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**A160 - A180 Improvements  
Immingham  
North and North-East Lincolnshire**

*Archaeological Evaluation*

*June 2010*

*Report No. 2087*

CLIENT  
Golder Associates (UK) Ltd

# A160 – A180 Improvements Immingham North and North East Lincolnshire

## Archaeological Evaluation

### *Summary*

*An archaeological evaluation by trial trenching was carried out along the preferred route of the A160 – A180 Improvements near South Killingholme, Lincolnshire. This followed a programme of non-intrusive evaluation comprising geophysical survey and air photo mapping and interpretation. Twenty six trenches were excavated, targeted predominantly on magnetic anomalies, revealing archaeological features in thirteen trenches. The main focus of activity identified was to the immediate north-east and north-west of Brocklesby Junction although isolated features were also recorded at the northern and eastern ends of the route. To the north-west of the junction the location of an Iron Age enclosure identified by magnetic survey and as a cropmark has been confirmed. The evaluation also confirmed Iron Age activity at several locations along the route. To the north-east of the junction part of a Romano-British settlement as evidenced by a complex of ditches and gullies has been located confirming the results of the geophysical survey. Pottery analysis suggests initial settlement in the 1st and -2nd centuries followed by a phase of renewal in the 3rd and 4th centuries.*



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## Report Information

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Address: Golder House, Tadcaster Enterprise Park, Station Road,  
Tadcaster, North Yorkshire, LS24 9JF  
Report Type: Archaeological Evaluation  
Location: South Killingholme  
County: North Lincolnshire and North East Lincolnshire  
Grid Reference: TA 136 143 to TA 145 163  
Period(s) of activity represented: Iron Age and Romano-British  
Report Number: 2087  
Project Number: 3535  
Site Code: PO110  
Planning Application No.: Pre-determination  
Museum Accession No.:  
Date of fieldwork: February 22nd – March 31st 2010  
Date of report: June 2010, revised March 2011  
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## **1 Introduction**

Archaeological Services WYAS (ASWYAS) was commissioned by Paul Wheelhouse of Golder Associates (UK) Ltd on behalf of Pell Frischmann, consultants for the Highways Agency to carry out an archaeological evaluation in advance of the determination of the preferred route/s for improvements to the A160/A180 south and east of South Killingholme. The archaeological work was required to establish the archaeological potential and significance of features identified from the geophysical survey and from cropmark data. The evaluation would help to inform the formulation of an appropriate mitigation strategy for dealing with the archaeology in advance of the road construction.

### **Site location and topography**

The evaluation trenches were located along the course of the proposed land take for the various route options. The majority of the trenches were located around the Brocklesby junction of the A180 and A160. Further trenches were located alongside the A160 between the Brocklesby junction and the Ulceby Road junction of the A1077 and A160 and further on to the roundabout at South Killingholme. Three trenches were located on land towards the eastern end of the scheme, directly north of the Immingham West Fire Station on Rosper Road. At all locations the land was generally flat ranging from 3m above Ordnance Datum (aOD) at the east rising to just above 15m aOD north of Brocklesby junction.

### **Soils, geology and land-use**

The solid geology comprises Upper Cretaceous Burnham chalk overlain with superficial (drift) deposits of glacial till (BGS 1983 and 1991). The soils are slowly permeable seasonally waterlogged fine loamy silts of the Holderness association (711u) (Soil Survey of England and Wales 1983). Most of the route was under arable cultivation being either stubble or with recently germinating crops, with a couple of trenches in overgrown pasture/fallow fields.

## **2 Archaeological and Historical Background**

An air photo mapping and interpretation study was undertaken (Deegan 2008) along the proposed upgrading routes and surrounding area. This identified and mapped evidence of possible Iron Age or Roman activity in the form of cropmarks both in the wider search area and within the proposed road corridors. Geophysical surveys (Webb 2008 and 2009) subsequently refined this evidence locating numerous anomalies of archaeological potential, mostly in the southern half of the scheme and particularly around the proposed interchange and slip roads from the A180 adjacent to Brocklesby Junction. These interpretations broadly fit in with the known archaeological sites in the wider landscape.

### **Prehistoric**

Definitive evidence of prehistoric settlement is limited, although artefacts including flints and ceramics have been found in the area of the petro-chemical works along the present A160. In addition excavations at the Vehicle Redistribution and Storage Facility east of Clough Road (Wylie *et al* 2009) identified a late Iron Age settlement comprising two large sub-rectangular enclosures, and three roundhouse as well as many discrete features. Much of the occupation identified was centred on small 'islands', elevated just above the former marsh environment (Wylie 2007). Iron Age activity was also identified during excavations carried out in advance of the construction of the Conoco combined heat and power (CHP) plant although on this site the settlement activity was centred on lower lying land near to a former creek on the shore on the Humber (Savage and Buglass 2001).

### **Roman**

During survey work associated with the power station and the oil refinery complex to the north-west and west of Rosper Road a number of sites were identified. To the north of the power station, at Chase Hill Farm, a significant Roman agricultural 'ladder' settlement was excavated demonstrating generally good degree of preservation with a range of finds including coins, local and imported ceramics, as well as economic indicators such as animal bone being recovered. At the Conoco CHP site a series of ditched enclosures connected by a trackway was identified on higher ground to the north of the Iron Age settlement (see above).

Archaeological excavations undertaken in advance of the re-alignment of Clough Road revealed evidence of agricultural activity and a low level of metal working that peaked in the late 2nd and early 3rd centuries AD (Wylie 2007). Roman pot sherds have also been recovered across the wider landscape, although the density of finds is not great, decreasing towards the former coastline. The excavations at the Vehicle Redistribution and Storage Facility also uncovered an area of superimposed ditches forming a Romano-British rectilinear field system of 2nd to 3rd century AD date and a smaller area comprising Romano-British rectilinear boundary ditches, dating between the late 2nd and early 4th centuries AD.

### **Medieval**

Much of the settlement pattern in Lincolnshire reflects that established in the medieval period. Remnants of medieval farming practices can be seen in abundance in the South Killingholme area, surrounding the medieval manorial complex at Blow Field (SMR ref. 1606) and were also identified during the excavations prior to the realignment of Clough Road (Wylie 2007).

The manorial site at South Killingholme lies at the southern end of a string of similar high status medieval moated sites located on a low clay ridge. Further examples are found to the north at Manor Farm and North Garth in North Killingholme, and at Baysgarth Farm and

Manor Farm in East Halton, all of which survive as earthworks and are Scheduled Monuments (SMR refs. 21185-87).

### **3 Aims and Objectives**

Whilst cropmarks and geophysical survey are good at revealing large linear features, they do not tend to reflect the positions of smaller features, such as pits and post-holes, or indeed some ditches that have been heavily degraded by modern ploughing. The purpose of the trial trench evaluation reported here is to investigate the targeted 'visible' archaeological features and enclosures, as revealed by the remote sensing methods, in order to better characterise the archaeology of the site and to identify and characterise any smaller discrete or degraded features that may not be visible to such techniques.

Consequently, the objectives of the evaluation were to gather sufficient information to establish the extent, condition, character, date and degree of preservation (insofar as circumstances permitted) of archaeological features and deposits within the excavated trenches.

### **4 Methodology**

Following consultation between the client, Alison Williams at the North Lincolnshire Sites and Monuments Record (NLSMR), and Hugh Winfield at the North East Lincolnshire Historic Environment Record (NELHER), a programme of 26 trial trenches (T1-T26) was agreed. All work was carried out in accordance with accepted professional standards and guidelines (English Heritage 2006, Institute of Field Archaeologists 2001), the ASWYAS site recording manual (ASWYAS 2007) and the Written Scheme of Investigation (ASWYAS 2009).

The trenches were laid out and their limits resurveyed using a Differential GPS system (dGPS) accurate to +/- 0.01cm. All trenches were also fixed in relation to nearby permanent structures and to the Ordnance Survey National Grid.

All topsoil and subsoil deposit were removed in level spits (not more than 0.2m) using a JCB excavator equipped with a smooth-bladed ditching bucket under direct archaeological supervision. All machining was halted at the first identifiable archaeological horizon or natural deposits. The stripped surface was cleaned by hand and inspected for any archaeological remains. All linear features were subject to a manual sampling regime of 10% of their total length within the trial trench, each section excavated was no less than 1m in length. Sections were, where possible, located adjacent to the trench edge to provide the full stratigraphic sequence. All terminal-ends, corners and intersections were fully investigated. All discrete features such as pits and post-holes were 50% excavated (by area) as a minimum.

All archaeological features were accurately recorded in plan at a scale of 1:50 and all excavated features were recorded in sections at scales of either 1:10 or 1:20. All plans and sections include spot heights related to the Ordnance Datum (OD) in metres. A full written and photographic record was made of all archaeological features. A soil-sampling programme was undertaken for the identification and recovery of carbonised remains, vertebrate remains, molluscs and small artefactual material. Soil samples of up to 60 litres were taken from the fills of excavated features where appropriate.

The evaluation took place in two phases between February 22nd and March 31st 2010. The work was monitored throughout by NLSMR and NELHER. An inventory of the primary archive is presented in Appendix 1 and a concordance of contexts, finds and environmental samples is presented in Appendix 2. A copy of the Written Scheme of Investigation is presented in Appendix 3. ASWYAS currently holds the site archive in a stable and secure location.

## **5 Results**

### **Summary**

In total 26 trial trenches were excavated along the routes of the A160 – A180 Improvement scheme with thirteen containing archaeological features or deposits. All trenches except T14, which was 40m by 2m, measured 15m by 2m giving a total area of 830m<sup>2</sup>. All but one trench was targeted on anomalies identified by the geophysical (magnetometer) survey. Trench 25 was located to sample an area which was unsuitable for magnetometer survey.

The trenches located around the Brocklesby junction contained archaeological features comprising of enclosure ditches and gullies of unknown function, dating to the Romano-British period. Several trenches contained no archaeological remains and only recorded the presence of modern agricultural activity.

### **Deposit Model**

The topsoil and subsoil deposits sealing the archaeological deposits and features were broadly similar across the site. A summary of the results containing information on the depths of topsoil and subsoil and the level at which the natural deposits were exposed is given in Table 2. The variation in the natural geology levels is also recorded here. The majority of the fills of the archaeological features comprised mid to dark greyish brown clayey soils. Any variations from this norm are described below.

### **Trial Trenching**

#### ***Trench 1 (Figs 2 and 8; Plate 1 and Plate 2)***

T1 was located south of the A180 and was orientated north-east/south-west. The trench was targeted on two parallel ditches identified by the magnetometer survey. The topsoil and

subsoil were removed by machine to an average depth of 0.50m below the ground level, at which point the clay natural was exposed at a minimum level of 11.44m aOD. Several archaeological features were indentified within the trench. At the north-eastern end two gullies that correspond with the geophysical anomaly were identified (218 and 220). At the south-western end of the trench two ditches and a shallower gully were present (213, 210 and 228 respectively). Cut through these linear features was another ditch (215); none of these latter features were identified by the geophysical survey.

#### **Ditch 213 (Fig. 8, S.41 Plates 1 and 2)**

Ditch 213 forms the earliest ditch in a sequence of three ditches that occupied the south-western area of T1. The features were orientated slightly off from north/south and ran at an oblique angle through the trench. Four slots were excavated into the features order to obtain as complete profile as possible and ascertain the stratigraphic relationships between the various features. Ditch 213 had a broad based U-shaped profile 0.60m deep. Only 0.98m of the ditch's width was visible due to truncation by Ditch 210 to the south-east and the limits of the trench to the north-west. Two separate fills were identified within the cut; the primary fill (212) was lighter in colour and is probably the product of erosion of the natural sides of the ditch or bank into the ditch. In comparison the secondary fill (211) was dark grey to black in colour; a full profile of this deposit was not obtained again due to the limits of the trench. Three sherds of Late Iron Age pottery and a number of animal bone fragments were recovered from deposit 212.

Running along the same course and cutting Ditch 213 to the south-east was Ditch 210 which possessed a flat based U-shaped profile with steps cut in the profile on both sides. The feature was 1.15m wide and 0.45m deep. Three fills were recorded within the ditch. Deposits 208 and 209 were very similar and again indicate weathering of the natural clays into an open ditch. The main fill of the ditch (207) was dark greyish brown and produced 18 sherds of Late Iron Age pottery and some animal bone. A gully (228) was located to the east of these two ditches and either terminated 5m from the north-western end of the trench or turned to the north-east; the slot excavated to resolve this proved inconclusive. Seven sherds of mid-late Iron Age pottery were recovered from the single fill (229). The exact course of the gully was difficult to determine due to the location of the trench, and a much larger area of excavation would be required to fully define its course.

#### **Ditch 215 (Plate 2)**

Ditch 215 was located at the extreme south-western end of the trench and cut through the fills of Ditch 213/217; it corresponded with a linear magnetic anomaly orientated north-west/south-east. The excavated slot did not provide a full profile but the partially excavated ditch possessed convex sides with a flat base, was 0.51m deep and at least 0.95m wide. The

single fill (214) was dark greyish brown and contained frequent small rounded chalk fragments in contrast with the fill of Ditch 213/217. Six sherds of Iron Age pottery and animal bone were recovered from deposit 214.

#### **Gullies 218 and 220 (Fig. 8, S.44)**

Gullies 218 and 220 were located 3.5m from the north-eastern edge of T1. The orientation of Gully 220 suggested that it would intersect with Gully 218. However, the excavated slot did not provide conclusive evidence as to the relationship between the two features. The feature was 0.7m wide and 0.16m deep; a small assemblage of Iron Age pottery was recovered from the single fill (221).

Gully 218 was 1.10m wide and 0.40m deep and Iron Age pottery fragments and animal bone were recovered from the single fill (219).

Both gullies were filled by a single deposit indicative of slow gradual silting up. The function of the two features is difficult to ascertain with such a limited sample but both could be the remnants of a field system or part of internal divisions within an enclosure, perhaps formed by Ditch 213 or 210.

#### ***Trench 2 (Fig. 2; Plate 3)***

T2 was located south of the A180 next to the Brocklesby junction and was orientated north-west/south-east. The trench was targeted on a single linear anomaly identified by the geophysical survey. The topsoil and subsoil were removed by machine to an average depth of 0.56m below the ground level, at which point the clay natural was exposed at a minimum level of 10.44m aOD. The feature was identified as a narrow field drain filled with an industrial slag material. No archaeological features or deposits were revealed.

#### ***Trench 3 (Figs 2 and 9; Plate 4 and 5)***

T3 was located to the north-east of the Brocklesby junction and was orientated north-east/south-west and was targeted on a cluster of magnetic anomalies. The topsoil and subsoil were removed by machine to an average depth of 0.54m below the ground level, at which point the clay natural was exposed at a minimum level of 12.41m aOD. At the south-western end of the trench no archaeological features were identified except for cuts for a ceramic field drain, a plastic water pipe and wheel ruts. A single large re-cut ditch (114) corresponding with a linear magnetic anomaly was identified 3.6m from the north-eastern edge of the trench.

#### **Ditch 114 (Fig. 9, S.16; Plate 5)**

Ditch 114 was 0.60m deep, at least 0.60m wide with a steep V-shaped profile. Seven sherds of 2nd century+ pottery and a number of animal bone fragments were recovered from its single fill (113). Ditch 114 was cut by Ditch 150 which had a more U-shaped cut and was 1.45m wide and 0.52m deep and contained two fills (115 and 149). The primary fill (149) appeared to be the result of a slow silting process caused by erosion of the sides and possibly

bank material. A single sherd of general Roman pottery was recovered. The upper fill (115) was much darker, and in places was blackish grey in colour. A fragment of a folded beaker, dating to the 4th century, and animal bone were also recovered from this secondary deposit. The size and nature of the ditch could suggest that it forms part of an enclosure ditch in this area.

#### ***Trench 4 (Figs 2 and 10; Plates 6 and 7)***

T4 was orientated north-west/south-east and was targeted on two linear geophysical anomalies. The topsoil and subsoil were removed by machine to an average depth of 0.52m below the ground level, at which point the clay natural was exposed at a minimum level of 12.95m aOD. A pair of parallel ditches (121 and 127) corresponding with the magnetic anomalies was recorded in the centre of the trench. A field drain (123) was also identified running along the entire length of the trench.

#### **Ditch 121 (Fig. 10, S. 2; Plate 7)**

Ditch 121 was located 4.75m from the north-western end of the trench. The cut was U-shaped in profile and was 1.44m wide and 0.48m deep containing two fills. The initial fill (120) was confined to the south-eastern side of the ditch and may represent erosion or collapse of bank material into the ditch. Pottery dating to the 3rd century was recovered from this deposit. The upper fill (119) was dark bluish grey in colour and was the main fill within the ditch. Ten sherds of 3rd century+ pottery and animal bone were recovered from this deposit.

#### **Ditch 127 (Fig. 10, S.6)**

Ditch 127 was located 5.75m from the south-eastern end of the trench. The cut was U-shaped with a step on the south-eastern side. The ditch was 1.15m wide and 0.43m deep. A total of three fills were identified. The primary fill (126) was interpreted as redeposited natural and contained three very abraded sherds of Roman pottery. The secondary fill (125) was only present on the north-western side and extended to the top of the cut. This is indicative of bank material that has slipped into the ditch. Pottery from the early to mid 2nd century, animal bone and a quern fragment were recovered from fill 125 whereas only pottery was recovered from 126. The main ditch fill (124) was dark greyish brown and produced an abundance of 2nd to 3rd century pottery and animal bone.

The function of the two ditches is not clear, although with the presence of additional features in the surrounding trenches this suggests that they may well form boundary ditches for an enclosure or internal divisions within the settlement located in this area.

#### ***Trench 5 (Figs 2 and 11; Plates 8 and 9)***

T5 was orientated north-east/south-west and was targeted on several magnetic anomalies. The topsoil and subsoil were removed by machine to an average depth of 0.35m below the ground level, at which point the clay natural was exposed at a minimum level of 12.79m

aOD. Four gullies (103, 108, 110 and 132), two ditches (139 and 154) and a possible post-hole (105) were exposed within the trench. Two plough furrows were also investigated.

### **Gully 103 and Post-hole 105**

Both features were located at the north-eastern end of T5. The gully terminated within the excavation area, 0.30m from the north-western side of the trench. A section through both features did not reveal a clear relationship as the fills (102 – gully and 104 -post-hole) were too similar. The arrangement of the two features could suggest that they are structural; however, as only a small portion of these features were exposed this interpretation must remain tentative. Pottery and animal bone were recovered from the fills of both features.

### **Gullies 108, 110 and 132 (Fig. 11, S.4)**

All three gullies were located in close proximity to each other; a single slot was excavated to provide full profiles and establish the relationship between the features. The deepest gully (108) was located on the north-eastern side of the trench and was 0.80m wide and 0.35m deep and contained a single fill (107). This gully was cut to the north-east by a plough furrow (112). The central gully (110) was the smallest and shallowest being 0.35m wide, 0.20m deep with a single fill (109). The final gully in the sequence (132) was 0.59m wide, 0.28m deep with two fills (130 and 131). The secondary fill (130) was dark grey in colour and contained pottery fragments. The primary fills (131, 109 and 107) of each of the gullies were too similar to provide any clear distinction between them. The function of the gullies is difficult to establish as so little was exposed by the excavation, although a structural element cannot be ruled out as well as perhaps field boundaries or internal divisions within an enclosure. The pottery recovered from the fills of Gullies 132 and 110 all dates to the mid 3rd century onwards.

### **Ditch 139 (Fig. 11, S.15; Plate 9)**

Ditch 139 was V-shaped in profile, 1.19m wide and 0.42m deep containing two fills. The primary fill (138) produced 69 sherds of pottery including a near complete vessel in a native tradition fabric with burnished lattice decoration. Samian ware was also recovered, suggesting a date of early to mid 2nd century. Large amounts of oyster shell were also recovered from this deposit. The secondary ditch fill (133) also produced 2nd century pottery, animal bone, oyster shells and frequent small rounded chalk fragments. Cut into the top of deposit 133 was a small feature (135) that was semi-circular in plan, 0.5m in length, 0.46m in width and 0.22m deep. The two fills (134 and 148) contained a large amount of burnt bone as well as burnt clay. No burning *in situ* was apparent suggesting this was the remains of a hearth deliberately deposited into the ditch.

### **Ditch 154**



Ditch 154 was located 1m from the south-western end of the trench and had a U-shaped profile with a slight step towards the north-eastern side. It was 1.25m wide, 0.47m deep and contained a single fill (153) from which pottery and animal bone were recovered.

The features identified within T5 broadly correspond with anomalies identified by the geophysical survey. The finds recovered also suggest fairly intensive occupation in the surrounding area and not just the remnants of field systems.

#### ***Trench 6 (Figs 2 and 12; Plates 10 and 11)***

T6 was orientated north-east/south-west and was also located to investigate a cluster of magnetic anomalies. The topsoil and subsoil were removed by machine to an average depth of 0.38m below the ground level, at which point the clay natural was exposed at a minimum level of 13.12m aOD. Three ditches (118, 140 and 142) and three post-holes (147, 152 and 156) were identified in the trench as well as a plough furrow and two field drains. The discrete features are recorded in Table 1 below.

#### **Ditch 118 (Fig. 12, S.1)**

Ditch 118 was located 1.7m from the south-western end of T6 and appears to be the continuation of Ditch 153 in T5. The ditch itself was U-shaped in profile, 0.9m wide and 0.54m deep containing a single fill (117). Mid 3rd century+ pottery and animal bone was recovered from this fill.

#### **Ditches 142 and 140 (Fig. 12, S.10; Plate 11)**

The earliest feature in the sequence was Ditch 140 which was 0.47m wide and 0.30m deep with a U-shaped profile. The single fill (141) comprised light brownish orange silty clay that contained both pottery and animal bone fragments. The fill of this smaller ditch (141) was cut by a much larger ditch (142) that was 1.85m wide and 0.67m deep. The profile of Ditch 142 was notable for having a step that formed a narrow trench in the base of the ditch and its single fill (143) notable for a large assemblage (123 sherds) of Romano-British pottery fragments as well as animal bone and oyster shells. The pottery recovered from the fill of Ditch 140 dates to the late 1st to mid 2nd century. The bulk of the pottery from the fill of Ditch 142 also dates to the late 1st to mid 2nd century but also contains fragment of Dales ware jars that belong to the 4th century; several cross context joining sherds between 143 and 141 suggests that material from 141 has been deposited within Ditch 142 when it was cut.

Table 1. Discrete features located in T6

Context Number		Diameter (m)	Depth (m)	Finds	Additional information
Cut	Fill				
147	146	0.60	0.08	-	Possible hearth base, slight reddening of the natural.
152	151	0.35	0.10	Pottery, single Roman greyware sherd	Feature located in close proximity to Ditch 142.

156	155	0.43	0.10	Pottery, six sherds of Roman pottery, including a bowl in an oxidised fabric copying Samian form 38	Pad stone located at base of cut
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### ***Trench 7 (Figs 2 and 13; Plates 12 and 13)***

T7 was orientated north-east/south-west and was located to evaluate a cluster of magnetic anomalies. The topsoil and subsoil were removed by machine to an average depth of 0.50m below the ground level, at which point the clay natural was exposed at a minimum level of 13.41m aOD. The south-western end of the trench contained a plough furrow and a modern plastic pipe. The remainder of the trench contained a large ditch (162) and two small gullies (164 and 243).

### **Ditch 162 (Fig. 13, S.21; Plate 13)**

Ditch 162 was located within the centre of the trench and broadly corresponded with the geophysical data. In plan the south-western side of the ditch arched into the trench suggesting that this is a corner or a curve in the ditch. The profile of the ditch was U-shaped with distinct stepping along the south-eastern side. The ditch was 0.79m deep and between 2.15m and 2.54m in width, the variation being due to the turn of the ditch. Three distinct fills (161, 160 and 159) were recorded. The primary fill (161) was dark greyish brown with frequent amounts of charcoal, from which Roman pottery fragments were recovered. The interface between deposits 161 and 159 consisted of a band of charcoal rich material (160). Sherds of Roman greyware were recovered from deposit 159. All of the fills from features in this trench were very dark in colour suggesting a large amount of burning somewhere in close proximity.

### **Gullies 164 and 243**

Located at the north-eastern end of the trench were two intersecting gullies. No discernable relationship was visible between the two gullies as the fills of both comprised an identical dark blackish brown clayey deposit. The northern most feature, Gully 164, was 1.05m wide and 0.26m deep. Its single fill (163) produced a single fragment of late Iron Age pottery. The other gully (243) had a more pronounced curve in plan and was only 0.45m wide and 0.08m deep. No finds were recovered from its single fill (242).

The size of Ditch 162 and the artefacts recovered suggest that this could be an enclosure ditch, perhaps marking the northern limit of settlement on the eastern side of Brocklesby junction. The turn in the ditch also aligns itself with the cropmarks located to the west, suggesting an expansion of this known settlement. The exact dating of the ditch is problematic due to the lack of definition provided by the pottery recovered. However, the ditch does appear to be later than the two gullies, 164 and 243. These gullies do not appear to be structural but with only a limited area exposed this cannot be discounted.

### ***Trench 8 (Fig. 2; Plate 14)***

T8 was located to the north-west of the Brocklesby junction and was orientated north-west/south-east. The trench was targeted on two parallel linear anomalies identified by the geophysical survey. The topsoil and subsoil were removed by machine to an average depth of 0.43m below the ground level, at which point the clay natural was exposed at a minimum level of 12.65m aOD.

The northernmost anomaly was found to be caused by a cut feature containing brick and clay pipe. No further investigation of this feature was undertaken although it does correlate with the location of the parish boundary. The second linear anomaly was found to be correlate with two modern land drains less than 1m apart. A fourth land drain perpendicular to the other features, which did not manifest as a magnetic anomaly, was also recorded at the southern end of the trench. No archaeological features or deposits were revealed in this trench, although late 1st to mid 2nd century pottery was recovered from the subsoil.

#### ***Trench 9 (Fig. 2; Plates 15 and 16)***

T9 was orientated north-west/south-east and was also targeted on a linear anomaly identified by the geophysical survey. The topsoil and subsoil were removed by machine to an average depth of 0.56m below the ground level, at which point the mottled blue and reddish clay natural was exposed at a minimum level of 12.53m aOD. A single field drain was located at the north-western end of the trench which corresponded with the magnetic anomaly (Plate 16). The drain cut was filled with an industrial slag material to a depth of 0.40m. The trench was extended by two metres to the north-west to make sure no archaeology was present. This extension confirmed that no archaeological features or deposits were present within this trench.

#### ***Trench 10 (Figs 2 and 10; Plates 17 and 18)***

T10 was orientated north-west/south-east and was targeted on a single linear magnetic anomaly which was also visible as a cropmark. The topsoil and subsoil were removed by machine to an average depth of 0.6m below the ground level, at which point the reddish clay natural was exposed at a minimum level of 12.87m aOD. Two features were exposed in plan; a large ditch (206) and a plough furrow (201).

#### ***Ditch 206 (Fig. 14, S.39; Plate 18)***

Ditch 206 was located centrally within T10 and possessed an irregular U-shaped profile which contained a stepped area forming the bottom of the ditch. The ditch was 2.40m wide and 0.89m deep, containing a sequence of four fills. The basal two fills (205 and 204) were contained within the lower portion of the ditch cut; both were dark greyish brown in colour with the primary fill (205) containing orange streaks of iron panning. Only animal bone fragments were recovered from the primary fill. Fill 203 which was only located on the south-eastern side of the ditch, and comprised a thin band of re-deposited natural. This side corresponds with the interior of the enclosure (as interpreted from the cropmark evidence)

and provides tentative evidence of the presence of an interior bank. The main ditch fill (202) comprised greyish brown clay which appears to have accumulated gradually. An assemblage of Iron Age pottery that does not contain any shell gitted wares was recovered from this deposit. The absence of this fabric suggests the assemblage it may well be Mid-Iron Age, probably from the second half of the 1st millennium BC. Animal bone fragments were also recovered.

Ditch 206 closely corresponds with the location of the cropmark and geophysical anomaly and forms part of the north-western side of a large enclosure approximately 60m by 60m. No internal features were exposed within the trench but the limited area opened up within the interior of the enclosure should not preclude there being additional archaeological features within.

#### ***Trench 11 (Figs 2 and 15; Plate 19 and 20)***

T11 was orientated north-west/south-east and was targeted on a single linear anomaly identified by the geophysical survey. The topsoil and subsoil were removed by machine to an average depth of 0.52m below the ground level, at which point the reddish clay natural was exposed at a minimum level of 12.75m aOD. A single ditch feature (192) was exposed in plan in the centre of the trench which corresponded with the geophysical data.

#### **Ditch 192 (Fig. 15, S.34; Plate 20)**

Ditch 192 had a V-shaped cut and was 0.72m wide and 0.52m deep with a slight step on the south-western side. The ditch cut across the trench with a slight curve towards the north-east. The ditch contained a single fill (191) which was almost entirely black in colour and contained some burnt clay fragments. The fill produced Iron Age pottery and animal bone. The colour of the fill and the finds suggest occupational activity within the enclosure identified from air photographs and confirmed by the ditch sampled in T10 (see above). No burning *in situ* was identified within the ditch itself. The ditch most likely represents an internal division within the enclosure, close to areas where burning has taken place.

#### ***Trench 12 (Figs 2 and 16; Plate 21 and 22)***

T12 was orientated north-east/south-west and was also targeted on a single linear anomaly identified from the geophysical survey in the interior of the enclosure (see above). The topsoil and subsoil were removed by machine to an average depth of 0.48m below the ground level, at which point the reddish clay natural was exposed at a minimum level of 13.41m aOD. A single archaeological ditch (190), a plough furrow and a modern clay field drain were identified.

#### **Ditch 190 (Fig. 16, S.32; Plate 22)**

Ditch 190 was located centrally within the trench and was U-shaped in profile with a deeper stepped area evident against the trench edge. The ditch was 1.71m wide and 0.69m deep stepping up to be 0.53m deep. The reason for the change in profile is not apparent but may be

the result of a re-cut or cleaning out of the ditch. The primary fill (189) was located within the deepest portion of the ditch, but did not show signs of having been cut by a later feature. A single sherd of Iron Age pottery and fragments of animal bone were recovered from the primary fill which was sealed by a thin, intermittent, layer of iron pan. The remaining four fills can be split into two groups. The lower two fills (188 and 187) were very similar to the natural and may be re-deposited natural or erosion of the natural deposits into the open ditch. Fill 188 was located only on the north-eastern side of the ditch and could well be a consequence of bank material eroding into the ditch. Deposit 188 was sterile but Deposit 187 produced some animal bone. The upper two fills (185 and 186) were markedly darker in colour being almost black to greyish brown. The lower fill (186) produced Iron Age pottery and animal bone. The ditch is located within the enclosure and may form an internal division within it.

#### ***Trench 13 (Fig. 2; Plate 23)***

T13 was orientated north-west/south-east and was targeted on a single linear anomaly identified by the geophysical survey. The topsoil and part of the subsoil were removed by machine to an average depth of 0.60m below the ground level. Further machine excavation to natural deposits was not possible due to the presence of a modern field drain, parallel with the long axis of the trench which ran down the centre of the entire length of the trench. Perpendicular to this feature a second land drain, filled with an industrial slag material similar to that encountered in T9, was observed to cross the middle of the trench. This feature correlates with the magnetic anomaly. No archaeological features were identified in this trench but as the clay natural was not exposed the presence or lack of any archaeology can not be completely confirmed.

#### ***Trench 14 (Figs 3 and 17; Plates 24 and 25)***

T14 was located to the east of the A160, 340m north of the Brocklesby junction, and measured 40m by 2m being orientated east-north-east/west-south-west. The trench was targeted on a single large linear magnetic anomaly that was also visible as a cropmark. The topsoil and subsoil were removed by machine to an average depth of 0.55m below the ground level, at which point the reddish clay natural was exposed at a minimum level of 12.81m aOD. The ground dropped away fairly rapidly both to the south and west of the trench, with a ridge of land extending to the east. Several archaeological features were located at the north-eastern end of the trench.

#### ***Ditch 177 (Fig. 17, S.26; Plate 25)***

Ditch 177 was aligned broadly north/south and located at the north-eastern end of the trench. Its position corresponded well both with the linear magnetic anomaly and with the cropmark, which has been interpreted as indicative of a large three sided enclosure on the northern side of a former stream course. The ditch profile was generally V-shaped, with steps on both sides, and was 5.90m wide and 1.64m deep containing a sequence of eight fill deposits. The top 0.64m and the primary fill of the ditch were hand excavated with the remainder of the fill

removed using the JCB and ditching bucket following consultation with Alison Williams at the NLSMR. The mechanical excavation was carried out in spits no greater than 0.2m to aid the recovery of finds and to identify differing contexts. The ditch fill was also scanned with the metal detector prior to excavation to aid artefact recovery.

Only fragments of animal bone were recovered from the primary fill (176). Deposit 175 was only located along the south-western side of the ditch on a clearly defined step on the external side of the enclosure ditch. Deposit 174 physically sealed 176 and 175 and formed one of the main fills within the ditch. A small group of Iron Age pottery and a single Dressel 20 amphora sherd were recovered from fill 174. Overlying this was a series of deposits (173, 172 and 171) located on the north-eastern side of the ditch. The formation of these deposits appears to have followed a similar process and will have formed fairly rapidly. An internal bank along the north-eastern side of the ditch will have provided an abundance of material that could have eroded into the open ditch forming these deposits. Deposit 170 forms one of the main fills and in comparison to the other deposits it was notably darker in colour. The deposit also produced the majority of the Iron Age pottery and animal bone fragments, suggesting this deposit formed during the peak of occupation within the enclosure. The final fill (169) was a similar colour to the natural, but also produced fragments of Iron Age pottery and animal bone fragments. The dating of this enclosure initially appears to be Iron Age but with the presence of Dressel 20 sherds this may suggest a late Iron Age and early Roman date or perhaps limited trade with continental Europe before the conquest, although further excavation would be required to confirm the date and function of this enclosure.

#### **Ditch 179**

Ditch 179 was located immediately south-west of Ditch 177 and was orientated north-west/south-east. The feature was at least 0.75m wide and 0.40m deep and contained a single dark greyish black fill (178), with an abundance of charcoal, from which Iron Age pottery was recovered. This feature had been heavily truncated by Ditch 177 but was partially visible in plan within the stepped south-western side of Ditch 177. Ditch 179 produced only Iron Age pot and is stratigraphically earlier than Ditch 177.

#### **Pit 168**

Pit 168 was located 10m from the north-eastern end of the trench, and was 1.09m in diameter and 0.35m deep, containing two fills. The secondary fill (167) contained occasional charcoal fragments and produced Iron Age pottery, animal bone and daub fragments. The feature maybe associated with the large enclosure, but this would place it on the exterior of the enclosure. It is more likely, therefore, to be associated with Ditch 179. The pottery dating also suggest they are earlier as both produced only Iron Age pottery, compared with the early Roman material from Ditch 177. Ditch 179 and Pit 168 appear to form an earlier group of features that predate the enclosure and represent an earlier form of land use.

*Trench 15 (Fig. 3; Plate 26)*

T15 was located to the east of the A160 and was orientated north-west/south-east targeted on vague linear anomalies identified from the geophysical survey. The topsoil and subsoil were removed by machine to an average depth of 0.55m below the ground level. This exposed reddish clay with patches of orange clay, which changed into an area of orangey sandy deposits towards the southern end of the trench. The natural deposits were exposed at a minimum level of 14.07m aOD. Two plough furrows and a clay drainage pipe were located. No archaeological features were exposed within the trench.

***Trench 16 (Fig. 4; Plate 27)***

T16 was located 200m to the south-west of the A160-A1077 Ulceby Road junction and was orientated north-west/south-east targeted on vague discrete anomalies identified from the geophysical survey. The topsoil and subsoil were removed by machine to an average depth of 0.50m below the ground level. This exposed reddish clay which changed into an area of orangey blue sandy clay to the south-east end of the trench. The natural deposits were exposed at a minimum level of 10.45m aOD. No archaeological features were exposed within the trench.

***Trench 17 (Fig. 4; Plate 28)***

T17 was located 150m to the north-east of the A160-A1077 Ulceby Road junction and was orientated north-west/south-east targeted on vague discrete anomalies visible identified from the geophysical survey. The topsoil and subsoil were removed by machine to an average depth of 0.48m below the ground level, at which point the reddish clay natural was exposed at a minimum level of 11.24m aOD. Clay drainage pipes were located at both ends of the trench. The pipe at the south-eastern end of the trench was situated within the subsoil preventing excavation down to the natural deposits. No archaeological features were exposed within the trench.

***Trench 18 (Figs 5 and 18; Plate 29 and 30)***

T18 was located to the west of Top Road and was orientated north/south and targeted on a single linear anomaly identified by the geophysical survey. The topsoil and subsoil were removed by machine to an average depth of 0.42m below the ground level, at which point the reddish clay natural was exposed at a minimum level of 16.48m aOD. A single large ditch (240) and a clay field drain were located within the trench.

***Ditch 240 (Fig 18, S.49; Plate 30)***

Ditch 240 was 2.45m wide and 1.10m deep with a broad V-shaped profile. The primary fill (239) was very shallow and appears to be the result of erosion of the natural into the open ditch. A small very abraded sherd of Roman greyware was recovered from the environmental sample taken from this fill; this may be intrusive (see below). Deposit 238 formed the main bulk fill of the ditch and produced an abundance of Late Iron Age pottery and animal bone in contrast to Deposit 241 which did not produce any finds.

The ditch identified within T18 was fairly large and produced an abundance of occupational material, suggesting it may form part of an enclosure which extends to the north and east outside the surveyed area.

***Trench 19 (Fig.6; Plate 31)***

T19 was located on the eastern side of Town Street, just to the south of the A160, and was orientated north/south targeted on a single linear anomaly identified by the geophysical survey. The topsoil and subsoil were removed by machine to an average depth of 0.47m below the ground level, at which point the reddish clay natural was exposed at a minimum level of 11.61m aOD. Two modern clay field drains were identified at each end of the trench. No archaeological features were exposed within the trench.

***Trench 20 (Fig. 7; Plate 32)***

T20 was located directly north of the Immingham West Fire Station, west of Rosper Road. It was orientated north-north-west/south-south-east and was targeted upon some vague discrete anomalies identified in the magnetic data. The topsoil and subsoil were removed by machine to an average depth of 0.30m below the ground level, at which point the natural deposits was exposed at a minimum level of 2.72m aOD. The natural consisted of reddish clay with abundant chalk inclusions located in the northern two-thirds of the trench and orangey sandy clay natural towards the southern end of the trench. No archaeological features were exposed within the trench.

***Trench 21 (Figs 3 and 19; Plate 33)***

T21 was located between T7 and T14, north-east of Brocklesby Junction, and was orientated north-east/south-west across the modern county boundary between North and North East Lincolnshire. The topsoil and subsoil were removed by machine to an average depth of 0.47m below the ground level, at which point the reddish clay natural was exposed at a minimum level of 12.40m aOD. A single narrow gully (182) was identified in the centre of the trench.

***Gully 182 (Fig. 19, S.30)***

Gully 182 was located just to the north-east of the county boundary between North and North East Lincolnshire. The gully had a U-shaped profile, was 1.00m wide, 0.48m deep and contained a single clayey deposit (181) bluish grey in colour. An abundance of rooting was observed throughout the deposit, with concentration towards the base of the feature. No finds were recovered.

***Trench 22 (Fig. 4; Plate 34)***

T22 was located 400m to the south of the A160-A1077 Ulceby Road junction and was orientated north-west/south-east and was targeted upon anomalies identified by the



geophysical survey. The topsoil and subsoil were removed by machine to an average depth of 0.53m below the ground level, at which point the reddish clay natural was exposed at a minimum level of 12.38m aOD. No archaeological features were exposed within the trench although a single plough furrow was identified running the length of the trench.

***Trench 23 (Fig. 4; Plate 35)***

T23 was located 100m to the east of the A160-A1077 Ulceby Road junction and was orientated north-west/south-east targeted on anomalies identified by the geophysical survey. The topsoil and subsoil were removed by machine to an average depth of 0.47m below the ground level, at which point the reddish clay natural was exposed at a minimum level of 11.31m aOD. The cut for a modern drainage pipe, filled with chalk, was observed at the north-western end of the trench. No archaeological features were exposed within the trench.

***Trench 24 (Fig. 5; Plate 36)***

T24 was located 200m to the south-west of the Killingholme roundabout and was orientated broadly north/south. The trench was targeted on anomalies visible in the geophysical data. The topsoil and subsoil were removed by machine to an average depth of 0.52m below the ground level, at which point the reddish clay natural was exposed at a minimum level of 14.37m aOD. Two modern clay drainage pipes were observed, but no archaeological features were present in this trench.

***Trench 25 (Figs 7 and 20; Plate 37 and 38)***

T25 was located directly north of the Immingham West Fire Station, west of Rosper Road. The trench was orientated north-north-east/south-south-west and was located in an area that was unsuitable for geophysical survey. The topsoil and subsoil were removed by machine to an average depth of 0.45m below the ground level, at which point the natural deposits was exposed at a minimum level of 2.79m aOD. Two intersecting ditches were recorded 6m from the southern end of the trench (195 and 199).

***Ditch 199 (Fig. 20, S.36; Plate 37)***

Ditch 199 was not fully exposed in plan as it extended out of the excavation area. The slot excavated through the feature revealed a U-shaped profile at least 0.87m wide and 0.67m deep. Excavation revealed an unusual profile along the length of the excavated ditch which may be explained if the very corner of a turning ditch had been caught within the trench. The deposit sequence also suggests the infilling of a linear feature. The primary deposit (198) produced an abundance of possibly Late Iron Age pottery and animal bone fragments. Late Iron Age Pottery fragments and animal bone fragments were also recovered from the secondary fill (197), but no finds were recovered from the upper fill (196).

***Ditch 195 (Fig. 20, S.35; Plate 38)***

Ditch 195 was truncated by Ditch 199 and was located directly to the east. The feature had a U-shaped profile and was 1.98m wide and 0.35m deep. It was difficult to resolve the relationship between the two features but it appeared that Ditch 195 may represent an earlier phase of activity in this area before the construction of the larger Ditch 199. Two fills were recorded with both deposits (193 and 194) producing Iron Age pottery fragments. The interface between deposit 193 and the primary fill 194 was also marked by a thin lens of charcoal.

The features identified within T25 confirm the presence of archaeology within this area, previously only suggested by cropmarks further to the north. The exact function of these features is difficult to ascertain, although the presence of occupational material could suggest some form of enclosure.

#### ***Trench 26 (Fig. 7; Plate 39)***

T26 was located directly north of the Immingham West Fire Station, west of Rosper Road and was orientated north/south, targeted upon anomalies in the geophysical data. The topsoil and subsoil were removed by machine to an average depth of 0.37m below the ground level, at which point the natural deposits was exposed at a minimum level of 2.59m aOD. No archaeological features were exposed within the trench.

Table 2. Summary of findings

Trench	Dimensions (m)	Orientation	Topsoil (m)	Subsoil (m)	Level of Natural (m aOD)	Natural	Archaeology	Findings	Interpretation
1	15 x 2	NE-SW	0.38	0.12	11.44	Reddish clay with abundant chalk fragments	Ditches x3 Gullies x2	PRIA or RB Pottery and animal bone	Possible enclosure ditch running length of trench with field systems or internal divisions
2	15 x 2	NW-SE	0.38	0.18	10.44	Reddish clay with abundant chalk fragments	No archaeology	-	-
3	15 x 2	NE-SW	0.37	0.17	12.41	Reddish clay with abundant chalk fragments	Ditch x1	PRIA or RB Pottery and animal bone	Enclosure ditch?
4	15 x 2	NW-SE	0.32	0.20	12.95	Reddish clay with abundant chalk fragments	Ditches x2	RB Pottery, animal bone and quern fragment	Boundary ditches or internal divisions within enclosure complex located in this area.
5	15 x 2	NE-SW	0.27	0.08	12.79	Reddish clay with abundant chalk fragments	Ditch x1 Gullies x4 Post-hole x1	RB Pottery and animal bone	The ditch may form a boundary ditch or enclosure ditch; the gullies could be structural or internal divisions
6	15 x 2	NE-SW	0.28	0.10	13.12	Reddish clay with abundant chalk fragments	Ditches x3 Post-holes x 3	PRIA or RB Pottery and animal bone	Ditches correspond with those identified in T5. Post-holes appear to be isolated
7	15 x 2	NE-SW	0.28	0.22	13.41	Reddish clay with abundant chalk fragments	Ditch x1 Gullies x 2	PRIA or RB Pottery and animal bone	Ditch may represent northern limit of enclosure complex
8	15 x 2	NW-SE	0.32	0.11	12.65	Reddish clay with abundant chalk fragments	No archaeology	-	-
9	17 x 2	NW-SE	0.30	0.26	12.53	Reddish clay with	No archaeology	-	-

Trench	Dimensions (m)	Orientation	Topsoil (m)	Subsoil (m)	Level of Natural (m aOD)	Natural	Archaeology	Finds	Interpretation
						abundant chalk fragments			
10	15 x 2	NW-SE	0.35	0.25	12.87	Reddish clay with abundant chalk fragments	Ditch x1	PRIA or RB Pottery and animal bone	Corresponds with cropmark and forms part of a large enclosure
11	15 x 2	NW-SE	0.28	0.24	12.75	Reddish clay with abundant chalk fragments	Ditch x1	PRIA or RB Pottery and animal bone	Feature is located within cropmark enclosure, possible internal division
12	15 x 2	NE-SW	0.31	0.17	13.41	Reddish clay with abundant chalk fragments	Ditch x1	PRIA or RB Pottery and animal bone	Feature is located within cropmark enclosure, possible internal division
13	15 x 2	NW-SE	0.40	At least 0.20	Natural deposits not reached due to clay pipe running along the course of the trench		-	-	-
14	40 x 2	NE-SW	0.33	0.22	12.81	Reddish clay with abundant chalk fragments	Ditch x2 Pit x1	PRIA or RB Pottery and animal bone	Large ditch corresponding with three sided enclosure visible as a cropmark and a geophysical anomaly. Additional features may be previous occupational activity in this area
15	15 x 2	NW-SE	0.33	0.22	14.07	Reddish clay with abundant chalk fragments with patches of orange clay	No archaeology	-	-
16	15 x 2	SW-SE	0.30	0.20	10.45	Reddish clay with abundant chalk fragments into orangey blue sandy clay	No archaeology	-	-

Trench	Dimensions (m)	Orientation	Topsoil (m)	Subsoil (m)	Level of Natural (m aOD)	Natural	Archaeology	Finds	Interpretation
17	15 x 2	NW-SE	0.26	0.22	11.24	Reddish clay with abundant chalk fragments into Orangey blue sandy clay	No archaeology	-	-
18	15 x 2	N-S	0.32	0.10	16.48	Reddish clay with abundant chalk fragments	Ditch x1	PRIA or RB Pottery and animal bone	Large ditch probably part of an unidentified enclosure?
19	15 x 2	N-S	0.27	0.20	11.61	Reddish clay with abundant chalk fragments into orangey sandy clay	No archaeology	-	-
20	15 x 2	NW-SE	0.20	0.10	2.72	Reddish clay with abundant chalk fragments into orangey sandy clay	No archaeology	-	-
21	15 x 2	NE-SW	0.27	0.20	12.40	Reddish clay with abundant chalk fragments	Gully x1	-	Part of the county boundary between North and North - East Lincolnshire
22	15 x 2	NW-SE	0.34	0.19	12.38	Reddish clay with abundant chalk fragments	No archaeology	-	-
23	15 x 2	SE-NW	0.37	0.10	11.31	Reddish clay with abundant chalk fragments	No archaeology	-	-
24	15 x 2	N-S	0.35	0.17	14.37	Reddish clay with abundant chalk fragments	No archaeology	-	-
25	15 x 2	N-S	0.30	0.15	2.79	Reddish clay with abundant chalk fragments	Ditches x2	PRIA or RB Pottery and animal bone	Part of an unidentified enclosure or boundary ditch

Trench	Dimensions (m)	Orientation	Topsoil (m)	Subsoil (m)	Level of Natural (m aOD)	Natural	Archaeology	Finds	Interpretation
26	15 x 2	N-S	0.20	0.10	2.59	Reddish clay with abundant chalk fragments	No archaeology	-	-

## 6 Artefact Record

### Flint by Ian Brooks

Thirty four flint artefacts were recovered from twelve contexts in seven of the trial trenches with no context containing more than eight artefacts. The trenches were also spread out over the full length of the road scheme suggesting that the collection cannot be regarded as a consistent assemblage. A further fourteen, broken but otherwise unworked, fragments of flint were also collected and these objects give an indication of the locally available flint resources of the area.

The flakes were divided into four groups: primary flakes with completely cortical dorsal surfaces, secondary with partly cortical dorsal surfaces, tertiary with uncorticated dorsal surfaces and broken flakes. Where possible the flint colours are defined by the Geological Society of America's Rock-Color Chart (Goddard *et al* 1948). The description of the tool follows that of Inizan *et al* (1992).

Immingham lies in an area with easy access to a range of potential flint resources. The nearest possible primary (chalk) source for flint is that of the Lincolnshire Wolds (Rawson *et al* 1978), particularly where the line of the Wolds is broken by the Humber. The flint here, however, tends to be of relatively poor quality, often opaque, pale grey in colour and faulted, although some slightly better quality nodular bands are known. More importantly there are a series of derived sources available, particularly the tills and associated gravels of the Lincolnshire coast (Brooks 1989, Henson 1985). These contain considerable flint resources, often of good quality which could be used for tool manufacture. These resources are in the immediate locality of the site and it is therefore unsurprising that these flint types form the majority of the raw materials used.

Twenty (58.8%) of the artefacts recovered were unmodified flakes consisting of two (5.9%) secondary flakes, nine (26.5%) tertiary flakes and nine (26.5%) broken flakes. The lack of primary flakes and the low level of cortical elements within the collection would suggest that primary reduction was not being carried out within the immediate area of the project. Seven (20.6%) worked lumps, with an average weight of only 29.6 g, were also recovered together with four (11.8%) shapeless fragments and two (5.9%) spalls once again suggesting large scale knapping was not being carried out in the immediate area.

Only one tool, a scraper, was found (see below). This tool appears to have been a fairly *ad hoc* artefact made from a water worn pebble. Whilst tools of this type could have been made at any time, the lack of relative skill exhibited may suggest a Bronze Age date for this tool.



*Tr1, Context 219. A scraper made on an irregular fragment of an opaque, greyish orange flint (10 YR 7/4). The working edge is defined by a series of inverse, short, abrupt, scalar removals along the distal right side of the original blank. The tool has been made on a fragment of a water worn pebble, probably originally from the till deposits along the Lincolnshire coast. 28.8 x 22.2 x 8.1 mm.*

The collection of flint artefacts recovered during the archaeological evaluation indicates a limited level of activity in the area with a thin spread of worked flint artefacts, but with no concentration of activity. It is clear, however, that the raw materials used within the collection were immediately available with no evidence for raw materials being brought to the area even from the chalk resources of the Lincoln Wolds only a few kilometres to the west. The lack of relative skill and the size and nature of the artefacts found, whilst not being diagnostic in itself, give the impression that the majority of the assemblage is probably quite late, possibly Bronze Age, in date.

#### **Pottery** by Ian Rowlandson

The pottery was archived using count and weight as measures according to the guidelines laid down for the minimum archive by The Study Group for Roman Pottery (Darling 2004) using



the codes developed by the City of Lincoln Archaeological Unit (see Darling and Precious forthcoming) and the North Lincolnshire fabric series (Rowlandson in prep.). Rim equivalents (RE) have been recorded and an attempt at a 'maximum' vessel estimate has been made following Orton (1975, 31) this should be viewed with extreme caution considering the highly fragmentary nature of many of the sherds.

A dating summary is provided in Table 3. A detailed pottery archive is contained with Appendix 4 along with a summary of abbreviations used in the archive and expansion of the fabric codes used.

### *Condition*

The ceramics examined totalled 871 sherds, weighing 11.622kg, from 47 contexts. The average sherd weight, 13.34g, was due to a few of the contexts producing good fresh groups of pottery as many of the sherds are extremely fragmentary. The pottery ranges from fresh to abraded, many of the Iron Age vessels are extremely small flakes.

This group of pottery provides interesting stratified evidence of later Iron Age and early Roman pottery from the area. A number of contexts also produced evidence of 3rd and 4th century Roman activity. This group has similar Iron Age material to the unpublished pottery from Weelsby Avenue, Grimsby including late Iron Age 'Dragonby type' fine wares which have been found on few sites in the Immingham area. This group provides further evidence of Iron Age and Roman activity along the North East Lincolnshire coast to add to the evidence from recent excavations in the parishes of North Killingholme and East Halton.

Although there is little evidence for sooting present on vessels from this group an Iron Age shell gritted vessel from context 198 had been pierced after firing to provide small drainage holes, a feature which often occurs on Iron Age vessels in Lincolnshire. A single sherd from a Samian dish shows signs of a rivet repair (context 138) and a *mortarium* from the Swanpool industry near Lincoln (context 102) has signs of use ware from grinding.

### *Dating*

The detailed archive is presented as Appendix 4. The dating summary for pottery from the evaluation has been tabulated by context and provides a quantified spot dating summary based on the pottery by context (Table 3).

The pottery retrieved from T1 predominantly dates to the Iron Age with the exception of a single greyware bowl sherd retrieved from the topsoil. The majority of the pottery from this trench was shell gritted with little erratic tempered pottery. Of note from this trench are a globular jar (context 207, D10) and a necked bowl with a cordoned shoulder (context 219, D11 cf. Elsdon 1993, C9). Both vessels are in a similar fine shell gritted fabric to examples found at Dragonby (Elsdon 1996).

Three small groups of Roman pottery were retrieved from T3 (113, 115 and 149). A single sherd from a Nene Valley colour-coated beaker dates context 115 to the 4th century.

Investigations in T4 produced pottery from two ditches. Ditch 121 contained two small groups of Roman pottery (contexts 119 and 120) which date to the 3rd century AD. Ditch 127 contained three small groups of Roman pottery (contexts 124, 125 and 126) mostly dating to the 2nd century with a Dales ware sherd from context 124 probably dating the group to the 3rd century AD.

Seven groups of Roman pottery were retrieved from T5; all are small with the exception of context 138. Gullies 110 and 132 produced three small groups of 3rd century pottery (109, 130 and 131). The largest group from this trench was retrieved from context 138, the primary fill of Ditch 139. This group of 69 sherds included a fragment of a Samian dish from Central Gaul, a large proportion of a rusticated jar with an everted rim (D5) and a jar in a native tradition fabric with burnished lattice decoration. This group probably dates to the Hadrianic period (early to mid 2nd century). Fill 133 of Ditch 139 also contained a small quantity of Roman pottery dating to the 2nd century AD. Small quantities of Roman pottery were also retrieved from topsoil 100 and furrow 111.

Five contexts from T6 contained Roman pottery. The earliest group of pottery was retrieved from Gully 140 (fill 141), which consists of two early Roman jars one with an everted rim in the IAGR fabric. The largest group of pottery is from Ditch 142 (fill 143), totalling 123 sherds. The group mostly consists of early Roman pottery dating to the later 1st to mid 2nd century AD with a small quantity of late Roman pottery. The Dales ware jar and a bowl with an in-turned bead and flange suggest a date in the late 4th century for the final infilling of the feature. The cross joining vessels between contexts 141 and 143 may suggest that much of the material within Ditch 142 (fill 143), may have derived from a similar source to fill 141. Ditch 118 (fill 117), produced a small group of pottery dating to the middle of the 3rd century or later. Pottery retrieved from two post holes consists of a single Roman sherd from context 151 and a small group of late 3rd to 4th century pottery including a hemispherical flanged bowl in an oxidised sand tempered fabric.

The pottery from T7 consisted of a two small groups of Roman pottery (contexts 159 and 161) and a single late Iron Age sherd from context 163.

Investigations of T10 produced a single medium sized group of Iron Age pottery from context 202 including a jar with a flat top decorated with diagonal slashes and a barrel shaped jar with an in-turned rim. This group can broadly be placed in the mid to late Iron Age as many of these simple forms had a long currency. This group of 69 sherds, in contrast to others on the site, contains no shell gritted pottery. Most Iron Age pottery is produced from the local geological resources, at this site boulder clay. The later Iron Age groups from this site (eg T1) appear to contain a large proportion of shell gritted pottery suggesting a change

in supply and technology. The pottery from T10 probably dates to the middle Iron Age before the regular use of shell gritted pottery along the north-east Lincolnshire coast.

T11 produced a single small group of Iron Age pottery including rock and shell gritted fabrics. Two contexts from T12 (186 and 189), also contain small groups of Iron Age body sherds.

The pottery from T14 mostly consists of small fragments of Iron Age pottery with a low average sherd weight. A single context, 174, contains a sherd from a Dressel 20 amphora alongside the Iron Age tradition pottery. This sherd may be intrusive or the Iron Age material present may be residual; the group is too small to be certain.

The pottery from T18 was retrieved from a single ditch. A large group of late Iron Age pottery was retrieved from the upper fill, context 238. This group contains two jars with flat topped rims in the ETW fabric (D12), coarse shell gritted sherds and includes the bases of two fineware vessels with moulded footring bases typical of the Late Iron Age. A single sherd retrieved from Sample 38, context 239 from the primary fill of the ditch, may be Roman greyware but is too tiny and abraded to be certain and therefore is probably intrusive beneath context 238 or possibly a fragment of an Iron Age vessel fired to a grey colour.

Four contexts from T25 produced late Iron Age pottery (193, 194, 197 and 198). Of these, context 197 contained a small group including late Iron Age fine ware vessels. A group of 77 sherds of late Iron Age pottery was retrieved from context 198 from a single thin walled shell gritted jar. The base of the vessel was pierced some time after firing perhaps to enable the vessel to be used as a strainer.

#### *Overview of forms and fabrics*

Much of the Iron Age pottery present is handmade and tempered with angular rock fragments (ETW). This simple pottery manufacturing technique was used in the Iron Age in eastern Yorkshire and Lincolnshire back into the Bronze Age utilising the erratic boulders from the boulder clay deposits to provide coarse filler for pots (Darling 2005, 2008). It is unclear if this technology was exclusively in use prior to the Roman conquest in Lincolnshire or if it continued after the conquest as in East Yorkshire (see Rowlandson 2009, Darling 2005). Late Roman rock tempered sherds do occur on sites in the area although it is possible that they represent an import from East Yorkshire rather than continuity of production in Lincolnshire (Rowlandson forthcoming). It would appear that the rock tempered sherds are largely superseded by sand, shell and grog gritted wares by the early Roman period in this area of North Lincolnshire but this should be treated with caution as it remains possible that conservative local potting traditions may have persisted into the 2nd century. Vessels of note from this site are a jar with a flat topped rim with slashed decoration and wiped external surfaces. (D8, context 202). The form of the vessel is similar to an example from Hasholme Hall, East Yorkshire (Challis and Harding 1975, Fig. 37.1). A jar from context 238 (D12,

context 238) of similar form to an example from Ancaster (Challis and Harding 1975, Fig. 11.5) and another with an in-turned rim and barrel type form (D9, context 202) similar to an example from West Furze, East Yorkshire (Challis and Harding 1975, 38.6) suggest a first millennium BC date for some of the Iron Age activity on the site. The pottery from 202 suggests a mid to late Iron Age date but the erratic tempered ware also occurs in late Iron Age groups such as 238 which suggests that vessels in the ETW fabric probably continued in use until at least the Roman conquest in this area.

One slightly unusual element to the assemblage is the presence of a small number of sherds with both fossil shell and sandstone or igneous rock grits. This is unusual in North Lincolnshire as shell gritted pottery is usually produced from the Jurassic deposits to the west of the Wold scarp and the erratic/ rock tempered pottery is more common in areas where the local potters exploited the boulder clay deposits. A similar rock and shell gritted pottery has been encountered by Darling in a group of pottery from North Killingholme (2008). A burnt fragment of shelly limestone from this site was presented to this author with the pottery assemblage from the site which was superficially similar to the limestone fragments seen by the author in the parish of Alkborough where similar fossiliferous *Gryphaea* rich rocks occur. Three possibilities present themselves: either that the potters in the Immingham area found fragments of fossiliferous limestone within the Boulder Clay and thus exploited them, the potters brought the shelly limestone for use as temper from a source to the west of the site or the 'shell and rock' gritted sherds represent an atypical product by the potters to the west of the Lincolnshire Wold scarp. Careful consideration of any future groups from this area might recognise vessels in similar fabrics which might help to date this fabric more closely. This may represent the beginnings of Iron Age potteries in this area gradually favouring fossil shell grit instead of the normal sandstone and igneous rocks usually favoured during the earlier Iron Age.

The majority of the remaining Iron Age pottery is shell gritted with a few sand tempered and grog tempered sherds present. Most of the coarser shell gritted sherds are from large jars or bowls with bead or everted rims (D12, context 238), typical utilitarian mid to late Iron Age forms. Few rims were present with the coarse shell gritted fabrics mostly represented by body and base sherds. A smaller quantity of fine shell gritted vessels, including globular jar D10 and a necked jar with a cordoned shoulder similar to an example from Ludford (D11 cf. Elsdon 1993, C9), are present suggesting late Iron Age fine wares were in use on the site.

This assemblage of Roman pottery is typical of groups of pottery from rural sites in northern Lincolnshire. There are few fine wares; a single sherd of Samian from context 138 and a small quantity of Nene Valley colour coated pottery are the only examples from this assemblage. A Dressel 20 olive oil *amphora* sherd and a 4th century *mortarium* from the Swanpool industry near Lincoln (context 102, D2 cf. Darling 1999 Fig. 43.581) represent the

only other vessels which are definitely not from the local northern Lincolnshire pottery industries.

The range of local pottery present includes a typical range of early Roman fabrics, probably produced in the vicinity of South Ferriby which are all known from the kiln site (GRROE, SFGR, SFGRC, SFGROG and SHGR, (Rowlandson in prep., Dudley 1949). Of note in the SFGR wheel made fabric are a jar with an everted rim and 'web' rustication typical of a late 1st to early 2nd century date (D5 context 138) and another everted rimmed jar (D4, context 125) with a rim form similar to Gillam type 135 (Gillam 1970). An early grog tempered native tradition hand built cook pot from context 143 is similar to a number of early Roman examples from Lincoln but has a rim with a flat top (D6). Also probably from a local source is a Knapton type jar in the SFGRC fabric (D7 context 143). There is a little Dales ware present in this assemblage and few indicators of the 3rd century. A large wide mouthed bowl from context 109 (D3) is typical of the large GREY vessels common in assemblages dating from the mid 3rd to the 4th century in this region. A couple of groups may suggest some activity in the 4th century, especially context 143, on the basis of a bowl with an in-turned bead and flange commonly found in the latest groups from the city of Lincoln. As such it appears that the main *flourit* of the site is the late Iron Age until the early to mid 2nd century with some activity in the 3rd and 4th centuries AD.

### *Discussion*

The pottery from this site is of some interest as it provides a group of Late Iron Age pottery containing distinctive finewares. The main point of note is the presence of the 'Dragonby' type late Iron Age fine ware in the same groups as the ETW fabric suggesting that erratic tempered pottery continued in use into the 1st century AD in north-east Lincolnshire. A single group from T10 suggests earlier Iron Age activity probably in the second half of the first millennium BC.

Our understanding of the Iron Age to early Roman period in this region is hindered by the lack of a full publication for the two main sites to the east of the River Ancholme; Weelsby Avenue, Grimsby has the best Iron Age sequence known from the area and the late Iron Age to late Roman sequence from Glebe Farm, Barton-upon-Humber (Sills and Kinsley 1978, Ellis *et. al.* 2001, Steadman 1993). However, there are an increasing number of sites which have been studied due to developer funded archaeology which are now beginning to provide smaller groups of pottery spanning the Iron Age to early Roman period which this material can be compared with (Darling 2008, 2006; Darling & Rowlandson 2008; Didsbury 2006, 2001, 2000; Precious & Vince 2005; Rowlandson 2010, 2009). It is becoming clear that many of these settlements show a period of a few hundred years of occupation before the focus of the settlement moves, perhaps due to water levels or other environmental factors. This is clear from the excavations in the vicinity of North Killingholme where excavations have found multi-period occupation spread over the landscape. The pottery from this evaluation

represents a transitional group showing the period when 'Dragonby type' Iron Age finewares were in use through into the Flavian to Trajanic period after the conquest. A small group of a conquest period date has recently been recovered during excavations at Grimsby (Rowlandson 2010) but few other sites in this area have shown groups which could be securely fixed to this period. The pottery from this evaluation dates from the Late Iron Age, conquest period and into the earlier part of the 2nd century AD and appears to fit between the more obviously Iron Age group from North Killingholme and a mostly 2nd century group from East Halton (Darling 2005 and Darling & Rowlandson 2008).

As is evident from other sites studied from the region the ceramic assemblage from this site is typically weighted towards functional jars and large bowls suggesting that both before and after the conquest only small quantities of ceramic 'fine wares' were in use. Ceramics were mostly used for basic cooking and storage functions with few specialist vessels. It is possible that the inhabitants utilised more perishable or less archaeologically visible materials such as glass, metal plate or treen for providing their table ware or it may be that the site was a basic farming settlement with little access to, or need of, the pretensions of ceramic finewares in either the Iron Age or the Roman period. A single amphora sherd suggests access to traded goods but this must be viewed with caution as the post breakage 'life' and deposition of amphora fragments can be complicated by reuse as ballast or as hones for sharpening tools. In contrast to other sites in the Humber basin, such as Dragonby or the Redcliff/ North Ferriby site in East Yorkshire, which had access to a variety of traded ceramic goods this site appears not to have been greatly involved in this trade with most of the ceramics present probably being brought from no more than 50 kilometres away.

Table 3. Pottery dating summary

Trench	Context	Spot date	Comments	Sherd total	Weight total (g)	Rim RE %
1	207	LIA	A small group including fragments of shell gritted jars including a fine globular vessel	18	174	16
1	212	LIA	Fragments from a single necked jar with a cordoned shoulder and a shell gritted jar sherd	3	42	12
1	214	IA	A small group of sherds from hand made shell gritted jars	6	178	0
1	216	IA+	Two small fragments of shell gritted pottery	2	3	0
1	219	LIA	A small group including a shell gritted fragment from a cordoned jar	3	17	0
1	221	IA	A small group of bodysherds	7	55	0
1	229	MLIA	A small group of sherds from a single fine shell gritted vessel	7	14	0
1	XI	2C+	A single sherd from a large greyware	1	36	7

Trench	Context	Spot date	Comments	Sherd total	Weight total (g)	Rim RE %
			bowl retrieved from the topsoil			
3	113	2C+	A small group including the base of a greyware jar	7	123	11
3	115	4C	A single sherd from a folded beaker	1	3	0
3	149	ROM	A single fragment from a bowl in an oxidised fabric	1	24	0
4	119	3C+	A small group including fragments of a bowl with a flared lip and a colour coated bowl sherd	10	327	20
4	120	3C	A small group dated by a fragment of a plain rimmed dish	12	107	3
4	124	2-3C?	A small group containing fragments of an everted rim jar and a possible sherd of Dales ware	12	92	10
4	125	EM2+	A small group including fragments of two everted rimmed jars	4	104	28
4	126	ROM	Three abraded sherd	3	8	0
5	100B	L1-2	A small group including a large greyware base trimmed to a disc and pierced post firing	2	212	0
5	109	M3+	A small group containing fragments of a large wide mouthed bowl and a plain rimmed dish	12	359	30
5	111	2C+	A small group of abraded sherd	3	40	0
5	130	M3	A single Dales ware rim	1	34	4
5	131	3C?	A small group of body sherds	3	103	0
5	133	2C+	A small group of bodysherds	2	11	0
5	138	EM2	A medium sized group containing a fragment of a samian dish from Central Gaul, a large proportion of a small rusticated jar with an everted rim and a jar in a native tradition fabric with burnished lattice decoration	69	1096	99
6	117	M3+	A small group including fragments of a flanged bowl and a large wide mouthed bowl type	10	142	29
6	141	L1-M2	A small group mostly consisting of one grog tempered jar with an everted rim probably dating from the late 1st century at the earliest but unlikely to be later than the middle of the 2nd century AD. Two cross joins with context 143	18	648	15
6	143	L4/ L1-M2	A large sized group, mostly dating to L1-M2 but including a single Dales ware jar and a bowl with an in turned bead and flange	123	3119	169

Trench	Context	Spot date	Comments	Sherd total	Weight total (g)	Rim RE %
6	151	ROM	A single greyware sherd	1	7	0
6	155	L3-4	A small group of Roman pottery including an bowl in an oxidised fabric copying samian form 38	6	274	10
7	159	ROM	A small group of greyware sherds	6	69	0
7	161	ROM	A single small sherd	2	67	0
7	163	LIA	A single shell gritted rim sherd	1	11	6
8	101	L1-M2	A rim fragment from a native tradition bowl rim retrieved from the subsoil	1	81	7
10	202	MLIA	A medium sized group of Iron Age pottery including a hand made jar with a flat top with slash decoration	69	372	19
11	191	IA	A small group of Iron Age pottery including a large proportion of a thick walled rock tempered jar	22	384	0
12	186	IA	A small group of body sherds	12	168	2
12	189	IA	A single sherd	1	11	0
14	167	IA	A group of tiny fragments	64	111	0
14	169	IA	A small fragmentary group	6	40	0
14	170	IA	A small group of rock tempered sherds	22	143	0
14	174	M1-2C	A single Dressel 20 amphora sherd, the remaining pottery is in the Iron Age tradition. Probably dates to the mid to late 1st century AD	10	339	12
14	178	IA	A small group of rock tempered sherd	8	29	0
18	238	LIA	A large group of pottery including two jars with flat topped rims and a neat base with a fine moulded footring	150	1008	28
18	239	ROM?	A single very abraded greyware sherd from sample 38, perhaps intrusive	1	1	0
25	193	IA	A small group	3	20	0
25	194	LIA	A small group from sample 27	2	8	0
25	197	LIA	A small group of pottery including both shell and rock gritted sherds. Also present are fine shell gritted sherds typical of late Iron Age finewares	18	416	0
25	198	LIA	A large number of fragments from a single shell gritted jar with a pierced base	77	390	0
3-6	100A	EM2	A small group including jar with a stubby everted rim	7	135	14



## Slag by Gerry McDonnell

### Introduction

This assessment report describes the material classified as slag recovered from the excavations on the A160 – A180 Improvements (Port of Immingham) scheme. A brief overview of the material from the site is provided, followed by a detailed description and quantification. The significance of the material is discussed and recommendations made for further work.

### Slag Classification

The slags were visually examined and the classification is based solely on morphology. In general they are divided into two broad groups. First are the diagnostic ferrous materials which can be attributed to a particular industrial process; these comprise ores and the ironworking slags, i.e. smelting and smithing slags. The second group are the non-diagnostic slags, which could have been generated by a number of different processes but show no diagnostic characteristic that can identify the process. In many cases the non-diagnostic residues, e.g. hearth or furnace lining, may be ascribed to a particular process through archaeological association. The residue classifications are defined below. The count and weight of each slag type present in each context was recorded.

#### Diagnostic Ferrous Slags and Residues

*Smelting Tap Slag (TAP)* - iron silicate slag generated by the smelting process, i.e. the extraction of the metal from the ore. Tap slag is one of the most characteristic forms and is distinguished by either a ropey morphology of the upper cooling surface or a fine crystalline fracture with spheroidal vesicles.

*Smelting Slag*- this smelting slag is characterised by flowed surfaces, the presence of droplets indicating that it had been fully liquid, although not free flowing. Large charcoal impressions may be present.

*Smithing Slag*- randomly shaped pieces of iron silicate slag generated by the smithing process. In general slag is described as smithing slag unless there is good evidence to indicate that it derived from the smelting process.

*Non-Diagnostic Slags and Residues*- burnt organic material/coal – burnt black low density material; either burnt organic material, including bone, or partially burnt coal.

### Results

### *Overview*

The slag recovered from the excavations comprises different types of iron working slag and one piece of non-diagnostic residue, probably burnt coal.

### *Description*

A total of c. 0.8kg of slag was recovered from the excavation. Table 4 list the slag types present on the site by context. Approximately 0.6kg of the ironworking slag was recovered from T9 Context 183. A small quantity of this deposit (0.24kg) was classified as Tap Slag, characterised by the presence of some flowed fingers on the surface of the slag pieces. One piece was larger, fine grained, with a single large flowed surface. The flowed fingers may have resulted through a reaction between a high iron oxides slag reacting with sand causing a lowering of the liquidus (full melting temperature), and the fingers flowing. A further 0.3kg was classified as Smelting Slag as it appears similar to the tap slag in terms of size and fracture but lacked the flowed fingers and did not contain the expected large charcoal impressions normally seen in furnace smelting slag. The remaining slag contained a higher silica content and was more 'cindery' in appearance and may derive from smelting iron, but due to this uncertainty the slag was classified as smithing slag. This context also contained a fragment of burnt coal. The bag was checked for the presence of hammer-scale with a magnet but none was present even though there was a small quantity of highly magnetic dust/fines attracted to the magnet. Another small quantity of Tap Slag was recovered from Context 202 in T10. A small quantity of slag classified as Smithing Slag was present in two other contexts in T5 and T7.

### *Potential and Significance*

The presence of both types of iron-working slag indicates smelting and smithing activity on the site. Smithing evidence is expected on all settlement sites dating to the Iron Age and later. The absence of hearth lining and hammer scale indicates that the smithing slag recovered from T5 and T7 are isolated finds, merely indicative of iron smithing in the vicinity. Both contexts are primary fills and hence of potential significance if they are dated to very early Iron Age dates which would supply evidence for the earliest dates for the adoption of iron technology. (Context 138 is the primary fill of ditch Context 139; Context 161 is the primary fill of ditch Context 169). The presence of iron smelting slag (Context 183) is significant because its morphology is similar to smelting slags dating from the earliest part of the Iron Age, however it appears to derive from a modern feature (land drain). The absence of other debris e.g. iron ore, furnace lining suggest that this is an isolated dump of material. The geophysics indicates a high magnetic anomaly to the south-east of T9 where the slag derived from, and may be associated with the slag. The other small deposit of Tap Slag from context 202, T10 derives from the latest fill of an enclosure ditch.

Table 4. Slag listings by context

Context	Trench	Sample Number	Smith Slag Count	Smith Weight	Tap Slag Count	Tap Slag weight	Smelt Slag count	Smelt Slag weight	Other wt	other type	Context total weight	comment
138	5		1	80							80	flat plate like lump
161	7	18	1	6							6	possibly natural pyrite nodule
183	9	25	12	107	11	236	>50	297	2	coal?	642	magnetic fines present, but no hammer scale
202	10				2	92					92	weakly magnetic
TOTALS				193		328		297	2		820	

## Daub and fired clay by Jane Young

### *Introduction*

A total of 140 fragments of fired clay and five recognisable fragments of daub from eleven different trenches were examined. All of the material was examined under x20 binocular microscope as six different fabrics were identified (see below). The material has been recorded at archive level by type in accordance with the Medieval Pottery Research Group's Guidelines (Slowikowski *et al* 2001) and complies with the Lincolnshire County Council's *Archaeological Handbook* (sections 13.4 and 13.5). The resulting archive was then recorded on an Access database.

### *Condition*

The material is mainly in a poor condition with most fragments showing a high degree of abrasion and fragmentation. Fragments range from large-sized (204 grams) to tiny (below 1 gram). Only three fragments had identifiable wattle impressions and these have been classified as daub along with two other pieces with possible thumb and stick impressions.

### *Overview*

Most of the fired clay fragments found on the site are small (below 5 grams) and featureless, however five daub fragments and two woggles are identifiable and a few other fragments have flattened, or curved surfaces. The range of ceramic types are shown and quantified by weight and fragment count in Table 5.

Table 5: Ceramic material codenames and total quantities by fragment count and weight

Codename	Full name	Total fragments	Total weight in grams
FIRE CLAY	Fired clay	140	619
DAUB	Daub	5	240

### *The Fired Clay and daub*

In total 140 fragments of fired clay and five pieces of daub were submitted for examination. Most of these fragments are small and featureless with an individual weight of less than 5 grams. For the purpose of this report the fabrics have been divided into six different fabrics using a x20 binocular microscope. Individual variations within these fabrics are described in the archive.

Fabric 1 – This fabric is mainly fired to an oxidised orange colour, often with a reduced core, although some fragments are also fully reduced. Under x20 magnification a background of very fine quartz below 0.1mm is visible, together with occasional larger (0.2 to 0.6mm) sub-rounded to rounded quartz grains, sparse iron-rich grains and calcareous grains. This was the most common fabric to be recovered from the site with 53 fragments in total. Most of these

fragments came from T5 and T14 and are small, abraded and featureless pieces of accidentally or poorly fired unrefined clay. Three fragments have flattened surfaces and one piece with an incomplete oval cross-section of c.45mm may have been part of a pedestal. Two fragments are small formless wedges in reduced fabrics, that is a lump of clay squeezed in the hand and then presumably used to fill in a gap, or form some other function.

Fabric 2 – This fabric is similar to Fabric 1 with the exception that the calcareous grains are moderately frequent and occasional streaks of inclusion-free light firing buff-coloured clay also occur. All eighteen fragments in this fabric are small and formless.

Fabric 3 – This is a light orange to orange fabric, which is also occasionally reduced internally. At x20 magnification a background of abundant fine quartz below 0.1mm is visible together with occasional larger sub-rounded to rounded grains up to 1.5mm, moderate to common iron-rich grains up to 3mm and common calcareous inclusions. Fragments of shell and thin streaks of clean light firing clay may also be present. The 39 fragments in this fabric include two recognisable pieces of daub; two with flattened surfaces and four small pieces with curved surfaces. The other fragments are all small and formless.

Fabric 4 – This fabric is mainly fired to an oxidised orange colour, occasionally with a reduced core. Under x20 magnification a background of very fine quartz below 0.1mm is visible, together with moderate to common larger (0.2 to 0.6mm) sub-rounded to rounded quartz grains, sparse iron-rich grains and calcareous grains. Thirty-three fragments, almost all in a very fragmentary and abraded condition, could be identified as this fabric. Three pieces are evidently daub, one of which has a thickness of c.65mm. Two other fragments have flattened surfaces.

Fabric 5 – A single tiny flake in a reduced micaceous fabric with an oxidised surface came from context 169 in T14. The fabric has an abundant fine quartz background (below 0.1mm) together with sparse larger grains 0.3 to 0.6mm) and occasional aggregated coarse sandstone. This tiny flake (weighing less than 1 gram) may be from a vessel.

Fabric 6 – The small flake in this fabric has a dark reduced core and oxidised surfaces. The fabric consists of abundant fine background quartz below 0.1mm together with common lumps of aggregated fine sandstone and occasional calcareous grains. The single fragment identified in this fabric has a thick carbonised deposit on a reduced flattened surface and may be from a vessel. It was recovered from context 186 in T12.

Table 6: Fired clay and daub fabrics by fragment count

Trench	Fabric 1	Fabric 2	Fabric 3	Fabric 4	Fabric 5	Fabric 6	Total fragments
Trench 1		2					2
Trench 04			1				1
Trench 05 (Daub)			1				1
Trench 05	19	13	8	3			43
Trench 06	1		1	1			3
Trench 07 (Daub)				1			1
Trench 07	2	1					3
Trench 10 (Daub)				1			1
Trench 10		1		16			17
Trench 11 (Daub)			1	1			2
Trench 11	6		8	3			17
Trench 12	1					1	2
Trench 14	17		8	7	1		33
Trench 18	5	1	11				17
Trench 25	2						2
Total	53	18	39	33	1	1	145

Much of the assemblage consists of small and very abraded fragments. Whilst this material is of use in terms of its presence within a context and for an overall estimate of fabric use, these tiny fragments are all undiagnostic and typically weigh less than 5 grams.

In eight instances, fragments of fired clay have flattened upper surfaces. Unfortunately they are all too fragmentary to identify a form or function for them, but possibilities includes clay flooring, daub, hearth base, salt-working tray, kiln plate and kiln lining. One of the daub fragments also has one flattened surface. Four pieces of fired clay, all very fragmentary, have one partially curved surface. A similar function to that of the flattened pieces is likely for these fragments. One piece with an incomplete oval cross-section could come from a pedestal. Only two fragments have evidence for exposure to a high temperature process. Two partially complete formless wedges of fired clay could have been used to secure kiln furniture or salt trays in place, or just to fill a crack in walling.

The five identifiable structural daub fragments are all small and only in three instances could the diameter of the wattle be estimated. One of the diameters is narrow (c.28mm), suggesting the use of withies from a short coppice cycle and two are larger at 45mm+ and c.65mm. The material is too fragmentary to ascribe to a particular structure type and they could come either from a building, or a kiln of domestic or industrial type.

No identifiable briquetage was noted and no fragments have what is termed 'salt-surfacing' usually caused by a reaction of the clay with brine during firing, however the presence of what could be part of a pedestal in T12 (context 186) may suggest salt-production. The

possibility of local production versus the inland transportation of salt-production containers at Iron Age and Roman sites in the area is discussed by Vince and Steane (2008) and Young (2009 and 2010).

#### *Site sequence*

The two largest fired clay assemblages came from T5 and T14 (44 and 33 fragments respectively). Three other trenches produced more than ten fragments (T10, T11 and T18). More than 50% of the material is associated with pottery of mid to late Iron Age date and no large groups come from securely dated Roman deposits, suggesting perhaps that the later pieces are residual. With the exception of sixteen Fabric 4 fragments in T10, there appears to be no spatial differences in fabric type on the site. Twenty-six fragments of fired clay and one piece of daub came from the fill of feature 135 in T5 (context 134). Unfortunately no pottery was recovered from this feature to assist with the dating of this group. With the exception of a single piece with a flattened surface all of the fragments are abraded and featureless. The piece of daub has a large impression, possibly that of a thumb. The upper fill of Ditch 206 in T10 (context 202) and fill 191 of Ditch 192 in T11, both produced groups of seventeen fragments of fired clay and one, or two pieces of daub. The material is associated with Iron Age pottery in both cases, that in Ditch 206 being dated to the mid to late Iron Age. Despite the fragmentary and abraded state of the undiagnostic pieces from Ditch 206 it is possible to say that they all probably originated from larger lumps of daub, similar to the single fragment found. The fragments in Ditch 192 include two pieces of daub and two further fragments with flattened surfaces. Again the formless fragments are probably from daub. The upper fill of Ditch 177 in T14 (context 169) contained 21 fragments of small abraded and formless fired clay associated with pottery of general Iron Age date. A similar but small group of ten fragments came from the main fill of Ditch 240 in T18 associated with Late Iron Age pottery.

#### *Summary and Recommendations*

Fired clay fragments are commonly found on sites of pre-Roman and Roman date in Lincolnshire and the collection from this site adds to our knowledge of local fabrics, but is of limited use as an indicator of site function. There is a possibility that salt processing was taking place in the locality but there is no definitive evidence from the material recovered.

#### **Stone object** by author with lithology by Zoe Horn

A single fragment of quernstone was recovered from the north-western side of Ditch 127 in T4 (context 125). The fragment was heavily damaged with only part of the grinding surface visible.

Lithology: Sandstone, pale brownish grey, medium to (more commonly) coarse grained, poorly sorted, poorly compacted, with appreciable feldspar. Millstone Grit.

## 7 Environmental Record

### Animal bone by Jane Richardson

In total, 1674 animal bone fragments and 39 oyster shells were recovered from both hand-excavated and sieved deposits (Table 7). The data are presented by phase, although only Late Iron Age and early Roman features produced sufficient bones to allow for meaningful comparisons between them (with reference to a number of statistical parameters after Van der Veen and Fieller 1982, 296). When bone zones (easily identifiable and non-reproducible parts) are considered, however, all groups fall well below the minimum reliable sample size of around 500.

Table 7. Animal bone fragments by feature (zone counts given in parentheses)

	Late Iron Age	1st-2nd C	3rd-4th C	Unphased/modern	Total
Cattle	(18) 80	(5) 47	(10) 32	(4) 6	(37) 165
Horse	(5) 8	(1) 2	(3) 5	1	(9) 16
Sheep	(3) 3	(1) 12	(7) 1		(11) 16
Sheep/goat	(23) 82	(21) 631	(3) 12	(1) 2	(48) 727
Pig	(6) 27	(2) 4	(6) 12	(1) 1	(15) 44
Dog		(1) 1		(2) 3	(3) 4
Cat			(6) 7		(6) 7
Cattle-size	(6) 244	95	56	5	(6) 400
Sheep-size	(2) 194	79	8	11	(2) 292
Bird spp		(1) 2	1		3
Total	638	873	134	29	1674
Oyster		(20) 23	(9) 12	(4) 4	(33) 39

### *Methodology*

Bones were identified to taxa wherever possible, although lower-order categories were also used (e.g. sheep/goat, cattle-sized). In the absence of any goat bones, however, sheep/goat bones are subsequently assumed to be of sheep. As the assemblage was relatively small, all fragments were recorded although identification of diagnostic element zones was also made.

For age-at-death data, epiphyseal fusion (after Silver 1969) and the eruption and wear of deciduous and permanent check teeth were considered. Dental eruption and wear were recorded using the letter codes of Grant (1982).



Bone condition, erosion and fragment size were recorded in order to assess bone preservation, while gnawing, burning and butchery marks were noted to determine bone treatment. Given the fragmented nature of the assemblage, the recovery of biometrical data was not attempted. Pathological bones were noted.

### *Results*

The assemblage is generally well preserved with few eroded bone surfaces. Most of the bones came from occupation deposits associated with Late Iron Age and early Roman settlement, with far fewer bones recovered from later Roman features. Regardless of phase, however, the very low proportion of bones identified as diagnostic zones (8%) is a reflection of the highly fragmented nature of the assemblage. Comparisons between the phases, therefore, should be treated with caution.

Butchery marks are present on cattle, sheep and pig bones from Late Iron Age and early Roman deposits, and on cattle and pig bones from later Roman contexts. All are indicative of carcass reduction as part of food preparation. Two pigs' heads (one each from early and later Roman deposits) had been cleaved in half along the sagittal line, probably prior to boiling. In total, seventeen butchery bones were noted, with the greatest proportion of butchered bones recovered from later Roman features (Table 8).

Gnawing of bones by dogs is apparent from all phases, although bones appear to have been most accessible to this type of damage during the later Roman phase (Table 8). Either dogs were more numerous during this later phase (although there is no evidence to support this from the bone assemblage), or bones were buried less rapidly.

Burnt bones are typically uncommon, although the presence of numerous cremated bones from feature 135 has significantly inflated the proportion of burnt bone from the earlier Roman phase (Table 8). If this deposit is excluded, only 1.5% of bones from 1st to 2nd-century features are burnt.

Table 8. Animal bone modification by feature

	Late Iron Age	1st-2nd C	3rd-4th C
Butchered	1.4%	0.3%	3.7%
Gnawed	3.1%	0.3%	8.2%
Burnt	1.1%	66.6%	0.7%

The bones recovered from Late Iron Age deposits are predominantly from sheep and cattle, although given their much larger carcass size, cattle are likely to have contributed by far the most in terms of meat weight. Pigs also contributed to the diet, while horses were probably kept as work animals although their consumption remains a possibility. For the main 'meat'

animals all body parts are represented suggesting that their slaughter was local. Age data indicate the slaughter of sub-adult and aged cattle suggesting that animals in their prime were maintained as breeding animals and for their secondary products. In contrast, young adult sheep in their prime appear to have been specifically targeted for slaughter. Meaningful age data for pigs are unavailable.

In contrast, the bones from early Roman features are skewed much more towards sheep, although this is largely the result of the cremated sheep bones concentrated in feature 135. Its fill is likely to have contained the remains of a single animal as some of the bones appear to be pairs and the Minimum Number of Individuals (MNI) present is 1. The bones are highly fragmented with no evidence for butchery. This animal was around one to two years old at death. Cattle are still likely to have contributed much to the diet and butchery evidence indicates that pigs did also. Again, the range of body parts indicates local slaughter. Unfortunately age data are scarce, although aged cattle and prime sheep are represented once again. Oysters are represented for the first time, no doubt harvested from the nearby River Humber, and would have supplemented the domestic meat diet. These were a familiar Roman delicacy and given comparable numbers of left and right shells, were imported to the site intact and fresh.

The 3rd to 4th-century bones are predominantly from sheep and cattle, although pigs appear to have been proportionally more important by this later phase. Unfortunately given the size of the assemblage, age data are too few to be meaningful. A partial cat skeleton from ditch 142 is not an uncommon find in later Roman Britain. This animal had suffered a rib fracture which was well healed at its death. Oysters, again presumably imported intact, were still being consumed.

### *Conclusions*

Although the assemblage is small, butchery waste from cattle, sheep and pigs is likely regardless of phase. The range of body parts from these animals certainly indicates local slaughter but localised rearing is also probable despite the absence of neonatal bones. From Late Iron Age deposits, cattle, following early selection, tended to be maintained to maturity in order to maximise the production of secondary products such as milk and traction. In contrast, young adult sheep may have been used to provide the inhabitants with prime meat. Unfortunately given the scarcity of age data, it was not possible to see if this pattern continued through the Roman period. The introduction of oysters to the diet during the Roman period, however, is clear.

### **Carbonised plant macrofossils and charcoal** by Diane Alldritt

Eighteen environmental sample flots were examined for carbonised plant macrofossils and charcoal. Charred material from three sample retents was also scanned for identifiable remains. Thirteen of the trial trenches produced archaeological features, suggested to be large enclosures of possibly Iron Age or Romano-British date, and environmental samples were examined from twelve of these trenches. Samples were taken from a number of different ditch and gully contexts.

### *Methodology*

Bulk environmental samples were processed by ASWYAS using an Ankara style water flotation system (French 1971). The flots were dried before examination under a low powered binocular microscope. The majority of samples produced only very small quantities of charred material from <2.5ml to 2.5ml, with occasional samples containing larger amounts from 10ml to 25ml. Modern root fragments were present in small amounts from <2.5ml to 15ml along with occasional earthworm egg capsules and some modern straw suggesting a degree of modern contamination. All identified plant remains including charcoal were removed and bagged separately by type.

Wood charcoal was examined using a high powered Vickers M10 metallurgical microscope at magnifications up to x200. The reference photographs of Schweingruber (1990) were consulted for charcoal identification. Plant nomenclature utilised in the text follows Stace (1997) for all vascular plants apart from cereals, which follow Zohary and Hopf (2000).

### *Discussion*

The environmental samples produced a small amount of carbonised plant material, concentrated in four of the trenches, with very little found elsewhere (Table 9). Trench 5 contained a small amount of burnt peat-like vesicular material, T7 a scattering of carbonised cereal grain and agricultural related weed seeds, whilst T6 and T11 produced small concentrations of wood charcoal. Samples examined from the remaining trenches (T1, T3, T4, T10, T12, T14, T18 and T25) were either completely barren of carbonised remains or produced only trace evidence. All trenches will be discussed in more detail below.

#### *Trench 1*

Two samples taken from T1 (Sample No. 32 – context 212, the main fill of Ditch 213 and Sample No. 34 – context 219, the primary fill of Gully 218), were both found to be sterile of carbonised material, producing only snail shell.

#### *Trench 3*

One sample was taken from T3 (Sample No. 10 – context 113, from Ditch 114), which produced a very small amount of tea-leaf sized charred detritus, most likely decayed or degraded wood charcoal, none of which was identifiable. A small amount of snail shell was the only other environmental material present.

*Trench 4*

Sample 3 (126) taken from Ditch 127 was sterile of carbonised plant material and contained only snail shell and a single modern seed, suggesting a small degree of bioturbation occurring in the deposit.

*Trench 5*

Three samples were examined from T5 with two of these producing a small amount of carbonised plant material. Sample 5 (134) taken from the primary fill of a U-shaped feature in the upper layers of Ditch 139 proved interesting in that it contained a small concentration of vesicular burnt peat-like material together with rhizomes and trace amounts of indeterminate cereal grain. This could be a discrete deposit of hearth waste dumped in the top of the ditch, or may represent an area of in-situ burning from a later period as the ditch went out of use, but in both cases peat appears to have been used as a source of fuel. The presence of rhizomes in addition to the peat suggests heath or peat land resources being cut into turves and brought onto the site for use as fuel.

Sample 9 (138) the primary fill of Ditch 139 was sterile of charred remains.

Sample 14 (107) the fill of Gully 108 contained single specimens of *Triticum spelta* (spelt wheat) and *Danthonia decumbens* (heathgrass) both quite well preserved. These are probably trace or wind blown occurrences in the gully, but provide some suggestion for agricultural activity taking place in the vicinity, albeit a residual indicator.

*Trench 6*

Two samples were examined from T6. Sample 2 (117) from Ditch 118 was completely sterile, whilst two flots from Sample 7 (143) from Ditch 142 produced a small quantity of charred plant material. Context (143) contained a single *Triticum spelta* (spelt wheat) cereal grain and a fragment of wood charcoal identified as *Quercus* (oak). Whilst these are probably of a similar residual nature to the cereal grain found in T5 (context 108) they nevertheless were in a good state of preservation and provide some degree of trace indication for human activity occurring nearby. The oak wood may possibly represent the remains of hearth fuel waste whilst the cereal grain could have become charred accidentally during cooking or processing.

*Trench 7*

The single sample examined from T7 produced a mostly well preserved concentration of carbonised cereal grain and weed seeds recovered here in greater amounts than from any other sample taken over the site as a whole. Carbonised material from Sample 18 (161) from the primary fill of Ditch 162 consisted mainly of cereal grain, with slightly greater amounts of *Triticum spelta* (spelt wheat) and *Triticum sp.* (wheat) recorded than of either *Hordeum*

vulgare sl. (barley) or *Avena* sp. (oat). A large number of grains were noted as indeterminate due to poor preservation. Agricultural weed recovery was low, with only two types recovered, although a small number of *Triticum spelta* (spelt wheat) glume bases provided tentative indication for agricultural processing, perhaps the final stages of sieving and drying, occurring in the vicinity. The combination of material pointed to a deposit of cereal processing waste being dumped in the ditch, perhaps the sweepings from a nearby corn drier or hearth place, although no fuel evidence was found in this particular context.

#### *Trench 10*

Sample 30 (205), the primary fill of Ditch (206, was barren of identifiable charred material, but did produce snail shell and modern straw indicating a degree of bioturbation in the deposit.

#### *Trench 11*

Sample 31 (191) taken from Ditch 192 produced a small concentration of wood charcoal with one piece identified as *Betula* (birch). This fragment was quite poorly preserved but most likely birch based upon the visible evidence. It was probably a discrete deposit of fuel waste although some bioturbation of the remains should not be ruled out, given the presence of modern roots and a single snail shell.

#### *Trench 12*

Sample 26 (189) taken from the primary fill of Ditch 190 was barren of identifiable remains containing only very small trace slivers of decayed wood charcoal measuring <3mm. Modern straw was found in this sample suggesting some mixing of the deposits.

#### *Trench 14*

Sample 23 (176) from Ditch 177 was sterile of charred remains, and contained a large amount of modern straw.

#### *Trench 18*

Sample 38 (239) from the primary fill of Ditch 240 was sterile.

#### *Trench 25*

Two samples taken from T25 produced trace residual remains only. Sample 27 (194) from Ditch 195 consisted of a single *Polygonum* sp. (knotgrasses) weed seed, whilst Sample 28 (198) from the primary fill of Ditch 199 produced only one indeterminate cereal grain. This material is probably not particularly significant.

### **Conclusion**

The environmental samples consisted of small amounts of carbonised plant remains and wood charcoal concentrated in four of the excavated trial trenches, with the remaining trenches producing very little evidence for agricultural activity or fuel use.

Carbonised cereal grain was concentrated mainly in T7 where a fairly substantial cache of material indicated a mixed agricultural economy using spelt wheat, barley and oats was in operation. Cereal grain was also recorded in T5, T6 and T25 although some of this material is probably residual. The deposit in T7 probably represents a discrete dump of agricultural processing waste from cereal drying or cooking occurring in the vicinity.

Charcoal was identified from T6 and T11 and found to consist of oak and birch types, both of which probably had a fuel use, and are indicative of mixed deciduous woodland. The birch charcoal from T11 would be suitable for dating if required. Other sources of fuel, in the form of peat or heath land resources, were indicated by the presence of burnt peat and rhizomes in T5. Given the context of the remains in T5 it is possible this could represent later burning activity occurring during or after the ditches had been abandoned and allowed to silt, but this would require radiocarbon dating or finds to test.

Overall the trial trench samples revealed the presence of carbonised plant material to be scarce at the site and confined to discrete areas. In the trenches where plant material was recorded the level of preservation was generally very good, and particularly in T7 the amounts recovered were of good quantity. Future excavation work has a good potential to produce well preserved environmental remains albeit confined to narrow areas of the site.

Table 9. Carbonised plant remains, charcoal and other remains

<b>A160 – A189 Improvements</b>	<b>Sample</b>	2	3	5	7	9	10	14
	<b>Context</b>	117	126	134	143	138	113	107
	<b>Trench</b>	T6	T4	T5	T6	T5	T3	T5
	<b>Feature</b>	ditch 118	ditch 127	u-shaped	ditch 142	ditch 139	ditch 114	gully 108
	<b>Total CV</b>	0	0	25ml	5ml	0	<2.5ml	<2.5ml
	<b>Modern</b>	<2.5ml	<2.5ml	2.5ml	5ml	<2.5ml	<2.5ml	<2.5ml
<b>Carbonised Cereal Grain and Chaff</b>	<b>Common Name</b>							
<i>Avena</i> sp.	oat							
<i>Triticum spelta</i>	spelt wheat				1			1
<i>Triticum</i> sp.	wheat							
<i>Triticum spelta</i> glume bases	spelt wheat chaff							
<i>Hordeum vulgare</i> sl.	barley							
Indeterminate cereal grain (+embryo)				2				
<b>Charcoal</b>								
<i>Quercus</i>	oak					1 (0.19g)		
<i>Betula</i>	birch							
<b>Carbonised Wild Resources</b>								
Burnt Vesicular / Peat				20+				
Rhizomes				4 (0.07g)				
<b>Carbonised Weeds</b>								
<i>Polygonum</i> sp.	knotgrasses							
<i>Rumex</i> sp.	docks							
<i>Chrysanthemum</i> sp.	crown daisies							
<i>Danthonia decumbens</i>	heath grass							1
<b>Other Remains</b>								
Non-marine mollusc shells			5+	20+	1	5+	20+	10+

Earthworm egg capsules		1									
Modern (non-carbonised) seeds			1								
Modern straw						5+					
<b>Port of Immingham, Lincolnshire</b>	<b>Sample</b>	18	23	26	27	28	30	31	32	34	38
	<b>Context</b>	161	176	189	194	198	205	191	212	219	239
	<b>Trench</b>	T7	T14	T12	T25	T25	T10	T11	T1	T1	T18
	<b>Feature</b>	ditch 162	ditch 177	ditch 190	ditch 195	ditch 199	ditch 205	ditch 192	ditch 213	gully 218	ditch 240
	<b>Total CV</b>	10ml	0	<2.5ml	<2.5ml	<2.5ml	<2.5ml	2.5ml	0	0	<2.5ml
	<b>Modern</b>	2.5ml	10ml	2.5ml	5ml	5ml	10ml	15ml	10ml	2.5ml	2.5ml
<b>Carbonised Cereal Grain and Chaff</b>	<b>Common Name</b>										
<i>Avena</i> sp.	oat	5									
<i>Triticum spelta</i>	spelt wheat	10									
<i>Triticum</i> sp.	wheat	7									
<i>Triticum spelta</i> glume bases	spelt wheat chaff	7									
<i>Hordeum vulgare</i> sl.	barley	5									
Indeterminate cereal grain (+embryo)		97				1					
<b>Charcoal</b>											
<i>Quercus</i>	oak										
<i>Betula</i>	birch							1 (0.11g)			
<b>Carbonised Wild Resources</b>											
Burnt Vesicular / Peat											
Rhizomes											
<b>Carbonised Weeds</b>											
<i>Polygonum</i> sp.	knotgrasses				1						
<i>Rumex</i> sp.	docks	1									
<i>Chrysanthemum</i> sp.	crown daisies	1									



<i>Danthonia decumbens</i>	heath grass										
<b>Other Remains</b>											
Non-marine mollusc shells		10+	50+	5+	5+	5+	50+	1	20+	10+	10+
Earthworm egg capsules											
Modern (non-carbonised) seeds											
Modern straw			20+				10+				5+

## 8 Discussion

### *Feature Visibility*

A good correlation was seen between the features identified during the geophysical surveys and the features identified during the evaluation with the majority of the features in the southern area around Brocklesby Junction. The archaeology uncovered within the trenches around this area revealed a series of linear features that form a network of settlement and domestic activity located within enclosures.

Four trenches that targeted linear anomalies (T2, T8, T9 and T13) did not locate any archaeological features. In each trench the anomalies were found to correspond with ceramic land drains the cuts for which had been backfilled with an industrial iron working slag thus accounting for the relatively strong magnetic response. A second linear anomaly identified at the northern end of T8 was found to correspond with another linear feature, also aligned north-east/south-west the same as the land drains. This feature correlates with the parish/county boundary and was observed to be backfilled with brick and clay pipe but was not investigated further. Trenches 15, 16, 17, 19, 20, 22, 24 and 26 were targeted upon weaker and less well defined anomalies and proved to be either plough furrows or land drains. The variation in the geology across the site also seems to account for several of the discrete anomalies identified by the geophysical survey.

The shallow depth of the topsoil and the clayey nature of the natural deposits suggest that the level of modern agricultural truncation could be fairly high. Many of the linear features did, however, retain a significant depth and the level of preservation of linear features appears to be high. Conversely discrete features were only identified within T6, and appeared to have been heavily truncated. Even with this high level of apparent truncation pottery was recovered from two of the three features suggesting that even from the heavily truncated features useful archaeological information can be recovered. This would seem to indicate that despite modern ploughing and various agricultural regimes, the rate of survival of the archaeology, artefacts and ecofacts appears to be very good.

### *Dating and Phasing*

On the basis of the available dating evidence, and disregarding residual flint of earlier prehistoric date, archaeological activity on the site would seem to fall into three broad phases: the pre-Roman Iron Age, early Roman period of the 1st -2nd centuries and finally later Roman period of the 3rd to 4th centuries.

#### *Pre-Roman Iron Age*

Dating of the pre-Roman Iron Age activity is best provided by the evidence of enclosure and land division located around T10, T11 and T12. The pottery recovered from all three trenches is exclusively late-Iron Age (c.100BC – 40AD) in date with a small amount identified as being of mid-Iron Age (350-100 BC). This small amount of pottery was recovered from the

main enclosure ditch in T10 and could indicate the possibility of an earlier establishment of the enclosure during the mid-Iron Age. Further evidence of either enclosure or land division was recovered from T1, T18 and T25 but with a lack of associated cropmark data and limited geophysical data the full extent of these features is not clear although some conclusions can be drawn. The date of the features within T1 suggest they may not be associated with the Romano-British settlement located directly north-west around T3, T4, T5, T6 and T7. The range of intercutting features and the artefacts recovered suggest occupational activity, located within an as yet unidentified enclosure. The ditch within T18 is fairly large and also suggestive of an enclosure with settlement activity located within. The features located within T25 also conform to the general picture of the wider landscape dating to the later Iron Age perhaps linking in with the fragmentary crop marks in the immediate area and the extensive Iron Age/Romano-British settlement site excavated approximately 0.4km to the north-west of this trench, in advance of the construction of the Conoco combined heat and power plant to the west of Rosper Road between 2000 and 2002. The environmental evidence for this period suggests that sheep and cattle were most likely being raised and slaughtered in the local areas with cattle contributing most to the diet and being maintained for breeding and their secondary products. Sheep in their prime appear to have been specifically targeted for slaughter and consumption. Evidence of any arable farming was none-existent within the environmental samples although the recovery of seeds from deposits across the site was limited to a very few narrow areas. Animal husbandry, therefore, appears to have played a more important role than arable during the Iron Age period. Birch fragments recovered from Iron Age contexts suggest a landscape with mixed deciduous woodland presumably with open areas.

#### *Early Roman period*

The early Roman period is clearly represented by a shift in settlement foci to the east of Brocklesby Junction. Many of the features in the area around T3-T7 produced pottery dating to the 1st – 2nd centuries with a peak of activity in the mid 2nd century AD. The artefacts recovered from the deposits that date to this early-Roman period suggest the presence of occupational activity, although its exact form is more difficult to determine. The presence of discrete features and shallow gullies also give tentative evidence of structures within the enclosures.

The pottery recovered from the large enclosure ditch in T14 was in the Iron Age tradition; however, a single Dressel 20 amphora sherd dating to the mid to late 1st century AD was also recovered. This may suggest access to traded goods but the subsequent use of broken amphora as ballast or as hones is not unknown, and this further complicated any dating. With few other traded ceramic goods recovered from the site, there does not seem to be any great involvement in trade. This sherd of Dressel 20 may, therefore, be intrusive or the Iron Age

material present may be residual: the group is too small to be certain. At this stage it is more practical to place this feature in the early Roman period.

The environmental evidence may suggest a change during the early Roman period with both cattle and sheep continuing to be exploited but with sheep contributing most to the diet. However, all groups fall below the minimum reliable sample, and it was recognized that the results are skewed by the disproportionate number of sheep bones recovered from a single context. Oysters most likely obtained from the Humber estuary are also incorporated into the diet for the first time during the early Roman period. Evidence for the increase in arable production is also demonstrated with the recovery of seeds grains from a 2nd century deposit within T5. The presence of a quernstone fragment from T4 also attests to the increases of use and consumption of arable crops.

#### *Later Roman Period*

A distinct group of features were identified within T3-7 that contained pottery that dates to the 3rd-4th centuries. Many of the features either respect the alignment of the earlier Roman period ditches or cut through the earlier ditches. The extent to which continuous occupation can be identified at this stage is very limited. The Roman period settlement might well have had two activity peaks with the later Roman period peak caused by a change in agricultural practices that saw the need for the re-cutting and re-defining of the enclosure complex. The environmental evidence for the later Roman period does suggest that although cattle and sheep were still being used and were still the predominant resource pigs became proportionately more important than previously. The evidence for arable crop production and processing is also greatest from the later Roman period features, with the use of spelt wheat identified within later Roman contexts. The clearest evidence of corn drying and processing of arable crops indicating mixed agricultural economy came from Ditch 162 in T7. This was seen in the form of a single discrete dump of processing waste from cereal drying. Although dating of this feature is problematic as the pottery only suggests a broad Roman date it does confirm the move to a more arable based economy during the Roman period.

What remains unclear from the results of the evaluation is to what extent the patterns of settlement identified are representative of continuous and uninterrupted development, shifting over time from the Iron Age enclosure around T10, T11 and T12 to the Roman period settlement around T3-T7. This shift could be a response to either changes in agricultural practice or access to new markets. Alternatively it could represent occupation by two distinct groups of people with a hiatus during the upheavals of the 1st century AD, followed by re-occupation. Identifying this transition period is also made more problematic by the long lived use of the native style pottery used from the Iron Age into the Roman period. The identification of a later Roman period phase of activity comes from a series of features that contain later Roman pottery. These features are located within the same area as the earlier

Roman features. A case for continuous occupation could be made with the renewal of features and the settlement during the 3rd to 4th centuries caused by a further move towards a more arable economy.

## 9 Conclusions

The evaluation of the proposed routes of the A160-A180 upgrade has revealed archaeological remains that broadly accord with the geophysical survey data and suggest exploitation of the landscape spanning a period incorporating the mid Iron Age till the later Roman period. Earlier prehistoric activity is represented by a small number of residual flint finds. The archaeological remains appear to be confined mainly to the areas around Brocklesby Junction and a couple of outlying areas (T18 and T25). The level of preservation appears to be relatively good, although predictably agricultural activity appears to have damaged several features. The discrete features within T6 also showed indications of having been heavily damaged. The recovery of ecofacts, especially charcoal and carbonised seeds, was fairly good but limited to only a very few areas of the site, while in contrast the preservation of animal bone was very good from all parts of the site.

Overall, the archaeological evidence is suggestive of a pre-Roman Iron Age agricultural landscape with livestock forming the bulk of the economy, with settlement/activity foci, that continued to be developed and exploited well into the Roman period. During this time there appears to be limited adoption of Roman material culture in the form of pottery and the inclusion of oysters in the diet. The Roman period also saw the greater use of arable crops and a possible shift away from cattle to sheep during the early Roman period followed by an increase in the consumption of pigs during the later Roman period. The extent to which settlement continuity can be identified at this stage is very limited, but the broad pottery dates do suggest a level of continuity of at least agricultural practice.

The evaluation provided significant evidence concerning the settlement, agricultural economy, and the nature of the landscape of the pre-Roman Iron Age along the Humber estuary within North/North East Lincolnshire adding to the information gained from the excavation of the Iron Age/Romano-British settlement at the Conoco site just to the north-east. The site has the potential for investigating the transition from the pre-Roman Iron Age into the Roman period and to identify any potential changes in the agricultural regime.

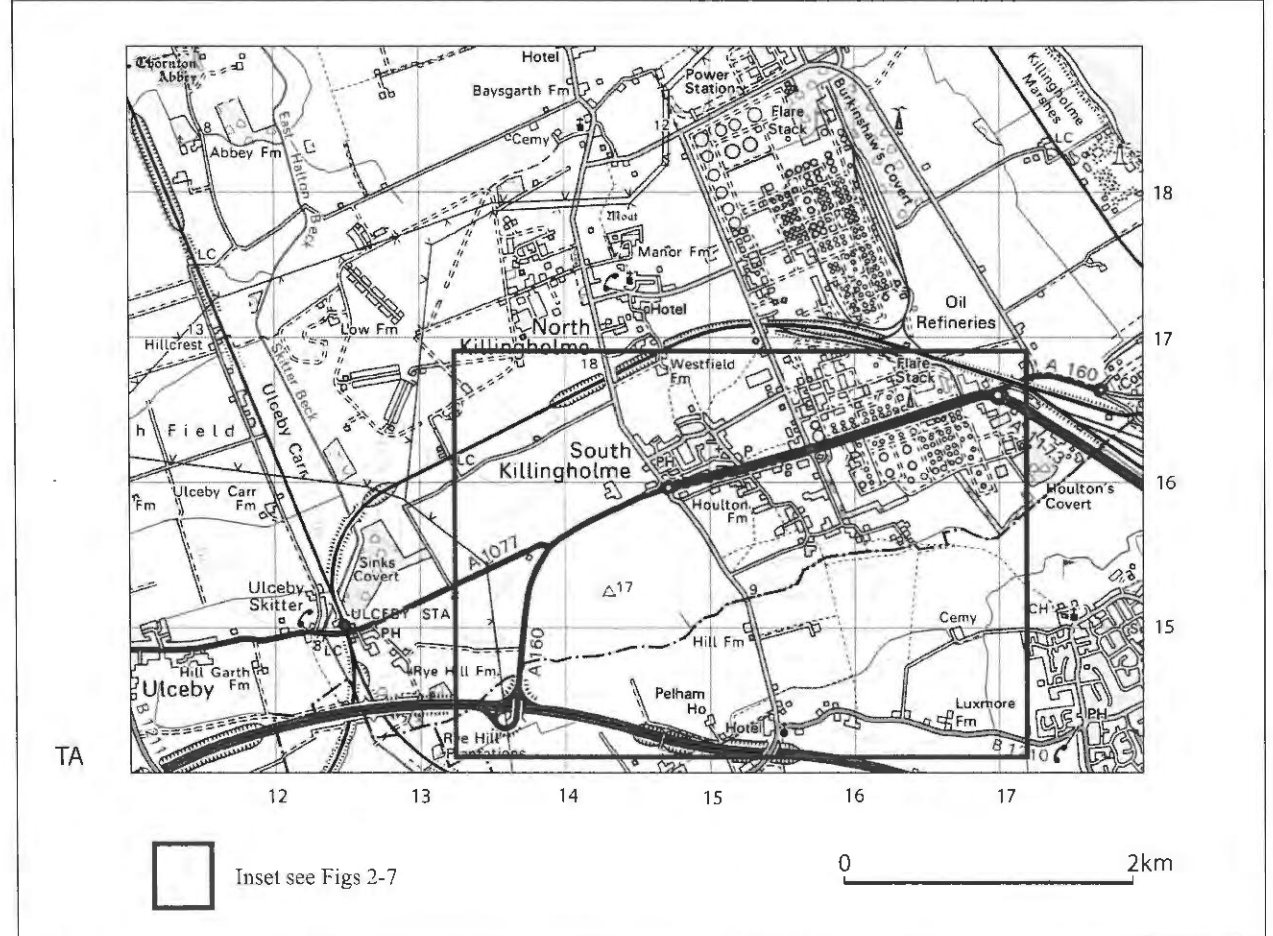
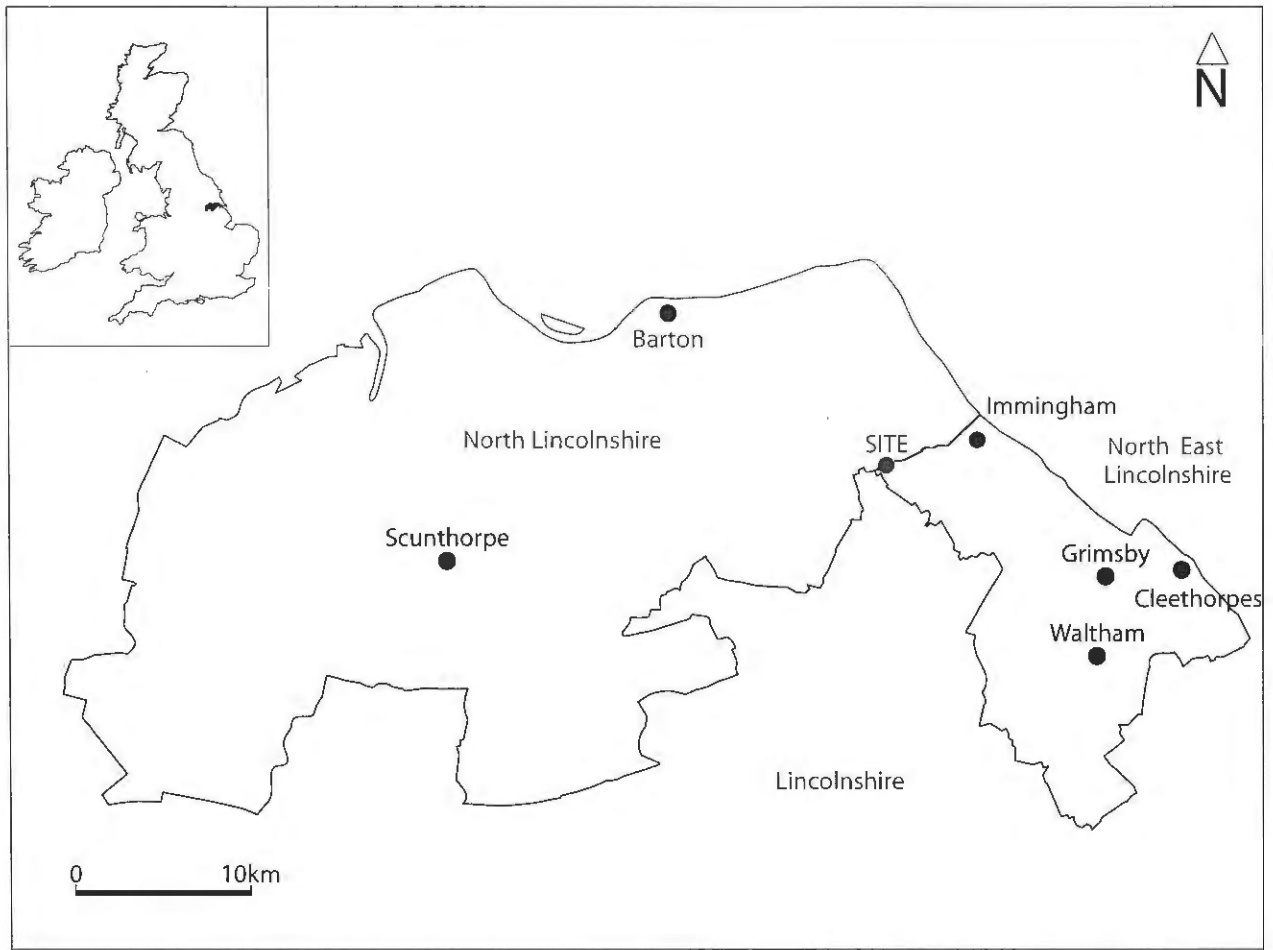


Fig. 1. Site location



Fig. 2. Site location showing trial trenches 1-13 in relation to archaeological features, greyscale magnetometer data and cropmark detail (1:1250 @ A3)

0 50m



Fig. 3. Site location showing trial trenches 14, 15 and 21 in relation to archaeological features, greyscale magnetometer data and cropmark detail (1:1250 @ A4)





Fig. 4. Site location showing trial trenches 16, 17, 22 and 23 in relation to archaeological features, greyscale magnetometer data and cropmark detail (1:2000 @ A4)





514200

514400

514600

Fig. 5. Site location showing trial trenches 18 and 24 in relation to archaeological features, greyscale magnetometer data and cropmark detail (1:2500 @ A4)

0 50m



Fig. 6. Site location showing trial trench 19, in relation to archaeological features, greyscale magnetometer data and cropmark detail (1:2000 @ A4)





Fig. 7. Site location showing trial trenches 20, 25 and 26, in relation to archaeological features, greyscale magnetometer data and cropmark detail (1:2000 @ A4)



Trench 1

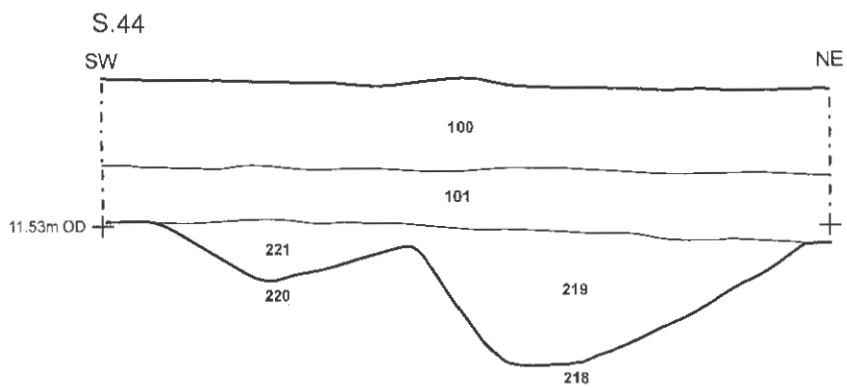
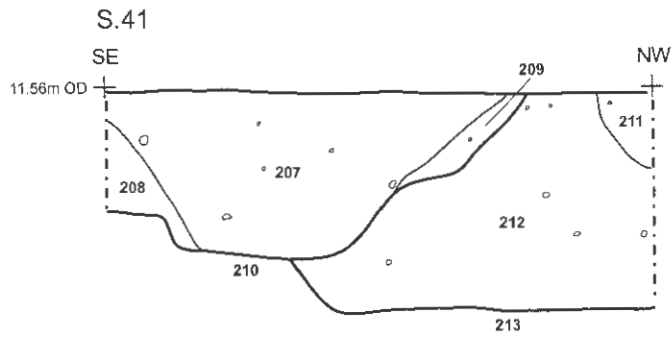
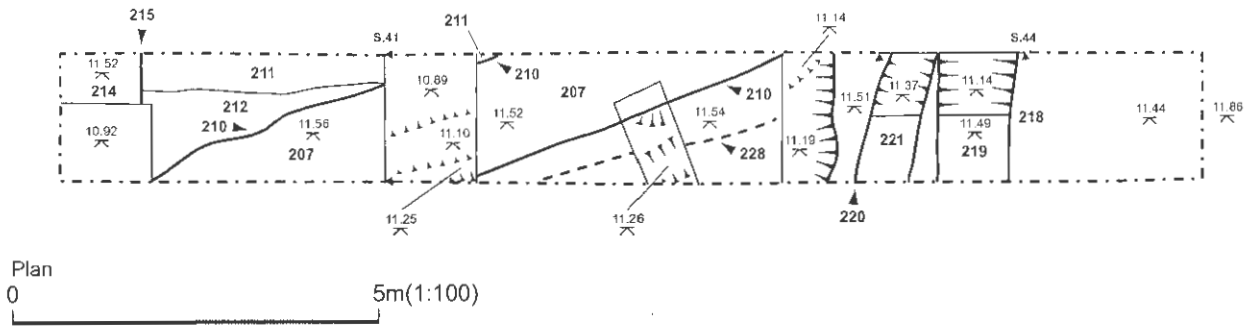


Fig. 8. Trench 1, plan and sections



Trench 3

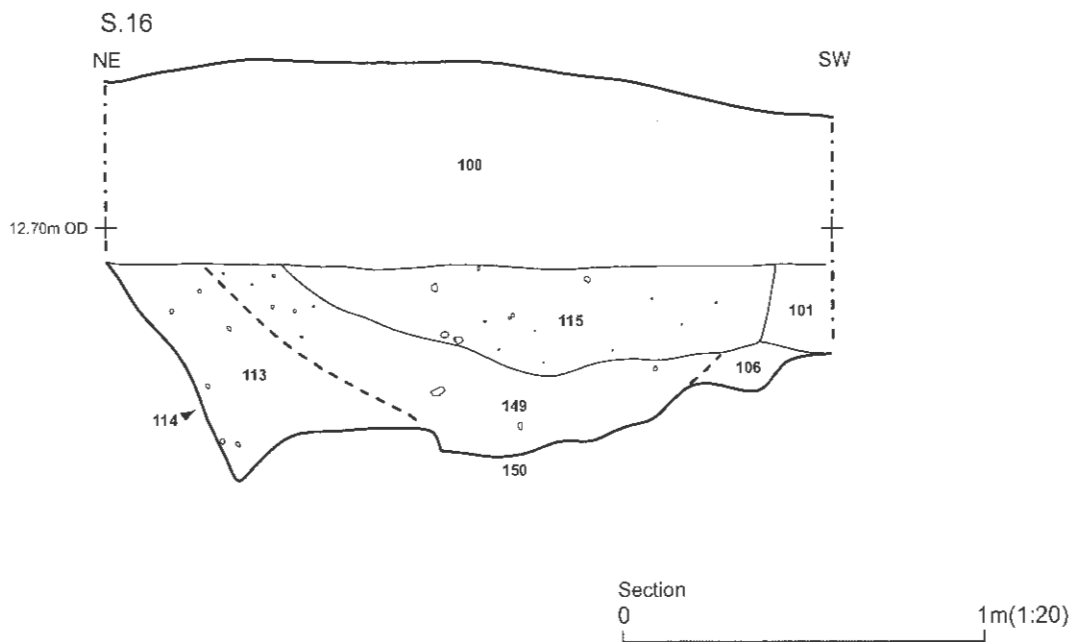
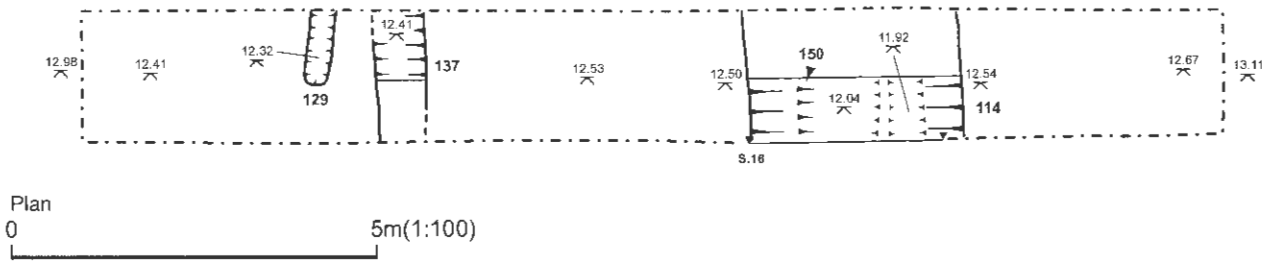


Fig. 9. Trench 3, plan and section



Trench 4

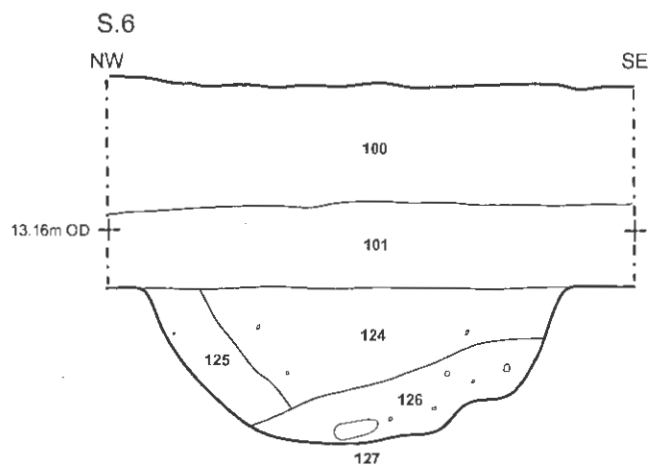
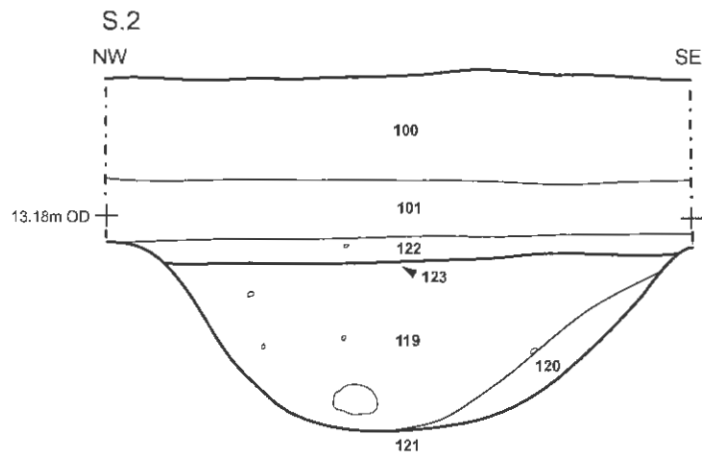
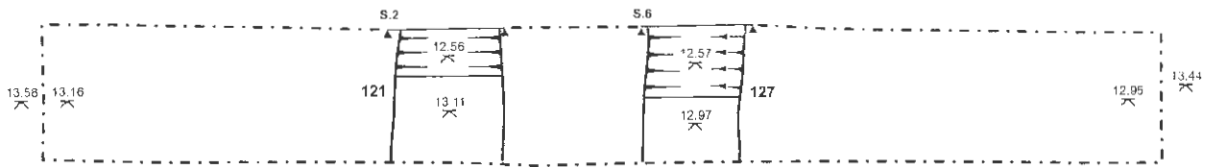


Fig. 10. Trench 4, plan and sections



Trench 5

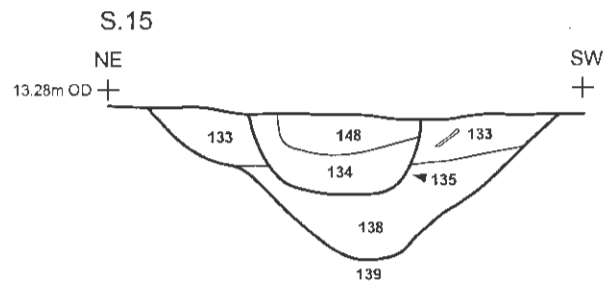
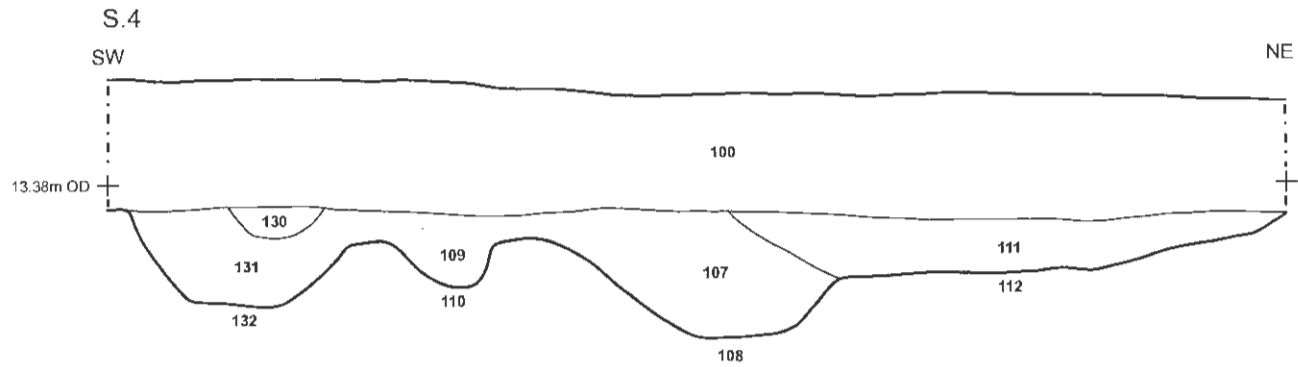
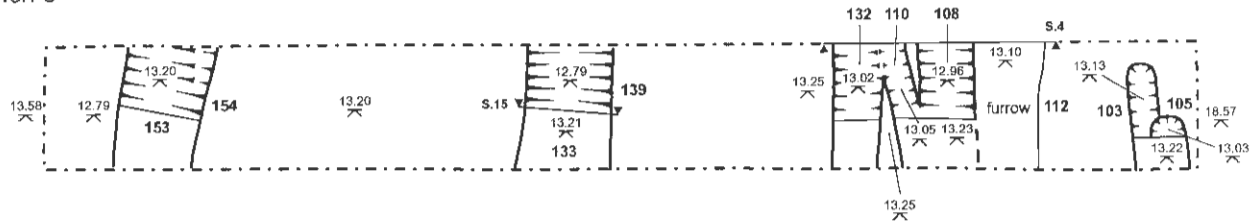


Fig. 11. Trench 5, plan and sections





Trench 6

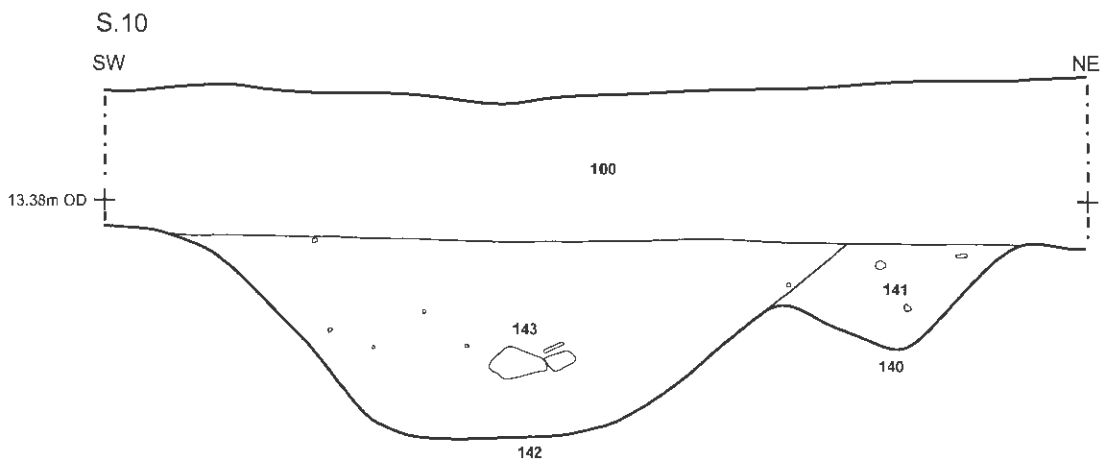
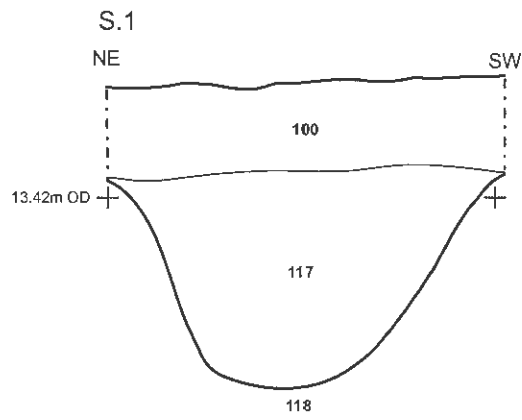
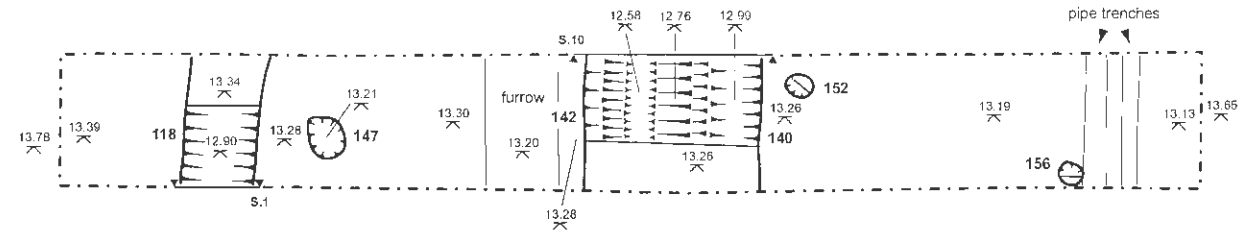


Fig. 12. Trench 6, plan and sections



Trench 7

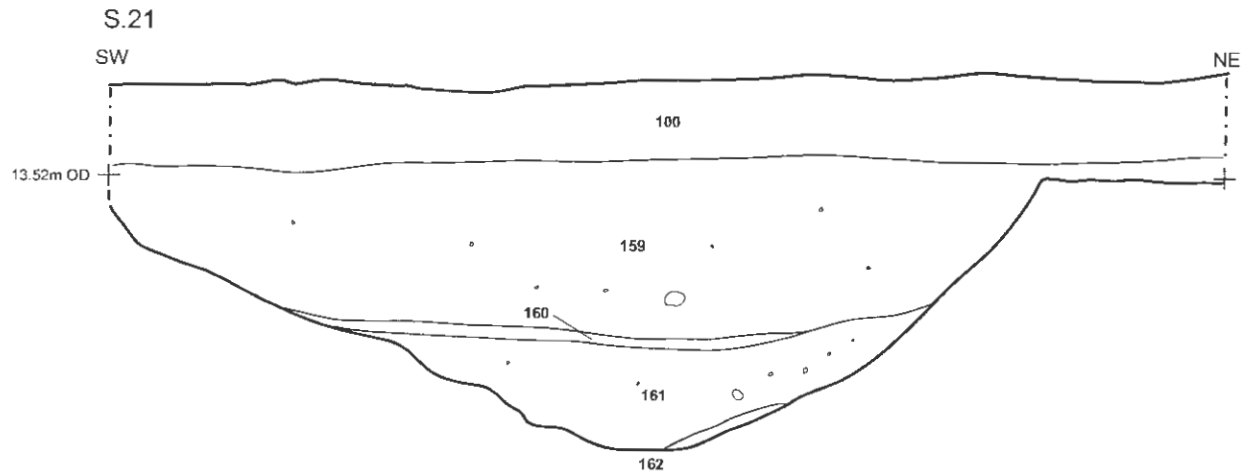
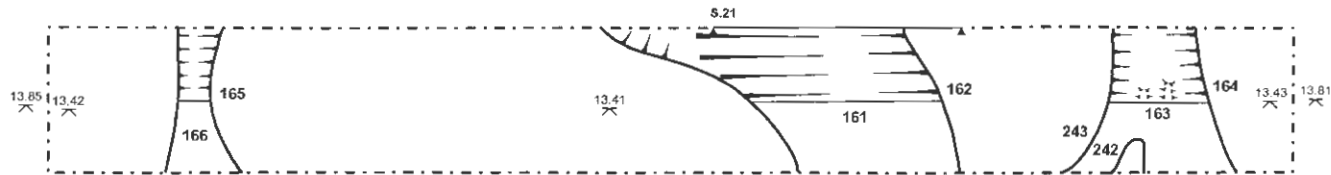


Fig. 13. Trench 7, plan and section



Trench 10

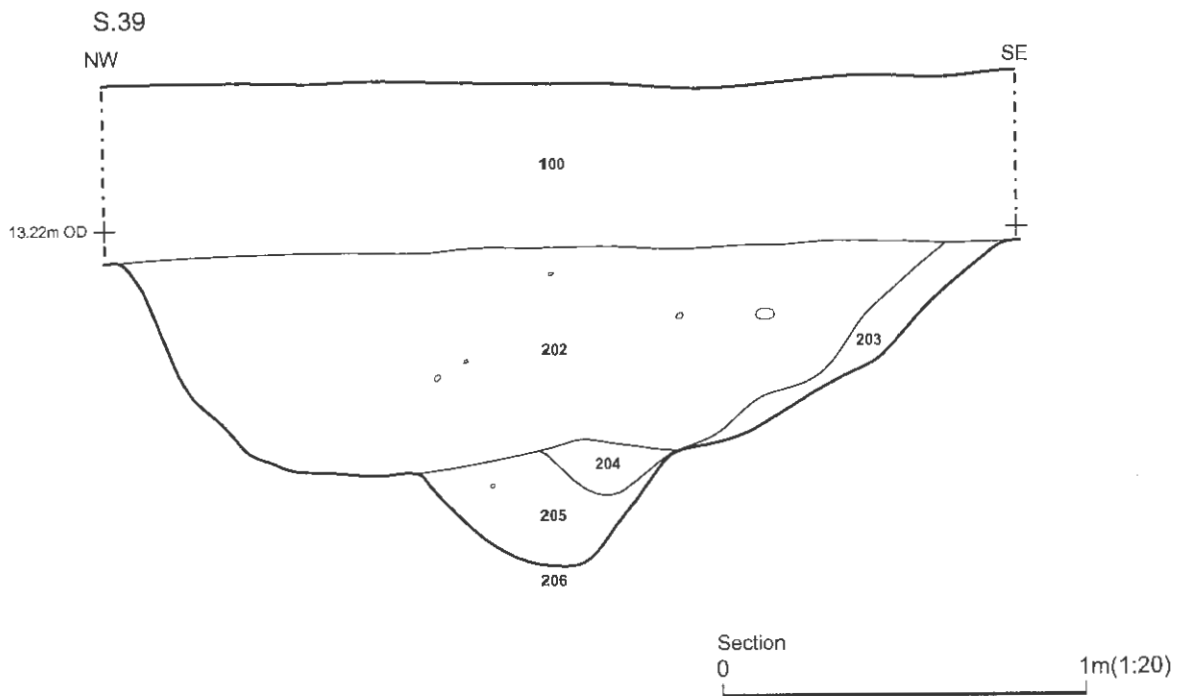
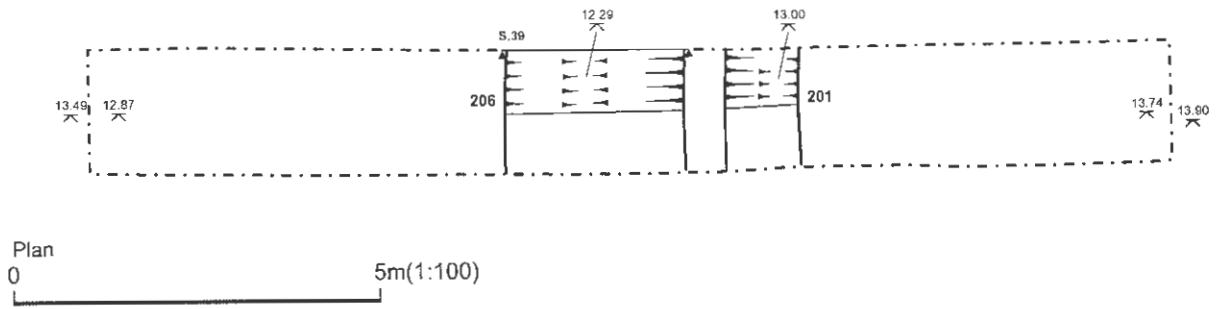


Fig. 14. Trench 10, plan and section

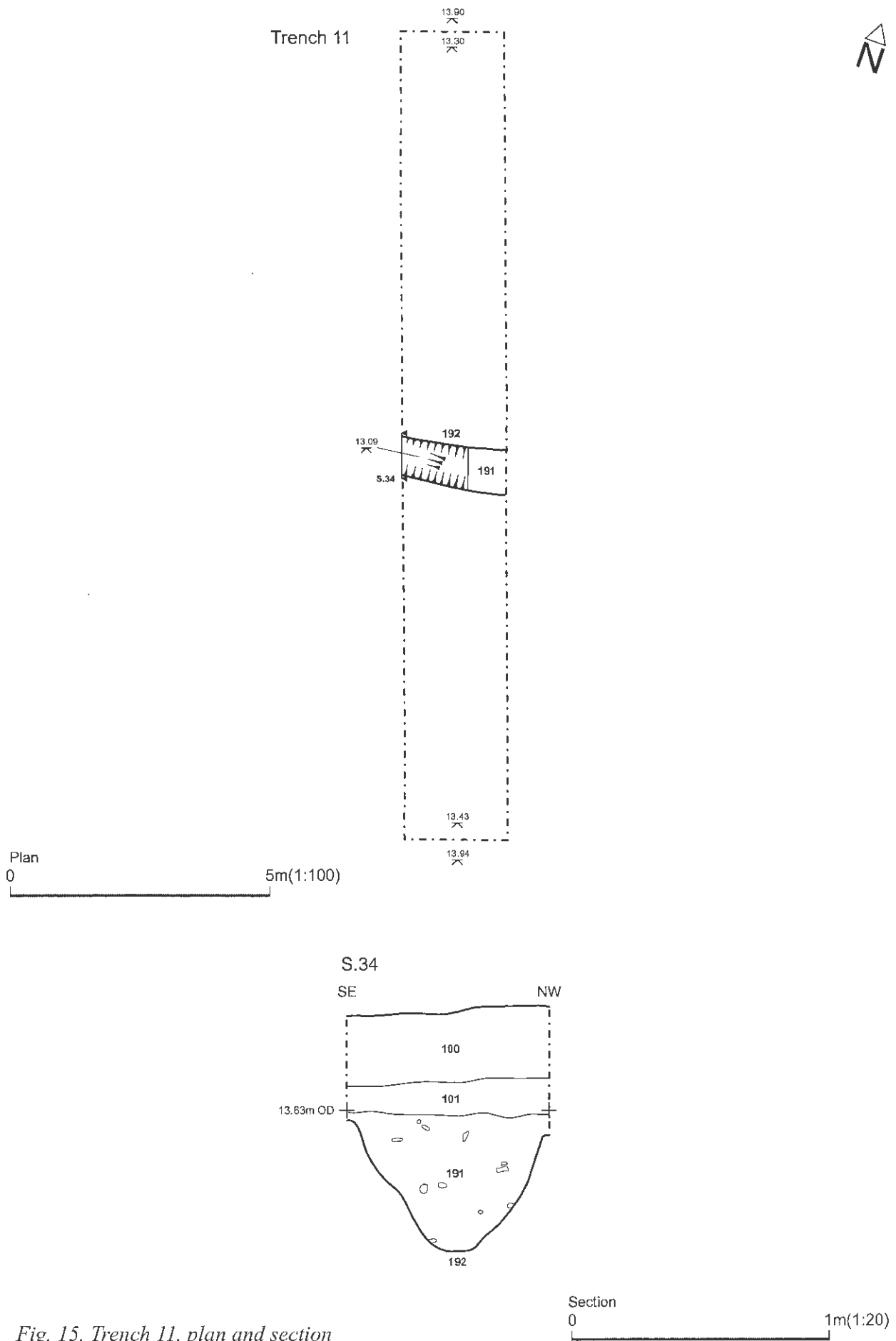


Fig. 15. Trench 11, plan and section



Trench 12

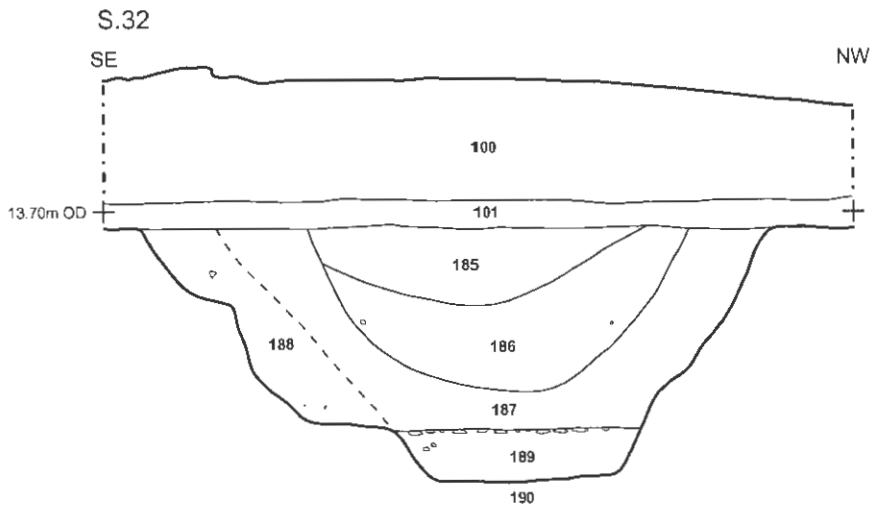
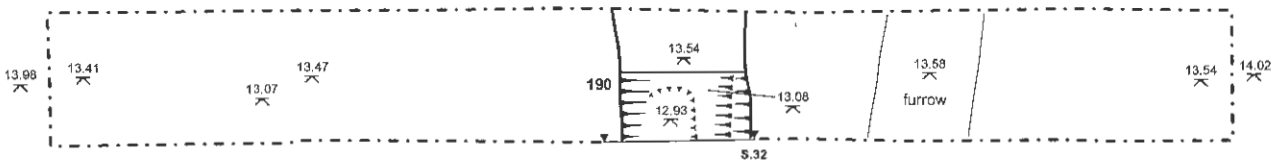


Fig. 16. Trench 12, plan and section



Trench 14

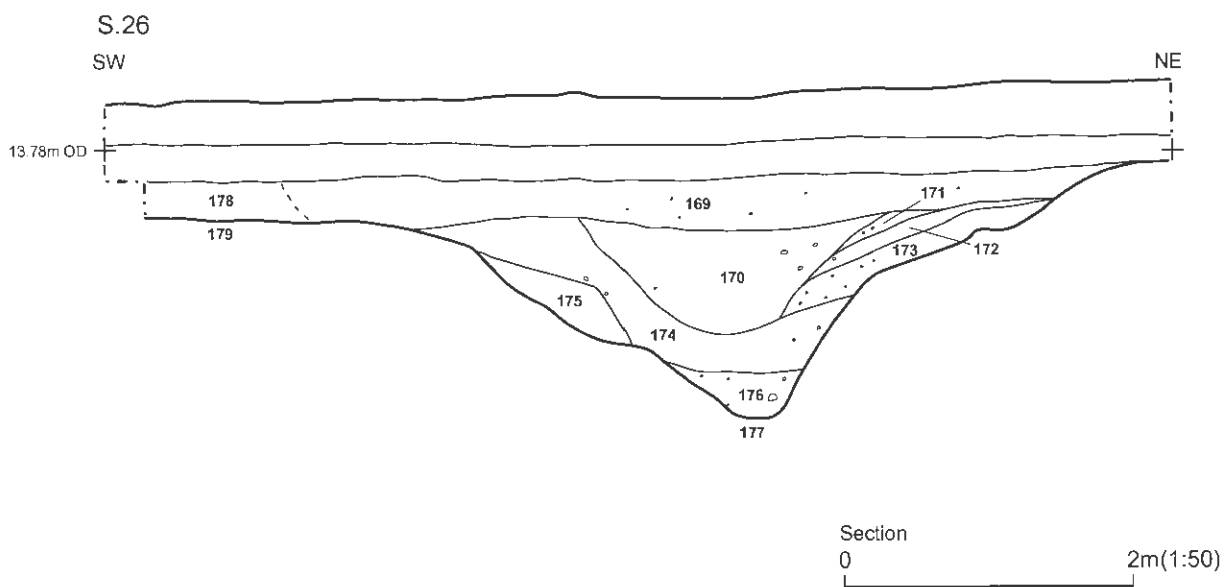
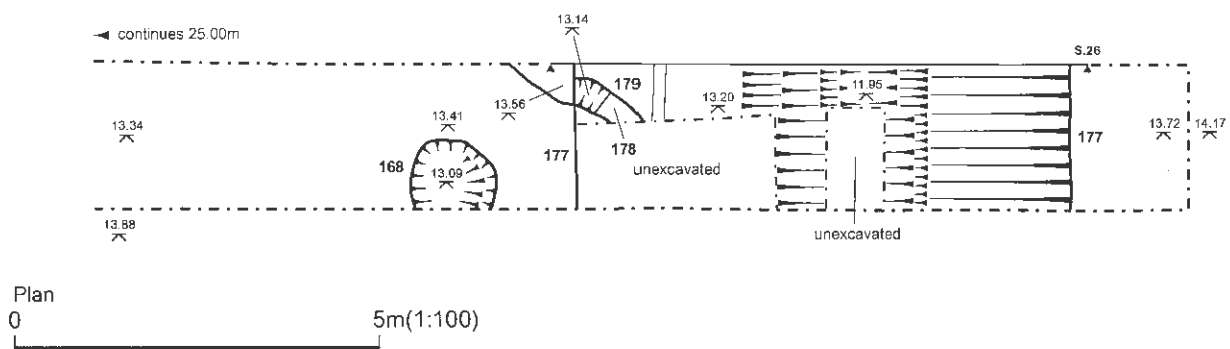


Fig. 17. Trench 14, plan and section

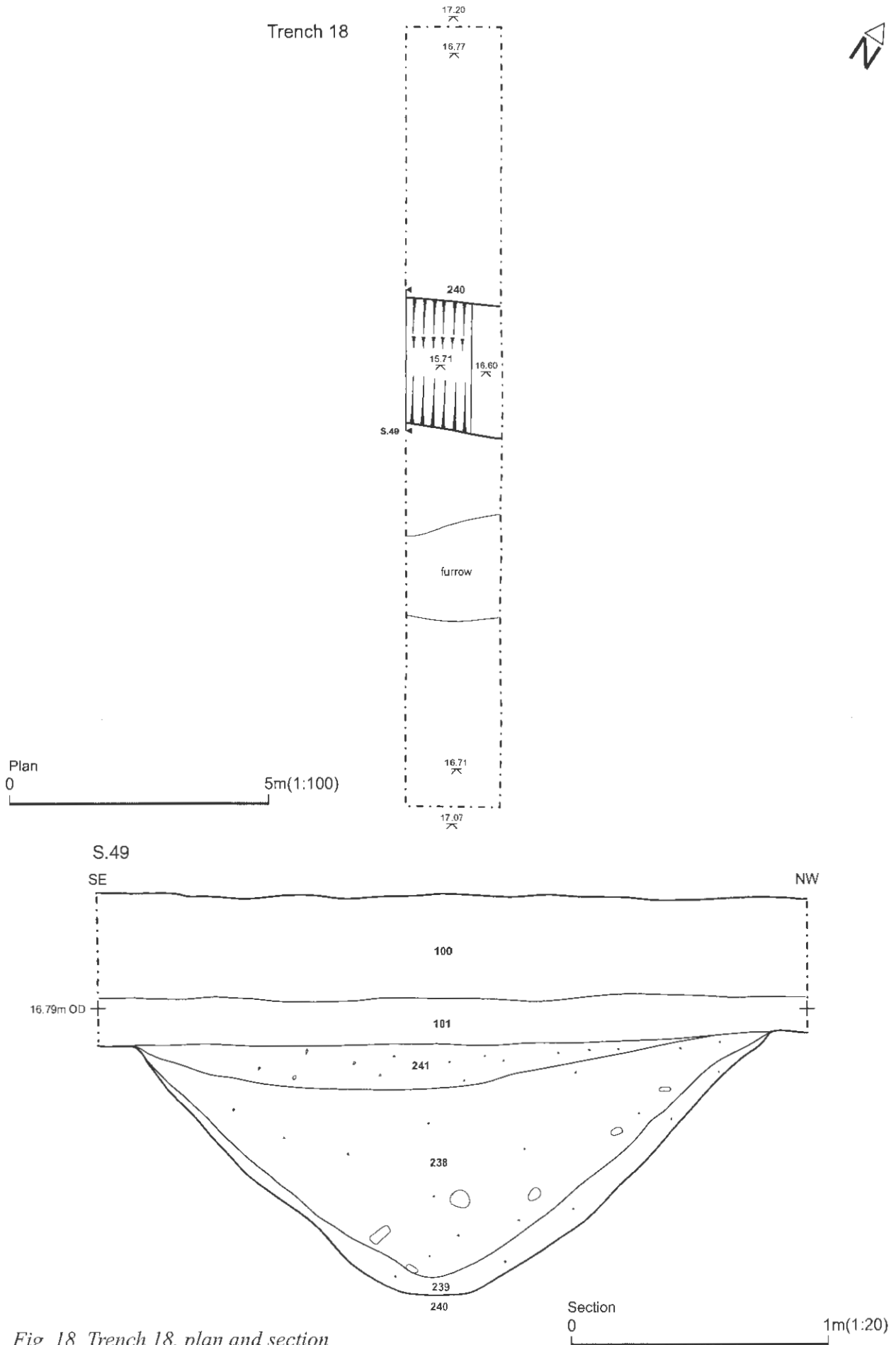


Fig. 18. Trench 18, plan and section



Trench 21

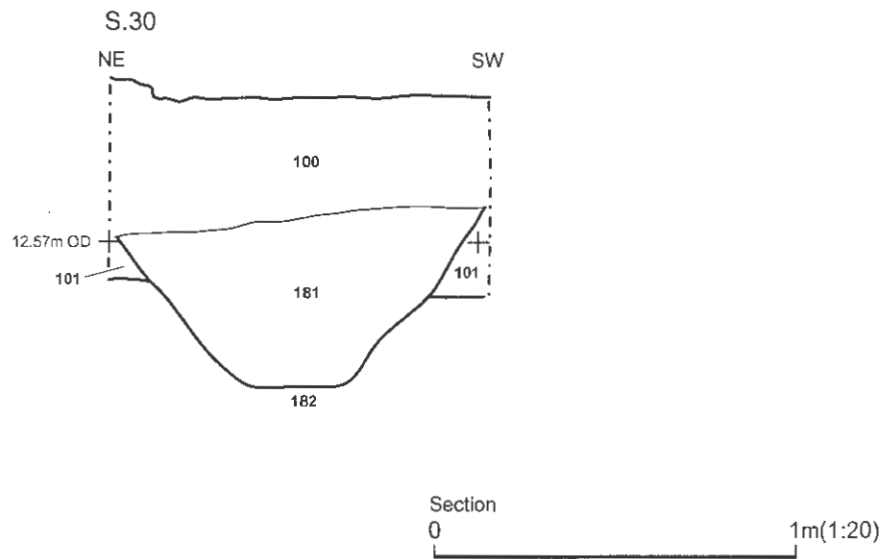
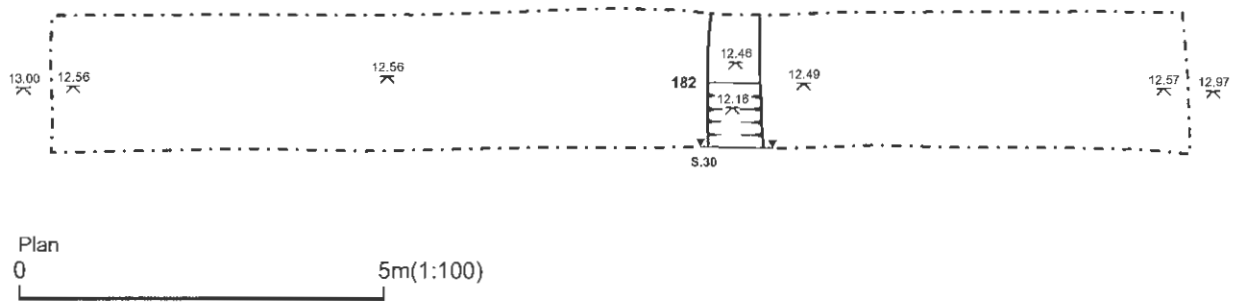


Fig. 19. Trench 21, plan and section





Trench 25

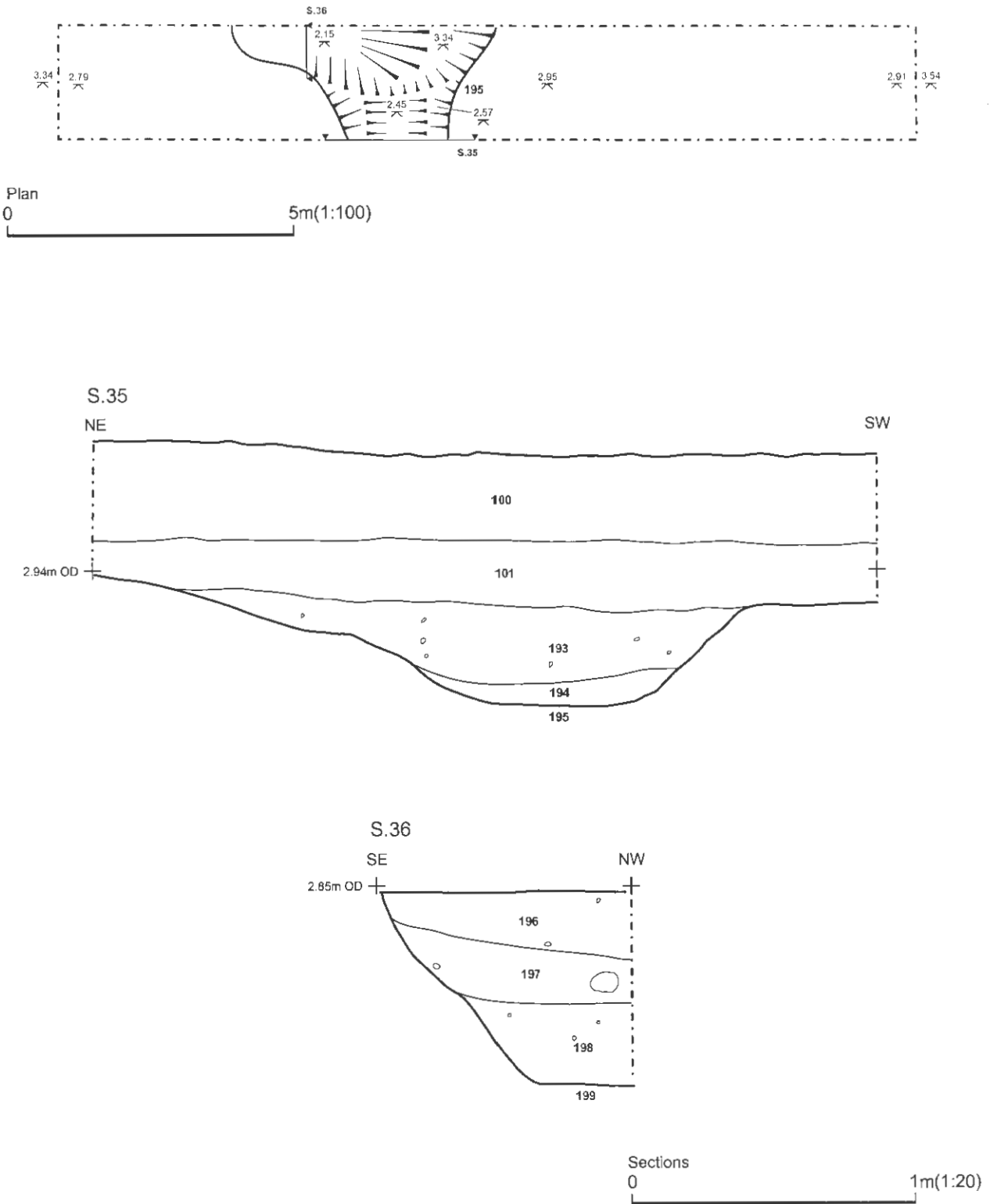


Fig. 20. Trench 25, plan and sections



*Plate 1. Trench 1 showing north-east facing section of Ditches 213 and 210, looking south-west.*



*Plate 2. Trench 1 showing Ditch 215, cut into Ditch 213/217, looking north-west*



*Plate 3. Trench 2 showing field drain filled with industrial waste material, looking south-east*



*Plate 4. Trench 3 showing Ditch 114, looking south-west, pre-excavation*



*Plate 5. Trench 3 showing Ditch 114, looking south-east, post-excavation*



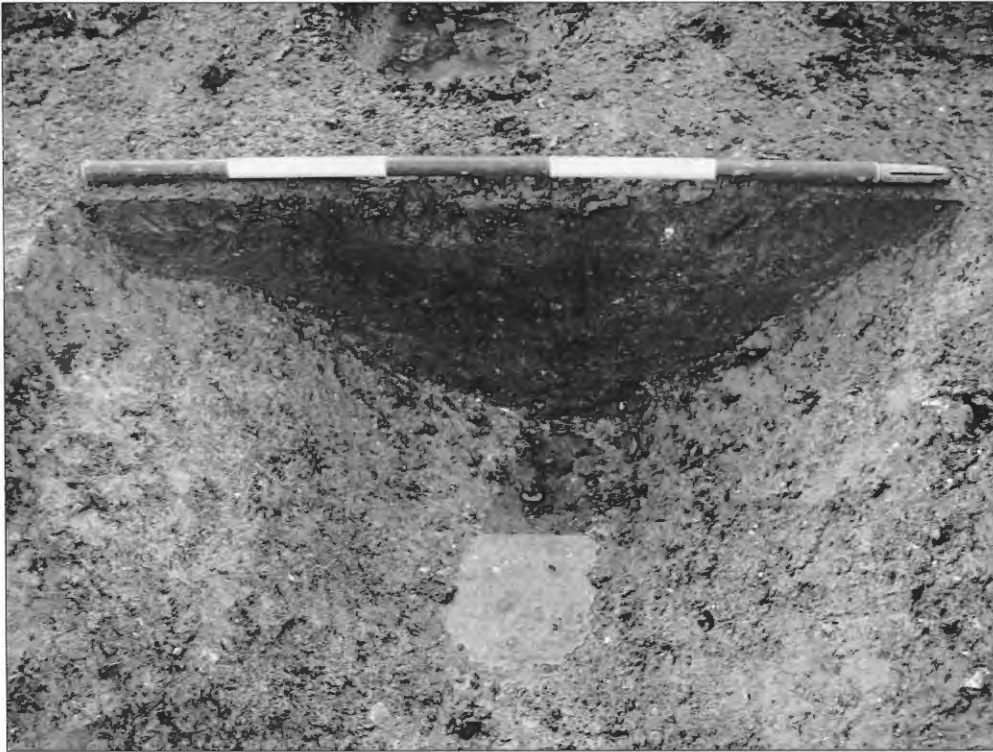
*Plate 6. Trench 4 showing Ditches 121 and 127, and field drain, looking north-west, pre-excavation*



*Plate 7. Trench 4 showing Ditch 121, looking north-east*



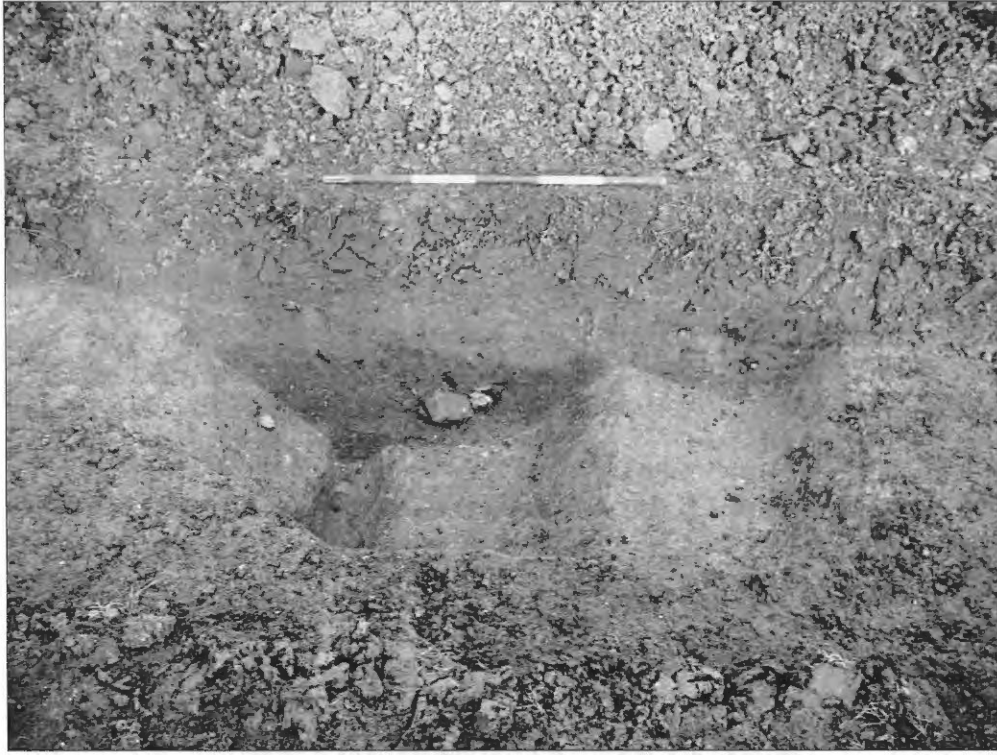
*Plate 8. Trench 5, showing gullies and ditches, looking north-west, pre-excavation*



*Plate 9. Trench 5 showing Ditch 139 with Feature 135 at the top of the section, looking south-east*



*Plate 10. Trench 6, field drains in the foreground, Ditch 142 and 140 in the centre of shot and Ditch 118 at the far end of the trench, looking south-west pre-excavation*



*Plate 11. Trench 6 showing Ditches 140 and 142, looking north-west, post-excavation*



*Plate 12. Trench 7, showing ditches and gullies, looking north-east, pre-excavation*



*Plate 13. Trench 7 showing Ditch 162, looking south-west, post-excavation*



*Plate 14. Trench 8 showing disturbance caused modern field drains, looking south-east*





*Plate 15. Trench 9 showing field drain filled by industrial slag, looking south-east, pre-excavation*



*Plate 16. Trench 9 showing field drain filled with industrial slag, looking south-west, post-excavation*



*Plate 17. Trench 10, showing Ditch 206, looking south-east, pre-excitation*



*Plate 18. Trench 10 showing Ditch 206, looking north-east, post-excitation*



*Plate 19. Trench 11 showing Ditch 192, looking south-east, pre-excitation*



*Plate 20. Trench 11 showing Ditch 192, looking south-west, post-excitation*



*Plate 21. Trench 12 showing plough furrow and Ditch 190, looking north-east, pre-excitation*



*Trench 22. Trench 12 showing Ditch 190, looking south-east, post-excitation*



*Plate 23. Trench 13 showing field drain in subsoil, looking north-west*



*Plate 24. Trench 14 showing Ditch 177, looking south-west, pre-excavation*



*Plate 25. Trench 14 showing Ditch 177, looking west, post-excavation*



*Plate 26. Trench 15 showing plough furrow to right side of the trench, looking south-east*



*Plate 27. Trench 16, looking south-east*



*Plate 28. Trench 17, looking south-east*



*Plate 29. Trench 18, showing plough furrow and Ditch 240, looking north, pre-excitation*



*Plate 30. Trench 18 showing Ditch 240, looking west, post-excitation*





*Plate 31. Trench 19, looking north*



*Plate 32. Trench 20, showing field drains, looking north-west*



*Plate 33. Trench 21, showing Gully 182, looking south-west, pre-excavation*



*Plate 34. Trench 22, looking south-east*



*Plate 35. Trench 23 showing field drain, looking south-east*



*Plate 36. Trench 24 showing drains, looking north-east*



*Plate 37. Trench 25 showing Ditches 195 and 199, looking north, pre-excitation*



*Plate 38. Trench 25 showing intersection of Ditches 195 and 199, looking south, post-excitation*



*Plate 39. Trench 26, looking north*

### Appendix 1: Inventory of Primary Archive

Phase	File/Box No	Description	Quantity
Evaluation	File no.1	Context register sheets	6
		Drawing register sheets	3
		Drawing sheet number record sheets	1
		Levels book	1
		Sample register sheets	2
		Digital photo register sheets	6
		Photo register sheets	6
		Trench record sheets	26
Evaluation	File no. 2	Sheets of permatrace	19
		Trench location plan	1
Evaluation	File no. 3	Context sheets (nos. 100-243)	144

## Appendix 2: Concordance of Contexts

### Abbreviations

PRIA Pot	Pre Roman Iron Age pottery
RB Pot	Romano-British pottery
Bone	Animal bone
GBA	General biological analysis soil sample
Slag	Industrial residues
Fired Clay	Fired clay or daub

Context	Trench	Phase	Description	Artefacts and environmental samples
100	All	-	Topsoil	
101	All	-	Subsoil	
102	T5	Un-phased	Dark grey silty clay fill of gully 105	GBA 12; Bone (2)
103	T5	Un-phased	U-shaped cut of gully 0.40m wide and 0.10m deep, filled by 102	
104	T5	Un-phased	Dark grey silty clay fill of post-hole 105	GBA 13; Bone (1); Fired Clay (1)
105	T5	Un-phased	U-shaped cut of post-hole 0.49m in length, 0.35m wide and 0.21m deep, filled by 104	
106	ALL	-	Natural deposit	
107	T5	Un-phased	Dark grey silty clay, single fill of gully 108	GBA 14; Bone (6); Fired Clay (4)
108	T5	Un-phased	U-shaped cut of gully 0.80m wide and 0.35m deep, filled by 107	
109	T5	3rd -4th C.	Dark grey silty clay, single fill of gully 110	GBA 15; RB Pot (12); Fired Clay (3)
110	T5	3rd -4th C.	V-shaped cut of narrow gully 0.35m wide and 0.20m deep, filled by 109	
111	T5	Modern	Mid yellowish brown silty clay fill of plough furrow	RB Pot (3)
112	T5	Modern	Cut of plough furrow	
113	T3	1st-2nd C.	Mid greyish brown silty clay fill of ditch 114	GBA 10; RB Pot (7)
114	T3	1st-2nd C.	V-shaped cut of ditch 0.60m wide and 0.60m deep, filled by 113	
115	T3	3rd-4th C.	Dark blackish grey clay fill of ditch 150	RB Pot (1); Bone (4)
116	-	-	VOID	

Context	Trench	Phase	Description	Artefacts and environmental samples
117	T6	3rd-4th C.	Mid orangey brown silty clay fill of ditch 118	GBA 2; RB Pot (10); Bone (19)
118	T6	3rd-4th C.	U-shaped cut of ditch 0.90m wide and 0.54m deep, filled by 117	
119	T4	3rd-4th C.	Dark bluish grey clay fill of ditch 121	RB Pot (10); Bone (3); Fired Clay (3)
120	T4	3rd-4th C.	Mid yellowish orange clay, primary fill of ditch 121	GBA 1; RB Pot (12); Bone (2)
121	T4	3rd-4th C.	U-shaped cut of ditch 1.44m wide and 0.48m deep, filled by 120 and 119	
122	T4	Modern	Dark yellowish brown silty clay, fill of pipe trench	
123	T4	Modern	Cut of pipe trench	
124	T4	1st-2nd C.	Dark greyish brown clay, upper fill of ditch 127	RB Pot (12); Bone (6); Fired Clay (1)
125	T4	1st-2nd C.	Light greyish orange clay fill of ditch 127	RB Pot (4)
126	T4	1st-2nd C.	Mottled orange and grey clay (redeposited natural). Fill of ditch 127	GBA 3; RB Pot (3); Bone (2)
127	T4	1st-2nd C.	U-shaped cut of ditch 1.15m wide and 0.43m deep, filled by 124, 125 and 126	
128	T3	Modern	Dark blackish grey silty clay fill of wheel rut 129	Bone (2)
129	T3	Modern	U-shaped feature cut through subsoil, size suggests a wheel rut	
130	T5	3rd-4th C.	Dark grey silty clay, upper fill of gully 132	RB Pot (1); Bone (34)
131	T5	3rd-4th C.	Mid greyish yellow brown silty clay, primary fill of gully 132	GBA 4; RB Pot (3); Bone (1); Fired Clay (4)
132	T5	3rd-4th C.	V-shaped cut of gully 0.59m wide and 0.28m deep	
133	T5	1st-2nd C.	Mid orangey brown silty clay, upper fill of ditch 139	RB Pot (2); Bone (2); Fired Clay (1)
134	T5	? Cut into 2nd C. feature	Dark grey silty clay, primary fill of feature 135	GBA 5; Bone (613); Fired Clay (27)
135	T5	? Cut into 2nd C. feature	U-shaped semi-circular feature cut in deposit 133, 0.46m wide and 0.22m deep	
136	T3	Modern	Dark blackish grey silty clay fill of pipe trench 137	
137	T3	Modern	U-shaped cut of modern pipe trench	
138	T5	1st-2nd C.	Mid greyish brown silty clay, primary fill of ditch 139	GBA 9; RB Pot (69); Bone (48); Slag (1)
139	T5	1st-2nd C.	V-shaped cut of ditch 1.19m wide and 0.42m deep, filled by 133 and 138	



Context	Trench	Phase	Description	Artefacts and environmental samples
140	T6	1st-2nd C.	U-shaped gully 0.47m wide and 0.30m deep, filled by 141	
141	T6	1st-2nd C.	Mottled Light brownish orange silty clay, single fill of gully 140	GBA 6; RB Pot (18); Bone (4)
142	T6	3rd-4th C.	U-shaped ditch with stepped base, 1.85m wide and 0.67m deep, filled by 143	
143	T6	3rd-4th C.	Dark orange brown silty clay, single fill of ditch 142	GBA 7; RB Pot (123); Bone (97); Fired Clay (2)
144	T6	Modern	Cut of modern land drain	
145	T6	Modern	Fill of land drain 144	
146	T6	Un-phased	Mottled reddish orange clay, possibly effects of burning <i>in situ</i> . Single fill of post-hole 147	GBA 8
147	T6	Un-phased	Oval feature 0.60m in length, 0.50m in width and 0.08m deep. Possibly an area of heat affected natural	
148	T5	? Cut into 2nd C. feature	Mid greyish brown silty clay, upper fill of feature 135	
149	T3	3rd-4th C	Mottled greyish brown silty clay, fill of ditch 150	GBA 11; Bone (2)
150	T3	3rd-4th C	U-shaped cut of ditch 1.45m wide and 0.52m deep, filled by 149	RB Pot (1)
151	T6	Roman	Dark orangey brown clay, single fill of post-hole 152	RB Pot (1); Fired Clay (1)
152	T6	Roman	Circular post-hole 0.35m wide and 0.10m deep, filled by 151	
153	T5	Un-phased	Mid greyish brown silty clay, single fill of ditch 154	GBA 16; Bone (19); Fired Clay (1)
154	T5	Un-phased	U-shaped cut of ditch, 1.25m wide and 0.47m deep, filled by 153	
155	T6	3rd-4th C	Dark blackish grey clay fill of post-hole 156	RB Pot (6)
156	T6	3rd-4th C	Circular post-hole 0.43m wide and 0.10m deep, filled by 155	
157	T6	Modern	Mottled greyish orange silty clay, fill of modern pipe trench	
158	T6	Modern	Cut of modern pipe trench	
159	T7	Roman 2nd C?	Dark blackish blue, brown silty clay, upper fill of ditch 162	GBA 17; RB Pot (6); Bone (2); Fired Clay (1)
160	T7	Roman 2nd C?	Black thin charcoal lens, fill of ditch 162	GBA 19
161	T7	Roman 2nd C?	Mid greyish brown, silty clay, primary fill of ditch 162	GBA 18; RB Pot (2); Bone (1); Slag (1)

Context	Trench	Phase	Description	Artefacts and environmental samples
162	T7	Roman 2nd C?	U-shaped cut of ditch 2.15m wide and 0.79m deep, filled by 159, 160 and 161	
163	T7	Late Iron Age	Dark blackish brown silty clay, fill of gully 164	GBA 20; RB Pot (1); Fired Clay (3)
164	T7	Late Iron Age	U-shaped cut of gully 1.05m wide and 0.26m deep, filled by 163	
165	T7	Modern	Cut of plough furrow	
166	T7	Modern	Light brown silty clay, fill of plough furrow 165	GBA 21
167	T14	Late Iron Age	Mid greyish brown silty clay, fill of pit 168	PRIA Pot (64); Bone (37); Fired Clay (8)
168	T14	Late Iron Age	Cut of pit 1.69m wide and 0.35m deep, filled by 167 and 180	
169	T14	1st-2nd C.	Greyish red brown clay, upper fill of ditch 177	PRIA Pot (6); Bone (48); Fired Clay (21)
170	T14	1st-2nd C.	Dark greyish blue clay, fill of ditch 177	PRIA Pot (22); Bone (36)
171	T14	1st-2nd C.	Mid greyish brown clay, fill of ditch 177	
172	T14	1st-2nd C.	Light reddish brown clay, fill of ditch 177	
173	T14	1st-2nd C.	Mid greyish brown clay, fill of ditch 177	
174	T14	1st-2nd C.	Mid greyish brown clay, fill of ditch 177	RB Pot (10); Bone (38)
175	T14	1st-2nd C.	Light mottled orange reddish brown clay fill of ditch 17387	
176	T14	1st-2nd C.	Mid greyish bluish brown clay, fill of ditch 177	GBA 23; Bone (29)
177	T14	1st-2nd C.	V-shaped cut of large enclosure ditch, 5.90m wide and 1.64m deep, filled by 169-176	
178	T14	1st-2nd C.	Dark greyish black silty clay fill of gully 179	GBA 24; PRIA Pot (8); Bone (55); Fired Clay (4)
179	T14	1st-2nd C.	U-shaped cut of a gull 0.75m wide and 0.40m deep, filled by 178	
180	T14	1st-2nd C.	Light orangey brown silty clay, fill of pit 168	
181	T21	Modern	Bluish grey fill of gully 182	
182	T21	Modern	U-shaped cut of gully, 1.00m wide and 0.48m deep, filled by 181	
183	T9	Modern	Black/Grey slag deposit, located within a cut for a land drain	GBA 25; Slag (73+)
184	T9	Modern	Cut of modern land drain	
185	T12	Late Iron Age	Dark greyish blue clay, upper fill of ditch 190	

Context	Trench	Phase	Description	Artefacts and environmental samples
186	T12	Late Iron Age	Mid greyish brown clay fill of ditch 190	PRIA Pot (12); Bone (47); Fired Clay (2)
187	T12	Late Iron Age	Mid greyish brown clay fill of ditch 190	Bone (2)
188	T12	Late Iron Age	Light orangey brown clay, fill of ditch 190	
189	T12	Late Iron Age	Dark greyish brown clay, primary fill of ditch 190	GBA 26; PRIA Pot (1); Bone (21)
190	T12	Late Iron Age	U-shaped cut with steps at base, 1.71m wide and 0.69m deep, filled by 185-189	
191	T11	Late Iron Age	Black clayey fill of ditch 192	GBA 31; PRIA Pot (22); Bone (219); Fired Clay (18)
192	T11	Late Iron Age	V-shaped cut of gully 0.72m wide and 0.52m deep, filled by 191	
193	T25	Late Iron Age	Greyish brown clay, upper fill of ditch 195	PRIA Pot (3)
194	T25	Late Iron Age	Orangey brown clay, primary fill of ditch 195	GBA 27; PRIA Pot (2); Fired Clay (1)
195	T25	Late Iron Age	U-shaped cut of ditch 1.98m wide and 0.34m deep, filled by 193 and 194	
196	T25	Late Iron Age	Greyish brown clay with orange streaks, upper fill of ditch 199	
197	T25	Late Iron Age	Dark greyish brown clay, fill of ditch 199	PRIA Pot (18); Bone (11)
198	T25	Late Iron Age	Orangey brown clay, primary fill of ditch 199	GBA 28; PRIA Pot (77); Bone (4)
199	T25	Late Iron Age	U-shaped cut of ditch (not fully exposed) 0.87m wide and 0.67m deep, filled by 197 and 198	
200	T10	Modern	Dark yellow brown, silty clay, fill of plough furrow 201	Bone (3)
201	T10	Modern	Cut of plough furrow	
202	T10	Late Iron Age	Greyish brown clay, upper fill of ditch 206	PRIA Pot (69); Bone (100); Slag (2); Fired Clay (18)
203	T10	Late Iron Age	Orangey brown clay fill of ditch 206	Bone (10)
204	T10	Late Iron Age	Dark greyish brown clay fill of ditch 206	GBA 29
205	T10	Late Iron Age	Dark greyish brown clay with streaks of orange, primary fill of ditch 205	GBA 30; Bone (21)
206	T10	Late Iron Age	U-shaped cut of enclosure ditch 2.40m wide and 0.89m deep, filled by 202-205	
207	T1	Late Iron Age	Dark greyish brown clay, upper deposit of ditch 210	PRIA Pot (18); Bone (10)

Context	Trench	Phase	Description	Artefacts and environmental samples
208	T1	Late Iron Age	Mid reddish brown clay fill of ditch 210	
209	T1	Late Iron Age	Mid reddish brown clay, fill of ditch 210	
210	T1	Late Iron Age	U-shaped cut of ditch 1.15m wide and 0.45m deep, filled by 207-209	
211	T1	Late Iron Age	Black to dark grey clay, upper fill of ditch 213	
212	T1	Late Iron Age	Mid orangey brown clay, main fill of ditch 213	GBA 32; PRIA Pot (3); Bone (30)
213	T1	Late Iron Age	Partially exposed ditch cut 0.98m wide and 0.60m deep, filled by 211 and 212	
214	T1	Late Iron Age	Dark greyish brown clay, single fill of ditch 215	GBA 33; PRIA Pot (6); Bone (11)
215	T1	Late Iron Age	Partially exposed U-shaped cut of ditch 0.95m wide and 0.51m deep, filled by 214	
216	T1	Late Iron Age	Mid orangey brown clay, main fill of ditch 215 (same as 212)	PRIA Pot (2)
217	T1	Late Iron Age	Partially exposed ditch cut 0.95m wide and 0.60m deep, filled by 216 (same as 213)	
218	T1	Late Iron Age	U-shaped cut of a gully 1.10m wide and 0.40m deep, filled by 219	
219	T1	Late Iron Age	Mottled grey and light yellow brown silty clay, primary fill of gully 218	GBA 34; PRIA Pot (3); Bone (15); Fired Clay (2)
220	T1	Late Iron Age	U-shaped cut of a gully 0.70m wide and 0.16m deep, filled by 221	
221	T1	Late Iron Age	Mottled grey and light yellow brown silty clay, primary fill of gully 220	PRIA Pot (7); Bone (11)
222	T1	Late Iron Age	U-shaped cut of a gully possibly same as gully 213, filled by 223	
223	T1	Late Iron Age	Light greyish/orange brown silty clay, single fill of gully 222	Bone (7)
224	T1	Late Iron Age	Partially excavated gully 0.40m deep, filled by 225	
225	T1	Late Iron Age	Mid greyish/orange brown silty clay, single fill of gully 224	
226	T1	Late Iron Age	Cut of possible pit truncated by ditch 230, filled by 227	
227	T1	Late Iron Age	Light yellow brown silty clay, fill of pit 226	GBA 36
228	T1	Late Iron Age	Partially excavated gully 0.35m deep, filled by 229 (same as 224)	PRIA Pot (150)
229	T1	Late Iron Age	Mid orangey brown silty clay single fill of gully 228	GBA 37; PRIA Pot (7)

Context	Trench	Phase	Description	Artefacts and environmental samples
230	T1	Late Iron Age	Partially excavated ditch part of ditch 210	
231	T1	Late Iron Age	Dark greyish brown silty clay fill of ditch 230	
232	T1	Late Iron Age	Dark greyish brown silty clay, fill of gully 224	GBA 35
233	T19	Modern	Cut for modern land drain	
234	T19	Modern	Fill of modern land drain 233	
235	T19	Modern	Fill of land drain 234	Fired Clay (5)
236	T19	Modern	Fill of plough furrow 237	
237	T19	Modern	Cut of plough furrow	
238	T18	Late Iron Age	Greyish brown clay, main fill of ditch 240	Bone (82); Fired Clay (10)
239	T18	Late Iron Age	Reddish brown clay, primary fill of ditch 240	GBA 38; RB? Pot (1); Fired Clay (1)
240	T18	Late Iron Age	V-shaped cut of ditch 2.45m wide and 1.10m deep, filled by 238, 239 and 241	
241	T18	Late Iron Age	Mid orangey brown silty clay, upper fill of ditch 240	
242	T7	Late Iron Age	Dark blackish brown silty clay fill of gully 243	
243	T7	Late Iron Age	Cut of gully 0.45m wide and 0.08m deep filled by 242	

## **Appendix 3: Written Scheme of Investigation**

# **A160 Improvements, Immingham**

## *Written Scheme of Investigation for Archaeological Evaluation by Trial Trenching*

### **1. Introduction**

- 1.1 An archaeological evaluation is required in advance of the determination of the preferred route/s for improvements to the A160/A180 south and east of South Killingholme, centred at approximately TA 136 146. This document is prepared to inform any future works in advance of, or during, development and is produced for Paul Wheelhouse of Golder Associates on behalf of their clients the Highways Agency.

### **2. Archaeological Background**

- 2.1 An air photo mapping and interpretation study of the route and surrounding area was undertaken (Deegan 2008). This identified and mapped evidence of possible Iron Age or Roman activity in the form of cropmarks both in the wider search area and within the proposed road corridors. Geophysical surveys (Webb 2008 and 2009) have subsequently refined this evidence locating several anomalies of archaeological potential, particularly in the southern half of the scheme and around the proposed interchange and slip roads from the A180.

### **3. Aims and Objectives and Evaluation Methodology**

- 3.1 The aim of this evaluation exercise will be to:-

- establish the presence or absence of archaeological features within the various road corridors
- determine the date, function, condition, character, and quality of survival of any archaeological features.

The evaluation is to be effected through the excavation of 26 trial trenches, T1-T26. All trenches except T14, which is 40m by 2m, measure 15m by 2m giving a total area of 830m<sup>2</sup>. All trenches are positioned to investigate magnetic anomalies interpreted as possibly or probably archaeological by the recent geophysical surveys except T25 which is located in an area which was not amenable to geophysical survey.

- 3.2 A contingency of up to a further 25m<sup>2</sup> will be allowed for in order that feature clarification is needed without a formal further stage of evaluation/mitigation. The contingency will only be used if required and as directed by the clients.

- 3.3 Excavation will not exceed a depth of 1.2m without the trench edges being stepped or battered. All topsoil and/or modern deposits will be removed in level spits (not more than 0.2m) using a 360° excavator (or rubber duck) equipped with a smooth bladed ditching bucket under archaeological supervision. Machining will stop at the first identifiable archaeological horizon or natural deposits, whichever is the shallower. Thereafter all further investigation will be manual. The stripped surface will be inspected for archaeological remains and where these require clarification the relevant area will be cleaned by hand.
- 3.4 All identified archaeological features will be accurately recorded in plan at scales of either 1:20 or 1:50 as appropriate. Sections will be drawn at scales of either 1:10 or 1:20 as appropriate. All plans and sections will include spot heights related to Ordnance Datum in metres.
- 3.5 The selected features will normally be investigated employing the following sampling strategies:
- Linear features: an appropriate sample of each feature will be excavated to investigate the full depth, profile and fills and to recover dating and environmental evidence from the fills. In general, a minimum sample of 10% of each linear feature will be excavated, although this may be increased in order to attempt to recover datable material. No section will be less than 1m in length. Where possible one section will be located and excavated adjacent to a trench edge and particular attention will be paid to terminal-ends, corners and intersections. Feature intersections will always be excavated in such a way so as to determine a stratigraphic relationship.
  - Discrete features: pits, post-holes, kilns, hearths, will normally be half sectioned to determine and record their form.
  - A full written, drawn and photographic record will be made of all material revealed during the course of the excavation.
  - All artefacts recovered will be recorded and removed from the site for appropriate storage in controlled environments. All artefacts recovered will be retained, cleaned, labelled and stored as detailed in the guidelines laid out in the IFA Guidelines for Finds Work. Conservation of any artefacts, if required, will be undertaken by approved conservators. UKIC guidelines will also apply.
  - Context recording will be by Archaeological Services WYAS standard method. All contexts, and any small finds and samples from them will be given unique numbers. Bulk finds will be collected by context.
  - Colour digital and monochrome negative photographs at a minimum format of 35mm will be taken.



- Soil sampling will be undertaken where there is clear potential for environmental analysis. Where appropriate and practicable soil samples of up to 60 litres will be taken from excavated contexts, and larger samples will be taken of any rich carbonised deposits. Particular attention will be paid to the sampling of primary ditch fills, large discrete features (e.g. refuse pits), structural and occupational evidence, skeletal remains and any surviving buried soils. Further, the recovery of material suitable for radiocarbon, archaeomagnetic, thermoluminescence and/or dendrochronological determinations will be sought, as appropriate. If buried soils or other appropriate deposits are encountered, column samples may be taken for micromorphological and pollen analysis. Magnetic susceptibility samples may also be collected. Where appropriate environmental material will be stored in controlled environments. Appropriate environmental and soil specialists will be consulted during the course of the evaluation with regard to the implementation of the sampling programme.
- All human remains will be recorded on-site prior to removal and analysis by the project's assigned osteoarchaeologist. Disturbance of human remains will only take place under appropriate government and environmental health regulations, and in accordance with the requirements of the Ministry of Justice prior to the commencement of any formal exhumation work.
- All finds of gold and silver and associated objects shall be reported to HM Coroner according to the procedures relating to the Treasure Act 1996, after discussion with the Client and Lincolnshire or North-East Lincolnshire Councils.
- After excavation each trench will be reinstated with the excavated soil, unless otherwise instructed by the Client.
- No changes will be made to the agreed Written Scheme of Investigation without consultation with the Client and Lincolnshire and North-East Lincolnshire Councils.

#### **4. Analysis and Reporting**

- 4.1 The site archive will contain all the data collected during the excavation, including records, finds and environmental samples. It will be quantified, ordered, indexed and internally consistent. Adequate resources will be provided during fieldwork to ensure that all records are checked and internally consistent. Archive consolidation will be undertaken immediately following the conclusion of fieldwork:
- the site record will be checked, cross-referenced and indexed as necessary;
  - all retained finds will be cleaned, conserved, marked and packaged in accordance with the requirements of the recipient museum;

- all retained finds will be assessed and recorded using pro forma recording sheets, by suitably qualified and experienced staff. Initial artefact dating will be integrated within the site matrix;
  - all retained environmental samples will be processed by suitably experienced and qualified staff and recorded using pro forma recording sheets.
- 4.2 The archive will be assembled in accordance with the specification set out in English Heritage's *Management of Archaeological Projects* (English Heritage 1991; Appendix 3). In addition to the site records, artefacts, ecofacts and other sample residues, the archive shall contain:
- site matrices where appropriate;
  - a summary report synthesising the context record;
  - a summary of the artefact record;
  - a summary of the environment record.
- 4.3 The integrity of the primary field record will be preserved. Security copies will be maintained where appropriate.
- 4.4 Provision will be made for the deposition of the archive, artefacts and environmental material, subject to the permission of the relevant landowner (and if no further archaeological work is to be initiated), in the appropriate recipient museum, in this instance Scunthorpe Museum. The museum will be advised of the timetable of the proposed investigation prior to excavation commencing. The archive will be prepared in accordance with the guidelines published in "*Guidelines for the preparation of Excavation Archives for long-term storage*" (United Kingdom Institute for Conservation, 1990) and *Standards in the Museum care of archaeological collections* (Museums and Galleries Commission 1994). Provision will be made for the stable storage of paper records and their long-term storage.
- 4.5 Upon completion of the investigations, the artefacts, ecofacts and stratigraphic information shall be assessed as to their potential and significance for further analysis.
- 4.6 An interim report will be prepared within three weeks of completion of on-site archaeological investigations and include the following :
- a non-technical summary of the results of the work;
  - a summary of the project's background;
  - the site location;
  - an account of the method;
  - the results of the excavation, including phasing and interpretation of the site sequence and spot-dating of artefacts, if recovered;
  - an assessment of the stratigraphic and other written, drawn and photographic records;
  - a catalogue of the archaeological material recovered during the excavation
  - a summary of the contents of the project archive and its location.

- 4.7 The report will produced within an agreed timetable. It will be supported by an overall plan of the site, accurately identifying the location of the trial excavations.
- 4.8 Finally, the report will outline the archaeological significance of the deposits identified, and provide an interpretation of the results in relation to other sites in the immediate area.
- 4.9 Copies of the report will be supplied to the Client and to Lincolnshire and North-East Lincolnshire Councils, who shall also receive a digital copy. Both councils will be provided with digital data files as well as a paper copy of the report, for the Historic Environment Record.
- 4.10 A final report, including all finds analysis and scientific dating results, shall be produced in accordance with English Heritage's *Management of Archaeological Projects* (English Heritage 1991). The distribution of reports will be as for the interim report.
- 4.11 It is possible that the excavation findings will warrant wider publication. This shall be effected either through one of Archaeological Service WYAS's in-house series of publications or through publication with an appropriate archaeological journal. On completion of the report an on-line OASIS form shall be completed.

## **5 Copyright, Confidentiality and Publicity**

- 5.1 Unless the Client commissioning the project wishes to state otherwise, the copyright of any written, graphic or photographic record and reports will rest with the originating body (Archaeological Services WYAS).
- 5.2 The circumstances under which the report or records can be used by other parties will be identified at the commencement of the project, as will the proposals for the distribution of the report. Archaeological Services WYAS will respect any requirements regarding confidentiality, but will endeavour to emphasise the company's professional obligation to make the results of archaeological work known to the wider archaeological community within a reasonable time.
- 5.3 Illustrated notices will, with the client's agreement, be displayed on site, explaining what work is in progress and why.
- 5.4 Provision may be made for publicising the results of the work locally, e.g. through a press release (at the Client's discretion), or talking to local societies (if the results warrant it).
- 5.5 A summary of appropriate length of the findings of the work, accompanied by appropriate illustrations, will be submitted in digital format. Text will be supplied in ASCII format and any images in .tif form.

## **6 Health and Safety**

- 6.1 Archaeological Services WYAS has its own Health and Safety policy which has been compiled using national guidelines such as SCAUM. These guidelines conform to all relevant Health and Safety legislation.
- 6.2 In addition each project undergoes a 'Risk Assessment' which sets project specific Health and Safety requirements to which all members of staff are made aware of prior to on-site work commencing. Health and safety will take priority over archaeological matters. Necessary precautions will be taken over underground services and overhead lines at the outset of the project.

## **7 Insurance**

- 7.1 Archaeological Services WYAS is covered by the insurance and indemnities of the City of Wakefield Metropolitan District Council. Insurance has been effected with: Zurich Municipal Insurance, Park House, 57–59 Well Street, Bradford, BD1 5SN (policy number RMP 03GO39–0143). Any further enquiries should be directed to: The Chief Financial Officer, Insurance Section, Wakefield MDC, PO Box 55, Newton Bar, Wakefield WF1 2TT.

## **8 Monitoring**

- 8.1 Lincolnshire and North-East Lincolnshire Councils will be responsible for monitoring the project, acting on behalf of the relevant planning authorities, and their officers will be afforded the opportunity to inspect the site and the records at any stage of the work.
- 8.2 The project will be discussed with the relevant museum curator in advance of work commencing on site. An advance notification form will be completed and forwarded to the museum before fieldwork commences.

## **9 Resources and Programming**

### 9.1 Project personnel :

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Project Management:	Alistair Webb
Project Officer	Phil Weston
Project Supervisor:	M. Rose
Site Assistant	
Site Assistant	

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### 9.2 Post-excavation specialists :

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Prehistoric pottery specialists:	Dr Chris Cumberpatch
Roman pottery specialist:	Dr Ruth Leary
Medieval pottery specialist:	Dr Chris Cumberpatch

Flint specialist:	Dr Ian P Brooks
Environmental:	Dr Jane Richardson
Faunal analyst:	Dr Jane Richardson
Human bone specialist:	Malin Holst MA
Metalwork specialist:	Dr Hilary Cool
Artefact conservationist:	Karen Barker

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- 9.3 The list of Archaeological Services WYAS project personnel may be subject to change.

### Appendix 4: Detailed Pottery Archive

CODE	TYPE	DETAILS
ABR	Alteration	Abraded
BS	Vessel part	Body sherd
CALC	Alteration	Calcareous deposit
DEP	Alteration	Deposit
EXT	Vessel part	External
FT	Finger-tipping	Finger-tip impressions
FTM	Vessel part	Moulded foot
FTR	Vessel part	Foot ring
HB	Manufacture	Hand built
HM	Manufacture	Handmade
INT	Vessel part	Internal
IRF	Firing	Irregular
OX	Firing	Oxidised
R	Firing	Reduced
ROU	Rouletted	-
RWEB	Rusticated	Heavy web/cage early (Darling 1984, no 10)
SHG	Scored	Horizontal grooves
SHLDR	Vessel part	Shoulder
SLASH	Slashed	-
STRING	Wiped	String cut base
VAB	Alteration	Very abraded
WF	Manufacture	Wheel finished
WIPV	Wiped	Vertical wipe marks
WM	Manufacture	Wheel made
Xx	Scored	Horizontal groove

#### Pottery Fabric Descriptions (NRFRC= Tomber and Dore 1998)

- CALGS        A handmade fabric gritted with spary calcite
- DR20        Amphorae Dressel 20 amphorae. Peacock & Williams 1986 Class 25, from Baetica, Southern Spain. Contents, olive oil. NRFRC: Baetican (Early) Amphorae 1
- DWNEL       Dalesware- North East Lincolnshire. A local late Roman fabric producing vessels in the 'Dalesware' range of forms (Rigby and Stead 1976, Fig. 93). Mid grey or irregularly fired with hand building and wheel finishing

techniques used. Shell gritting is usually sparse to moderate between 0.3-1.5mm. The main difference from the DWSHS fabric is the presence of moderate sub-rounded clear quartz c. 0.5mm: sparse fine silver mica 0.1-0.25 visible on the surfaces

DWSHS	Dalesware- North West Lincolnshire. NRFRC: Dales-Shelly ware DALSH
ETW	Erratic pebbles broken up as temper with shell, handmade. Mostly quartz sandstone and igneous rocks are present in this group
ETWSH	Erratic pebbles broken up as temper with shell, handmade. Discussed in report
GREY	Miscellaneous reduced greywares. Undifferentiated reduced sand tempered greywares. A fabric group containing undifferentiated reduced Romanised greywares. Probable sources for this group include the known local kilns in the Market Rasen area but also there is also a possibility that some of the pottery might be from Claxby, Nettleham Top Elsham Top, north-east of the Lincolnshire Wolds or perhaps less likely from the early East Yorkshire greyware industries. It is also possible that some of this material may have been manufactured more locally to the east of the wolds
GREYC	Coarse greyware. A fabric group consisting of coarse grey reduced wares (as GREY but with common poorly sorted quartz 0.5-1mm)
GROG	Grog-tempered. Miscellaneous unsourced grog-tempered fabrics
GRROE	An early Roman handmade or wheel finished fabric similar to SHGR with out the shell or grog inclusions with polished 'Green Sand Quartz'- 0.6-1.5mm. A source along the edge of the Lincolnshire Wold Scarp is likely for all of these sherds
GYMS	Grey with Minimal shell. A fabric group to cover sherds, usually wheel-made, grey with minimal very sparse shell inclusions. Normally from vessels typical of the later Iron Age, but possibly continuing into the early Roman period
IAGR	Iron Age Gritty. A coarse tempered, often pimply with grog and other inclusions, Iron Age tradition fabric, which continues in use into the Roman period. Cf Trent Valley ware
IAGROG	Iron Age handmade grog tempered wares
IASA	Sand-tempered IA tradition. Quartz-gritted fabrics used for forms of late Iron Age type, usually continuing into the Roman period
MOSP	Mortaria from Swanpool kilns, Lincoln. NRFRC: SWN WS

NELGR1	North East Lincolnshire Early Roman wheel made greyware 1. A pale grey wheel made reduced fabric with rounded quartz 0.3-0.5mm and rare ?grog and calcareous inclusions (0.3-0.8mm), less than 1mm which has been recognised from an assemblage from Grimsby (Rowlandson 2010, GREY 1) no diagnostic forms are present to confirm the presumed early Roman date
NVCC	Nene Valley colour-coat NRFRC: LNVCC
NVCC1	Nene Valley colour-coat with a white fabric NRFRC: LNVCC
NVCC2	Nene Valley colour-coat with a oxidised fabric NRFRC: LNVCC
OX	Oxidized, miscellaneous oxidized wares. This coding comprises all miscellaneous oxidized sherds, usually in varying red-brown shades and degrees of grittiness, for which no significant fabric groupings are evident
OXWS	Oxidized white slipped. Light brown fabric, sparse coloured quartz and occasional calcareous inclusion, with exterior white slip, used most for flagons, unknown source
SAMCG	Central Gaulish Samian, from Lezoux. NRFRC : LEZ SA
SFGR	South Ferriby Greyware. Wheel made with a pale grey core with mid grey surfaces, slightly concoidal break. Pitted surfaces due to the calcareous parent clay often with voids left by the surfaces. Occasional to moderate sub-rounded clear quartz c. 0.5mm; sparse fine silver mica 0.1-0.25 visible on the surfaces and often in the break. Many of the small bowls and dishes are burnished to a blue- grey sheen. Surfaces are often pitted were red chalk has leached out. Variants in the fabric are evident, some coarser variants have surviving flecks of red chalk. The make up of the fabric suggest the potters utilized deposits from the Hunstanton Series which makes production at South Ferriby most likely
SFOXC	South Ferriby coarse oxidised ware. As SFGR but oxidised with moderate glassy quartz 0.8-1.5mm
SFGRC	South Ferriby coarse reduced ware. As SFGR with moderate glassy quartz 0.8-1.5mm
SFGROG	South Ferriby grog tempered. As SFGR with rare grog 0.5-1.5mm
	Shell gritted wares: SHCC, SHCF, SHCM, SHMC, SHMM, SHSC, SHSF and SHSM. Shell gritted wares with sorting described following the Prehistoric Ceramics Research Group guidelines (PCRG 1997)



SHGR North East Lincolnshire Grog and shell tempered early Roman coarseware. This fabric broadly equates to fabric group IAGR (Darling and Precious *forthcoming*). A small quantity of this fabric was evident on this site, when this fabric has been encountered elsewhere it occurs in a range of typically early Roman forms (eg South Ferriby, East Halton etc Darling and Rowlandson 2008). A source to the west of the Lincolnshire Wold scarp and to the east of the River Ancholme is favoured with South Ferriby being a likely location. Included is an extract from the forthcoming North Lincolnshire Fabric Series (Rowlandson *in prep*)

Most vessels in this fabric appear wheelmade or hand built and wheel finished with the commonest form being an early Roman jar/bowl (Rigby and Stead 1976, Fig. 64.4). The vessels generally have very dark grey-black surfaces (Munsell 2000, 3/N- 2.5/N) with similar coloured cores, some closed vessels have slightly lighter internal surfaces (10Y 2.5/1 and 6/1). Vessels appear to have greenish grey to light greenish margins (10Y 6/1-7/1). Some vessels shows evidence of patchy oxidisation (reddish-yellow 5YR 6/6) possibly the result of poorly controlled kiln or clamp firing. The surfaces are generally smooth and sherds are generally quite thick and mostly from jars or large bowls (10-20mm). The fabric has a clay matrix. Quartz, common often clear/glassy- moderate, poorly sorted, sub-rounded to sub-angular, 0.3- 1mm. Shell, sparse poorly sorted 0.3-5mm. Grey grog, sparse, sub angular, 0.5mm- 1.5mm. Greensand quartz, sparse- 0.5-1.5mm although this is not always evident in all examples. Silver mica, rare, up to 0.3mm. Large quartz, rare, poorly sorted, 1.2-15mm. The grog was of a similar range in colour to the vessels with poorly sorted quartz evident

VESIC Vesicular fabrics

## Pottery Archive

Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve
100A	GREY	CLSD	BHL; BDL	1			BASE NEAT FTM; HORIZONTAL AND DIAGONAL CROSS DECORATION; DRK BLACK SURFACES		1	34	0	0
100A	SHGR	JEVS	WF?	1			RIM SHLDR		1	35	16	11
100A	CALGS	JEV	WF	1			RIM SCRAP		1	10	20	3
100A	SHCC	CLSD	HM	1			BASE: LIGHT GREY		1	32	0	0
100A	GRROE	CLSD	HM	1			BS: COARSE GLASSY QUARTZ HAND MADE		1	14	0	0
100A	GYMS	CLSD	WM	1			BS DARK SURVACES THIN WALL		1	5	0	0
100A	GREY	-		1	ABR		BS		1	5	0	0
100B	GREYC	JBL		1	DISC PIERCED; ABR		BASE; COARSE SAND SPARSE FLINT C.2MM; HAND BUILT WHEEL FINISHED?; APPEARS TO BE TRIMMED TO A DISC AND PIERCED POST FIRING; BROKEN IN HALF AND ABRADED DISC DIAMETER 11.5CM		1	180	0	0
100B	GREY	CLSD	BHL	1			BS LOWER WALL		1	32	0	0
101	IAGR	BNATV		1	ABR	D1	RIM: SOME FE PRESENT >4MM;		1	81	36	7
102	MOSP	MBF		1	ABR; BURNT; WORN INT	D2	RIM: SLAG TRITS; SLIGHTLY BURNT AROUND RIM		1	99	30	8
107	SFGR	CLSD		1			BS SHLDR		2	13	0	0
107	GREY	-		1			BS		1	29	0	0
109	GREY	JB		1	ABR		RIM: SPARSE SHELL FRAGMENTS UP		1	14	0	0

Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve
							TO 3MM					
109	GREY	BWM2		1		D3	RIM SHLDR		5	210	26	19
109	OX	DPR		1			RIM- BASE		5	114	18	11
109	GRROE	CLSD	HM	1			BS; RARE SHELL FRAGMENTS; OX/R; THIN WALLED		1	21	0	0
111	GREY	JB		1	VAB		BS NECK NEAR RIM		1	12	0	0
111	GREY	-		1	ABR		BS		1	18	0	0
111	SHSC	-		1			BS; LATE ROMAN?		1	10	0	0
113	GREY	CLSD	STRING	1			BASE; SLIGHT REMNANTS OF A STRING CUT REMAINING		4	99	0	0
113	GREY	JBNK		1	ABR		RIM		1	5	10	8
113	SHGR	JBHER		1	ABR		RIM		1	9	20	3
113	SHSC	-	HM	1	VAB		BS; SAMPLE 10		1	10	0	0
115	NVCC2	BKFO	ROU	1	ABR		BS		1	3	0	0
117	GREY	-	SHG	1	ABR		BS		1	10	0	0
117	SFGR	-		1	ABR		BS		1	5	0	0
117	SFGR	-		1	VAB		BS		1	3	0	0
117	GREY	BFB		1	VAB		RIM		1	19	16	10
117	SFGR	JEV		1	ABR		RIM		1	14	13	15
117	GREY	BL		1			RIM BS		5	91	20	4
119	NVCC1	B		1			BS		1	41	0	0
119	GREY	CLSD	SHG	1			BASE		3	43	0	0
119	GREY	BFL		1			RIM		1	69	22	12
119	GREY	CLSD		1	ABR		BASE; FTM		1	113	0	0
119	GREY	CLSD		1	ABR		BASE		2	37	0	0
119	GREY	-		1	ABR		BS		1	4	0	0
119	SFGR	DGR		1	ABR		RIM		1	20	18	8
120	SHSC	-	HM	1	BURNT; VAB		BS; ALSO MOD SAND 0.2-0.5MM		1	8	0	0
120	SFGR	CLSD	SHG	1			BS		4	51	0	0

Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve
120	SFGR	-		1			BS		1	9	0	0
120	SFGR	-		1			BS		1	9	0	0
120	SFGR	-		1	VAB		BS		1	2	0	0
120	GREY	-	SHG	1	ABR		BS		2	4	0	0
120	GREY	DPR		1			RIM		1	18	20	3
120	SFGR	CLSD	CORDON	1	ABR		BS LOWER WALL		1	6	0	0
124	DWSHS	-		1	ABR		BS; NWLINCS DALESWARE TYPE- 3RD CENTURY DATE ?		1	7	0	0
124	GREY	CLSD		1	ABR		BS		1	6	0	0
124	GREY	-		1			BS		1	6	0	0
124	GREY	-		1	ABR		BS		1	8	0	0
124	GREY	-		1	ABR		BS		1	9	0	0
124	GREY	-		1	ABR		BS		1	2	0	0
124	SFGR	JEV		1			RIM SHLDR; HIGH SHLDR		4	50	15	10
124	GREY	-	SHG	1			BS		1	1	0	0
124	GREY	-		1			BS		1	3	0	0
125	SFGR	-		1	VAB		BS FLAKE		1	1	0	0
125	SFGR	JEV		1			RIM; FORM AS D4		1	18	16	8
125	SFGR	JEV		1		D4	RIM; SHLDR; COPY OF HADRIANIC BB1 TYPE FORM		2	85	12	20
126	SFGR	CLSD		1	VAB		BS		1	5	0	0
126	SFGR	CLSD		2			BS; SCRAPS; SAMPLE 3		2	3	0	0
130	DWNEL	JDW?	WF	1	ABR; BURNT		RIM; AS GILLAM 157		1	34	20	4
131	SFOXC	JBL		1	ABR		BS; OX/R/OX		1	73	0	0
131	DWNEL?	-	HB	1	ABR		BS		1	15	0	0
131	SFGR	-		1	ABR		BS		1	15	0	0
133	GREYC	-	HM?	1	VAB		BS; COMMON ANGULAR SAND-NONE LOCAL?		2	11	0	0
133	GROG	CLSD	SHG	1			BS; THIN WALLED; SPARSE		8	38	0	0

Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve
							GROG >3MM; COMMON POORLY SORTED SAND 0.2-0.8MM					
133	SFGR	CLSD	SHG	1	ABR		BS		1	3	0	0
133	SFGR	CLSD		1	ABR		BS; RARE SHELL		1	5	0	0
133	SFGROG	CLSD	HM	1			BS; IRF; THIN HANDMADE ABBUNDANT QU SPARSE RED CHALK AND MICA AS SFGR HANDMADE WITH SPARSE GROG 4MM		1	40	0	0
133	SHMM	CLSD	HM	1			BS		13	33	0	0
138	SHSC	J	HM	1			BASE		2	130	0	0
138	GRROE	CLSD	HB	1			BS		15	155	0	0
138	SHGR?	CLSD	HB; SHG	1			BASE; COMMON POORLY SORTED SAND; RARE SHELL AND GROG COARSER NATIVE TRADITION FABRIC?		5	167	0	0
138	IAGR	JGLOB	LA; SHG	1			BS SHLDR; LATTICE DECORATED BAND		3	99	0	0
138	SFGR	JEV	RWEB	1	CALC INT DEP	D5	RIM- BASE; NEARLT FULL PROF; FTM; SMALL EXAMPLE		21	211	10	65
138	IASA	CLSD?	HM	1			BS; FLAKES; SAMPLE 9		2	1	0	0
138	SAMCG	18/31?		1	RIVET HOLE		BS; NEAR BASE RIVET REPAIR; EARLY EXAMPLE		1	9	0	0
138	SHGR	JHER		1		D?	RIM SHLDR; BS; ?DRAW FOR FULL PUBLICATION		13	267	16	34
138	SHGR	CLSD	HB	1			BS		7	57	0	0
141	IAGR	JEV		1			RIM BASE; NEAT THIN WALLED WHEEL FINISHED JAR	143	16	541	15	8
141	GRROE	JBL	HB?	1			BS; OX SURFACE	143	2	107	0	0

Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve
							JOINS 143					
143	SHGR	-		1	ABR		BS		1	14	0	0
143	GREY	CLSD		1			BS- EARLY GREY DARK SURFACES R/OX/R/OX/R		1	5	0	0
143	SFGR	-		2	ABR		BS		2	10	0	0
143	GREY	-		1	VAB		BS		2	4	0	0
143	SFGR	CLSD?	SHG	1	ABR		BS		1	28	0	0
143	NELGR1	CLSD		1	ABR		BASE \$\$\$ DESCRIPTION		2	28	0	0
143	GRROE	-	HM?	1	ABR		BS		2	40	0	0
143	IASA	-		1			BS		2	22	0	0
143	SFGROG	CPN	SHG; HB	1		D6	RIM; IRF; WIPE INT SURF;SIMILAR TO NATIVE TRADITION COOK POTS FROM LINCOLN BUT WITH A FLAT TOP		3	179	16	25
143	GREY	-		1			BS		2	21	0	0
143	SFGROG	CPN	SHG; HB	1			RIM; REDUCED; FORM AS D6		1	43	20	10
143	GREY	JEV		1			RIM; EARLY GREY DARK SURFACES R/OX/R/OX/R		1	12	12	18
143	GREY	BIBF		1		D?	RIM		1	61	26	27
143	SFGR	JEV		1			RIM		1	14	14	13
143	GREY	BFB		1			RIM		1	24	14	5
143	GREY	BD		1			RIM		1	18	18	8
143	GREY	BFL		1			RIM		1	10	22	4
143	SHSC	-	HM	2	ABR		BS		2	17	0	0
143	OXWS	OPEN		1			BASE; FTM		6	85	0	0
143	SFGR	-		2	VAB		BS		2	23	0	0
143	GREY	JL		1			BS; LOWER WALL		2	132	0	0
143	GRROE	JBL		1			BASE		0	89	0	0
143	SHGR	BHER		1	BURNT POST BREAK		RIM SHLDR; OX SURFACES		1	68	20	5

Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve
143	SHSC	-		1			BS		1	6	0	0
143	DWNEL	JDW		1			RIM		1	33	20	8
143	GRROE	JBL		1			BS; OX SURFACE JOINS 141	141	7	343	0	0
143	IAGR	JEV		1			BS; JOINS	141	27	233	15	8
143	SFGR	CLSD		1	ABR		BASE; SAMPLE 7		1	32	0	0
143	DWNEL	JDW		1	ABR		RIM; SAMPLE 7		1	8	14	6
143	SHGR	BHER		1			RIM		1	301	34	22
143	SHSC	-	HM	1			BS		1	16	0	0
143	IASA	CLSD		1			BS		1	14	0	0
143	IASA	-		1	ABR		BS		1	13	0	0
143	SFGR	JBCAR		1			BS		1	3	0	0
143	IASA	-		1			BS; OXID		2	5	0	0
143	GRROE	-		1	ABR		BASE		1	56	0	0
143	GRROE	-		1	VAB		BS		2	7	0	0
143	SFOXC	JL	HB?	1			BS; ? LARGE STORAGE JAR		1	38	0	0
143	GREY	-		2	ABR		BS		2	10	0	0
143	GRROE	JBL		1			BS		2	180	0	0
143	GRROE	JBL		1			BS		2	54	0	0
143	GREY	JBL		1			BS; LOWER WALL; LATER 2-3C SHERD		1	101	0	0
143	SHGR	-		1			BS		1	18	0	0
143	SHSC	-	HM	1			BS		1	33	0	0
143	SFGROG	-		1	ABR		BASE		2	105	0	0
143	SFGR	-		1	ABR		BS		1	14	0	0
143	SHSC	CLSD?	HM	1	ABR		BS		1	6	0	0
143	GREY	JBL		1			BASE		1	161	0	0
143	GRROE	-		1	VAB		BS; OX EXT		1	13	0	0
143	GREY	-		1	ABR		BS		1	8	0	0
143	SFGR	-		1	ABR		BS		2	7	0	0
143	SFGR	-		1	ABR		BS		1	7	0	0
143	SFGR	CLSD		1			BS		1	10	0	0

Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve
143	GRROE	CLSD		1			BS		1	31	0	0
143	GREY	CLSD?		1	ABR		BS		1	9	0	0
143	GRROE	-		1	ABR		BS		1	10	0	0
143	GRROE	CLSD	SHG; WF	1	ABR		BS		1	12	0	0
143	GRROE	CLSD	ROU; WF	1	ABR		BS		1	5	0	0
143	NELGR1	CLSD		1	ABR		BS		1	20	0	0
143	SFGRC	JUP	HM	1		D7	RIM AS KNAPTON TYPE; TWO ROCK FRAGS		1	21	16	10
143	SFGR	JB		1	ABR		BS		1	69	0	0
143	GREY	JB		1	ABR		BS		1	23	0	0
143	GRROE	CLSD		1	ABR		BS		6	65	0	0
143	SHGR	JLH		1	ABR		HANDLE		1	72	0	0
149	OX	B		1	ABR		BS		1	24	0	0
151	SFGR	-		1	ABR; BURNT		BS		1	7	0	0
153	GRROE	-		1	ABR		BS		1	6	0	0
153	DWNEL?	-		1			BS		2	8	0	0
153	OX	OPEN		1	VAB		BS		1	6	0	0
153	SFGR	-		1	ABR		BS		1	6	0	0
153	SFGR	PD		1			RIM		1	12	20	12
153	GRROE	CLSD		1			BS		1	8	0	0
153	DWNEL	JDW		1	ABR		RIM		1	4	14	7
153	GREY	-		1	ABR		BS		1	7	0	0
153	SHGR	-		1			BS		3	5	0	0
155	GREY	JL	STAB	1	ABR		BS; STAB-'WHEATSHEAF' MOTIF		1	106	0	0
155	GREY	JBL		1			BASE		1	115	0	0
155	GREY	-		3	VAB		BS		3	9	0	0
155	OX	B38		1	SOOT INT		RIM AND FLANGE BROAD SHALLOW EXAMPLE- 4C?		1	44	19	10
159	GREY	CLSD		2			BS		2	28	0	0
159	SFGR	OPEN		1			BASE		1	19	0	0



Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve
159	SFGR	CLSD		1			BS		3	22	0	0
161	SFGR	JL?	BWL	1			BS; LOWER WALL		1	66	0	0
161	SHGR	-		1	ABR		BS; SAMPLE 18		1	1	0	0
163	SHCF	JB	HM	1			RIM; OX/R/OX		1	11	20	6
167	ETW	-	HM	25			BS; TINY FRAGMENTS		25	62	0	0
167	SHCC	-	HM	39			BS; TINY FRAGMENTS		39	49	0	0
169	ETW	-	HM	6			BS SMALL FRAGMENTS		6	40	0	0
170	ETW	-	HM	21	ABR		BS; MISC		21	132	0	0
170	SHMC	-	HM	1	ABR		BS		1	11	0	0
174	SHCM	-	HM	1	ABR		BASE; BS FLAKES		3	16	0	0
174	SHSC	JBL	HM	1			RIM; EVERTED; LARGE VESSEL		1	16	34	7
174	DR20	A		1			BS; GRITTY EARLY FABRIC		1	192	0	0
174	ETW	JBL		1			RIM FRAG		1	21	24	5
174	ETW	-	HM	1			BS; THICK		1	72	0	0
174	ETW	-	HM	3			BS		3	22	0	0
178	SHSF	-		1			BS		1	3	0	0
178	ETW	-		7			BS; FLAKES		7	26	0	0
186	ETW	-	HM	2	VAB		BS		2	7	0	0
186	SHCC	-	HM	1			BS; R/OX		4	96	0	0
186	ETW	CLSD	M; STAB EXT	1			BS; OX/R		1	53	0	0
186	SHCC	-	HM	4	ABR		BS		4	8	0	0
186	ETW	JEV	HM	1	VAB		RIM; STUBBY EVERTED FORM; SMALL FRAGMENT		1	4	0	2
189	SHSC	-	HM	1	ABR		BS		1	11	0	0
191	ETW	-	HM	1			BS; REDUCED		1	13	0	0
191	VESIC	-	HM	1	VAB		BS FLAKE		1	1	0	0
191	ETW	-	HM	6	VAB		BS FLAKES		6	12	0	0
191	ETW	-	HM	1	ABR		BS		1	12	0	0

Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve
191	SHCC	-	HM	7	ABR		BS: FLAKES		6	21	0	0
191	ETW	J	HM	1			BASE: OX/R; THICK WALLED; BASIC IGNEOUS AND ANGULAR QUARTZ INCLUSIONS UP TO 15MM		6	314	0	0
191	SHCF	-	HM	1	ABR		BS		1	11	0	0
193	ETW	-	HM	1	ABR		BS		2	16	0	0
193	SHSF	CLSD	HM	1			BS: REDUCED		1	4	0	0
194	SHSF	CLSD	HM	1			BS: SAMPLE 27		2	8	0	0
197	SHSC	-	HM	4			BS		4	70	0	0
197	SHSF	CLSD	HM	1			BS; REDUCED		3	35	0	0
197	ETW	JB	HM	1			RIM FLAKES; OXID		2	15	0	0
197	ETW	-	HM	2	VAB		BASE; OX/R; EARLIER IA??; OPEN POORLY MIXED FABRIC;		2	16	0	0
197	SHSC	CLSD	HM	1			BASE; OX/R/OX		3	92	0	0
197	ETWSH	CLSD	HM	1			BASE; REDUCED		1	37	0	0
197	ETWSH	CLSD	HM	1			BASE; IRF		3	151	0	0
198	SHCC	J	HM	1	PIERCED POST FIRING		BASE AND LOWER WALL; IRF: PIERCED HOLES DIAM. 5MM		71	382	0	0
198	SHCC	J	HM	0	ABR		BS; SCRAPS FROM PIERCED JAR FROM THIS CONTEXT; SAMPLE 28		6	8	0	0
202	ETW	J?	HM	1	ABR		BS: OX/R		1	11	0	0
202	SHSM	-	HM	19	ABR		BS: FLAKES		19	19	0	0
202	ETW	JFT	SLASH RIM; HM; WIPV EXT	1		D8	RIM SHLDR; IRF; SLASHED FLAT RIM IN TWO DIRECTIONS; WIPED EXTERNAL SURFACE: SIMILAR TO CHALLIS & HARDING 1975 FIG 37.1		2	145	17	20

Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve
202	ETW	JBAR	HM	1		D9	RIM: IRF; BROADLY SIMILAR TO CHALLIS AND HARDING 1975 FIG 47.16 & FIG 38.6		2	85	18	10
202	ETW	JBAR	FT RIM; HM	1	ABR		RIM: OX/R		1	18	12	9
202	ETW	-	HM	43	ABR		BS:IRF; SMALL FRAGMENTS ?VESSEL COUNT?		43	124	0	0
202	ETW	JB	HM	1			BASE: OX/R		2	100	0	0
202	ETW	-	HM	1	ABR		BS; OX/R; QUARTZITE		1	15	0	0
207	SHCC	JBBR	HM	1	ABR		RIM		1	7	12	6
207	SHCC	-	HM	11	ABR		BS; IRF; THIN WALLED		11	69	0	0
207	SHSF	-	HM	1	VAB		BS		2	6	0	0
207	SHCC	JBBR	HM	1	ABR		RIM		1	9	14	5
207	ETW	-	HM	1	VAB		BS		1	2	0	0
207	SHSF	JGLOB	HM; B EXT	1		D10	RIM: REDUCED; FLATTENED RIM TOP		2	81	10	5
212	SHSF	JNK	HM; CORDON	1		D11	RIM; SHLDR; ; SIMILAR TO AN EXAMPLE FROM LUDFORD ELSDON 1993 C9		2	24	16	12
212	SHCC	CLSD	HM	1	ABR		BS; REDUCED		1	18	0	0
214	SHSC	-	HM	1	ABR		BS		1	6	0	0
214	SHSC	J?	HM	1	ABR		BS; OX/R		1	77	0	0
214	SHSC	J	HM; WIPE EXT	1			BS; OX/R; VERTICAL EXTERNAL WIPING;		4	95	0	0
216	SHSF	-		1	ABR		BS; REDUCED; SANDY		2	3	0	0
219	SHSF	CLSD?	HM	1			BS; REDUCED; SANDY		1	8	0	0
219	IASA	-	HM	1	ABR		BS		1	3	0	0
219	SHSF	CLSD	CORDON?	1			BS SHLDR; GROOVE AND CORDON LIA		1	6	0	0

Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve
							STYLE: SIMILAR FRAGMENT IN CONTEXT 212					
221	IASA	CLSD?	HM	1			BS; REDUCED		3	18	0	0
221	IAGROG	CLSD?	HM	1			BS		1	33	0	0
221	SHCC	-		3	VAB		BS		3	4	0	0
229	SHCF	-	HM	1			BS ?RIM FLAKE; REDUCED		7	14	0	0
238	SHSC	CLSD	HM	1			BS; OX/R; SANDY		3	28	0	0
238	ETW	-	HM	3			BS		3	68	0	0
238	ETW	JFT	HM	1		D12	RIM; SHLDR; IRF; AS CHALLIS & HARDING 1975 FIG 11.5		1	38	12	5
238	SHCF	-	HM	1			BS; REDUCED		1	24	0	0
238	SHSC	JB	HM; WIPE EXT	1		D?	RIM; EVERTED		1	22	20	4
238	SHSF	-	HM	4			BS; REDUCED		4	90	0	0
238	SHCC	-	HM	47			BS MISC FLAKES		47	136	0	0
238	SHSF	J	HM	1			BASE AND BS; FTR; REDUCED; MOULDED FOOTRING		24	152	0	0
238	IAGROG	-	HM	1			BS; REDUCED		1	5	0	0
238	SHSC	CLSD	HM	31			BS; FLAKES- VESSEL COUNT?; REDUCED		31	59	0	0
238	SHSF	CLSD?	HM	1			BASE; FTM; R/OX/R/OX/R/; NEATLY MOULDED LATE IRON AGE TYPE		1	12	0	0
238	SHSF	CLSD	HM	1			BASE; FTR; REDUCED; FOOTRING		1	8	0	0
238	SHGR	CLSD	HM?	1			BASE		2	122	0	0
238	SHGR	JHER		1			RIM SHLDR		1	69	20	15
238	SHGR	-		7			BS		7	41	0	0
238	SHCC	JBL	HM	1	ABR		BASE BS; OX/R/OX		4	60	0	0
238	SHSC	-	HM	10			BS; REDUCED		10	36	0	0
238	SHSC	-	HM	1	ABR		BS; OX		3	5	0	0

Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve
238	SHSC	-	HM	2	ABR		BS; REDUCED FLAKES		2	4	0	0
238	SHSC	-	HM	1	ABR		BASE; PLAIN BASE		1	6	0	0
238	SHSF	-	HM	1	ABR		BS FLAKE		1	1	0	0
238	ETW	JFT	HM	1	ABR		RIM SHLDR AS CONTEXT 238 D?		1	22	14	4
239	GREY?	-		1	VAB		BS; SAMPLE 38		1	1	0	0
XI	GREY	BL		1	ABR		RIM		1	36	28	7

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