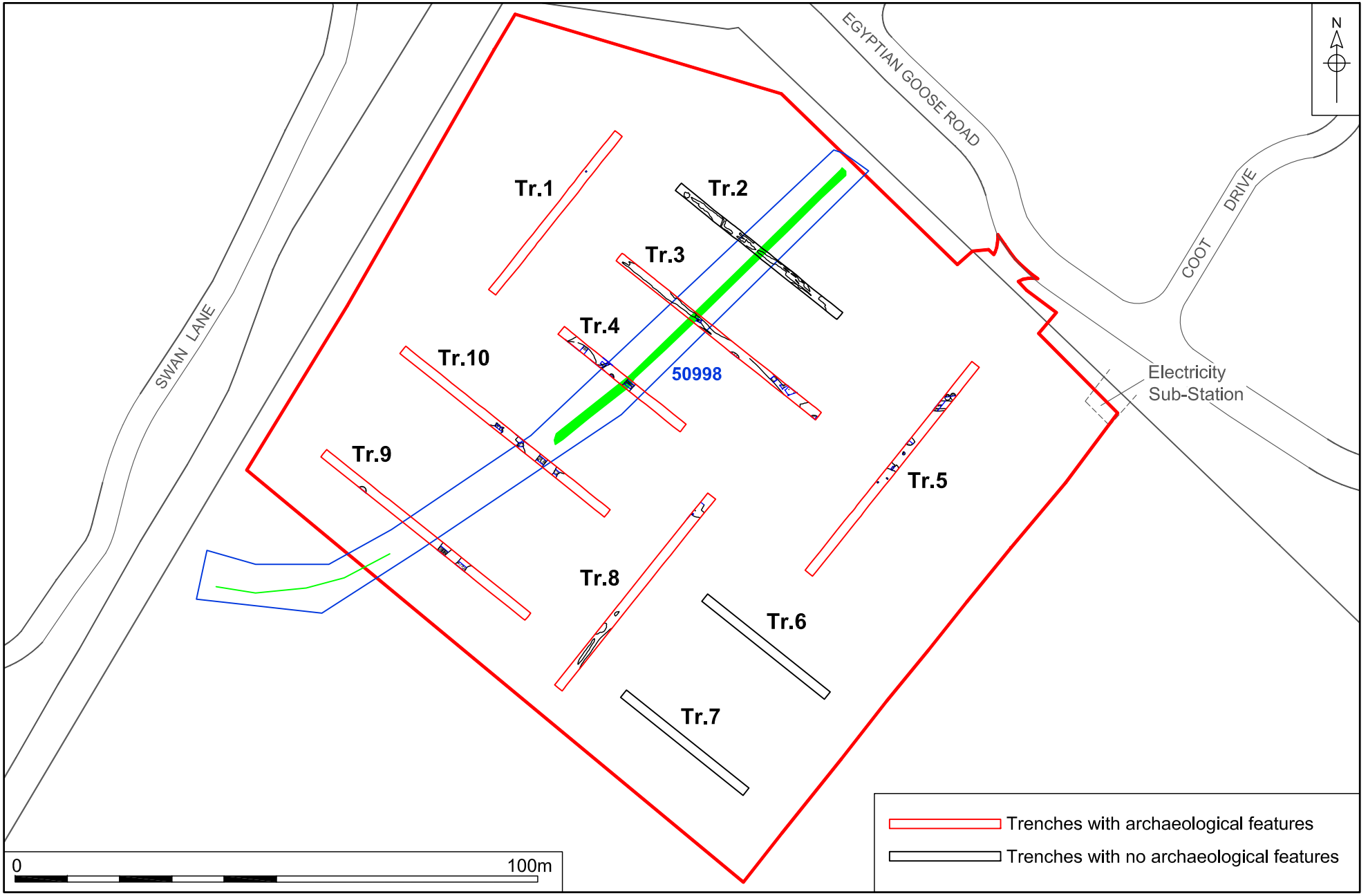

Figure 2. Location of trenches. Scale 1:1000

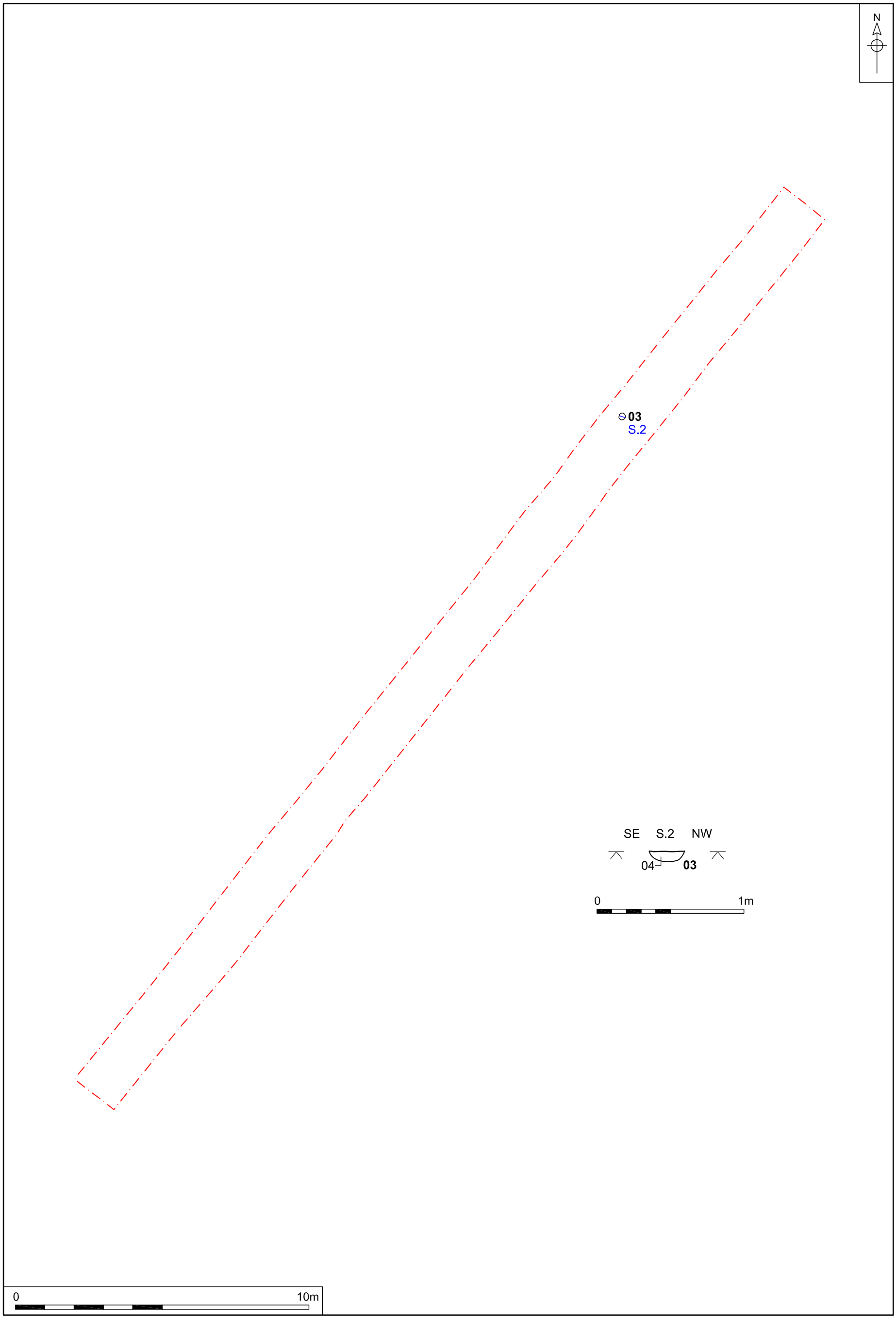

Figure 3. Trench 1, plan and section. Scale 1:125 and 1:25

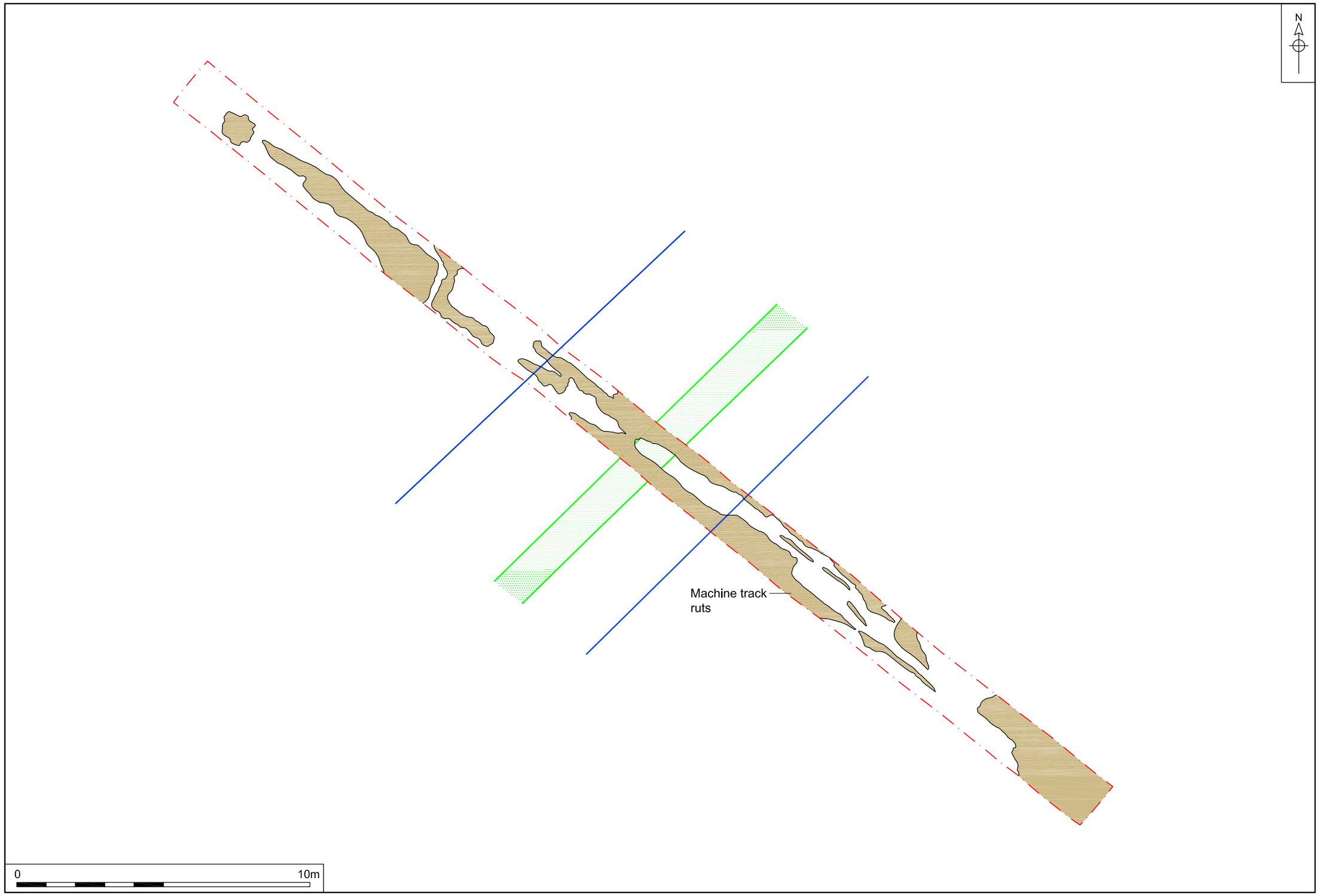

Figure 4. Trench 2, plan. Scale 1:125

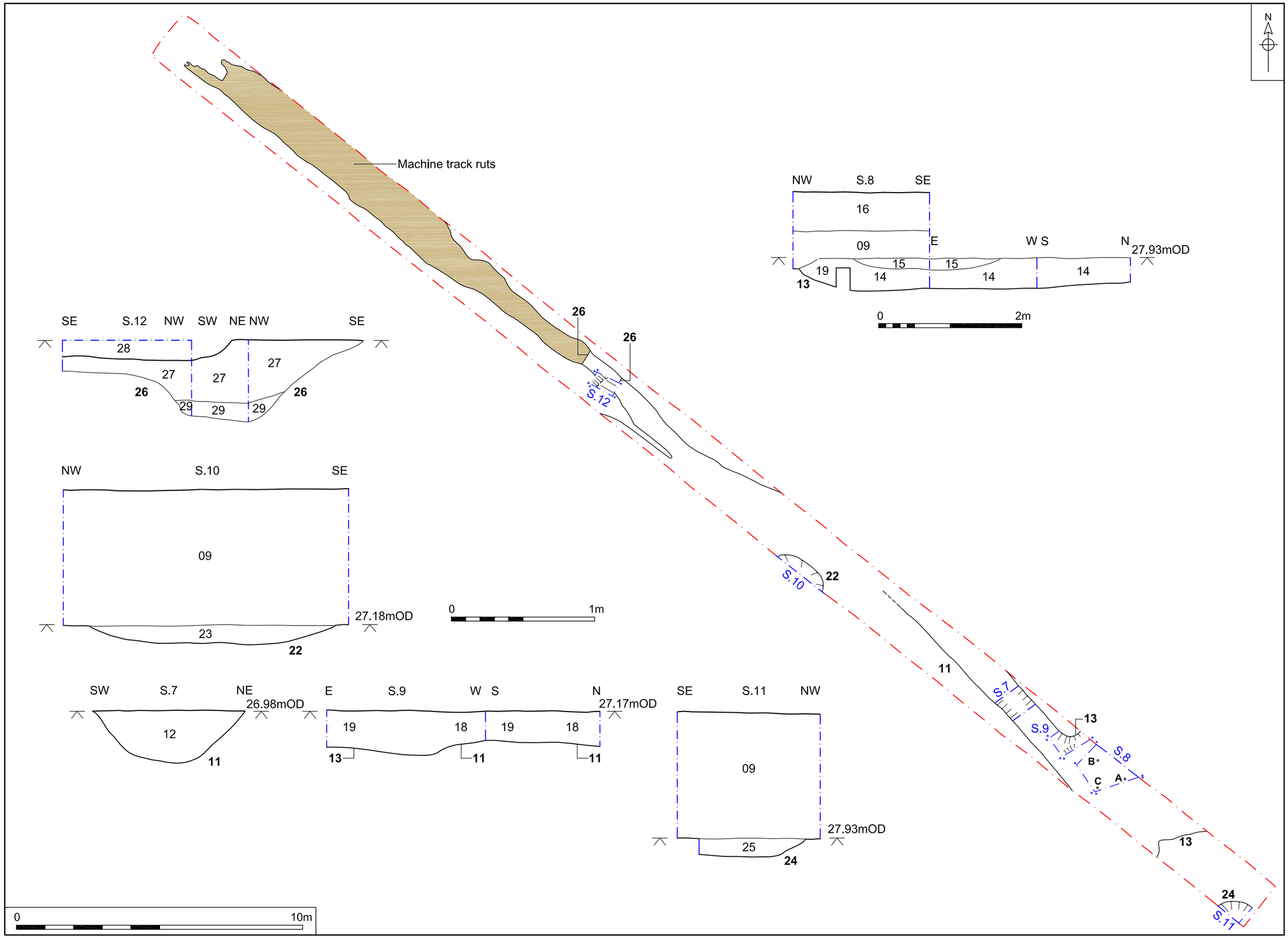

Figure 5. Trench 3, plan and sections. Scale 1:125, 1:50 and 1:25

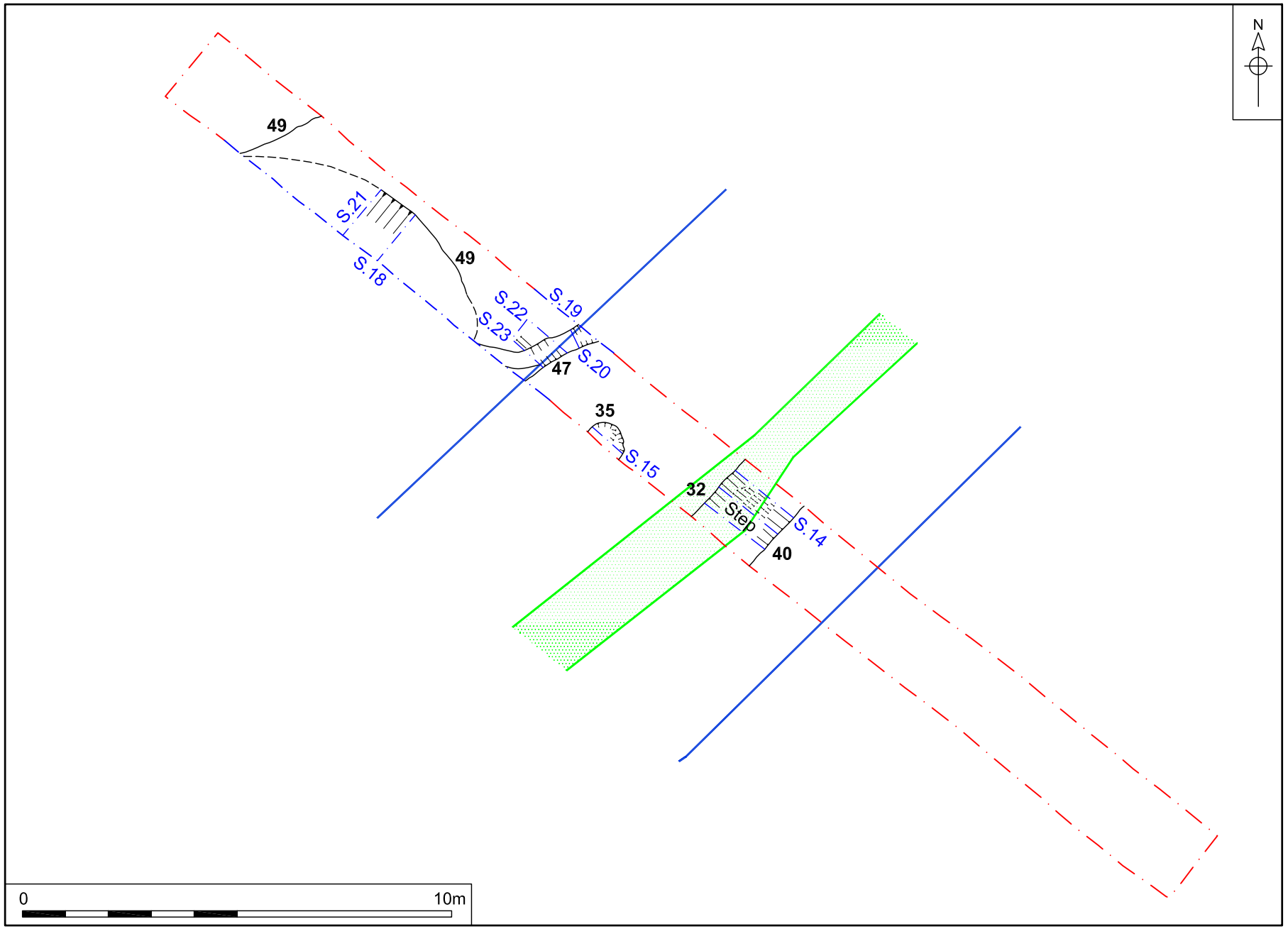

Figure 6. Trench 4, plan. Scale 1:125

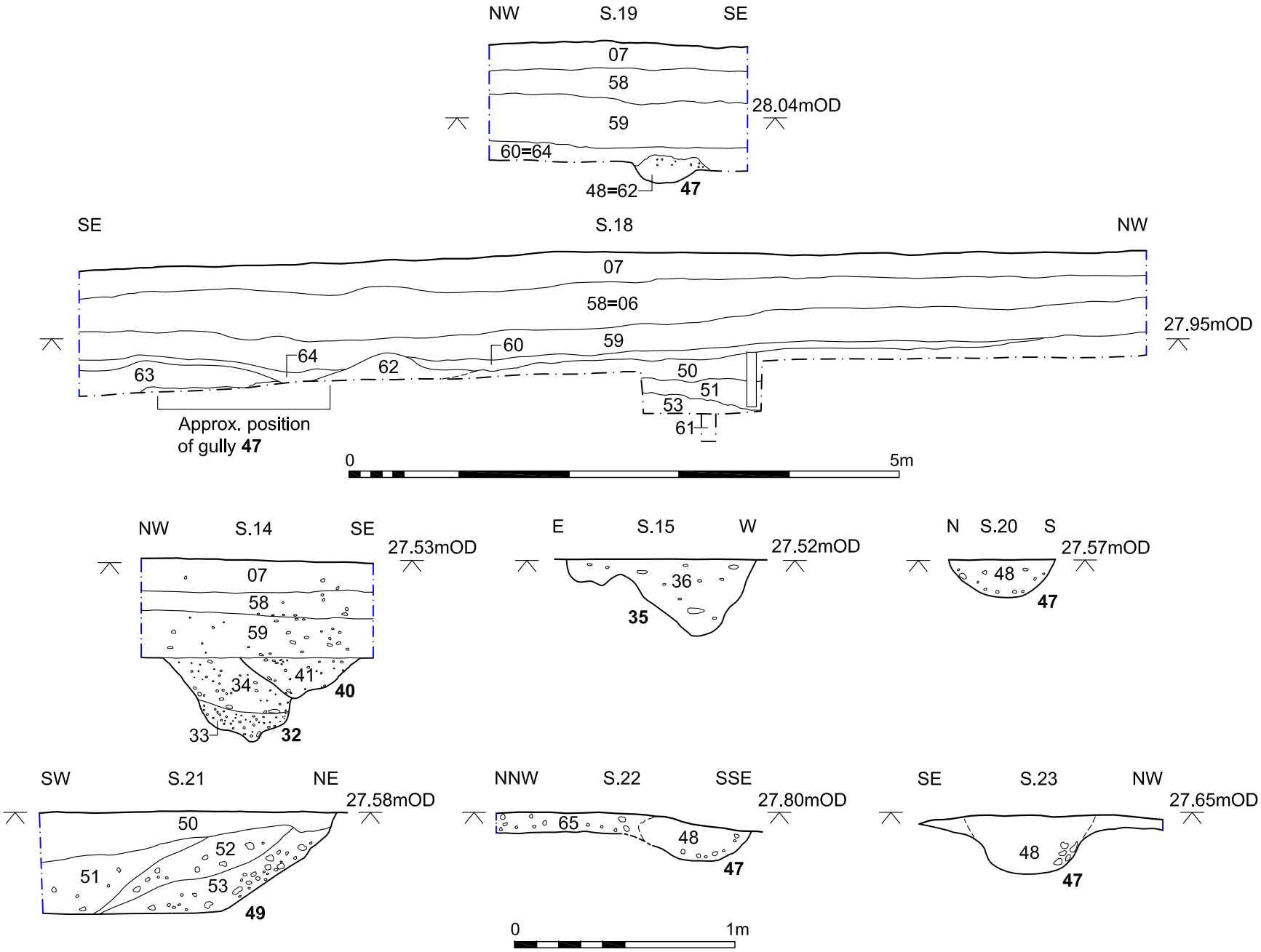

Figure 7. Trench 4, sections. Scale 1:50 (top) 1:25 (bottom)

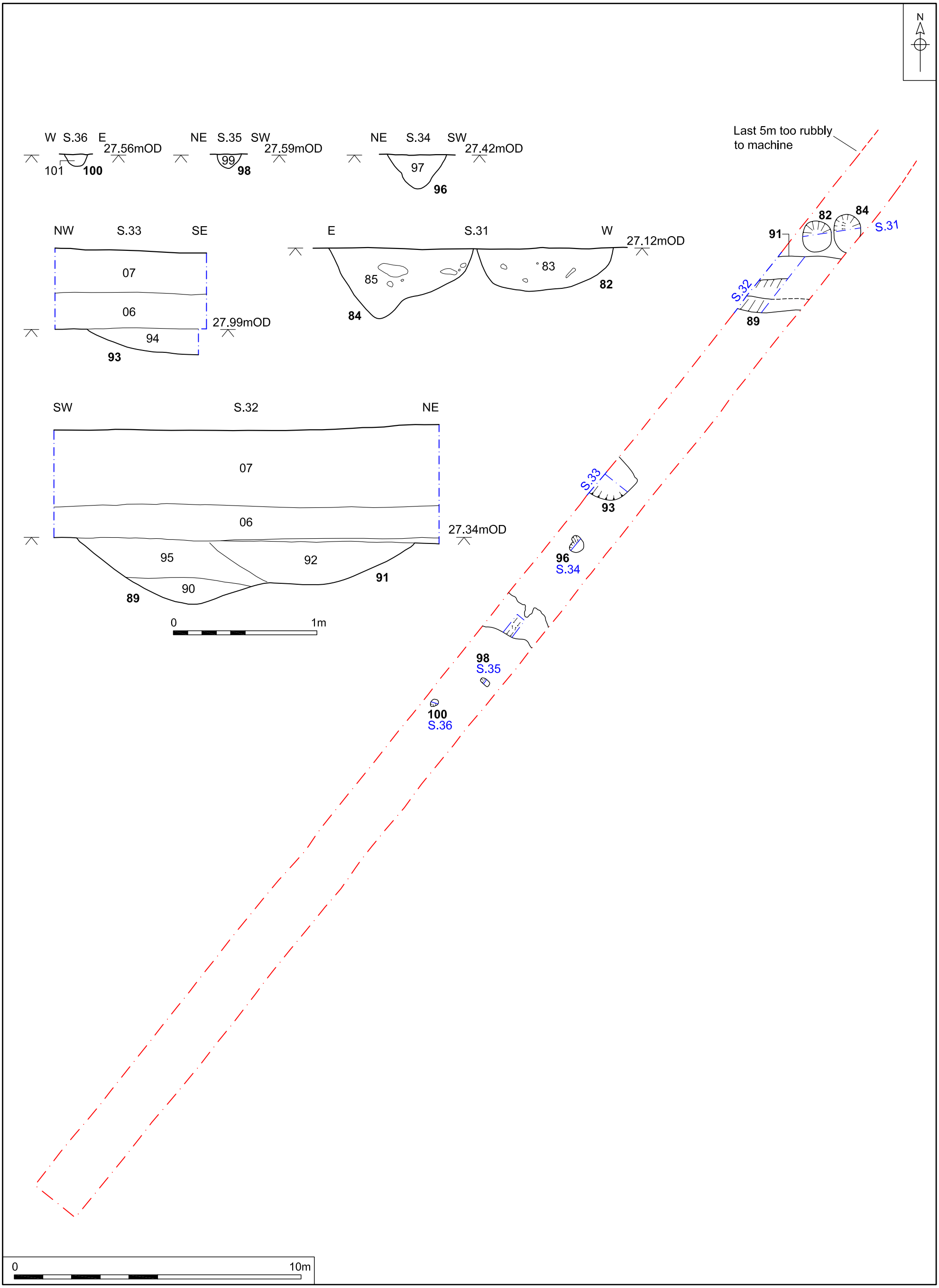

Figure 8. Trench 5, plan and sections. Scale 1:125 and 1:25

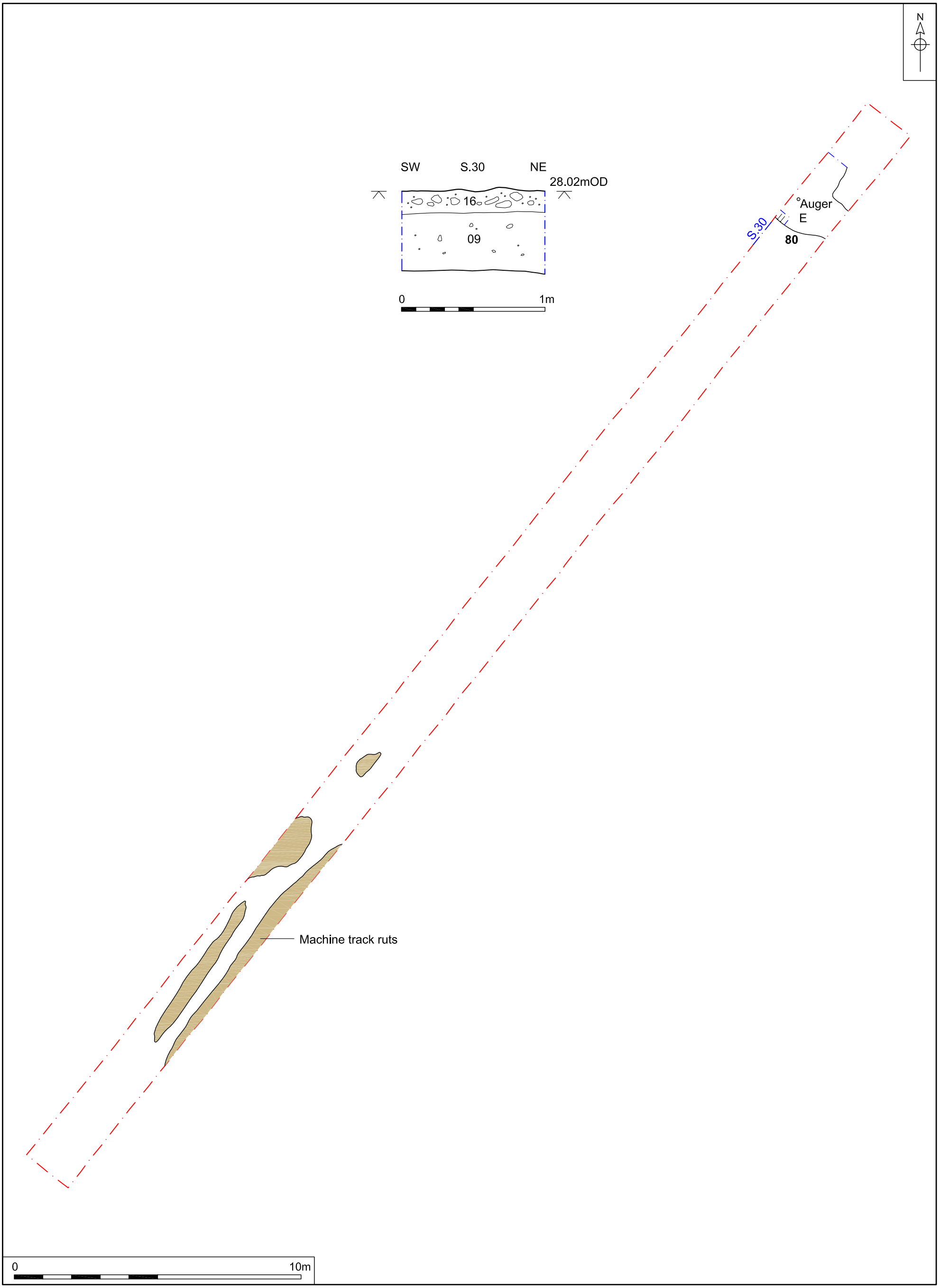

Figure 9. Trench 8, plan and section. Scale 1:125 and 1:25

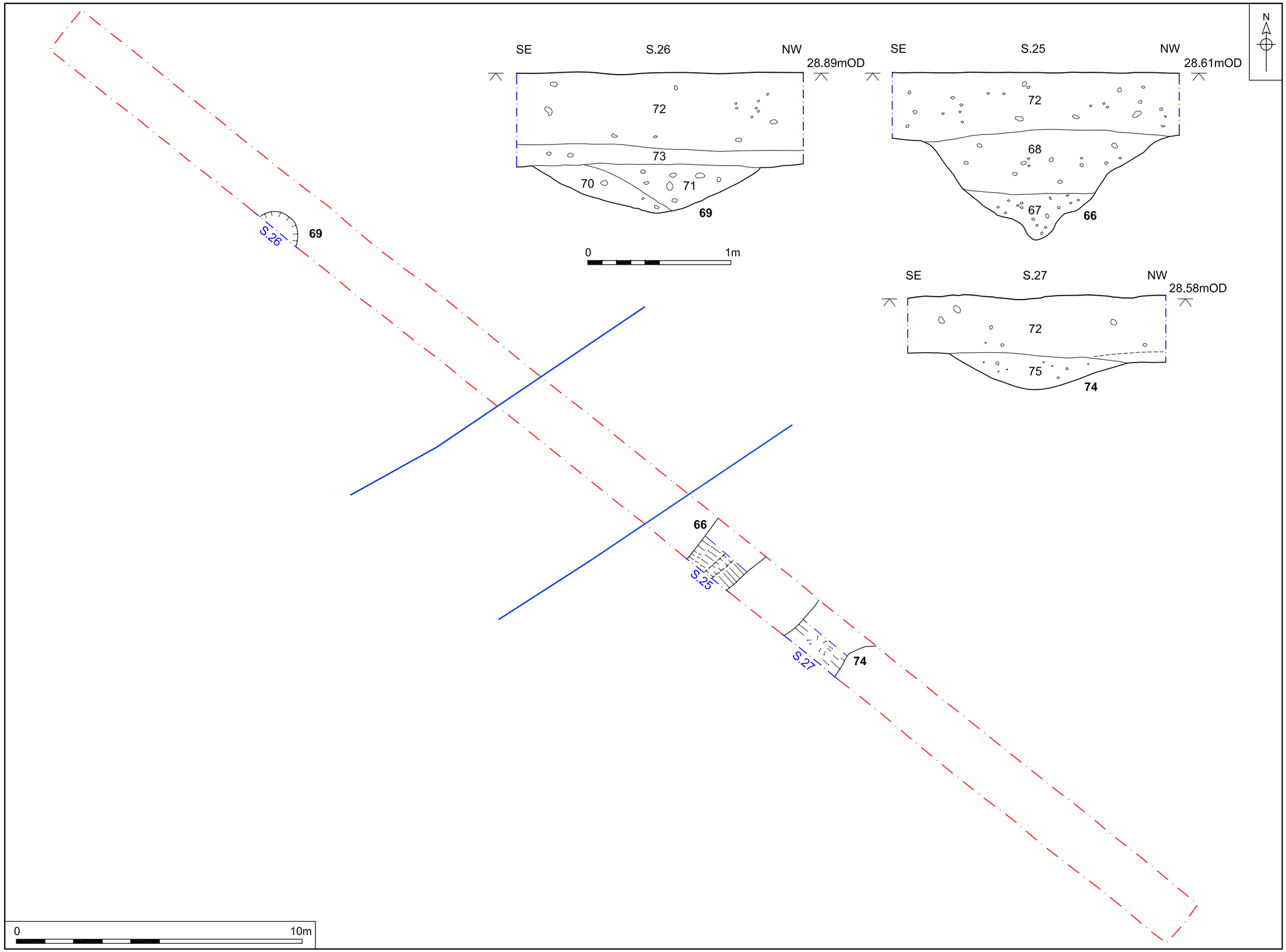

Figure 10. Trench 9, plan and sections. Scale 1:125 and 1:25

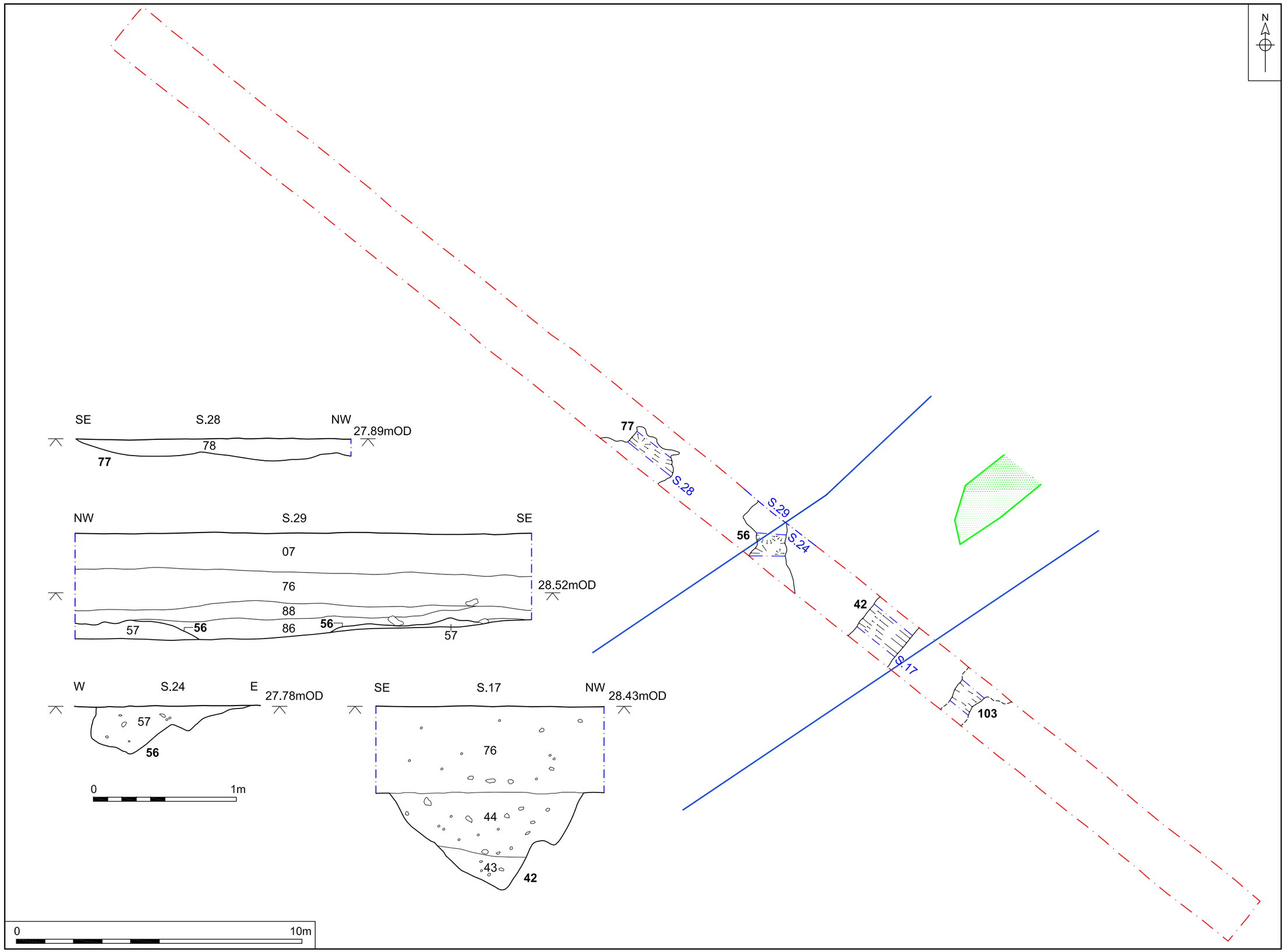

Figure 11. Trench 10, plan and sections. Scale 1:125 and 1:25

Appendix 5: Archaeological Specification

Norfolk County Council

BRIEF FOR A PROGRAMME OF ARCHAEOLOGICAL MITIGATORY WORK
(to commence with informative trial trenching)
At

NEW PRIMARY SCHOOL SITE, MALLARD WAY, (NORTH OF BLUE BOAR LANE) SPROWSTON, NORFOLK

PLANNING AUTHORITY:	Broadland District Council
PLANNING REFERENCE:	
HES REFERENCE	CNF47735
NHER EVENT NUMBER:	To be arranged
GRID REFERENCE:	TG 2602 1211
MAP EXTRACT ATTACHED:	No
DEVELOPMENT PROPOSAL:	Primary school
CURRENT LAND USE:	Former arable
ISSUED BY:	John Percival
	Historic Environment Officer
	Historic Environment Service
	Community and Environmental Services
	Norfolk County Council
	Union House, Gressenhall, Dereham
	Norfolk NR20 4DR
	Tel: 01362 869275 (direct)
	Mobile: 07775 697616
	john.percival@norfolk.gov.uk
DATE:	20th September 2017

IN TRAN communication for all

If you need this document in large print, audio, Braille, alternative format or in a different language please contact hep@norfolk.gov.uk and we will do our best to help.

Summary

Pre-application advice was sought relating to the construction of a new primary school on approximately 2.2 hectares of land adjacent to Mallard Way (North of Blue Boar Lane), Sprowston, Norfolk. Norfolk Historic environment Service has recommended that any planning applications in relation to this site be subject to conditions for a Programme of Archaeological Mitigatory Work. The Programme of Archaeological Mitigatory Work will commence with informative trial trenching. The results of the trial trenching will be used to determine the scope and extent of any further mitigatory work that may be required (e.g. an archaeological excavation or monitoring of groundworks during construction).

This brief covers all stages the Programme of Archaeological Mitigatory Work. If further stages of archaeological mitigatory work are required following on from the initial trial trenching no further formal briefs will be issued. A single Written Scheme of Investigation for the full Programme of Archaeological Mitigatory Work will be prepared in response to this brief. Following discussions with NCC HES project designs for any subsequent phase of archaeological work will be produced. These project designs will form an appendices to the overall Written Scheme of Investigation.

The Programme of Archaeological Mitigatory Work will include:

1) The production of the Written Scheme of Investigation for the full Programme of Archaeological Mitigatory Work.

2) The production of project designs for each phase of archaeological work. Each of these will form an Appendix to the overall Written Scheme of Investigation.

3) The provision for sampling, dating and recording of all archaeological features, deposits and structures.

4) Provision to be made for analysis and dissemination of results and archive deposition.

5) The production of a final “grey literature” archive report including specialist post fieldwork analyses for each phase of work.

6) The production of an Assessment Report and Updated Project Design for any excavation phase of work.

7) The production of an appropriate publication report.

1. Policy Background

The relevant planning policies can be found in :-

Broadland District Council, Norwich City Council and South Norfolk Council *Joint Core Strategy for Broadland, Norwich and South Norfolk* (Adopted March 2011) Policies 1 and 8

and

National Planning Policy Framework. The Department of Communities and Local Government (2012).

2. Archaeological Background

An archaeological desk-based assessment has been produced in relation to the proposed development

> Copsey, R., 2017 *Sprowston New Primary School, Mallard Way, Norfolk, NR7 8RN, Archaeological Desk-based Assessment* NPS Archaeology report 2016/1067, unpublished

This summarises the available archaeological data for the site and its environs.

There is one recorded cropmark site (NHER 50998) within the proposed development area. NHER 50998 consists of a linear cropmark of a probable ditch which respects the alignment of a paleochannel southeast of the probable ditch. NHER 50998 has been interpreted as possibly being of prehistoric date.

The proposed development site lies within the historic extent of former Mousehold Heath. Recent archaeological investigations within the former extent of Mousehold Heath associated with the construction of the Norwich northern distributor road have revealed a sparse spread of evidence relating to prehistoric activity of various kinds and a similarly sparse spread of evidence relating to medieval settlement and industrial activity.

3. Planning Background

Norfolk Historic environment Service has recommended that any planning applications in relation to this site be subject to conditions for a Programme of Archaeological Mitigatory Work in accordance with paragraph 141 of *National Planning Policy Framework*

This brief provides an outline of the Programme of Archaeological Mitigatory. This will start with trial trenching, the results of which will be used to define the scope and extent of any further archaeological mitigatory work (e.g. excavation or monitoring). Further work will be required if features of importance are found and these cannot be preserved *in situ*.

4. Requirement for Work

The programme of archaeological work will include a number of phases. The archaeological contractor must prepare a single Written Scheme of Investigation for the full Programme of Archaeological Mitigatory Work and a project design for each phase of archaeological work. Each project design will form an Appendix to the overall Written Scheme of Investigation. Drafts of the Written Scheme of Investigation and Project Designs must be submitted to the Historic Environment Service for approval *before* costs are prepared for the commissioning client.

The archaeological research aims and objectives of the project will be clearly stated. The Written Scheme of Investigation will demonstrate how these will be met and will make appropriate reference to:-

> Medlycott, M (ed.), 2011 *Research and Archaeology Revisited: a revised framework for the East of England* East Anglian Archaeology Occasional Paper **24**

The relevant experience of the project team must be articulated within the Written Scheme of Investigation and/or Project Designs. In particular the person leading each phase of the project in the field must have significant experience of appropriate archaeological methods, theory and safe practice.

The Project Designs must indicate the number of person days allocated to each fieldwork stage of the project.

The Written Scheme of Investigation must confirm that relevant health and safety considerations have been built in. The potential of the area being contaminated by toxins must have been adequately investigated or plans for a pre-project investigation of ground conditions outlined. Appropriate tools for the job must be utilised and consideration for this shown in the Written Scheme of Investigation.

The archaeological contractor will contact the HER Officer of the Historic Environment Service[1] in advance of each phase of work starting to obtain a HER Event number for the phase or, if a number is already given on the Brief or has been provided previously, to ensure that it is still applicable. An Event number will not be issued unless there has been a recent relevant HER search (i.e. within the last 12 months). Please note the Norfolk Heritage Explorer website is a filtered dataset and thus not suitable for planning work.

At the start of each phase of work (immediately before fieldwork commences) an OASIS online record http://ads.ahds.ac.uk/project/oasis/ must be initiated and key fields completed on Details, Location and Creators forms.

The Written Scheme of investigation and project designs produced in response to this brief will include a plan showing trial trench locations and the locations

[1] Norfolk Historic Environment Record: heritage@norfolk.gov.uk, 01362 869282

of any areas to be the subject of further archaeological investigations. In this case National Mapping Project aerial photographic plot data (available from the HER Officer of the Historic Environment Service, see above) must be included on any such plans.

Phase 1: informative trial trenching
Trial trenching is required to recover as much information as possible on the extent, date, phasing, character, function, status and significance of the site. The states of preservation of archaeological features or deposits within the area indicated should be determined

Informative trial trenching will take place across the whole ensuring adequate coverage of the whole site. A 5% sample of the whole development area of approximately 2.2 hectares equates 610metres of 1.8m wide trial trenches. The trench layout should consist of an appropriate number of 20m, 30m, 40m and 50m long trial trenches, for example six 50m long trenches, three 30m long trenches and one 20m long trench. The exact number of each length of trench will be dictated by achieving an adequate layout and overage of trenches.

Particular emphasis should be placed on the mapped location of NHER 50998 and its associated paleochannel which must be sampled by at least 3 trenches. Trenches sampling these features must be located and set out in relation to National Mapping Project aerial photographic plot data (available from the HER Officer of the Historic Environment Service, see above).

If necessary to achieve an adequate coverage of trial trenches all or parts of the spoil heaps and other construction debris that litter portions of the site may have to be moved or removed.

The trenches must characterise the full archaeological sequence down to undisturbed geological deposits. Where the full depths of deep features cannot be safely or practicably excavated their full depths will be established by hand auger soundings.

The results of the trial trenching must be fully analysed, described and illustrated in an archive report. The contractor must also produce an archive and seek to secure the transfer of the full archive (including artefacts) to an appropriate museum. Artefacts must be appropriately conserved.

Further phases
The Historic Environment Service will use the results of the informative trial trenching to determine the nature of subsequent phases of the programme of archaeological mitigatory work. It is possible these will include full archaeological excavation and/or the monitoring of groundworks under archaeological supervision and control. The archaeological contractor will be expected to provide Project Designs for these phases once their nature has been determined.

If excavation is required, it will recover as much information as possible on the origins, date, development, phasing, spatial organisation, character, function, status, significance and the nature of social, economic and industrial activities on the site.

Excavation Projects should examine, excavate and replace by record all archaeological features, deposits and structures within the area indicated and to the agreed depth, assess their potential for analysis, produce an Assessment Report and Updated Project Design, undertake an agreed programme of analysis and artefact conservation, produce an archive and a fully illustrated archive report, seek to secure the transfer of the full archive (including artefacts) to an appropriate museum, and disseminate the results by means of an appropriate form of publication (potentially a journal note or article or an East Anglian Archaeology monograph).

If monitoring of groundworks under archaeological supervision and control is required this will cover specified areas of below-ground disturbance, including excavations, foundation trenches, service trenches, drains, soakaways, pipeline trenches and cable trenches. Provision will be made for an appropriate level of analysis (including identification and conservation of artefacts and specialist reports if appropriate), the production of archive and a fully illustrated archive report, and the transfer of the full archive (including artefacts) to an appropriate museum.

All phases of work
Contractors should note that no element of this brief should be treated as a contingency unless agreed in advance with the Historic Environment Service.

Where appropriate, topsoil or spoil will be scanned by metal-detector before and during its removal.

In the interests of reproduction of the results, a single context planning methodology must be used and a matrix of the sequence created on site.

All archaeological contexts and artefacts exposed, examined or excavated will be fully recorded on appropriate context, finds and sample sheets, on plans and sections and by photographic record, including raw digital images black and white film photography.

Provision should be made for the sampling of deposits for the analysis of palaeoenvironmental remains and for the scientific dating of deposits, artefacts or ecofacts where appropriate. Sampling strategies should be agreed during the course of the excavation in consultation with Norfolk County Council Historic Environment Service and the Historic England Regional Advisor for Archaeological Science.

When the project is completed, all parts of the OASIS online form/forms must be completed for submission to the Norfolk Historic Environment Record. This will include an uploaded .pdf copies of all grey literature reports. Each grey

literature report must include a copy of the OASIS forms. Grey literature reports that do not include OASIS forms will automatically be rejected.

All reports must include the results of a recent HER search and relevant background research. Reports that use material from the Norfolk Heritage Explorer website rather than an HER search will automatically be rejected.

All grey literature reports must quote the relevant Historic Environment Service CNF reference number.

Draft copies of each project report can be submitted to the Historic Environment Service for comment and approval. If drafts are provided, they must be submitted to hep@norfolk.gov.uk.

One unbound hard copy and a copy in pdf/A format on CD of each project report should be supplied to the Historic Environment Service for the attention of the Senior Historic Environment Officer (Advice and Strategy) within eight weeks of the completion of the fieldwork on the understanding that this will become a public document after an appropriate period of time (generally not exceeding six months).

A second copy of each report should be sent directly to the Regional Advisor for Archaeological Science, Historic England, Brooklands House, 24 Brooklands, Avenue, Cambridge CB2 8BU.

5. Standards

The Historic Environment Service will be responsible for monitoring progress and standards throughout the project. The archaeological contractor will give the Historic Environment Service not less than two weeks' written notice of the commencement of the work, so that arrangements for monitoring the project can be made.

The Written Scheme of Investigation and/or Project Designs prepared by archaeological consultants or contractors should state that all works will be carried out in full accordance with the appropriate sections of Gurney, D., 2003, '**Standards for Field Archaeology in the East of England',** as adopted by the Association of Local Government Archaeological Officers for the East of England Region and published as *East Anglian Archaeology Occasional Paper* 14. This is available as a PDF file on the web at www.eaareports.org.uk. All other relevant national standards must be followed.

Archaeological contractors should note that the standards documents stipulate basic *methodological* standards. All contractors will strive to achieve the highest possible *qualitative* standards, with the application of the most advanced and appropriate techniques possible within a context of continuous improvement aimed at maximising the recovery of archaeological data and contributing to the development of a greater understanding of Norfolk's historic environment. Monitoring officers will seek and expect clear evidence of

commitment to the historic resource of Norfolk, with Written Schemes of Investigation being drawn up within a context of added value.

6. Other matters

Any subsequent variation to a Project Design or Written Scheme of Investigation must be agreed with the Historic Environment Service prior to its implementation.

This brief is valid for a period of one year from the date of issue. After that time, it may need to be revised to take account of new discoveries, changes in policy or the introduction of new working practices or techniques.

7. Notes for Applicants/developers

The Historic Environment Service is responsible for safeguarding the county's archaeological heritage. The Historic Environment Service is consulted by local planning authorities and provides specialist information and advice on the archaeological implications of development proposals.

An Archaeological Project will usually consist of one or more of the following:-

Desk-based assessment: a report drawing together existing information about a site from a wide range of sources.
Survey: usually fieldwalking and metal-detecting, sometimes non-intrusive geophysical surveys (e.g. magnetometer survey)
Evaluation: survey and/or trial-trenching or test-pitting.
Excavation: larger-scale excavation
Watching brief or monitoring: the presence of an archaeologist during the development to record any features exposed
Post-excavation: analysis, and the preparation of a report and archive of records and finds at the end of any archaeological project

A phased approach to fieldwork is frequently adopted, with one stage leading on to another (if necessary) after each phase is reported upon and reviewed.

If an evaluation is required before an application is determined or if planning permission is granted subject to a condition for a programme of archaeological work, the Historic Environment Service will provide a brief for the archaeological project. This outline of the project is forwarded to you by the Historic Environment Service or the Planning Authority.

You should then ask one or more archaeological contractors to prepare a Written Scheme of Investigation which will detail how the project is to be undertaken, and how the brief will be fulfilled. This will be sent to the Historic Environment Service for approval on behalf of the planning authority, after which the contractor will give you details of costs.

Details of archaeological contractors based in Norfolk and beyond may be

found in the Chartered Institute for Archaeologists Yearbook & Directory, available from the CI*f*A., University of Reading, 2 Earley Gate, PO Box 239, Reading RG6 6AU. Tel: 0118 931 6446. Fax: 0118 931 6448. Email: admin@archaeologists.net. Website: www.archaeologists.net.

The Historic Environment Service does not see contractors' costings, nor do we give advice on the costs of archaeological projects. This is between you and the archaeological contractor(s). You may wish to obtain a number of quotations or to employ the services of an archaeological consultant.

For further information or advice on any archaeological matters please contact the person issuing this report whose details are on Page 1.