



Roman Settlement and Malting Industry at Stallingborough Interchange

Archaeological Evaluation, Metal Detecting Survey and Field Walking Survey Report

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Summary

From the 13th to the 17th of March 2017 Oxford Archaeology East undertook an evaluation at land at Stallingborough Interchange, North East Lincolnshire (TA 19581 12842).

A geophysical survey had taken place at the site (WYAS 2016) and revealed evidence for an extensive settlement of an unknown date at the western side of the field with outlying probable/possible archaeological features to the east and south. A metal detecting survey and field walking survey took place prior to trial trenching. The metal detecting survey covered an area of 1.5 hectares and only one coin (dating to 269-274 AD) was recovered. The field walking survey covered an area of 4 hectares and Roman pottery (73 sherds), post-Roman pottery (5 sherds) and ceramic building material (27 fragments) was recovered with the main concentration of Roman pottery focused on Trench 4.

A total of nine trenches were excavated ranging in size from 5m to 14m in length and 1.80m wide. All of the trenches bar Trenches 6 and 9 contained archaeological finds and features. Trenches 1 to 5 were located over the main area of geophysical anomalies and upon excavation were found to contain a series of large ditches, stone walls, post-holes and a possible oven or kiln, all dating to the Roman period.

Trench 1 contained evidence for the northern and southern walls (**47** and **50**) of an east to west aligned building (Structure 1). Structure 1 measured 4.6m wide externally (3m internally) and the walls themselves measured 0.8m wide with two to three courses of the wall surviving. Only a small amount of pottery was recovered from this trench which makes dating the building difficult, eight fragments of wall plaster, some of which were painted with red ochre, were recovered from this trench indicative of a high status building. Further evidence for structures (Structure 2), probably with an agricultural use, were identified in Trench 3.

Ditches were the most prominent features in the trenches, none of them were seen in their entirety but measured at least 1 to 2.2m wide and 0.7 to 0.95m deep with steep to near vertical edges and concave bases (where visible). These ditches were largely aligned east to west or north-east to south-west: the pottery recovered from their fills spanned the Roman period making dating imprecise but suggesting a late Roman date in general. Part of a kiln or oven was identified in Trench 2, indicative of industrial practices taking place within the main site.

Trenches 7 and 8 lay to the east of the main settlement area, targeted on fainter geophysical anomalies, and contained ditches and post-holes. An unabraded assemblage of pottery was recovered from ditch **25** in Trench 7, dated to the 2nd to 3rd centuries AD. A single wall tile (of high status) was recovered from ditch **41** in Trench 8. The environmental evidence from these two trenches

recovered an exceptional quantity of charred spelt and emmer wheat indicative of malting having taken place on site, probably within the immediate vicinity of the trench. A large quantity of ceramic building material was identified within the area surrounding Trench 7 and may indicate the presence of another structure, perhaps related to the malting process.

The pottery assemblage recovered from the site is small (but no so in relation to the size of the trenches and number of interventions) and is largely comprised of locally produced coarse wares, including forms such as jars and bowls. A few sherds of samian and other local fine wares were present but there was a distinct lack of specialist wares in the assemblage.

Stallingborough Interchange adds to a growing corpus of Roman sites in this part of North and North East Lincolnshire. Only a small part of the site was excavated yet revealed the potential for a large stone walled building with further outlying buildings alongside industrial activity including an extensive malting industry. Precise dating of the site is problematic but at this stage unnecessary, with only a small assemblage of pottery being recovered spanning the entire Roman period. The assemblage does show a potential spike in activity during the 2nd to 3rd centuries however. The stone building is evidently of high status however its function is uncertain. The location of the site within close proximity to a number of others which show evidence for activities such as crop processing, dairy, livestock management and pottery production may suggest that the site at Stallingborough Interchange acted as a possible estate centre.

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The project was managed for Oxford Archaeology by Richard Mortimer. The fieldwork was directed by Kathryn Blackbourn, who was supported by Simon Birnie, Dan Firth and Malgorzata Kwiatkowska. Survey and digitising was carried out by Malgorzata Kwiatkowska. Thanks is also extended to the teams of OA staff that cleaned and packaged the finds under the management of Natasha Dodwell, processed the environmental remains under the management of Rachel Fosberry, and prepared the archive under the management of Katherine Hamilton.

1 INTRODUCTION

1.1 Scope of work

- 1.1.1 Oxford Archaeology East (OAE) was commissioned by Engie Services Ltd to undertake a metal detecting survey, field walking survey and a trial trench evaluation at the site of a proposed 200 acre industrial hub development at Stallingborough Interchange, North East Lincolnshire (Fig. 1).
- 1.1.2 The work was undertaken to inform the Planning Authority in advance of a submission of a Planning Application. A brief was set by Hugh Winfield and a Written Scheme of Investigation was produced by OA detailing the Local Authority's requirements for work necessary to inform the planning authority of Archaeology present at the site. This document outlines how OA implemented the specified requirements.

1.2 Location, topography and geology

- 1.2.1 The bedrock geology on the site comprises Burnham Chalk Formation which is overlain at the west by Devensian Till deposits (Diamicton) and at the east by Tidal Flat deposits of clay and silt. (<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>)
- 1.2.2 The site is undulating but relatively flat, with a gentle slope from west to east from c.4m to c.2m AOD. It is bounded at the south by the A180 and at the west by the A1173 beyond which the North Beck runs east into the Humber estuary.

1.3 Archaeological and historical background

- 1.3.1 An HER search has been conducted in the area surrounding the site, this information has been noted below alongside information drawn from site reports.

Prehistoric

- 1.3.2 A pair of ditches were excavated 600m to the north-east of the site (MNL 4182) two pieces of worked flint were recovered from these ditches, a retouched flake and a blade both of Neolithic to Bronze age date. Further east (1.4km) a scatter of worked flint objects were recovered from the topsoil (MNL 4180) including a scraper, burin, point and retouched flakes also dating from the Neolithic to the Bronze Age.

Roman

- 1.3.3 The excavation of a pipeline route took place to the east of the site where an early Romano-British rural settlement was uncovered with approximately 50 to 100 years continuous occupation at the site (ArchHeritage 2013). The features uncovered comprised roundhouses, gullies and ditches which contained largely coarse ware pottery.
- 1.3.4 A number of Roman findspots have been identified near Riby, 5km south of the site, including a possible villa site which has yielded finds including pottery, building debris and gold and silver coins (HER 54231).
- 1.3.5 Other Roman sites have been identified further afield, a crop processing site at Hobson Way dating to the 2nd to 3rd centuries AD (Field 2011). A large site at Brocklesby

Interchange which yielded evidence for livestock management and metalworking dating to throughout the Roman period but specifically the 2nd and 3rd centuries AD (Network Archaeology 2016).

Saxon and Medieval

- 1.3.6 The majority of recorded archaeology comes from around modern day village of Stallingborough. On the western edge, 1.2km south of the site, lies extensive earthworks representing the early medieval settlement of Stallingborough (MNL 371) which in the domesday book of 1086 had a recorded population of 47 and was the third largest settlement in North Lincolnshire after Barton and Grimsby.
- 1.3.7 To the east of this, two stages of excavation took place at The Old Vicarage, on Church Lane, which uncovered three truncated ditches, one of which appeared to show evidence of a fence or palisade being present. Pottery uncovered was 10th century in date. A number of intercutting pits and ditches, mostly dated to the 12th to 15th centuries, were also uncovered at this site. Only a small assemblage of pottery and animal bone was uncovered within heath and midden waste here signifying the site was away from the main focus of settlement (MNL 2326). The Church of Saint Peter and Saint Paul is located 1km south of the site (MNL 379) and was built in 1779 on the site of an earlier demolished church which had medieval origins.
- 1.3.8 Mauxhall Farm is located 650m north-west of the site and is recorded as an isolated farmstead thought to originate in the post-medieval period (MNL 2452). A possible medieval moated site has been identified 1km to the north-west of the site (MNL 282), this moat has four sides, although one side appears to be filled in and measures 100m². A possible deserted settlement lies 500m north-west of the site (MNL 326) comprising ridge and furrow cropmarks, trackways and possible building platforms all thought to be medieval in date.

Post-medieval and Modern

- 1.3.9 Extensive ridge and furrow has also been identified in this area (MNL 2235) during the 1940s, from aerial photography, although much of this cannot now be seen. Approximately 1km south-west a complex cropmark has been identified and comprises a sub-rectangular enclosure with numerous internal features of an unknown date (MNL 2410).

Previous work at the site

- 1.3.10 A geophysical survey and field walking survey have taken place at the site (WYAS 2016). The geophysical survey identified a series of anomalies possibly relating to multiple phases of settlement in a roughly north to south orientation in the south-west part of the site. Groups of possible pits or natural features were also identified to the east and south.
- 1.3.11 Field walking revealed flint, Roman to post-medieval pottery and fragments of slag with CBM being most prominent.

2 EVALUATION AIMS AND METHODOLOGY

2.1 Aims

2.1.1 The aims of the Trial Trenching:

- Establish the date of the main area of settlement
- Establish the potential type and wealth of the settlement
- Establish the quality of preservation of the archaeology and of the environmental remains within it
- Set results in the local, regional and national archaeological context and in particular its wider cultural landscape and past environmental conditions
- Provide sufficient information to construct an archaeological mitigation strategy, dealing with preservation, the recording of archaeological deposits, working practices, timetables, and orders of cost
- To establish the impact of medieval and post-medieval ploughing and hence assess the degree of archaeological survival of buried deposits

2.1.2 The aims of the Metal Detecting and Fieldwalking Survey:

- To determine the range, quality and quantity of material present
- To determine the date range of any material
- To determine the densities and spread of any material within the main feature complex
- To determine the nature or status of any activity or activities that the materials represent

2.2 Methodology

2.2.1 A Field walking survey of an area measuring 4 hectares took place. Artefacts were recovered from a 2m wide corridor, over 100m transects spaced at 20 metres. Finds were bagged and plotted and large concentrations were noted and also plotted (Fig 2).

2.2.2 An area measuring 1.5 hectares was surveyed with a metal detector. The survey was conducted using a 100% collecting sample by walking north-south transects spaced 2m apart. Finds were plotted using a GPS.

2.2.3 Nine trial trenches were then excavated, three measuring 5m in length, three measuring 8m in length and a further three measuring 10m in length, one of which (Trench 1) was then extended to a length of 14m. Five of these trenches were targeted over strong geophysical results thought to represent settlement remains (Fig. 2). The remaining four were targeted over possible archaeological features. These trenches were excavated using a 9 tonne tracked 360 excavator using a 1.8m wide ditching bucket.

2.2.4 Environmental samples were taken from a range of features thought to have the greatest potential for preserved remains.

3 RESULTS

3.1 Introduction and presentation of results

3.1.1 The results of the evaluation are presented below, and include a stratigraphic description of the trenches which contained archaeological remains. This is supplemented by plans, a selection of sections and photographs. Cut features such as ditches or pits are shown in **bold** in the text. The full details of all trenches with dimensions and depths of all deposits can be found in Appendix A. Finds and environmental remains are noted in the descriptions where relevant, with summaries provided at the end of the Section that give an overview of the specialist reports included as Appendices B and C. The evaluation results are discussed within their wider context and with reference to the project's research aims and objectives in Section 4.

3.2 General soils and ground conditions

3.2.1 The soil sequence between all trenches was fairly uniform. The natural geology (3) consisted of a yellowy clay that was overlain by a mid brown clayey silt subsoil (2) that ranged from 0.04m to 0.3m deep, which in turn was overlain by topsoil (1) that consisted of a mid grey brown clayey silt and measured between 0.24m and 0.56m deep.

3.2.2 Ground conditions throughout the evaluation were generally good, and the trenches remained dry throughout, the water table was observed in features at a depth of 1m below ground level. Archaeological features, where present, were easy to identify against the underlying natural geology. The field had been recently ploughed but not harrowed which was problematic for the Metal Detecting Survey although ideal, if uncomfortable, for Fieldwalking.

3.3 General distribution of archaeological deposits

3.3.1 Trenches 1 to 5 were located over strong geophysical results, thought to represent a settlement. Trenches 6 to 9 were covering possible anomalies outlying this main settlement area. All trenches contained archaeological finds and features bar Trenches 6 and 9. Archaeological features occurred where the geophysics had picked up a strong response, however, it became clear that further archaeological features were not identified via the geophysics and in the case of Trench 7 and 8 the 'possible' archaeology identified through geophysics did in fact represent archaeological features.

3.4 Field walking and Metal Detecting Survey

3.4.1 The field walking and metal detecting took place prior to the trenches being excavated. The metal detecting survey only uncovered a single Roman coin thought to be from the Gallic Empire of Victorinus or Tetricus I (269-74 AD) located close to Trench 2. The ground conditions were poor and this is most likely the reason for the lack of metal finds rather than an absence of them.

- 3.4.2 Although the ploughed field was ideal for field walking only a small number of finds were recovered. 73 sherds (924g) of Roman pottery were recovered, the majority of which was identified in an area close to Trench 4 (Fig. 3). A small number (5 sherds, 42g) of medieval and post-medieval sherds were also identified. 27 fragments of ceramic building material were recovered from the topsoil and a large number of unidentifiable fragments were recovered from a spread identified close to Trench 7 (Fig. 4). Field walking find No.3 was located between Trenches 1 and 3 and is a fragment of Roman flue tile. The field had been previously field walked when slag and flint had also been recovered (Fig. 5, Archaeological Service WYAS 2016).

3.5 Roman Settlement (Trenches 1-5, Fig. 3)

- 3.5.1 Trenches 1 to 5 were located over an area of strong geophysical anomalies and upon excavation were found to contain a number of large ditches and other settlement features such as stone walls and a kiln or oven. These features have all been dated to the Roman period although specific phasing within this was not possible due to the wide date range of the pottery uncovered and the small size of the interventions.

Trench 1

- 3.5.3 Trench 1 was aligned roughly north to south and measured 14m in length having been extended from the original 10m. A number of features were observed in the trench (Fig. 3, Plate 1), most noteworthy two stone walls (Structure 1) overlain by subsoil and topsoil.
- 3.5.4 At the southern end of the trench was deposit (56) that consisted of a mid yellow-brown silty clay that was not excavated. To the north was wall 47 (Fig.3, Plate 2, Fig. 7 Section 13 and 14) with an east to west alignment. The wall measured 0.8m wide and was built tight up against the construction cut on its southern side. Three courses of stonework survived (0.35m deep) and was made from roughly shaped pieces of limestone that measured between 80mm (L) by 60mm (W) and 10mm (T) to 230mm (L) by 210mm (W) and 40mm (T). The wall was faced on both the northern and southern sides and no apparent bonding material was present.
- 3.5.5 On the southern side of this wall was deposit 57 that consisted of a light brown grey clayey silt thought to represent a demolition layer associated with the structure as it contained mortar and collapsed plaster (unexcavated). To the north of wall 47 was rubble layer 48 that represented the collapse or demolition of the wall and consisted of a spread (0.8m wide) of limestone measuring the same size as the pieces seen *in situ* within the wal. A small fragment of tile and 4 fragments (59g) of wall plaster including a fragment covered with red ochre paint (SF 5), a burnt fragment and one with withie impressions were recovered from this layer. Three sherds (53g) of pottery dating to the late 1st to 3rd centuries AD were also recovered alongside a single fragment (15g) of large mammal bone and 12g of Oyster shell.
- 3.5.6 Approximately 3m to the north was wall 50 (Fig.3, Plate 2, Fig. 7 Section 12) which was also aligned east to west and measured 0.8m wide but consisted of only one course (0.15m deep) of roughly shaped limestone blocks measuring from 90mm (L) by 50mm

(W) and 20mm (T) to 290mm (L) by 120mm (W) and 100mm (T) with no bonding material present. Like wall **47** this wall appeared to be faced on both the northern and southern sides. A single sherd (20g) of grey ware dating to the up to the 2nd century AD, a single piece of wall plaster (1g, SF 7) painted with red ochre, and cattle bone (46g) were recovered. Directly north was a possible external surface (**52**) represented by three possible paving slabs (Plate 2) that appeared to have been shaped to have a flat surface facing upwards. These slabs measured roughly the same size averaging at 270mm (L) by 220mm (W) and 30mm (T) and covered an area measuring 0.6m².

- 3.5.7 An area of demolition rubble (**51**) was recorded directly north of wall **50**, thought to represent its collapse as it was formed from similarly sized limestone blocks. This layer was aligned north to south along the eastern edge of the trench, measured 0.8m wide. and could possibly represent rubble from another wall line to the east. A single sherd of Roman pottery, three pieces (20g, SF 8) of red ochre wall plaster and a large mammal bone (8g) were recovered from this layer.
- 3.5.8 Two further deposits at the northern end of the trench were briefly investigated. Layer **53** measured 0.34m deep and consisted of a mid grey brown clayey silt with occasional small limestone inclusions. Three sherds (3g) of pottery dated to the late 1st to early 2nd century AD, two amorphous fragments (8g) of fired clay and a fragment (15g) of sheep or goat bone were recovered. This layer may represent an external area possibly associated with **52** to the south. This layer was cut by possible ditch **54**, this ditch was not excavated and was only made partially visible within the section through a small investigative slot. The ditch would measure at least 1.1m wide and at least 0.35m deep and was aligned east to west. Its uppermost fill (**55**) consisted of a dark brown-grey clayey silt that contained occasional limestone inclusions including some large pieces thought to represent a dump of material from the nearby walls (**47** and **50**). Three sherds (80g) of Roman pottery alongside large mammal (63g) and sheep or goat bone (15g) were recovered from this fill.

Trench 2

- 3.5.9 The most westerly trench was Trench 2, aligned north to south and measuring 10m in length. This trench contained a number of ditches, some of which remained unexcavated, and a kiln or oven overlain by subsoil and topsoil. At the southern end of the trench were two large unexcavated ditches, the most southerly aligned north-east to south-west and the second east to west. Both these ditches appear to have been truncated by kiln or oven **36**, although not fully uncovered this feature was sub circular with a linear extension and measured at least 1.32m long and 0.56m wide (Plate 3). The part of this feature that was uncovered most likely represented the chamber and flue which had a fired clay lining (**37**) that consisted of a mid orange red firm clay that measured 0.15m thick. The disuse fill (**38**) measured 0.32m wide and consisted of a dark brown grey silty clay. There were no obvious signs of pottery or charcoal on the surface.
- 3.5.10 To the north was gully terminus **34**, measuring 0.45m wide and 0.06m deep with gently sloping sides and a flat base. Its single fill (**35**) consisted of a mid grey silty clay. This fill was cut by post-hole **32** that measured 0.32m wide and 0.12m deep with steep sides

- and a concave base. Its single fill (33) consisted of a mid brown-grey silty clay that contained a single fragment of amorphous fired clay (12g).
- 3.5.11 At the northern end of the trench was a ditch **17**, not fully exposed it was aligned east to west and measured at least 2.2m wide and at least 0.84m deep with near vertical sides (Fig. 7 Section 4). This ditch contained seven fills.
- 3.5.12 The base of this ditch was not fully reached and therefore a relationship between the two basal fills is uncertain. Fill 19 was most likely the true basal fill and measured 0.2m thick and consisted of a dark grey gravel, most likely representing a slump of material. Fill 18 measured 0.02m thick and consisted of a dark grey clayey silt that contained charcoal. Overlying these fills was a mid brown-grey silty clay (20) that measured 0.20m thick and contained a single sherd (14g) of Late Iron Age to mid 1st century AD pottery. This fill also contained amphibian, cattle, dog, equid and small mammal bone (284g) and evidence for charred cereals, chaff and charcoal. Fill 21 measured 0.30m thick and consisted of a mid grey-brown silty clay that contained charcoal, a fragment (10g) of amorphous fired clay and a fragment of structural (24g) fired clay, possibly originating from a kiln bar. A total of 19 sherds (646g) of pottery dated to the early to mid 2nd century AD was also recovered alongside a large assemblage (982g) of animal bone (incl. cattle, pig, dog, horse, sheep/goat).
- 3.5.13 Overlying this was a mid yellow-brown silty clay (22) that measured 0.4m thick and contained 40 sherds (1463g) of pottery dated to the mid 3rd to 4th century AD and a single shard (1g) of blue glass. An assemblage (752g) of animal bone was also recovered (incl. cattle, horse, pig, sheep/goat) from this fill. Fill 23 measured 0.1m thick and consisted of a mid brown-grey silty clay that contained 5 sherds (41g) of pottery dating to the late 1st to 2nd century AD and cattle (128g) and sheep/goat (10g) bone. The uppermost fill (24) measured 0.16m thick and consisted of a dark grey silty clay that contained 5 sherds (22g) of pottery dated to the mid 1st to mid 2nd century AD and 87g of animal bone (cattle, medium mammal and sheep/goat). A total of 175g of Oyster shell was recovered from the fills of this ditch (10, 21, 22 and 24).

Trench 3

- 3.5.14 To the east was trench 3 which had an east to west orientation and measured 10m in length. This trench contained a series of ditches and possible wall foundations overlain by subsoil and topsoil. At the eastern end of the trench was ditch **10** that was not fully exposed but measured at least 1.6m wide and 0.95m deep with very steep sides and had a north-east to south-west alignment (Plate 4). This ditch contained three fills.
- 3.5.15 The basal fill (11) measured 0.1m thick and consisted of a light to mid mottled yellow orange clay that most likely signifies a period of primary silting whilst the ditch was in use. Overlying this was fill 12 that measured 0.35m thick and consisted of a mid to dark brown grey silty clay that contained 3 sherds (127g) of pottery dated to the mid to late 1st century AD, 19g of oyster shell and 25g of fired clay. Cattle and sheep/goat bone (176g) was recovered including a single fragment of worked bone (SF 9) identified as a tool made from sheep/goat tibia that has been pointed and polished. The environmental sample contained a mixture of charred cereals, chaff, legumes and duckweed which indicated the ditch originally contained water.

- 3.5.16 The uppermost fill (13) measured 0.6m thick and consisted of a mid brown-grey silty clay that contained a number of finds including 26 sherds (594g) of pottery dated throughout the Roman period and fragments of fired clay (230g) comprising structural fragments and a clay object with a flattened surface. Cattle, large mammal and sheep/goat bone (162g) was also recovered alongside 75g of oyster shell.
- 3.5.17 In the centre of the trench were at least two possible wall foundations (Structure 2), one of which was not excavated but had a north to south alignment, the other lay directly west and had a north-west to south-east alignment. Construction cut **14** measured 0.58m wide and 0.44m deep with vertical sides and a flatish base (Fig. 7 Section 3). At the base of this cut was fill 49 that measured 0.5m wide and 0.1m thick and may represent a levelling fill prior to the foundations construction. This fill consisted of a dark brown grey silty clay that contained rare small pieces of limestone and 68g of mammal bone, the environmental sample contained charred cereal grains.
- 3.5.18 Overlying this was wall foundation **16** measuring 0.58m wide and 0.35m deep and comprised of small to medium sized rough limestone pieces (no bigger than 160mm by 80mm and 30mm). This foundation did not appear to be faced and although the foundations were 0.35m deep did not show any obvious courses. Patches of a yellow orange mortar were present among the stones which were overlain by construction backfill 15. This measured 0.35m thick and consisted of a mid brown-grey clayey silt that contained a single fragment of amorphous fired clay (9g).
- 3.5.19 A further unexcavated ditch was present at the western end of the trench with a seemingly north-east to south-west orientation.

Trench 4

- 3.5.20 Trench four was located to the south and was aligned north to south, measured 5m in length and contained a single large ditch overlain by subsoil and topsoil. Ditch **4** was located at the northern end of the trench and had an east to west alignment and measured 1.8m wide and 0.94m deep although its full extent was not excavated (Plate 5, Fig. 7 Section 1). This ditch had steep sides and a concave base and contained three fills.
- 3.5.21 The basal fill (5) measured 0.16m thick and consisted of a dark brown grey clayey silt that contained 2 sherds (26g) of Roman pottery, a large assemblage (548g) of animal bone (cattle, sheep/goat and mammal) and evidence for charred cereal and weed seeds. Overlying this was fill 6 that measured 0.5m thick and consisted of a mid grey brown clayey silt that contained occasional stone inclusions including larger pieces of limestone. A total of 19 sherds (1137g) of Roman pottery was recovered, the majority of which dated to the early 2nd to 4th century AD. The uppermost fill (7) measured 0.24m thick and consisted of a dark brown grey clayey silt that contained occasional gravel and stones and 36 sherds (897g) of Roman pottery. A total of 353g of Oyster shell was recovered from the fills of this ditch, the majority of which (200g) came from upper fill 7.
- 3.5.22 A natural feature (**8**) was also observed in the trench with irregular sides and base. Its single fill (9) consisted of a light grey brown clayey silt that contained a single sherd (9g) of Roman pottery.

Trench 5

3.5.23 At the southern end of the settlement area was trench 5 which had a north-east to south-west alignment and measured 8m in length. This trench contained three ditches, two of which had a north to south alignment, only one of these ditches was excavated (28) that measured 0.48m wide and 0.56m deep with steep sides and a concave base. Its single fill (29) consisted of a mid grey yellow silty clay that contained no finds. This ditch and the unexcavated ditch were truncated by large ditch 30 that had an east to west alignment and measured at least 1m wide and 0.7m deep with steep sides and a concave base. Its single fill (31) consisted of a dark brown grey clayey silt that contained 4 sherds (40g) of Roman pottery, a large mammal bone (9g) and a single fragment of fired clay (14g).

3.6 Outlying Roman activity (Trench 7 and 8, Fig. 4)

3.6.1 Trenches 7 and 8 lie to the east of the main area of settlement and were located over geophysical results marked as possible archaeology. Ditches and post-holes were identified in these trenches containing distinct dark silty fills. These features were also dated to the Roman period and the environmental evidence is suggestive of malting taking place nearby.

Trench 7

3.6.2 To the east of the main area of activity was Trench 7 that had a north to south orientation and measured 5m in length. This trench contained a single ditch (25) that had a north-east to south-west alignment and measured 1.58m wide and 0.52m deep with steep sides and a slightly concave base (Plate 6, Fig. 7 Section 5). This ditch contained two fills, the basal fill (26) measured 0.08m thick and consisted of a light grey yellow clay that most likely accumulated due to slumping. Overlying this was fill 27 that measured 0.44m thick and consisted of a dark black clayey silt that contained frequent charcoal and the occasional lump of unfired clay. This fill contained 14 sherds (618g) of pottery dated to the mid 2nd to 3rd century AD including the majority of a carinated bowl. A single fragment of a heavily fired brick and two structural fragments of fired clay (35g) were also recovered. An exceptionally large quantity (800ml) of spelt and emmer wheat in the form of chaff, germinated grains, detached sprouts and single grain spikelets related to malting were also recovered alongside hulled barley and weeds including docks, bromes, scentless mayweed, corn gromwell and corn cockle.

Trench 8

3.6.3 To the east (120m) was Trench 8 that measured 7m long and had a roughly north-west to south-east orientation. This trench contained a number of features overlain by a thin layer of subsoil and topsoil. At the northern end of the trench were two post-holes, post-hole 45 measured 0.4m wide and 0.1m deep with gently sloped sides and a concave base. Its single fill (46) consisted of a dark brown grey clayey silt. Immediately south post-hole 43 measured 0.35m wide and 0.15m deep with steep sides and a concave base (Fig. 7 Section 10). Its single fill (44) consisted of a dark brown grey clayey silt that contained occasional spelt, emmer, wheat grains and chaff.

- 3.6.4 1.75m south was ditch **41** that had a north-west to south-east alignment and measured 1.07m wide and 0.1m deep with gently sloping sides and a flat base (Plate 7). Its single fill (42) consisted of a dark brown grey clayey silt that contained a flue tile, most likely a parietalis or facing tile suggestive of a high status building and a single piece of slag (26g). The environmental sample contained 150ml of spelt and emmer wheat chaff with evidence for germination. A single charred grain has the appearance of bread wheat and the weed seed assemblage comprises rye-grass, and small vetches.
- 3.6.5 At the southern end of the trench 1.8m of ditch **39** was exposed and had a north to south alignment, the ditch measured at least 0.5m wide and 0.14m deep with sloped sides and a concave base. Its single fill (40) consisted of a mid brown grey silty clay that most likely accumulated due to disuse.

3.7 Finds summary

- 3.7.1 The metal detecting survey and field walking survey revealed only a small number of finds including a Roman coin, 73 sherds (924g) of Roman pottery, 27 fragments (1138g) of CBM and 5 sherds (42g) of medieval and post-medieval pottery.
- 3.7.2 The pottery assemblage from the site was reasonably small consisting of 254 sherds (weighing 6.954kg) however was only recovered from a small number of features that were excavated on the site. The assemblage included some Late Iron Age sherds but was predominately dated to the late 1st to 3rd century AD. Pottery recovered from ditch **25** in Trench 7 was comparably different to the rest of the assemblage comprising the majority of a carinated beaker and a large fragment of indented beaker dating to the 2nd to 3rd century AD. These sherds were unabraded compared to the rest of the assemblage.
- 3.7.3 A small assemblage of CBM and fired clay was recovered from site (1816g and 367g), these including examples of flue tiles from a high status building and possible objects related to kilns. Eight fragments (79g) of wall plaster was recovered from Trench 1, many of which were painted with a red ochre. Very small quantities of glass (1g), iron nails (SF 10, 11 and 12), slag (26g) and 19 pieces (634g) of Oyster shell were also recovered from a handful of features on site.
- 3.7.4 The animal bone assemblage from the site was largely recovered from ditches and comprised 83 specimens (weighing 3.325kg), 60 of the specimens were identifiable to species and included cattle, pig, dog, sheep/goat, mammals and amphibian. A single fragment of worked bone (SF 9), a tool made from a sheep/goat tibia, was recovered from ditch **10**.
- 3.7.5 Seven bulk samples were taken across the site all of which have yielded evidence for preserved plant remains. Samples taken from features in Trenches 2, 3 and 4 contained a small amount of charred plant remains commonly found on settlement sites. Ditch **10** in Trench 3 had evidence for duckweed suggesting the ditch originally contained water.
- 3.7.6 The samples taken from features in Trenches 7 and 8 yielded exceptionally well preserved and large quantities of charred plant remains in the form of spelt and

emmer wheat chaff. A large assemblage of weed seeds were also identified in ditch 25, Trench 7. The plant remains recovered from these two trenches are indicative of the malting of spelt and probably emmer during the Roman period.

4 DISCUSSION

4.1 Reliability of field investigation

4.1.1 A total of nine trenches were excavated during this evaluation totalling only 73m of linear trenching in an area that measured roughly 20 hectares. The trenches were targeted over geophysics results and have identified that features existed where strong results were identified and also those anomalies recorded as possible archaeology do in fact represent archaeological features. Archaeology was observed in seven of the nine trenches and suggests that the settlement doesn't continue to the south however the true density of features within the settlement area and the outlying area of activity to the east has not been truly identified.

4.2 Evaluation objectives and results

4.2.1 Trenches 1 to 5 contained a dense concentration of archaeology dating to the Roman period comprising largely ditches, post-holes and walls. The main aim of this evaluation was to ascertain the date of features identified through the geophysical survey. The majority of the features excavated on site yielded Roman pottery however distinct phases were not able to be identified due to the wide date range of the pottery recovered and the small number of features excavated.

Metal Detecting and field walking survey

4.2.2 The metal detecting survey and field walking survey revealed only a small number of finds including a Roman coin, 73 sherds (924g) of Roman pottery, 27 fragments (1138g) of CBM and 5 sherds (42g) of medieval and post-medieval pottery. Although a concentration of Roman pottery was observed around Trench 4 (Fig. 5) the finds recovered during these surveys did not aid in the interpretation of the site.

Stone walled buildings

4.2.3 The most prominent feature on site was the presence of a stone walled building (Structure 1, walls 47 and 50) in Trench 1. Two walls were identified with a roughly east to west alignment, both of which measured 0.8m wide and are thought to represent the northern and southern walls of the same structure that at this point measures roughly 4.6m wide. These walls are fairly well preserved with three courses of stones remaining of wall 47 and two courses of wall 50. Areas of demolition rubble (48 and 51) associated with the destruction or abandonment of this building were also recorded. Only a very small amount of Roman pottery (5 sherds weighing 81g) was recovered from these features not allowing for a secure date of when this building was constructed or went out of use. However important to note is the presence of 8 fragments (79g) of wall plaster, the majority of which has been painted with red ochre, indicative of a high status building during the Roman period.

4.2.4 Although only a small portion of this stone building was revealed, the recovery of high status items alongside a well preserved large wall is suggestive of a high status building. This building was constructed from limestone fragments varying in size from 80mm (L) by 60mm (W) and 10mm (T) to 230mm (L) by 210mm (W) and 40mm (T). This stone was most probably acquired from the Lincolnshire Wolds some 9km south

(or further) of the site. Small fragments of this limestone is visible in the topsoil where it has been brought to the surface via modern day ploughing. This area of limestone measures roughly 62m by 67m around Trench 1 (Fig. 5) and may therefore represent the full extent of a Roman stone building below the surface.

- 4.2.5 Evidence for further stone structures (Structure 2) were identified in Trench 3, 50m south-east. In this case wall **16** only measured 0.58m wide and was formed from a single course of smaller limestone fragments and had a north-west to south-east alignment. It is more likely that this stone structure represents the foundations for a timber building or a small stone building perhaps related to agriculture. The construction cut (**14**) for this structure was fairly deep measuring 0.44m perhaps in fact indicating the original wall foundation was robbed out and was far more substantial. Further evidence for stone structures in this trench were left unexcavated.

Ditches

- 4.2.6 The majority of features identified on site were ditches, the bias of which may be due to them being easily identifiable from the geophysical survey and were therefore targeted during trenching. The ditches identified in Trenches 2, 3, 4 and 5 (**17**, **10**, **4** and **30**) were large in size and their full extent was not visible in the small trenches that were excavated. These ditches ranged from at least 1 to 2.2m wide and 0.7 to 0.95m deep with steep to near vertical sides and a concave base (where visible). These ditches have a variety of alignments (largely east to west and north-east to south-west) and contained a number of fills representing primary silting whilst the ditches were still in use and secondary fills indicative of large silting events as a result of the disuse of these features. These ditches are difficult to date, for example, ditch **4** contained three fills, the basal fill (5) contained two sherds (26g) of Roman pottery, the fill above this (6) contained 19 sherds (1337g) of pottery dating from the Late Iron Age through to the 4th century AD and the uppermost fill (7) contained 36 sherds (897g) of pottery dating from the Late Iron Age through to the 4th century AD.
- 4.2.7 The pottery assemblages recovered from these ditches may signify a long period of use for these features and the only clear evidence of phasing was observed in Trench 5 with ditch **28** and another unexcavated ditch with a north-west to south-east alignment being truncated by later ditch **30** which had a roughly east to west alignment. The earlier ditches were smaller measuring only 0.48m wide and contained no finds, whereas ditch **30** was similar in size to those mentioned above and contained Roman pottery. Only a small portion of these ditches were identified and it is thought that they would have primarily functioned for drainage purposes. Fill 12 from Ditch **10** in Trench 3 contained evidence of duckweed suggesting that the ditch had originally contained water, possibly seasonally. It is also possible that the size of these ditches is representative of their use as enclosures or boundaries.

Industry

- 4.2.8 A single kiln or oven (**36**) orientated east to west was identified in Trench 2, exposed for 1.3m from the eastern limits of the trench and measuring 0.56m wide this feature had a fired clay lining (**37**). This feature was not excavated and there was no obvious

pottery present within its fill (38). Worth noting is that this kiln or oven truncated one or two earlier ditches which were also unexcavated.

- 4.2.9 Trenches 7 and 8 lie to the east of the main settlement, features excavated in these trenches comprised ditches and post-holes. Ditch 25 and ditch 41 (Trench 7 and 8) probably represented a Roman boundary, distinctly smaller than those seen in the main settlement area, suggestive perhaps of a more agricultural use. The fills of these features however yielded exceptionally large quantities of spelt and emmer wheat (800ml and 150ml) indicative of malting taking place within the vicinity. Post-hole 43 also contained occasional spelt and emmer. The topsoil around Trenches 7 and 8 was noticeably darker (Fig. 5) and these areas measured 24m by 18m (Trench 7) and 30m by 17m (Trench 8). This may represent the extent of any malting activity taking place, the large volume of remains from ditch 25 may represent its proximity to corndriers. Ditch 25 also contained 14 sherds (618g) of pottery dated to the mid 2nd to 3rd century AD including the majority of a carinated bowl and an indented beaker. The unabraded nature of this assemblage is distinctly different to the pottery assemblage recovered from features in Trenches 1 to 5. Whether these vessels are an indicator of another industry taking place (pottery production) or directly related to the malting taking place (used as drinking vessels) is uncertain.
- 4.2.10 A spread of ceramic building material was identified in the topsoil close to Trench 7, measuring roughly 30m by 20m (Fig. 5) and may represent the presence of a structure being present in this area. The possible function of a structure in this area could be related in some way to the malting taking place which was identified through the presence of spelt and emmer within the fill of ditch 25. The presence of a high status wall tile in ditch 41, Trench 8 could also suggest the presence of another structure in this eastern part of the site.

4.3 Interpretation

- 4.3.1 Although only a small portion of this site was excavated the features identified have allowed some analysis of the site, however the small areas excavated has also some what limited the knowledge we were able to obtain. This site is situated within an area of known rural Late Iron Age to Roman sites which are located on the edge of the tidal flats in the Humberside region (Van de Noort *et al* 1998). A number of these sites, including that of the Stallingborough Interchange, sits on areas of noticeably higher ground (Fig. 6) and may have been selected as dry areas for settlement during the Roman period. Specifically, into the 2nd and 3rd centuries as evidence from other sites in low lying areas, such as that uncovered on the Stallingborough pipeline, went out of use in the 2nd century possibly because the area became too wet due to a rise in sea level (Van de Noort *et al.* 1998, 296).
- 4.3.2 The evaluation has proven the geophysical survey to be accurate in revealing an extensive Roman settlement in the western part of the site measuring at least 150m by 120m in size. Five of the trenches were excavated in this main area of settlement and revealed a series of large ditches on a number of alignments containing evidence for waterlogging and a probable long period of use signified by a broad date range of the pottery recovered from their fills. The most significant evidence recovered from

these trenches is the evidence for a stone building (Structure 1) within Trench 1 and extending beyond. The two walls identified represent the northern and southern walls of a high status structure measuring 4.6m wide at this point. A spread of limestone was observed within the topsoil measuring 70m by 62m and is believed to signify the presence of a substantial building within this area. The pottery recovered from this trench was minimal however the presence of eight fragments of wall plaster some of which was painted red is suggestive of a high status building. Other high status finds were identified across the site including a large fragment of wall tile. Wall plaster and worked fragments of stone were recovered from the Brocklesby excavation 6km north-west of the site (Network Archaeology 2016: 42) however no evidence for a structure of high status was identified at the site.

- 4.3.3 The stone used for this structure was clearly brought a fair distance from its original source with the most likely source being the Lincolnshire Wolds at least 9km south of the site. Stone buildings dating to the Roman period are fairly rare in this part of Lincolnshire, the Roman town of Caistor is situated 14km south-west of Stallingborough and is known to have consisted of defensive Roman walls constructed in the 4th century (LHER 54186). Only a small number of excavations have taken place within the town, a small portion of the wall was uncovered during excavations in 2008 and was found to be 5m wide and 1.7m thick with a single course of unbonded, roughly dressed limestone blocks overlain by three courses of roughly dressed, mortared limestone blocks in a herringbone pattern (Allen Archaeology 2009). Pottery recovered from excavations at Caistor largely dates to the 3rd and 4th centuries and other finds such as wall plaster and brick and tiles have also been uncovered.
- 4.3.4 The majority of high status buildings within Lincolnshire were located within close proximity to Lincoln or situated along Ermine Street such as Winterton Villa some 27km north-west of the site, thought to have been built in the late 2nd century AD (Stead 1976: 72-84). Excavations at Dragonby uncovered settlement including an Iron Age roundhouse and Roman aisled buildings (May 1996). This settlement appeared to be prosperous and some military items have been uncovered from the site. This site also yielded six pottery kilns dating from the Flavian to Antonine period (69-160 AD).
- 4.3.5 The pottery assemblage recovered from site was relatively small (254 sherds, 6.954kg) however for how little of the site was exposed it could be argued that the pottery recovered indicates the potential for a substantial assemblage upon further excavation. The majority of the assemblage consisted of heavily abraded coarse wares, most likely locally produced and representing a variety of forms such as jars and bowls dating to the Roman period. A small number of Native tradition shell tempered wares were identified including fragments of large storage jars, the type of vessels that would have been curated prior to deposition. The assemblage appears to be of a domestic nature with only a small number of fine ware and samian sherds present and a distinct lack of specialist wares such as mortaria or cheese presses. Assemblages such as this have been mirrored at nearby rural sites Brocklesby Interchange (Network Archaeology 2016) and Stallingborough pipeline (ArcHeritage 2014).
- 4.3.6 The lack of specialist, imported and fine wares may be a direct result of the areas excavated. The feasibility of a high status stone building has been recognised through

the presence of walls and painted wall plaster although is clearly not supported by the pottery assemblage at this time. Of interest was the assemblage recovered from Ditch 25 in Trench 7 comprising the majority of a carinated bowl and a large piece of indented beaker both dating from the 2nd to 3rd century AD. These sherds were distinctly unabraded and forms such as these have been identified by Precious and Darling (2014) as being produced at kilns discovered at Market Rasen which is located some 25km south-west of the site.

- 4.3.7 The presence of malting waste recovered from features within Trenches 7 and 8 are of high numbers and deemed a rare discovery. Evidence such as this is a direct result of malting taking place in this part of the site, with the presence of corndriers within this area being highly probable. Evidence for germinated barley grains were also discovered from the fills of six pit like features, interpreted as corndriers, at the Hobson Way site (4km to the north-east, Field 2011). Two spreads of dark material were observed in the topsoil around Trenches 7 and 8 and the area between the two trenches (115m) could contain the remains of an extensive malting industry. The presence of a spread of CBM (30m by 20m) around Trench 7 may also indicate the presence of a structure which may or may not be related to the malting clearly taking place here.
- 4.3.8 This site adds to an ever growing corpus of Roman sites within this part of Lincolnshire to the north of the Lincolnshire Wolds and along the tidal flats related to the River Humber. Some of these sites have been associated with particular activities with evidence for crop processing and animal husbandry suggested by the presence of corndriers at Hobson Way (4km north-east), and also a small pottery industry suggested by a small number of kiln seconds and highly fired pottery dating to the 2nd and 3rd centuries AD (Field 2011). Excavations at Brocklesby Interchange (6km north-west) revealed evidence for settlement spanning the 1st to 4th centuries AD with an apparent livestock management and dairying industry taking place during the 2nd and 3rd centuries AD alongside a small scale metal working industry (Network Archaeology 2016: 48-9).
- 4.3.9 A number of small rural settlements have also been recorded, a number of roundhouses dating to the 1st to 2nd century AD (ArcHeritage 2014) were identified along the Stallingborough pipeline (2km south-east) and a series of enclosures dating to two phases of Roman activity were identified during the Hornsea Wind Farm cable route (1.5km south-west, Wessex Archaeology 2016).
- 4.3.10 The obvious difference of the site at Stallingborough Interchange is the presence of a high status stone building, the function of which is unknown. This site also had its own industry taking place (malting) on the outskirts of the main settlement area. The pottery from the site does appear to span the entire Roman period but with a spike of activity during the 2nd to 3rd centuries, a date which is echoed on other sites mentioned above. The site at Stallingborough Interchange appears to have a fairly central location to the other sites so far identified in this part of North East Lincolnshire and is of a similar date. It is therefore feasible to suggest that the presence of a stone building, of high status, may represent this sites function as a possible estate centre in which the sites mentioned above were managed from.

4.4 Significance

- 4.4.1 The site at Stallingborough Interchange is one of high status and great importance within this part of Lincolnshire. Although a number of other sites of a Roman date have been identified within the vicinity this site contains evidence for a well preserved stone structure at the heart of the settlement. It is difficult to ascertain the use of this structure at this time and it would be simple to suggest that it is a villa. The presence of high status items is evident however the pottery assemblage is not representative of a high status building, although this may be due to the majority of the pottery recovered not being recovered from features directly associated with the structure.
- 4.4.2 The possibility that this site represents an estate centre in which other local sites were managed is highly feasible at this stage as it appears to have a fairly central location to the other recorded sites. The pottery from the site at Stallingborough Interchange spans the Roman period but with a small spike in the 2nd to 3rd centuries, a date which is mirrored on other sites. Although evidence for malting has been uncovered at the site on Hobson Way, the presence of a malting industry at Stallingborough Interchange is evident and the exceptional preservation on site is deemed incredibly rare.
- 4.4.3 Further excavation of this site could allow a rare insight into a well preserved high status Roman site in this part of North East Lincolnshire.

APPENDIX A TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Trench 1						
General description					Orientation	N-S
Trench contained two definite walls aligned east to west with demolition rubble and an external surface also present.					Length (m)	14m
					Width (m)	1.8
					Avg. depth (m)	0.54
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.24-0.4	Topsoil	-	-
2	Layer	-	0.1-0.22	Subsoil	-	-
3	Layer	-	-	Natural	-	-
47	Masonry	0.8	0.35	Wall	-	Roman
48	Masonry	0.8	-	Demolition Rubble	Pottery, Tile, Wall Plaster, Bone, Shell	1st-3rd C
50	Masonry	0.8	0.15	Wall	Pottery, Wall Plaster, Bone	LIA-2nd C
51	Masonry	0.8	-	Demolition Rubble	Pottery, Wall Plaster, Bone	1st-4th C
52	Masonry	0.6	-	External surface	-	Roman
53	Layer	-	0.34	deposit	Pottery, Fired Clay, Bone	1st-4th C
54	Cut	1.1	0.35	Possible Ditch	-	Roman
55	Fill	1.1	0.35	Fill of Ditch	Pottery, Bone	1st-4th C
56	Layer	-	-	unknown	-	-
57	Layer	-	-	Demolition Rubble	-	-
Trench 2						
General description					Orientation	N-S
Trench contained three large ditches, two of which were truncated by a possible kiln or oven. A small gully terminus and a post-hole were also present					Length (m)	9
					Width (m)	1.8
					Avg. depth (m)	0.62
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.49-0.56	Topsoil	Coin	269-274 AD
2	Layer	-	0.16-0.3	Subsoil	-	-
3	Layer	-	-	Natural	-	-
17	Cut	2.2	0.84	Ditch	-	Roman
18	Fill	1.14	0.02	Fill of Ditch	-	-
19	Fill	0.34	0.2	Fill of Ditch	-	-
20	Fill	1.46	0.20	Fill of Ditch	Pottery, Bone, Shell	LIA-1st C
21	Fill	1.5	0.30	Fill of Ditch	Pottery, Fired Clay, Bone, Shell	1st-4th C

22	Fill	1.26	0.40	Fill of Ditch	Pottery, Glass, Bone, Shell	1st-4th C
23	Fill	0.66	0.10	Fill of Ditch	Pottery, Bone	1st-2nd C
24	Fill	0.38	0.16	Fill of Ditch	Pottery, Bone, Shell	1st-4th C
32	Cut	0.32	0.12	Post-hole	-	Roman
33	Fill	0.32	0.12	Fill of Post-hole	Fired Clay	Roman
34	Cut	0.45	0.06	Gully terminus	-	-
35	Fill	0.45	0.06	Fill of gully terminus	-	-
36	Cut	0.56	-	Kiln or Oven	-	-
37	Fill	0.15	-	Clay lining	-	-
38	Fill	0.32	-	Fill of Kiln or Oven	-	-
Trench 3						
General description					Orientation	E-W
Trench contained a number of large ditches and possible wall foundations overlain by subsoil and topsoil					Length (m)	10
					Width (m)	1.8
					Avg. depth (m)	0.5
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.3	Topsoil	-	-
2	Layer	-	0.2	Subsoil	-	-
3	Layer	-	-	Natural	-	-
10	Cut	1.6	0.95	Ditch	-	Roman
11	Fill	1	0.1	Fill of Ditch	-	-
12	Fill	1	0.35	Fill of Ditch	Pottery, Fired Clay, Bone, Shell	LIA-2nd C
13	Fill	1.6	0.6	Fill of Ditch	Pottery, Fired Clay, Bone, Shell	LIA-4th C
14	Cut	0.58	0.44	Construction Cut	-	Roman
15	Fill	0.58	0.35	Construction backfill	Fired Clay	Roman
16	Masonry	0.58	0.35	Wall foundations	-	Roman
49	Fill	0.58	0.1	Leveling layer	Bone	-
Trench 4						
General description					Orientation	N-S
Trench contained one large ditch overlain by subsoil and topsoil					Length (m)	6
					Width (m)	1.8
					Avg. depth (m)	0.36
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.2-0.38	Topsoil	-	-
2	Layer	-	0.04-0.1	Subsoil	-	-
3	Layer	-	-	Natural	-	-
4	Cut	1.8	0.94	Ditch	-	Roman

5	Fill	1.1	0.16	Fill of Ditch	Pottery, Bone, Shell	1st to 4th C
6	Fill	1.7	0.5	Fill of Ditch	Pottery, Shell	LIA to 4th C
7	Fill	1.6	0.24	Fill of Ditch	Pottery, Shell	LIA to 4th C
8	Cut	0.2	0.3	Natural Feature	-	-
9	Fill	0.2	0.3	Fill of Natural Feature	Pottery	1st to 4th C
Trench 5						
General description					Orientation	NE-SW
Trench contained two ditches aligned roughly north-south truncated by a large east to west ditch.					Length (m)	8
					Width (m)	1.8
					Avg. depth (m)	0.48
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.3-0.35	Topsoil	-	-
2	Layer	-	0.1-0.2	Subsoil	-	-
3	Layer	-	-	Natural	-	-
28	Cut	0.48	0.56	Ditch	-	-
29	Fill	0.48	0.56	Fill of Ditch	-	-
30	Cut	1	0.7	Ditch	-	Roman
31	Fill	1	0.7	Fill of Ditch	Pottery, Fired Clay, Bone	1st-4th C
Trench 6						
General description					Orientation	N-S
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of clay					Length (m)	5
					Width (m)	1.8
					Avg. depth (m)	0.5
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.38-0.4	Topsoil	-	-
2	Layer	-	0.1-0.12	Subsoil	-	-
3	Layer	-	-	Natural	-	-
Trench 7						
General description					Orientation	N-S
Trench contained a single ditch overlain by subsoil and topsoil					Length (m)	5
					Width (m)	1.8
					Avg. depth (m)	0.4
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.3	Topsoil	-	-
2	Layer	-	0.1	Subsoil	-	-
3	Layer	-	-	Natural	-	-
25	Cut	1.58	0.52	Ditch	-	2nd-3rd C
26	Fill	1.42	0.08	Fill of Ditch	-	-
27	Fill	1.58	0.44	Fill of Ditch	Pottery, Brick, Fired Clay	2nd-3rd C

Trench 8						
General description					Orientation	NW-SE
Trench contained two ditches and two post-holes overlain by subsoil and topsoil					Length (m)	7
					Width (m)	1.8
					Avg. depth (m)	0.45
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.3-0.4	Topsoil	-	-
2	Layer	-	0.1	Subsoil	-	-
3	Layer	-	-	Natural	-	-
39	Cut	0.5	0.14	Ditch	-	-
40	Fill	0.5	0.14	Fill of Ditch	-	-
41	Cut	1.07	0.1	Ditch	-	Roman
42	Fill	1.07	0.1	Fill of Ditch	Tile	Roman
43	Cut	0.35	0.15	Post-hole	-	-
44	Fill	0.35	0.15	Fill of Post-hole	-	-
45	Cut	0.4	0.1	Post-hole	-	-
46	Fill	0.4	0.1	Fill of Post-hole	-	-
Trench 9						
General description					Orientation	NW-SE
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of sand.					Length (m)	8
					Width (m)	1.8
					Avg. depth (m)	0.4
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.31-0.33	Topsoil	-	-
2	Layer	-	0.07-0.09	Subsoil	-	-
3	Layer	-	-	Natural	-	-

APPENDIX B FINDS REPORTS

B.1 Metal work – Coin

By Denis Sami

Introduction

B.1.1 A possible coin from the Gallic Empire of Victorinus or Tetricus I was recovered from the topsoil (1). The coin is worn and has signs of metal disease that prevents a precise identification.

SF1, (1)

B.1.2 Incomplete, illegible CuA radiate, possibly Victorinus, AD 269-71 or Tetricus I, AD 271-274 (Reece 13)

OBV: Bust, radiate, right

REV: Standing figure

Diameter: 17.49 mm

Thickness: 1.95 mm

Weight: 2.55 g

B.2 Metal work – Iron objects

By Denis Sami

Assemblage

B.2.1 Finds were recovered from soil samples (Sample 2 and 12). The assemblage comprises of two iron nails and a small hobnail.

Condition

B.2.2 The hobnail SF 10 is complete while nail SF 11 is incomplete, SF 12 is complete but fragmented.

B.2.3 All objects are packaged in polythene bags with foam support and stored in Stewart boxes with the silica gel and humidity indicator strips.

Discussion

B.2.4 Iron nails represent multi-functional objects often associated with timber structures. Hobnails are associated with footwear and shoe making. These artefacts have a very wide chronology spanning from the Roman to modern periods.

B.2.5 No further work on this assemblage is needed. The iron objects can be deselected from the archive.

Catalogue

B.2.6 SF 10, (12), Sample 2

A complete hobnail with slightly domed head, tapering stem with quadrangular section and bent tip (Manning Type 10).

Thickness: 3.51 mm

Height: 7.82 mm

Weight: 0.03 g

B.2.7 SF 11, (12), Sample 2

Incomplete. Head and tip missing, Tapered stem with quadrangular section and bended tip forming a 90° angle.

Thickness: 7.70 mm

Height: 37.19 mm

Weight: 7.19 g

B.2.8 SF 12, (49), Sample 7

Complete. Circular slightly domed head, straight tapering stem with quadrangular section (Manning Type 1).

Thickness: 6.33 mm

Height: 43.63 mm

Weight: 2.60 g

B.3 Glass

By Carole Fletcher

- B.3.1 A single shard of cobalt blue glass (1g in weight) was recovered from ditch fill 22, the fragment is from a free blown vessel with some faults and bubbles. Recovered alongside Roman pottery, the glass may be from a Roman vessel, however the shard is too small for dating to be certain.

B.4 Late Iron Age and Roman Pottery

By Stephen Wadeson

Introduction

B.4.1 A relatively small assemblage consisting of 254 sherds of pottery, weighing 6.954kg was recovered during the evaluation at Stallingborough. Recovered from 19 stratified deposits the majority of the assemblage was retrieved from the fill of ditches (166 sherds, 5.815kg) and accounts for c. 84% by weight. Predominantly a Romano-British assemblage (late 1st to 3rd centuries AD), a smaller quantity of Later Iron Age/Early Roman (LIA to Mid-2nd centuries AD) material was also identified.

B.4.2 The assemblage is fragmentary and moderately abraded suggesting that the majority of the sherds were not located at their primary site of deposition. The pottery has an average sherd weight (ASW) of c.27g. This weight however is due in part to the presence of several large storage jar fragments (15 sherds, 2.047kg) in Ditches 4 and 17, which if dismissed gives an ASW of c.19g. Many of the sherds have not retained their original surfaces or evidence of wear and use. The relatively poor condition of the pottery is attributed not only to the action of local soils but also post-depositional disturbance such as middening and/or manuring as part of the waste management during the Roman and post-Roman periods.

Methodology

B.4.3 The Roman pottery was analysed following guidelines recorded in A Standard for Pottery Studies in Archaeology (Barclay et al 2016, 14-18). The fabrics and forms used within this report reference those published by Perrin 1999, supported with references to the national fabric series (Tomber and Dore 1998), also Tyers (2006).

B.4.4 The total assemblage was studied and a full catalogue was prepared (in archive). The sherds were examined using a hand lens (x10 magnification) and were divided into fabric groups (used primarily in the archive) defined on the basis of inclusion types present. Fabric codes are descriptive and abbreviated by the main letters of the title (Roman Sandy grey ware = RSGW); Vessel forms (jar, bowl) are also recorded. The sherds were counted and weighed to the nearest whole gram and recorded by context. Decoration, residues and abrasion were also noted. and a spot date has been provided for each individual sherd and context. The site archive is currently held by OA East and will be deposited with the appropriate county stores in due course.

Sampling Bias

B.4.5 The excavation of trenches was carried out by hand and feature selection made through standard sampling strategies. There are not expected to be any inherent biases. Where bulk samples have been processed for environmental and artefactual remains, there has also been some recovery of pottery. These are small quantities of

abraded sherds and have not been quantified unless no pottery was recovered during excavation, and serious bias is not likely to result.

Prehistoric and Roman Pottery

- B.4.6 This is a predominantly Roman assemblage which shows evidence of continuous activity on site from the Later Iron Age through to the 4th century AD. The majority of the assemblage consists primarily of unsourced locally produced utilitarian domestic coarse wares. The Later Iron Age-Early Roman material consists mainly of Shell tempered wares (IASH), much of this pottery is handmade although some is wheel finished (Precious & Darling, 2014 88-94).
- B.4.7 Romanised sandy grey wares 62% (by weight) account for the majority of the Romano-British material recovered. While the majority of the coarse wares, both Later Iron Age and Roman most likely originate from local Lincolnshire or Yorkshire sources, two fragments of Black Burnished Ware 2 (COL BB 2) from Colchester (Tomber & Dore 131) were also identified. In addition, a small quantity of Roman, Dales Shell tempered sherds (*ibid*, 157) were identified including the rim and upper wall fragment from a lid seated jar.
- B.4.8 While the bulk of the sandy coarse ware assemblage cannot be assigned to a specific vessel type, a limited range of vessels were identified, these include a semi-complete Romanised sandy grey ware (RSGW) carinated bowl (B334, Precious & Darling, 2014 136, Fig.118, 1157-62) from the fill of Ditch 22. This type of carinated bowl was produced during the early to mid-2nd century AD and excavations of kilns in Market Rasen, Lincs (*ibid*, 136) located 25km south-west of the site, have shown this type of vessel was being manufactured locally during this period. Also recovered from the ditch was the lower half of a RSGW indented beaker (E-MC3). Other vessels identified in the assemblage include straight sided, flanged bowls and dishes including plain and grooved rim types, also several sherds from the rim of a large storage jar (MC2-C4).
- B.4.9 The assemblage includes a limited quantity of imported pottery, as is typical of assemblages from this part of Lincolnshire (Network Archaeology 2016). Small quantities of samian were identified (5 sherds, 42g). The samian present includes material from production centres at La Graufesenque, South Gaul (Tomber & Dore 1998, 28), Les Martres and Lezoux, Central Gaul (*ibid*, 30 & 32) and Eastern Gaul (*ibid*, 34-41). Forms identified consist of a form 27 cup, form 33 cup and a single example of an East Gaulish form 31R Bowl. No examples of stamped or decorated vessels were identified. Low levels of samian are typical of rural settlements in Britain (Willis 2003, 100).
- B.4.10 Amphorae sherds are noticeable by their absence from the assemblage however this may be simply a preference for utilizing more locally produced vessels. The assemblage also lacks specialist wares, with no sherds from either mortarium or flagons identified.
- B.4.11 Domestically produced fine wares are present in small numbers in the assemblage and include two grey ware (fine) sherds most likely from locally produced beakers, possibly Butt Beakers dating from the early Roman period (M/LC1-MC2). In addition, late Roman fine wares consist of a single example of a burnt Oxfordshire red ware with a

red colour coat (mid 3rd to late 4th/early 5th century AD. Tyers 1996, 175-178) recovered from the topsoil. Products from the Nene Valley including both Nene Valley Grey Wares (Perrin 1999, 78-87) and Nene Valley Colour Coat Wares (Tomber & Dore 1996, 173-175) were absent from the assemblage. Similarly Nene Valley products were also absent from the assemblage excavated on Stallingborough Pipeline excavation (ArchHeritage 2014) located 2km south-east of the site.

Discussion

- B.4.12 This is a relatively small assemblage of Later Iron Age/Early Roman and Romano-British pottery the majority of which consists of unprovenanced but locally produced utilitarian Romanised sandy coarse ware sherds. Vessel forms present indicate a domestic coarse ware assemblage with limited access to imported wares with only small quantities of samian present and an apparent absence of specialist wares; this however may be due to the pottery not having been deposited within the area evaluated or may reflect the use of local alternatives.
- B.4.13 The assemblage represents domestic activity within the area of excavation, from the Later Iron Age through to the 4th century AD primarily during the Roman period, specifically the early/mid-2nd to 3rd centuries AD.
- B.4.14 Many of the sherds within the assemblage are likely to be residual having been recovered mainly from ditch fills with limited examples of primary deposition. Post-depositional disturbance has made the assemblage difficult to assess beyond providing basic dating information. Comprised of utilitarian vessels, their predominance within the assemblage is suggestive of a low status rural site.
- B.4.15 If no further work is undertaken the following summary catalogue acts as a full record.

Prehistoric & Roman Pottery Catalogue

Context	Fabric	Dsc	Qty	Wgt (kg)	Spot Date	Context Date	Form
1	DLA SH	RU	2	0.108	LC2-C4	TOPSOIL	LID SEAT JAR
1	IASH	R	1	0.012	LIA-M/LC1	TOPSOIL	?DISH
1	IASH	U	3	0.021	LIA-M/LC1	TOPSOIL	
1	OXRCC	B	1	0.082	LC3-EC5	TOPSOIL	
1	SAMCG	U	1	0.003	AD120-200	TOPSOIL	
1	SAMMV	U	1	0.002	AD100-120	TOPSOIL	
1	SAMSG	U	1	0.003	AD70-110	TOPSOIL	DRAG. 27 CUP
1	RSGW	UBR	52	0.615	LC1-C4	TOPSOIL	JAR, DISH
1	RSGW	U	1	0.004	E-MC2	TOPSOIL	
1	RSRW	U	9	0.063	M/LC1-C3	TOPSOIL	
1	RSRW (Calc)	U	1	0.011	LC1-C4	TOPSOIL	
5	RSGW	U	1	0.024	LC1-C4	LC1-C4	
5	RSGW	U	1	0.002	LC1-C4	LC1-C4	
6	COL BB 2	UD	2	0.014	EC2-M/LC3	EC2/MC4	

6	GW (Grog) (Calc)	U	1	0.002	LIA-MC2	EC2/MC4	
6	IASH	U	7	0.079	LIA-M/LC1	EC2/MC4	
6	RSGW	RB	3	1.157	EC2/MC4	EC2/MC4	SJAR
6	RSGW	U	1	0.048	EC2-MC4	EC2/MC4	S/JAR
6	RSGW	1	1	0.016	E/MC2	EC2/MC4	CARINATED BOWL B334
6	RSGW	U	2	0.015	E/MC2	EC2/MC4	BOWL
6	RSGW	U	2	0.06	LC1-C4	EC2/MC4	
7	IASH	U	3	0.066	LIA-M/LC1	M/L3-C4	
7	IASH	U	2	0.019	LIA-M/LC1	M/L3-C4	
7	IASH (Grog)	U	1	0.049	LIA-M/LC1	M/L3-C4	
7	RSGW	U	4	0.272	EC2-MC4	M/L3-C4	SJAR
7	RSGW	R	1	0.007	M/LC3-C4	M/L3-C4	PLAIN RIM DISH
7	RSGW	RUB	14	0.197	LC1-C4	M/L3-C4	MISC JARS
7	RSGW	UB	1	0.137	LC1-C4	M/L3-C4	MISC JAR
7	RSGW	R	2	0.037	M/LC2-LC3	M/L3-C4	FLANGED BOWL
7	RSGW (Calc)	RU	5	0.031	MC1-C2	M/L3-C4	JAR
7	RSGW (Calc)	R	1	0.037	M/LC2-LC3	M/L3-C4	FLANGED BOWL
7	RSGW (Calc)	U	1	0.003	LC1-C4	M/L3-C4	
7	RSOW	U	1	0.017	L/MC1-C4	M/L3-C4	
7	STW	R	2	0.025	M/L3-C4	M/L3-C4	MISC JAR
9	RSGW	U	1	0.009	LC1-C4	LC1-C4	
12	GW (Fine)	U	1	0.001	M/LC1-EC2	M/LC1	BEAKER
12	IASH	R	1	0.075	LIA-M/LC1	M/LC1	JAR
12	IASH	U	1	0.051	LIA-M/LC1	M/LC1	
13	GW (Grog) (Calc)	UB	1	0.026	LIA-MC2	LC3- M/LC4	
13	IASH	UB	3	0.128	LIA-MC2	LC3- M/LC4	MISC JAR
13	IASH	U	2	0.018	LIA-M/LC1	LC3- M/LC4	
13	IASH	U	1	0.012	LIA-M/LC1	LC3- M/LC4	
13	SAMEG	B	1	0.027	LC2-MC3	LC3- M/LC4	DRAG. 31R BOWL
13	RSGW	U	2	0.045	LC3-M/LC4	LC3- M/LC4	FLANGED DISH
13	RSGW	UB	3	0.146	LC1-C4	LC3- M/LC4	

13	RSGW	U	2	0.060	LC1-C4	LC3-M/LC4	
13	RSGW	U	2	0.054	LC1-C4	LC3-M/LC4	
13	RSGW	U	6	0.048	LC1-C4	LC3-M/LC4	
13	RSGW	B	1	0.005	LC1-C4	LC3-M/LC4	
13	RSGW (Calc)	RU	2	0.025	LC1-C4	LC3-M/LC4	
20	IASH	U	1	0.014	LIA-M/LC1	LIA-M/LC1	
21	GW (Grog)	U	1	0.035	MC1-E/MC2	E/MC2	
21	GW (Grog)	U	1	0.020	MC1-E/MC2	E/MC2	
21	IASH	RU	4	0.037	LIA-M/LC1	E/MC2	
21	RSGW	B	1	0.336	LC1-C4	E/MC2	MISC JAR
21	RSGW	UB	5	0.043	LC1-C4	E/MC2	
21	RSGW	U	1	0.012	E/MC2	E/MC2	
21	RSGW (Calc)	R	1	0.038	EC2-MC4	E/MC2	S/JAR
21	SRW	U	2	0.023	MC1-E/MC2	E/MC2	
21	SRW	R	1	0.010	MC1-E/MC2	E/MC2	
21	SRW (Grog)	R	2	0.092	MC1-E/MC2	E/MC2	
22	GW (Grog)	RU	3	0.032	MC1-E/MC2	MC3-C4	?LID SEATED JAR
22	IASH	U	3	0.202	LIA-M/LC1	MC3-C4	
22	IASH	U	2	0.014	LIA-M/LC1	MC3-C4	
22	SCW (Calc)	U	1	0.078	C1-C4	MC3-C4	JAR
22	RSGW	R	2	0.018	LC1-C4	MC3-C4	?LID/BOWL
22	RSGW	U	2	0.072	LC1-C4	MC3-C4	
22	RSGW	U	2	0.024	LC1-C4	MC3-C4	
22	RSGW	U	1	0.003	LC1-C4	MC3-C4	
22	SRW (Calc)	R	1	0.015	LC1-C4	MC3-C4	JAR/BOWL
22	STW	U	1	0.115	MC3-C4	MC3-C4	2 HANDLED JAR
22	STW	R	12	0.890	MC1-C3	MC3-C4	SJAR
23	GW (Grog)	U	1	0.014	LIA/C2	LC1-C2	
23	IASH	R	1	0.014	LIA-M/LC1	LC1-C2	JAR
23	IASH	U	2	0.010	LIA-M/LC1	LC1-C2	
23	RSGW	U	1	0.003	LC1-C2	LC1-C2	

24	RW (Grog)	U	3	0.020	LIA-MC2	M/LC1- MC2	
24	RSGW	U	1	0.001	LC1-C4	M/LC1- MC2	
24	SGW (Fine)	RU	1	0.001	M/LC1- MC2	M/LC1- MC2	EVERT RIM BEAKER
27	RSGW	U	1	0.033	EC2- LC3/EC4	MC2-C3	SJAR
27	RSGW	R	1	0.034	LC1-C4	MC2-C3	MED MOUTH JAR
27	RSGW	B	1	0.111	E-MC3	MC2-C3	INDENT BEAKER 3.3
27	RSGW	RU	10	0.427	E-MC2	MC2-C3	CARINATED BOWL B334
27	RSGW	U	1	0.013	LC1-C4	MC2-C3	
31	SAMCG	R	1	0.007	AD120-200	E/MC2+	DRAG. 33 CUP
31	RSGW	U	2	0.019	LC1-C4	E/MC2+	
31	RSGW	U	1	0.004	LC1-C4	E/MC2+	
48	RSGW	U	2	0.027	LC1-C3	LC1-C3	
48	RSGW	U	1	0.026	LC1-C4	LC1-C3	
50	GW	U	1	0.020	LIA-MC2	LIA-MC2	
51	RSGW	U	1	0.008	LC1-C4	LC1-C4	
53	GW (Fine)	U	1	0.001	M/LC1-EC2	LC1-EC2	BEAKER
53	RSGW	U	2	0.001	LC1-C4	LC1-EC2	
55	RSGW	U	1	0.072	LC1-C4	LC1-C4	MISC JAR
55	RSGW	B	1	0.007	LC1-C4	LC1-C4	
55	RSOW	U	1	0.001	M/LC1-C3	LC1-C4	
Total			254	6.954			

Table 1: Pottery catalogue by context (R - Rim Sherd, B - Base Sherd, U - Undecorated Body Sherd, D - Decorated Body Sherd)

Fabric Codes

COL BB 2: Colchester Black Burnished ware 2

DAL SH: Dales Shelly Ware

GW: Grey Ware

GW (Fine): Grey Ware (Fine)

GW (Grog): Grey Ware (Grog tempered)

GW (Grog) (Calc): Grey Ware (Grog & Calc tempered)

IASH: Native Tradition Shell Tempered Ware

IASH (Grog): Native Tradition Shell Tempered Ware (Grog tempered)

OXRCC: Oxfordshire Red Colour Coat

RSGW: Roman Sandy Grey Ware
 RSOW: Roman Sandy Oxidised Ware
 RSRW: Roman Sandy Reduced Ware
 RSGW (Calc): Roman Sandy Grey Ware (Calc tempered)
 RSGW (Fine): Roman Sandy Grey Ware (Fine)
 RW (Grog): Grog tempered Reduced Ware
 SACG: Samian Central Gaulish (Lezoux)
 SAEG: Samian East Gaulish
 SAMV: Samian Central Gaulish (Les Martres)
 SASG: Samian South Gaulish (La Gruafesenque)
 SCW (Calc): Sandy Coarse Ware (Calc tempered)
 SRW (Calc): Sandy Reduced Ware (Calc tempered)
 SRW (Grog): Sandy Reduced Ware (Grog tempered)
 STW: Shell tempered ware

B.5 Post Roman Pottery

By Carole Fletcher

B.5.1 Topsoil produced, moderately abraded to abraded post-Roman sherds including sherds from two Cistercian-type ware (CIST mid/late 15th-17th century) drinking vessels alongside abraded sherds from several green glazed jugs, tentatively identified as Toynton Medieval ware (TOY late 13th to mid-15th century) (Carole Fletcher *pers comm*). The widely differing ages of the pottery recovered indicate significant reworking of the deposits, with the latest phases of activity most likely to be post-medieval manuring and later ploughing.

Post Roman Pottery Catalogue

Context	Fabric	Dsc	Qty	Wgt (kg)	Spot Date	Context Date	Form
1	CIST	UB	2	0.018	M/LC15-C17	TOPSOIL	Drinking Vessel
1	TOY	U	2	0.009	LC13-MC15	TOPSOIL	Jugs
1	Unprovenaced Glazed Ware	U	1	0.015	1150 - 1500	TOPSOIL	
Total			5	0.042			

Table 2: Post Roman pottery catalogue (R - Rim Sherd, B - Base Sherd, U - Undecorated Body Sherd, D - Decorated Body Sherd)

B.6 Ceramic Building Material

By Ted Levermore

Introduction

B.6.1 A small assemblage of ceramic building material (CBM) was recovered during this evaluation (30 fragments, 1816g). The assemblage was collected from features and the topsoil, those from the latter were collected as a representative sample of the finds from this layer. Whilst many of the fragments were too fragmentary and abraded to be identified, or given a date, the rest of the assemblage is comfortably Roman in date.

Methodology

B.6.2 The assemblage was quantified by context, fabric and form and counted and weighed to the nearest whole gram. Fabrics were examined using a x20 hand lens and were described by main inclusions present. Width, length and thickness were recorded where possible. Woodforde (1976) and McComish (2015) will be used as reference for identification and dating.

B.6.3 The quantified data and fabric descriptions are presented on an Excel spreadsheet held with the site archive. A summary of the catalogue can be found in Table 3.

Assemblage

B.6.4 This assemblage was recovered from three contexts in three trenches and the topsoil across the site.

Topsoil

B.6.5 Context 1 produced 27 fragments of CBM (1138g). Of these, 25 fragments were undiagnostic pieces in an orange sandy fabric (673g). They were heavily abraded and not datable, as is expected of objects recovered from topsoil.

B.6.6 Remarkably, the other two fragments from the topsoil are the most significant in the whole assemblage. Small Find 3 (76g) is a fragment of Roman flue tile. It has a keyed and smoothed upper face, a single remaining edge and a rough reverse. The keyed surface has remains of two sets of incisions. It may be a fragment of parietalis judging by the thickness (15mm), it also bears similarities in fabric with the large fragment from Trench 8. The other fragment (389g) is a piece of Roman box flue tile. It bears the hallmarks of a box tile; a keyed outer surface, thick walls (25mm) and a scar from the joining of a perpendicular face.

Trench 1

B.6.7 Context **48**, the demolition of wall **47**, produced a very small fragment of tile (5g). It is too small to date but likely relates to the demolition of the wall or the later use of the area.

Trench 7

B.6.8 Fill **27** of ditch **25** produced single fragment of CBM (176g). This fragment has been tentatively identified as a brick and may possibly be related to light industry – perhaps related to the malting evidence from the same ditch. It is made in a grey porous silty fabric with a thin (10mm) non-porous upper layer that is smoothed. The faces of the object suggest it has been cut to shape rather than broken, probably while the clay was wet. The base is irregular with square-ish impressions; these may be from crushed stone or grit.

Trench 8

B.6.9 Ditch **41** produced a single fragment of a flue tile, most likely a *parietalis* or facing tile. It has a smoothed and keyed face, one remaining edge face and a rough irregular reverse face. It has a circular hole/notch (D:30mm) that was cut pre-firing in the upper left side. No full width or length, notch/hole is incomplete. The smoothed face has three bands of rough keying of six parallel incisions each, radiating from the notch. The reverse face has a circular burn, full circle is larger than fragment, could the tile have been repurposed as a pot stand? Seems unlikely to be related to kiln firing, burning extends along break faces.

Discussion

B.6.10 The Roman part of this assemblage points towards a high degree of wealth and significance of the parent structure. The box flue fragment, as well as other contenders in the undiagnostic part of the assemblage, are strong evidence for a hypocaust heating system in said building. *Parietalis* tiles are particularly rare in Roman Britain, whole ones in particular (Brodribb, 1989). They were mounted to a wall with the keyed surface exposed so they could be plastered over. The notch allowed a spacer to be used to mount the tile away from the wall in order to create a cavity (*ibid.*) This kind of tile is often used in conjunction with a hypocaust system and suggests a high degree of sophistication of the system as a whole.

B.6.11 The unidentifiable brick in the grey sandy fabric is novel. Whilst it is unclear what it is, its combination with fired clay and evidence of malting suggests that a bespoke light-industrial activity can be linked to the site.

Recommendations and Further Work

B.6.12 This assemblage has been fully assessed and recorded and should be included in the report and the site archive.

B.6.13 The significance of this site is quite heavily implied by the CBM recovered at the evaluation stage. Therefore, this assemblage should be retained and further excavation work should hopefully expand interpretation and characterisation of the site.

Context	Cut	Trench	Feature	Form	Description	Date	Count	Weight (g)	Comment
48		1	Wall Backfill	Tile	Fragment	?	1	5	
27	25	7	Ditch	?Brick	Malting Brick?	Roman?	1	176	Fragment of CBM. A grey-ware like porous fabric with a thin (10mm) non-porous upper layer that is smoothed. The faces of the object suggest it has been cut to shape rather than broken, probably while the clay was wet. Base is irregular with squareish impressions. Patches of ?iron oxide on base.
42	41	8	Ditch	Tile	?Parietalis/ ?Flue Tile	Roman	1	497	Incomplete fragment of a facing tile, Roman Parietalis or flue tile. It has a smoothed and keyed face, one remaining edge face and a rough irregular reverse face. It has a circular hole (D:30mm) that was cut pre-firing. No full width or length, notch/hole is incomplete. Smoothed face has three bands of rough keying of six parallel incisions each, from a brush? radiating from the notch Reverse face has a circular burn, full circle is larger than fragment.
1			Topsoil	Tile	?Parietalis/ ?Flue Tile	Roman	1	76	Small fragment of a keyed tile. Keyed and smoothed upper face, a single remaining edge and a rough reverse. Keyed surface has remains of two sets of keying incisions. Probably a fragment of parietalis or flue tile judging by the thickness, fabric similarity with the large fragment and the keying. Slightly abraded.
1			Topsoil	Tile	Box Flue	Roman	1	389	Fragment of a box flue tile. Outer face is smoothed with remnants of keying/combing, inner face is rough/irregular. Along the surviving edge is evidence of a right-angle turn with a raised break 20mm wide.
1			Topsoil	Tile	Undiag	?	24	593	Collection of thick tile fragments. Could all be flue tile fragments but are very abraded too fragmentary.
1			Topsoil	Brick	Fragment	No Date	1	80	Fragments of brick probably med-early p-med. But no date certain.
						Total	30	1816	

Table 3: Summary CBM catalogue

B.7 Fired Clay

By Ted Levermore

Introduction

B.7.1 Archaeological work produced 23 fragments (367g) of fired clay. This includes both amorphous and structural fragments, the latter exhibiting flattened surfaces and a single example of a hand formed corner. There were no diagnostic fragments, however some fragments appear to be fragments of unidentifiable objects.

Methodology and Fabrics

B.7.2 The assemblage was quantified by context, fabric and form and counted and weighed to the nearest whole gram. Fabrics were examined using a x20 hand lens and were described by main inclusions present. Width, length and thickness were recorded where possible.

B.7.3 The fired clay was attributed to eight fabrics. They consist mostly of a silty or sandy clay matrix with a range of tempers including grit, flint, clay or ironstone pellets. Although the exact source of the clay or inclusions has not been proven for this assemblage these are likely to have been naturally occurring in the local clay. The poor sorting of the inclusions suggests minimal paste preparation, although organic matter (chaff?) may have been added to some of the clay recipes.

B.7.4 The quantified data and fabric descriptions are presented on an Excel data sheet held with the site archive.

Assemblage

B.7.5 The fired clay was collected from eight contexts across five trenches.

Trench 1

B.7.6 Layer 53 produced two fragments (8g) of amorphous fired clay.

Trench 2

B.7.7 Fill 21 of ditch 17 produced one fragment (10g) of amorphous fired clay and one fragment of structural fired clay (24g). The structural fragment likely originated from a kiln bar or similar. It has two perpendicular flattened surfaces remaining.

B.7.8 Post hole 32 produced a single fragment of amorphous fired clay (12g).

Trench 3

B.7.9 Ditch 10 (fills 12 and 13) produced 13 fragments (255g) of fired clay. Three fragments were amorphous (23g) and the remaining 10 (232g) were structural with flattened surfaces. Of these were fragments that refitted to form a clay object with a flattened surface in a high fired and oxidised clay fabric. There were also fragments of thin flattened objects, similar to kiln dome plates. All of these fragments were very abraded and therefore no conclusions are certain.

B.7.10 The backfill (15) of construction cut 14 produced a single amorphous fragment (9g).

Trench 5

B.7.11 Ditch 30 produced a single amorphous fragment (14g)

Trench 7

B.7.12 Ditch 25 (fill 27) produced a two structural fragments with flattened surfaces (35g)

Discussion

B.7.13 None of the fired clay was found *in situ*, therefore information pertaining to exact use or intention is lost. The amorphous fragments provide little information beyond indicating the historic presence of kilns, ovens or hearths. Structural fragments provide more information however there is little to be said about these here because they cannot be related to any diagnostic forms.

Recommendations and Further Work

B.7.14 This assemblage has been fully assessed and recorded and should be included in the report and the site archive.

B.7.15 The significance of this site is quite heavily implied by the CBM recovered at the evaluation stage. Therefore, the fired clay assemblage should be retained and further excavation work should hopefully expand interpretation and characterisation of the site.

B.8 Painted Wall Plaster

By Alice Lyons

Introduction

B.8.1 A total of 8 pieces, weighing 79g, of Romano-British wall plaster, some of which were painted, were recovered from three masonry deposits associated with substantial limestone walls (Table PWP 1). The assemblage consists of small fragments with no complete dimensions and an average fragment weight of only c. 10g.

B.8.2 All the fragments are similar whereby the underlying coarse chalky (or lime) mortar (*arriccio*) is covered with a finer white plaster (*intonaco*), which has been painted with a layer of red ochre.

Methodology

B.8.3 The PWP was counted and weighed to the nearest whole gramme. The material was described and the data presented in tabular form. The assemblage is curated by OA East.

Terminology

B.8.4 The term '*arriccio*' is used to describe the coarse mortar layers which were applied directly to the wall, whilst the term '*intonaco*' is used for the fine top plaster layer upon

which the decoration was painted, following accepted terminology for wall paintings (Mora *et al.* 1984, 10).

Context	Small Find	Feature	Fragment Count	Weight (g)	Description
48		Masonry-Demolition Rubble	2	43	Mortar with several withie impressions.
48	5	Masonry-Demolition Rubble	1	6	Mortar with a intonaco layer covered by red ochre
48	5	Masonry-Demolition Rubble	1	9	Mortar fragment. Burnt.
50	7	Masonry-Wall	1	1	Mortar with a intonaco layer covered by red ochre
51	8	Masonry-Demolition Rubble	3	20	Mortar with a intonaco layer covered by red ochre
Total			8	79	

Table 4: The Painted Wall plaster assemblage

Conclusion

- B.8.5 This is a small abraded assemblage of Romano-British wall plaster, some of which is painted. The painted fragments are consistently decorated with a plain background of red ochre - no other decorative motifs or detail were present. Red ochre was locally available as it is composed mainly of iron oxide, as such it is one of the cheaper and more common wall coverings used in Roman Britain (Davey and Ling 1982, 62).
- B.8.6 Although the potential for further analysis, such as the re-creation of decorative motifs and interior design is limited, the survival of this fragile material is a strong indicator that the footings of the Roman building found during this project were of a high status building such as a villa.

Recommendations for future work

- B.8.7 No additional work is required on this material. If, however, any further excavations are carried out this assemblage should be incorporated into the larger whole.

APPENDIX C ENVIRONMENTAL REPORTS

C.1 Environmental Samples

By Rachel Fosberry

Introduction

C.1.1 Seven bulk samples were taken from features within the evaluated area at Stallingborough Interchange, Lincolnshire in order to assess the quality of preservation of plant remains and their potential to provide useful data as part of further archaeological investigations. Samples were taken from features relating to Roman settlement.

Methodology

C.1.2 The total volume (up to 20L) of each of the samples was processed by tank flotation using modified Siraff-type equipment for the recovery of preserved plant remains, dating evidence and any other artefactual evidence that might be present. The floating component (flot) of the samples was collected in a 0.3mm nylon mesh and the residue was washed through 10mm, 5mm, 2mm and a 0.5mm sieve.

C.1.3 The dried flots were scanned using a binocular microscope at magnifications up to x 60 and an abbreviated list of the recorded remains are presented in Table 1. Identification of plant remains is with reference to the Digital Seed Atlas of the Netherlands (Cappers et al. 2006) and the authors' own reference collection. Nomenclature is according to Zohary and Hopf (2000) for cereals and Stace (1997) for other plants. Plant remains have been identified to species where possible. The identification of cereals has been based on the characteristic morphology of the grains and chaff as described by Jacomet (2006).

Quantification

C.1.4 For the purpose of this initial assessment, items such as seeds and cereal grains have been scanned and recorded qualitatively according to the following categories:

= 1-5, ## = 6-25, ### = 26-100, #### = 100+ specimens

Items that cannot be easily quantified such as molluscs and charcoal has been scored for abundance

+ = rare, ++ = moderate, +++ = abundant

Results

C.1.5 Samples from features associated within the Roman settlement (Trenches 2,3,4) produced a scatter of charred plant remains that are predominantly comprised of poorly-preserved cereal grains with occasional fragments of hulled wheat chaff. Such remains are commonly found on settlement sites and do not represent deliberate deposition. Ditch 10 within Trench 3 contains evidence of duckweed (*Lemna* sp.) in second fill 12 suggesting that the ditch originally contained water, possibly seasonally.

C.1.6 Samples taken from Trenches 7 and 8 were taken from a post hole (43) and ditches 25 and 41 produced significant charred remains. The fill (44) of post hole 43 contains occasional spelt (*Triticum spelta*) and emmer (*T. dicoccum*) wheat grains and chaff. Upper fill (27) of ditch 25 in Trench 7 produced approximately 2 litres of charred plant remains from a 16 litre sample of soil. The 800ml flot was almost entirely comprised of spelt and emmer wheat in the form of chaff (glume bases and spikelet folks), germinated grains, detached sprouts and single-grain spikelets. Six-row hulled barley is a secondary component with both grains and rachis fragments present. Weeds were rare and include docks (*Rumex* sp.), bromes (*Bromus* sp.), scentless mayweed (*Tripleurospermum inodorum*), corn gromwell (*Lithospermum arvense*) and corn cockle (*Agrostemma githago*). Numerous silicates represent chaff that has burnt completely to ash. A comparable charred assemblage was recovered from the single fill (42) of ditch 41. The total volume of the assemblage was considerably smaller (150ml from 7L soil) but it is also comprised of spelt and emmer wheat chaff with evidence of germination. A single charred grain has the morphological appearance of bread (*Triticum aestivum* s.l.) wheat and the weed seed assemblage includes rye-grass (*Lolium* sp.) and small vetches (*Vicia* sp.) one of which showed evidence of germination.

Feature No.	Context No.	Sample No.	Feature Type	% context sampled	Area/trench No.	Volume processed (L)	Flot Volume (ml)	Cereals	Chaff	Legumes	Weed Seeds	Snails from flot	Small Bones	Charcoal <2mm	Charcoal > 2mm
17	20	4	Ditch	<10	2	16	5	#	#	0	0	+++	0	+	++
10	12	2	Ditch	<10	3	17	10	#	#	#	##	+++	#	+++	0
14	49	7	Construction cut	<10	3	14	5	###	0	0	0	0	0	+	0
4	5	1	Ditch	<10	4	11	20	#	0	0	#	++++	0	+	0
25	27	3	Ditch	<10	7	16	800	#####	#####	0	###	0	0	+++	++
41	42	5	Ditch	<10	8	7	150	###	####	##	####	0	0	++	++
43	44	6	Post hole	50	8	8	2	##	#	0	#	0	0	+	0

Table 5: Environmental samples

Discussion

C.1.7 The environmental samples taken during the evaluation of this site indicate that there is potential for the recovery of significant archaeobotanical assemblages relating to the malting of spelt (and possibly emmer wheat) during the Roman period. Spelt gradually replaces emmer as the favoured wheat variety cultivated in the Roman period. Both species produce spikelets in which two grains (usually) are contained

within a tough outer chaff that requires parching and/or pounding to release the grain. Evidence of germination is through the presence of cereal sprouts which are easily knocked off the grain and are frequently found detached within a charred assemblage. A large component of the grain from this site shows evidence of germination either through sprouts that are still attached or through the presence of a dorsal groove that is caused when the grain germinates within the spikelet.

- C.1.8 Evidence of spelt germination is fairly common (although not always ascribable to malting) but assemblages of the size recovered from ditch 25 are extremely rare suggesting that this site has exceptional preservation. Large volumes of spelt malting waste have recently been recovered from an early to middle Roman site at Over Industrial Estate, Cambridgeshire (Fosberry, report forthcoming) and from a middle Roman site at Kettering, Northants (Fosberry, report forthcoming). Malting requires the use of corn-driers to heat the grain in order to halt the germination process. Corn driers are notably rare in Lincolnshire (Monkton 2003, 18). However, six pit like features found at Hobson Way (Field & McDaid 2011, 14) contained occasional barley grains that had begun to germinate prior to charring and have been interpreted as corn-driers.
- C.1.9 If further excavations are planned for this area, a detailed sampling strategy should be employed to investigate spatial distribution of charred malting waste.

C.2 Animal Bone

By Zoe Ui Choileáin

- C.2.1 A total of 83 specimens of bone weighing 3.325kg were found at the site of Stallingborough. Of the specimens 60 were identifiable to species. The assemblage was primarily recovered from ditches with four masonry features containing fragments of bone.

Methodology

- C.2.2 All identifiable elements were recorded using a version of the criteria described in Davis (1987). Identification of the assemblage was undertaken with the aid of Schmid (1972) plus use of the OAE reference collection. Preservation condition was evaluated using the 0-5 scale devised by McKinley (Brickley and McKinley 2004, 14-15). Where possible all remains were determined to be adult or juvenile based on the level of epiphyseal fusion. Results are displayed in the table below.

Results

- C.2.3 The condition of the bone was recorded as a grade 1-2 on the McKinley scale (Brickley and McKinley 2004 p11) meaning that some limited erosion was present. Most specimens were fragmented however some specimens did allow for measurements to be taken.
- C.2.4 Analysis identified a range of species consisting of Cattle, Equid, Sheep/goat, Pig and Dog. The Minimum number of individuals (MNI) per species is recorded below.

C.2.5 Age could be determined for 29 specimens and is recorded in the summary table. Three cases of gnawing were observed on specimens. Three cases of butchery were also observed. These took the form of deep u shaped marks as caused by an axe and finer defleshing marks as caused by a knife. A single fragment of worked bone (SF 9) was identified within context (12). This was a tool made of a sheep/goat tibia pointed at the distal end and polished possibly through use. There was no evidence of shaping on the fragment and it is probable that the pointed end is the result of a natural break.

Discussion

C.2.6 This is typical of a small Roman assemblage with cattle being the most prominent species recorded. The assemblage contains both adult and juvenile individuals and it may be the case that animals were reared on site. This assemblage suggests that if further excavations were to take place on this site a large quantity of information could be gained. A larger assemblage from this site would have potential to analyse age ranges in more detail, investigate whether butchery is domestic related or industrial in purpose and compare and contrast this assemblage with assemblages from nearby Roman occupation sites.

	Cattle	Equid	Sheep/Goat	Pig	Dog
Humerus	1		1		
Radius	2	2			
Ulna	2				
Femur					
Tibia	2		1		
Mandible	1			2	2
MNI	2	2	2	2	1

Table 6: Minimum Number of Individuals

Cut	Context	Feature	Element	No of Frags	Weight (g)	Taxon
4	5	Ditch	Indet	1	1	
			Horncore	1	43	Cattle
			Loose Mand cheek tooth	1	6	Cattle
			Mandible	1	98	Cattle
			Ulna	1	29	Cattle
			Indet	1	1	Small mammal
			Femur	1	206	Cattle
			Humerus	1	76	Cattle
			Loose mand cheek tooth	1	25	Cattle

			Mandible	1	17	Sheep/goat			
			Long bone	1	17	Large mammal			
			Mandible	1	29	Sheep/goat			
10	12	Ditch	Humerus	1	127	Cattle			
			Radius	1	24	Cattle			
			Rib	1	4	Medium mammal			
			Radius	1	12	Sheep/goat			
			Tibia	1	8	Sheep/goat			
			Indet	1	1	Small mammal			
	13			Tibia	1	129	Cattle		
				Skull	1	25	Large mammal		
Femur				1	9	Sheep/goat			
17	20	Ditch	Indet	6	2				
			Vertebra	1	1	Amphibian			
			Loose Mand cheek tooth	1	1	Cattle			
			Mandible	1	39	Dog			
			Radius	1	196	Equid			
			Indet	1	1	Small mammal			
			21			Loose max cheek tooth	1	44	Cattle
						Mandible	1	16	Cattle
						Mandible	1	30	Cattle
						Maxilla	1	72	Cattle
						Radius	1	232	Cattle
						Radius	1	7	Cattle
						Radius	1	95	Cattle
	Tibia	1	83	Cattle					
	Mandible	1	14	Dog					
	Metapodial	1	1	Dog					
	Metacarpus	1	135	Equid					
	Radius	1	156	Equid					
	Long bone	1	4	Large mammal					
	Ulna	1	22	Large mammal					

			Vertebra	1	9	Large mammal
			Rib	1	4	Medium mammal
			Humerus	1	16	Pig
			Loose mandibular row	1	19	Pig
			Astragalus	1	9	Sheep/goat
			Humerus	1	9	Sheep/goat
			Tibia	1	5	Sheep/goat
	22		Loose mandibular cheek tooth	1	4	Cattle
			Metatarsal	1	270	Cattle
			Radius	1	23	Cattle
			Ulna	1	45	Cattle
			Metacarpus	1	125	Equid
			Radius	1	176	Equid
			Mandible	1	56	Large mammal
			Rib	1	5	Medium mammal
			Skull	1	24	Medium mammal
			Humerus	1	11	Pig
			Mandible	1	4	Pig
			Max canine	1	1	Pig
			Vertebra	1	8	Sheep/goat
	23		Tarsal	1	36	Cattle
			Tibia	1	92	Cattle
			Tibia	1	10	Sheep/goat
	24		Calcaneus	1	71	Cattle
			Rib	1	1	Medium mammal
			Humerus	1	15	Sheep/goat
30	31	Ditch	Long bone	1	9	Large mammal
	48	Demolition Rubble	Long bone	1	15	Large mammal
14	49	Foundation Trench	Vertebra	1	67	Large mammal
			Indet	1	1	Small mammal
	50	Wall	Astragalus	1	46	Cattle

	51	Demolition Rubble	Rib	1	8	Large mammal
	53	Layer	Metapodial	1	15	Sheep/goat
54	55	Ditch	Rib	2	17	Large mammal
			Vertebra	1	46	Large mammal
			Tibia	1	15	Sheep/goat
Total				83	3325	

Table 7: Summary of faunal remains

C.3 Shell

By Zoe Ui Choileáin

Introduction

C.3.1 A small quantity of shell was recovered from various ditch slots and is recorded in the table below.

Cut	Context	Feature	Species	Weight (g)	No of Frags
4	5	Ditch	Oyster	128	2
4	6	Ditch	Oyster	25	1
4	7	Ditch	Oyster	200	6
10	12	Ditch	Oyster	19	1
10	13	Ditch	Oyster	75	2
17	20	Ditch	Oyster	22	1
17	21	Ditch	Oyster	15	1
17	22	Ditch	Oyster	64	1
17	24	Ditch	Oyster	74	3
	48	Wall	Oyster	12	1
Total				634	19

Table 8: Summary of shell

APPENDIX D BIBLIOGRAPHY

- Allen Archaeology. 2009. *Archaeological Scheme of Works at Caistor Grammar School, Caistor*. CAGS08
- Archaeological Services WYAS. 2016. *Stallingborough Interchange, Phase 1, North East Lincolnshire. Geophysical and Fieldwalking Survey*. Unpublished
- ArchHeritage. 2014. *Archaeological Excavation on the Stallingborough Pipeline, North East Lincolnshire*. Report Number 2013/33
- Barclay, A., Knight, D., Booth, P., Evans, J., Brown, D. H., Wood, I. 2016. *A Standard for Pottery Studies in Archaeology*. Prehistoric Ceramics Research Group, Study Group for Roman Pottery (Historic England)
- Brickley, M. & McKinley, J. (eds.) 2004. *Guidelines To The Standard For Recording Human Remains. IFA Paper 7* (Reading: IFA/BABAO)
- Brodribb, G. 1989. *Roman Brick and Tile*. Alan Sutton.
- Cappers, R.T.J, Bekker R.M, and Jans, J.E.A. 2006. *Digital Seed Atlas of the Netherlands. Groningen Archaeological Studies 4*. Barkhuis Publishing, Eelde: The Netherlands.
www.seedatlas.nl
- Darling, M. & Precious, B. 2014. *A Corpus of Roman Pottery from Lincoln*. Lincoln Archaeological Studies No.6. Oxbow Books. Oxford.
- Davey, N. & Ling, R. 1981. *Wall-painting in Roman Britain*. Alan Sutton Publishing Ltd
- Davis S.J. 1987. *The Archaeology of Animals*. Routledge
- Field, N. & McDaid, M. 2011. *Biomass Generating Station, Hobson Way, Stallingborough, North East Lincolnshire: Archaeological Excavation*. NFAC Report No 0929.
- Jacomet, S. 2006. *Identification of cereal remains from archaeological sites*. (2nd edition, 2006) IPNA, Universität Basel / Published by the IPAS, Basel University
- Manning, W.H. 1985. *Catalogue of the Romano-British Iron tools, fittings and weapons in the British Museum*. London
- May, J. 1996. *Dragonby. Report on Excavations at an Iron Age and Romano-British Settlement in North Lincolnshire*. Exeter. Oxbow Monograph 61

McComish, J.M. 2015. *A Guide to Ceramic Building Materials*. York Archaeological Trust. Report Number 2015/36. Web Based Report.

Monckton, A. 2003. *East Midlands Archaeological Research Framework: Resource Assessment and Research Agenda for Environmental Archaeology*.
<www.le.ac.uk/archaeology/research/projects/eastmidsfw/> [accessed 03 April 2017]

Mora, P., Mora, L. & Philippot, P. 1984. *Conservation of wall paintings*. London

Network Archaeology. 2016. *A160/A180 Port of Immingham improvement: Post Excavation Assessment of potential for Analysis and Update Project Design*. Report No 16017

Perrin, J.R. 1999. Roman Pottery from Excavations at and near to the Roman Small Town of Durobrivae, Water Newton, Cambridgeshire, 1956–58. *Journal of Roman Pottery Studies* Volume 6

Schmid, E. 1972. *Atlas of Animal Bones*. Elsevier Publishing Company

Stace, C. 1997. *New Flora of the British Isles*. Second edition. Cambridge University Press

Stead, I. M. (ed) 1976. *Excavations at Winterton Roman Villa and other sites in North Lincolnshire 1958-67*. Department of the Environment Archaeological Report 9. London: HMSO

Tomber, R. & Dore, J. 1998. *The National Roman Fabric reference collection, A Handbook*. MoLAS Monograph 2

Tyers, P. 1996. *Roman Pottery in Britain*. Routledge

Van de Noort, R. & Ellis, S. (eds) 1998. *Wetland Heritage of the Ancholme and Lower Trent Valleys: An Archaeological Survey*. Hull: Centre of Wetland Archaeology

Wessex Archaeology. 2016. Hornsea Offshore Wind Farm Project ONE: SPE2 (Plot 87), Completion Statement. Report No 110491

Willis, S. 2003. *Class S, Samian Wares* in Himman, M., *A Late Iron Age Farmstead and Romano-British site at Haddon, Peterborough*. British Arch Report 358, Archaeological Field Unit, Monogr. No. 2.

Woodforde, J. 1976. *Bricks: To Build A House*. Routledge and Kegan Paul.

Zohary, D. & Hopf, M. 2000. *Domestication of Plants in the Old World – The origin and spread of cultivated plants in West Asia, Europe and the Nile Valley*. 3rd edition. Oxford University Press

APPENDIX E OASIS REPORT FORM

Project Details

OASIS Number	Oxfordar3-281774		
Project Name	Roman settlement at Stallingborough Interchange		
Start of Fieldwork	13/3/17	End of Fieldwork	17/3/17
Previous Work	No	Future Work	

Project Reference Codes

Site Code	XLISTA17	Planning App. No.	
HER Number		Related Numbers	

Prompt	
Development Type	Rural commercial
Place in Planning Process	Choose an item.

Techniques used (tick all that apply)

- | | | |
|--|---|--|
| <input type="checkbox"/> Aerial Photography – interpretation | <input type="checkbox"/> Grab-sampling | <input type="checkbox"/> Remote Operated Vehicle Survey |
| <input type="checkbox"/> Aerial Photography - new | <input type="checkbox"/> Gravity-core | <input type="checkbox"/> Sample Trenches |
| <input type="checkbox"/> Annotated Sketch | <input type="checkbox"/> Laser Scanning | <input type="checkbox"/> Survey/Recording of Fabric/Structure |
| <input type="checkbox"/> Augering | <input type="checkbox"/> Measured Survey | <input checked="" type="checkbox"/> Targeted Trenches |
| <input type="checkbox"/> Dendrochronological Survey | <input checked="" type="checkbox"/> Metal Detectors | <input type="checkbox"/> Test Pits |
| <input checked="" type="checkbox"/> Documentary Search | <input type="checkbox"/> Phosphate Survey | <input checked="" type="checkbox"/> Topographic Survey |
| <input type="checkbox"/> Environmental Sampling | <input type="checkbox"/> Photogrammetric Survey | <input type="checkbox"/> Vibro-core |
| <input checked="" type="checkbox"/> Fieldwalking | <input type="checkbox"/> Photographic Survey | <input checked="" type="checkbox"/> Visual Inspection (Initial Site Visit) |
| <input type="checkbox"/> Geophysical Survey | <input checked="" type="checkbox"/> Rectified Photography | |

Monument	Period	Object	Period
wall	Roman (43 to 410)	pot	Roman (43 to 410)
ditch	Roman (43 to 410)	bone	Roman (43 to 410)
posthole	Roman (43 to 410)	Wall plaster	Roman (43 to 410)

Insert more lines as appropriate.

Project Location

County	North East Lincolnshire	Address (including Postcode) Stallingborough interchange Stallingborough NE Lincs
District	North East Lincolnshire	
Parish	Stallingborough	
HER office	NE Lincs SMR	
Size of Study Area	27 hectares	
National Grid Ref	TA 19581 12842	

Project Originators

Organisation	OA East
Project Brief Originator	Hugh Winfield
Project Design Originator	Richard Mortimer

Project Manager	Richard Mortimer
Project Supervisor	Kathryn Blackburn

Project Archives

	Location	ID
Physical Archive (Finds)	NE Lincs Museums Service	
Digital Archive	OAEast	XLISTA17
Paper Archive	NE Lincs Museum Service	

Physical Contents	Present?	Digital files associated with Finds	Paperwork associated with Finds
Animal Bones	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ceramics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Environmental	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Glass	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Human Remains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Stratigraphic		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Survey		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Textiles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked Bone	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Worked Stone/Lithic	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

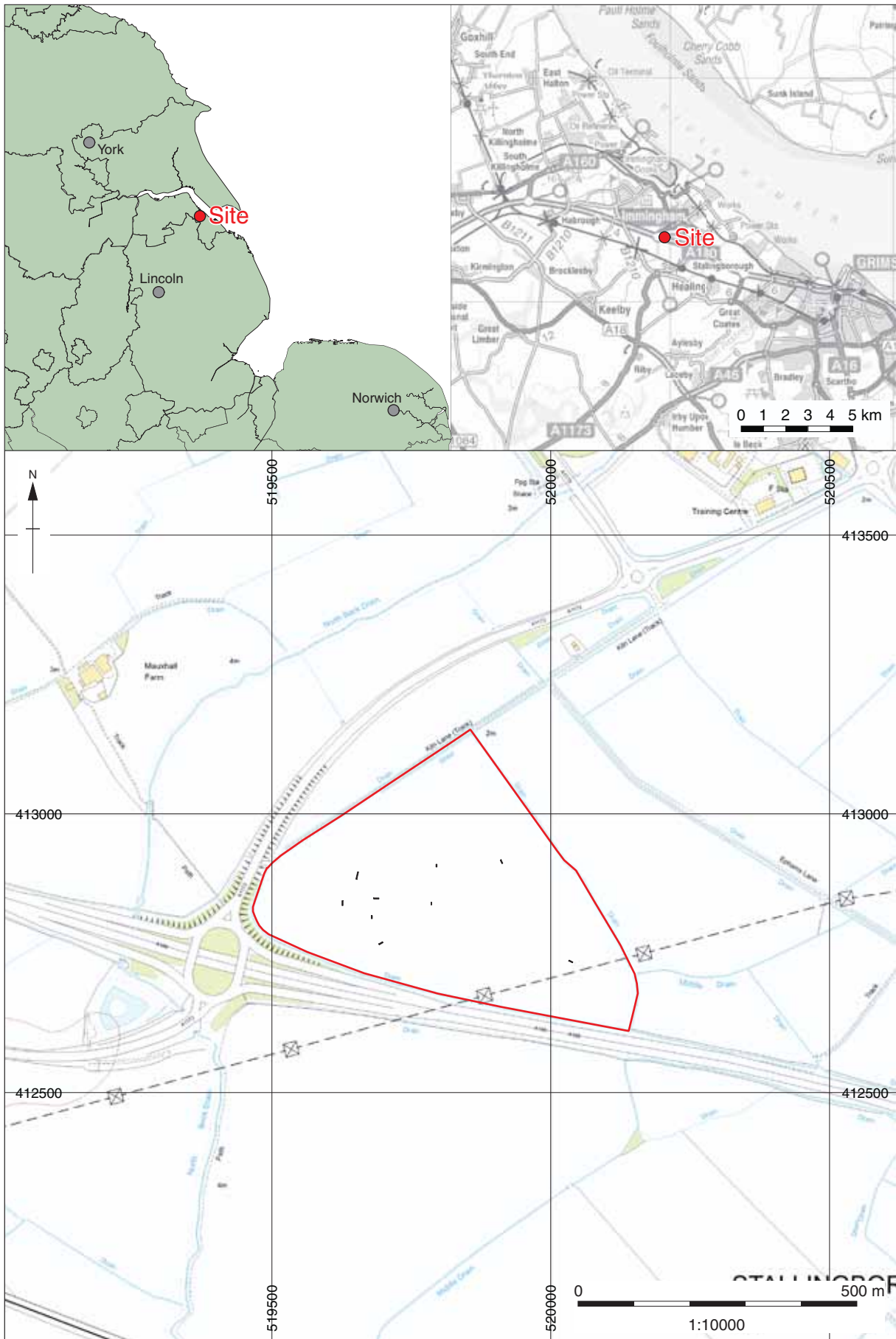
Digital Media

Database	<input checked="" type="checkbox"/>
GIS	<input type="checkbox"/>
Geophysics	<input checked="" type="checkbox"/>
Images (Digital photos)	<input checked="" type="checkbox"/>
Illustrations (Figures/Plates)	<input checked="" type="checkbox"/>
Moving Image	<input type="checkbox"/>
Spreadsheets	<input checked="" type="checkbox"/>
Survey	<input checked="" type="checkbox"/>
Text	<input checked="" type="checkbox"/>
Virtual Reality	<input type="checkbox"/>

Paper Media

Aerial Photos	<input type="checkbox"/>
Context Sheets	<input checked="" type="checkbox"/>
Correspondence	<input checked="" type="checkbox"/>
Diary	<input type="checkbox"/>
Drawing	<input checked="" type="checkbox"/>
Manuscript	<input type="checkbox"/>
Map	<input type="checkbox"/>
Matrices	<input checked="" type="checkbox"/>
Microfiche	<input type="checkbox"/>
Miscellaneous	<input type="checkbox"/>
Research/Notes	<input type="checkbox"/>
Photos (negatives/prints/slides)	<input type="checkbox"/>
Plans	<input checked="" type="checkbox"/>
Report	<input checked="" type="checkbox"/>
Sections	<input checked="" type="checkbox"/>
Survey	<input checked="" type="checkbox"/>

Further Comments



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Figure 1: Site location showing archaeological trenches (black) in development area (red)

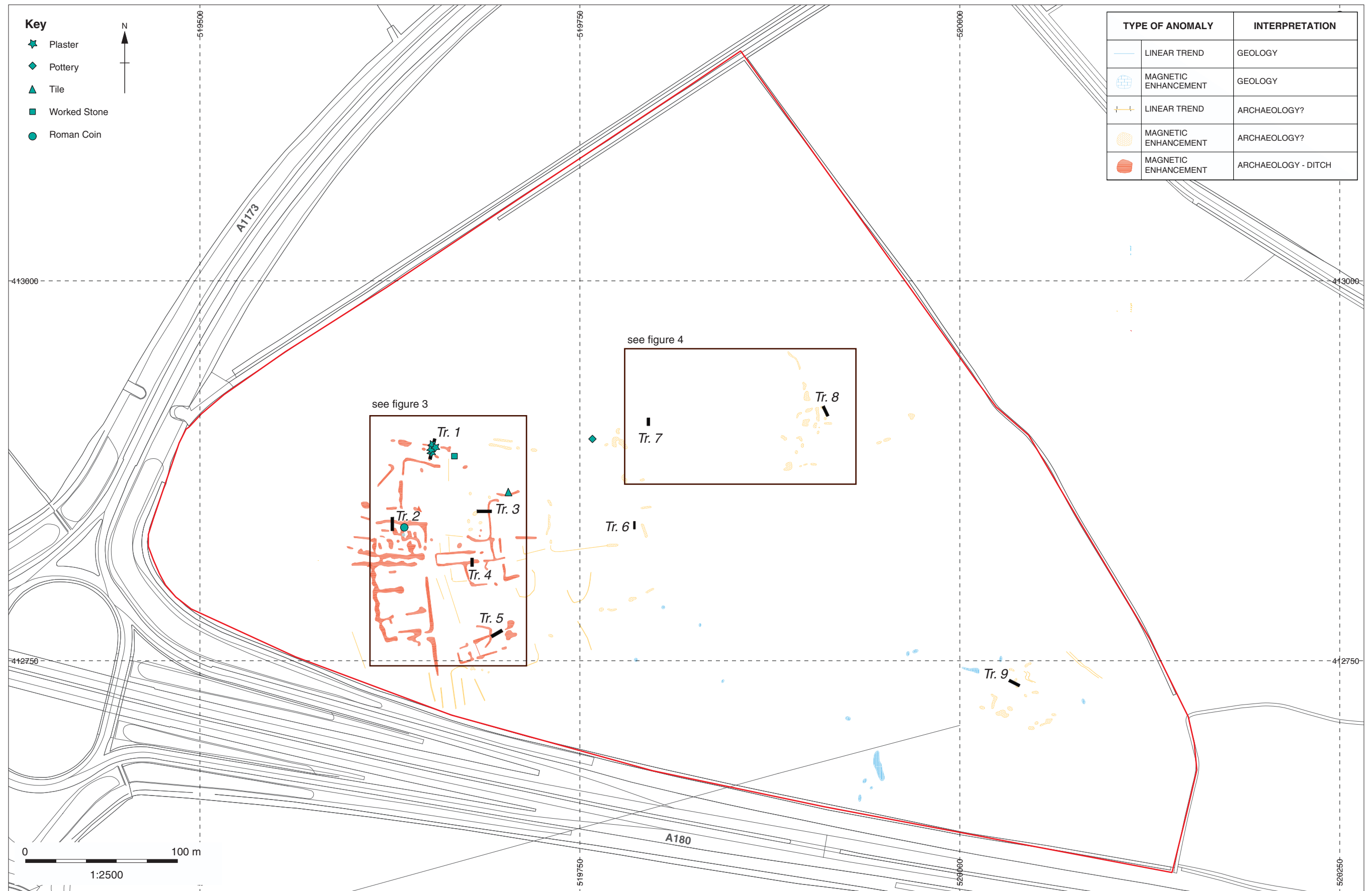


Figure 2: Trench plan overlaying geophysics, data supplied by the client

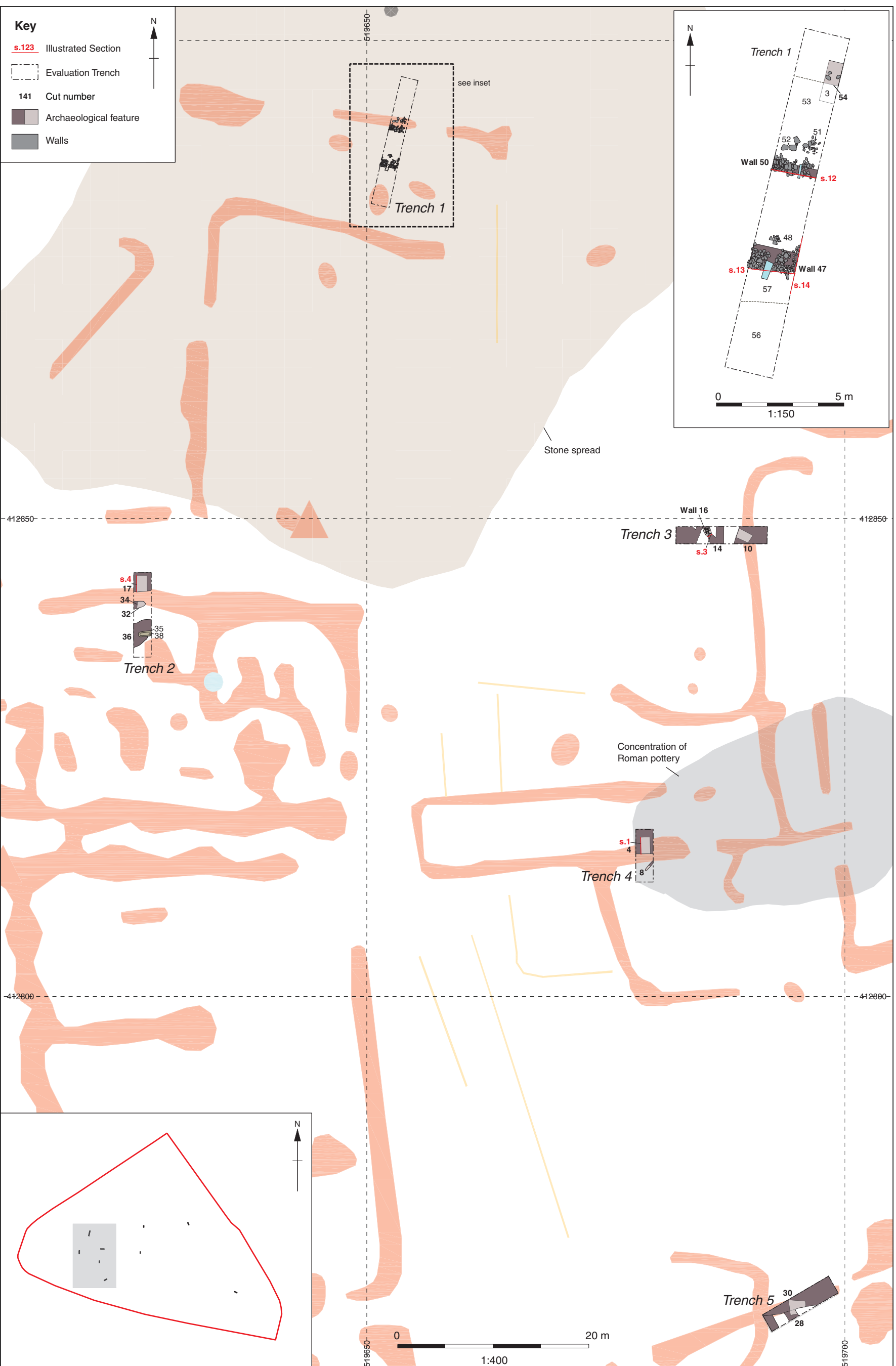


Figure 3: Detail plan of Trenches 1-5

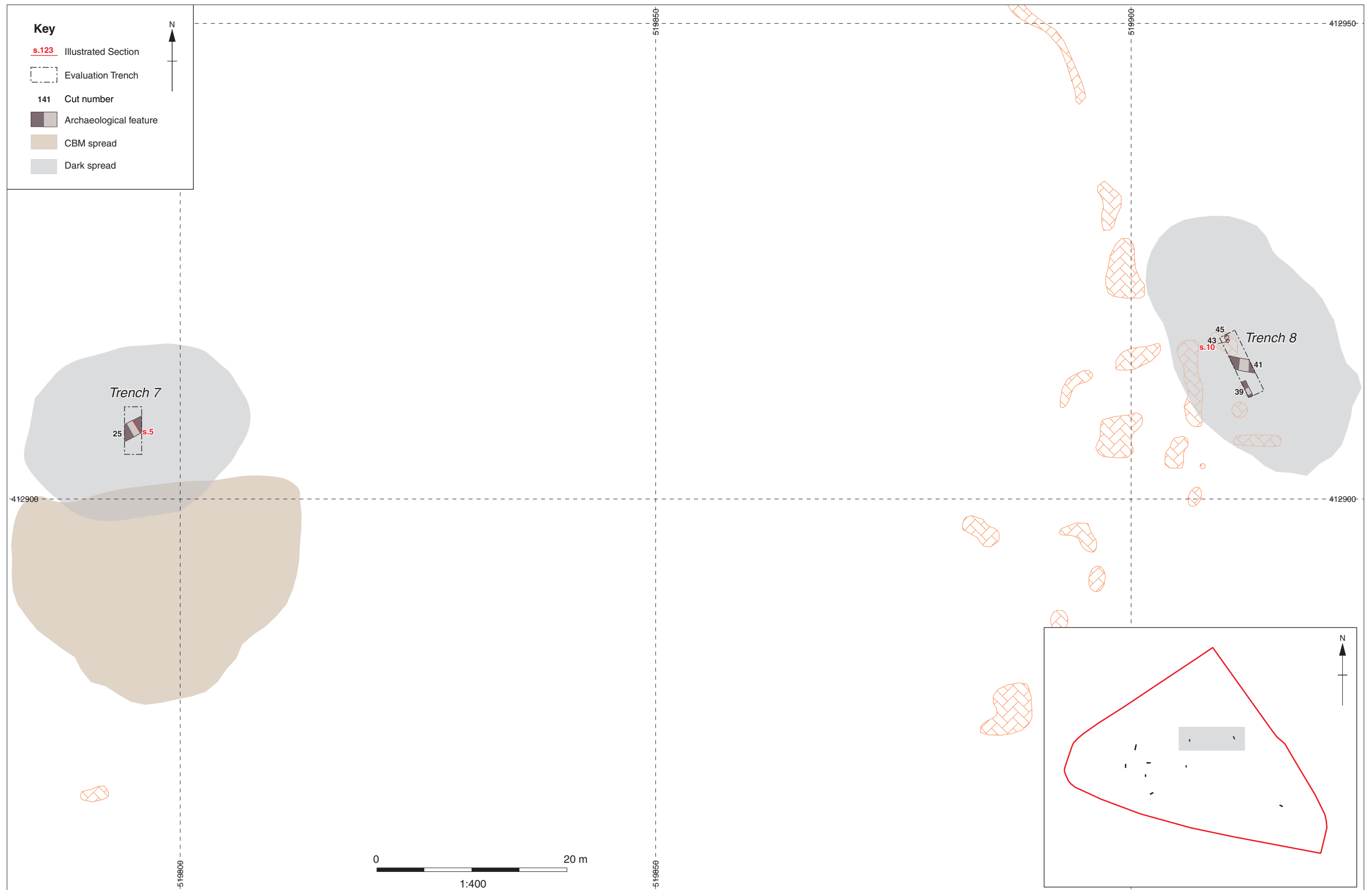
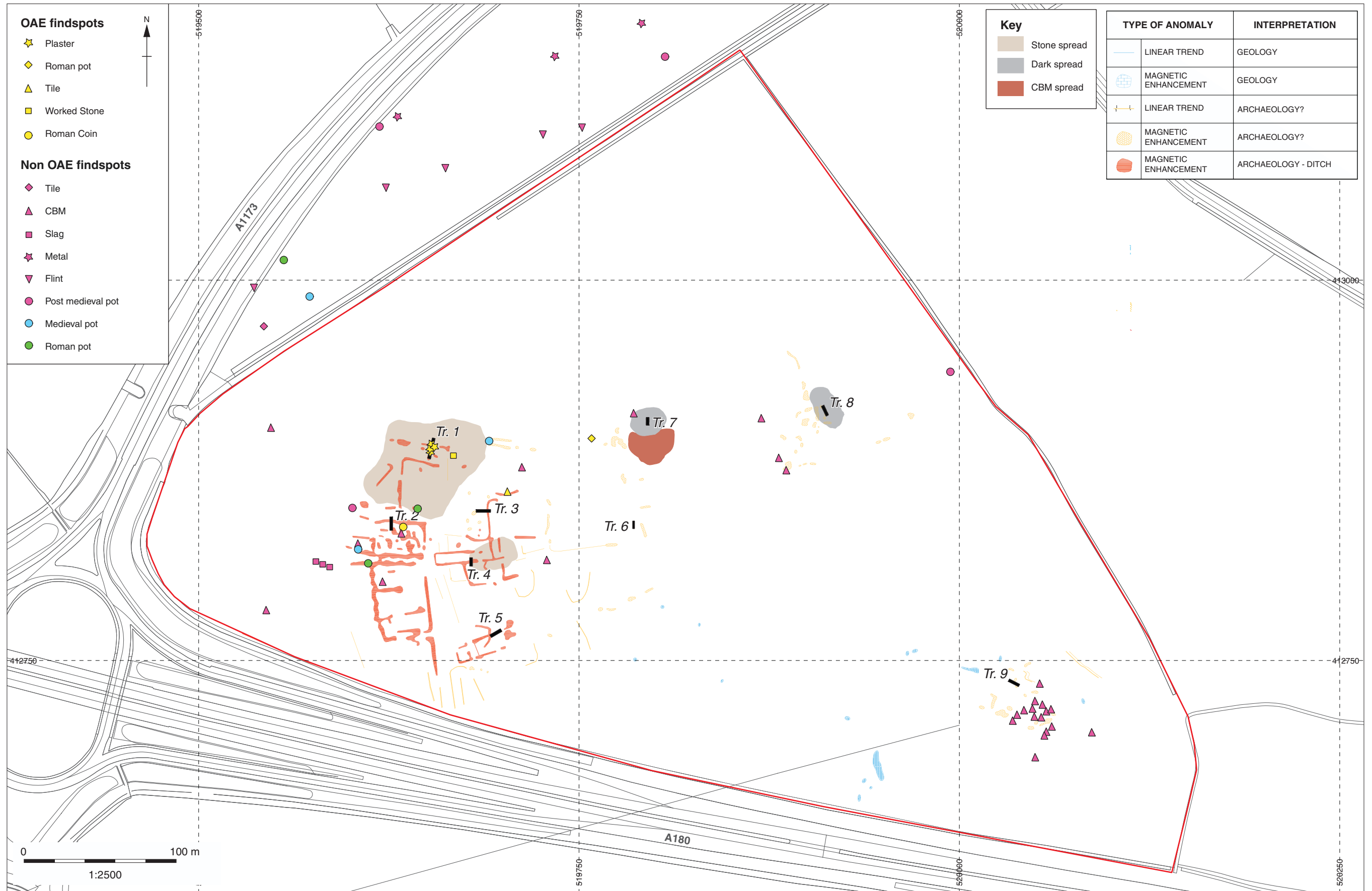


Figure 4: Detail plan of Trenches 7 and 8



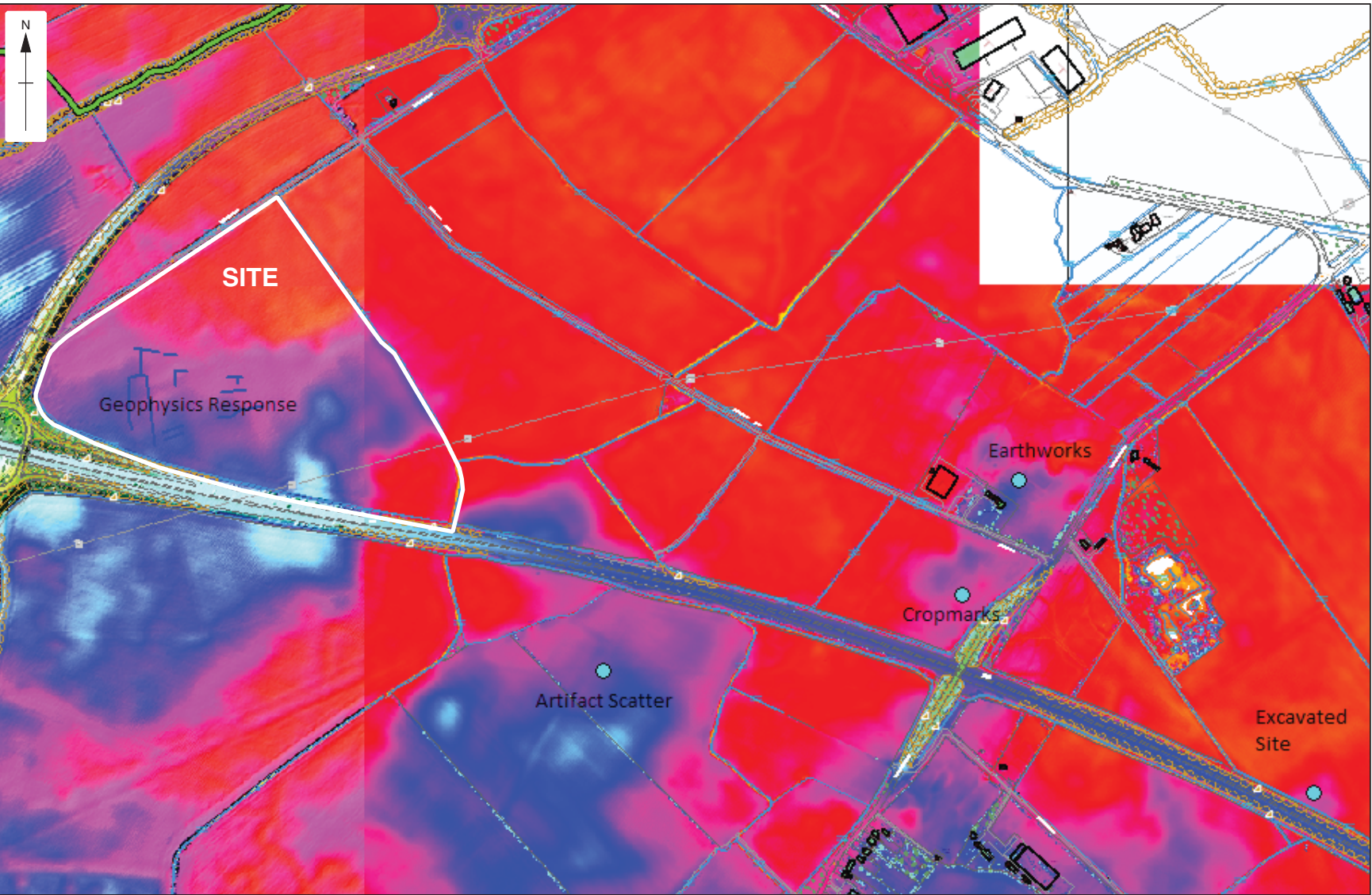


Figure 6: LIDAR survey (data supplied by the client)

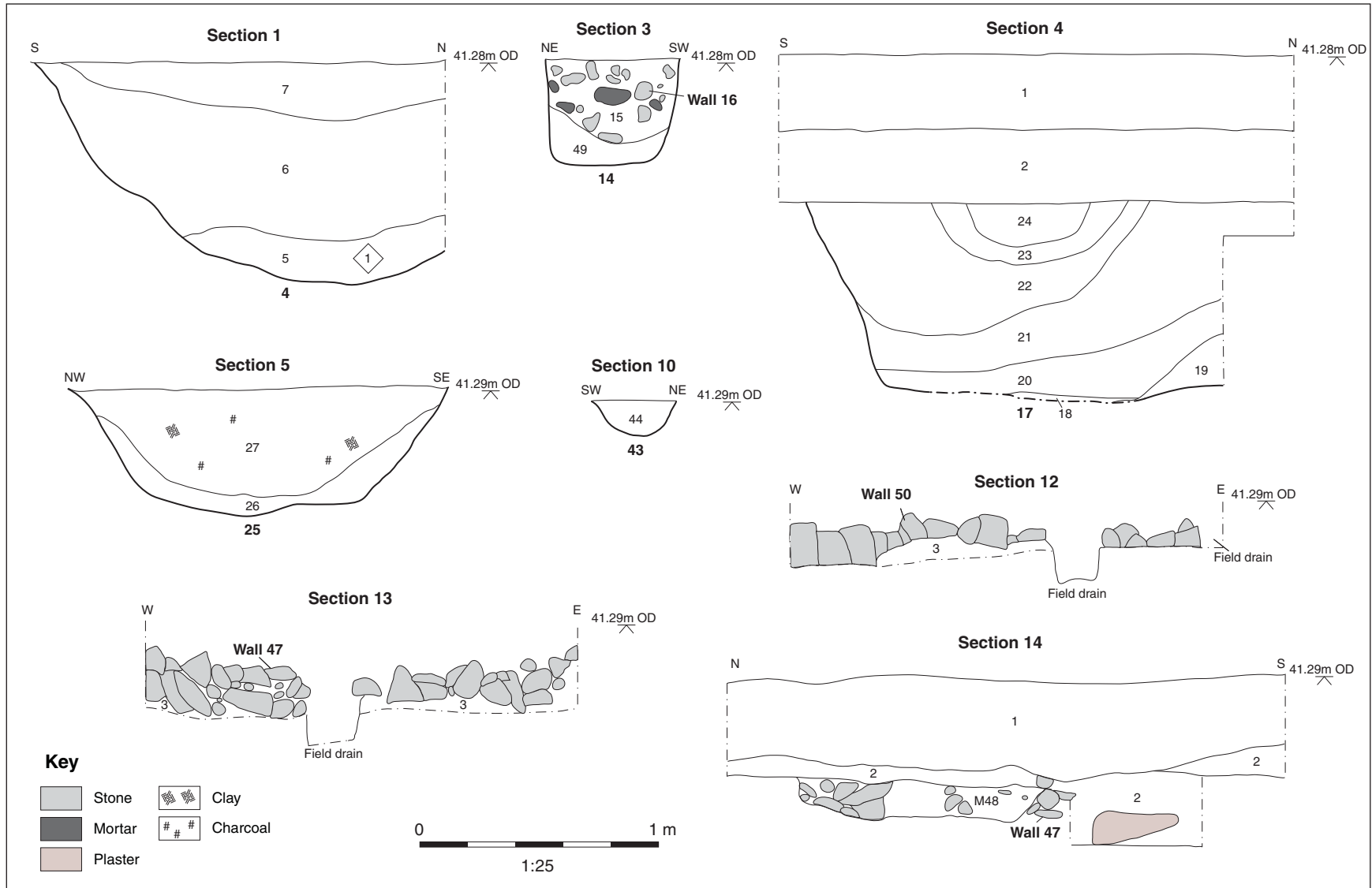


Figure 7: Selected sections



Plate 1: Trench 1, looking north-north-east

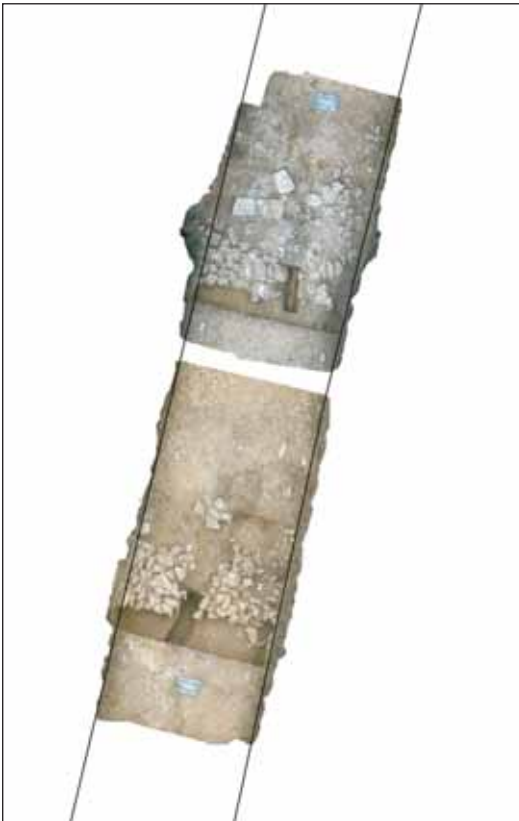


Plate 2: Walls 47 and 50 with possible external surface 52



Plate 3: Possible kiln or oven **36**, Trench 2, looking west



Plate 4: Ditch **10**, Trench 3, looking north-east



Plate 5: Ditch 4, Trench 4, looking west



Plate 6: Ditch 25, Trench 7, looking north-east



Plate 7: Ditch 41, Trench 8, looking north-west



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