Northamptonshire County Council

Northamptonshire Archaeology

Archaeological trial excavation and topographic survey of land at East Halton, Lincolnshire 2008

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Report 08/122

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QUALITY CONTROL

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OASIS REPORT FORM

PROJECT DETAILS		
Project name	East Halton Glass Wool Factory	
Short description	Northamptonshire Archaeology conducted a trial excavation and topographical survey on land to the east of East Halton, North Lincolnshire on behalf of RPS Leeds and their clients URSA. Archaeological remains were present and fell into three physically distinct groups. In the north-western part of the proposed development were Iron Age ditches and gullies that may form round houses and an enclosure. In the north-east corner of the site were features associated with a 2nd-3rd century 'ladder' settlement, previously identified by geophysical survey and excavation. To the south-west were ditches and gullies relating to a contemporary enclosure system. Topographical survey over the route of a proposed access road east of Brick Lane recorded only ridge and furrow.	
Project type	Evaluation	
Site status		
Previous work	Geophysics, excavation	
Current Land use	Arable, pasture	
Future work	unknown	
Monument type/ period	Iron Age, Roman	
Significant finds	Iron Age and Roman pottery	
PROJECT LOCATION		
County	North Lincolnshire	
Site address (including postcode)	Land to the west of East Halton, Lincolnshire	
Study area (sq.m or ha)	15ha	
OS Easting and Northing	51525 41975	
Height OD	5-8mOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology	
Project brief originator	NLHER	
Project Design originator	RPS	
Director/Supervisor	Paul Mason	
Project Manager	Adam Yates and Tony Walsh (NA), Dan Slatcher (RPS)	
Sponsor or funding body	RPS	
PROJECT DATE		
Start date	28.7.08	
End date	11.06.08	
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ARCHAEOLOGICAL TRIAL EXCAVATION AND TOPOGRAPHIC SURVEY ON LAND AT EAST HALTON, LINCOLNSHIRE

APRIL - JUNE 2008

ABSTRACT

Northamptonshire Archaeology conducted a trial excavation and topographical survey on land to the east of East Halton, North Lincolnshire on behalf of RPS Leeds and their clients URSA. Archaeological remains were present and fell into three physically distinct groups. In the north-western part of the proposed development were Iron Age ditches and gullies that may form round houses and an enclosure. In the north-east corner of the site were features associated with a 2nd-3rd century 'ladder' settlement, previously identified by geophysical survey and excavation. To the south-west were ditches and gullies relating to a contemporary enclosure system. Topographical survey over the route of a proposed access road east of Brick Lane recorded only ridge and furrow.

1 INTRODUCTION

From April to June 2008 Northamptonshire Archaeology undertook an archaeological trial excavation and topographical survey on land to the east of East Halton, North Lincolnshire (NGR TA 1525 1975, Fig 1). The archaeological investigations were undertaken in order to inform the planning process in advance of the proposed construction of a glass wool factory and access road by URSA. The work was conducted in accordance with a written scheme of investigation prepared by RPS Leeds (RPS 2008b). The fieldwork commenced on 28 April and was completed on 11 June 2008.

2 BACKGROUND

2.1 Planning background

A development proposal for the construction of a glass wool factory at East Halton has been made by URSA.

2.2 Archaeological background

Desk-based assessment and previous archaeological work

The site was the subject of an archaeological desk-based assessment undertaken by RPS Leeds in April 2008 (RPS 2008a). The following summary is paraphrased from that document.

Prehistoric and Roman

A prehistoric scraper was found some 150m to the west of the proposed development area and finds of flint cores and flakes have been made some 300m to the south east. Further away, stone axes dating to the Neolithic period have been found at Killingholme and a flint knife was found on the site of the Lindsey Oil Refinery.

The oil refinery site probably contained at least one Roman occupation site. Finds dating to the 3rd and 4th centuries have been made in this area some 800m north of the proposed development.

At the eastern periphery of the proposed development area a Roman 'ladder' settlement dating from the early 2nd to later 4th centuries was identified by geophysical survey and excavation in 1991. Further associated archaeological features have since been identified by geophysical

survey in 1999 and 2006. Fieldwalking in the adjacent field has also produced evidence for Roman settlement activity.

Medieval and post-medieval

Geophysical survey suggests that much of the site was covered in ridge and furrow by the end of the medieval period, if not before. The land encompassing the proposed development area was enclosed in the first years of the 19th century. Farm buildings associated with Chase Hill Farm are shown within the site on the first edition Ordnance Survey map of 1890. The power station to the south of the site was built in the early 1990s. Chase Hill Farm and its outbuildings were demolished at this time.

Recent geophysical survey

A geophysical survey was undertaken by GSB Prospection Ltd in tandem with the trial trenching evaluation (GSB 2008). A substantial 'D'-shaped enclosure complex was identified to the north of the proposed development area. Within the site, a possible ring ditch was identified in the north-west area, further detail added to the previous survey in the vicinity of the Roman settlement and a number of pit-like anomalies highlighted across the site. Ridge and furrow was evident in most of the fields.

2.3 Topography and geology

The proposed development site lies *c* 1km to the east of the village of East Halton (centred on NGR TA 1521 1971). Agricultural fields form the northern and western boundaries of the site, a power station lies to the south and depots associated with Immingham Docks lie to the east. The Humber Estuary is *c* 1.3km due east of the eastern periphery of the site. The proposed route of an access road is aligned through fields to the east of the main development area. It connects the site to Chase Hill Road via land to the rear of Fairfield House.

The proposed development area lies at *c* 5-8mOD and is currently occupied by agricultural fields planted with wheat.

The underlying geology of the proposed development area comprises chalk overlain by glacial till (www.bgs.org/geoindex).

3 THE TOPOGRAPHIC SURVEY

Objectives and Methodology

A topographic survey was carried out in three adjacent fields to the south-west of the evaluation area, along the route of the proposed access road, at the request of RPS (Fig 2). Another field intended for survey, north of trench 52, did not contain earthworks. The aim of the survey was to establish the extent of earthwork features in these fields and to record their degree of survival.

Data was collected using a Differential GPS (Leica System 1200), with a total of 980 points recorded to a 3D accuracy of <50mm. The top and base of slopes were surveyed at either 5 or 10m intervals, depending on the resolution necessary. All readings were taken on Ordnance Survey OSGB36 National Grid and related to Ordnance Survey datum. The resulting data was plotted using Leica GeoOffice and MapInfo GIS.

Results

The visibility of features was moderate; as these fields were set-aside, the ground cover comprised very long wild grasses and weeds between 0.5-0.8m high, although the form and extent of the earthworks could still be determined.

In the northern two fields, a system of ridge and furrow ploughing (A) was aligned north-east to south-west, surviving for a maximum length of 122m (Fig 3). The spacing between the ridges ranged between 6.0-10.5m, with the average being 8m. The height between the peak of the ridge

and the base of furrow was up to 0.4m. The north-eastern ends were essentially straight, while the south-western ends displayed a more curvilinear shape typical of medieval agriculture. The current hedgerow between the two fields clearly overlay the earthworks. Although outside the survey area, heavily truncated ridge and furrow remains were visible in the field to the east; these were aligned north-west to south east, at right angles to (A) with the division between the two alignments being respected by the current field boundary.

On the south-west side of this alignment was another field system (B), orientated north-west to south-east. These survived for a maximum length of 108m, being truncated in the middle by the current field boundary ditch and on the south by modern ground disturbance. The ridge spacing was similar to (A), being between 7.0-10.5m. The height between the peak of the ridge and the base of furrow was shallower, at 0.25-0.30m. No headland was visible between (A) and (B).

In the southern field two distinct patterns were visible. Pattern (C) was a curvilinear alignment and appeared to be the continuation of (B), representing the reverse-S curve of that pattern.

To the east, pattern (D) extended on a similar alignment as (B) but appeared to curve towards (C) in a 'fan' pattern. The ridge spacing was typically less than the other patterns, about 6.5m wide. The height between the peak of the ridge and the base of furrow was also less than in the north fields, at about 0.2m. The south-west part of this field was disturbed by an electricity pylon, while landscaping and cattle had caused damage to the ridge and furrow system on the north side.

Discussion

The survey recorded medieval earthworks, in the form of ridge and furrow ploughing, in all three southern fields. Preservation was generally very good, the earthworks being for the most part clearly visible below high vegetation. Only modern landscaping had damaged localized areas of the earthworks, particularly in the southern field. The pattern of the medieval field systems appeared to be generally fossilized in the layout of the current field boundaries, resulting in the north-east to south-west alignment of the fields in this area. The boundaries of the northern field clearly cut the earthworks. It is typical of many post-medieval field boundaries that they incorporate elements of the medieval open field system. Ridge and furrow remains were also present in the fields to the east of the survey area, but were for the most part heavily damaged by modern ploughing.

4 OBJECTIVES AND METHODOLOGY OF TRIAL EXCAVATION

4.1 Aims and objectives

The aims and objectives of the fieldwork are defined in the approved specification (RPS 2008b) as follows:

...to determine the presence or absence of archaeological remains within the development area and, if such remains are present, to determine their nature, extent, quality and preservation, and enable an assessment of their relative importance in a local, regional, national or international context

4.2 Methodology

Fifty-two 50m-long trenches were laid out in pre-determined positions over the fields that comprise the proposed development area using a Leica 1200 GPS system (Fig 2). The trenches were excavated using a 360º tracked digger fitted with a 2.10m-wide toothless ditching bucket.

Topsoil and subsoil, where present, were removed to expose the upper strata of geology and stored separately. A number of trenches were shortened to avoid buried services. All of the repositioned trenches were resurveyed using a GPS system or Total Station.

Once opened, hand excavation and recording of trenches progressed in accordance with the approved specification (RPS 2008b). Following the completion of the archaeological work the trenches were backfilled. All works were monitored by RPS on behalf of the client and North Lincolnshire Sites and Monuments Record (NLSMR).

5 THE EXCAVATED EVIDENCE

5.1 General observations

The site's geology was glacial till comprising clay varying in colour from reddish brown to yellow to bluish grey and often containing flecks of chalk, flint nodules and patchy sand. It was overlain by greyish brown silty clay subsoil, typically lying 0.20-0.30m deep. The only exception to this was noted in Trench 44, located on the western periphery of the main development area, where subsoil was absent. The ground level in this vicinity may have been reduced when a modern (?) earthen bund was created to the west. Elsewhere the subsoil was overlain by a dark grey silty clay loam with a typical depth of 0.20-0.40m.

Twenty-five of the fifty-two excavated trenches contained archaeological features; significant clusters were present in three areas of the site. The densest concentration lay in the north-east corner of the proposed development area (centred on Trenches 11 and 12) where ditches, gullies, pits and postholes indicative of Roman occupation were discovered. To the south-west (Trenches 3-6) a lower concentration of Roman features was present and may be associated with agriculture rather than settlement. In each of these areas the archaeology was primarily cut through the subsoil. The third area of archaeological interest lay in the western part of the development area (Trenches 30-32 and 43) where ditches and gullies of Iron Age date were recorded. Here the features were generally sealed by the subsoil. Elsewhere there were isolated features in a number of trenches that probably relate to relict field systems

In each instance the archaeology correlated with areas where geophysical anomalies were interpreted as having archaeological potential. However, away from these areas many of the anomalies were found to be caused by modern features such as agricultural drains, rubble and services. Some of the 'weaker' anomalies detected in the northern part of the site left no physical trace where intercepted by trenches.

Twenty-seven trenches contained no archaeology (Trenches 1-2, 14, 17-19, 21-29, 34-37, 39, 41-42, 44-45, 47-49). Agricultural drains and tree/crop root disturbance were noted in many of the trenches, the latter being particularly prevalent in the north-western part of the application area.

5.2 Archaeological features - the main development area

All trenches measured 50m by 2.2m unless otherwise stated.

Trench 3

Trench 3 was aligned north-east to south-west towards the centre of the site, to the south-east of a small, rectangular copse (Fig 4). The geology, a mottled greyish brown chalk flecked clay (303) lay *c* 0.60m below the existing ground level. It was overlain by 0.20-0.30m of mid-brown silty clay subsoil (302) and up to 0.40m of dark grey brown silty clay loam topsoil (301).

Towards the centre of the trench a cluster of articulated calf bones (304) were found lying directly over the geology. There was no visible cut for their deposition, though one is assumed, and the condition of the bones suggests that they are modern. In close vicinity were three small pits or postholes [305], [308] and [310]. Each had a diameter of *c* 0.50m, their depths ranged from 0.11 to 0.25m and they were filled with mottled grey/orange brown clay (307), (309) and (311).

Cutting through the subsoil to the north-east was a north to south aligned ditch [312]. It was 1.3m wide, 0.57m deep and was filled with a silty clay (313) containing sherds of late 3rd/4th-

century pottery and animal bone. This was overlain by a secondary fill of dark brown silty loam (314).

Trench 4

Trench 4 was aligned north-east to south-west towards the centre of the site and measured *c* 77m long (Fig 4). The geology, a mottled orange brown chalk flecked clay (403) lay *c* 0.60m below the existing ground level. It was overlain by *c* 0.30m of dark brown clay subsoil (402) and *c* 0.30m of dark grey brown silty clay loam topsoil (401).

An east to west aligned gully [404] was present in the southern end of the trench. It was 0.80m wide, 0.30m deep and filled with charcoal-flecked silty clay (405). Sherds of mid-2nd century pottery were recovered together with animal bone. Towards the centre of the trench were two intersecting gullies [406] and [408]. The earlier, [406], was 1.25m wide, 0.60m deep and filled with mid orange brown silty clay (407) containing 3rd-century pottery and animal bone. This was truncated by gully [408] which measured 0.30m wide, 0.15m deep and was filled with mid grey silty clay (409).

Pit [410] was partially revealed at the northern end of the trench. It had a projected diameter of 1.70m, was 1.14m deep and had a primary fill of dark grey silty clay (411). This was overlain by a lighter-coloured deposit (412). The primary fill contained pottery of 3rd century date.

Trench 5

Trench 5 was aligned east south-east to west north-west towards the centre of the development area (Fig 4). The geology, a mottled orange/brown/bluish grey clay (503), lay *c* 0.50m below the existing ground level. It was overlain by 0.20m of mid yellowish brown silty clay subsoil and 0.30m of dark grey brown silty clay loam topsoil (501).

A number of north to south aligned linear features cut the subsoil along the length of the trench. At its western end was ditch [504] measuring 2m wide and 0.70m deep filled with a sequence of deposits (505), (506) and (507). The secondary fill, a dark grey clay loam (506) contained mid 2nd-century pottery and animal bone. To the east was a double gully [513]/[515] measuring 2m wide, 0.25m deep and filled with silty clay (514)/(516). Further to the east was ditch [508] measuring 0.80m wide and 0.50m deep. Its secondary fill, a dark grey silty clay (510) contained undiagnostic Roman pottery and animal bone. Again to the east was a smaller gully [511].

A second phase of activity was indicated by a straight-edged, dog-legged gully [517] that cut ditch [508] in the centre of the trench (Plates 1 and 2). It was cut from immediately below the topsoil and measured *c* 0.60m wide by *c* 0.60m deep. It was filled with very dark grey silty clay (518) that although undated was sampled producing a large quantity of charred grains indicative of nearby cereal processing (Samples <1>/<6>). A small quantity of animal bone was also retrieved.

Trench 6

Trench 6 was aligned roughly east to west in the centre of the site (Fig 4). The geology, a mottled orange brown chalk flecked clay (603), lay 0.45-0.60m below the existing ground level. It was overlain by 0.20-0.30m of mid yellowish brown silty clay subsoil (602) and up to 0.30m of dark grey brown silty clay loam topsoil (601).

The trench revealed a single feature, a north to south aligned ditch [604] measuring 1.20m wide and 0.28m deep. It was filled with undated orange brown silty clay (605).

Trench 7

Trench 7 was aligned north-east to south-west in the eastern part of the site (Fig 5). The geology, a mottled orange brown/bluish grey chalk flecked clay (703), lay 0.50-0.60m below the existing ground level. It was overlain by *c* 0.30m of mid brown silty clay subsoil (702) and up to 0.30m of dark grey brown silty clay loam topsoil (701).

Towards the centre of the trench the subsoil was cut by east to west aligned gully [704] which measured 0.50m wide and 0.50m deep. It was filled with orange brown clay (705) containing

undiagnostic Roman pottery. Adjacent to this was a small pit or posthole [706] with a diameter of *c* 0.35m and a depth of 0.60m. It was filled with dark grey silty clay (707). To the north-east was an east to west aligned ditch [708]. It was 1.40m wide, *c* 0.50m deep and filled with mid-greyish brown silty clay containing mid 2nd century pottery and animal bone.

Trench 8

Trench 8 was aligned roughly north to south in the eastern part of the site (Fig 5). The geology, a mottled orange brown clay (803), lay *c* 0.70m below the existing ground level. It was overlain by *c* 0.30m of orange brown silty clay subsoil (802) and up to 0.40m of dark grey brown silty clay loam topsoil (801).

Cutting the subsoil at the northern end of the trench was an east to west aligned ditch/gully [815]. It measured 1.10m wide, 0.60m deep and was filled with dark greyish brown silty clay (816) containing 2nd-century pottery and animal bone. Adjacent to this were intersecting features [807] and [809]. The former was an east to west aligned gully, 0.70m wide, 0.25m deep and filled with mid orange brown silty sand (808). Against the edge of the trench it joined the second feature [809], which could have been either a pit or gully terminal; only a small part was visible and the relationship between the two features was not tested.

Further to the south, and cutting the subsoil, was a substantial ditch [804] measuring 1.70m wide and 0.70m deep. It was filled with a charcoal-flecked dark grey clay loam (805) containing 2nd-century pottery and animal bone. A soil sample <8> produced only two amphibian bones.

Towards the northern end of the trench was a small undated post/stakehole [813] with a diameter of only 0.08m.

Trench 9

Trench 9 was aligned roughly east to west in the eastern part of the site (Fig 5). The geology, a mottled orange brown/bluish grey clay (903), lay *c* 0.50-0.60m below the existing ground level. It was overlain by 0.25-0.30m of mid brown silty clay subsoil (902) and up to 0.25m of dark grey brown silty clay loam topsoil (901).

A 0.25m wide curvilinear gully [904] terminated in the western part of the trench adjacent to a north to south aligned ditch [908]. The latter measured 1.20m wide, 0.60m deep and had a primary fill of weathered-in geology (910). This was overlain by a deposit of greyish brown silty clay (909) containing mid-late 2nd-century pottery, bone, shell and a fragment of Roman quern.

Near the centre of the trench were two small pits [906] and [913]. Small fragments of burned bone were observed in their fills (907) and (914) suggesting the possibility of cremations. Accordingly only one of them, pit [906], was excavated. Its dark greyish brown fill (907) was collected and the resulting sample produced charred bones including the partial skeleton of a neonatal lamb (Sample <2>). A large quantity of fired clay fragments, perhaps the remnants of an oven, were also present.

Towards the eastern end of the trench were two more linear features. Ditch [915] was aligned north to south and measured 1.5m wide and 0.50m deep (Fig 11; Section 1). It was filled with charcoal-flecked dark brown silty clay (916) containing *c* 10kg of mid-late 2nd-century pottery sherds and some animal bone. To the east was similarly aligned gully [911] which measured *c* 0.40m wide and *c* 0.15m deep. This also contained undiagnostic Roman pottery in its silty clay fill (912).

Trench 10

Trench 10 was aligned north-east to south-west in the north-eastern part of the site (Fig 6). The geology, a mottled yellow to dark brown clay (1003), lay *c* 0.50m below the existing ground level. It was overlain by *c* 0.30m of grey brown silty clay subsoil (1002) and up to *c* 0.20m of dark grey brown silty clay loam topsoil (1001).

An undated north-west to south-east aligned ditch/gully [1004] was the only archaeological feature present. It measured 112m wide, 0.26m deep and was filled with a yellowish grey silty clay (1005) containing animal bone.

Trench 11

Trench 11 was aligned north-west to south-east in the north-eastern part of the site (Fig 6). The geology, a chalk flecked yellow brown clay (1103), lay *c* 0.50m below the existing ground level. It was overlain by *c* 0.20m of yellow brown silty clay subsoil (1102) and up to *c* 0.20m of dark grey brown silty clay loam topsoil (1101).

This trench contained the densest concentration of archaeological features observed during the evaluation and indicated at least three phases of activity. At the north-eastern end of the trench were three intercutting gullies [1122], [1125] and [1142]. The earliest, gully [1125] measured c 0.75m wide and 0.18m deep. It was cut by gully [1122] which measured 0.42m wide and 0.12m deep; this was in turn cut by gully [1142] which was of similar proportion. None of these features contained dating evidence.

A short distance to the south-east was curvilinear ditch/gully [1112] which measured 1m wide and *c* 0.40m deep. It was filled with brown silty clay (1113) containing pottery dating to the 2nd-3rd century, animal bone and an undiagnostic iron strip and nail. A soil sample produced three fragments of animal bone (Sample <5>).

South-east of this were more intercutting features, gullies [1110], [1129] and [1131] representing at least two phases of activity. The earliest was north-east to south-west aligned gully [1131] whose dark clay fill (1132) contained 3rd-century pottery, animal bone, and an off-cut of worked antler. Gullies [1129] and [1110] cut this earlier feature; both contained small quantities of residual 2nd-century pottery in their fills and the latter contained a single fragment of Roman tegula roof tile.

A more substantial gully/ditch [1104] was revealed in the centre of the trench. It was aligned north-east to south-west and measured 1.3m wide and 0.25m deep. Its dark grey silty clay fill contained 2nd-century pottery. Postholes [1114] and [1127] were located either side of the gully. Both had a diameter of *c* 0.20m; a single sherd of pottery found in the fill of the former (1115) dated to the Roman period. Also in close vicinity was a curvilinear gully [1106] cut by posthole [1108] and pit/gully terminal [1116]. Evidence for two further postholes was present in the base of the latter. The only dating evidence retrieved from this cluster of features, sherds of pottery dating to the 2nd century, was taken from the fill (1117) of pit/gully terminal [1116]. A soil sample from this context produced a single charred sedge seed (Sample <3>).

To the south-east again, was a pair of north to south aligned intercutting gullies (Fig 11; Section 2). The earlier was gully [1135] measuring 1m wide and 0.45m deep. Its primary fill (1136) contained late 3rd-4th-century pottery and its secondary fill (1137) contained undiagnostic sherds. Gully [1138] cut through the latter and measured 1.5m wide and 0.2m deep. It was filled with a series of silty clay deposits (1139), (1140) and (1141). The uppermost fills contained residual pottery dating to the 2nd century and a fragment of Roman tegula.

Trench 12

Trench 12 was aligned north to south to the immediate north of Trench 11 in the northeastern part of the site (Fig 6). The geology, a chalk flecked yellow brown clay (1203), lay *c* 0.60m below the existing ground level. It was overlain by *c* 0.20m of yellow brown silty clay subsoil (1202) and up to *c* 0.40m of dark grey brown silty clay loam topsoil (1201).

This trench also contained a significant concentration of features. Cutting the subsoil at the southern end of the trench was a substantial east-west aligned ditch [1204] measuring 2m wide and 0.70m deep (Fig 11; Section 3). Its charcoal-flecked, mottled grey brown fill (1205) contained a large quantity of animal bone, shells and pottery sherds dating to the mid-3rd century. A soil sample was taken producing four charred legume seeds and a single fragment of animal bone (Sample <7>).

In the central part of the trench a series of intercutting linear/curvilinear features were indicative of at least three phases of activity (Plate 3). The earliest feature, a 1.30m wide, 0.55m deep ditch [1215] cut the subsoil. It was filled with dark grey silty clay (1216) containing undiagnostic Roman pottery, animal bone and shell. This was cut by the ditch's principal feature, a curvilinear ditch [1210/1217] that was traced along the western edge of the trench for a distance of some 14m. Only part of the ditch's width was revealed; where sectioned it was in excess of 0.9m wide and *c* 0.70m deep and produced sherds of 3rd-century pottery. Butting up against this ditch was undated gully [1213] and cutting across its northern end was another substantial ditch [1220]. This was aligned east to west and measured 2.5m wide and 0.65m deep. Sherds of mid-3rd-century pottery were recovered from its secondary fill (1222).

Towards the northern end of the trench was a smaller east to west aligned linear feature. Ditch [1206] was 1.35m wide, 0.65m deep and was filled with yellow brown clay (1207) containing early 2nd century pottery and animal bone. This was cut by a small cigar-shaped feature [1208] with a depth of only 0.02m. Its very dark fill (1209) also contained Roman pottery.

Trench 13

Trench 13 was aligned north-east to south-west in the extreme north-eastern part of the site (Fig 6). The geology, a chalk flecked yellow brown clay (1303), lay *c* 0.65m below the existing ground level. It was overlain by *c* 0.40m of mid brown silty clay subsoil (1302) and up to *c* 0.25m of dark grey brown silty clay loam topsoil (1201).

Cutting the subsoil at the north-eastern end of the trench was a 0.70m wide gully [1304]. It was filled with a dark greyish brown clay loam (1306) overlain by a mid brown silt (1305). Both fills contained late 1st-2nd-century pottery and the latter was sampled producing a very small number of charred grains (Sample <4>).

Trench 15

Trench 15 was aligned north-west to south-east in the extreme north-eastern part of the site (Fig 6). The geology, a banded yellow/orange/grey brown clay (1503), lay *c* 0.55m below the existing ground level. It was overlain by *c* 0.30m of orange brown silty clay subsoil (1502) and up to *c* 0.25m of dark grey brown silty clay loam topsoil (1501).

Two substantial intercutting north-east to south-west aligned ditches [1504] and [1508] were present in the south-eastern end of the trench (Fig 11; Section 4). The earlier [1508] measured 2.40m wide and *c* 0.90m deep with steeply-angled sides and a broad, flat base. Its primary fill was a silty clay (1510) containing undiagnostic Roman pottery; a sample produced two cereal grains and a small quantity of weed seeds (Sample <15>). This was overlain with a greyish brown silty clay loam (1509) which contained sherds of a probable 3rd century date along with animal bone and shell. The northern edge of this feature was cut by 'V'-shape ditch [1504]. This measured 1.90m wide, 0.95m deep and was filled with weathered-in geology (1507) overlain by grey brown clay loam (1506) and orange brown clay loam (1505). The secondary and tertiary fills contained 2nd-3rd-century pottery and animal bone. Fill (1506) was sampled producing a small number of charred grains and six amphibian bones (Sample <9>).

Trench 16

Trench 16 was aligned north-west to south-east in the north-eastern part of the site (Fig 6). It was shortened to *c* 30m in order to avoid water mains. The geology, a yellow brown clay (1603), lay *c* 0.50m below the existing ground level. It was overlain by *c* 0.20m of yellow brown silty clay subsoil (1602) and up to *c* 0.30m of dark grey brown silty clay loam topsoil (1601).

Towards the centre of the trench was a curvilinear gully [1604/1606]. It measured 0.60m wide by 0.20m deep and was filled with greyish brown silty clay (1605/1607). No dating evidence was recovered.

Trench 20

Trench 20 was aligned roughly east to west in the in the south-eastern part of the site (Fig 7). The geology, a chalk-flecked mottled grey clay (2003), lay 0.60-0.70m below the existing ground

level. It was overlain by 0.30-0.40m of yellow brown silty clay subsoil (2002) and up to *c* 0.35m of dark grey brown silty clay loam topsoil (2001).

At the eastern end of the trench was a cluster of three possible post/stakeholes [2004], [2006] and [2008]. Their diameters ranged from 0.15-0.25m with depths of *c* 0.10m. The fills were dark grey silty clay (2005), (2007) and (2009). No dating evidence was recovered.

Trench 30

Trench 30 was aligned north to south in the western part of the site (Fig 8). The geology, a grey brown clay (3003), lay *c* 0.4m below the existing ground level. It was overlain by *c* 0.12m of yellow brown silty clay subsoil (3002) and up to *c* 0.30m of dark grey brown silty clay loam topsoil (3001).

Curvilinear gullies [3004] and [3006] cut the geology towards the southern end of the trench (Fig 12; Section 5). They appeared as 'ring ditch' type anomalies on the geophysical survey. The former was *c* 0.50 wide and 0.20m deep and filled with mottled grey/yellow/brown silty clay (3005) containing Iron Age pottery, bone and burned stone. The latter, located some 5m to the north, was larger, measuring 1.65m wide and 0.50m deep. Its primary fill (3007) was a mid orange brown silty clay containing Iron Age pottery. This was overlain by a charcoal flecked silty clay (3008).

To the south of these was a substantial east to west aligned ditch [3009] whose steeply angled, flat-based profile (Fig 12; Section 6) was very similar to ditch [1508]. Its primary fill was a silty clay (3013) containing only animal bone. This was overlain by a similar deposit (3012) containing Iron Age pottery, animal bone and burned stones. The remainder of the ditch was filled with sand (3011) and clay (3010).

Trench 31

Trench 31 was aligned east to west and formed a T-shape with Trench 30 (Fig 8). The geology, a red brown clay with sand patches (3103), lay 0.40-0.50m below the existing ground level. It was overlain by 0.20-0.25m of yellow brown silty clay subsoil (3102) and up to *c* 0.30m of dark grey brown silty clay loam topsoil (3101).

At the eastern end of the trench, near the junction with Trench 30, was a curvilinear ditch/gully [3104] that also appeared as a 'ring ditch' type anomaly in the geophysical data. It was 1.30m wide, *c* 0.50m deep and filled with dark grey silty clay (3106) containing many heat damaged cobbles (Fig 12; Section 7). This was overlain by dark brown silty clay (3105) containing Iron Age pottery and animal bone. A soil sample from this context produced a single charred cereal grain (Sample <10>). The subsoil sealed this feature.

Trench 32

Trench 32 was aligned north to south in the western part of the site (Fig 8). The geology, a chalk-flecked red brown clay (3203), lay 0.40-0.50m below the existing ground level. It was overlain by 0.10-0.25m of mid brown silty clay subsoil (3202) and up to *c* 0.30m of dark grey brown silty clay loam topsoil (3201).

A small pit/posthole [3204] cut the geology at the southern end of the trench. It had a diameter of *c* 0.30m and a depth of 0.06m. Its dark grey clay loam fill (3205) contained a single piece of animal bone. A soil sample did not produce ecofacts (Sample <11>).

Trench 33

Trench 33 was aligned east to west in the western periphery of the site (Fig 8). The geology, a light brown/blue grey clay (3303), lay 0.35-0.45m below the existing ground level. It was overlain by 0.15-0.20m of yellow brown silty clay subsoil (3302) and up to *c* 0.30m of dark grey brown silty clay loam topsoil (3301).

A large number of root-like disturbances were present along the length of the trench. They had irregular plans and profiles and were bereft of finds. They were sealed by the subsoil. Samples

taken from the 'fill' of these features failed to produce environmental evidence (Samples <12> and <13>).

Trench 38

Trench 38 was aligned north to south in the north central part of the site (Fig 9)). The geology, a chalk flecked and mottled light brown/blue grey clay (3803), lay 0.40-0.60m below the existing ground level. It was overlain by 0.10-0.20m of mid brown silty clay subsoil (3802) and up to *c* 0.40m of dark grey brown silty clay loam topsoil (3801).

Cutting the geology towards the northern and of the trench was a north-east to south-west aligned gully [3804] (Fig 12; Section 8). It was 0.10m wide and 0.50m deep and was filled with greyish brown clay (3805) which contained an undiagnostic retouched flint flake. A soil sample did not produce ecofacts (Sample <14>).

Trench 40

Trench 40 was aligned east to west in the north central part of the site (Fig 9). The geology, a chalk flecked and mottled red brown/blue grey clay (4003), lay 0.45-0.60m below the existing ground level. It was overlain by 0.20-0.30m of silty clay subsoil (4002) and up to *c* 0.30m of dark grey brown silty clay loam topsoil (4001).

Partially revealed at the western end of the trench was an irregular-shaped pit [4008] that cut the subsoil (Plate 4). It measured 3m in width and *c* 0.60m deep. It was filled with a dark grey sandy loam (4009) containing many small fragments of heat damaged sandstone. A short distance to the east was a much larger spread of the same material that appeared to infill a large cut feature, perhaps a ditch or large pit [4004] (Plate 5). The base of the feature contained a deposit of eroded geology (4005). The overlying material (4006) contained two very abraded sherds of Iron Age pottery. A soil sample failed to produce environmental evidence (Sample <16>).

Trench 43

Trench 43 was aligned north to south in the western part of the site (Fig 8). The geology, a chalk flecked and mottled brown/blue grey clay (4303), lay *c* 0.50m below the existing ground level. It was overlain by *c* 0.20 of silty clay subsoil (4302) and up to *c* 0.30m of dark grey brown silty clay loam topsoil (4301).

Two linear ditches [4304] and [4306] were present towards the centre of the trench. Ditch [4304] was aligned east to west and measured 2m wide and 0.60m deep (Plate 6). Its profile was similar to that of ditch [3009]. It was filled with olive brown clay (4305) containing Iron Age pottery. Ditch [4306] lay immediately to the north and was aligned north-west to south-east. It was 1m wide, 0.40m deep and filled with heavily leached silty clay (4307). This feature contained no dating evidence but was sealed below the subsoil.

Trench 46

Trench 46 was aligned east to west towards the north eastern part of the site (Fig 9). The geology, a orange brown clay (4603), lay *c* 0.50m below the existing ground level. It was overlain by 0.20-0.30m of orange brown silty clay subsoil (4602) and up to *c* 0.30m of dark grey brown silty clay loam topsoil (4601).

A north-east to south-west aligned gully [4604] was present in the eastern end of the trench. It was *c* 0.70m wide, 0.30m deep and filled with light brown clay (4605) containing a single sherd of Iron Age/Roman pottery.

5.3 Archaeological features – the access road

Trench 50

Trench 50 was aligned north-west to south-east in the north to south arm of the access road (Fig 10). The geology, a orange/grey brown clay (5003), lay 0.40-0.60m below the existing ground

level. It was overlain by 0.20-0.40m of orange brown silty clay subsoil (5002) and up to *c* 0.30m of mid grey brown silty clay loam topsoil (5001).

At the north-west end of the trench was a small undated posthole [5006] filled with dark grey clay (5007). At the opposing end of the trench was the terminal of a 0.5m wide gully [5004] filled with mottled grey/brown clay (5005). This too was undated.

Trench 51

Trench 51 was aligned north to south in the north to south arm of the access road (Fig 10). The geology, a orange/grey brown clay (5103), lay 0.40-0.60m below the existing ground level. It was overlain by 0.20-0.40m of orange brown silty clay subsoil (5102) and up to *c* 0.20m of dark grey brown silty clay loam topsoil (5101).

A sand-filled, east to west aligned gully [5104] present towards the centre of the trench is thought to be of geological origin. It was sampled but did not produce ecofacts (Sample <17>).

Trench 52

Trench 52 was aligned east to west in the east to west arm of the access road (Fig 10). The geology, a orange/grey brown clay (5203), lay 0.50-0.60m below the existing ground level. It was overlain by 0.25-0.40m of orange brown silty clay subsoil (5202) and up to 0.20-0.30m of dark grey brown silty clay loam topsoil (5201).

Towards the centre of the trench was an undated north-east to south-west aligned gully [5204]. It was 0.40m wide, 0.30m deep and filled with orange/grey brown clay (5205).

6 THE FINDS

6.1 **Flint** by Andy Chapman

There is an undiagnostic flake, in a brown vitreous flint, which has been retouched along one edge; from fill (3805) of gully [3804].

6.2 **Prehistoric and Roman pottery** by Margaret J Darling and Ian Rowlandson

Introduction

The pottery amounted to 768 sherds, weighing 21.527kg from 50 deposits. The fragmentation of the pottery varied across the trenches, the heaviest average sherd weights coming mainly from trenches 9-15. The overall average sherd weight was fairly high at over 28g sherd, reflecting the fresh nature of the larger groups. Some abrasion occurred, mainly in the small groups. No problems are anticipated for long term storage. The pottery has been archived using count and weight as measures according to the guidelines laid down for the minimum archive by The Study Group for Roman Pottery. Quantities and dates by context are detailed in Appendix 1.

The pottery was distributed across the evaluation trenches (Table 1).

Table 1: Pottery distribution

Trench	Sherds	%	Weight (g)	%	Average Sherd weight (g)	Date
03	11	1.43	130	0.6	11.8	3rd-4th century
04	71	9.24	1115	5.18	15.7	Mid 2nd-3rd century
05	29	3.78	548	2.55	18.9	Mid 2nd century
07	37	4.82	389	1.81	10.5	Mid 2nd century
08	13	1.69	115	0.53	8.8	2nd century
09	213	27.73	11159	51.84	52.4	Mid-late 2nd century
11	108	14.06	1806	8.39	16.7	2nd-3rd or 4th century
12	104	13.54	2274	10.56	21.9	Early 2nd-mid 3rd century
13	9	1.17	234	1.09	26.0	1st or 2nd-mid-late 3rd century
15	112	14.58	3523	16.37	31.5	2nd-mid 3rd century
30	49	6.38	140	0.65	2.9	Iron Age
31	6	0.78	24	0.11	4.0	Iron Age
40	2	0.26	10	0.05	5.0	Iron Age
43	3	0.39	51	0.24	17.0	Iron Age
46	1	0.13	9	0.04	9.0	Iron Age/Roman
	768	**100**	**21527**	**100**	**28.0**	

Most of the pottery came from the area of the Roman settlement, trenches 9-15, with smaller quantities from the trenches to the south-west, and very sparse finds of Iron Age date from the area of the Iron Age enclosure, with outliers closer to the Roman settlement in trenches 40 and 46. Sherd links were observed between ditches 1210 and 1220, and ditches 1504 and 1508 (see appendix 1).

The dating based on the context dates for each deposit is shown in Table 2. This shows clearly the predominance of 2nd century pottery. The largest percentage based on weight derives from a large number of large jars and bowls of that date.

Table 2: Context dates

	Sherds	%	Weight (g)	%
Iron Age	61	8.40	234	1.11
2nd century	439	60.47	15914	75.62
3rd century	212	29.20	4567	21.70
3rd-4th century	14	1.93	330	1.57
	726	100.00	21045	100.00
Roman	42		482	
Total	768		21527	

Overview of fabrics and vessel types

The fabrics are listed in Table 3.

Table 3: Fabrics

Fabric	Code	Sherds	%	Weight	%
Coarse mixed fabric	COAR	1	0.13	6	0.03
Cream	CR	2	0.26	28	0.13
Cream sandy	CRSA	3	0.39	74	0.34
Amphora Dressel 20	DR20	2	0.26	523	2.43
Shell-gritted dales ware	DWSH	73	9.51	942	4.38
Erratic-tempered ware	ETW	23	2.99	148	0.69
Fired clay	FCLAY	17	2.21	78	0.36
Grey fine	GFIN	3	0.39	8	0.04
Grey	GREY	304	39.58	6094	28.31
Grey fairly-fine	GRFF	1	0.13	26	0.12
Grog	GROG	60	7.81	7304	33.93
Grey round-quartz fabric	GRRO	29	3.78	647	3.01
Grey sandy	GRSA	9	1.17	181	0.84
Grey with very sparse shell	GRYSH	1	0.13	9	0.04
Grey minimal shell	GYMS	4	0.52	17	0.08
Iron Age tradition gritty	IAGR	14	1.82	249	1.16
Nene Valley colour-coated ware	NVCC	3	0.39	86	0.40
Oxidized	OX	9	1.17	292	1.36
Oxidized light	OXL	6	0.78	1549	7.20
Parisian ware	PART	3	0.39	12	0.06
Samian Central Gaulish	SAMCG	2	0.26	3	0.01
Shell-gritted common fine	SHCF	17	2.21	15	0.07
Shell-gritted common medium	SHCM	14	1.82	56	0.26
Shell-gritted	SHEL	112	14.58	1437	6.68
Shell & grog inclusions	SHGR	50	6.51	1665	7.73
Shell-gritted sparse fine	SHSF	1	0.13	42	0.20
Shell-gritted sparse medium	SHSM	1	0.13	14	0.07
Tile	TILE	3	0.39	13	0.06
Vesicular	VESIC	1	0.13	9	0.04
Total		**768**	**100**	**21527**	**100**

Only two sherds of samian from Central Gaul, a single fragment of a dish form 79 came from Trench 4, and the only other import are sherds from a single Dressel 20 olive oil amphora from Baetica in Southern Spain from Trench 15; this is in an early fabric, probably 2nd century. The only vessels positively from outside the area are the two Nene Valley colour-coated vessels (NVCC), a painted beaker from Trench 3 and a sherd from a closed vessel from Trench 11, both datable to the later 3rd, possibly into the 4th century. The only other fine ware is a fragment of a single probable beaker in Parisian type ware (PART) from Trench 5. Only a single cream (CR) flagon was found (Trench 13), but a lug-handled jar and narrow-neck jar in coarser fabrics would have served as liquid holders.

Coarse fabrics predominate, with dales ware (DWSH) jars supplying cooking vessels in the 3rd century, and Iron Age tradition gritty (IAGR) cooking pots and bowls, with similar vessels in grog-tempered fabrics (GROG, SHGR) being the main vessels in the 2nd century. The multiplicity of fabrics is of interest, indicating a community relying on pottery from various different sources, and the origins of most of the coarse fabrics lie beyond the west edge of the Wolds.

Erratic-tempered ware (ETW): The erratic-tempered sherds contain common rock fragments, which appear to be from crushing glacial erratic boulders and pebbles, including dolerite. This

type of tempering was used from the Late Bronze Age to the early Iron Age in north-east England (Rigby 2004; Freestone and Rigby 1983; Freestone and Middleton 1991; Wardle 1992), mostly in areas covered by deposits of Boulder Clay, as in this area of north Lincolnshire. The source of the erratic-tempered vessels is difficult to determine, as these could be traded along the coast from Yorkshire, but could equally have been made in the area, drawing on the deposited Holderness clays in the basement till, and sandstone igneous rocks also occur on the north Lincolnshire coast (pers comm A.G. Vince). Such fabrics have been found on other sites in the area (Darling 2006; 2008; Precious & Vince 2000; Didsbury 2000), and are the subject of continuing research. The few sherds (from Trenches 12, 30, 43, possibly 40) may have been traded from further north where these wares, and the occurrence of erratic rocks, is commoner than on the Lincolnshire coast. Where identifiable for form, the fabrics appear to have been used only in the Iron Age on this site. The only pottery from Trenches 30, 31 and 43 was sherds in erratic-tempered ware and hand-made shell-gritted fabrics (SHCF, SHCM).

Three aspects stand out in the fabrics: the paucity of fine wares, particularly samian given the 2nd century dating and colour-coated wares later; the absence of mortaria and the source of much of the coarse wares to the west across the Wolds.

Fabrics definitions

Publication of The National Roman Fabric Reference Collection, abbreviated NRFRC (Tomber and Dore 1998), obviates the need to describe the major imported and widely traded Romano-British wares in detail.

COAR: Coarse tempered fabrics, usually in a Iron Age pottery tradition, often poorly mixed clay with quartz, limestone, grog and other inclusions.

CR: Cream, miscellaneous cream wares. Sherds attributed to a fabric group rather than a discrete fabric. A single fragment of a flagon.

CRSA: A particularly sandy cream fabric, a single vessel, probably a jar.

DR20: Amphorae Dressel 20 amphorae. Peacock & Williams 1986 Class 25, from Baetica, Southern Spain. Contents, olive oil. NRFRC: Baetican (Early) Amphorae 1 BATAM1; (Late) Amphorae 2 BATAM 2 (3)

DWSH: Shell-gritted dales ware jars, hand-made and wheel-finished from sources in north Lincolnshire around the Humber area. NRFRC: DAL SH

ETW: Erratic-tempered ware. Crushed igneous rocks, a type of fabric used from the Bronze Age to the Iron Age. Varying fabric textures from dense to coarse, with sparse to common inclusions of crushed rock.

FCLAY: Fragments of fired clay, sometime daub.

GFIN: Grey fine. This coding is used for reduced fabrics lying between the common quartz-gritted GREY used for most jars and bowls, and the very fine fabrics used for London-type ware and Parisian ware. Some vessels decorated in Parisian or London ware styles are coarser and fit into this category.

GREY: Grey, undifferentiated quartz-gritted grey fabrics, hard wares with sparse to common sub-rounded quartz inclusions.

GRFF: Grey, fairly fine fabric. This code covers fabrics intermediate between the common grey wares with sparse to common quartz and fine grey wares (GFIN), which itself is coarser than the very fine fabrics used for Parisian and 'London' wares. Usually used for finer vessels for the table, particularly beakers.

GROG: Grog-tempered. Similar grog to that in SHGR.

GRRO: Grey with rounded quartz inclusions from greensand deposits, origin west of the Wolds.

GRSA: Grey, with common to abundant quartz sand inclusions.

GRYSH: Hard Grey quartz-gritted with sparse to occasional shell inclusions.

GYMS: A fabric group to cover sherds, usually wheel-made, grey with minimal very sparse shell inclusions. Normally from vessels typical of the later Iron Age, but possibly continuing into the early Roman period.

IAGR: Coarse tempered, often pimply with grog and other inclusions, IA tradition fabric, which continues in use into the Roman period. Cf Trent Valley ware.

NVCC: Nene Valley colour-coat NRFRC: LNVCC

OX: Oxidized, miscellaneous oxidized wares. This coding comprises all miscellaneous oxidized sherds, usually in varying red-brown shades and degrees of grittiness, for which no significant fabric groupings are evident. Both open and closed forms occur.

OXL: Oxidized lighter red-brown. Usually used for flagons in light cream-brown shades, but in this case a large jar, dwg 28, with a pre-firing hole cut in the lower wall.

PART: Parisian type ware. A very fine silty grey fabric, often with a sandwich fracture showing a lighter cortex, usually with a fine black of grey polished external surface. The fabric colour can range from light grey, grey-brown to dark grey. Fine grained with smooth fracture, small quartz grains occurring usually very sparsely but occasionally more frequently. Rare clay pellets of the same colour as the matrix also occur. Parisan ware is decorated with stamps or rouletting, and can be dated to the 2nd century (Elsdon 1982), although the fabric continues to be used in the later Roman period for different vessel forms (Darling 1984, 77-80). Known to have been made at Market Rasen, Lincs (Darling, forthcoming). NRFRC: LMR FR, and at the Rossington Bridge Doncaster kilns (Buckland *et al* 2001) NRFRC: ROS FR. Body sherds can be confused with London Ware, a very similar fabric, but used for different forms with differing decoration. This ware is common in London, but is also made in the Nene Valley (Perrin 1990).

SAMCG: Samian Central Gaul, from Lezoux. NRFRC : LEZ SA

SHCF: Shell-gritted, common fine shell inclusions.

SHCM: Shell-gritted, common medium shell inclusions.

SHEL: Shell-gritted, miscellaneous shell-gritted ware, not certainly of local origin.

SHGR: Shell, grog and greensand quartz fabric. Wheel-made. Similar grog to that in the GROG sherds.

SHSF: Shell-gritted, sparse fine shell inclusions.

SHSM: Shell-gritted, sparse medium shell inclusions.

TILE: Tile fragments, usually building material.

VESIC:Vesicular, vesicular sherds, probably due to loss of shell-gritting.

Overview of forms

The analysis in table 4 is based on records of vessels with rims only.

Table 4: Vessel forms/rims

Form		**Sherds**	**%**	**Weight (g)**	**%**
Jar narrow-necked	JNN	1	0.58	5	0.11
Jar handled	JH	1	0.58	82	1.82
Jar	J	108	63.16	2113	46.97
Beaker	BK	8	4.68	35	0.78
Jar or bowl	JB	19	11.11	1010	22.45
Bowl	B	20	11.70	867	19.27
Dish	D	13	7.60	355	7.89
Lid	L	1	0.58	32	0.71
Total		171	100.00	4499	100.00

This excludes a single native tradition bowl in grog-tempered fabric from ditch 915 (dwg 1) weighing 5.6kg, which would otherwise adversely distort the analysis. The high percentage of jars is typical for most rural sites in the area, while most of the bowls and jar/bowls would also be kitchen vessels. Many of the vessels can be paralleled on other north Lincolnshire sites as at South Ferriby and neighbouring Killingholme (Darling 2005; 2006; 2008; Didsbury 2001; Dudley 1949), Immingham (Precious and Vince 2005), from excavations at East Halton (Didsbury 2000), and Winterton (Rigby and Stead 1976).

There is a particularly unusual vessel from ditch 915 in an oxidized fabric (OXL, dwg 28), a large jar (no rim survives) with stabbed decoration on the shoulder, but with a 3cm diameter hole cut pre-firing in the lower wall, relatively close to the base. No parallels are known for this, and it would appear to be a vessel for a specialised use. That it is a large liquid container is clear, but presumably with some form of bung or spigot. No parallel is immediately obvious, but given the conservatism seen in the forms and features of functional vessels, and by analogy with post-Roman wares, a connection to brewing is possible, and this will be looked into further.

Discussion and conclusions

The Iron Age sherds from Trenches 31, 30, 43, and 40 and possibly 46 are predominantly erratic and shell-tempered wares, and could date from the early to mid Iron Age onwards. The erratic-tempered wares are very crudely potted vessels, difficult to date, and hopefully further excavation would produce more datable pottery. Research on these wares in this area of Lincolnshire started comparatively recently and more evidence is needed. The sherds from this site may be traded vessels from further north.

There are significant differences between the pottery assemblages from the two main areas, the Roman settlement (Trenches 7-15) and the enclosures to the south and west (Trenches 3-5), as is shown by analysis of the fabrics by area. The pottery from the settlement area is dominated by coarse fabrics, GROG, IAGR, and OXL, while the enclosures area has a more Romanised feel with more standard grey fabrics, dales ware and shell-gritted. While these differences may emphasize a separation between these areas, it is important to note that the samples differ widely (Trenches 7-15 19.5kg; Trenches 3-5, 1.8kg), and this may be a freak result.

Many vessel types occur in several fabrics, as everted rim bowls and jars in GROG, IAGR, SHGR and SHEL, and are the subject on ongoing research, to refine dating and define sources. More excavated material from the site may enable these differences to be understood.

The occupation of the site in the Roman period appears to be of low economic status, with a scarcity of fine wares, and a limited range of vessels, including a number of large jars more suitable for storage, and large bowls. The unusual vessel from ditch 915 appears to be a specialist vessel. There is no definitively 1st century or 4th century pottery, most fitting into the 2nd and 3rd century. This would suggest on available evidence that there was a break in occupation between the Iron Age and later Roman activity on the site.

Recommendations

In the context of other recent excavations in this area and ongoing research to explore the economy and trading links of the area, this material is extremely important. The occurrence of erratic-tempered wares amongst the pottery draws attention to the need for petrological analysis to understand these unusual wares and their significance; these wares occurred in earlier work at North Killingholme where petrological work was also recommended (Darling 2006). The research already undertaken in Yorkshire under the auspices of the British Museum (Rigby 2004) and in Humberside, particularly the analytical work carried out on similar pottery from the pipeline project at Melton (OSA04 EX03; Vince *et al*, forthcoming) and at Immingham (Precious and Vince 2004), provides a sound comparative background to enable better understanding of the pottery supply, and any chronological changes, crucial to understand the character of the occupation on these sites. While most of the pottery is likely to have come from west of the Wolds scarp, the erratic-tempered vessels on this site may be evidence for trade from the north.

6.3 **Ceramic building material** by Pat Chapman

Tile

The two fragments of tile, both broken into two pieces, are most likely Roman tegula roof tile body sherds. They are each 23mm thick. One sherd, weighing 393g, from fill (1111) of gully [1110], has a circle made by a single finger swirl on the smooth upper surface, quite a common feature. The other sherd, from fill (1141) of gully [1138], weighing 251g, has a V-shaped mark also made by a finger. They are both made from a sandy fabric, but the tile from gully [1110] is quite coarse with some flint inclusions up to 7mm long and a very dark red with a black surface, while the tile from gully [1138] is a finer orange sandy fabric.

Fired clay

This assemblage comprises *c* 156 pieces weighing 1762g. The majority of the fired clay came from pit [906], with 80 pieces of medium to smaller size and as many again 5mm or less in diameter, together weighing 1437g. These are hard and irregular in shape, though the larger pieces tend to be flatter rather than round, and fired to red brown with black underneath. There is a grass stem impression on one sherd. These would appear to be the remains from a structure such as an oven. The rest of the assemblage are all irregular in shape, typically hard and ranging in colour from red brown with black to pale orange brown with black and made from a fine almost silty fabric. Only two pieces had a smooth surface, from fills (810) and (811) of ditch [809]. A piece from fill (1140), of ditch [1138], had a V-shaped impression, from a sharp edge.

The small size of the individual pieces and the relatively few pieces from the fills, with the exception of pit [906], indicates that this is a general scatter of material that could have originated from hearths or structures.

Table 5: Quantification of fired clay

Context/feature	Sample no	Sherd no	Weight (g)
313/ditch 312		1	5
518/gully 517	6, 1	19	15
810/ditch 809		11	119
811/ditch 809		4	22
907/pit 906	2	80+	1437
912/gully 911		1	28
1113/ditch 1112	5	3	5
1117/pit 1116	3	24	20
1140/ditch 1138		5	26
1207/ditch 1206		6	30
1222/ditch 1220		1	10
1605/gully 1604		1	44
Totals		**156+**	**1761**

6.4 **Querns** by Andy Chapman

There is a single fragment of quern from fill (909) of ditch [908]. This is manufactured from a white to pale grey sandstone speckled with rounded mineral grits, 1-4mm diameter, dark brown to light grey in colour, probably local Spilsby Sandstone from the Lincolnshire Wolds. The fragment comes from the centre of an upper stone and includes part of a central eye, *c* 80mm in diameter. The stone is 50mm thick, with closely parallel surfaces, indicating that it has come from a typical flat-topped quern of Roman date. It has a heavily worn, concave grinding surface.

6.5 **Other finds** by Tora Hylton

The excavations produced a small group of nine individually recorded small finds in three material types (1 antler, 1 copper alloy, 2 metal-alloy and 5 iron). There are only three finds from stratified deposits and all were recovered from Trench 11. The majority of finds were recovered by metal detector from spoil associated with Trenches 3, 4 and 5 and are therefore unstratified.

Finds from stratified deposits include an undiagnostic iron strip and nail from ditch [1112] and an antler offcut from gully [1131]. The fragment of antler attests to some form of antler working. The piece appears to be part of a horizontal slice which has been cut through the basal burr (the widest part of the antler). The cancellous (medullary) tissue has been removed, leaving just the compact outer tissue; both ends of the piece have been sawn and the natural textured finish of the exterior surface of the antler is visible on the outside edge.

Finds from unstratified deposits include, part of a handle from a ?teaspoon, two corroded chain links from Trench 3; two nails and a decorative machine pressed fragment from Trench 4, and an illegible ?penny from Trench 5.

Catalogue

SF 4 Strip fragment, iron. Parallel-sided strip with rectangular cross-section. Nature of object impossible to determine Measurements: 67 x 8 x 5mm. Context (1113), fill of ditch [1112].

SF 5 Nail, iron. Incomplete, head missing. Square-sectioned shank with clenched terminal bent at right angles. No measurements. Context (1113), fill of ditch [1112]

SF 6 Offcut, antler? Fragment of cross-section of antler burr?, just the compact outer tissue remains and the medullary tissue has been removed. Section measures 9mm high, sawn off at both ends (saw marks visible on surface) and natural grain visible on the outer surface. Diameter roughly measures 60mm suggesting that this piece may have been cut from the basal burr. Measurements: 36 x 9 x 9mm. Context (1132), Fill of gully [1131].

SF 7 Nail (x 2), iron. Sub-circular head with rectangular sectioned shank tapered to a point. Length: 44mm. No distinct head, slightly expanded shank and possibly burred; rectangular shank. Length: 65mm. Tr 4, Unstratified.

SF 8 Machine pressed metal alloy fragment. Shaped sheet fragment with concave profile; exterior surface textured, giving the impression of fur/wool. Vestige of two nail holes for securing to a another object. Exact nature of object difficult to determine, possible part of a toy, handle or decorative fitting. Post-medieval. Tr 4, Unstratified.

SF 9 Rod, iron. Short length of circular-sectioned rod with flat terminal. Possibly a pin. Length: 14mm Diameter: 1mm. Unstratified.

SF10 Cutlery handle, metal alloy. Possibly a teaspoon. No measurements. Post-medieval. Tr 3, Unstratified.

SF 11 Chain links, iron. Two oval, circular-sectioned chain links corroded together to form an amorphous lump. Length of link: *c* 48mm. Tr 3, Unstratified.

SF12 Coin, copper alloy. Illegible coin, patina flaked off, impossible to identify. Size suggests that it may be an 18th-/19th-century penny. Tr 5, Unstratified.

7 THE ENVIRONMENTAL EVIDENCE

7.1 **Animal bone** by Karen Deighton

Method

Three kilograms of animal bone were collected by hand during the course of excavation. A further 0.4 kg was collected from sieved samples (mesh sizes 500microns, 1mm and 3.4 mm).This material was assessed using standard zooarchaeological methods.

Results

Preservation

Fragmentation was fairly heavy, no complete long bones were noted and the majority of bone fragments were in the form of splinters. Abrasion was moderate with the exception of context (3205), fill of pit [3204] where bone was particularly worn.

Two instances of butchery were noted; chop marks and possible dismembering marks.

Burning was noted from three contexts, canid gnawing was noted from nine contexts.

Species present

Table 6: Taxa (anatomical units) by trench

Trench	*equus*	*bos*	*ovicaprid*	*sus*	*canid*	*avis*	L.ungulate	S.ungulate	Total
	Horse	Cow	Sheep/goat	pig	dog	bird	L.hoofed	S. hoofed	
3		1*							1
4		?	2						3
5		1	4						5
8		1	1						2
9		1	4	1					6
11		5	8	3			5		21
12	1	3	3			1	2		10
13			1						1
15		4	3	1	1		2		11
16		1	2		3				6
30	1	3						1	5
32		2							2
Total	**2**	**23**	**28**	**5**	**4**	**1**	**9**	**1**	**73**

* Partial calf, consisting of scapulae, femur, tibias, ribs and vertebra

Table 7: Number of bone fragments by taxa and sample

Sample	Cut/fill	*Bos*	*Ovicaprid*	*Sus*	S.ungulate	Amphibian	*Avis*
2	[906]/(907)		22*	1	2		
5	[1112]/(1113)	2			1		1
7	[1204]/(1205)			1			
8	[804]/(805)					2	
9	[1504]/(1506)					6	

* Possible partial skeleton of neonatal lamb

Samples 1, 3, 6, 10 and 11 produced unidentified bone fragments only.

Ovicaprid is the most abundant taxa, followed by Bos with much smaller numbers of Sus and Canid.

Ageing and measurements

Ageing data was available from both teeth and fusion for all of the domesticates. Neonatal elements were also present for cattle and sheep/goat.

Unfortunately due to fragmentation very few measurements could be taken

Discussion

Little can be said due to the small size of the assemblage, other than that a range of common domesticates were associated with or exploited at the site.

Potential

If more bone were collected from dateable/phaseable features during the course of any subsequent excavation an understanding of the animal economy of the site could be gained. This would also add to the existing corpus of work for the area and provide comparendra for future work.

7.2 **Shell** by Karen Deighton

Method

1.2 kgs of shell was collected by hand from a range of contexts during the course of excavation.

This material was analysed and identified to species where possible.

Results

Preservation

Fragmentation and abrasion were moderate. Possible puncture marks were noted on two shells from contexts 506.

Species present

Table 8: Species by context

Cut/fill	Oyster		Whelk	*H.aspersa*	*C.nemoralis*	*C.hortensa*	Indet snail
	Upper	Lower					
[312]/(313)					7		
[504]/(506)	13	10		2	7		
[511]/(512)							
[604]/(605)				1	4		
[708]/(709)					9		
[804]/(805)					6		
[815]/(816)					2		
[908]/(909)					6	1	
[1004]/(1005)					6		
[1106]/(1107)		1					
[1135]/(1137)	1						
[1204]/(1205)	11	6	1		5		1
[1206]/(1207)	1	2			1		
[1210]/(1211)	1						
[1215]/(1216)	1						
[1220]/(1222)	1						
[1304]/(1505)	2		1				
[1504]/(1506)					2		2
Total	**31**	**19**	**2**	**3**	**55**	**1**	**3**

Cepaea nemoralis was the most abundant taxa present, closely followed by Oyster (Ostrea edulis).

Discussion

The snails present (ie *H.aspersa, C.nemoralis, C.hortensa*) are catholic in their habitat preferences, so provide little information on the environment of the site. The oysters present are

the marine species and the non uniform shape of their shells suggests these were gathered from the wild. The lack of ornamentation on the shells suggests a low level of sunlight and therefore a deep water habitat. However, due to the relatively small sample size these statements are tentative. Oysters were probably part of the diet but could also be used for decoration and medicinal purposes. Again whelks (Buccinum undatum) were also eaten.

Potential

If further shells were collected during the course of any further excavation these could help to provide an understanding of the site's economy and of the exploitation of marine resources.

7.3 **Plant macrofossils** by Wallis Lord-Hart

Introduction

Seventeen soil samples were taken from gullies, ditches, and pits across the East Halton site in order to identify macroscopic plant remains.

Methods

Ten litre sub-samples from each context were processed by flotation. The residue was collected in a 1mm sieve fitted to a modified siraf tank, and then agitated in order to assist in separation. The floating fraction (flot) was collected into a 500 micron mesh. Eight of the contexts produced charred seeds and the remaining part of these samples was subsequently processed. The resulting fraction was then dried and scanned using a binocular microscope with a magnification of up to x 20. Seeds were then identified with reference to Cappers *et al* (2006) and Zohary and Hopf (2000) and using the terminology of Stace (1997).

Results

Of the seventeen samples that were taken, eight were found to contain charred seeds. Of these, Samples 1 and 6 (both which were taken from the same gully [518] in the southern area of the site) had significantly more charred seeds than any of the other samples. The preservation of most of the seeds was poor.

Discussion

Of the seeds that were recovered from the site, a large proportion came from one feature, gully [517] (Trench 5) where close to 1,000 cereal grains were present. Their presence would suggest that grain processing was being undertaken in this part of the site and is likely that this concentration comprises grains that became burnt during the drying process. The presence of sprouting grains and the large number of burnt chaff provide further evidence for this. Weed seeds that contaminate grain stocks, such as *Raphinus raphistrum* (wild radish) and *Bromus* (Bromes) were also present

The identified cereal grains are of types commonly cultivated in the Roman period. The large number of *triticum spelta* (spelt) glume bases are rarely found in the medieval period, but are quite common in the Roman. Conversely, *Secale* (rye), a common cereal of the medieval period, was absent from these samples (van Zeist, *et al* 1991).

A smaller number of seeds were recovered from the eastern area of the site, where it is thought a Roman settlement is located. The minimal number of cereal grains, along with only a few weed seeds suggests that they represent windblown detritus from neighbouring areas (such as the postulated grain processing area to the south) or deposits of burned debris deriving from areas of occupation.

A modest assemblage of seeds was recovered from a ditch in the western area of the site (Ditch [3104], Trench 31) but meaningful interpretation is difficult due to its small size.

Potential

Further sampling of dated features uncovered in the vicinity of Trench 5 would help identify the range of activities occurring in this area and provide evidence for the regimes of agriculture practiced. The rest of this site has limited environmental potential.

Table 9: Seed Quantification

Sample	1	6	3	7	4	9	15	10
Feature	**Gully [517]**	**Gully [517]**	**Pit [1116]**	**Ditch [1204]**	**Gully [1304]**	**Ditch [1504]**	**Ditch [1508]**	**Ditch [3104]**
Context Number	518	518	1117	1205	1306	1506	1510	3105
Volume of Sample (litres)	20	20	10	40	40	40	40	40
Barley – *Hordeum sp*	11	9				3	1	
Barley– *Hordeum* sp (Rachis Fragments)	4	8						
Spelt - *Triticum Spelta*		5				2		
Possible Spelt - cf *Triticum spelta*								
Spelt - *Triticum Spelta* (Glume Bases)	237	258			2	1		
Wheat - *Triticum turgidum*	3	8						
Wheat - *Triticum turgidum* (Glume Bases)					3			
Possible Emmer Glume base – cf *Triticum dicoccum*		1						
Oat type - *Avena Sativa* sp		1						
Indet Cereal	85	279			1	10	1	1
Indet Cereal chaff (sprouting)	4	13						
Indet Cereal chaff (Glume base)	15	106						
Indet Cereal chaff (Spiklet forks)	3	8						
Indet Cereal chaff (lemma)		1						
CEREAL TOTAL (chaff not included)	340	569	0	0	6	16	2	1
Carrot type - *Apiaceae sp*						1		
Wild Radish - *Raphinus Raphistrum*		1						
Soapwart - *Saponaria oficinalis*	1							
Oraches type - *Atriplex sp*	2					1	1	
Goosefoot type - *Chenopodium sp*		4					1	
Sedges type – *Carex sp*.	1		1			1	1	
Possible Sedges– cf *Carex*	1					1		
Sedges Family - Cyperaceae		1					1	
Vetches type - *Vicia sp*.		1		4				
Common Pea – *Pisum sativum*		3						
Vetches Family - *Fabaceae*		11						
Speedwell type - *Veronica sp*.	1							
Bromes type - *Bromus sp*.	9	13						
Bromes like– cf *Bromus*		65						
Dock type- *Rumex sp*		2						
Indet	6	1				2		2
Total Seeds	**361**	**671**	**1**	**4**	**6**	**22**	**6**	**3**

8 CONCLUSIONS

The trial excavation has demonstrated that archaeological remains are present within the proposed development area and are, for the most part, concentrated in three distinct groups.

The earliest remains are a series of ditches and gullies dating to the Iron Age. They are principally located in the western part of the site (Trenches 30, 31 and 43) where geophysical survey identified two possible ring ditches and a number of pit-like and linear anomalies. The excavated evidence in this part of the site comprises gullies associated with the putative ring ditches and two sections of a larger ditch which may form part of an enclosure.

Isolated features of potential Iron Age date were also observed to the east in Trenches 38, 40 and 46. They comprised sections of linear ditch/gully that are probably associated with late prehistoric field systems. More enigmatic, however, are the features recorded in Trench 40, close to the extreme northern periphery of the site. These were initially thought to be modern but two small sherds of Iron Age pottery were recovered from the fill of the larger feature. In both cases their physical extent and function remain unknown.

Roman occupation appears to have begun in the late 1st/early 2nd century and is focused in two areas of the site. The core of the settlement lies in the north-east corner of the proposed development area where a series of ditches and gullies were found. These are likely to define enclosures and structural elements associated with the 'ladder' settlement identified by previous campaigns of survey and excavation. Ceramic evidence suggests that the settlement was of modest economic status and reached its zenith in the 3rd century.

A second cluster of Roman features were discovered to the south-west (Trenches 3-6) where geophysical survey identified a series of linear anomalies defining an enclosure system. Ditches and gullies were excavated in this area and again produced ceramics dating principally to the 2nd and 3rd centuries, though not in the same quantities deriving from the settlement. An environmental sample taken from one of the gullies in this area produced clear evidence for grain processing which may indicate that this part of the site was used for agrarian purposes rather than occupation.

Across the site the excavated evidence largely corroborated the results of the geophysical survey. The only significant exception to this was where the survey data suggested the presence of a pair of linear features aligned north-east to south-west across the northern part of the development area. No physical evidence for these was found. A number of the geophysical anomalies located in the southern areas of the site were evidently caused by deposits of modern rubble lying in and below the topsoil. Some of this appears to have derived from a demolished farm outbuilding whose footprint is still visible in the south-east part of the site.

In the area of the proposed access road the topographic survey identified well preserved ridge and furrow to the east of Brick Lane. Trenches located to the north of this area did not locate significant archaeological remains.

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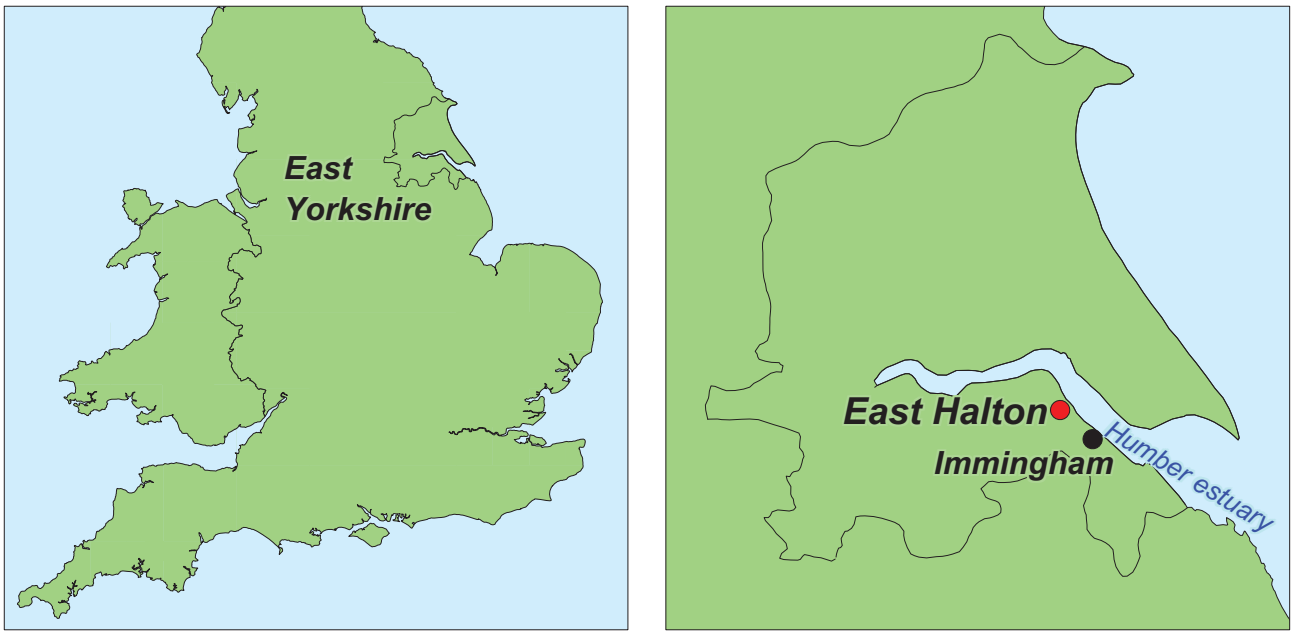
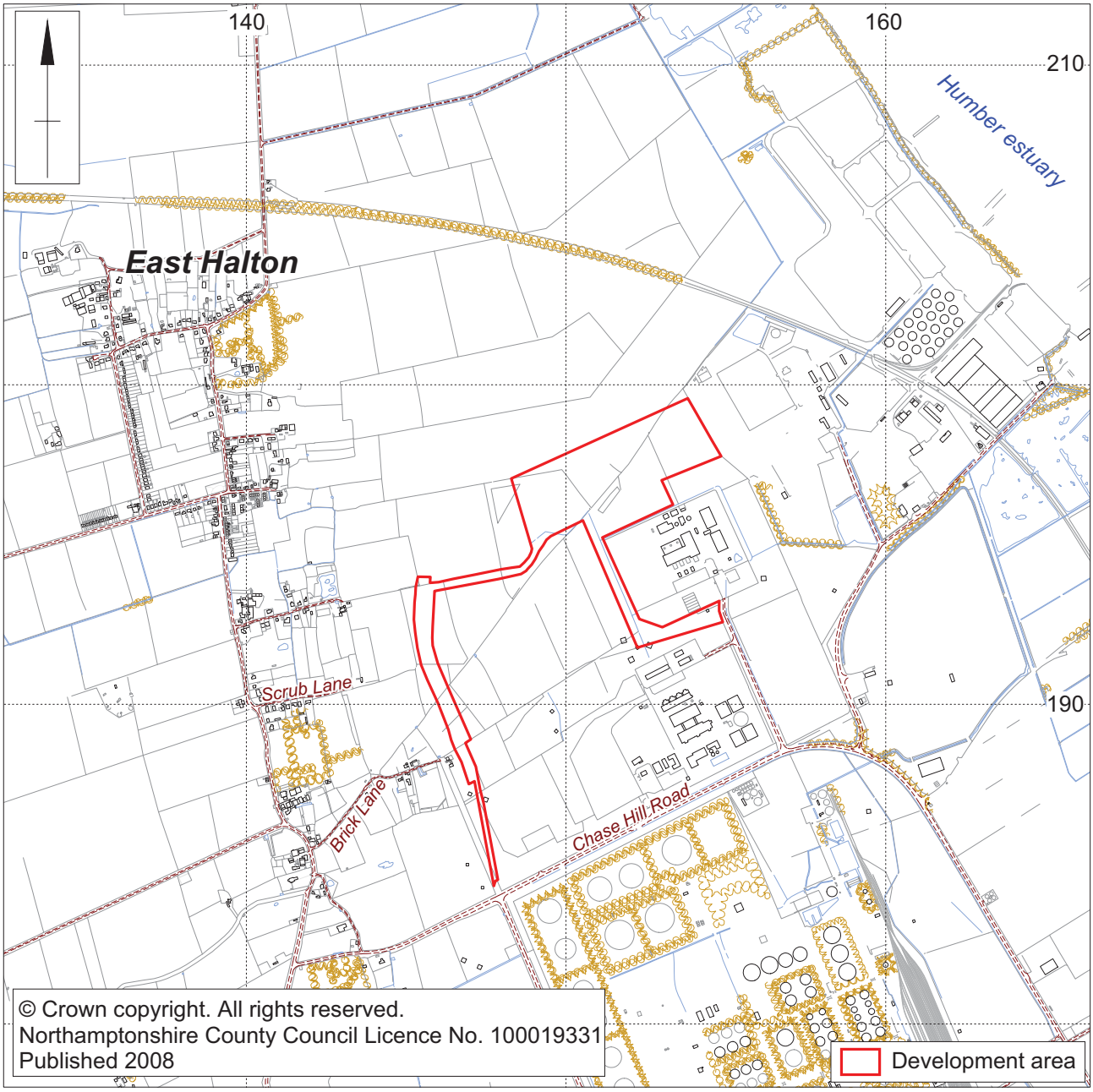
APPENDIX 1: POTTERY SUMMARY BY CONTEXT

Cut	Interp.	Cxt	Sherds	Weight(g)	Date	
-	Topsoil	0301	1	12	Roman	
312	Ditch	0313	10	118	Late 3rd-4th century	
404	Ditch	0405	11	69	Mid 2nd century?	
406	Ditch	0407	55	974	3rd century	
410	Pit	0411	5	72	3rd century	
504	Ditch primary	0506	21	429	Mid 2nd century?	
508	Ditch secondary	0510	3	25	Roman	
515	Gully	0516	5	94	Mid 2nd century?	
704	Gully	0705	4	5	Roman	
708	Ditch	0709	33	384	Mid 2nd century	
804	Ditch secondary	0805	5	34	2nd century	
815	Gully	0816	8	81	2nd century?	Strange ?tile frag
909	Ditch	0908	20	327	Mid-late 2nd century	
911	Gully	0912	2	66	ROM	
915	Ditch	0916	191	10766	Mid-late 2nd century	
1104	Ditch	1105	7	89	2nd century?	
1106	Ditch	1107	4	80	Mid-2nd century?	
1110	Gully	1111	3	39	2nd century?	
1112	Ditch	1113	16	671	2nd-3rd century?	Dish date?
1114	Stakehole	1115	1	11	Roman	
1116	Pit	1117	5	60	2nd century	
1120	Posthole	1121	1	7	Roman	
1129	Gully	1130	1	22	2nd century	
1131	Gully	1132	7	135	3rd century	
1133	Ditch	1134	5	31	Mid-3rd century	
1135	Ditch primary	1136	4	212	Late 3rd-4th century	
1135	Ditch secondary	1137	3	100	Roman	
1138	Ditch secondary	1140	3	12	Roman	
1138	Ditch upper	1141	48	337	2nd century	
1205	Ditch	1204	49	763	Mid 3rd century?	Fragmented jar; Links >1205
1205	Ditch	1205	20	722	Mid 3rd century?	Links >1204
1206	Ditch	1207	12	215	Early 2nd cenutury?	
1208	Gully	1209	3	106	Roman	Frag erratic stone retained
1210	Ditch secondary	1211	8	153	3rd century	Link to 1222
1215	Ditch	1216	3	48	Roman	
1220	Ditch	1222	9	267	Mid 3rd century	Link to 1211
1304	Gully secondary	1305	2	28	Late 1st-2nd century	Flagon only
1304	Gully primary	1306	7	206	Mid to late 3rd century	
1504	Ditch tertiary	1505	16	405	3rd century?	Link to 1509
1504	Ditch secondary	1506	63	2860	Mid 2nd century	Most prob earlier date; some marked 1137
1508	Ditch secondary	1509	15	168	3rd century?	Link to 1505
1508	Ditch primary	1510	18	90	Roman	
3004	Ditch	3005	15	51	Iron Age	
3006	Ditch primary	3007	18	18	Iron Age	
3006	Ditch secondary	3008	1	30	Iron Age+	
3009	Ditch secondary	3012	15	41	Iron Age?	
3104	Ditch	3105	6	24	Iron Age	Intrusive? Tile chips
4004	Ditch secondary	4006	2	10	Iron Age	
4304	Ditch	4305	3	51	Iron Age	
4604	Ditch	4605	1	9	Iron Age/ Roman	
			768	**21527**		





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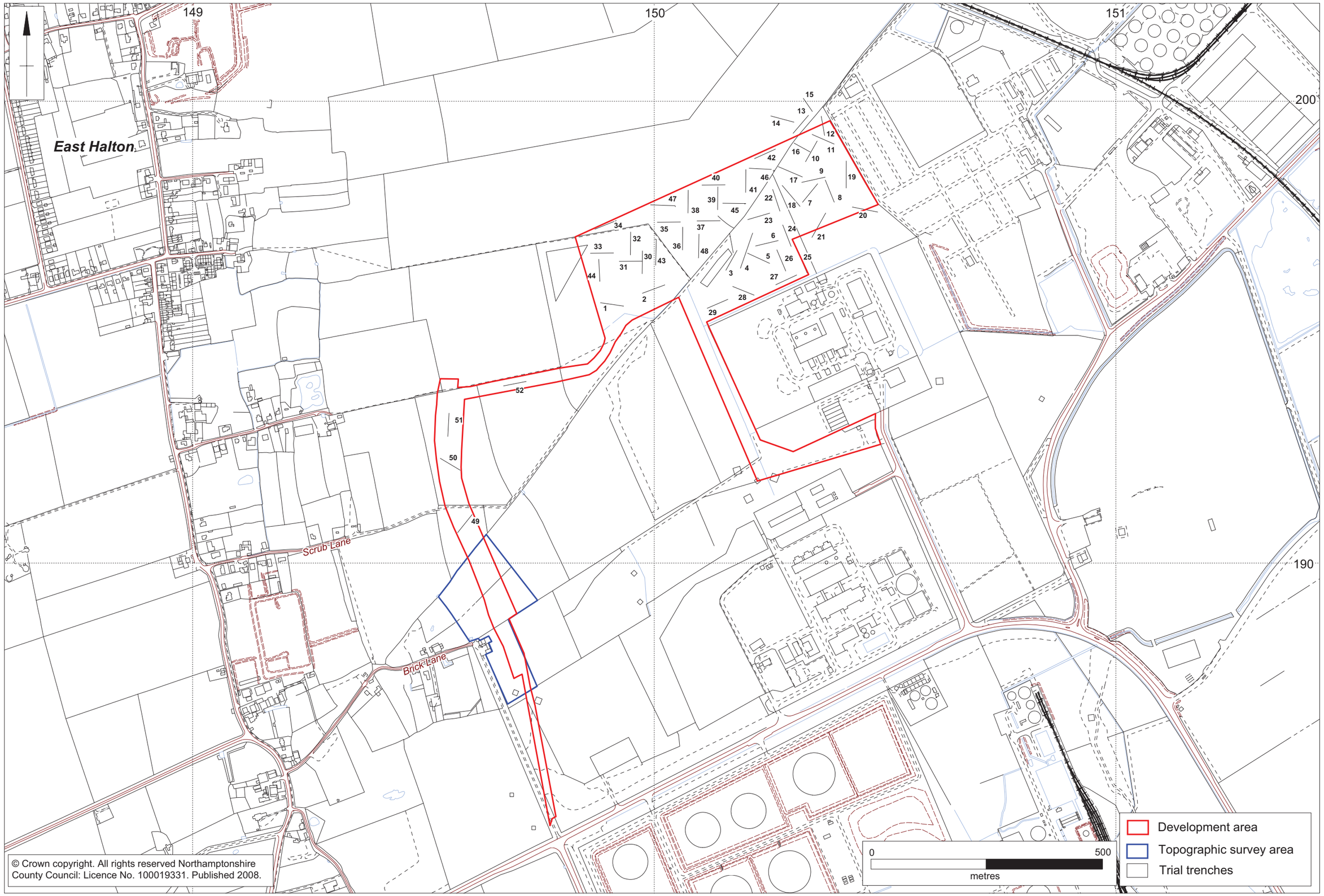
Site location Fig 1



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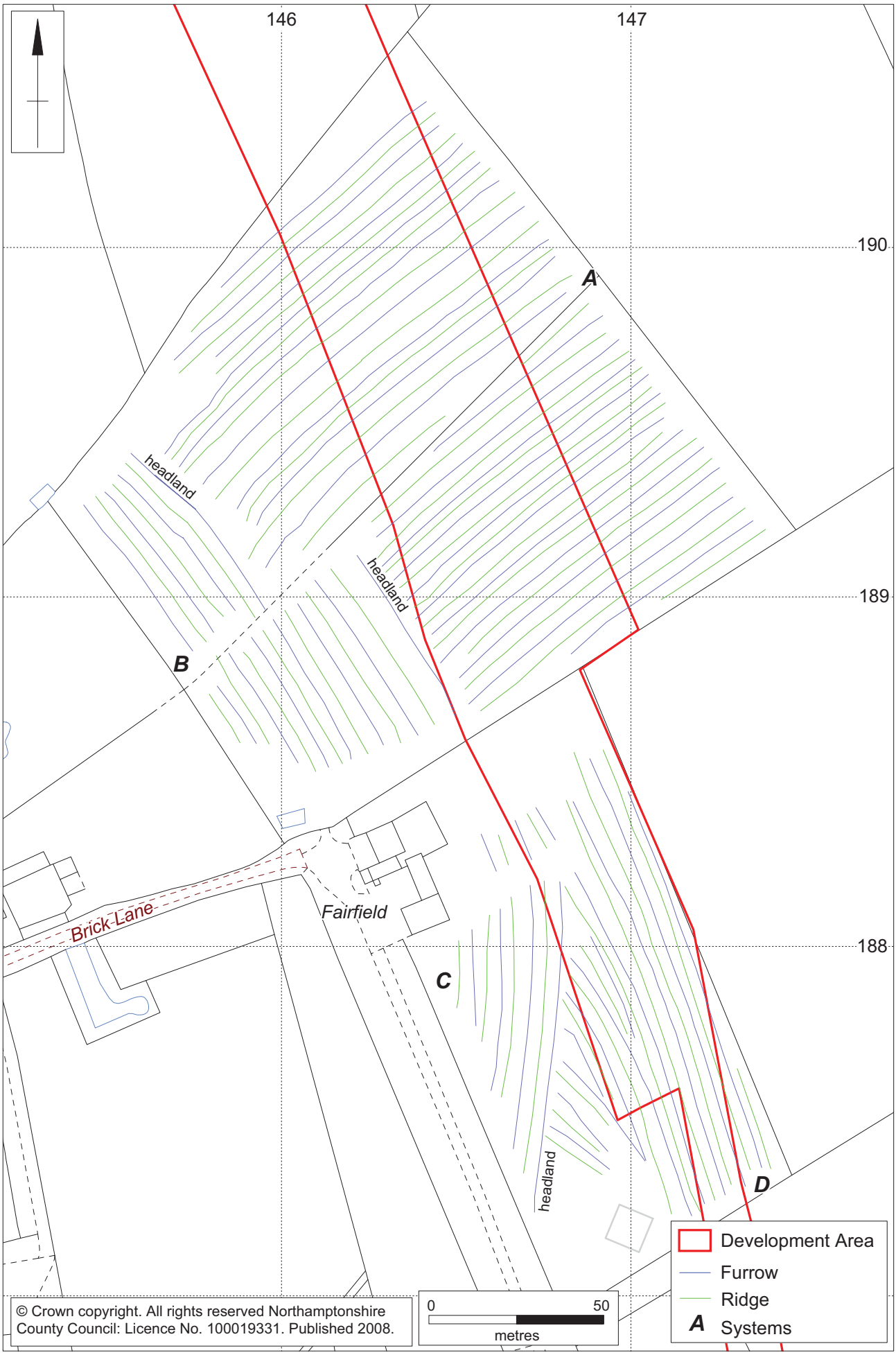
Trench and topographic survey locations Fig 2



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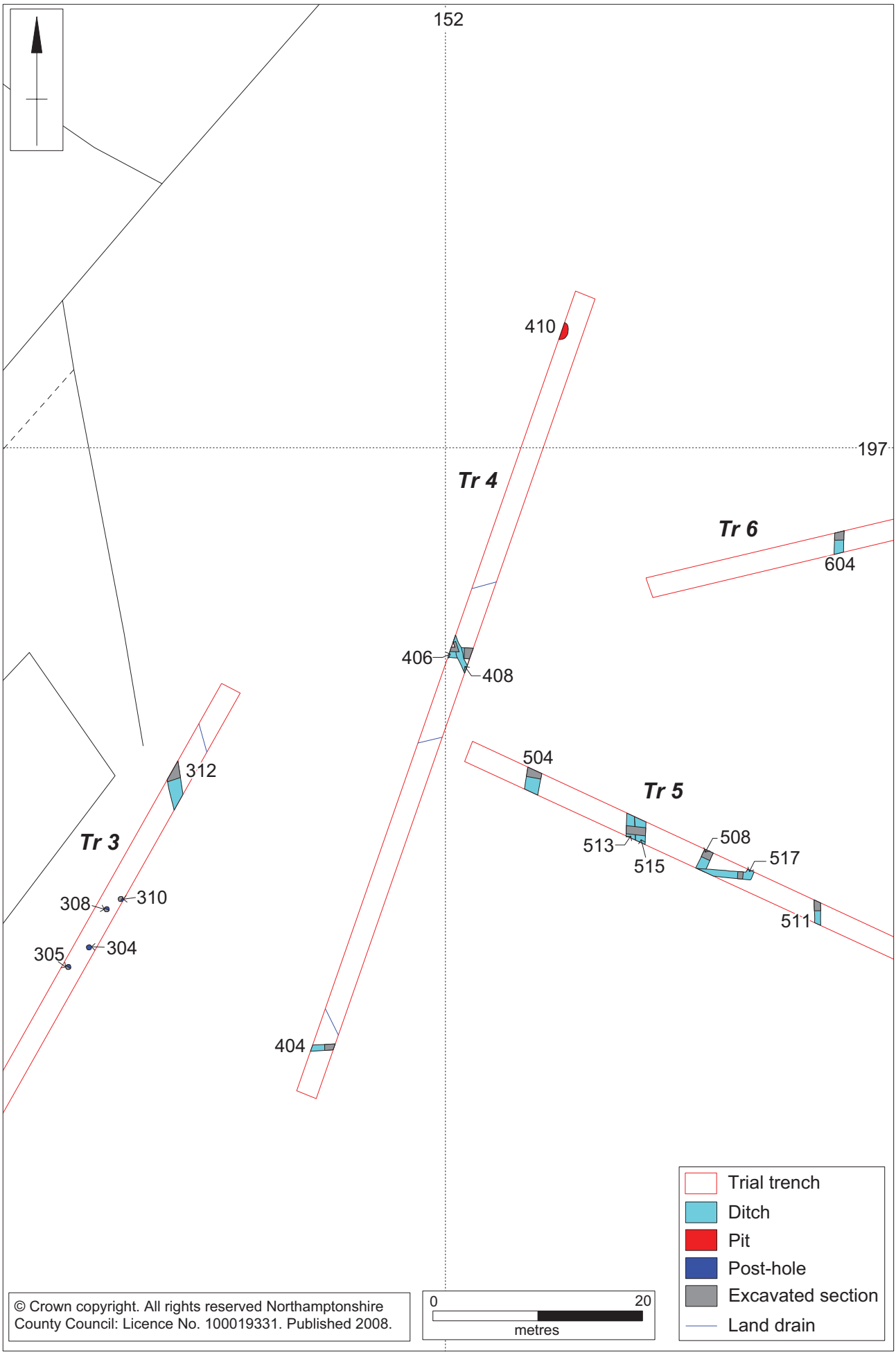
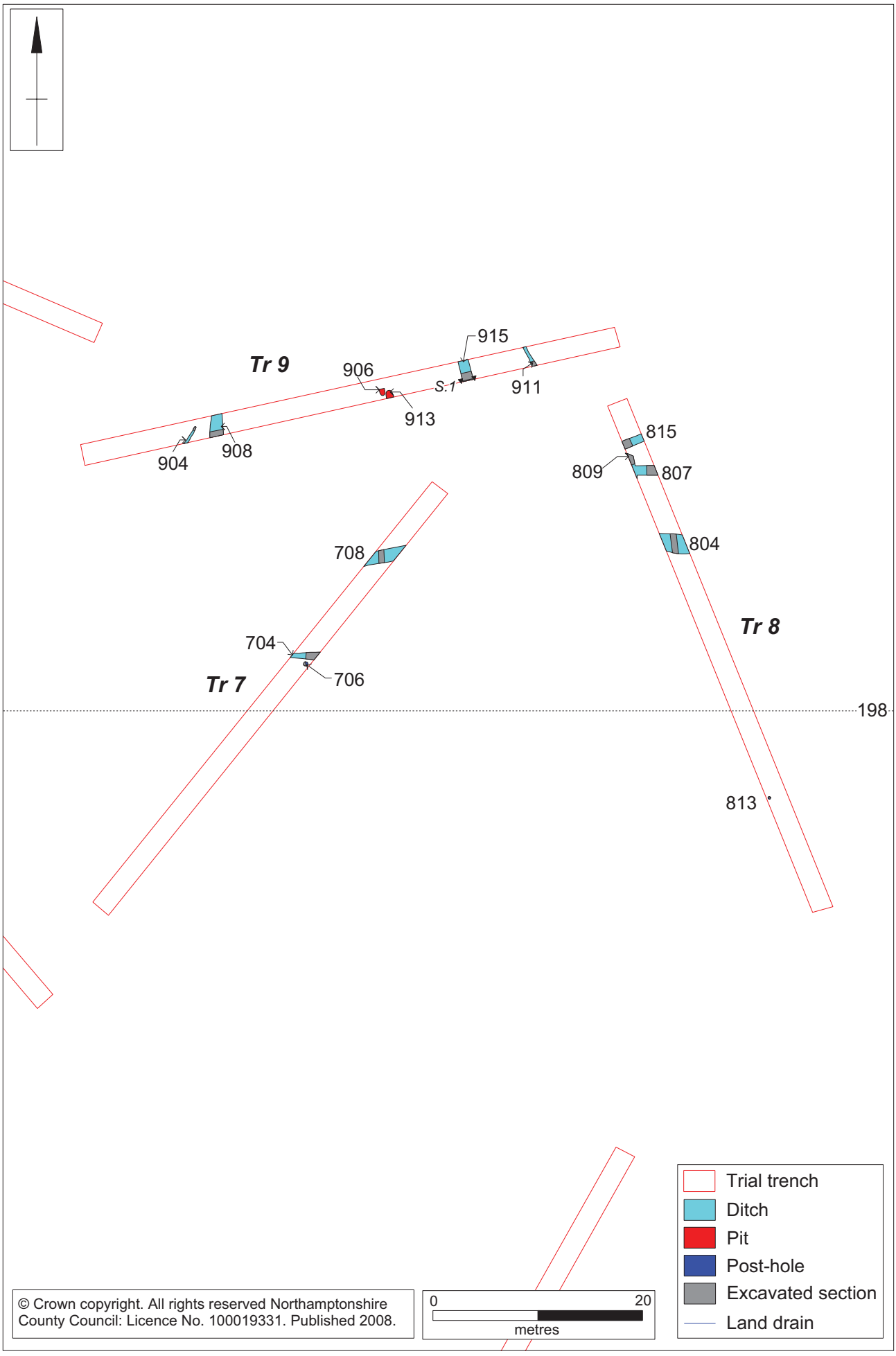
Topographic Survey results Fig 3



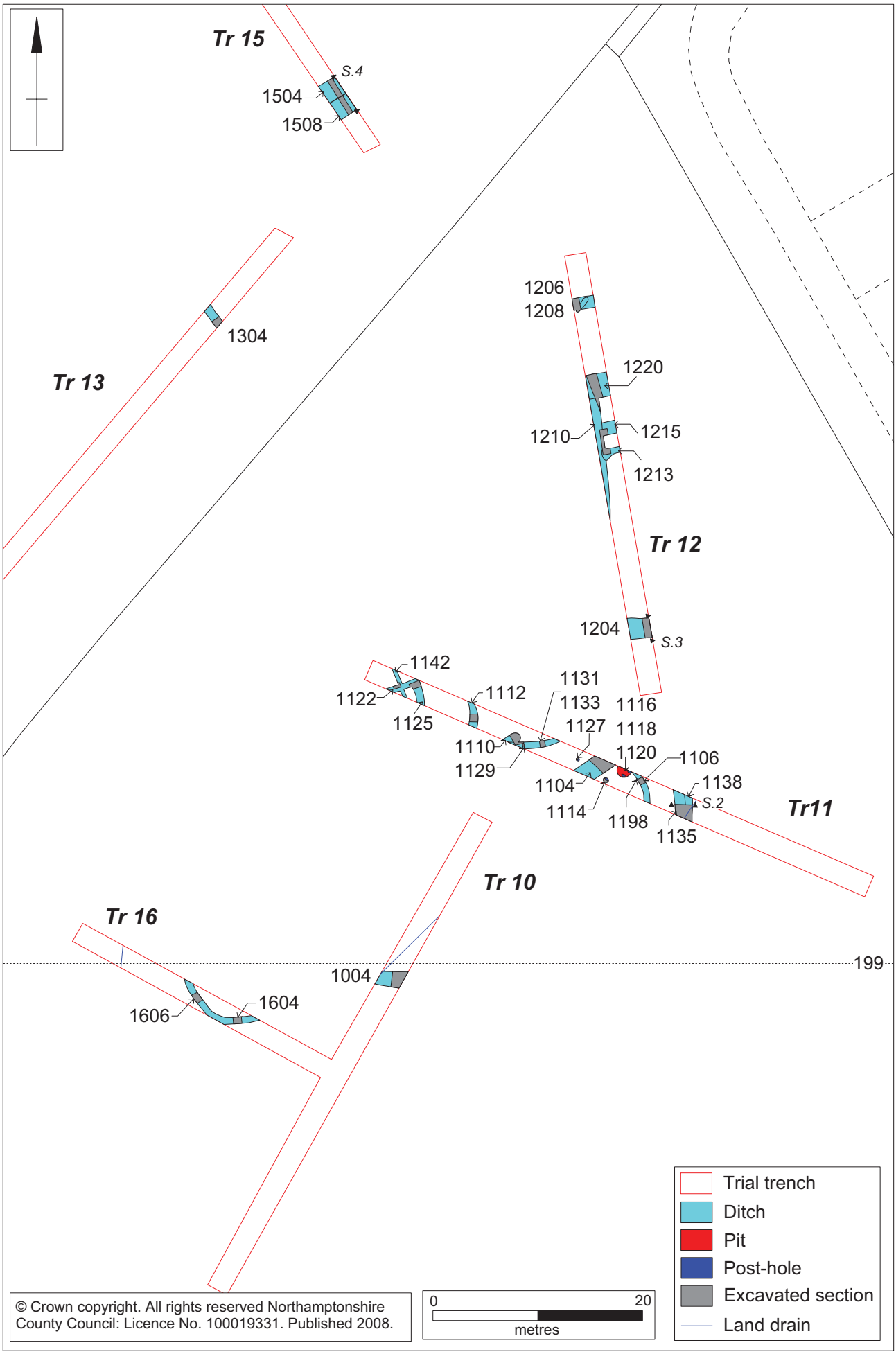
Scale 1:500

Plans of trenches 3-6 Fig 4



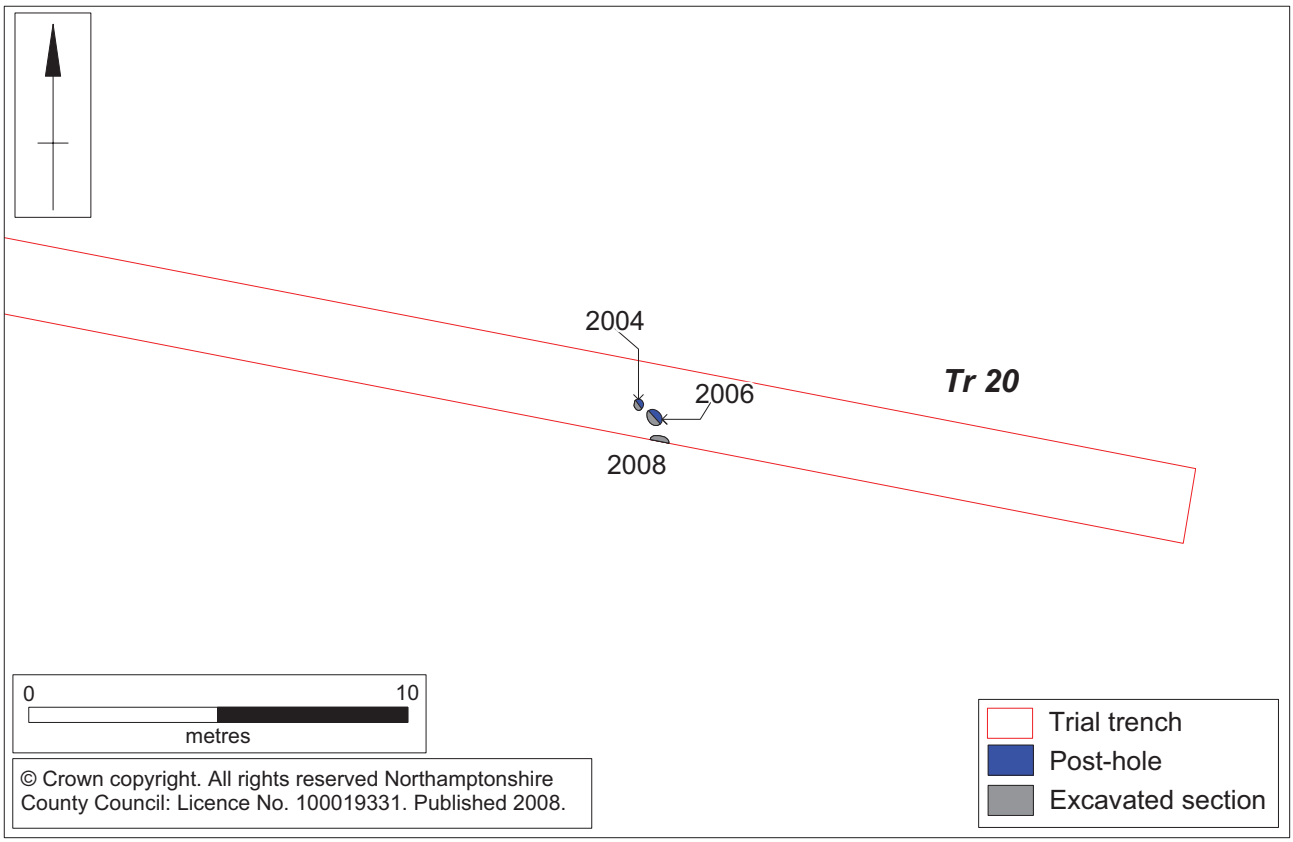
Scale 1:500

Plans of trenches 7-9 Fig 5



Scale 1:500

Plans of trenches 10-13, 15-16 Fig 6



Scale 1:200

Plan of trench 20 Fig 7

149

150

197

Tr 32

Tr 43

4304

4306

3204

Tr 30

Tr 31

3104

S.7

3006

3004

S.5

S.6

3009

Tr 33

3304

3306

3308

3310

3312

3314

3316

3318

3320

3322

3324

Tr 44

0 20
metres

Trial trench
Ditch
Pit
Post-hole
Excavated section
Land drain

Scale 1:500

Plans of trenches 30-33, 43-44 Fig 8

151

152

198

4604

Tr 46

Tr 39

4008

Tr 40

4004

Tr 39

S.8

3804

Tr 38

Tr 45

Tr 23

Tr 37

0 20
metres

Trial trench
Ditch
Pit
Post-hole
Excavated section
Land drain

Scale 1:500

Plans of trenches 23, 37-41, 45-46 Fig 9

Scale 1:500

147

194

5204

Tr 52

5104

193

Tr 51

5006

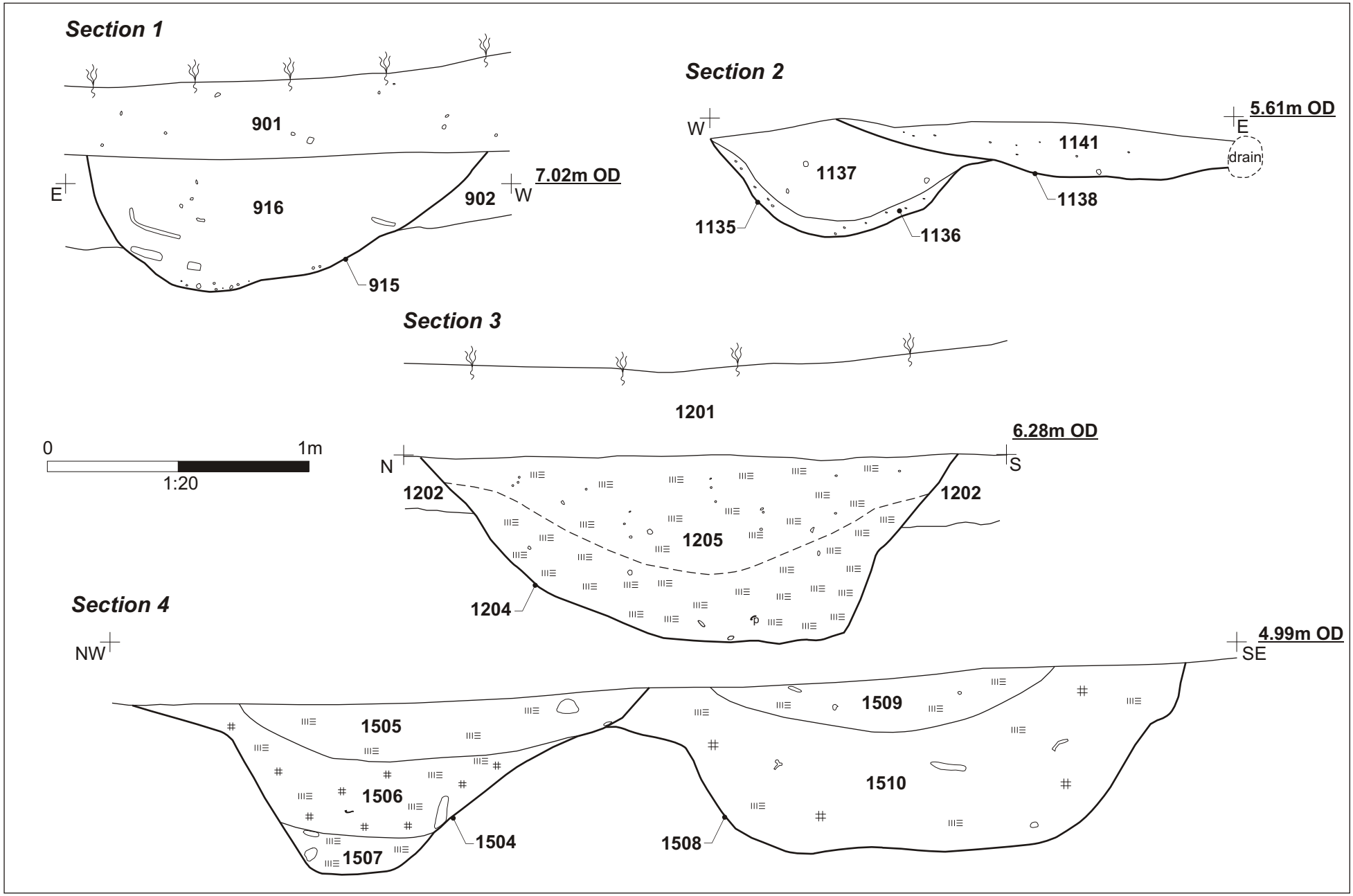
Tr 50

5004

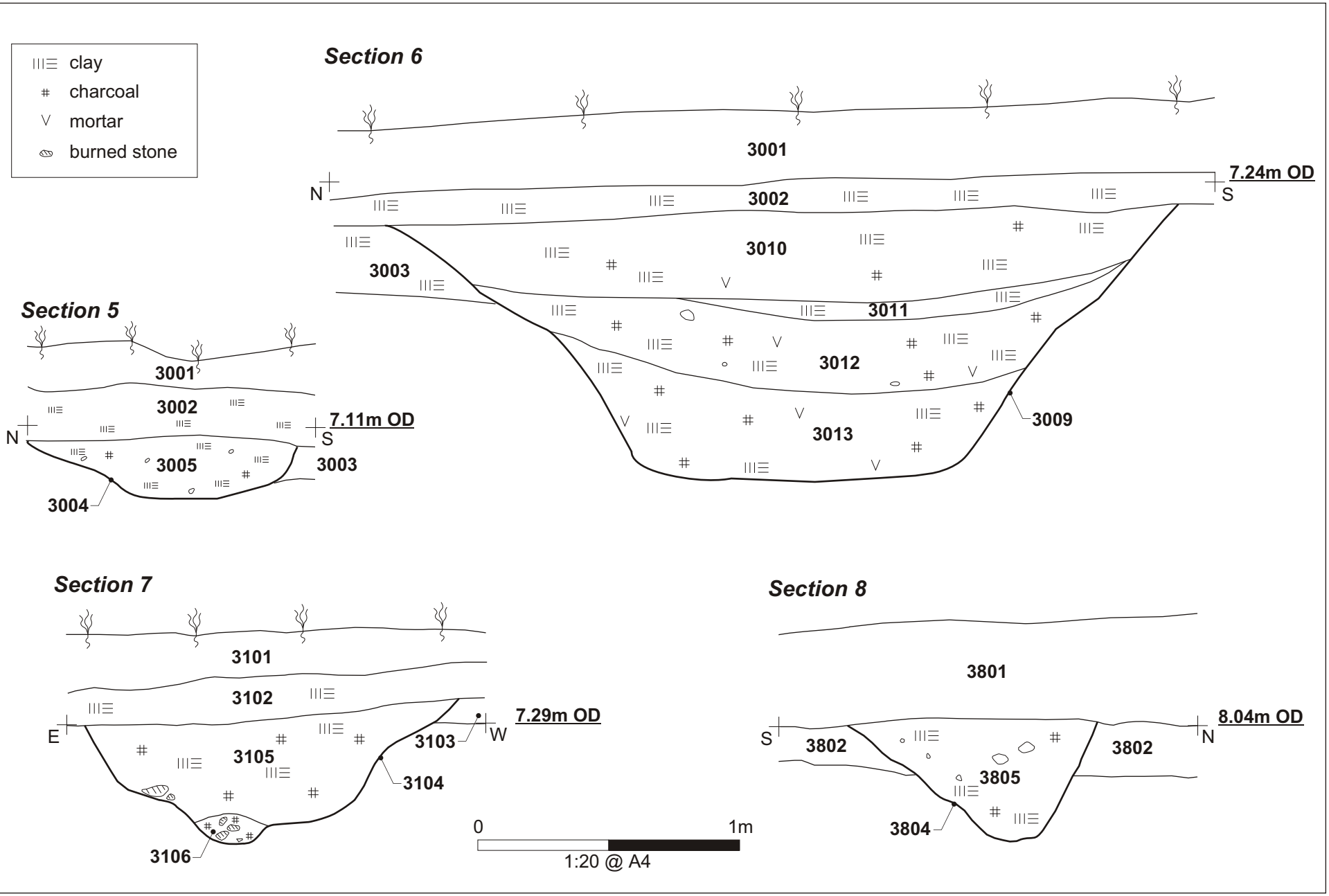
0 20
metres

Trial trench
Ditch
Pit
Post-hole
Excavated section
Land drain

Plans of trenches 50-52 Fig 10



Sections 1-4 Fig 11



Sections 5-8 Fig 12

Plate 1: Roman (?) gully [517], Trench 5, looking east

Plate 2: Roman (?) gully [517], Trench 5, looking east

Plate 3: Roman ditch and gully complex, Trench 12, looking north

Plate 4: Iron Age (?) pit [4008], Trench 40, looking north

Plate 5: Iron Age (?) ditch or large pit [4004], Trench 40, looking south-east

Plate 6: Iron Age ditch [4304], Trench 43, looking west