Report 2013/1292

nps archaeology

Archaeological Trial Trench Evaluation of Land at Cringleford, Norfolk

ENF132484

Prepared for
Cirrus Land Management
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Location:	Land south of Cantley Lane, Cringleford, Norfolk
District:	South Norfolk
Grid Ref.:	TG 1914 0613 (centred between development sites)
Planning Ref.:	Pre-application
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Summary

An archaeological evaluation was conducted for Cirrus Land Management prior to deposition of a planning application to create new housing on the west side of Cringleford.

The current evaluation programme was for limited trial trenching in the southern part of the overall potential development area in order to test the nature of the archaeological resource in general and in particular to test anomalies identified during a recent geophysical survey. Four trial trenches were excavated across the southern field, targeted on known geophysical anomalies.

The results demonstrated that there was some evidence of activity in the Roman period in Trenches 1 and 3 in the north and west of the evaluated area respectively. Bronze Age evidence was present in Trenches 2 and 4.

1.0 INTRODUCTION

Proposals to develop a large site at Cringleford, Norwich required a programme of archaeological work to support and inform future planning applications for the site. This initial evaluation consisted of four trial trenches and was undertaken in order to assess the nature of the archaeology present at the southern part of the proposed development area. The overall proposal is anticipated to comprise residential development in an area to the west of Cringleford bounded by the A47 to the west. The development area covers approximately 45 hectares and is mainly comprised of agricultural land with some fallow land to the west of Round House Way.

The project was undertaken by NPS Archaeology in-line with guidance issued by Norfolk Historic Environment Service (NHES), though no formal brief was prepared by NHES. The work was conducted in accordance with a Written Scheme of Investigation prepared by NPS Archaeology (01-04-14-2-1292).

This work was commissioned and funded by Cirrus Land Management.

This project follows previous evaluation works at the site including a desk-based assessment by NPS Archaeology (Sillwood 2013), and a geophysical survey of the development area (Webb 2013). NHES required that trial trench evaluation be undertaken to fully assess the nature of the geophysical survey to inform any future planning application.

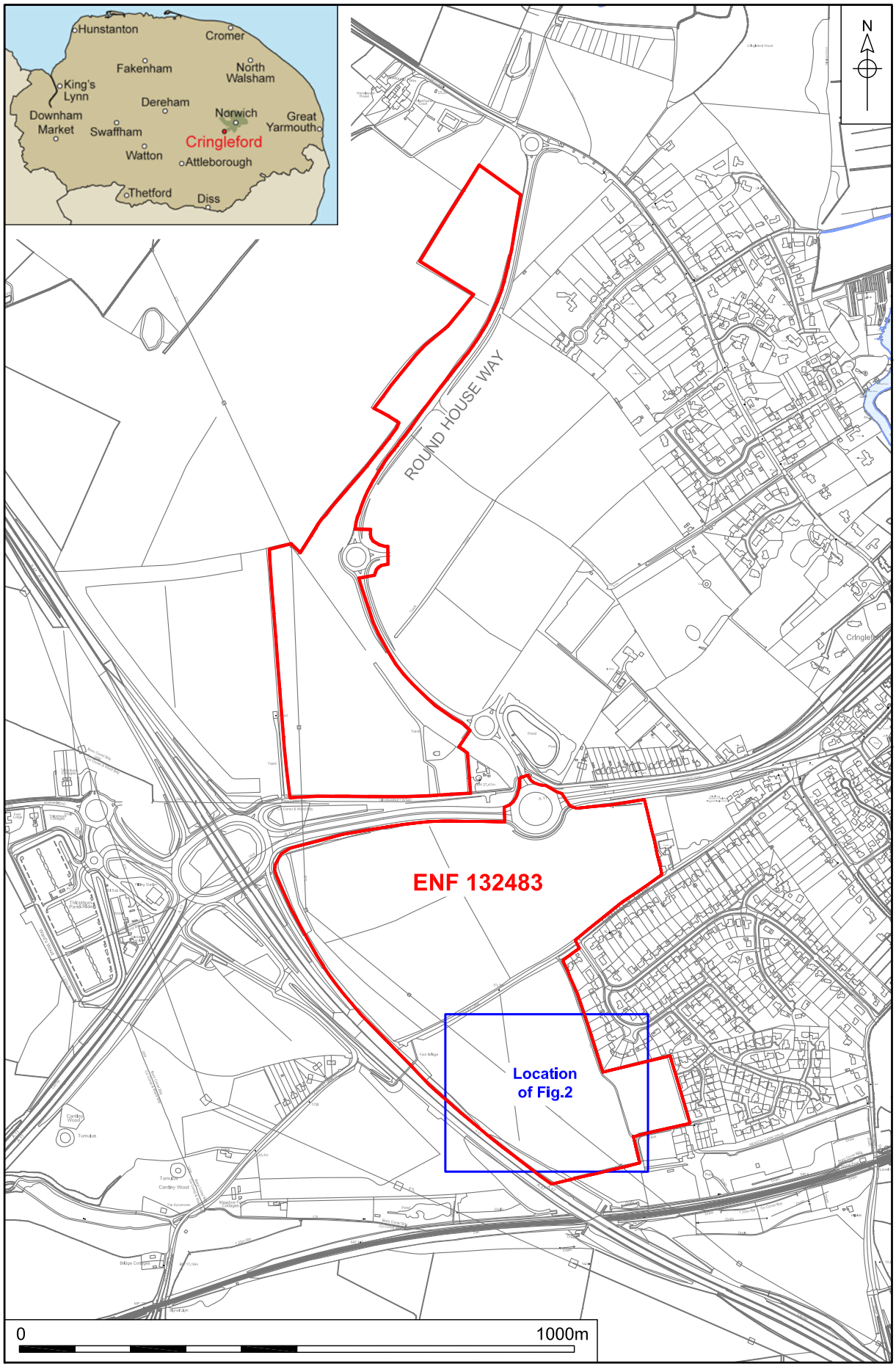

Figure 1. Site Location. Scale 1:10,000

This programme of work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, following the guidelines set out in *National Planning Policy Framework* (Department for Communities and Local Government 2012). The results will enable decisions to be made by the Local Planning Authority about the treatment of any archaeological remains found.

The site archive is currently held by NPS Archaeology and on completion of the project will be deposited with Norfolk Museums and Archaeology Service (NMAS), following the relevant policies on archiving standards.

2.0 GEOLOGY AND TOPOGRAPHY

The development sites lies to the west of the village of the Cringleford, situated to the west of the city of Norwich. The site is bounded to the west by the A47 and to the south by the railway. The River Yare is located approximately 700m to the east at its nearest point to the proposed development area. This four-trench trial trench evaluation has been designed to examine the most southerly field to be developed, located just south of Cantley Lane, and which accounts for around 20% of the total 45 hectares of the development area. The area south of Cantley Lane currently has residential development on its eastern side. This section of development land lies at an elevation of around 25m to 30m OD.

The underlying geology of the site varies between Crag Group (sand and gravel) and chalk in the area of the Yare valley. The upper geology of the area is mainly sand and gravel of the Happisburgh Glacigenic Formation and Lowestoft Formation (Undifferentiated). Alluvium and River Terrace deposits are present along the course of the river Yare further to the east but are not present in the area occupied by the current evaluation (British Geological Survey 1985 and1991).

The site specific topsoil consists of a loose mid brown sandy silt with moderate amounts of flint gravel. It varies in depth between 0.30m and 0.50m and does not get thicker towards the base of the hill as might be expected due to colluvial action. Subsoil (light brown sandy silt) is present only in the central region of the site - in the vicinity of Trench 3. The natural substratum is generally an orange sand and gravel.

3.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The information presented here is based on a 1km radius search of data held by the Norfolk Historic Environment Record (NHER) and has been presented in a fuller form in the desk-based assessment (Sillwood 2013). That report summarised almost 300 records in total and only those entries that are closest to the evaluated area and are most relevant have been utilised for this report.

Prehistoric to Roman

Due to the loose and well drained nature of the gravels and alluvial deposits in the environs of the River Yare, such areas became much sought after in earlier times and there are considerable find spots which have been recorded due to fieldwalking and metal detecting projects in the area.

Site NHER 40940 records some prehistoric settlement activity within the development site itself.

There have also been some larger investigations such as that at the John Innes Centre (NHER 9332) and the Norfolk and Norwich Hospital (NHER 31871) which revealed Neolithic and Late Neolithic/Iron Age activity respectively. Mesolithic flints (NHER 11639) were also found on the latter site. 340m west of the current site an archaeological site at the Cringleford park and ride (NHER 39823) recorded Bronze Age and Iron Age finds and features.

Several ring ditches are known of within a 1km radius of the site (NHERs 9395, 25507 and 54408) and a barrow cemetery is recorded to the extreme east of the study area (NHERs 9549, 53268-53271). Many such prehistoric monuments are to be found at high points in river valleys, yet below the summit of the valley sides. A cropmark in the southern field evaluated during the present work has been identified as a possible ring ditch probably associated with a barrow (NHER 36138). Some linear features observed on the geophysical survey of the southern field may relate to former field boundaries.

There is less activity through into the Roman period, though still a reasonable amount, although this is mostly in the form of find spots rather than evidence for settlement activity. There is a possible Roman road to the south-east of the study area. A hoard comprising several 2nd-century Roman coins (NHER 9363) was possibly found in Cringleford in the 1920s although its exact position is not known. A Roman cremation in an upturned urn was recorded at NHER 9364. A Roman kiln site (NHER 9380) has been interpreted from the presence of many sherds of pottery and in particular wasters.

Anglo-Saxon to medieval

Only a series of find spots have been recovered from the study area in the Saxon period. There are no particular concentrations and the centres of settlement by this period were probably the existing surrounding villages to the east at Cringleford, Eaton, Colney and Earlham for example, as presented in the Domesday Book.

There have been a reasonable amount of medieval findspots located around the development area. Again the main centres of medieval settlement activity can be found in the village centres mentioned above. There are also cropmarks (NHERs 52150, 52153, 53244, 54424 and 54614) within the 1km radius search area which may date to the medieval period such as field boundaries or trackways, but as yet these are untested. There is a known deserted medieval village of Cantley (NHER 9469), a medieval moat (NHER 33732) in Thickthorn Park, and two possible medieval manors (NHERs 9473 and 15914) in the development area.

Post-medieval to modern

Several lime kilns (NHERs 9547 and 9612) have been recorded in the parish of Cringleford along with the site of a windmill (NHER15550). To the north of the current development pot and brick kilns were operated at Newfound Farm (NHER 9404) possibly from the 17th-century onwards. Associated clay pits (NHER 9407) were also found at that estate with kiln debris (NHER 9406). Cropmarks recorded on the site appear to date to this period as they appear to be the continuation of the boundaries seen on the Tithe map of the area (NHER 9396). NHER 54411 may record a similar type of boundary. The Norfolk Railway (NHER 13571) that opened in 1844 runs just to the south of the development area. This Railway is named the Great Eastern Railway on the First Edition Ordnance Survey map. Many of the Second World War defences are situated in the parish of Cringleford,

although, however they are a considerable way from the present site and are not considered relevant at present. Several railblocks were located along the railway (NHERs 52497 and 53252).

4.0 METHODOLOGY

The objective of this evaluation 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.

The archaeological works outlined via email and conversation with NHES required a small percentage of trenching at this stage (below 1% of the area) to be undertaken at the southern end of the proposed development (Fig. 2). The resultant four trenches were to inform the planning process and in particular examine the nature of the geophysical anomalies recorded during the geophysics survey. It became necessary to relocate Trench 3 as its original position was too close to large overhead power lines which cross the site. Trench 3 was re-positioned away from the power lines and to run up slope; targeting a further geophysical anomaly.

Machine excavation was carried out with a 13 tonne hydraulic 360˚ excavator equipped with a toothless ditching bucket and operated under constant archaeological supervision. The machine was supplied by Bryn Williams Plant hire and driven by Carl.

Spoil, exposed surfaces and features were scanned with a metal-detector. All metal-detected and hand-collected finds other than those which were obviously modern, were retained for inspection.

Environmental samples were taken from two well-dated and sealed features. The fill's context numbers were [29] and [21].

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

The trenches were set out using a Leica GPS900RTK Rover which supplied datum heights for each end of every trench. These temporary benchmarks were used during the course of this work to supply any further levels necessary.

Site conditions were good, with the work taking place in fine unseasonably warm weather.

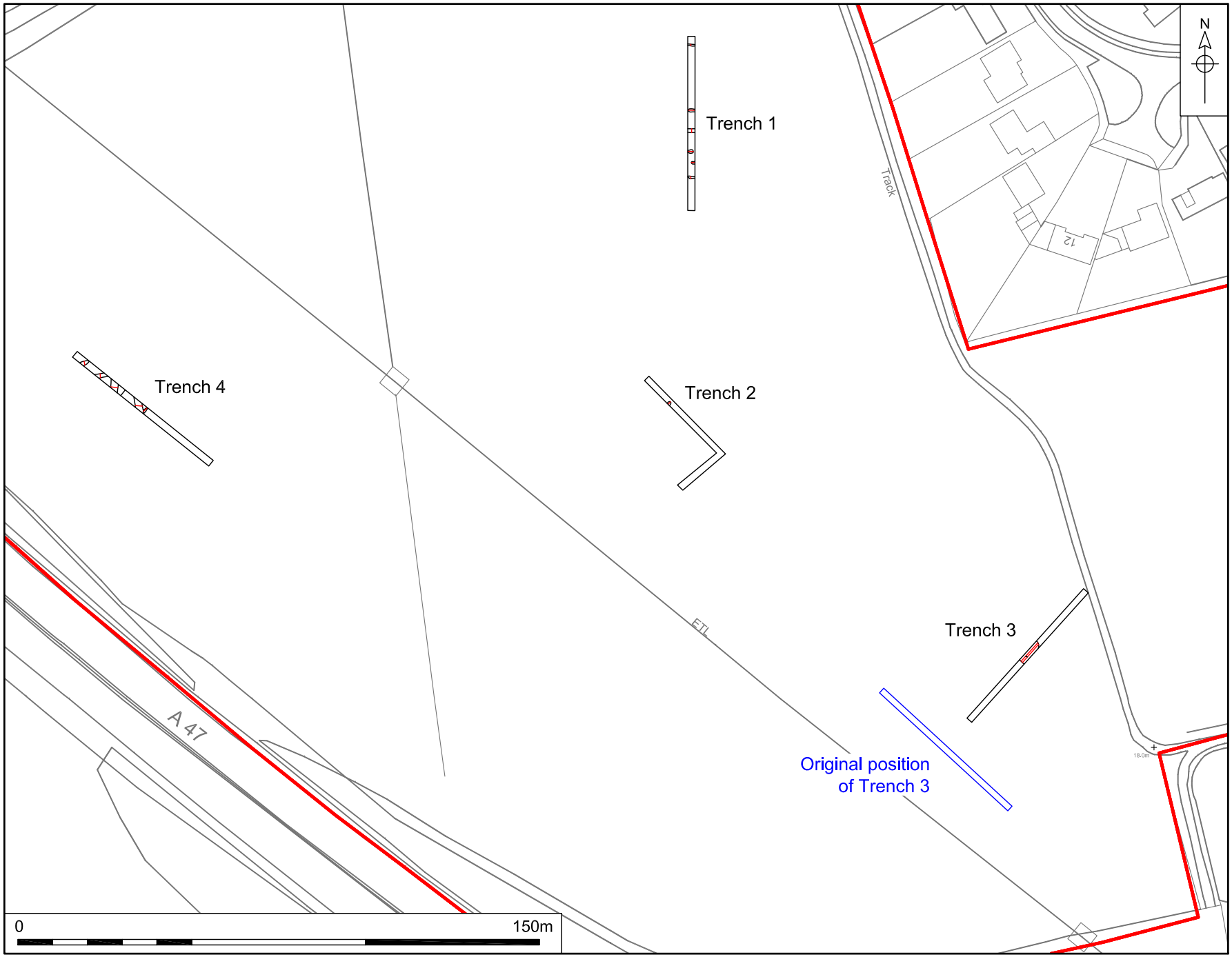

Figure 2. Location of trenches. Scale 1:1500

5.0 RESULTS

Trench 1

Trench 1 looking south

Fig. 3 and Plates 1-6	
Location	
Orientation	North to south
North	619023 305190
South	619023 305140
Dimensions	
Length	50.00m
Width	2.00m
Depth	0.50m
Levels	
North top	30.09mOD
South top	29.48mOD

Context	Type	Description and Interpretation	Thickness	Depth BGL
01	Deposit	Topsoil	0.50m	0.00-0.50m
14	Cut	Gully	0.10m	0.50m-0.60m
15	Deposit	Fill of gully [14]	0.10m	0.50m-0.60m
16	Cut	Pit	0.22m	0.50m-0.72m
17	Deposit	Fill of pit [16]	0.22m	0.50m-0.72m
18	Cut	Ditch	0.12m	0.50m-0.62m
19	Deposit	Fill of ditch [17]	0.12m	0.50m-0.62m
20	Cut	Pit	0.31m	0.50m-0.81m
21	Deposit	Fill of pit [20]	0.31m	0.50m-0.81m
22	Cut	Pit	0.14m	0.50m-0.64m
23	Deposit	Fill of pit [22]	0.14m	0.50m-0.64m
24	Cut	Gully	0.17m	0.50m-0.67m
25	Deposit	Fill of gully [25]	0.17m	0.50m-0.67m
34	Deposit	Natural	--	0.50m-

Discussion

There were three pits and three probable linear features within Trench 1, described below from

Trench 1

north to south. All of the features appeared directly below the topsoil and no subsoil was present.

At the northern end of the trench was gully [14]. It crossed the trench perpendicularly and was orientated east to west. It was 0.48m wide and 0.10m deep. Its single fill [15] was composed of loose dark brown sand with frequent flint gravel which had probably accumulated naturally.

Around 18.0m south of this gully was small pit [16]. The pit extended beyond the eastern limit of the trench and had an observed length of 1.90m east to west and a width of 0.90m north to south. The depth was 0.22m. Its fill [17] consisted of a loose mid brown silty sand which contained moderate amounts of flint gravel.

A further 5.0m to the south was shallow ditch [18]. It crossed the trench at right angles (east to west) and had a width of 1.0m. The ditch was 0.12m deep. The fill [19] consisted of a loose mid brown silty sand which contained frequent amounts of flint gravel.

A similar distance to the south there was small pit [20]. It extended partly beyond the western limit of the trench and had a visible length of 1.60m. The observed width was 1.05m. The depth was 0.31m. The fill consisted of dark brown silty sand which contained a moderate amount of flint gravel. This fill ([21]) had probably naturally accumulated although the presence of some Roman pottery within it may indicate that part of it was dumped material.

A short distance to the south was pit [22]. It had a visible extent of 1.0m east to west and extended beyond the eastern side of the trench. It was 0.87m wide and 0.14m deep. The single fill ([23]) consisted of a dark brown silty sand with moderate amounts of flint gravel which, like other features, had probably accumulated naturally but with some element of dumping – there were some Roman pottery sherds present. A single struck flint was also recovered from the fill.

Some 3.50m south of pit [22] was gully [24]. The irregular character of this gully could imply that it may have been an elongated pit, but this would appear a less likely interpretation. It extended for at least 2.0m across the trench and had a width of 0.67m. It had an irregular shape in plan and was deeper at the northern side. The single fill [25] consisted of dark brown silty sand which contained frequent amounts of flint gravel which had probably accumulated naturally.

Plate 1. Gully [14] looking west

Trench 1

Plate 2. Pit [16] looking north

Plate 3. Ditch [18] looking east

Trench 1

Plate 4. Pit [20] looking north

Plate 5. Pit [22] looking north

Trench 1

Plate 6. Pit/Ditch [24] looking west

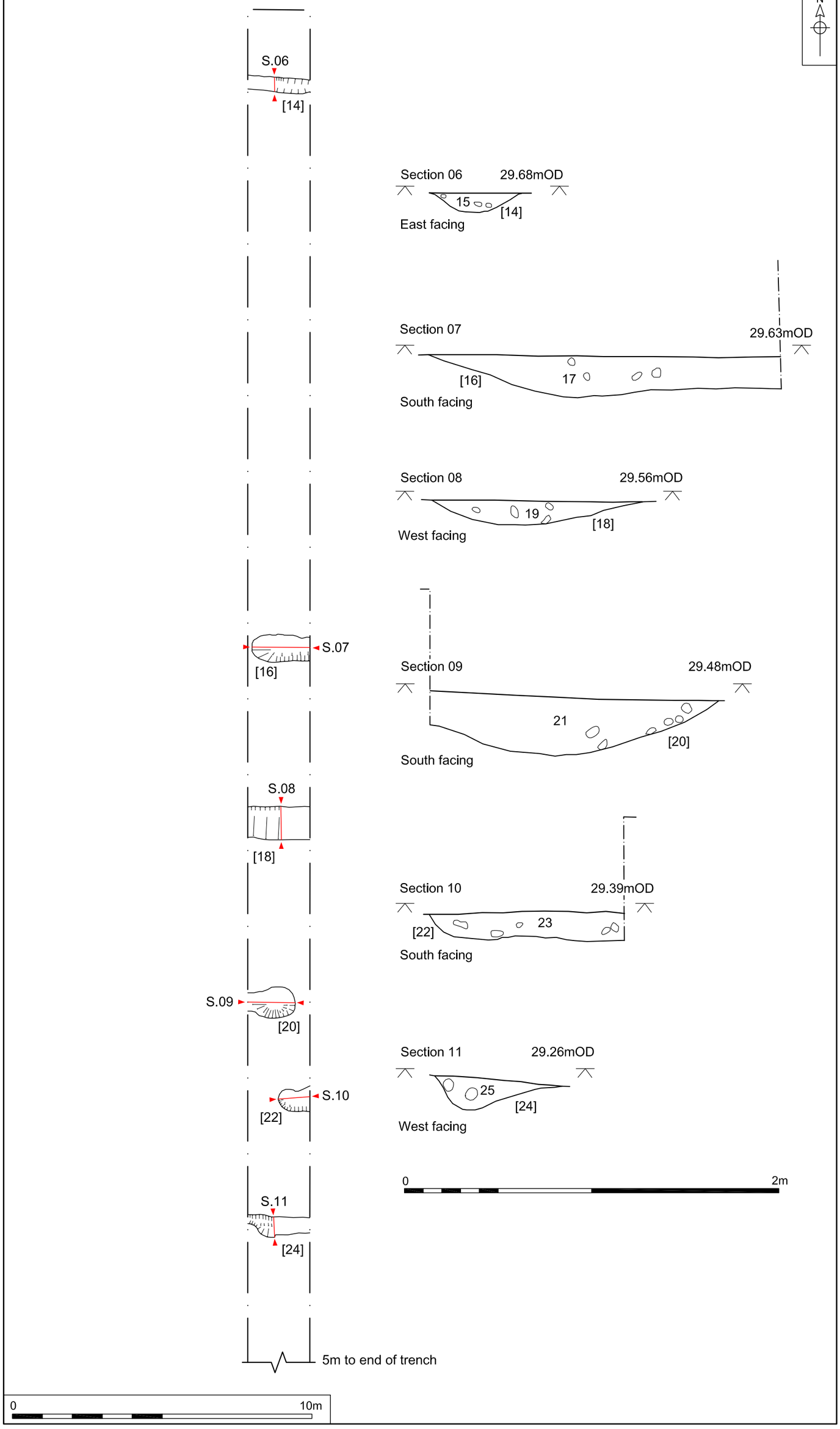

Figure 3. Trench 1, plan and sections. Scale 1:125 and 1:20

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Trench 2

Trench 2 (short limb) looking north-east

Fig. 4 and Plate 7	
Location	
Orientation	L-shaped - north-west to south-east and north-east to south-west
North-west	619010 305092
South-east	619032 305070
North-east	619032 305070
South-west	619019 305060
Dimensions	
Length	50.00m (Total length)
Width	2.00m
Depth	0.30m
Levels	
North-west top	29.06m OD
South-east/North-east top	28.35m OD
South-west top	27.97m OD

Context	Type	Description and Interpretation	Thickness	Depth BGL
01	Deposit	Topsoil	0.30m	0.00-0.30m
27	Cut	Pit	0.17m	0.30m-0.47m
28	Deposit	Fill of pit [27]	0.17m	0.30m-0.47m
34	Deposit	Natural	--	0.30m-

Discussion

There was a single pit present within Trench 2 which was immediately below the topsoil. There was no subsoil present.

Small pit [27] extended beyond the western limit of the trench and had an observed length of 0.96m east to west and a width of 0.90m north to south. The depth was 0.17m. The fill ([28]) consisted of loose light brown silty sand which contained occasional amounts of flint gravel which had probably accumulated through natural build-up.

Trench 2

Plate 7. Trench 2 (long limb) looking south-east

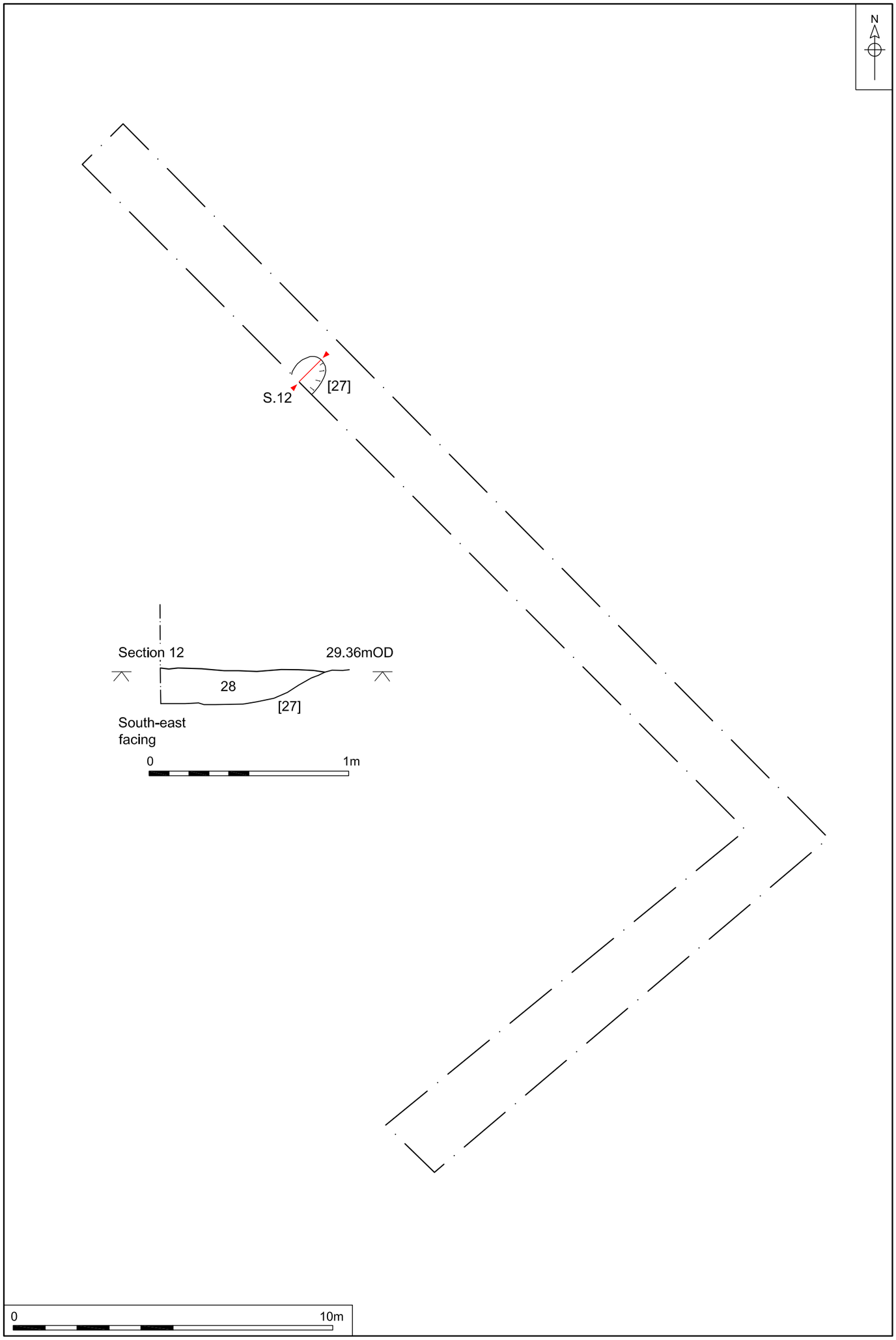

Figure 4. Trench 2, plan and section. Scale 1:125 and 1:20

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Trench 3

Trench 3 looking south-west

Fig. 5 and Plates 8-9	
Location	
Orientation	North-east to south-west
North-east	619136 305031
South-west	619103 304993
Dimensions	
Length	50.00m
Width	2.00m
Depth	0.60m
Levels	
North top	27.00mOD
South top	21.20mOD

Context	Type	Description and Interpretation	Thickness	Depth BGL
01	Deposit	Topsoil	0.30m	0.00-0.60m
28	Cut	Ditch	0.75m	0.60m-1.15m
29	Deposit	Primary fill of ditch [28]	0.55m	0.60m-1.10m
30	Deposit	Secondary fill of ditch [28]	0.40m	0.70m-1.10m
31	Deposit	Uppermost fill of ditch [28]	0.13m	1.12-1.15m
32	Deposit	Layer of subsoil	0.10m	0.30m-0.40m
33	Deposit	Layer of subsoil	0.20m	0.40m-0.60m
34	Deposit	Natural	--	0.60m-

Discussion

There was a single large probable ditch ([28]) extending across the middle of Trench 3. The feature was consistent with a large anomaly recorded during the geophysical survey.

Ditch [28] was at least 2.0m long and was orientated north-west to south-east. It was 7.20m wide. The full excavated depth was 0.55m although the actual base of the feature was at an augered depth of 0.75m at its deepest part on the south-western side. The average depth for much of the width of the feature was 0.50m.

The earliest of the fills was deposit [31]. It was 0.13m thick and confined to the wider and shallower part of the feature. It was composed of chalk-flecked orangey brown sandy silt which had probably accumulated through natural processes.

Fill [30] was very firm light brown sandy clay located in the deepest part of the feature and against the south-western edge. There was occasional charcoal flecks scattered throughout this deposit, which were more frequent towards the top south-western edge. The fill had almost

Trench 3

certainly been deliberately dumped and contained struck flints and Roman pottery.

The uppermost fill ([29]) was located in the top part of the ditch. It was 0.41m thick at its deepest part and consisted of light brown sandy silt with occasional flint gravel. There was occasional charcoal flecks scattered throughout the deposit, which were more frequent towards the top south-western edge, suggesting that it had been partly influenced by deliberate dumping.

There were two layers of subsoil ([32] and [33]) present in the area of Trench 3. These deposits were located in the area of ditch [28] and sealed it. Whilst not being actual fills of the ditch they appeared to occupy a generally hollow area above the ditch. They each consisted of light brown sandy silt and the uppermost ([33]) was the lighter and sandier of the two.

Plate 8. Ditch [28] looking west

Trench 3

Plate 9. Ditch [28] looking south-west

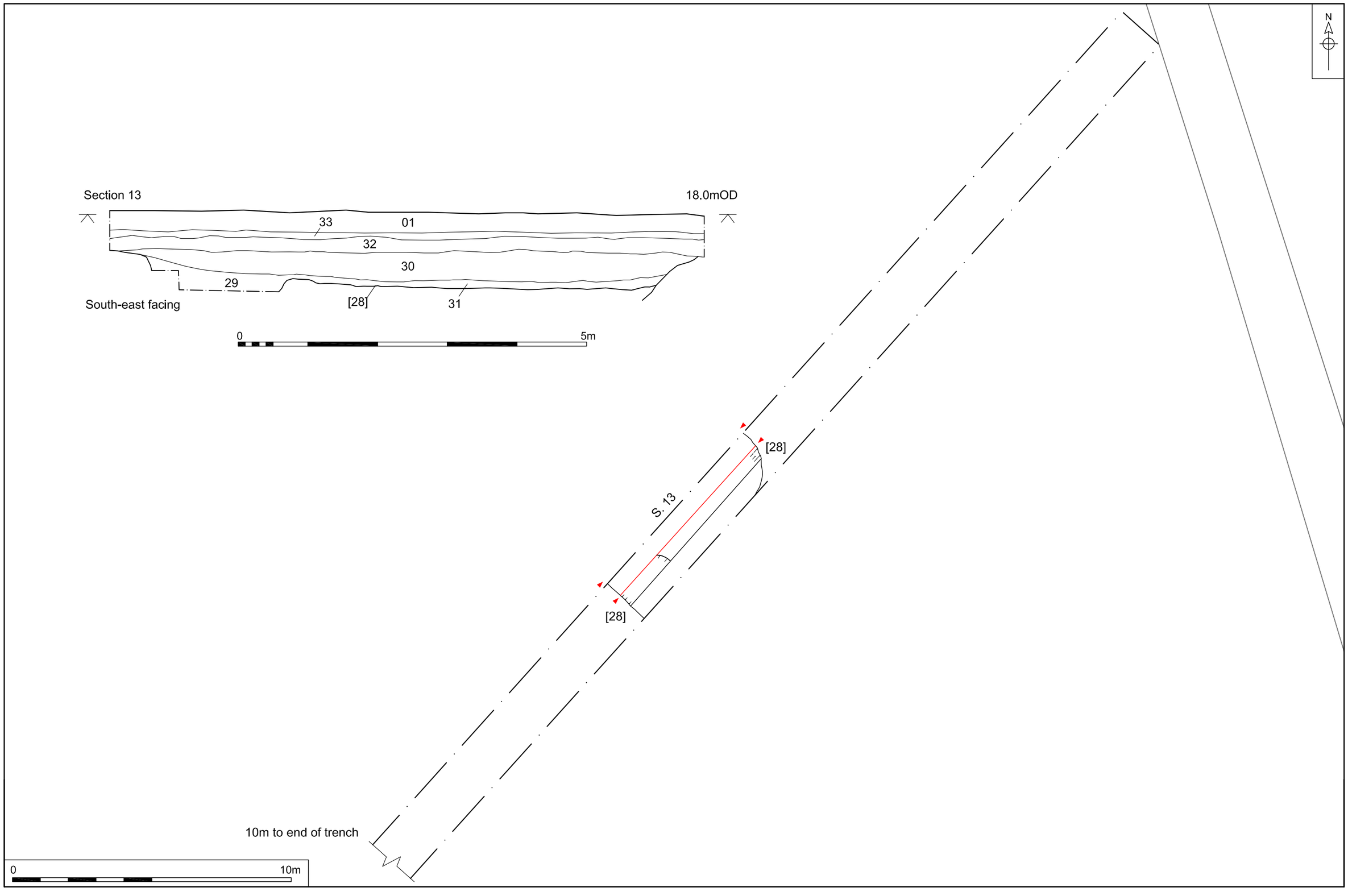

Figure 5. Trench 3, plan and section. Scale 1:125 and 1:50

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Trench 4

Trench 4 looking south-east

Fig. 6 and Plates 10-14	
Location	
Orientation	North-west to south-east
North-west	618845 305099
South-east	618884 305067
Dimensions	
Length	50.00m
Width	2.00m
Depth	0.40m
Levels	
North-west top	31.56m OD
South-east top	30.20m OD

Context	Type	Description and Interpretation	Thickness	Depth BGL
01	Deposit	Topsoil	0.50m	0.00-0.40m
02	Cut	Ditch	0.38	0.40m-0.78m
03	Deposit	Fill of ditch [02]	0.38	0.40m-0.78m
04	Cut	Ditch	0.29m	0.40m-0.69m
05	Deposit	Fill of ditch [04]	0.29m	0.40m-0.69m
06	Cut	Ditch	0.18m	0.40m-0.58m
07	Deposit	Fill of ditch [06]	0.18m	0.40m-0.58m
08	Cut	Ditch	0.18m	0.40m-0.58m
09	Deposit	Fill of ditch [08]	0.18m	0.40m-0.58m
10	Cut	Ditch	0.37m	0.40m-0.77m
11	Deposit	Fill of ditch [10]	0.37m	0.40m-0.77m
12	Cut	Pit	0.17m	0.40m-0.57m
13	Deposit	Fill of pit [12]	0.17m	0.40m-0.57m
14	Deposit	Natural	--	0.40m-

Discussion

There were five ditches and a single small pit present within Trench 4. They have been described from north-west to south-east along the trench. All of the features were located directly below the topsoil and there was no subsoil present.

Trench 4

Ditch (or possibly elongated pit) [02] was situated towards the north-western end of the trench. It was at least 2.70m and had a width of 1.15m at its widest point. The depth was 0.38m and it had an irregular shape. The single fill ([03]) consisted of mid brownish sand with occasional flint gravel which it had probably infilled the feature naturally. A struck flint was recovered from the fill.

Some 3.50m to the south-east was ditch [04]. It was located on almost an east to west axis and had an observable length of 3.20m; it extended beyond the edges of the trench. It was 0.29m deep and 1.18m wide. The ditch had a rounded base and slightly convex sides. The single fill ([05]) was composed of pale to mid brown sand which contained occasional flint gravel. It had probably developed through natural build-up.

Almost immediately to the south-east was ditch [06]. This ditch was orientated virtually north to south and had a visible extent of 2.80m. It was 2.10m wide and 0.18m deep. The single fill ([07]) consisted of mid brown sand and occasional flint gravel which had probably accumulated naturally.

Intercutting ditches [08] and [10] were situated almost immediately to the east of ditch [06]. The earliest of the two ([08]) was truncated on its eastern side by ditch [10] which could be a re-cut due to its identical alignment. Ditch [08] was 0.18m deep and [10] was 0.37m deep. They were filled with very similar mid/dark brown sand ([09] and [11] respectively) although the hue of fill [11] was lighter. Fill [09] contained 3 struck flints.

Ditch [08] was also observed to truncate pit [12] on its eastern side. Pit [12] was 1.67m in length and 0.90m wide and had a depth of 0.16m. The pit had an irregular appearance in plan and was filled with mid brown sand which had occasional flint gravel and occasional charcoal flecks. There was dating evidence recovered from the fill and a struck flint suggesting a Bronze Age date.

Plate 10. Ditch?[02] looking east

Trench 4

Plate 11. Ditch [04] looking east

Plate 12. Ditch [06] looking north

Trench 4

Plate 13.Ditch [08] and [10] looking north

Plate 14. Pit [12] looking north-west

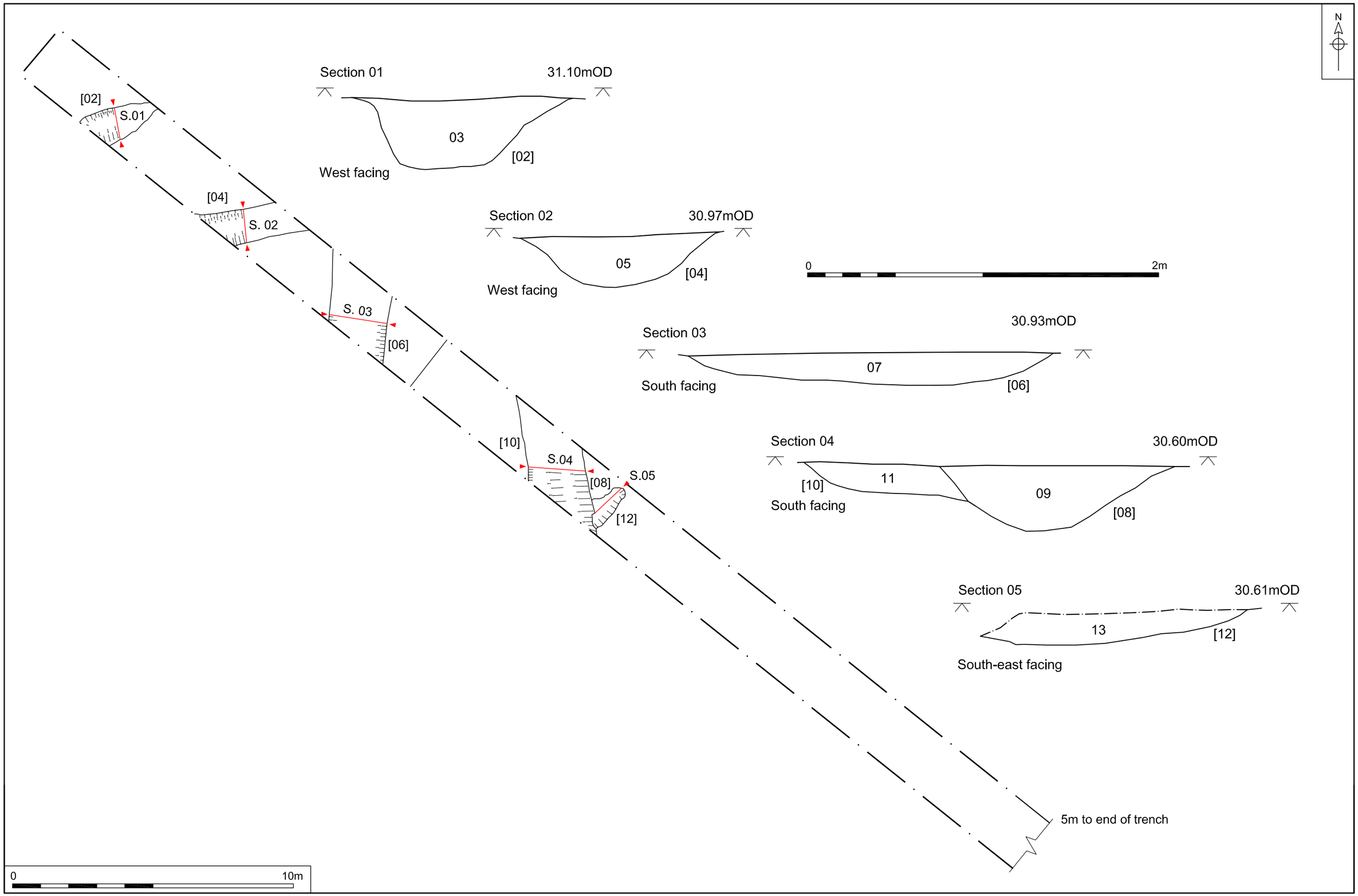

Figure 6. Trench 4, plan and sections. Scale 1:125 and 1:20

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6.0 THE ARCHAEOLOGICAL MATERIAL

Finds were processed and recorded by count and weight, and information was entered onto an Excel spreadsheet. Each material type has been considered separately and is presented below by material. A list of finds in context number order can be found in Appendix 2a.

6.1 Pottery

by Andrew Peachey

6.1.1 Introduction

Trial-trench excavations recovered a total of nine sherds (71g) of prehistoric and Roman pottery in a fragmented and abraded condition (Appendix 3). The prehistoric pottery included non-diagnostic body sherds of Bronze Age and Iron Age date, while the Roman pottery is comprised of local coarse wares that include a small fragment of a 2nd century AD bowl.

6.1.2 Methodology

The pottery was quantified by sherd count and weight (g), with fabrics analysed at x20 magnification, and all data entered into a Microsoft Excel spreadsheet that forms part of the site archive. The pottery fabrics are described, below, and quantified (Table 1).

6.1.3 Fabric Descriptions

F1 Flint-tempered ware (prehistoric). Handmade, bonfire-fired, tempered with common calcined flint (typically <2.5mm) and sparse quartz sand.

Q1 Quartz sand-tempered ware (prehistoric). Hand-made, bonfire-fired with black surfaces and core. Inclusions comprise common well-sorted quartz (0.1-0.5mm), sparse fine mica and medium flint (0.5-2.5mm).

BSW1 Black-surfaced/Romanising sandy grey ware. Black surfaces over dark red margins and a mid red/grey core. Inclusions comprise common, poorly-sorted quartz (0.1-0.5mm), sparse fine mica, sparse grog (0.1-5mm) and occasional flint (<5mm). A hard fabric with an abrasive feel.

GRS1 Sandy grey ware (Roman). Mid grey surfaces fading to a dark grey core. Inclusions comprise common, well-sorted quartz (0.1-0.25mm), sparse fine mica, sparse black iron-rich grains (0.25-2mm) and occasional flint (<3mm). A hard fabric with an abrasive feel.

WAT RE1 Wattisfield/Waveney Valley reduced ware (Tomber and Dore 1998, 184). A mid to pale grey fabric, often with slightly contrasting margins and core. Inclusions comprise common, well-sorted quartz (generally <0.1mm), sparse dark grey to black iron rich grains/clay pellets (<0.5mm) and abundant mica, especially visible on the surface. The fabric has a slightly abrasive to powdery feel.

Fabric	Sherd Count	Weight (g)
F1	1	3
Q1	2	22
BSW1	1	8
GRS1	3	30
WAT RE	2	8
Total	***9***	***71***

Table 1. Quantification of Prehistoric and Roman fabric types

6.1.4 Commentary

A single body sherd of fabric F1 was contained in pit [12], with flint-tempered pottery typical of mid to late Bronze Age vessels in the region. Two body sherds of prehistoric fabric Q1 were contained in pit [20] in association with Roman sherds. These sand-tempered body sherds appear to come from ovoid jars, possibly with burnished exteriors, indicative of a mid to late Iron Age date.

The three Roman coarse wares: BSW1, GRS1 and WAT RE are relatively common in the region, with the latter fabric manufactured in south Norfolk/north Suffolk and the others produced locally. Body sherds of GRS1 were contained in pit [20], pit/ditch [22] and [28], with the sherd in pit [20] exhibiting the mid body carination of a type of 2nd century AD bowl that would have had a flat-topped or reeded rim, if present. The BSW1, also in pit [20] and the WAT RE1 in pit/ditch [22] would be consistent with a date in this period, but their production also continued throughout the Roman period.

6.2 Fired Clay

by Rebecca Sillwood

A single piece of highly abraded fired clay (2g), possibly a fragment of brick or tile of post-medieval date, was recovered from ditch fill [25]. The piece was not found in association with any other finds, and is too worn to be certain of the exact date and function of the fragment. The fabric is a deep red with tiny pebble and quartz inclusions.

6.3 Flint

by Andrew Peachey

6.3.1 Introduction

Excavations recovered a total of 17 fragments (371g) of struck flint in a fresh, un-patinated condition, and a single small fragment (12g) of burnt flint (Appendix 4). The assemblage is predominantly comprised of cores and flakes with close affinities to later Neolithic and early Bronze Age un-systematic core reduction and flake blank production, although a rare blade suggests evidence of earlier Neolithic activity may also be present (Table 2). The entire assemblage was manufactured using good quality mid to dark grey raw flint with, where extant, a white powdery cortex that suggests it was sourced from the primary chalk deposits that run down through central Norfolk.

Implement/Flake Type	**Struck Flint**	
	No.	**Wt.**
Core	1	184
Flake Blank	2	93
Blade	1	7
Debitage	13	87
Burnt Flint	1	12
Total	***18***	***383***

Table 2: Quantification of struck flint

6.3.2 Methodology

The flint was quantified by fragment count and weight (g), with all data entered into a Microsoft Excel spreadsheet that will be deposited as part of the archive. Flake type (see 'Dorsal cortex,' below) or implement type, patination, colour and condition were also recorded as part of this data set, along with free-text comments.

The term 'cortex' refers to the natural weathered exterior surface of a piece of flint, and the term 'patination' to the colouration of a flaked surface exposed by human or natural agency. Dorsal cortex is categorised after Andrefsky (2005, 104 and 115) with 'primary flake' referring to those with cortex covering 100% of the dorsal face; 'secondary flake' with 50-99%; 'tertiary' with 1-49% and 'un-corticated' to those with no dorsal cortex. A 'blade' is defined as an elongated flake whose length is at least twice as great as it's breadth, often exhibiting parallel dorsal flake scars (a feature that can assist in the identification of broken blades that, by definition, have an indeterminate length/breadth ratio). Terms used to describe implement and core types follow the system adopted by Healy (1988, 48-9).

6.3.3 Commentary on Flint

The assemblage included a single blade, contained in pit/ditch [28] that is characteristic of earlier Neolithic technology. The blade exhibits traces of wear along one lateral edge, and not only does its technology contrast with the bulk of the assemblage, but the raw flint used in its manufacture is darker, near black, suggesting a greater degree of selection. Two further debitage flakes in this context have blade-like proportions, but this may be coincidental, and they appear to have greater affinities in their manufacture with the other flakes in the context.

The struck flint in pit/ditch [28] included a core, flake blank and debitage that are indicative of later Neolithic to early Bronze Age flint industry. The core has been reduced unsystematically with a hard hammer, with no regular striking platforms but numerous flake removals. Despite weighing 184g, it may have been exhausted as no further flake removals were viable. The flake blank is roughly triangular with sides of approximately 50mm and a uniform thickness of 20mm. It appears to have been carefully removed using a hard-hammer and direct percussion from the core in the context or another closely comparable, flowing the removal of preparatory flakes from several directions. The flake does not appear to have been re-touched or utilised in any way, but would appear to form the basis (or blank) for a tool. Another flake blank with comparable shaping, but a square profile was contained in pit/ditch [16], but similarly remains to be utilised. The remaining debitage in pits/ditches [28], [22], ditches [02] and [08] is consistent with unsystematic core reduction using a hard hammer, and is predominantly comprised of tertiary flakes with broad, squat profiles, rippled ventral faces and a high incidence of abnormal terminations. The production of flake blanks as part of the process to manufacture extensively retouched scrapers or other implements is a characteristic of later Neolithic/early Bronze Age flint technology, and this evidence would support the presence of such a process on the site, although it remains unclear why the discarded flake blanks were not selected and discarded.

6.4 Other Stone

by Rebecca Sillwood

A total of six pieces of lava weighing 137g were recovered from ditch/pit fill [30]. These pieces are all much abraded, with no extant surfaces left. The lava itself was probably imported from the Rhineland for use as a quernstone, possibly in the Roman period.

6.5 Animal Bone

by Rebecca Sillwood

A single piece of animal bone (36g) was recovered from ditch fill [05], and is a much abraded, incomplete tibia from a small horse or pony. This was the only find from this context, and so cannot be dated. The piece appears to have moved around a lot in the soil, given its worn and porous nature, and there is no evidence for butchery on the bone. This may be a farm animal or pet which died of natural causes.

6.6 Finds Conclusions

The finds from Cringleford exhibit activity on the site from the Early Neolithic through to the Roman period, and possibly also in the post-medieval period.

The flint from the site shows possible activity from the Earlier and Later Neolithic and the Bronze Age. There is also some element of possible blade production in the vicinity. Some of the flint was found in isolation, but more often was found with pottery of later date, and so may be residual in this context.

The pottery consists of Bronze Age, Iron Age and Roman sherds, although not in any huge quantities from any of the features. The Middle/Late Bronze Age pottery is the only period of pottery which was not found in association with later material, and so this is likely to be evidence that pt [12] is of this date. Iron Age pottery was found along with Roman pottery here and so is probably residual in context; it is however evidence for activity in the area of Iron Age date. The Roman activity, although sparse, probably points to pit/ditch [22] and [28] and pit [20] being of this date.

7.0 ENVIRONMENTAL EVIDENCE

7.1 Plant Macrofossils

by Val Fryer

7.1.1 Introduction and method statement

Samples for the evaluation of the content and preservation of the plant macrofossil assemblages were taken, and two (Sample <1> and Sample <2>) were submitted for assessment.

The samples were processed by manual water flotation/washover and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x16 and the plant macrofossils and other remains noted are listed below in Appendix 6. Nomenclature within the appendix follows Stace (1997). All plant remains were charred. Modern roots and straw fragments were also recorded.

The non-floating residues were collected in a 1mm mesh sieve and sorted when dry.

7.1.2 Results

Cereal grains and seeds are recorded within both assemblages, but the density of material is very low. Preservation of the macrofossils is poor, with the cereals in particular being very puffed and distorted, probably as a result of combustion at very high temperatures. None of the grains can be closely identified. Seeds are scarce, but do include a specimen of bedstraw (*Galium mollugo*) type along with a possible brassica (Brassicaceae) and a possible small legume (Fabaceae). Charcoal/charred wood fragments including some pieces >10mm in size are present within both assemblages.

Other remains are also scarce and it is suspected that most (including the black porous and tarry residues and the coal fragments) may be intrusive within the feature fills. Such contamination is commonly seen where either night soil was spread on the land during the later medieval and post-medieval periods or where steam ploughs were used to cultivate the land during the early modern era.

7.1.3 Conclusions

In summary, the recovered assemblages are small (<0.1 litres in volume) and sparse, and it is very likely that both samples contain modern intrusive materials. If contemporary with the excavated features, it is suggested that the plant macrofossils are probably derived from a very low density of scattered refuse. However, in the light of the other contaminants, contemporaneity may be doubtful.

8.0 CONCLUSIONS

This archaeological trial trench evaluation, undertaken largely to test the nature of the geophysical anomalies mapped on the site, was a useful exercise and provides information to supplement forthcoming planning applications.

The trial trenching indicated that nearly all of the anomalies observed on the geophysical plan represented archaeological features; the exception being Trench 2 where a linear anomaly observed running in a north-east to south-west direction across the site was not visible within the trench. This may indicate that that feature was ephemeral in nature, possibly being caused by repeated deep ploughing in one part of the site. There are many repeated possible plough marks visible on the geophysics plot in general. The angle and appearance of the anomaly suggests that it may have been part of an enclosure and it is possible that it is very shallow and may not have been detectable by excavation within an archaeological trench. Many of the features found across the site are shallow which may be due to many years of erosion caused by repeated agricultural practices.

Ditch [18] in Trench 1 does seem to tie up with the linear anomaly observed t on the geophysical plot and there is a hint of a fainter anomaly at the southern end which may correspond with linear feature [24]. The pits found within Trench 1 do seem to confirm that many of the pit-like anomalies which are liberally scattered across the geophysics plot may relate to archaeological features. Pits [20] and [22] appear to be of Roman date, and this activity appears to be relatively unusual in the area. The presence of a Roman kiln at Cringleford does indicate local activity in the Roman period. The pits may indicate that there was a Roman farmstead or

similar small establishment close by; the pottery is not imported but sherds are of local coarse wares perhaps giving some support to this interpretation. The Iron Age pot recovered may suggest that that the evidence on the eastern side of the site may stretch back as far as that period.

Arguably the most interesting trench was Trench 3 at the south-eastern end of the evaluated area. Large feature [28] appears to correspond with the large linear anomaly observed as part of the geophysics survey. The appearance of the feature in both plan and section seemed slightly irregular and hints that there were actually two features. This may correspond with shading on the geophysics plot where there seems to be an overall shallow linear with darker circular pits. The single probable Neolithic blade from the fill and other struck flints although possibly residual do suggest that there may be a concentration of earlier prehistoric interest in this part of the evaluated area and supports the view that perhaps there is a barrow or other similar feature present immediately to the south-west. The Yare valley and its bordering landscape are notable for the occurrence of prehistoric sites recorded along its course (Ashwin and Bates 2000). The site appears to follow the distribution of many prehistoric sites in Norfolk, a pattern which often occurs along or close to watershed valleys.

The two large ditches observed in Trench 4 also appear to strongly confirm the two north-south orientated linear anomalies recorded during the geophysical survey. The struck flints within the fills of ditches [02] and [04] seem to suggest that they are of probable Bronze Age date. The fact that pit [12] lay close by to the south seems to indicate that there is a cluster of activity of this date in this corner. Pits dated to the Bronze Age are often found in small clusters, and may have been originally excavated for ritual purposes and as such there are probably others to be found close-by. It is posited that pit groups and individual pits of Early Bronze Age date could have had a ritual significance possibly connected with seasonal visits and the ritualistic deposition of special artefacts (Ashwin and Bates 2000) rather than being merely for the disposal of rubbish. However there are no such clusters indicated on the plot of geophysics features.

There is no direct evidence of settlement activity on the site i.e. posts, beam slots, drainage gullies or the concentrations of pottery sherds that might be expected. However the number of Roman and prehistoric pottery sherds recovered does suggest that settlement activity might be found close by. Broadly it might be suggested that Roman activity is concentrated to the east side of the trial trenched area whereas the Neolithic and Bronze Age activity is on the western side. The straight gullies and ditches and small pits are more likely to relate to agricultural activity, taking advantage of well-drained soils and the prevalent slope. Large feature [28] in Trench 3 has an unusual form and though appearing to be Roman in date may be located here because of the presence of remnant prehistoric earthworks such as the possible barrow just to the south (designed to be tested by the original positioning of Trench 3). This feature seems to lie in a prominent position where the slope starts to become steeper and an alternative suggestion is that it was created to exaggerate the profile of the slope. The Roman pottery could conceivably be intrusive, though this is perhaps unlikely.

Archaeological evaluation at the Cringleford Park and Ride site (39823 HET) to the north-west of this evaluated site also found that there were few artefacts post-dating the prehistoric activity (Birks 2003). A similar result was obtained from an

evaluation undertaken just to the north of the present site off Cantley Lane (site 40940 CRF) (Emery 2004)

Acknowledgements

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The fieldwork was undertaken by the author with Steve Hickling. The trenches were located by Steve Howes of the NPS Land Survey Team.

Ed Plumb of Brown and Co assisted in accessing the site and with general information. The site was monitored by James Albone of Norfolk Historic Environment Service.

The finds were processed, recorded and reported on by Rebecca Sillwood apart from the pottery and flint which were analysed by Andrew Peachey. This report was illustrated by David Dobson after initial digitising by the author . it was edited by Jayne Bown.

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Appendix 1a: Context Summary

Context	Category	Cut Type	Fill Of	Description
1	Deposit			Topsoil
2	Cut	Ditch		Ditch
3	Deposit		2	Fill
4	Cut	Ditch		Ditch
5	Deposit		4	Fill
6	Cut	Ditch		Ditch
7	Deposit		6	Fill
8	Cut	Ditch		Ditch
9	Deposit		8	Fill
10	Cut	Ditch		Ditch
11	Deposit		10	Fill
12	Cut	Pit		Pit
13	Deposit		12	Fill
14	Cut	Ditch		Ditch
15	Deposit		14	Fill
16	Cut	Pit/Ditch		Pit/Ditch Terminus
17	Deposit		16	Fill
18	Cut	Ditch		Ditch
19	Deposit		18	Fill
20	Cut	Pit		Pit
21	Deposit		20	Fill
22	Cut	Pit/Ditch		Pit/Ditch Terminus
23	Deposit		22	Fill
24	Cut	Ditch		Ditch
25	Deposit		24	Fill
26	Cut	Pit		Pit
27	Deposit		26	Fill
28	Cut	Pit/Ditch		Large ditch/pit
29	Deposit		28	Fill
30	Deposit		28	Fill
31	Deposit		28	Fill
32	Deposit			Subsoil in Trench 3

Appendix 1b: OASIS Feature Summary

Period	Material	Total
Undated	Ditch	5
Bronze Age	Ditch	4
	Pit	1
Roman	Pit/Ditch	1
	Pit	2

Appendix 2a: Finds by Context

Context	Material	Qty	Wt	Period	Notes
3	Flint – Struck	1	3g	Prehistoric	
5	Animal Bone	1	36g	Unknown	
9	Flint – Struck	3	29g	Prehistoric	
13	Flint – Burnt	1	12g	Prehistoric	
13	Pottery	1	3g	Middle/Late Bronze Age	
17	Flint – Struck	1	55g	Prehistoric	
21	Pottery	2	22g	Iron Age	
21	Pottery	2	17g	Roman	2nd century
23	Flint – Struck	1	11g	Prehistoric	
23	Pottery	3	18g	Roman	
25	Fired Clay	1	2g	Post-medieval	
30	Flint – Struck	11	273g	Prehistoric	
30	Pottery	1	11g	Roman	
30	Stone	6	137g	Roman	Lava

Appendix 2b: OASIS Finds Summary

Period	Material	Total
Prehistoric	Flint – Burnt	1
	Flint – Struck	17
Middle/Late Bronze Age	Pottery	1
Iron Age	Pottery	2
Roman	Pottery	6
	Stone	6
Post-medieval	Fired Clay	1
Unknown	Animal Bone	1

Appendix 3: Pottery Catalogue

Context	Description	Spot Date	Total Pottery		F1		Q1		BSW1		GRS1		WAT RE	
			No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.
13	Pit	M-LBA	1	3	1	3								
21	Pit	2nd C AD	4	39			2	22	1	8	1	9		
23	Pit/Ditch	Roman	3	18							1	10	2	8
30	Pit/Ditch	Roman	1	11							1	11		
			9	***71***	***1***	***3***	***2***	***22***	***1***	***8***	***3***	***30***	***2***	***8***

Appendix 4: Flint Catalogue

Ctxt	Descrip	Struck Flint		Burnt Flint		Find/type	No	Wt	P	R	Colour	Cortex	I?	Size (mm)			Comment
		No	Wt	No	Wt									L	W	D	
3	Ditch	1	3			Tertiary Flake (<50mm, broad, squat)	1	3	\	\	dark grey	white, chalky	\	\	\	\	\
9	Ditch	3	29			Tertiary Flake (<50mm, broad, squat)	3	29	\	\	dark grey	white, chalky	\	\	\	\	hard-hammer struck
13	Pit			1	12	Burnt Flint	1	12	\	\	\	\	\	\	\	\	\
17	Pit/Ditch	1	55			Flake blank (<50mm, broad, squat)	1	55	\	\	dark red-brown	white, chalky	\	50	50	20	large, roughly square, probably struck deliberately from multi-platform, unsystematic core, possibly a pebble core but not utilised/retouched; removed with hard hammer

		Struck Flint		Burnt Flint									Size (mm)			
23	Pit/Ditch	1	11			Tertiary Flake (<50mm, broad, squat)	1	11	\	\	dark grey	white, chalky	\	\	\	\	\
30	Pit/Ditch	11	273			Core	1	184	\	na	dark grey	white, chalky	\	75	55	45	Type C: multi-platform, un-systematic, struck directly with hard hammer
						Flake blank (<50mm, broad, squat)	1	38	\	\	dark grey	\	\	50	50	20	large, roughly triangular, probably struck deliberately from multi-platform, unsystematic core but not utilised/retouched; removed with hard hammer
						Tertiary Flake (<50mm, broad, squat)	6	35	\	\	dark grey	white, chalky	\	\	\	\	\
						Tertiary Flake (<50mm, blade-like)	2	9	\	\	dark grey	white, chalky	\	\	\	\	\
						Blade	1	7	\	\	very dark grey	\	\	45	15	7	traces of wear on one lateral edge
		17	*371*	*1*	*12*		*18*	*383*									

Key: R= retouched, P = patinated

Appendix 5: Plant Macrofossils

Sample No.	**1**	**2**
Context No.	**29**	**21**
Feature No.	**28**	**20**
Feature type	**Pit/ditch**	**Pit**
Plant macrofossils		
Cereal indet. (grains)	x	x
Brassicaceae indet.		xcf
Fabaceae indet.		xcf
Galium mollugo type	x	
Charcoal <2mm	xxx	xxx
Charcoal >2mm	xxx	xx
Charcoal >10mm		x
Charred root/stem		x
Indet. seeds	x	x
Other remains		
Black porous and tarry residues	xxx	xx
Bone		x
Small coal frags.	x	xx
Vitreous material	x	x
Sample volume (litres)	**18**	**16**
Volume of flot (litres)	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**

Key to Table

x = 1 – 10 specimens xx = 11 – 50 specimens xxx = 51 – 100 specimens cf = compare

Appendix 6: OASIS Report Summary

OASIS DATA COLLECTION FORM: England

List of Projects | Manage Projects | Search Projects | New project | Change your details | HER coverage | Change country | Log out

Printable version

OASIS ID: norfolka1-162054

Project details

Project name	LAND AT CRINGLEFORD
Short description of the project	An archaeological evaluation was conducted for Cirrus Land Management prior to deposition of a planning application to create new housing on the west side of Cringleford. The current evaluation programme was for limited trial trenching in the southern part of the overall potential development area in order to test the nature of the archaeological resource in general and in particular to test anomalies identified during a recent geophysical survey. Four trial trenches were excavated across the southern field, targeted on known geophysical anomalies. The results demonstrated that there was some evidence of activity in the Roman period in Trenches 1 and 3 in the north and west of the evaluated area respectively. Bronze Age evidence was present in Trenches 2 and 4.
Project dates	Start: 25-10-2013 End: 30-10-2013
Previous/future work	Yes / Not known
Any associated project reference codes	ENF132484 - HER event no.
Type of project	Field evaluation
Site status	None
Current Land use	Cultivated Land 3 - Operations to a depth more than 0.25m
Monument type	DITCH Bronze Age
Monument type	PIT Bronze Age
Monument type	DITCH Roman
Monument type	PIT Roman
Monument type	DITCH Uncertain
Significant Finds	STRUCK FLINT Late Prehistoric
Significant Finds	BURNT FLINT Late Prehistoric
Significant Finds	POT Bronze Age
Significant Finds	POT Iron Age
Significant Finds	POT Roman
Significant Finds	STONE Roman
Significant Finds	FIRED CLAY Post Medieval
Significant Finds	ANIMAL BONE Uncertain

Methods & techniques	"Targeted Trenches"
Development type	Rural residential
Prompt	National Planning Policy Framework - NPPF
Position in the planning process	Pre-application

Project location

Country	England
Site location	NORFOLK SOUTH NORFOLK CRINGLEFORD LAND AT CRINGLEFORD - EVALUATION
Study area	4.00 Hectares
Site coordinates	TG 1914 0613 52 1 52 36 29 N 001 14 12 E Point

Project creators

Name of Organisation	NPS Archaeology
Project brief originator	Norfolk Historic Environment Service
Project design originator	NPS Archaeology
Project director/manager	Nigel Page
Project supervisor	Peter Crawley
Type of sponsor/funding body	Developer
Name of sponsor/funding body	Cirrus Land Management

Project archives

Physical Archive recipient	Norfolk Museums and Archaeology Service
Physical Contents	"Animal Bones","Ceramics","Environmental","Worked stone/lithics"
Digital Archive recipient	NPS Archaeology
Digital Contents	"Animal Bones","Ceramics","Environmental","Worked stone/lithics","other"
Digital Media available	"Images raster / digital photography","Images vector","Spreadsheets","Survey","Text"
Paper Archive recipient	Norfolk Museums and Archaeology Service
Paper Contents	"Animal Bones","Ceramics","Environmental","Worked stone/lithics","other"
Paper Media available	"Context sheet","Photograph","Plan","Report","Section"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological Trial Trench Evaluation of Land at Cringleford, Norfolk
Author(s)/Editor (s)	Crawley, P.
Other bibliographic details	Report 2013/1292
Date	2013
Issuer or publisher	NPS Archaeology
Place of issue or publication	Norwich
Description	A4 and A3 paper, double-sided, colour-printed, spiral-bound; pdf
Entered by	J Bown (jayne.bown@nps.co.uk)
Entered on	22 November 2013

OASIS:

Please e-mail English Heritage for OASIS help and advice