# ARCHAEOLOGICAL EVALUATION AND, GEOPHYSICAL SURVEY REPORT, LAND IN WICKENBY/LISSINGTON PARISHES, LINCOLNSHIRE 

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Report prepared for Lincolnshire County Council, by

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## Summary

- An archaeological evaluation comprising geophysical survey and trial excavation was carried out on land straddling the parish boundary of Wickenby and Lissington in Lincolnshire. These works were recommended to provenance a collection of Late Iron Age, Romano-British and Anglo-Saxon metal artefacts recovered by a metal detectorist and reported to the Finds Liaison Officer at Lincolnshire County Council.
- The geophysical survey identified a palimpsest of potentially archaeologically significant anomalies. Subsequent trial excavation revealed these features to represent enclosures, pits and ditches, indicative of field systems and associated settlement and industrial activity, covering the $1^{\text {st }}$ to $4^{\text {th }}$ centuries $A D$, as well as evidence of medieval ridge and furrow farming practices.


Fig.1: Site Location. (Scale 1:25000)
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### 1.0 Introduction

Pre-Construct Archaeology (Lincoln) was commissioned by Lincolnshire County Council to carry out an archaeological evaluation comprising geophysical survey and trial trenching on agricultural land either side of the parish boundary between Wickenby and Lissington, Lincolnshire.

These works were commissioned by the Finds Liaison Officer for Lincolnshire County Council, in response to the discovery of large quantities of metalwork, recovered by a local metal detectorist, and reported under the Portable Antiquities Scheme.

The fieldwork and reporting methodology used in this report is consistent with the recommendations of Management of Archaeological Projects (English Heritage, 1991), Standards and guidance for archaeological field evaluation (IFA, 1999), and the Lincolnshire County Council document Lincolnshire Archaeological Handbook: a manual of archaeological practice (LCC, 1998).

This report will be deposited with the commissioning body (Lincolnshire County Council) and the County Sites and Monuments Record for Lincolnshire. A further copy will be sent to the City and County Museum, Lincoln, along with an ordered project archive for long-term storage and curation.

### 2.0 Site location and description

The parishes of both Wickenby and Lissington lie within the administrative district of East Lindsey. The site straddles the parish boundary, and lies approximately 16 km northeast of Lincoln, and 1 km west of Lissington, at a height of $22-23 \mathrm{~m}$ OD. A hedge runs along the parish boundary, dividing the area of investigation, with pasture to the west (Wickenby parish) and ploughed arable land (Lissington parish) to the east.

The local geology comprises drift deposits of glacial till, overlying Ampthill Clay (British Geological Survey, 1999). This is overlain by soils of the Beccles 1 Association; seasonally waterlogged clayey and loamy soils (Hodge et. al., 1984).

Central National Grid Reference TF 09568345.

### 3.0 Project background

The site lies outside the planning regulations in that it is undisturbed agricultural land that is not the subject of any existing planning application, or is likely to be in the near future.

Based on the findings of the metal detectorist, Mr Kelway, it was clear that the site extended across the boundary that separated the parishes of Wickenby and Lissington. As the extent of the site was not known from the results of the detector survey, a scheme of works was proposed by the Finds Liaison Officer of Lincolnshire County Council, comprising detailed gradiometer and magnetic susceptibility surveys, supported by a subsequent phase of trenching to identify and assess remains likely to be associated with the metal artefacts that had been initially recovered.

### 4.0 Archaeological and historical background

Prior to the recovery of metal artefacts and the current phase of archaeological investigation, there was little recorded evidence of past settlement activity in the vicinity of the site. The earliest evidence consists of a single perforated stone mace head of Neolithic date, listed in the County Sites and Monuments Record for Lincolnshire as being found in a beet field approximately 500 m south of the site (SMR ref. 53213).

Archaeological work during the construction of a Petrofina pipeline identified Iron Age and Romano-British pottery in the topsoil, just over a kilometre south of the site. An undated ditch was also identified in this location (SMR refs. 53100, 53101, 53102). Further pottery of Romano-British date was recovered in Lissington village.

Both the villages of Lissington and Wickenby appear to have originated in the AngloSaxon period. The etymology of Wickenby suggests its pre-Conquest origins, the name being derived from the Old Danish personal name 'Viking' and the Old Danish suffix by, a farmstead or settlement (Cameron, 1998). In the case of Lissington, Anglo-Saxon origins are suggested by the discovery of pottery of $8^{\text {th }}$ century date during the levelling of village earthworks in 1977 (SMR ref. 53244). Furthermore, both settlements are listed in the Domesday Book. At this time land in Wickenby was divided between the King, William of Percy and Jocelyn of Lambert. Lissington was exclusively in the ownership of the Bishop of York (Morgan \& Thorne, 1986).

The area that is the focus of the current phase of investigation was discovered by a local metal detectorist, Mr. Keith Kelway, who has carried out an extensive survey of the landscape with the permission of the landowners. The results of this survey have been reported and mapped through the Portable Antiquities Scheme. The survey has recovered in excess of 350 metal finds, largely of Late Iron Age and Romano-British date. Below is a summary discussion of these finds, based on information provided by the Finds Liaison Officer.

The Iron Age material includes a gold coin and two silver coins. All three are inscribed examples, making them very rare and of great significance. Strap loops and brooches of Late Iron Age date have also been recovered. An Ox head spout that was found within a field to the south of the investigated site, may belong to a shallow bowl used in ritual feasting, and is paralleled by an example from Kirmington in North Lincolnshire.

The Romano-British material consists largely of coins, with over 90 examples being clearly identified, and the same amount again being too worn to identify. The majority are bronze coins of $3^{\text {rd }}$ to $4^{\text {th }}$ century date, although the assemblage also includes coins of Vespasian (AD69-79), Trajan (AD98-117), Antoninus Pius (AD138-161) and Septimus Severus (AD193-211).

The Romano-British assemblage also includes 51 brooches, which, unlike the coins, are concentrated in the $1^{\text {st }}$ and $2^{\text {nd }}$ centuries AD and include Dolphin brooches, Trumpet brooches and Hod Hill brooches. These finds have been located over an extensive area, in both Wickenby and Lissington parishes. However, there is a marked concentration of finds straddling the parish boundary in the area of the current programme of evaluation. There is also a notable trend running south-south-eastwards along the parish boundary towards Lissington Road.

The Romano-British metal finds also incorporated a significant number of finds of potential religious or ritual significance. These included a sceptre head in the form of the god Mars. This is a very rare find, with only two other examples known, one coming from a burial near Ermine Street at Brough on Humber. It indicates the potential of a nearby rural shrine, possibly to the south of the investigated site (based on the findspot of the sceptre piece).

Finds typical of domestic usage of the site include cosmetic grinders, nail cleaners, hairpins and locks.

The final component of the Romano-British metal finds were military in nature, and included an apron mount, a plate from a belt, a strap fitting and a harness strap union link. A bronze buckle with outward facing horse heads (c. AD350-450) may be indicative of the presence of Germanic mercenaries.

### 5.0 GEOPHYSICAL SURVEY

### 5.1 Methodology

Magnetic susceptibility and fluxgate gradiometer surveys were carried out in accordance with the English Heritage document Geophysical Survey in Archaeological Field Evaluation, 1995, and in accordance with a specification prepared by PCA.

Detailed area survey using a fluxgate gradiometer is a non-intrusive method of evaluating the archaeological potential of a site. The gradiometer detects magnetic anomalies created
by areas of high or low magnetic susceptibility. These variations are caused by changes in the composition of the subsoil or the underlying geology. Archaeological features result from man-made alterations to the soil and they may also incorporate intrusive materials such as brick and stone. These features can create detectable magnetic anomalies. In addition, activities that involve heating and burning can generate magnetic anomalies, as will the presence of ferrous metal objects.

The anomalies detected by a fluxgate gradiometer survey can often be resolved into entities sharing morphological similarities with features of known archaeological provenance. This enables the formulation of an informed, but subjective, interpretation.

The Gradiometer survey was undertaken using two Bartington Grad-01 Dual Fluxgate Gradiometers. The zigzag traverse method of survey was used across $30 \mathrm{~m} \times 30 \mathrm{~m}$ grids, at 0.25 m sample intervals along 1.0 m wide traverses.

The data was processed using ArcheoSurveyor 0.28.4.6. In the resultant plots, low magnetism is shown as white and high magnetism as black. The plots are shown as raw and enhanced data.

The gradiometer survey data was processed using zero mean functions to correct the unevenness of the plots in order to give a smoother graphical appearance. It was also processed using algorithm to remove magnetic spikes, thereby reducing extreme readings sometimes caused by stray iron fragments and spurious effects due to the inherent magnetism of soils.

The results are presented as a greyscale image, along with an interpretative plan (Figs. 36).

| Instruments | Bartington Grad - 01 - 1000 fluxgate gradiometer with <br> DL601 data logger |
| :--- | :--- |
| Grid size | $30 \mathrm{~m} \times 30 \mathrm{~m}$ |
| Sample interval | 0.25 m |
| Traverse interval | 1.0 m |
| Traverse method | Zigzag |
| Sensitivity | 0.1 nT |
| Processing Software | Archeosurveyor v.0.28.6.4 |
| Weather conditions | Sunny, some cloud |
| Area Surveyed | 4ha |
| Date of survey | Friday March 5 ${ }^{\text {th }}$ |
| Survey personnel | Dave Bunn, Peter Heykoop and Cath Stone |
| National Grid Reference | TF 0956 8345 |

Table 1: Summary of gradiometer survey parameters

The magnetic susceptibility survey was carried out using a Bartington Instrument MS2-D search loop connected to a MS2 susceptibility meter. At each station point the sensor was first zeroed in the air, then a measurement was taken to produce a reading for the locality. Measurements of volume specific magnetic susceptibility (MS) were logged in SI units at 20 m intervals along transects spaced 20 m apart. The data was recorded by hand and subsequently inputted into Geoplot v. 3 for analysis and plotting. The magnetic susceptibility results are shown as colour-scale plots (Fig. 2), with red indicating the highest readings of magnetic susceptibility and blue the lowest.

### 5.2 Results (Figs.2-6)

The gradiometer survey revealed a palimpsest of linear and pit-like anomalies that signify a considerable multi-phase settlement (Fig. 6), clearest examples highlighted in red). It is believed that occupation of the site dates from the pre-Roman period.

The results indicate that significant remains extend beyond the limits of the survey, particularly to the west. The magnetic susceptibility results (Fig. 2) suggest that the focus of occupation lies close to the current field boundary that bisects the survey area, although it should be noted that topsoil magnetic susceptibility levels are generally higher close to boundaries. Magnetic susceptibility levels were not established to the east of the field boundary and, as such, the survey has not established the easternmost extent of major archaeological remains.

Many anomalies appear to be traversed by northwest to southeast aligned ridge and furrow ploughing (examples shown as orange lines), some of which survives today as low earthworks. The ridge and furrow has almost certainly truncated or eradicated underlying features. Where ditches are aligned at oblique angles to the ploughing, some of these resolve as fragmented linear anomalies. These circumstances predispose a confident analysis relating to the morphology of many features.

For the most part, linear anomalies are likely to represent drainage ditches and enclosed features that, where relevant, clearly predate the formation of a current field boundary (which follows the parish boundary). Suggested positions of tracks are shown as green on the smaller interpretative plan (fig. 6, 1:2000).

The results do not indicate clear traces of structural remains, either as stone walls or brick/tile rubble spreads.

Anomalies circled in red may reflect pit-like features, such as waste storage/quarry pits. A number of stronger anomalies, highlighted as pink, may have archaeological potential as burnt materials, although others could reflect modern ferrous material (ploughshares etc). A zone of wide magnetic variation (1) corresponds to backfill material within a former pond (pers. comm. Mr Doughty, landowner).

### 5.3 Conclusions

The geophysical survey has successfully identified clear traces of former settlement activity within the target area. Metal detection had previously established that the site was probably occupied in the Roman period and (at the time of writing) this has been confirmed by excavation. A complex of linear and discrete features suggests that occupation of the area may have been prolonged and extensive, although it has not been possible to clearly define specific phases of activity. A significant enhancement of topsoil magnetic susceptibility in the mid-part of the site may indicate a focus of settlement activity around Trench 1.
6.0 TRIAL EXCAVATION

### 6.1 Methodology

Following consultations with the Portable Antiquities Officer it was decided that five trenches should be investigated, each measuring 15 m by 1.6 m . The locations of the trenches were based on the results of the preceding detailed gradiometer survey.

Initial machine excavation was carried out using a JCB fitted with a 1.6 m wide smooth bucket. The topsoil was removed in spits of no more than 0.2 m , until archaeologically significant horizons were encountered. At this point, further cleaning and excavation was carried out by hand. Features were sample excavated in order to establish depth, profile, date and function. Context information was recorded on pro-forma record sheets, and plan and section drawings were made at an appropriate scale (1:50 and 1:20). A colour photographic record was maintained, selected prints from which have been included in this report.

The fieldwork was carried out over four days between the $10^{\text {th }}$ and $15^{\text {th }}$ March, 2004, by the authors, with the assistance of two experienced field archaeologists, a work experience trainee, the Finds Liaison Officer, and Mr Kelway, the metal detectorist who identified the site. During the fieldwork, Mr. Kelway also carried out further metal detecting in and around the excavated trenches.

### 6.2 Results (Figs. 2, 3, 7-11)

## Trench 1 (Fig. 8)

The trench was positioned north-west to south-east across a possible linear anomaly and an area of magnetic disturbance, possibly evidencing waste from some form of industrial process. The trench contained a series of intercutting pits and ditches of Romano-British date, and a possible buried soil horizon. The pottery from this trench was dated between the $2^{n d} / 3^{\text {rd }}$ century and the $3^{\text {rd }} / 4^{\text {th }}$ century $A D$.

The trench was sealed by a topsoil of dark brown clay-loam, 100. Directly beneath this, two possible furrows were observed. At the west end of the trench, 124 extended beyond
the limit of excavation, and sealed a small linear feature 122 , which also extended beyond the end of the trench. The fill, 123, contained three very abraded greyware sherds and four animal bone fragments. The second furrow, 135 was 2.5 m to the east of 124 , measured 6 m wide, and contained a fill of brown silty clay, 131. Between the two furrows was a 0.85 m wide and 0.2 m deep gully, 120 , running broadly north-south. This contained a fill of dark grey sandy clay, 121 , and cut a possible buried soil, 110, of very dark silty clay, dated between the $2^{\text {nd }}$ to $3^{\text {rd }}$ century by ten sherds of pottery. 121 yielded eight sherds of pottery of $2^{\text {nd }}-3^{\text {rd }}$ century date and three fragments of animal bone.

Furrow 135 cut and therefore post-dated a complex of intercutting pits and ditches of Romano-British date. The earliest feature in this complex was a large sub-oval pit, 113, containing a fill of light grey silty clay, 114. The feature was approximately 4.5 m wide and 0.2 m deep, and was sealed by the buried soil, 110 . Towards the east end of the pit, and also sealed by 110, was a possible post hole, 128 . Immediately to the east of this was a north - south linear feature, 111 , which truncated the east end of pit 113, and also cut 110. 111 contained a fill of very dark silty clay with occasional charcoal flecks, 112, which produced a single sherd of Romano-British greyware pottery, four fragments of cattle and sheep bone and one oyster shell fragment.

Also cutting pit 113 , was ditch 132 , which was approximately 2 m wide and 0.25 m deep, and ran through the middle of pit 113. This feature also appeared to cut buried soil 110, although the edges were very diffuse and this relationship was unclear. The fill, 115, was a dark grey silty clay. It contained 32 sherds of Romano-British pottery, dominated by 24 sherds of greyware. The date for this material is late $2^{\text {nd }}$ to $3^{\text {rd }}$ century. Two fragments of animal bone were recovered.

Approximately 0.5 m west of 132 , pit 113 and buried soil 110 were cut by a feature with a bowl shaped profile, 134. This feature was interpreted as a pit, as it was not visible in plan. The fill was a grey silty clay, 134. This in turn was cut by a 0.75 m wide north south linear feature, 126, containing a fill of very dark grey silty clay, 127 . Immediately to the west of this was another north - south ditch, 118. The relationship between 118 and 126 could not be established due to the similarity of the fills, 119 and 127 respectively. Fill 119 contained 25 sherds of pottery of $3^{\text {rd }} / 4^{\text {th }}$ century date and three fragments of roof tile.

A large animal bone assemblage was recovered from this context, totalling 107 fragments. This was dominated by 73 fragments of cattle and cattle sized bone, and also included 26 fragments of sheep/goat and sheep sized bone, and horse, pig and dog. Only four fragments exhibited butchery marks, and eight exhibited evidence of dog gnawing. The excavated material also included one oyster shell fragment.

The final feature in the complex was a ditch, 116 , running north - south, and measuring 1.7 m wide and 0.65 m deep. This was cut by both 118 and 126 , and cut pit 113 . It contained a fill of grey silty clay with occasional chalk flecks, 117 , producing five sherds of Romano-British greyware pottery and four fragments of cattle bone.

Towards the east end of the trench, another complex of intercutting features was exposed. The earliest feature in the complex was a curvilinear ditch, 106, broadly aligned west-south-west to east-north-east, and containing a fill of dark grey silty clay, 107. This was cut by ditch 102 , running north-west to south-east. Two fills were recognised within the ditch, a primary fill of very dark grey/brown silty clay, 105 , sealed by a mixed light brown and dark grey/brown clay, 104. Both 106 and 102 were cut by ditch 130, which also cut buried soil 110 . This was aligned broadly north-north-west to south-south-southeast and exhibited a shallow profile 3.1 m wide and 0.3 m deep. The fill was a dark grey/brown silty clay, 103. This deposit yielded a total of 25 sherds of pottery of Romano-British date, four fragments of animal bone, and one oyster shell fragment.

Immediately to the west of 130 , was 108 , a small slightly curvilinear gully, approximately 0.5 m wide and 0.2 m deep. The fill was undated grey silty clay, 109 , from which two fragments of cattle bone were recovered.

The natural geology in this trench consisted of a mixed orange clay with lenses of gravel, grey clay and orange sandy clay, 101.

## Trench 2 (Fig. 9)

The trench was positioned to target an area of high magnetic disturbance, and to traverse a linear anomaly running broadly east-west. It was orientated north - south and exposed a large ditch, a gully, and two medieval furrows. Romano-British pottery from this trench dated features to the late $3^{\text {rd }} / 4^{\text {th }}$ century $A D$.

The uppermost deposit throughout the trench was a brown topsoil, 200, with a maximum depth of 0.3 m . Metal detecting of the spoil heap and the environs of the trench recovered a copper alloy stud dated to AD $100-150$, a lead fragment and four coins. These were largely illegible, but are dateable to the period AD 260-410.

The topsoil sealed 201, a yellow/brown clay with small chalk gravels and occasional patches of orange sand, interpreted as the natural geology (glacial till).

Following removal of the topsoil horizon it was observed that a spread of black silty clay, 204 existed in the central portion of the trench. This spread produced 15 sherds of pottery and three sherds of tile. The pottery included greyware, Nene Valley Colour Coated fineware, and a sherd of a Dressel 20 olive oil amphora, dating to the late $3^{\text {rd }}-4^{\text {th }}$ century AD . The context also yielded two unidentified lead fragments, two iron nails, nine fragments of animal bone representing cattle, sheep, horse and cat, and four oyster shell fragments. This was cut by a probable furrow, 212 , which contained a fill of brown silty clay, 202, and ran broadly north-west to south-east. Pottery from within the furrow was exclusively $3^{\text {rd }}-4^{\text {th }}$ century date (residual material that had been disturbed from Roman features during medieval ploughing). A slot was hand-dug through spread 204 and furrow 212, exposing two linear features.

At the north end of the trench was a shallow gully with steep sides and a flat base, 205, which had been truncated by furrow 212 . The gully, which was orientated east - west, was filled with dark grey silty clay, 206 , containing four sherds of mid $3^{\text {rd }}$ century Romano-British pottery and a single fragment of sheep/goat bone.

Approximately 4.8 m to the south lay ditch 207 , which was 1.8 m wide and 0.65 m deep, with near vertical sides and a flat base. The sole fill, 208, a yellow/brown silty clay, was similar in consistency to the surrounding natural geology, suggesting natural silting of the ditch with little activity in the area at this time. Pottery recovered from this feature consisted of two sherds of Dales Ware, a single greyware sherd and two sherds of Iron Age tradition pottery, suggesting a date in the late $3^{\text {rd }}$ century. Following this episode of silting, the ditch was recut. The recut, 209, appears to have been the subject of two phases of dumping ( 210 and 211). The dark grey to black fills contained frequent pieces of charcoal, suggesting intensive burning nearby.

Primary fill 210 contained 40 sherds of pottery, of which 32 were domestic greyware. The context also yielded a (probably residual) sherd of Central Gaulish samian ware, three sherds of Nene Valley Colour Coated ware, and three large Dales Ware sherds, as well as two iron nails and two iron sheet fragments, possibly from the same knife blade, six fragments of animal bone and one oyster shell fragment. The suggested date of deposition is mid $3^{\text {rd }}$ century or later. Four sherds of tile were also recovered from this context, and included both roof tile and box flue tile from a hypocaust heating system.

The uppermost deposit, 211, was very similar to the overlying spread 204, suggesting that both deposits may be derived from the same episode of deposition. Furthermore, 28 fragments of pottery and tile from the context had a similar date in the $4^{\text {th }}$ century $A D$. Three coins were recovered from either context 210 or 211 . Two were very worn radiate types dating $260-315$, and a third was a coin of Constantine II dating to $324-330$. A fourth coin from 211 was minted in the reign of Constantine I, and dated 306-337. Animal bone from this context totalled five fragments, representing cattle and sheep/goat.

Spread 204 probably relates to an area of magnetic disturbance recorded during the detailed gradiometer survey (fig. 3). The discovery of this spread suggests there has been only limited loss of the former ground surface in this area since the Roman period, save where the medieval furrows cross the field.

Towards the south end of the trench, a second furrow, 213, was observed, also aligned north-west to south-east, and containing a brown silty clay fill, 203. A modern ploughscore closely followed the edge of the furrow cut.

## Trench 3 (Fig. 10)

The trench was positioned east-west, to traverse a linear geophysical anomaly. A series of Romano-British ditches and gullies were exposed and investigated, largely dated to the $I^{s t}$ and $2^{\text {nd }}$ centuries $A D$. A possible medieval furrow was also exposed.

A dark grey/brown clayey loam topsoil, 300, sealed the entire trench, and extended to a maximum depth of 0.35 m Metal detecting of the topsoil heap produced a copper alloy brooch, dating to $\mathrm{AD} 50-150$, and three coins, the dates of which were $\mathrm{AD} 335-341$, 300-410 and 364-378. Beneath this, 317 represented the natural geology, a yellowish brown clay with natural inclusions of flint gravels. A series of features were exposed beneath the topsoil, cutting into the natural.

At the west end of the trench, was a complex of intercutting features. The earliest was 327, one side of a north - south linear feature containing a fill of yellow/grey silty clay, 325. This feature had been largely truncated by a recut, 324. Two fills were observed within this feature, a primary fill, 323 of dark grey silty clay, possibly representing a dumped deposit, sealed by a fill of yellow/brown silty clay, 322, more reminiscent of natural silting. Both fills were dated by ceramic evidence to the $1^{\text {st }} / 2^{\text {nd }}$ century, and contained small quantities of oyster shell. Following the silting of this ditch, it was again recut by 309 , a north - south ditch containing a fill of grey silty clay, 301, producing nine fragments of animal bone, 42 fragments of oyster shell, and four sherds of pottery suggesting a deposition date in the $1^{\text {st }} / 2^{\text {nd }}$ century. The east side of 309 was cut by another ditch, 320 , also aligned north - south. The grey silty clay fill, 321 , contained two sherds of $1^{\text {st }}-2^{\text {nd }}$ century pottery. This in turn was cut by a steep sided ditch, 310, approximately 1.05 m wide and 0.4 m deep. The fill, 302 , produced 56 sherds of pottery of $2^{\text {nd }}$ century date: 38 sherds from a single Iron Age tradition jar. The excavated fill also contained fifteen fragments of cattle bone and one fragment of horse, and three oyster shell fragments. To the east, ditch 310 also cut a pit, 311 , which contained a light yellow/grey silty clay, 303, containing eight sherds of pottery and tile, including one sherd of possible late Iron Age date, as well as three animal bone fragments.

Immediately to the east of 311 was a wide, shallow linear feature, 312, approximately 4.1 m wide and 0.25 m deep. The fill was a grey/brown silty clay, 304 . Morphologically, this feature is most likely to be a furrow, although the fill was noticeably darker than that of the other furrows exposed on site and yielded pottery of late Iron Age and RomanoBritish date. It is possible that this material is residual, having been incorporated into the furrow fill from the nearby Romano-British features exposed in the trench.

A further sequence of small linear features was excavated to the east of 312.313 was aligned north-east to south-west and was filled by an undated grey silty clay, 305. In section it was shown to be cutting 314 , a 0.9 m wide ditch running north-west to southeast. This ditch contained a fill of brownish grey silty clay, 306, which was dated to the mid $3^{\text {rd }}$ century by three sherds of Romano-British greyware.

Running parallel to 314 was a narrow gully, 318, containing a brown/grey silty clay fill, 319. Towards the south side of the trench 318 merged with 315 , a north-east to southwest aligned gully. The relationship between the two features was not established as both had been partially truncated by machine excavation and contained very similar fills. Each gully contained a single sherd of Romano-British pottery. 307, filling 315, also contained five fragments of animal bone.

At the east end of the trench, gully 316 ran north-west to south-east, and contained a fill of grey silty clay, 308 , producing seven sherds of Roman pottery and a single oyster shell fragment.

## Trench 4 (Fig. 11)

This trench was positioned east - west across a curvilinear anomaly and an area of high magnetic resistance. A large ditch was exposed representing the curvilinear anomaly, as well as a series of pits and ditches of mid to late $2^{\text {nd }}$ to mid to late $3^{\text {rd }}$ century $A D$ date.

The trench was sealed by a 0.2 m deep topsoil, 400 , overlying a natural geology of yellow/brown clay, incorporating patches of grey clay and orange sand, 401. Metal detecting around the trench yielded a number of copper alloy fragments of RomanoBritish date, possibly derived from a bracelet, and a coin dated to AD 335-341. Directly beneath the topsoil, two possible furrows were observed. At the west end of the trench, 421 was in excess of 6 m wide and extended beyond the limit of excavation. The fill, 414, was a brown silty clay. The second furrow, 422 , was 4.5 m to the east. A 3.3 m portion of the furrow was exposed, the remainder extending beyond the east end of the trench. The fill, 406, was undated brown silty clay, which contained a single iron nail.

At the west end of the trench, part of a large, steep sided ditch was exposed, 402; the width of which was in excess of 1.7 m . It survived to a depth of 0.65 m , having been partially truncated by furrow 421. The ditch contained a single homogenous fill of dark grey silty clay, 403 . The dark colour of the fill and the presence of charcoal flecks suggests nearby domestic fires or burning associated with industrial activity. Twenty sherds of pottery were recovered from the context, dating it to the late $3^{\text {rid }}-4^{\text {tid }}$ century. The context also contained three fragments of roof tile, 21 animal bone fragments indicating cattle, sheep/goat and horse, and six oyster shell fragments.

To the east of 402 , a portion of a sub-oval pit, 411 , was exposed, containing a fill of brownish grey silty clay, 418. This cut the west side of a north - south aligned ditch, 410, which was 1.1 m wide and 0.3 m deep. It contained a single fill of brownish grey silty clay, 415. This feature contained several large unabraded sherds, representing approximately half of each of two greyware bowls, and a large sherd from a Dressel 20 amphora imported from Southern Spain. The date range for this material was mid - late $2^{\text {nd }}$ century AD. Immediately to the east of 410 another ditch ran north - south across the trench and measured 1.85 m wide by 0.5 m deep. The fill was a grey silty clay, 416,
producing pottery of mid $3^{\text {rd }}$ century date or later and a single cattle tooth. All of the above features were cut by furrow 421 .

The east edge of 409 cut a broadly sub-circular pit, 419, containing a fill of grey silty clay, 420 . This feature was also cut to the east by a north-west to south-east aligned ditch, 417. This feature appeared to be terminating towards the north side of the trench. It contained a grey silty clay, 417.

Between 402 to the west, and 408 to the east, a linear feature, 412 ran along the south side of the trench. It was in excess of 0.7 m wide, with a moderately steep edge. The fill was a grey silty clay, 413 . The ditch was cut at the west end of the trench by ditch 402 , but the relationship was not established between 412 and the features it intersected; 408, 409,410 and 419, due to the similarity of the fills and the rising water table in the trench. The possibility remains that ditch 408 represents a component of 412 , marking the point where the ditch first turns, and then ends.

At the east end of the trench, was one side of the cut for a substantial feature, 404, running parallel to 408 , and extending beyond the limit of excavation. This suggests that it was in excess of 4 m wide, and could represent either a large ditch or a possible pit or pond. The geophysical survey identified an area of high magnetic susceptibility at this point, which may suggest that the feature is more likely to be broadly subcircular rather than linear.

The feature was excavated to a depth of 0.65 m before the high water table prevented further excavation. Two fills were recognised within the ditch, a primary fill of grey silty clay, 407 , producing mid $3^{\text {rd }}$ century pottery, and six animal bone fragments, which was sealed by a much darker grey silty clay with charcoal flecking, indicative of the dumping of burnt material. This deposit, 405, was cut by furrow 422, and contained 15 sherds of mid - late $3^{\text {rd }}$ century pottery, a fragment of box flue tile, eleven fragments of animal bone, one oyster shell fragment and a number of unidentified metal objects.

## Trench 5

This trench was located towards the north-west corner of the detailed gradiometer survey, to target an enclosure-like anomaly that initially seems to form a later phase of the settlement. Unfortunately, due to the high water table the trench had to be abandoned following hand cleaning and initial photography.

### 7.0 Discussion and conclusion

The presence of the burnt spread in Trench 2 (204) shows that little or none of the Roman ground surface has disappeared in this area through later ploughing, despite furrow truncation during the medieval period. The same can be said for the area of Trench 1, where a buried soil has survived, sealing some earlier features, with some degree of truncation of the Romano-British deposits having been caused by medieval furrows. In Trenches 3 and 4 however, the stratigraphy does suggest a degree of truncation, but not sufficient to significantly affect the archaeological resource. This is most likely to have been caused by the recent levelling of ridge and furrow earthworks by the father of the current landowner. Despite this, there is a considerable degree of preservation of the archaeological resource on this site.

The ceramic and metalwork evidence suggests that, other than the medieval furrows, the excavated features cover much of the Romano-British period, from the $1^{\text {st }}$ to $4^{\text {th }}$ centuries AD. Small amounts of pottery of possible late Iron Age date was also recovered from Trenches 1 and 3, although in insufficient quantities to allow any detailed understanding of this period of activity. This material was also deemed to be residual, in association with later pottery. However, the metal detector survey of the site has yielded a small quantity of highly significant metal finds. On the basis of these few finds it may be possible to tentatively attribute a ritual or religious function to the site in the Late Iron Age. Religious sites in this period need not have had some form of associated structure at their centre. Although several rectangular shrines have been identified in Late Iron Age/early Roman Britain, it was also common practice for such religious sites to be more animistic in nature, focussed on springs, rivers or trees (Cunliffe, 1991). The current site is characterised by a pedological formation that is subject to seasonal waterlogging (Hodge et. al., 1984). Although this is to an extent, a formation derived from modern farming practices, the underlying geology has a major impact on the incidence of waterlogging/flooding, and hence, in the Iron Age, with the absence of drainage features, the area was most likely subject to the same or greater degree of waterlogging. This would have created a boggy, waterlogged environment, perhaps with a number of small pools, which would have presented an ideal environment for ritual focus.

The geophysical survey and evaluation trenching seem to indicate a site with a predominantly domestic and industrial function during the Romano-British period, rather than the largely ritual function suggested by the metal detector finds. The geophysical survey revealed an extensive network of ditches and enclosures, indicative of field systems and associated small-scale rural settlement. The excavated material was also largely domestic in nature, representing deposition of waste into field ditches from the associated settlement. This included sherds of cooking vessels and other relatively low status domestic forms, as well as numerous fragments of animal bone, with the soil samples producing evidence of crop processing in the vicinity. The focus of this activity is likely to have been around Trench 1 . The magnetic susceptibility survey showed particularly high readings in this area, indicative of settlement activity (see 5.3, above). The trench also yielded the highest quantity of pottery sherds and more than half of the total animal bone assemblage, in particular the large dump of bone in ditch 119.

The earliest clearly stratified material recovered from the evaluation was from Trench 3, dating to the $1^{\text {st }} / 2^{\text {nd }}$ centuries AD . This is significant as this trench was the closest to the concentration of $1^{\text {st }}$ and $2^{\text {nd }}$ century brooches that were discovered during the metal detector survey. In this context, it is possible that the assemblage of early Roman brooches may indicate the continuation of native religious practices evidenced by the Iron Age metal finds, representing votive offerings to the same deity or animistic entity originally associated with this place. However, the site had also begun to serve a more utilitarian purpose by this time, with the permanent settlement and agricultural exploitation of the site suggested by the excavated pottery and animal bone. The excavation of a series of linear features in the Romano-British period served not only to delineate a series of agricultural enclosures, but also to drain the area and make it suitable for farming. This is highly significant in that it represents a deliberate attempt to change the landscape from a seasonally waterlogged area of marsh and ponds with an important religious significance, into an agrarian landscape, possibly putting paid to the ritual practices of the native population.

In the context of the adoption of the site for domestic and agricultural use in the early Roman period, it is possible that the cluster of $1^{\text {st }}$ and $2^{\text {nd }}$ century brooches suggest the presence of an artisan living and working on the site, and forming a component of the community responsible for the excavated field systems and domestic waste. As of yet, no direct structural evidence for such a workshop has been identified, either by excavation or geophysical survey. It is however possible that the structure, if it existed, may have been built from perishable materials such as timber posts, which left only ephemeral traces, not detected by geophysical survey, and may also be beyond the excavated areas. The only evidence for any structures on the site comes from the 29 tile fragments identified. The majority of these are roof tile fragments, although the tile assemblage also included box flue tile, a component of a hypocaust heating system. This would suggest a moderately high status building in the vicinity of the site, more likely to be a domestic structure than a workshop.

It was also notable that the date range for the excavated material was different in each of the evaluation trenches. The date range for Trench 3 was $1^{\text {st }} / 2^{\text {nd }}$ century $A D$, with one $3^{\text {rd }}$ century exception. The features in Trench 4 were dated to the mid to late $2^{\text {nd }}$ to mid to late $3^{\text {rd }}$ century; Trench 1 was $2^{\text {nd }} / 3^{\text {rd }}$ to $3^{\text {rd }} / 4^{\text {th }}$ century, and the latest material was from Trench 2 , and dated to the late $3^{\text {rd }} / 4^{\text {th }}$ century. This would suggest that there was a gradual expansion of the network of field systems over time, with the focus of activity shifting away from the area of Trench 3 after the $2^{\text {nd }}$ century. The dating however is not sufficiently well defined to discern any distinct phasing of the development of the site, other than in the most general terms, as above.

### 8.0 Effectiveness of methodology

A range of fieldwork methodologies has been employed in order to investigate this site. The potential of the site to yield important archaeological evidence was first identified by the metal detector survey of the area, which yielded a wealth of data covering the Iron Age, Romano-British and Anglo-Saxon periods. As the location of the finds was mapped and recorded through the Portable Antiquities Scheme, it allowed a comprehensive range of techniques to be employed in order to contextualise this information, and to help further understand the nature of the archaeological activities represented.

The use of geophysical survey provided a broad context into which the metal detector finds could be placed, and allowed the targeting of the evaluation trenches to where they would yield the most useful information. As a result, the evaluation trenches suggested that there was a domestic and industrial component to the site, as well as the ritual activities suggested by the metal detector finds, and that there appeared to be a shift in the focus of this activity throughout the Romano-British period.

Although there are many questions left to answer about the exact nature and extent (both spatially and chronologically) of the site, this initial programme of fieldwork has provided a framework for any possible future investigations, and has been particularly useful in showing the effectiveness of combining data from a variety of sources (metal detector survey, geophysics and excavation) in order to more fully understand the archaeological resource.

### 9.0 Acknowledgements

The authors would like to thank the Finds Liaison Officer for Lincolnshire, Adam Daubney for commissioning PCA for this work and for his assistance during and after the programme of fieldwork. Thanks are also due to the metal detectorist who initially identified the site, Keith Kelway, and to the site assistants, Dave Bower, Dave Brown and Cath Stone. Finally, thanks are also due to the landowners, Mr. And Mrs. Doughty.

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### 11.0 Site archive

The documentary and physical archive is currently in the possession of Pre-Construct Archaeology (Lincoln). This will be deposited at Lincoln City and County Museum within six months. Access to the archive may be gained by quoting the global accession number 2004.65.


Fig. 2: Composite plan showing the results of the magnetic susceptibility survey, the interpretive plan of the gradiometer survey and the evaluation trenches (white). Scale 1:2500


Fig. 3: Trench location plan, showing the evaluation trenches in yellow, superimposed over the results of the gradiometer survey (scale 1:2500)





30 m


Fig. 7: Interpretive plan of the results of the gradiometer survey.
The evaluation trenches are superimposed in yellow (scale 1:1000)


Fig. 8: Trench 1 plan and section (scale 1:50)

$\underbrace{A_{[202}^{(202)}}_{\underbrace{(206)}_{[205]}}$


Scale 1:50
Fig. 9: Trench 2 plan and section (scale 1:50)


Scale 1:50
Fig. 10: Trench 3 plan and section (scale 1:50)


Scale 1:50
Fig. 11: Trench 4 plan and section (scale 1:50)


Pl. 1: General view of the site, looking north-north-east


PI. 2: Trench 2 preexcavation, looking south-east. The furrow can be seen cutting layer [204] in the foreground.


P1. 3: Trench 3, preexcavation, looking west


Pl. 4: Ditches [102], [106], [108], [130], looking north-north-east


Pl. 5: Ditch [207] and recut[209], looking east.


PI. 6: Ditches [313], [314], looking north.


PI. 7: Ditch [402] looking north.


PI. 8: Possible pond [404], looking north. This shot shows the extent of flooding in this feature.


PI. 9: Working shot showing soil samples being taken in Trench 3

APPENDIX 2. The metallic small finds
Adam Daubney
The quantity of stratified metallic small finds discovered during the excavation is in stark contrast to the previously metal detected collection. Trench 2 contained the majority of small finds which all came from the capping layer (204) and the fills of recut [209]. (202) and (204) produced three small rough fragments of lead in total, while (204) also produced two nails. Ditch fill (210) contained two further nails and two iron sheet fragments, probably representing blade fragments from the same knife. The presence of charcoal fragments from these fills along with the fragmentary nature of the finds is indicative of the dumping of material from intensive burning nearby. Four copper alloy nummi were also recovered from these roughly contemporary fills. Three dating between AD260-337 were recovered, however it is unclear whether they were from (210) or (211), whilst one coin from (211) dated to AD306-337. One coin dating between 260410 came from (203).

Fills 405 and 406 contained two ferrous nail and two unidentifiable ferrous fragments, all unfortunately undatable. Ceramics date these features from the mid to late $2^{\text {nd }}$ to mid to late $3^{\text {rd }}$ centuries AD .

The unstratified finds came from metal detecting the trench spoil heaps and also from Keith Kelway continuing his survey of the site. Only one unstratified find is worthy of comment. This was a copper alloy bow and fantail brooch found in the topsoil of trench 3. This is near to the concentration of brooches defined by Mr Kelways metal detecting survey, however the underlying features of trench did not provide any useful context to this phenomena. The bow and fantail brooch is a type that is thought to be a second century form, however some hinged pin types from the vicus at Castleford, Yorkshire were found in contexts dating from as early as $\mathrm{AD} 71 / 4$. A fantail bearing the same decoration was found at Ruskington, and is recorded on the Portable Antiquities Scheme's database (Find Number LIN-B2EFE7; www.finds.org.uk).

The finds from the excavation indicate a general domestic use of the site.

| Find No. | Context | Description |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 200, U/S | Copper alloy stud with convex head and square-sectioned shaft. Diameter of head is 23 mm . Length of shaft 21 mm . | 100-150AD | 2 mS of trench 2 |
| 6 | 200, U/S | Unidentified lead fragment |  |  |
| 7 | 202 | Unidentified lead fragment |  |  |
| 9 | 204 | Unidentified lead fragment |  |  |
| 10 | 204 | Unidentified lead fragment |  |  |
| 11 | 204 | Iron pin or nail with flattened terminal. L:40mm; W:6mm |  |  |
| 12 | 204 | Iron nail with flat oval head and tapering circular sectioned shaft. L:37; W:22 |  |  |
| 15 | 210 | Iron nail. L:36mm; W:20mm. |  |  |
| 16 | 210 | Iron nail. L. $60 \mathrm{~mm} ; \mathbf{W}: 18 \mathrm{~mm}$. |  |  |
| 17 | 210 | Iron sheet fragment, possibly knife blade, L:55m; W:20mm |  |  |
| 18 | 210 | Iron sheet fragment, possibly knife blade and probably part of the same object as small find 17 (210). L:42 |  |  |
| 20 | 300, U/S | Copper alloy silvered bow and fantail brooch. The wings are cylindrical in section and contain a copper alloy hinged pin and axis bar. There is a small suspension loop above. The centre of each wing has a vertical groove. The centre of the bow has an acanthus reel with a transverse groove below leading into the fantail. The fantail is subdivided into three small triangles with a ring and dot motif in the lower two triangular panels. <br> The brooch fantail has been decorated with what appears to be champleve enamelling (indicative colour green). <br> Catchplate on reverse; pin intact. L:38mm; W:18mm <br> A similar example was found at Ruskington (LIN-B2EFE7) | 50-150AD |  |
| 22 | 400, U/S | Unidentified conical lead fragment. L:16mm; Diam:7mm |  |  |
| 23 | 400, U/S | Copper alloy fragment, probably from a bracelet. The Surface is undecorated. L: $38 \mathrm{~mm} ; \mathbf{W}: 6 \mathrm{~mm} ; \mathbf{T}: 0.75 \mathrm{~mm}$ | c. $320-450 \mathrm{AD}$ | 3 mE of trench 4 |
| 24 | 400, U/S | Copper alloy sheet fragment |  | 3 m SE of trench 4. |
| 25 | 400, U/S | Copper alloy flat rectangular fragment. Either a bracelet or a tweezer. | 43-410AD | 2 mS of trench 4 |
| 26 | 405 | Iron nail. Oval head and tapering shaft square sectioned shaft. L: $49 \mathrm{~mm} ; \mathbf{W}: 12 \mathrm{~mm}$ |  |  |
| 27 | 405 | Iron sheet fragment, trapezoid in plan but broken on all sides. L: $29 \mathrm{~mm} ; \mathrm{W}: 32 \mathrm{~mm} ; \mathrm{T}: 5 \mathrm{~mm}$ |  |  |


| Find No. | Context | Description | Date | Notes |
| :---: | :---: | :---: | :---: | :---: |
| 28 | 405 | Unidentified leaded bronze fragment. The object is |  |  |
|  |  | 1.5 mm thick, concave and rough on both edges. |  |  |
|  |  | L:44mm; W:26mm |  |  |
| 29 | 406 | Iron nail. Oval head and tapering shaft square sectioned shaft. L: $44 \mathrm{~mm} ; \mathrm{W}: 12 \mathrm{~mm}$ |  |  |
| 30 | 103 | Iron fragment, possibly a small latch. The object tapers and gently curves to a flat rounded terminal. |  |  |
| 31 | 105 | Folded copper alloy sheet fragment. The sheet is plain and is broken on all sides. |  |  |
| 33 | 500, U/S | Unidentified V-shaped lead fragment. L:31mm; W:32mm T:7mm |  |  |
| 34 | 500, U/S | Copper alloy fragment, probably from a bracelet. The shaft is undecorated and oval in section. | 43-410AD |  |
| 39 | 115 | Iron rod or possible latch lifter. | 43-410AD |  |
| 53 | 500, U/S | Unidentified lead fragment. W;13mm; L:30mm; T:6mm |  |  |

APPENDIX 2b. Coin catalogue

| Number | Context | Ruler | Date | Obverse | Reverse | Mint | Weight | Dia. Axis |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 200, 8m SW of T2 |  | 260-410 | illegible | illegible |  | 1.96 g | 22 |
|  |  |  |  | illegible | illegible |  |  |  |
| 3 | 200, 5 m SW of T2 |  | 260-410 | illegible | Victory walking left with wreath |  | 1.46 g | 17 |
|  |  |  |  | illegible | illegible |  |  |  |
| 4 | $200,8 \mathrm{mWW}$ of T2 |  | 300-410 | Laureate bust right | illegible |  | 2.05g | 180 |
|  |  |  |  | illegible | figure standing left |  |  |  |
| 5 | 200, 1 m N of T2 |  | 318-324 | Laureate and cuirassed bust right | Two Victories holding wreath over altar |  | 1.95g | 176 |
|  |  |  |  | illegible | VICTORIAE LAETAE PRINC PERP; VOT PR |  |  |  |
| 8 | 203 |  | 260-410 | illegible | illegible |  | 1.27 g | 13 |
|  |  |  |  | illegible | illegible |  |  |  |
| 13a | 210/211 |  | 260-315 | Radiate bust right | figure standing left |  | 2.35 g | 16 |
|  |  |  |  | illegible |  |  |  |  |
| 13b | 210/211 |  | 260-315 | Radiate bust right | illegible |  | 1.35 g | 16 |
|  |  |  |  | illegible | ]IO[ |  |  |  |
| 14 | 210/211 | Constantine II | 324-330 | Laureate bust right | Camp gate, star above | PLON | 2.6 g | 187 |
|  |  |  |  | CONSTANTINVS IVN NOB C | PROVIDENTIAE CAESS; PLON | London |  |  |
| 19 | 211 | Constantine 1 | 306-337 | Laureate bust right | figure standing left | PLN | 3.63g | 226 |
|  |  |  |  | ]CONSTANTIN[ | illegible | London |  |  |
| 31 | 300 |  | 335-341 | Laureate bust right | Two soldiers standing either side of standard | TRS | 1.43 g | 150 |
|  |  |  |  | illegible | GLOR[IA EXERCITVS] | Trier |  |  |
| 36 | $300,1 \mathrm{~mW}$ of T3 |  | 300-410 | illegible | illegible |  | 1.66 g | 12 |
|  |  |  |  | illegible | illegible |  |  |  |
| 37 | $300,2 \mathrm{~mW}$ of T3 |  | 364-378 | Diademed bust right | Victory walking left with wreath |  | 2.34 g | 170 |
|  |  |  |  | DN VALENS PF AVG | SECVRITAS REIPVBLICAE; OF |  |  |  |
| 38 | $400,15 \mathrm{~m} \mathrm{~S} \mathrm{of} \mathrm{T4}$ |  | 335-341 | illegible | Two soldiers standing either side of standard [GLORIA EXERCITVS] |  | 0.51 g | 9 |
|  |  |  |  | illegible |  |  |  |  |

# APPENDIX 3. Romano-British pottery report <br> REPORT 160 ON POTTERY FROM AN EVALUATION IN THE PARISHES OF WICKENBY/LISSINGTON, LINCOLNSHIRE, WILI04 

for PRE-CONSTRUCT ARCHAEOLOGY

by Margaret J. Darling, M.Phil., F.S.A., M.I.F.A.

10 April 2004


#### Abstract

The Roman pottery amounted to 412 sherds, weighing 13.690 kg from 35 contexts in four trenches. The pottery included a few abraded sherds but also a number of contexts with relatively fresh large sherds, resulting in an average sherd weight of 30 g . No problems are anticipated for long term storage. The pottery has been archived using count and weight as measures according to the guidelines laid down for the minimum archive by The Study Group for Roman Pottery. The archive codes are in Appendix 2. The archive record (below Appendix 3, and available on disk) will be curated for future study. A list of vessels suitable for illustration is attached as Appendix 4; reference to particular vessels uses the drawing number assigned during archiving.


## INTRODUCTION

The distribution of the pottery across the trenches is shown on Table 1.
Table 1 Distribution

| Tr | Pot shs | Pot wt | g/sh. | Tile frs | Tile wt | Total cnt | Total wt | Date range |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 120 | 2493 | 20.8 | 4 | 116 | 123 | 2609 | $2 / 3$ to $3-4 \mathrm{c}$ |
| 2 | 100 | 2766 | 27.7 | 16 | 1651 | 116 | 4417 | L3-4 to 4c |
| 3 | 107 | 3892 | 36.4 | 4 | 101 | 111 | 4037 | 1-2c, M3? |
| 4 | 56 | 2354 | 42.0 | 5 | 317 | 61 | 2671 | ML2-ML3 |
|  | 383 | 11505 | 30.0 | 29 | 2185 | 412 | 13690 |  |

Details of the quantities and dating by context are given in Appendix 1. The pottery includes two large fragments of Dressel 20 amphorae, from the spread cxt. 204 and the ditch 410 (415), but excluding these, the average sherd weights are still 33 g and 113 g respectively. The ditch 410 is unusual in also containing large sherds of a large part a large lug-handled jar in Iron Age tradition fabric (IAGR). The high average sherd weight indicates relatively fresh rubbish. Tile fragments came mainly from trench 2. No sherd links occurred between deposits.

The earlier pottery appeared to occur more in Trench 3, including some fragmentary sherds which appear to belong to the Iron Age (Trench 3, ditch 311; Trench 1, the recut of ditch 102, cut 130), and the single sherd of South Gaulish samian of 1st century (Trench 3, Ditch 309). Later Roman sherds occur more in Trenches 2 and 4.

FABRICS AND VESSEL FORMS
The fabrics are summarised for quantities on Table 2.
Table 2 Fabrics

| Fabric | Code | Sherds $\%$ |  |  | Weight $\%$ |  |  |
| :--- | :--- | ---: | ---: | ---: | ---: | :---: | :---: |
| Cream | CR | 2 | 0.52 | 23 | 0.20 |  |  |
| Amphorae Dressel 20 | DR20 | 2 | 0.52 | 621 | 5.40 |  |  |
| Shell-gritted dales ware | DWSH | 8 | 2.09 | 303 | 2.63 |  |  |
| Fired clay | FCLAY | 2 | 0.52 | 25 | 0.22 |  |  |
| Grey quartz-gritted | GREY | 243 | 63.45 | 5440 | 47.28 |  |  |
| Grog-tempered | GROG | 1 | 0.26 | 11 | 0.10 |  |  |
| Grey with shell | GRSH | 1 | 0.26 | 9 | 0.08 |  |  |
| IA tradition grog/shell | IAGR | 59 | 15.40 | 3422 | 29.74 |  |  |
| Mortaria Swanpool | MOSP | 1 | 0.26 | 5 | 0.04 |  |  |
| Nene Valley colour-coated ware NVCC | 6 | 1.57 | 56 | 0.49 |  |  |  |
| Oxidized quartz-gritted | OX | 8 | 2.09 | 156 | 1.36 |  |  |
| Parisian ware | PART | 4 | 1.04 | 56 | 0.49 |  |  |
| Post-Roman | PRO | 1 | 0.26 | 4 | 0.03 |  |  |
| Samian Central Gaulish | SAMCG | 1 | 0.26 | 28 | 0.24 |  |  |
| Samian South Gaulish | SAMSG | 1 | 0.26 | 4 | 0.03 |  |  |
| Shell-gritted common medium | SHCM | 10 | 2.61 | 234 | 2.03 |  |  |
| Shell-gritted | SHEL | 33 | 8.62 | 1108 | 9.63 |  |  |
|  |  | 383 | 100 | 11505 | 100 |  |  |
| Bldg. Material | TLLE | $29-$ |  | $2185-$ |  |  |  |
| Total finds |  | 412 |  | 13690 |  |  |  |

Imports are confined to two large sherds from Dressel 20 globular olive oil amphorae (DR20) from Baetica in southern Spain, the fabrics indicating a 2 nd century date (from Trenches 2 and 4). Only two sherds of samian were found, a Central Gaulish 2nd century sherd (SAMCG) from Trench 2 Ditch 209 primary, and a lst century sherd of a South Gaulish dish (SAMSG) from Trench 3 Ditch 309. A single flake of mortarium from Trench 4 (Ditch 402) is likely to come from the late Roman kilns at Swanpool, Lincoln (MOSP).

Other fine wares are confined to a few sherds of Nene Valley colour-coated ware (NVCC; all from Trench 2), and sherds of parisian ware (PART; from Trenches 1 and 2), all in the finest silty fabric. Although the parisian sherds are undecorated, a grey sandy body sherd occurred with stamps of parisian type (Dwg 2). There is a scatter of earlier pottery, as shown by sherds from rusticated jars occurring in Trenches 1, 2 and 3. Notably earlier coarse wares include a rare type of bowl normally dated to the later 1st to 2nd century from Trench 3 (Ditch 310; dwg 10), and a dish of similar dating from Trench 2 (primary fill Ditch 209; dwg 8). The single context in Trench 3 (Ditch 314) dated to the 3rd century contained a very abraded fragment of a widemouthed bowl, the condition suggesting this had come from an upper disturbed deposit. Coarse vessels in an Iron Age tradition fabric occur in all trenches, the fabric continuing into the 2nd century. While this fabric appears to be a major constituent, the occurrence of half a large lughandled jar (in ditch 310; dwg 15) creates a bias; if excluded, this fabric type accounts for 6-8\% of the total, the grey wares representing 61-70\%. The concentration of later pottery in Trench 2 is shown by the occurrence of not only the Nene Valley colour-coated wares, but also dales ware shell-gritted jars (DWSH), shell-gritted lid-seated jars, late flanged bowls in both grey and shelltempered fabrics (dwg 9, Ditch 209 upper), and wide-mouthed bowls (dwg 7, Ditch 207 primary).

Although there was a scatter of earlier pottery across the site, the main concentration occurred in Trench 3, the best evidence for later activity lay in Trench 2, while the finds from Trenches 1 and 4 appeared to be more 2nd to 3rd century. The latest context date in Trench 1, 119 (Ditch 118), rests on shell-gritted dishes (dwgs 4-5, Ditch 118) which, while late Roman types, the dating is ill-defined, ranging from late 3rd to 4th century.

The evidence for earlier activity rests on a few shell-gritted hand-made sherds, including a fragmentary rim of a probable bowl (dwg 11, Ditch 311) and body sherds from a closed form from the same context, decorated with curving combing. There was also a base from Trench 1 (Ditch 130, a recut of 102). The bowl fragment is a simple form with a long date-range, but the style of the combing suggests a later Iron Age date. Conservatively, the range would be mid- to late-Iron Age.

Tile finds were commonest in Trenches 2 and 4, and include fragments of combed flue tile, indicative of a heated building. While many of the fragments are definitely from roofing tiles, others appear to be too thick, and are possibly from bonding or hypocaust tiles.

## SUMMARY

The pottery gives evidence for activity in the area possibly starting in the Iron Age, but definitely from the lst to the 4th century. There are no sherds that need necessarily belong to the later 4th century. The tile finds indicate a building of some quality in the area, with heating. There is a possibility of a preceding Iron Age phase, although the few fragments found can only be very tentatively dated to perhaps the latter part of the Iron Age. It is probable that some of the pottery came from the kilns at Market Rasen, although no stamps on sandy grey fabrics have been noted there. Several of the grey vessel types do, however, occur in the kiln repertoire.

The assemblage from four separate trenches of varying dates is too small to draw many conclusions, but it includes the variety normally seen in domestic rubbish. The tile finds also substantiate the presence of a building with hypocaust heating in the area.

The fresh nature of the pottery suggests that well-preserved deposits occur, giving considerable potential results from further excavation. A minimum of 15 vessels are considered worthwhile for illustration, including unusual types and well preserved good examples; these are reserved pending further work on the site (see attached list, Appendix 4).

## FABRIC DEFINITION

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

CR Cream, miscellaneous cream wares. Sherds attributed to a fabric group rather than a discrete fabric, the only sherds apparently from flagons.
DR20 Amphorae Dressel 20 amphorae. Peacock \& Williams 1986 Class 25; NRFRC Baetican (Early) Amphorae 1 BATAM1; (Late) Amphorae 2 BATAM 2 (3)
DWSH Shell-gritted dales ware jars, hand-made and wheel-finished from sources in north Lincolnshire around the Humber area. NRFRC DAL SH
FCLAY Fired clay fragments.


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## APPENDIX 3a SUMIMARY OF QUANTITIES AND DATES BY CONTEXT <br> Pottery and tile.

| Tr | Cxt | Cut | Details | Sherds W | Weight Date | Comments | Tilefr | Ti | Wt | Pot shs | /s Pot wt Pot ${ }^{\text {g/sh }}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 100 | - | Topsoil | 8 | 177 M 3 |  |  |  |  |  | 8 | 177 | 22.1 |
| 1 | 103 | 130 | Ditch; ?recut [102] | 27 | 379L2-3 | Some abrasion | 1 | 1 | 25 |  | 26 | 354 | 13.6 |
| 1 | 105 | 102 | Ditch primary | 1 | 9ROM |  |  |  |  |  | 1 | 9 | 9.0 |
| 1 | 110 | - | Buried soil? | 10 | 2312-3C | Some abrasion |  |  |  |  | 10 | 231 | 23.1 |
| 1 | 112 | 111 | Ditch | 1 | 26ROM |  |  |  |  |  | 1 | 26 | 26.0 |
| 1 | 115 | 132 | Ditch | 32 | 718L2-3 |  |  |  |  |  | 32 | 718 | 22.4 |
| 1 | 117 | 116 | Ditch cut by [118] | 5 | 107ROM | Flint flake |  |  |  |  | 5 | 107 | 21.4 |
| 1 | 119 | 118 | Ditch | 28 | 8523-4C |  | 3 | 3 | 91 |  | 25 | 761 | 30.4 |
| 1 | 121 | 120 | Ditch | 8 | 972-3C? |  |  |  |  |  | 8 | 97 | 12.1 |
| 1 | 123 | 122 | Ditch/gully cut by [124] | 3 | 9ROM | Very abraded |  |  |  |  | 3 | 9 | 3.0 |
| 1 | 125 | 124 | Linear ?furrow | 1 | 4ROM |  |  |  |  |  | 1 | 4 | 4.0 |
| 2 | 202 | 212 | Furrow | 17 | 557L3-4 | Some abrasion |  | 4 | 276 |  | 13 | 281 | 21.6 |
| 2 | 204 | - | Spread sealing 209 | 18 | 690L3-4 | Some abrasion | 3 | 3 | 107 |  | 15 | 583 | 38.9 |
| 2 | 206 | 205 | Ditch | 4 | 160M3? | Some abrasion |  |  |  |  | 4 | 160 | 40.0 |
| 2 | 208 | 207 | Ditch primary cut by [209] | 5 | 269L3+ |  |  |  |  |  | 5 | 269 | 53.8 |
| 2 | 210 | 209 | Ditch primary | 44 | $1712 \mathrm{M} 3+$ | Some residual |  | 4 | 751 |  | 40 | 961 | 24.0 |
| 2 | 211 | 209 | Ditch upper | 28 | 10294C? | Some abrasion |  | 5 | 517 |  | 23 | 512 | 22.3 |
| 3 | 300 | - | Topsoil | 1 | 4 POSTRO |  |  |  |  |  | 1 | 4 | 4.0 |
| 3 | 301 | 309 | Ditch cuts [324] | 4 | 871-2C? |  |  |  |  |  | 4 | 87 | 21.8 |
| 3 | 302 | 310 | Ditch cuts [311] [320] | 57 | 30272C | Some abrasion |  |  |  |  | 57 | 3027 | 53.1 |
| 3 | 303 | 311 | Ditch out by [310] | 11 | 199IA/ROM | Some abrasion | 1 | 1 | 43 |  | 7 | 109 | 15.6 |
| 3 | 304 | 312 | Furrow? | 7 | 1301A/ROM | Some abrasion |  |  |  |  | 7 | 130 | 18.6 |
| 3 | 306 | 314 | Ditch euts [318] | 3 | 31M3? | Some abrasion |  |  |  |  | 3 | 31 | 10.3 |
| 3 | 307 | 315 | Gully | 1 | 6ROM |  |  |  |  |  | 1 | 6 | 6.0 |
| 3 | 308 | 316 | Gully | 7 | 93ROM | Some abrasion |  |  |  |  | 7 | 93 | 13.3 |
| 3 | 319 | 318 | Gully cut by [314] | 1 | 13 ROM | Some abrasion |  |  |  |  | 1 | 13 | 13.0 |
| 3 | 321 | 320 | Ditch | 2 | 621-2C? |  | 1 | 1 | 38 |  | 1 | 24 | 24.0 |
| 3 | 322 | 324 | Ditch recut of 327 | 4 | 561-2C? | Some abrasion |  |  |  |  | 4 | 56 | 14.0 |
| 3 | 323 | 324 | Ditch recut of 327 | 13 | 3041-2C? |  |  |  |  |  | 13 | 304 | 23.4 |
| 3 | 332 | ? | ? | 1 | 8ROM |  |  |  |  |  | 1 | 8 | 8.0 |
| 3 | 333 | ? | ? | 2 | 20ROM | Tile only | 2 | 2 | 20 |  | 0 | 0 | 0.0 |
| 4 | 403 | 402 | Ditch | 22 | 461 L3-4 |  | 3 |  | 255 |  | 19 | 206 | 10.8 |
| 4 | 405 | 404 | Ditch secondary | 18 | 361ML3? |  |  | 2 | 62 |  | 16 | 299 | 18.7 |
| 4 | 407 | 404 | Ditch secondary | 5 | $35 \mathrm{M} 3+$ | Some abrasion |  |  |  |  | 5 | 35 | 7.0 |
| 4 | 415 | 410 | Ditch | 11 | 1619ML2? |  |  |  |  |  | 11 | 1619 | 147.2 |
| 4 | 416 | 409 | Ditch | 5 | 195M3 + ? | Some abrasion |  |  |  |  | 5 | 195 | 39.0 |
|  |  |  |  | 412 | 13690 |  | 25 |  | 2185 |  | 383 | 11505 | 30.0 |

## APPENDIX 3b ARCHIVE CODES

## Vessel type

Code Expansion
A Amphora
B Bowl
B321 Bowl of Lincoln type 321
BD Bowl or dish
BDEV Bowl or dish everted rim
BDFL Bowl or dish flanged rim
BDTR Bowl or dish triangular rim
BEV Bowl everted rim
BFB Bowl bead and flange
BFL Bowl flat-rimmed
BK Beaker
BKFN Beaker funnel necked
BNAT Bowl native type
BNK? Bowl necked
BNNK Bowl wide mouth with neck
BOND?Bonding tile
BWM Bowl wide mouth with neck
CLSD Closed form
D452 Dish of Lincoln type 452
DFL Dish flanged
DGR Dish grooved rim
DPR Dish plain rim
F? Flagon
FLUE Flue tile
IMBRE Imbrex roofing tile
X
J Jar
JB Jar or bowl
JBEV Jar or bowl everted rim
JBK Jar or beaker
JBKCU Jar or beaker curved
R rim
JCUR Jar curved rim
JDW Jar Dales ware
JDWV Jar Dales ware variant
JEV Jar everted rim
JL? Jar large

JLH Jar lug-handled
JLS Jar lid-seated
JNN Jar narrow-necked
JRUST Jar rusticated
M Mortarium
OPEN? Open form
TEG Tegula roofing tile
Manufacture \& decoration
Code Expansion
BWL Burnished wavy line
COL Combed lines
COMB Combed
HM Hand-made
LA Latticed
NOTC Notched
RIV Rivetted
RLIN Rusticated linear
SLAS Slashed
STAB Stabbed
STCO Stamped comb
STR Stamped round
WM Wheel-made

## APPENDIX 3c

 ARCHIVE DATABASE| Cxt Fabric | Form | Manuf+ | Ves D? | Dno | Details |  | Shs |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 100 GREY | JDWV | - | D | 01 | RIM $>$ SHLDR;SSANDY FB;VARIANT COPY;DIAM15 | - | 1 | 74 |
| 100 GREY | BWM | - | - - | - | RIM FRAG;STRONG ROLL-OVER;U'CUT | - | 1 | 42 |
| 100 GREY | JRUST | RLIN | - - | - | BS | - | 1 | 8 |
| 100 GREY | CLSD | $\begin{aligned} & \text { STCO;ST } \\ & \mathrm{R} \end{aligned}$ | - D | 02 | BS SANDY FAB | - | 1 | 12 |
| 100 GREY | - | - | - - |  | BSS | - | 3 | 36 |
| 100 PART | CLSD | - | - - | - | BS PLAIN;FINE SILT FAB | - | 1 | 5 |
| 100 ZDATE | - | - | - - | - | M3 | - |  |  |
| 103 GREY | DFL | - | D? | - | RIM/PT WALL;DIAM24 | - | 1 | 78 |
| 103 GREY | JNN? | - | D? | - | RIM ONLY;RIBBEDX3;DIAM13 | - | 1 | 15 |
| 103 GREY | DPR | - | - - | - | RIM/PT WALL | - | 1 | 24 |
| 103 GREY | B | - | - - |  | RIM FLAKED;OUTFLARING;RB FB;DKGRY SURFS | - | 1 | 10 |
| 103 GREY | - | - | - - | - | BSS;MOST ABR | - | 8 | 46 |
| 103 GREY | DGR | - | - - | - | RIM/PT WALL;SLOPING OUT | - | 1 | 14 |
| 103 GREY | JRUST | RLIN? | 2 | - | BSS;DKGRY \& LTGRY | - | 2 | 8 |
| 103 GREY | CLSD? | - | - - |  | BS DKGRY CORE;LT CORT;DKGRY SURF | - | 1 | 13 |
| 103 PART | - | - | - - | - | BS TINY;SILT FB | - | 1 | 3 |
| 103 SHEL | JCUR? | - | - - | - | RIM FR;NR JLS?;DKGRY | - | 1 | 20 |
| 103 SHEL | J | - | 1 | - | BASE PLAIN;WM? | - | 2 | 26 |
| 103 SHCM | - | HM | - - | - | BASE PLAIN;BS;GRY FB;RB EXT | - | 2 | 58 |
| 103 SHEL | - | - | - - | - | BS GRY FB;DKGRY SURF;RB CORT | - | 1 | 7 |
| 103 GROG | CLSD | - | - - |  | BS;DKGRY;GREY GROG;WM | - | 1 | 11 |
| 103 IAGR | J | SLAS | - - | - | BS;GRY FB;GRYBN SURFS;OCC SHELL;GROG | - | 1 | 14 |
| 103 TILE | - | - | - - | - | FRAG VABR | - | 1 | 25 |
| 103 FCLAY | - | - | - - | - | FRAG;OR TILE? | - | 1 | 7 |


| 103 ZDATE | - | - | - | - | - | L2-3 | - | - - |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 105 SHEL | - | - | - | - | - | BS FLAKE ONLY;DKGRY;LTBN SURF | - | 1 | 9 |
| 105 ZDATE | - | - | - | - | - | ROM | - | - - |  |
| 110 GREY | JLH | - | - | - | - | HDLE ONLY;MLGRY | - | 1 | 44 |
| 110 GREY | BD | - | - | - | - | BASE FR;DKGRY FB;LT SURFS | - | 1 | 34 |
| 110 GREY | - | - | - | - | - | BSS;ABR | - | 4 | 62 |
| 110 GREY | JL? | - | - | - | - | BS LGE VESS | - | 1 | 70 |
| 110 SHEL | JBK? | - | - | - | - | RIM TINY FRAG;EVERT;DKGRY;SPARSE SHELL | - | 1 | 3 |
| 110 SHEL | JB | COL | - | - | - | BS DKGRY;FCOMM FINE SHELL;DIAG.COMBED LINES | - | 1 | 13 |
| 110 SHEL | - | - | - | - | - | FLAKE | - | 1 | 5 |
| 110 ZDATE | - | - | - | - | - | 2-3C | - | - - |  |
| 112 GREY | BD | - | - | - | - | BASE/WALL;LTGRY | - | 1 | 26 |
| 112 ZDATE | - | - | - | - | - | ROM | - |  |  |
| 115 PART | BK | - | - | - | - | BASE NECKED;SILT FAB | - | 1 | 45 |
| 115 CR | F? | - | - | - | - | BS NECK FR;LGE DIAM;HDLE STUMP;ABR | - | 1 | 17 |
| 115 GREY | BNNK | - | 1 | D | 03 | RIM/PT WALL;BSS;LTBN INT;DIAM28 | - | 6 | 219 |
| 115 GREY | DFL | - | - | - | - | RIM/PT WALL;LGER DIAM | - | 1 | 21 |
| 115 GREY | BK? | - | - | - | - | BASE NECK | - | 1 | 32 |
| 115 GREY | BDFL | - | - | - | - | RIM FRAG;BURNT | - | 1 | 11 |
| 115 GREY | $\begin{aligned} & \mathrm{JBKCU} \\ & \mathrm{R} \end{aligned}$ | - | - | - | - | RIM FRAG;DIAM10-11 | - | 1 | 6 |
| 115 GREY | - | - | - | - | - | BSS | - | 14 | 202 |
| 115 GREY | JB | LA | - | - | - | BS | - | 1 | 20 |
| 115 OX | - | - | - | - | - | BS;GRY FB;RB SURFS | - | 1 | 9 |
| 115 IAGR? | BEV | - | - | D? | - | RIM FR;DKGRY;OCC SHELL;GROG | - | 1 | 33 |
| 115 IAGR? | - | LA | - | - | - | BS LGEISH VES;DKGRY;GROG;OCC SHEL | - | 1 | 67 |
| 115 IAGR? | - | - | - |  | - | BS | - | 1 | 31 |
| 115 SHEL? | - | - | - |  | - | FLAKE;DKGRY | - | 1 | 5 |
| 115 ZDATE | - | - | - | - | - | L2-3 | - | - |  |




| 208 ZDATE |  | - | - | - - | L3+ | - |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $210 \text { SAMC }$ | $31 ?$ | RIV | - | - - | RIM/PT WALL;RIV GROOVES;SABR | - | 1 | 28 |
| 210 NVCC | BKFN | - | 1 | D? - | RIMS>SHLDR;LTRB FAB | - | 3 | 20 |
| 210 GREY | JRUST | RLIN | - | - - | BS;DKGRY | - | 1 | 7 |
| 210 GREY | BFL | - | - | D? - | RIM/PT WALL;CURVE ANGLE;DKGRY;THIN WALL;DIAM14 | - | 1 | 20 |
| 210 GREY | JEV | - | - | D? - | RIM;PT SHLDR;DKGRY;STUBBY EVERT;LTGRY CORT | - | 1 | 29 |
| 210 GREY | BFL | - | - | - - | RIM/PT WALL ONLY;LTGRY;DIAM18 |  | 1 | 19 |
| 210 GREY | DPR | - | - | - - | RIM/WALL;LTGRY;F.STRAIGHT WALL | - | 1 | 33 |
| 210 GREY | BFB | - | - | D? - | RIM FR;WALL ?CHAMFER;HIGH BEAD;THIN SM.FLANGE | - | 1 | 47 |
| 210 GREY | D452 | - | - | D 08 | RIM/WALL;DIAM18;F.LT GRY | - | 1 | 27 |
| 210 GREY | JEV | - | - | - - | RIM/PT SHLDR | - | 1 | 53 |
| 210 GREY | BWM | - | - | - - | RIM FRAG;PT WALL;HIGH CURVE | - | 1 | 69 |
| 210 GREY | J | - | 1 | - - | BASE;WALL;DKGRY;S'WICH FAB | - | 2 | 72 |
| 210 GREY | JBK? | - | - | - - | BASE FTM;DKGRY | - | 1 | 14 |
| 210 GREY | - | - | - | - - | BSS DKGRY | - | 2 | 17 |
| 210 GREY | - | - | - | - - | BSS M-LGRY | - | 18 | 326 |
| 210 SHEL | JLS | - | - | - - | RIM FRAG;DKGRY | - | 1 | 13 |
| 210 DWSH | JDW | HM | 2 ? | - - | RIM \& NR RIM BS | - | 2 | 51 |
| 210 DWSH | J | HM | - | - - | BS LGE | - | 1 |  |
| 210 TILE | - | - | - | - - | FLAKE | - |  |  |
| 210 TILE | TEG | - | - | - - | FRAG W FLANGE;20MM | - | 1 |  |
| 210 TILE | TEG? | - | - | - - | FRAG W GROOVE;BUT > 35MM THICK? | - | 1 | 80 |
| 210 TILE | BOND? | - | - | - - | FRAG W CORNER;30MM | - | 1 |  |
| 210 TILE | FLUE | COMB | - | - - | FRAG W CORNER;16MM | - | 1 |  |
| 210 ZDATE | - | - | - | - - | M3+ | - |  |  |
| 210 ZZZ | - | - | - | - - | SOME RESIDUAL | - |  | - |
| 211 NVCC | DPR | - | - | - - | RIM FR;CR FAB | - | 1 |  |
| 211 NVCC? | BD? | - | - | - | RIM PLAIN;VVABR;MOST CC LOST | - | , |  |
| 211 PART | CLSD | - | - | - - | BS;SILT FAB | - | 1 | 3 |


| 211 OX | OPEN? | - | - | - - | BS;GRY FB;LTRB SURFS;?SLIPPED;?LATE | - | 1 | 44 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 211 OX | CLSD? | - | - | - - | BASE FTM;LTRB | - | 1 | 40 |
| 211 GREY | BFB | - | - | D? - | RIM/PT WALL;LTGRY;DIAM20 | - | 1 | 50 |
| 211 GREY | DPR | - | - | D? - | RIM/PT WALL;LTGRY;THICKEN WALL | - | 1 | 53 |
| 211 GREY | JBK | - | - | - - | BASE;PLAIN;STRING | - | 1 | 40 |
| 211 GREY | BWM? | - | - | - - | RIM FRAG | - | 1 | 14 |
| 211 GREY | BDFL? | - | - | - - | RIM FRAG | - | 1 | 8 |
| 211 GREY | BD | - | - | - - | BASE FRAG;ABR | - | 1 | 24 |
| 211 GREY | - | - | - | - - | BASE PLAIN;BSS;LTGRY | - | 8 | 110 |
| 211 SHEL | BFB | - | - | D 09 | RIM/WALL;DENSE SHELL;DKGRY;DIAM20? | - | 1 | 54 |
| 211 IAGR? | JBEV | - | - | - - | RIM FR;DKGRY;V.OCC SHELL;GROG | - | 1 | 39 |
| 211 SHEL? | - | - | - | - - | BS FLAKE; V SPARSE SHELL |  | 1 | 9 |
| 211 GREY | - | - | - | - - | BS DKGRY | - | 1 | 7 |
| 211 TILE | TEG | - | - | - - | FRAG W FLANGE;22MM | - | 1 | 175 |
| 211 TILE | TEG | - | - | - - | FRAG W FLANGE;VABR;C 20MM | - | 1 | 177 |
| 211 TILE | - | - | - | - - | FRAG FLAT; 27 MM | - | 1 | 80 |
| 211 TILE | BOND? | - | - | - - | FRAG FLAT; 35 MM | - | 1 | 60 |
| 211 TILE | - | - | - | - - | FRAG FLAT W EDGE;>15-17MM | - | 1 | 25 |
| 211 ZDATE | - | - | - | - - | 4C? | - |  |  |
| 300 PRO | - | - | - | - - | BS OXID GLAZED | - | 1 | 4 |
| 300 ZDATE | - | - | - | - - | POSTRO | - |  |  |
| 301 SAMS | 18 | - | - | - - | RIM FRAG | - | 1 | 4 |
| 301 GREY | - | - | - | - - | BSS DKGRY | - | 2 |  |
| 301 IAGR | CLSD | - | - | - - | BS;DKGRY FB/INT;LTBN EXT;GROG;NO OBV.SHELL | - | 1 |  |
| 301 ZDATE | - | - | - | - - | 1-2C? | - | - |  |
| 302 IAGR | JH | - | 1 | D 15 | RIMS>BASE;COMP PROF;GRY F;RB CORT;GRYBN SURFS;GROG;SHELL | - |  |  |
| 302 GREY | B321 | BWL | 1 | D 10 | RIMS/WALL;BWL ON FLANGE;DIAM FL. 22 | - | 5 | 87 |
| 302 GREY | JRUST | RLIN | 1 | - - | BSS;LTBN INT | - | 2 | 30 |


| 302 GREY | JRUST | RLIN | - | - |  | BS LTGRY;HIGH RUSTICATION | - | 1 | 40 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 302 SHEL | JLS? | - | - | - | - | RIM FLAKE;SPARSE SHELL;LTGRY FB;BSS | - | 3 | 22 |
| 302 GREY | - | - | - | - | - | BSS;DKGRY | - | 4 | 40 |
| 302 GREY | - | - | - | - | - | BSS;LTGRY;VABR | - | 2 | 34 |
| 302 IAGR | - | - | - | - | - | BASE FR;DKGRY;LTRB SURFS;GROG;?SHELL | - | , | 30 |
| 302 IAGR | - | - | - | - | - | BS GRY;LGE VESS | - | 1 | 84 |
| 302 ZDATE | - | - | - | - | - | 2C | - | - - |  |
| 303 SHCM | B? | HM? | - | D | 11 | RIM/FLAKED WALL;DKGRY;LTBN EXT;HARSH FAB | - | 1 | 30 |
| 303 SHCM | - | $\begin{aligned} & \text { COL;HM } \\ & ? \end{aligned}$ | 1 | - | - | BSS;DKGRY;COMBED CURVED DEC;INT SURF LOST | - | 3 | 47 |
| 303 GREY | - | - | - | - | - | BS LTGRY ABR | - | 1 | 7 |
| 303 GREY | - | - | - | - | - | BD;DKGRY;ILL-S PEBBLES | - | 1 | 13 |
| 303 IAGR | - | - | - | - | - | BS DKGRY FB;LTBN SURFS;GROG | - | 1 | 12 |
| 303 TILE | - | - | - | - | - | FRAG;VABR;ONE SURF ONLY | - | 1 | 43 |
| 303 ZDATE | - | - | - | - | - | IA/ROM | - | - - |  |
| 304 SHCM | JB | HM? | 1 | - | - | BASE PLAIN;GRY FB;RB SURFS;COARSER SHELL | - | 4 | 99 |
| 304 GREY | BD? | - | - | - | - | BASE FRAG;LTGRY \& FLAKE | - | 2 | 19 |
| 304 OX? | - | ? | - | - | - | BS VABR;HARSH LTBN;FLINT? | - | 1 | 12 |
| 304 ZDATE | - | - | - | - | - | IA/ROM | - | - - |  |
| 306 GREY | BWM | - | - | - | - | RIM FR;VVABR FLAKED;LTGRY | - | 1 | 23 |
| 306 GREY | - | - | - | - | - | BSS | - | 2 | 8 |
| 306 ZDATE | - | - | - | - | - | M3? | - | - - |  |
| 307 SHEL | - | - | - | - | - | BS LTGRY;SPARSE SHELL;WM | - | 1 | 6 |
| 307 ZDATE | - | - | - | - | - | ROM | - |  |  |
| 308 GREY | BD | - | - | D? | - | RIM/WALL;OUTFLARING;DIAM22 | - | 1 | 15 |
| 308 GREY | - | - | - | - | - | BSS; VABR | - | 3 | 47 |
| 308 GREY | - | - | - |  | - | BS DKGRY PEBBLY FAB;UNUS INCL | - | 1 | 11 |
| 308 IAGR | - | - | - |  | - | BS;DKGRY;GRYBN SURFS;GROG | - | 1 | 17 |
| 308 SHEL | - | - | - | - | - | FLAKE;DKGRY | - | 1 | 3 |
| 308 ZDATE |  |  |  |  |  | ROM |  |  |  |



| 403 TILE | TEG? | - | - | - | - | FRAG;CURVE $>$ FLANGE;BURNT;20MM | - |  | 1248 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 403 ZDATE | - | - | - | - | - | L3-4 | - | - | - |
| 405 GREY | JBK | - | - | - | - | BASE;GROOVE U'SIDE | - |  | 190 |
| 405 GREY | DFL | - | - | D? | - | RIM/PT WALL;DIAM 20;ML.GRY | - |  | 121 |
| 405 GREY | - | - | - | - | - | BSS | - |  | 971 |
| 405 GREY | - | - | - | - | - | BS DKGRY | - |  | 111 |
| 405 DWSH? | JDW | - | - | - | - | RIM FLAKED OUTER;LGE JAR | - |  | 124 |
| 405 SHEL | JLS | - | - | - | - | RIM/NECK;NR JDLS;DKGRY;BN INT | - |  | 41 |
| 405 SHEL | - | - | - | - | - | BS DKGRY;HARD;SPARSE SHELL | - |  | 21 |
| $\begin{gathered} 405 \text { FCLAY } \\ ? \end{gathered}$ | - | - | - | - | - | FRAG;RB;CHALKY INCLS | - |  | 18 |
| 405 TILE | - | - | - | - | - | FLAKE | - |  | 17 |
| 405 TILE | FLUE? | - | - | - | - | FRAG;FLAT;H'BONE PATTERN;14MM | - |  | 57 |
| 405 ZDATE | - | - | - | - | - | ML3? | - | - | - |
| 407 GREY | JEV? | - | - | - | - | RIM FRAG ONLY;ABR | - |  | 7 |
| 407 GREY | - | - | - | - | - | BSS | - |  | 324 |
| 407 DWSH? | JDW | - | - | - | - | RIM SMALL FRAG;DKGRY;SPARSE SHELL | - |  | 4 |
| 407 ZDATE | - | - | - | - | - | M3+ | - | - | - |
| 415 GREY | BNNK | - | 1 | D | 13 | RIMS;WALL;50\% VESS;DIAM29;LGE SHS;LTGRY | - |  | 6865 |
| 415 GREY | BFL | - | 1 | D | 14 | RIMS;WALL;50\% VESS;DKGRY;DIAM19 | - |  | 261 |
| 415 DR20 | A | - | - | - | - | BS LARGE GRITTY FB;2C | - |  | 493 |
| 415 ZDATE | - | - | - | - | - | ML2? | - | - | - |
| 416 GREY | JNN | - | - | - | - | RIM/PT NECK;HEAVY W LID-SEAT;VVABR;?NOTC;LTGRY | - |  | 1105 |
| 416 GREY | - | - | - | - | - | BASE PLAIN | - |  | 161 |
| 416 GREY | - | - | - |  | - | BSS | - |  | 226 |
| 416 SHEL | - | - | - |  | - | BS CHIP;LTGRY;SPARSE SHELL | - |  | 3 |
| 416 ZDATE |  | - | - |  | - | M3+? | - | - | - |

## APPENDIX 4. Animal bone and shell report

Wickenby/Lissington - WILI04
A note on the animal bone and shell
A small sample of 235 animal bones was collected during excavations at Wickenby/Lissington. The bones have been identified and recorded following the procedures of the Environmental Archaeology Consultancy (see attached Key) and the catalogue is attached to this report. The condition of the bone is generally good. No phasing was available at the time of recording although the bulk of the archaeological features are of RomanoBritish date ( $1^{\text {st }}-4^{\text {th }}$ Century AD). The shells have been identified and counted (see catalogue).

The assemblage included fragments from cattle, pig, sheep/goat, sheep, horse, dog and cat; also shells of oyster and the terrestrial snails Helix aspersa and Helix hortensis (Table 1). A small percentage ( $7 \%$ ) of the assemblage carried chop marks, while $8 \%$ showed evidence of dog gnawing. The fragmentation level (number of diagnostic zones/number of fragments) was fairly typical at 0.6 .

Cattle clearly dominate the assemblage, with sheep/goat approximately half as frequent, and pig relatively rare. Most of the cattle bones are young adults or older, but a few younger animals are represented and one bone from a calf is present. All the sheep bone indicate adult animals except one from an immature animal. The posterior part of a ram's skull was present in context 119.

Table 1. Number of hand collected fragments of bone and shell of each species or category.

| species | No. fragments |
| :--- | :---: |
| Horse | 8 |
| Cattle | 78 |
| Cattle size | 76 |
| Sheep/goat | 31 |
| Sheep | 4 |
| Sheep size | 27 |
| Pig | 4 |
| Dog | 2 |
| Cat | 1 |
| Unidentified | 4 |
|  | 73 |
| Oyster | 4 |
|  | 2 |
|  |  |

Context 119 , the fill of ditch 118 , produced the largest sample of bone (Table 2 ), and the bulk of the remainder of the assemblage was also recovered from ditch fills. The assemblage is consistent with domestic food waste and perhaps disturbed horse burials, but gives no indication of any ritual activity, such as suggested by the metal detected finds.

Table 2. Frequency of fragments of bone and oyster from each context.


The assemblage is in good condition and some ditch deposits contained fairly rich bone assemblages. If further fieldwork is undertaken at the site these features have the potential for generating quite large and useful assemblages of animal bone from which some interpretations of the animal economy of the site will be possible. The excavation strategy should therefore include the excavation of stretches of these features and not merely small 1 metre sections if the potential of the assemblages are to be realised.
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The Environmental Archaeology Consultancy
$23^{\text {rd }}$ September 2004

THE ENVIRONMENTAL ARCHAEOLOGY CONSULTANCY
Key to codes used in the cataloguing of animal bones and marine shells
SPECIES:

| SPECIES CODE |  |  | $\begin{aligned} & \text { SPECIES } \\ & \text { CODE } \\ & \hline \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: |
| MAN | human |  | DOVE | Dove species |
| EQU | Horse |  | FER | Feral dove |
| EQSZ | Horse size |  | PART | Partridge |
| BOS | Cattle |  | SWAN? | Swan? |
| BOSL | Cattle-large |  | WOOD | Woodcock |
| CSZ | cattle size |  | CURL | Curlew |
| SUS | Pig |  | WADE | wader |
| OVCA | sheep or goat |  | CROK | Crow or rook |
| OVI | Sheep |  | CORV | Crow or rook |
| CRA | Goat |  | JACK | Jackdaw |
| SSZ | sheep size |  | OWL | Owl indet. |
| FEL | Cat |  | BUZZ | Buzzard |
| CAN | Dog |  | GULL | Gull sp. |
| AUR | Aurochs |  |  |  |
| AUR? | Aurochs? |  | TURD | Turdidae |
| CER | red deer |  | BIRD | Identifiable but not id'd |
| DAM | Fallow deer |  | PASS | Passerine |
| CLS | roe deer |  | LBIRD | Large bird |
| LEP | Hare |  | UNIB | Bird indet |
| ORC | Rabbit |  |  |  |
| LAG | Lagomorph |  | FROG | Frog |
| CARN | Carnivore |  | FRTO | Frog or toad |
| FOX | Fox |  |  |  |
| POLE | Polecat/ferret |  |  |  |
| WEA | weasel |  | GAD | Gadid, cod family |
| BADG | Badger |  | LING | Ling |
| SEAL | seal |  | HADD | Haddock |
| SQU? | Squirrel? |  | RAY | ray |
| BEAV | Beaver |  | FISH | Fish |
| ROD | Rodent |  | UNIF | Fish indet |
| RAT | Rat |  |  |  |
| AGR | Field vole |  | OYS | oyster |
| ARV | Water vole |  | COK | Cockle |
| MUS | House mouse |  | MUSS | Common Mussel |
| SORA | Common shrew |  | WHELK | Common whelk |
| MOLE | Mole |  | HEL | Helix aspersa |
| SMA | Small mammal |  | HELIX | Helix sp. |
| UNI | Unknown |  | HELN | Helix nemoralis |
|  |  |  | SNAIL | snail |
| CHIK | Chicken |  |  |  |
| CHKZ | Chicken size |  | FOSS | Fossil bone |
| GOOS | Goose, dom |  |  |  |
| GOOS? | Goose, dom? |  |  |  |
| GSSZ | Goose size |  |  |  |
| GSSP | Goose species |  |  |  |
| GOSZ | Goose, poss. Wild |  |  |  |
| DUCK | Duck, domestic sp. |  |  |  |
| DUCK? | Duck? |  |  |  |
| DKSP | Duck species |  |  |  |
| DSP | Duck species indet |  |  |  |
| MALL | Duck, dom. |  |  |  |
| TURK | Turkey |  |  |  |
|  |  |  |  |  |

## BONE ELEMENT:

| BONE CODE |  | BONE CODE |  |
| :---: | :---: | :---: | :---: |
| SKEL | skeleton | SCP | scapula |
| SKL | skull | HUM | humerus |
| ANT | antler | RAD | radius |
| ANT? | antler? | ULN | ulna |
| ATT | antler tine | RUL | radius and ulna |
| HC | horn core | C/T | carpus/tarsus |
| TEMP | temporal | C23 | carpus 2+3 |
| FRNT | frontal | CAR | carpus |
| PET | petrous | CPA | accessory carpal |
| PAR | parietal | CPI | intermediate carpal |
| OCIP | occipital | CPR | radial carpal |
| ZYG | zygomatic | CPU | ulnal carpal |
| NAS | nasal | MTC | metacarpus |
| PMX | premaxilla | MC1-5 | metacarpus 1-5 |
| MAN | mandible | MTP | metapodial |
| MNT | mandibular tooth | MPL | lateral metapodial |
| DLI | deciduous lower incisor | INN | innominate |
| DLPM1-4 | deciduous lower premolar 1-4 | ILM | ilium |
| LI | lower incisor (and 1-3) | PUB | pubis |
| LC | lower canine | ISH | ischium |
| LPM1-LPM4 | lower premolar 1-4 | FEM | femur |
| LM1-LM3 | lower molar 1 - molar 3 | PAT | patella |
| MAX | maxilla | TIB | tibia |
| DUI | deciduous upper incisor | FIB | fibula |
| UI | upper incisor (1-3) | LML | lateral malleolus |
| UC | upper canine | AST | astragalus |
| DUPM | deciduous upper premolar | CAL | calcaneum |
| DUPM1-4 | deciduous upper premolar 1-4 | CQ | centroquartal |
| UPM1-UPM4 | upper premolar 1-4 | TAR3 | tarsus 3 |
| UM1-UM3 | upper molar 1-molar 3 | T4 | tarsus 4 |
| MXT | maxillary tooth | TAR | tarsus |
| TTH | indeterminate tooth | MTT | metatarsus |
| INC | incisor | MT1-5 | metatarsus 1-5 |
| HYD | hyoid | MTL | lateral metatarsus |
| ATL | atlas | SES | sesamoid |
| AXI | axis | PH1 | 1st phalanx |
| CEV | cervical vertebra (and 3-7) | PH2 | 2nd phalanx |
| TRV | thoracic vertebra (and 1-13) | PH3 | 3rd phalanx |
| LMV | lumbar vertebra | PHL | lateral phalanx |
| SAC | sacrum | LBF | long bone |
| CDV | caudal vertebra | UNI | unidentified |
| VER | vertebra |  |  |
| STN | sternum | CLV | clavicle |
| CC | costal cartilage | COR | coracoid |
| RIB1 | first rib (2 etc) | CMP | carpo-metacarpus |
| RIB | rib | CMC | carpo-metacarpus |
|  |  | WPH1-3 | wing phalanges 1-3 |
| URO | urostyle | WPH | wing phalanx |
|  |  | LSA | lumbosacrale |
| DENT | dentary |  |  |
| CLEI | cleithrum |  |  |
| RAY | fin ray |  |  |
|  |  |  |  |
| SHELL | shell |  |  |
| UV | upper valve |  |  |
| VAL | valve |  |  |
|  |  |  |  |

NUMBER: number of fragments in the entry

SIDE: $\quad \mathrm{W}$ - whole L -left side R - right side F - fragment
FUSION: records the fused/unfused condition of the epiphyses
P - proximal; D - distal; E- acetabulum; N - unfused; F - fused; C - cranial; A - posterior
ZONES: records the part of the bone present.
The key to each zone on each bone is on page 4
BUTCHERY: records whether a bone has been chopped (CH), cut (KN), worked (W), burnt (C)
GNAWING: records if a bone has been gnawed by dogs (DG), cats (FEL) or rodents (RG)
TOOTH WEAR - Codes are those used in Grant, A. 1982 The use of tooth wear as a guide to the age of domestic animals, in B. Wilson, C.Grigson and S.Payne (eds) Ageing and sexing animal bones from Archaeological sites, 91-108.

Teeth are labelled as follows in the tooth wear column:

| Deciduous | Permanent |
| :---: | :---: |
| fldpm2/dupm2 | F lpm2/upm2 |
| g ldpm3/dupm3 | G lpm3/upm4 |
| h ldpm4/dupm4 | H lpm4/upm4 |
|  | $1 \mathrm{lml} / \mathrm{uml}$ |
|  | J lm2/um2 |
|  | K 1m3/um 3 |

MEASUREMENTS :Any measurements are those listed in A.Von den Driesch (1976) A Guide to the Measurement of Animal Bones from Archaeological Sites, Peabody Museum Bulletin 1, Peabody Museum, Harvard, USA
Some measurments have been taken on juveniles. Measurements marked L1 are the greatest length of long bones lacking one unfused epiphysis - the measurement being taken from the epiphyseal junction. Measurements marked L2 are the greatest length of the long bones between epiphyseal junctions when both epiphyses are unfused.

PATHOLOGICAL: A ' $P$ ' indicates that the bone fragment carries a pathology
COMMENTS: This may include a short description of the fragments, any pathologies, butchery or gnawing evidence

PRESERVATION: records the condition of the bone in the following manner
1- enamel only surviving
2- bone very severely pitted and thinned, tending to break up; teeth with surface erosion and loss of cementum and dentine
3- surface pitting and erosion of bone, some loss of cementum and dentine on teeth
4- surface of bone intact, loss of organic component, material chalky, calcined or burnt
5- bone in good condition, probably with some organic component

ZONES - codes used to define the zones on each bone
$\left.\begin{array}{|l|l|l|l|}\hline \text { SKULL } & \text { 1. paraoccipital process } & \text { METACARPUS } & \text { 1. medial facet of proximal articulation, MC3 } \\ \hline & \text { 2. occipal condyle } & & \text { 2. lateral facet of proximal articulation, MC4 } \\ \hline & \text { 3. intercornual protuberance } & & \text { 3. medial distal condyle, MC3 } \\ \hline & \text { 4. external acoustic meatus } & & \text { 4. lateral distal condyle, MC4 } \\ \hline & \text { 5. frontal sinus } & & \text { 5. anterior distal groove and foramen } \\ \hline & \text { 6. ectorbitale } & & \text { 6. medial or lateral distal condyle } \\ \hline & \text { 7. entorbitale } & & \text { FIRST } \\ \text { PHALANX }\end{array}\right)$

Archive catalogue of animal bone from Wickenby/Lissington - WILI04

| site | cont. | species | bone | no. | side | fusion | zone | $\begin{array}{\|l\|} \hline \text { butc } \\ \text { hery } \end{array}$ | $\begin{array}{\|c\|} \hline \text { gna } \\ \text { wing } \end{array}$ | toothwear | measurement | path ol | comment | preser vation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WILI04 | 100 | CSZ | RIB | 1 | F |  |  | CH | DG |  |  |  | MIDSHAFT-DISTAL CHOPPED-PROX CHEWED | 4 |
| WILI04 | 100 | OVCA | TIB | 1 | L |  |  |  | DG |  |  |  | SHAFT-BOTH ENDS CHEWED | 4 |
| WILI04 | 100 | BOS | TIB | 1 | R |  |  |  | DG |  |  |  | DISTAL SHAFT FRAGMENT-SL POROUS-IMM | 4 |
| WILI04 | 103 | OVCA | MTT | 1 | R | DN | 125 |  |  |  |  |  | DISTAL EPI LOST-2 PIECES | 4 |
| WILI04 | 103 | SSZ | RIB | 1 | F |  |  |  |  |  |  |  | SMALL SHAFT FRAGMENT | 4 |
| WILI04 | 103 | OVCA | MTC | 1 | F |  |  |  |  |  |  |  | SPLIT DISTAL SHAFT FRAGMENT | 4 |
| WILI04 | 103 | BOS | DUP4 | 1 | R |  |  |  |  | h13 |  |  | DA,MAGED-3 PIECES | 4 |
| WILI04 | 109 | BOS | MAX | 1 | L |  |  |  |  | J11K5 |  |  | LOOSE TEETH AND FRAG MAX-4 PIECES | 4 |
| WILI04 | 109 | CSZ | LBF | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILI04 | 110 | SUS | INN | 1 | L |  | 7 |  |  |  |  |  | ISCHIAL SHAFT WITH PART ACETAB | 4 |
| WILI04 | 112 | CSZ | RIB | 1 | L |  |  |  |  |  |  |  | MIDSHAFT FRAGMENT | 4 |
| WILI04 | 112 | BOS | HUM | 1 | L | PNDN | 5690 |  |  |  |  |  | SHAFT-2 PIECES-CALF | 4 |
| WILI04 | 112 | BOS | MAN | 1 | R |  |  |  |  |  |  |  | VENTRAL FRAG HORI RAMUS | 4 |
| WILI04 | 112 | SSZ | LBF | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT-FEM? | 4 |
| WILI04 | 115 | BOS | UM3 | 1 | R |  |  |  |  | K5 |  |  | ROOTS BROKEN | 4 |
| WILI04 | 115 | EQU | ULN | 1 | R | PF | 12 |  |  |  |  |  | ANT PROX END | 4 |
| WILI04 | 117 | BOS | SKL | 1 | R |  |  |  |  |  |  |  | ANT TEMPORAL FRAG-POST ZYGOMATIC ARCH | 4 |
| WILI04 | 117 | BOS | MTT | 1 | L | DF | 345 |  |  |  | SD-25 Bd-51.6 Dd-29.5 |  | DISTAL HALF | 4 |
| WILI04 | 117 | BOS | MTT | 1 | F |  |  |  | DG |  |  |  | FRAGMENT PROX END-CHEWED | 4 |
| WILI04 | 117 | CSZ | HUM | 1 | F |  |  |  |  |  |  |  | DISTAL SHAFT FRAGMENT | 4 |
| WILI04 | 119 | CSZ | RIB | 1 | L |  |  |  |  |  |  |  | FRAG PROX END | 4 |
| WILI04 | 119 | BOS | SKL | 1 | R |  |  |  |  |  |  |  | PART ZYGOMATIC ARCH | 4 |
| WILI04 | 119 | SSZ | RIB | 1 | R | PF | 1 |  |  |  |  |  | PROX END AND MOST SHAFT | 4 |
| WILI04 | 119 | SSZ | RIB | 1 | L | PF | 1 |  |  |  |  |  | PROX HALF | 4 |
| WILI04 | 119 | BOS | SCP | 1 | R |  |  |  |  |  |  |  | DISTAL PART CAUDAL MARGIN OF BLADE AND SPINE | 4 |
| WILI04 | 119 | CSZ | LMV | 1 | R | CFAF |  |  |  |  |  |  | FRAGMENT RICHT SIDE CENTRUM | 4 |
| WILI04 | 119 | CSZ | CC | 1 | F |  |  |  |  |  |  |  |  | 4 |
| WILI04 | 119 | SSZ | RIB | 1 | F |  |  |  |  |  |  |  | MIDSHAFT FRAGMENT | 4 |
| WILI04 | 119 | CSZ | SCP | 1 | F |  |  |  |  |  |  |  | BLADE FRAGMENT-3 PIECES | 4 |
| WILI04 | 119 | CSZ | LBF | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILI04 | 119 | CSZ | UNI | 3 | F |  |  |  |  |  |  |  | INDET | 4 |
| WILI04 | 119 | CSZ | RIB | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT-2 PIECES | 4 |
| WILI04 | 119 | CSZ | SKL | 1 | F |  |  |  |  |  |  |  | INDET | 4 |
| WILI04 | 119 | SSZ | FEM | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILI04 | 119 | CSZ | LMV | 1 | F | AN | 3 |  |  |  |  |  | POST EPI | 4 |
| WILI04 | 119 | CSZ | VER | 2 | F |  |  |  |  |  |  |  | FRAGS NEURAL ARCH | 4 |
| WILI04 | 119 | SSZ | RAD | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILI04 | 119 | SSZ | LBF | - | F |  |  |  |  |  |  |  | SHAFT FRAGMENT--I?PIG HUM | 4 |
| WILI04 | 119 | EQU | SCP | 1 | R | DF | 12345 |  |  |  | LGP-84.8 LG-54.5 BG-44 SLC63.2 |  | DISTAL HALF | 4 |


| site | cont. | species | bone | no. | side | fusion | zone | $\begin{array}{\|l\|} \hline \text { butc } \\ \text { hery } \end{array}$ | $\begin{array}{\|c\|} \hline \text { gna } \\ \text { wing } \\ \hline \end{array}$ | toothwear | measurement | $\begin{array}{\|c\|} \hline \text { path } \\ \text { ol } \\ \hline \end{array}$ | comment | $\begin{aligned} & \hline \text { preser } \\ & \text { vation } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WILI04 | 119 | BOS | SCP | 1 | R | DF | 1235 | CH |  |  | SLC-62.8 |  | GLENOID-NECK AND DISTAL PART BLADE-CHOPPED THRU GLENOID | 4 |
| WILI04 | 119 | BPS | SCP | 1 | L | DF | 123 | $\begin{aligned} & \mathrm{CH} \\ & \mathrm{C} \end{aligned}$ |  |  |  |  | GLENOID-NECK AND DISTAL PART BL;ADE-CHOPPED AT BASE SPINE-CHARRED | 4 |
| WILI04 | 119 | BOS | TRV | 1 | F | CFAN | 1245 |  |  |  |  |  | CENTRUM-ARCH AND SPINE-2 PIECES | 4 |
| WILI04 | 119 | BOS | SAC | 1 | F | CFAF | 234 |  |  |  |  |  | ANT VERT-CENTRUM AND WINGS | 4 |
| WILI04 | 119 | BOS | FEM | 1 | R | PF | 1 |  | DG |  |  |  | PART PROX END-SL CHEWED-2 PIECES | 4 |
| WILI04 | 119 | BOS | LMV | 1 | F | CFAF | 234 |  |  |  |  |  | CENTRUM | 4 |
| WILI04 | 119 | BOS | LMV | 1 | F | CFAF | 234 |  |  |  |  |  | MOST OF CENTRUM | 4 |
| WILI04 | 119 | CSZ | RIB | 1 | F |  |  | CH |  |  |  |  | MIDSHAFT FRAGMENT-PORX END CHOPPED | 4 |
| WILI04 | 119 | BOS | SKL | 1 | L |  |  |  |  | J13K11 |  |  | POST MAXILLA WITH M2 AND 3 | 4 |
| WILIO4 | 119 | BOS | ULN | 1 | R | PN | 2 |  | DG |  |  |  | PROX END WITHOUT EPI-PROX CHEWED | 4 |
| WILI04 | 119 | BOS | MAN | 1 | R |  | 1 |  |  |  |  |  | SYMPHYSEAL FRAGMENT-2 PIECES | 4 |
| WILI04 | 119 | CSZ | RIB | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILI04 | 119 | OVCA | MTT | 1 | L |  | 12 |  | DG |  |  |  | PROX END AND SHAFT-DISTAL CHEWED | 4 |
| WILI04 | 119 | OVI | HC | 1 | L |  | 1 |  |  |  |  |  | COMPLETE WITH PART FRONTAL-WETHER? | 4 |
| WILI04 | 119 | BOS | SCP | 1 | R |  |  |  |  |  |  |  | PART OF CAUDAL MARGIN OF BLADE- 2 PIECES | 4 |
| WILI04 | 119 | BOS | SCP | 1 | L |  |  |  | DG |  |  |  | PART OF CAUDAL MARGIN OF BLADE-PROX CHEWED | 4 |
| WILI04 | 119 | BOS | SCP | 1 | R |  |  |  |  |  |  |  | BLADE AND SPINE FRAGMENT-2 PIECES | 4 |
| WILI04 | 119 | BOS | SCP | 1 | L |  |  |  |  |  |  |  | DISTAL CRANIAL MARGIN OF BLADE AND SPINE | 4 |
| WILI04 | 119 | BOS | SCP | 1 | F |  | 4 |  |  |  |  |  | SPINE | 4 |
| WILI04 | 119 | BOS | SCP | 1 | F |  |  |  |  |  |  |  | SPINE FRAGMENT | 4 |
| WILI04 | 119 | BOS | SCP | 2 | F |  |  |  |  |  |  |  | BLADE FRAGMENT | 4 |
| WILI04 | 119 | BOS | SCP | 1 | F |  |  |  |  |  |  |  | FRAG CAUDAL MARGIN OF BLADE | 4 |
| WILI04 | 119 | CAN | TRV | 1 | F | CFAF | 2345 |  |  |  |  |  | CENTRUM AND ARCH | 4 |
| WILI04 | 119 | CAN | AXI | 1 | F | AF | 345 |  |  |  |  |  | CENTRUM AND PART ARCH | 4 |
| WILI04 | 119 | BOS | LMV | 1 | F | CFAF | 234 |  |  |  |  |  | CENTRUM | 4 |
| WILI04 | 119 | OVI | SKL | 1 | F |  | 22366 |  |  |  |  |  | RAM-POST HALF SKULL WITH BASE OF BOTH HORN CORES | 4 |
| WILI04 | 119 | OVI | SKL | 1 | R |  | HC |  |  |  |  |  | HORN CORE WITH PART FRONTAL AND PARIETALWETHER OR EWE | 4 |
| WILI04 | 119 | BOS | TIB | 1 | R | PN | 123 |  |  |  |  |  | PROX EPI | 4 |
| WILI04 | 119 | BOS | RIB | 1 | R | PF | 1 |  |  |  |  |  | PROX END | 4 |
| WILI04 | 119 | CSZ | RIB | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILI04 | 119 | BOS | MAN | 1 | R |  | 578 |  |  |  |  |  | PART ASC RAMUS WITH CONDYLE | 4 |
| WILI04 | 119 | BOS | PH2 | 1 | R | PF | 12 |  | DG |  |  |  | CHEWED | 4 |
| WILIO4 | 119 | OVI | SKL | 1 | R |  | 6 |  |  |  |  |  | FRONTAL AND PARIETAL FRAG WITH BASE COREWETHER/EWE | 4 |
| WILI04 | 119 | SUS | MT4 | 1 | R | DN | 12 |  |  |  | L1-41 SD-7.7 |  | DISTAL EPI LOST | 4 |
| WILI04 | 119 | BOS | MAN | 1 | F |  | 4 |  |  |  |  |  | CORONOID | 4 |
| WILIO4 | 119 | BOS | UM1 | 1 | L |  |  |  |  | 115 |  |  | COMPLETE | 4 |
| WILI04 | 119 | BOS | MAN | 1 | R |  | 6 |  | DG |  |  |  | ANGLE | 4 |
| WILIO4 | 119 | BOS | CPR | 1 | W |  | 1 |  |  |  |  |  | COMPLETE | 4 |


| site | cont. | species | bone | no. | side | fusion | zone | $\begin{array}{\|l\|} \hline \text { butc } \\ \text { hery } \\ \hline \end{array}$ | gna <br> wing | toothwear | measurement | $\begin{array}{\|c} \hline \text { path } \\ \text { ol } \\ \hline \end{array}$ | comment | preser vation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WILIO4 | 119 | OVCA | FEM | 1 | R | PF | 13 |  |  |  |  |  | DAMAGED PROX END | 4 |
| WILIO4 | 119 | BOS | CAR | 1 | W |  | 1 |  |  |  |  |  | COMPLETE | 4 |
| WILI04 | 119 | CSZ | LBF | 3 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILI04 | 119 | SSZ | TRV | 1 | F |  | 1 |  |  |  |  |  | SPINE | 4 |
| WILI04 | 119 | OVCA | TIB | 1 | R |  |  |  | DG |  |  |  | DISTAL SHAFT-DISTAL CHEWED | 4 |
| WILI04 | 119 | OVCA | UM2 | 1 | R |  |  |  |  | J13 |  |  | COMPLETE | 4 |
| WILIO4 | 119 | OVCA | ULN | 1 | F |  |  |  |  |  |  |  | MIDSHAFT | 4 |
| WILIO4 | 119 | CSZ | CEV | 1 | F |  |  | CH |  |  |  |  | ZYGAPOPHYSES-CHOPPED | 4 |
| WILI04 | 119 | SSZ | RIB | 1 | R |  |  |  |  |  |  |  | PROX HALF SHAFT | 4 |
| WILI04 | 119 | OVCA | INN | 1 | R | EF | 5 |  |  |  |  |  | LATERAL PART ACETAB | 4 |
| WILI04 | 119 | OVCA | RAD | 1 | R |  |  |  | DG |  |  |  | MIDSHAFT-DISTAL CHEWED | 4 |
| WILI04 | 119 | CSZ | LMV | 1 | F |  |  |  |  |  |  |  | POST ZYGAPOPHYSIS | 4 |
| WILI04 | 119 | CSZ | LMV | 1 | F |  |  |  |  |  |  |  | ANT ZYGAPOPHYSIS | 4 |
| WILIO4 | 119 | CSZ | VER | 4 | F |  |  |  |  |  |  |  | INDET | 4 |
| WILI04 | 119 | SSZ | RIB | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILI04 | 119 | CSZ | RIB | 6 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILIO4 | 119 | CSZ | RIB | 1 | F |  |  |  |  |  |  |  | PROX SHAFT FRAGMENT | 4 |
| WILI04 | 119 | BOS | SCP | 1 | F |  | 1 |  |  |  |  |  | PART OF SPINE | 4 |
| WILI04 | 119 | BOS | SCP | 1 | F |  |  |  |  |  |  |  | FRAGMENT OF SPINE | 4 |
| WILIO4 | 119 | CSZ | LMV | 1 | F |  |  |  |  |  |  |  | ANT ZYGAPOPHYSIS | 4 |
| WILIO4 | 119 | CSZ | LMV | 2 | F |  |  |  |  |  |  |  | PART TRANSVERSE PROCESS | 4 |
| WILI04 | 119 | CSZ | SKL | 1 | F |  |  |  |  |  |  |  | INDET | 4 |
| WILI04 | 119 | SSZ | LMV | 1 | F |  |  |  |  |  |  |  | TRANS PROCESS | 4 |
| WILI04 | 119 | SSZ | LBF | 4 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILI04 | 119 | SSZ | HUM | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILI04 | 119 | CSZ | SCP | 2 | F |  |  |  |  |  |  |  | BLADE FRAGMENT | 4 |
| WILI04 | 119 | UNI | UNI | 4 | F |  |  |  |  |  |  |  | INDET | 4 |
| WILI04 | 119 | CSZ | LMV | 1 | F | AN | 4 |  |  |  |  |  | PART OF CENTRUM-SMALL-JUV | 4 |
| WILI04 | 121 | OVCA | HUM | 1 | R |  |  |  |  |  |  |  | DISTAL SHAFT FRAGMENT | 4 |
| WILI04 | 121 | CSZ | UNI | 1 | F |  |  |  |  |  |  |  | INDET | 4 |
| WILIO4 | 121 | OVCA | RAD | 1 | L |  | 3 |  | DG |  |  |  | SHAFT-DISTAL END CHEWED | 4 |
| WILI04 | 123 | SSZ | LBF | 2 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILI04 | 123 | OVCA | RAD | 1 | F |  |  |  | DG |  |  |  | SPLIT MIDSHAFT FRAGMENT-CHEWED | 4 |
| WILI04 | 123 | BOS | UM2 | 1 | L |  |  |  |  | J15 |  |  | COMPLETE | 4 |
| WILI04 | 125 | BOS | TIB | 1 | L | DN | 7 |  |  |  |  |  | DISTAL END | 4 |
| WILI04 | 202 | OVCA | SCP | 1 | R |  | 3 |  | DG |  |  |  | NECK AND DISTAL BLADE-POROUS-SMALL-JUV | 4 |
| WILI04 | 202 | BOS | UM2 | 1 | L |  |  |  |  | J11 |  |  | COMPLETE | 4 |
| WILI04 | 202 | CSZ | ULN | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILI04 | 204 | EQU | HUM | 1 | L | DF | 6789 |  |  |  |  |  | DISTAL END | 4 |
| WILIO4 | 204 | BOS | PH2 | 1 | L | PF | 2 |  |  |  |  |  | PROX END SPLIT OFF | 4 |
| WILI04 | 204 | FEL | FEM | 1 | R |  | 3 |  |  |  |  |  | SHAFT | 4 |
| WILI04 | 204 | BOS | UPM2 | 1 | L |  |  |  |  | G5 |  |  | DAMAGED-NO WEAR | 4 |
| WILI04 | 204 | CSZ | RIB | 1 | R |  |  |  |  |  |  |  | PROX SHAFT FRAGMEBNT | 4 |


| site | cont. | species | bone | no. | side | fusion | zone | $\begin{array}{\|l\|} \hline \text { butc } \\ \text { hery } \end{array}$ | $\begin{gathered} \text { gna } \\ \text { wing } \end{gathered}$ | toothwear | measurement | $\begin{gathered} \text { path } \\ \text { ol } \end{gathered}$ | comment | $\begin{array}{\|c\|} \hline \text { preser } \\ \text { vation } \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WILIO4 | 204 | OVCA | FEM | 1 | L |  | 4 |  |  |  |  |  | DISTAL SHAFT-2 PIECES | 4 |
| WILI04 | 204 | SSZ | LMV | 1 | F |  |  |  |  |  |  |  | TRANS PROCESS | 4 |
| WILIO4 | 204 | OVCA | MAN | 1 | R |  | 2 |  |  | GH11/12J1 <br> 2 |  |  | RAMUS FRAG WITH P3-M2-M2 LOOSE | 4 |
| WILIO4 | 204 | CSZ | LBF | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILIO4 | 206 | OVCA | TIB | 1 | R |  |  |  |  |  |  |  | DISTAL HALF SHAFT | 4 |
| WILIO4 | 210 | BOS | TIB | 1 | L |  |  |  |  |  |  |  | POST MIDSHAFT FRAGMENT | 4 |
| WILI04 | 210 | ssz | LBF | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILIO4 | 210 | Ssz | LBF | 1 | F |  |  |  | DG |  |  |  | SHAFT FRAGMENT-CHEWED | 4 |
| WILIO4 | 210 | BOS | UM1 | 1 | L |  |  |  |  | 116 |  |  | COMPLETE | 4 |
| WILIO4 | 210 | CSZ | LBF | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILIO4 | 210 | BOS | MTT | 1 | L | DF | 12345 |  |  |  | GL-210.1 Bp-41 Dp-39.1 SD-20.8 Bd-46.4 Dd-27.7 |  | COMPLETE | 4 |
| WILIO4 | 211 | CSZ | LBF | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILIO4 | 211 | OVCA | TIB | 1 | R |  |  |  |  |  |  |  | DISTAL SHAFT | 4 |
| WILI04 | 211 | BOS | SCP | 1 | F |  |  |  | DG |  |  |  | FRAGMENT OF BLADE-CHEWED | 4 |
| WILIO4 | 211 | csz | HUM | 1 | L | DF | 8 |  |  |  |  |  | FRAGMENT OF CONDYLE | 4 |
| WILIO4 | 211 | OVCA | MTT | 1 | F |  |  |  |  |  |  |  | SPLIT MIDSHAFT FRAGMENT | 4 |
| WILIO4 | 301 | BOS | TIB | 1 | L | DF | 567 |  |  |  | SD-36 Bd-58.8 Dd-43.1 |  | DISTALEND | 4 |
| WILIO4 | 301 | Csz | RIB | 1 | F |  |  |  |  |  |  |  | MIDSHAFT FRAGMENT | 4 |
| WILIO4 | 301 | CSZ | TRV | , | F |  |  | c |  |  |  |  | BASE SPINE-CALCINED | 4 |
| WILI04 | 301 | OVCA | LM3 | 1 | L |  |  |  |  | K10 |  |  | COMPLETE | 4 |
| WILIO4 | 301 | OVCA | MAN | , | R |  |  | c |  |  |  |  | ANT PART RAMUS WITH PM ALVEOLI-CHARRED AND CALCINED | 4 |
| WILI04 | 301 | CSZ | UNI | 3 | F |  |  | c |  |  |  |  | INDET-CHARRED | 4 |
| WILIO4 | 301 | OVCA | MAN | 1 | F |  |  | c |  |  |  |  | POST VENTRAL FRAG RAMUS-CHARRED | 4 |
| WILIO4 | 302 | EQU | HUM | 1 | L | DF | 67890 |  |  |  | BT-64.4 HT-42.2 |  | DISTAL END AND SHAFT | 4 |
| WILIO4 | 302 | BOS | MAN | 1 | R |  | 45 | CH |  |  |  |  | DORSAL PART ASC RAMUS-CHOPPED POSTERIORLY | 4 |
| WILIO4 | 302 | BOS | MAN | 1 | L |  | 45 | CH |  |  |  |  | DORSAL PART ASC RAMUS-CHOPPED POST | 4 |
| WILIO4 | 302 | csz | LMV | 1 | F |  | 5 |  |  |  |  |  | PART OF NEURAL ARCH | 4 |
| WILIO4 | 302 | BOS | PH1 | 1 | R |  | 2 |  |  |  |  |  | DISTAL END-ERODED | 3 |
| WILIO4 | 302 | BOS | MTC | 1 | L |  | 5 |  |  |  |  |  | SPLIT DISTAL END |  |
| WILIO4 | 302 | Csz | HUM | 1 | F | PF |  |  |  |  |  |  | PART PROX FACET | 4 |
| WILIO4 | 302 | BOS | SKL | 1 | L |  | 7 |  |  |  |  |  | SUPRA-ORBITAL FRAGMENT OF FRONTAL-2 PIECES | 4 |
| WILIO4 | 302 | BOS | SKL |  | F |  |  |  |  |  |  |  | FACIAL FRAGMENT | 4 |
| WILIO4 | 302 | BOS | MAN | 1 | L |  |  |  | DG |  |  |  | POST VENTRAL FRAG HORI RAMUS-CHEWED | 4 |
| WILIO4 | 302 | BOS | SCP | 1 | R |  | 3 |  |  |  |  |  | DISTAL END OF SPINE AND PART BLADE | 4 |
| WILIO4 | 302 | CSZ | SKL | 2 | F |  |  |  |  |  |  |  | FRAGMENTS | 4 |
| WILIO4 | 302 | BOS | MTT | 1 | F |  |  |  |  |  |  |  | SPLIT MIDSHAFT FRAGMENT | 4 |
| WILIO4 | 302 | BOS | ATL | 1 | F |  |  |  |  |  |  |  | DAMAGED- 3 PIECES-ARCH NOT FUSED | 4 |
| WILIO4 | 302 | BOS | MAX |  | R |  |  |  |  | 112 J 11 |  |  | LOOSE TEETH AND PART MAX | 4 |
| WILIO4 | 302 | CSZ | UNI |  | F |  |  |  |  |  |  |  | INDET | 4 |
| WILIO4 | 303 | BOS | MTC |  | L | DF | 345 |  |  |  | Bd-50.3 Dd-27.4 |  | DISTALEND | 4 |


| site | cont. | species | bone | no. | side | fusion | zone | $\begin{array}{\|l\|} \hline \text { butc } \\ \text { hery } \end{array}$ | $\begin{array}{\|c\|} \hline \text { gna } \\ \text { wing } \\ \hline \end{array}$ | toothwear | measurement | $\begin{array}{\|c} \text { path } \\ \text { ol } \\ \hline \end{array}$ | comment | preser vation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WILI04 | 303 | CSZ | LMV | 1 | F |  | 5 |  |  |  |  |  | FRAGMENT OF NEURAL ARCH | 4 |
| WILI04 | 303 | SUS | TIB | 1 | R |  |  |  |  |  |  |  | SPLIT MIDSHAFT FRAGMENT | 4 |
| WILI04 | 307 | BOS | MAN | 1 | L |  | 5 | CH |  |  |  |  | CORONOID-CHOPPED | 4 |
| WILI04 | 307 | SSZ | RIB | 1 | F |  |  |  |  |  |  |  | SPLIT SHAFT FRAGMENT | 4 |
| WILI04 | 307 | CSZ | SKL | 1 | F |  |  |  |  |  |  |  | INDET | 4 |
| WILI04 | 307 | SUS | TIB | 1 | L | DN | 5 |  |  |  |  |  | FRAGMENT OF DISTAL EPI | 4 |
| WILI04 | 307 | OVCA | TIB | 1 | R |  |  |  |  |  |  |  | DISTAL SHAFT-VERY SMALL-GRACILE-JUV? | 4 |
| WILIO4 | 323 | OVCA | MAN | 1 | L |  | 23 |  |  | F |  |  | DIASTEMAL FRAGMENT-2 PIECES | 4 |
| WILIO4 | 403 | BOS | MTT | 1 | R | DN | 5 |  |  |  |  |  | PART DISTAL CONDYLE | 4 |
| WILI04 | 403 | OVCA | RAD | 1 | L | PF | 123 |  |  |  |  |  | PROX END AND MOST OF SHAFT | 4 |
| WILI04 | 403 | SSZ | RIB | 1 | R |  |  | CH |  |  |  |  | PROX HALF OF SHAFT-PROX CHOPPED | 4 |
| WILI04 | 403 | CSZ | LBF | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILI04 | 403 | BOS | LMP3 | 1 | L |  |  |  |  | G11 |  |  | COMPLETE | 4 |
| WILI04 | 403 | OVCA | MTC | 1 | F |  |  |  | DG |  |  |  | DISTAL MIDSHAFT-DISTAL CHEWED | 4 |
| WILIO4 | 403 | SSZ | LBF | 1 | F |  |  |  |  |  |  |  | SHAFT FRAG | 4 |
| WILI04 | 403 | CSZ | LBF | 2 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILI04 | 403 | CSZ | SCP | 1 | F |  |  |  |  |  |  |  | PROX FRAGMENT OF BLADE | 4 |
| WILI04 | 403 | BOS | PH1 | 1 | R | PF | 12 |  |  |  |  |  | HEAVILY DAMAGED | 4 |
| WILI04 | 403 | CSZ | UNI | 4 | F |  |  |  |  |  |  |  | FRAGMENT | 4 |
| WILI04 | 403 | CSZ | RIB | 1 | F |  |  |  |  |  |  |  | MIDSHAFT FRAGMENT | 4 |
| WILIO4 | 403 | CSZ | LBF | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT |  |
| WILI04 | 403 | BOS | MAN | 1 | R |  |  |  |  |  |  | P | POST PART HORI RAMUS WITH MOLAR ALVEOLIABCESS OR BREAKGE OF TOOTH AND HEALED | 4 |
| WILI04 | 403 | SSZ | FEM | 1 | F |  |  |  |  |  |  |  | SPLIT MIDSHAFT FRAGMENT | 4 |
| WILI04 | 403 | SSZ | LBF | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILI04 | 403 | EQU | INN | 1 | L | EF |  |  |  |  |  |  | LATERAL PART ACETAB | 4 |
| WILI04 | 405 | EQU | INN | 1 | L |  | 39 |  |  |  |  |  | ILIAL SHAFT AND PART ACETAB-SAME BONE AS IN 403 | 4 |
| WILI04 | 405 | EQU | MTC | 1 | R | DF | 3 |  |  |  |  |  | DISTAL END | 4 |
| WILI04 | 405 | OVCA | HUM | 1 | L |  |  |  |  |  |  |  | POST DISTAL SHAFT FRAGMENT | 4 |
| WILI04 | 405 | EQU | FEM | 1 | F | PF | 1 |  |  |  |  |  | HEAD | 4 |
| WILI04 | 405 | BOS | FEM | 1 | R | DF | 567 |  |  |  |  |  | DISTAL END | 4 |
| WILI04 | 405 | BOS | MAN | 1 | R |  | 45 | CH |  |  |  |  | DORSAL HALF ASC RAMUS-2 PIECES-VENTRAL CHOPPED | 4 |
| WILI04 | 405 | BOS | LM3 | 1 | L |  |  |  |  | K6 |  |  | COLUMN LOST | 4 |
| WILI04 | 405 | BOS | MAN | 1 | R |  | 13 |  |  |  |  |  | SYMPHYSEAL FRAGMENT | 4 |
| WILI04 | 405 | BOS | MAN | 1 | L |  |  |  |  |  |  |  | ANT DORSAL FRAG SYMPHYSIS | 4 |
| WILI04 | 405 | BOS | MAN | 1 | F |  |  |  |  |  |  |  | LATERAL FRAG HORI RAMUS | 4 |
| WILI04 | 405 | OVCA | MTT | 1 | F |  |  |  |  |  |  |  | SPLIT MIDSHAFT FRAGMENT-POROUS | 4 |
| WILI04 | 405 | OVCA | TIB | , | R |  | 4 |  |  |  |  |  | SHAFT-2 PIECES | 4 |
| WILI04 | 407 | CSZ | HUM | 1 | F |  |  |  |  |  |  |  | SHAFT FRAGMENT | 4 |
| WILI04 | 407 | OVCA | MTT | 1 | F |  |  |  | DG |  |  |  | MIDSHAFT-CHEWED | 4 |
| WILI04 | 407 | BOS | SCP | 1 | L |  |  |  |  |  |  |  | DISTAL BLADE AND SPINE FRAGMENT-POROUS-IMM | 4 |


| site | cont. | species | bone | no. | side | fusion | zone | butc hery | $\begin{array}{\|c\|} \hline \text { gna } \\ \text { wing } \end{array}$ | toothwear | measurement | path ol | comment | preser vation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WILI04 | 407 | BOS | MTT | 1 | F |  |  |  |  |  |  |  | SPLIT SHAFT FRAGMENT | 4 |
| WILI04 | 407 | CSZ | UNI | 1 | F |  |  |  |  |  |  |  | INDET | 4 |
| WILI04 | 407 | OVCA | MAN | 1 | R |  | 23 |  |  |  |  |  | DIASTEMAL FRAGMENT- 3 PIECES | 4 |
| WILI04 | 416 | BOS | LM1 | 1 | R |  |  |  |  | 113 |  |  | ROOT BROKEN | 4 |

Catalogue of hand excavated marine and terrestrial shells

| site | context | species | valve | number |
| :--- | :--- | :--- | :--- | ---: |
| WILI04 | 103 | Oyster | LOWER VALVE | 1 |
| WILI04 | 103 | Helix aspersa | SHELL | 2 |
| WILI04 | 112 | OYSTER | UPPER VALVE | 1 |
| WILI04 | 119 | OYSTER | UPPER VALVE | 1 |
| WILI04 | 204 | OYSTER | UPPER VALVE | 4 |
| WILI04 | 210 | OYSTER | LOWER VALVE | 1 |
| WILI04 | 211 | OYSTER | UPPER VALVE | 1 |
| WILI04 | 301 | OYSTER | LOWER VALVE | 21 |
| WILI04 | 301 | OYSTER | UPPER VALVE | 21 |
| WILI04 | 300 | OYSTER | UPPER VALVE | 1 |
| WILI04 | 302 | OYSTER | UPPER VALVE | 3 |
| WILI04 | 307 | Helix hortensis | SHELL | 2 |
| WILI04 | 308 | OYSTER | UPPER VALVE | 1 |
| WILI04 | 322 | OYSTER | LOWER VALVE | 2 |
| WILI04 | 323 | OYSTER | UPPER VALVE | 6 |
| WILI04 | 323 | OYSTER | LOWER VALVE | 2 |
| WILI04 | 405 | OSY | UPPER VALVE | 1 |
| WILI04 | 405 | Helix aspersa | SHELL | 2 |
| WILI04 | 403 | OYSTER | UPPER VALVE | 5 |
| WILI04 | 403 | OYSTER | LOWER VALVE | 1 |

## WILI 04 Sample assessment

Five samples were processed using a combination of bucket and Siraf-type machine flotation. The samples ranged in volume from 6 litres - 12 litres, floatation residues were retained on $300 \mu \mathrm{~m}$ mesh, heavy residues were initially retained to 1 mm . The floatation residue was allowed to air dry, heavy residues were scanned for cultural material and charred remains and retained for further assessment where appropriate, scanned and sorted residues were then discarded. The air-dried flotation residues have been scanned and assessed by eye and under magnification up to x 10 .

All the samples have produced frequent $(10-50)$, to abundant $(>50)$ charcoal $>1 \mathrm{~mm}$. Samples <1>; <2>; <4> and <5> contained varying amounts of grain; with samples $<1>$ and $<4>$ also producing some chaff. Wild seeds were only rarely present in any of the samples while modern weeds, roots and snails were frequently present. Despite the frequency of charcoal none of the floatation residues have produced enough of a sufficient size to warrant further identification. Samples $<1>,<2\rangle$ and $<4>$ produced occasional (5-10) to frequent $(10-50)$ grain. Unfortunately much of this grain is too poorly preserved to be able to identify further with any certainty, although some, particularly in samples <1> and $<4>$ where occasional chaff is also found, may be amenable to further identification.

In the context of the sites function, the samples producing grain and chaff preliminarily support the presence of domestic activity such as crop processing in the general vicinity of trenches 2 and 3, however none of the samples have produced the abundance of material that would be representative of such activities in their immediate locale. The quantity and size of charcoal present in these samples does not offer any support to industry requiring large quantities wood fuel in immediate association with the contexts represented. It is suggested that overall it is unlikely that further analysis of this material will produce significant data. While the amount of modern weeds and root material does not suggest a major issue with contamination, in combination with the low levels of identifiable material it would raise questions of contextual integrity.

Finds : <1> pot, bone; <2> pot, bone; <3> pot, bone; <4> fired clay, pot, shell (oyster), bone; <5> pot, bone.

APPENDIX 6: List of archaeological contexts

| Context | Type | Description |
| :---: | :---: | :---: |
| Trench 1 |  |  |
| 100 | Layer | Very dark brown clayey loam - topsoil |
| 101 | Layer | Mixed orange clay, occasional lenses of gravel, grey clay, orange sandy clay - natural |
| 102 | Cut | Ditch cut, contains (104), (105). Cuts (107), cut by [130] |
| 103 | Fill | Dark grey/brown silty clay - Fill of ditch [130] |
| 104 | Fill | Mixed light brown clay and dark grey/brown clay - upper fill of ditch [102]. Seals (105), cut by [130] |
| 105 | Fill | Very dark grey/brown silty clay - primary fill of ditch [102]. Sealed by (104) |
| 106 | Cut | Ditch cut, contains (107). Cut by [102], [130] |
| 107 | Fill | Dark grey silty clay - fill of ditch [106]. Cut by [102], [130] |
| 108 | Cut | Narrow ditch/gully, contains (109). Sealed by (110) |
| 109 | Fill | Grey silty clay - fill of [108]. Sealed by (110) |
| 110 | Layer | Very dark grey silty clay, occ. charcoal flecks. Possible buried soil? Cut by [111], [118], [120], [124], [130], [133]. Sealed by (100), seals (109), (129) |
| 111 | Cut | Ditch cut, contains (112) |
| 112 | Fill | Very dark grey silty clay, occ. charcoal flecks - fill of [111] |
| 113 | Cut | Pit cut, contains (114). Cut by [116], [128], [132], [133] |
| 114 | Fill | Light grey silty clay, occ. patches of orange clay - fill of [113] |
| 115 | Fill | Dark grey silty clay - fill of [132]. Sealed by (131) |
| 116 | Cut | Ditch cut, contains (117). Cut by [118], [126]. Cuts [113] |
| 117 | Fill | Grey silty clay, occasional chalk flecks - fill of [116] |
| 118 | Cut | Ditch cut, contains (119). Cuts (110), (117). Uncertain relationship with [126]. |
| 119 | Fill | Very dark grey silty clay - fill of [118]. Sealed by (100), (131) |
| 120 | Cut | Ditch cut, contains (121). Cuts (110) |
| 121 | Fill | Dark grey sandy clay - fill of [120]. Sealed by (100) |
| 122 | Cut | Ditch/gully, contains (122). Cut by [124] |
| 123 | Fill | Brownish grey sandy clay -Fill of [122] |
| 124 | Cut | Very shallow linear feature - furrow?. Contains (125), cuts (123) |
| 125 | Fill | Brown silty clay - fill of [124]. Sealed by (100) |
| 126 | Cut | Gully, contains (127). Cuts [116], [133]. Uncertain relationship with (131) |
| 127 | Fill | Very dark grey silty clay - fill of [126]. Sealed by (131) |
| 128 | Cut | Possible post hole, contains (129). Cuts [113]. |
| 129 | Fill | Grey silty clay - fill of [128]. Sealed by (110) |
| 130 | Cut | Ditch, possible recut of [102], contains (103). Cuts [102], [106] |
| 131 | Fill | Brown silty clay - fill of [135] |
| 132 | Cut | Ditch cut, contains (115). Diffuse edges, uncertain relationship with (110). Cut by [135], cuts [113] |
| 133 | Cut | Ditch cut, contains (134). Cuts (110), [113], cut by [126], [135] |
| 134 | Fill | Grey silty clay - fill of [133] |
| 135 | Cut | Very shallow linear feature - furrow?. Contains (131), cuts [111], [118], [126], [132], [133]. |

Trench 2

| 200 | Layer | Brown silty clay loam - topsoil |
| :--- | :--- | :--- |
| 201 | Layer | Yellow/brown clay with patches of orange sand - natural |
| 202 | Fill | Brown silty clay - fill of [212] |
| 203 | Fill | Brown silty clay - fill of [213] |
| 204 | Layer | Black silty clay, abundant charcoal - spread of material sealing <br> ditch [209]. Possibly same as fill (211) |
| 205 | Cut | Ditch cut, contains [206], cut by [212] |

Trench 3

Trench 4

| 400 | Layer <br> Layer |
| :--- | :--- |
| 401 | Cut |
| 402 | Fill |
| 403 |  |
| 404 | Cut |
| 405 | Fill |
| 406 | Fill |
| 407 | Fill |
| 408 | Cut |

Dark grey silty clay - fill of [205]. Sealed by (202)
Primary ditch cut, contains (208). Recut by [209]
Yellowish brown silty clay, occ. charcoal flecks. Fill of [207]
Recut of ditch [207], contains (210), (211)
Dark grey silty clay, frequent charcoal flecks - primary fill of [209]. Sealed by (211)
Black silty clay, frequent charcoal inclusions - Upper fill of [209].
Sealed by/?same as (211)
Furrow cut, contains (202), cuts (206), (204)
Furrow cut, contains (203)

| Layer | Dark grey/brown clayey loam - topsoil |
| :---: | :---: |
| Fill | Grey silty clay, patches of yellow clay -fill of [309]. Sealed by (300) |
| Fill | Dark grey silty clay - fill of [310], sealed by (300) |
| Fill | Light yellow/grey silty clay - fill of [311], sealed by (300) |
| Fill | Grey/brown silty clay - fill of [312], sealed by [300] |
| Fill | Grey silty clay - fill of [313], sealed by (300) |
| Fill | Brownish grey silty clay - fill of [314], sealed by (300) |
| Fill | Greyish brown silty clay - fill of [315], sealed by (300) |
| Fill | Grey silty clay - fill of [316], sealed by (300) |
| Cut | Ditch cut, contains (301), cuts [324], cut by [320] |
| Cut | Ditch cut, contains (302), cuts [311], [320] |
| Cut | Ditch cut, contains (303), cut by [310] |
| Cut | Probable furrow cut, contains (304) |
| Cut | Ditch cut, contains (305), cuts [314] |
| Cut | Ditch cut, contains (306), cuts [318], cut by [313] |
| Cut | Gully cut, contains (307) |
| Cut | Gully cut, contains (308) |
| Layer | Yellow/brown clay - natural |
| Cut | Gully cut, contains (319), cut by [314] |
| Fill | Brown/grey silty clay -fill of [318] |
| Cut | Ditch cut, contains (321). Cuts [309], [324], cut by [310] |
| Fill | Grey silty clay - fill of [320], sealed by (300) |
| Fill | Yellowish brown silty clay - fill of [324]. Same as (329). Sealed by (300), seals (323) |
| Fill | Dark grey silty clay - primary fill of [324]. Sealed by (322), (329) |
| Cut | Recut of [327], contains (322), (323), (329). Cuts [327], cut by [309] |
| Fill | Yellowish grey silty clay - fill of [327]. |
| - | Void |
| Cut | Ditch cut, contains (325). Recut by [324], [309] |
| - | Void |
| Fill | Yellowish brown silty clay - fill of [324]. Same as (322). Sealed by (300), seals (323) |
| Layer | Dark greyish brown clayey loam - topsoil |
| Layer | Yellow/brown clay with patches of grey clay \& orange sand natural |
| Cut | Ditch cut, contains (403). Cut by [421] |
| Fill | Dark grey silty clay, occ. chalk flecks \& charcoal - fill of [402]. Sealed by (414) |
| Cut | Ditch cut, contains (405), (407). Cut by [422] |
| Fill | Very dark grey silty clay, occ. chalk \& charcoal flecks - secondary fill of [404]. Sealed by (406) |
| Fill | Brown silty clay - fill of [422]. Sealed by (400) |
| Fill | Grey silty clay, occ. charcoal flecks |
| Cut | Pit cut or possible ditch terminus, contains (417) |


| 409 | Cut |
| :--- | :--- |
| 410 | Cut |
| 411 | Cut |
| 412 | Cut |
| 413 | Fill |
| 414 | Fill |
| 415 | Fill |
| 416 | Fill |
| 417 | Fill |
| 418 | Fill |
|  |  |
| 419 | Cut |
| 420 | Fill |
| 421 | Cut |
| 422 | Cut |

Ditch cut, contains (416), cuts [419], cut by [421]
Ditch cut, contains (415), cut by [411], [421]
Ditch cut, contains (418), cuts [410], cut by [421]
Ditch cut, contains (413), cut by [402]. Uncertain relationship with [408], [409], [410]
Grey silty clay, occ. chalk flecks - fill of [412]
Brown silty clay - fill of [421], sealed by (414)
Brownish grey silty clay - fill of [410], sealed by (414)
Grey silty clay - fill of [409], sealed by (414)
Grey silty clay - fill of [408], sealed by (400)
Brownish grey silty clay - fill of brownish grey silty clay, occ
chalk pebbles, sealed by (414)
Pit cut, contains (420), cut by [409]
Grey silty clay - fill of [419], sealed by (400)
Furrow cut, contains (414), cuts [402], [409], [410], [411]
Furrow cut, contains (406), cuts [404]


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