Great Sunnings Farm, Sunnings Lane, Upminster

A post-excavation assessment

Site Code UP-GS83

Author Julian Hill

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Figure 2: Ossuary pit [7] is as yet unlocated in plan. Only features dated at assessment are shown, with the position of the later Iron Age enclosure shown on outline.

Figure 3: Only some fills of enclosure ditch [10060] definitely date to the Middle Iron Age. The finds within [208] and [10100] are likely to be residual, as these ditches are probably Romano-British. Only features dated at assessment are shown, with the position of the Middle/Late Iron Age enclosure shown on outline.

Figure 4: Only features dated at assessment are shown, with the position of the enclosure shown on outline.

Figure 5: Ditches containing pottery with a late date of before AD 200 are shown in light grey, those containing pottery with a late date of after AD 250 are shown on dark grey and undated, conjectural elements of the field system are shown hatched. With the exception of this conjecture, only features dated at assessment are shown, with the position of the enclosure shown on outline. Pre-AD 200 deposits, representing the disuse of the enclosure, are shown stippled.

Tables

Introduction

1.1 Site location

The site is located by Great Sunnings Farm, Sunnings Lane, Upminster in the London Borough of Havering. The approximate centre of the site lies at NGR 55670 18447.

Fig 1 Site location: Great Sunnings Farm

1.2 The scope of the project

The excavations at Great Sunnings Farm, Upminster recorded activity or artefacts dating from the Early, Middle and Late Iron Age and the Roman period, although occupation was not necessarily continuous. The assessment of the site itself is confined to immediate vicinity. However, the site forms a part of a broader project – 'Understanding East London Gravels' (Project Design MoLAS 2002) – which encompasses sites stretching from Ilford to Upminster.

The Post-excavation assessment and updated project design report is defined in the relevant GLAAS guidance paper (Paper VI) as intended to 'sum up what is already known and what further work will be required to reach the goal of a well-argued presentation of the results of recording and analysis' (VI/1).

The principle underlying the concept of post-excavation assessment and updated project design were established by English Heritage in the Management of Archaeological Projects 2 (MAP2), (1991). More recent GLAAS guidance has emphasised the need for this stage to be seen as 'brief and transitional', the document acting as a 'gateway' to further analysis and eventual publication (EH, GLAAS, 1999 VI/1)

1.3 Circumstances and dates of fieldwork

The site was originally identified during observation of topsoil stripping. It was excavated in 1983 by the Passmore Edwards Museum, under the direction of Pamela Greenwood, under rescue conditions in advance of gravel extraction. Funding was provided by the GLC.

The site can also be identified from cropmarks in aerial photographs, though the photographs only became available after the removal of the site for gravel.

1.4 Organisation of the report

This assessment report is organised into 7 sections. Section 2 briefly presents the topographic, historical and archaeological background context for the project. Section 3 reiterates the research themes outlined in the original project design for 'Understanding the East London Gravels'. In section 4 the results of the assessment of the stratigraphic record are presented on a period by period basis. Section 5 contains

the assessments of finds assemblages and their quantification. Section 6 examines the potential of the data discussed in sections 4 and 5 to answer the research questions outlined in section 3, whilst section 7 provides a brief synthesis of the site data, outlining its significance. The Updated Project Design for Great Sunnings forms part of a separate document and includes a project-wide overview of potential and significance, revised research aims, proposed tasks, resources and costs, and a single bibliography.

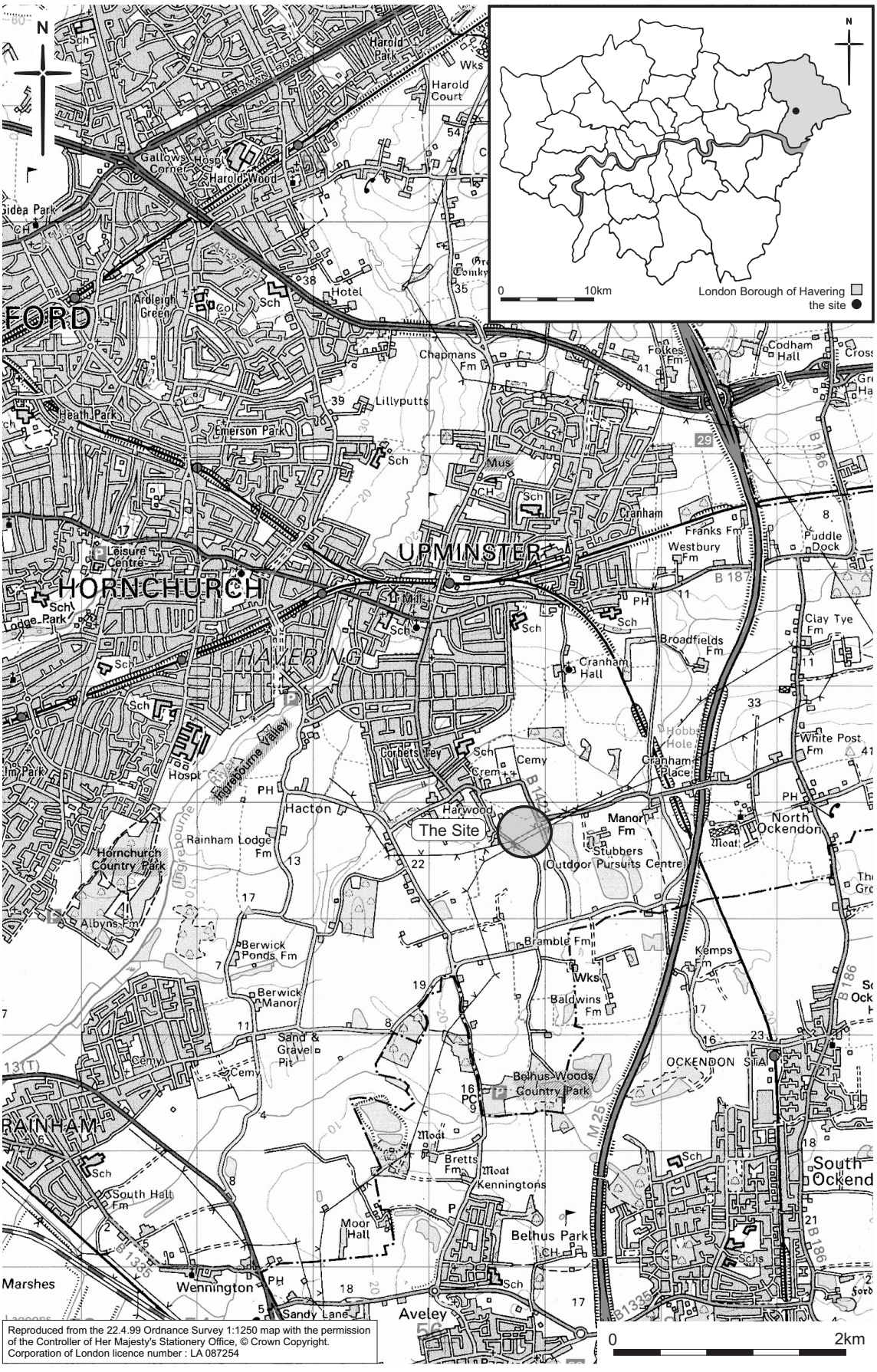


Fig 1 Site location: Great Sunnings Farm

2 Historical and archaeological background

2.1 Geology and topography

The site is situated on the Lynch Hill/Corbets Tey Thames Terrace Gravels at c 20.0m OD. The gravels are overlain by subsoil and topsoil.

2.2 Archaeological background

Great Sunnings lies about 1km east of Corbets Tey, an Iron Age and Roman settlement site (Marshall 1963). Land to the east of Stubbers Lane and the grounds of Stubbers House were extracted for gravel in the 1970s or earlier. Great Sunnings Farm lies about 600m from Manor Farm, North Ockendon (UP-MF83), a site also included within this project, where evidence for Iron Age and Roman occupation was recorded, along with scattered Mesolithic – Neolithic – Bronze Age flints and a small assemblage of early Saxon pottery. Roman ditch systems at Great Sunning and Manor Farm may be related.

3 Original research aims

The site was excavated under rescue conditions. All subsequent research is undertaken within the priorities established in the Museum of London's A research framework for London Archaeology, 2002. Research aims and priorities follow the outlines in *Management of Archaeological Projects 2 (MAP2), English Heritage London Division Guidelines Paper 3.*

Additionally, the project design (MoLAS 2002) highlighted a series of 'potential' research themes, or original research aims. These have been paraphrased below. They refer to the East London Landscape project as a whole rather than to Great Sunnings Farm, Upminster specifically.

3.1 Potential research themes

The sites in this project have the potential to illustrate the landscape development on the gravel terraces of the East London area by establishing certain fundamental details of that landscape such as aspects of its architecture and the nature of specific activities seen through their resultant archaeological residues. The project will therefore establish a considerable amount of detail of acts of inhabitation for all periods. This will allow broad discussion of cultural themes concerning the development of a settled landscape and farming practises in the estuarine Thames from the 3rd millennium BC to the 17th/18th century.

The following research aims have been crystallised from a number of broad themes which run through each of the site objectives. These questions have been formulated into a series of larger questions focusing on the most promising (in terms of potential) elements of the sites and their datasets.

For the purposes of this assessment these Aims have been regrouped whilst retaining the original numbering used in the project design document (MoLAS 2002).

3.1.1 General

- Aim 1: In co-operation with other relevant agencies to establish limits to a future study area which will address an emerging research agenda for prehistoric and Romano-British activity in East London (English Heritage 1997, 56 (L4) and 60 (MTD11)).
- Aim 5: To collate and present the evidence for the ritual or ceremonial activities, and to propose a framework for their development (English Heritage 1997, 44 (PC3)).
- Aim 11: To recreate landscapes from historical, archaeological, ecological and topographical data, interpret partitioning, alignments and territory and chart the way successive societies used and transformed the landscape. To demonstrate the extent to which natural and man-made features influenced later land use and settlement patterns in the study area, and in the wider regional context (English Heritage 1997, 56 (L4)).

3.1.2 Ceramic and finds

- Aim 2: In co-operation with other agencies to establish a means of ensuring that prehistoric ceramics and lithics recovered from the sites in the project can be assessed and referenced in a commonly agreed and accepted manner.
- Aim 3: In co-operation with other agencies to achieve an understanding of the relationship between the pottery fabrics and forms from the Neolithic through to the Iron Age-Roman transition. The absence of a clear chronological framework for the Iron Age in Essex has been a barrier to understanding regional social and economic processes (Bryant 2000, 14). The project team will establish a regional pottery sequence supported, where possible, by absolute dates (Nixon *et al* 2002, 19–20, English Heritage 1997, 55 (L3)).

3.1.3 Palaeolithic and Mesolithic

- Aim 4: To report on the few finds and features of Palaeolithic and Mesolithic date from the sites in this project, and to relate them to known activity in the locality.

3.1.4 Bronze Age

- Aim 6: To examine the evidence for the transformation from a ceremonial landscape to an enclosed agrarian landscape with increasingly long-lived patterns of settlement during the late 2nd and 1st millennium BC (Nixon *et al* 2002, 21).
- Aim 7: To explore the further changes taking place in the agricultural landscape during the 1st millennium BC and the appearance of nucleated settlements in the study area in the late 1st millennium BC and to analyse the associated activity traces (Nixon *et al* 2002, 21, English Heritage 1997, 48 (P8)).

3.1.5 Late Iron Age-Roman transition

- Aim 8: To examine and interpret the evidence for the Late Iron Age-Roman transition. In particular to understand the rate, scale and causes of change (Haselgrove et al 2001, English Heritage 1997, 44 (PC4)).

3.1.6 Roman

- Aim 9: To characterise the nature of Roman hinterland occupation, to determine its links with the pre-existing landscape and the wider world, and to explore the nature of activities, chronology and reasons for the changes in land use apparent between the early and later Roman periods (Nixon *et al* 2002, 24–5 and 36–7). To examine critically the notion that a decline in or change of land use occurred in the study area between the middle of the 2nd century AD and the end of the 3rd century AD.

3.1.7 Medieval and post-medieval

- Aim 10: To characterise the post-Roman development of the East London landscape identifying foci of activity in chronological and spatial terms (English Heritage 1997, 44 (PC5), Nixon *et al* 2002, 38–9).

3.2 Summary

The potential of the project has been considered at four levels:

- The potential to reconstruct the architectural settings and types of occupation and activities which occurred within the evolving landscape of what is now East London.
- The potential that constructional and depositional evidence, and environmental evidence have to expand current understanding of the particular research themes, within regional (and national) prehistoric and Roman and later studies.
- The potential that the selected multi-site dataset has to contribute to the regional model of changing landscapes.

The information that already exists in the form of interim reports, partially completed analysis reports and previous assessment work provides a substantial knowledge-base upon which to build. However, significant gaps remain, so a targeted selection of tasks needed to assess the potential of the archive have been formulated.

4 Site sequence: interim statement on field work

The discussion of the site sequence by chronological period which follows is informed by the fact that whilst all the prehistoric pottery and flint has been assessed (though much of these assemblages was undiagnostic and only broadly datable), only 25% of the LIA/Roman pottery has undergone assessment and the small amount of time available for the inspection of post-Roman pottery may mean that some evidence for later periods of occupation remains to be defined. The site has not been sub-grouped and all references are at context level.

The assessment has avoided conjecture where possible and has generally only included securely dated material within the provisional phase plans. As a result these plans may differ from those previously suggested by the excavators.

4.1 Natural and topography

The natural substrata comprise Thames gravels at c 20.0m OD.

4.2 Mesolithic/Neolithic

The items that may fall into this broad period were a retouched blade of Later Mesolithic to Early Neolithic date ([514] a fill of [10068]) and a fragment from a split pebble core with blade detachments (1/FR 27 – probably from machine disturbance [27] and therefore unstratified), which might date to the Early Neolithic period.

4.3 Late Bronze Age (1000 – 700 BC)

The majority of the worked flints were characteristic of a Late Bronze Age date, although an Early Iron Age date is also a possibility.

4.4 Early and Middle Iron Age (600 – 300 BC)

A small group of Early Iron Age cremations or structured depositions appears to be present at Great Sunnings. Unfortunately this material is as yet unlocated in plan and the precise number of burials is unclear though within the range 2 – 5. Possible cremation [7] contained at least 118 fragmentary sherds of Early Iron Age date (600 – 300 BC). A number of other features have been provisionally dated to this period and are shown on Fig 2.

Fig 2 Possible Early Iron Age features (600 – 300BC) at Great Sunnings Farm

4.5 Middle Iron Age (300 – 50 BC)

The most diagnostic pottery of this date occurs in [356] and [357] (fills of [10060]). There is a sherd link between these fills but this feature also contains pottery with a late date of AD 70. [10060] forms the south side of the junction between the two large, conjoining rectilinear enclosures that lie in the site. The integrity of a possible Middle Iron Age date for this feature requires further analysis and if demonstrably not residual will assist in the dating of the enclosures. The numbers of sherds from the remaining contexts are too small to allow the Early to Middle Iron Age date to be to be precisely refined. Fig 3 is provisional. The finds within [208] and [10100] are almost certainly residual within what should be, on alignment, Romano-British field boundaries.

Fig 3 Indeterminate Early/Middle Iron Age (600 – 50 BC) and Middle Iron Age (300 – 50 BC) features at Great Sunnings Farm

4.6 Late Iron Age/Early Roman (50 BC – 200 AD)

Most of the datable pottery within the 25% sample belongs to the 1st and 2nd centuries, with a probable latest date of AD150/160. The activity seems to be characterised by the disuse of the Iron Age enclosures and the imposition of a rectilinear field system across the levelled landscape. The fields probably postdate AD 70, though further analysis needs to be undertaken both their dating and that of the enclosures they replace.

Fig 4 Late Iron Age or 1st century features (50BC – 100 AD) at Great Sunnings Farm, probably associated with the use or disuse of the Middle/Late Iron Age enclosure

Fig 5 Early Roman features at Great Sunnings Farm, which define a field system probably dating to AD 70 150/160

4.7 Post-Roman

There is no definable post-Roman activity on the site apart from a scatter of 19th century pottery in the topsoil.

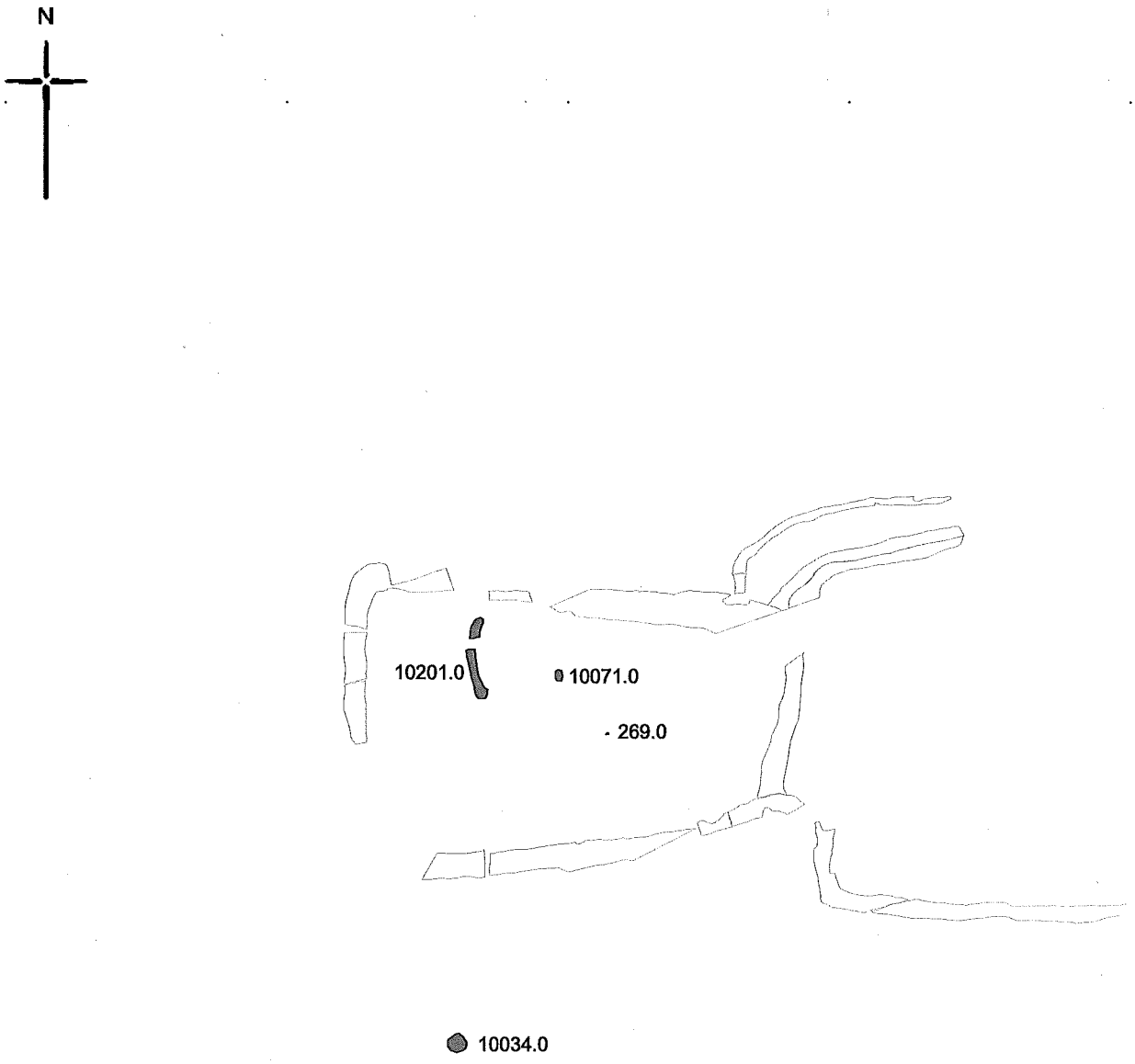
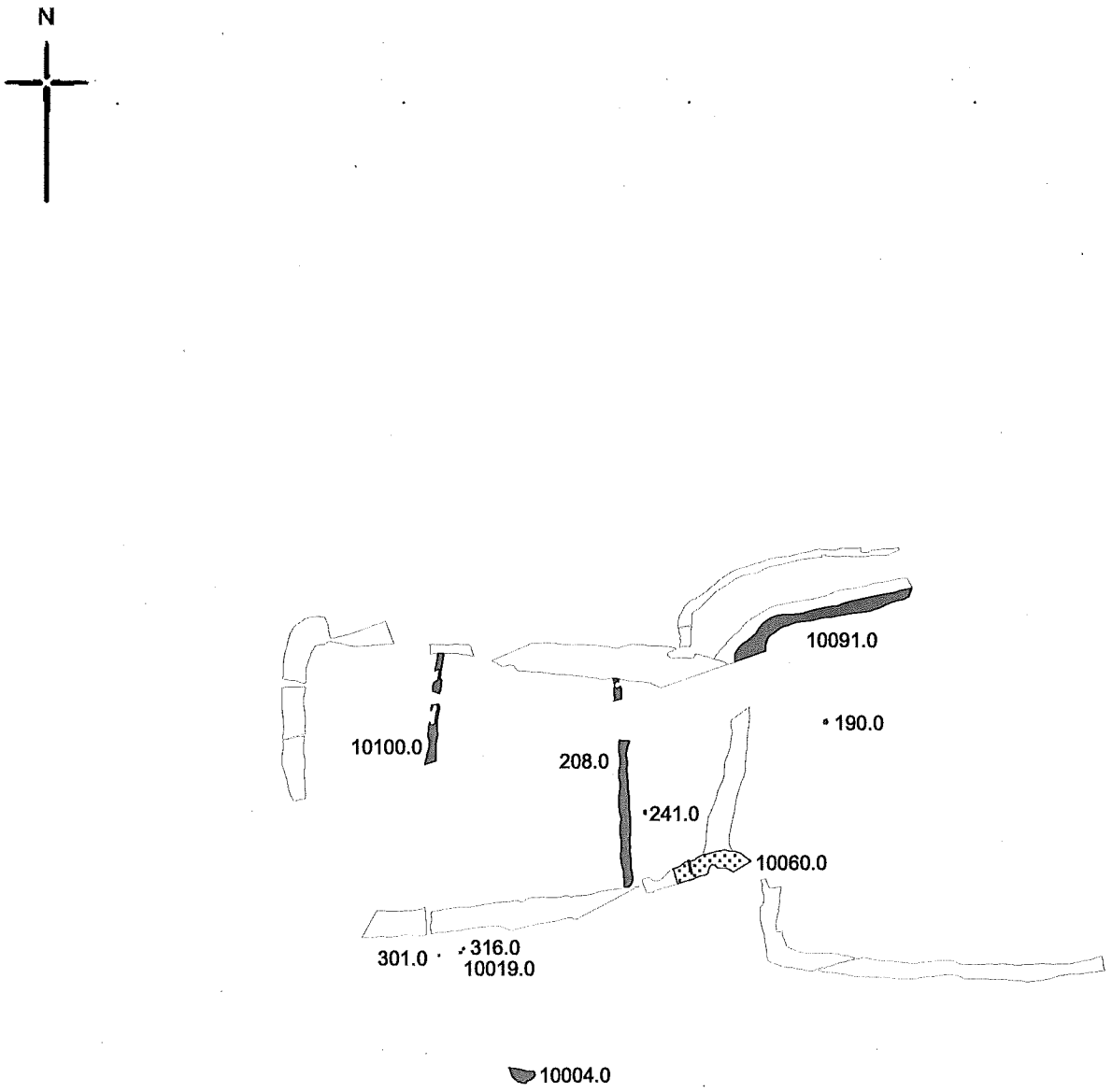


Fig 2 Possible Early Iron Age features (600BC - 100 AD) at Great Sunnings Farm.



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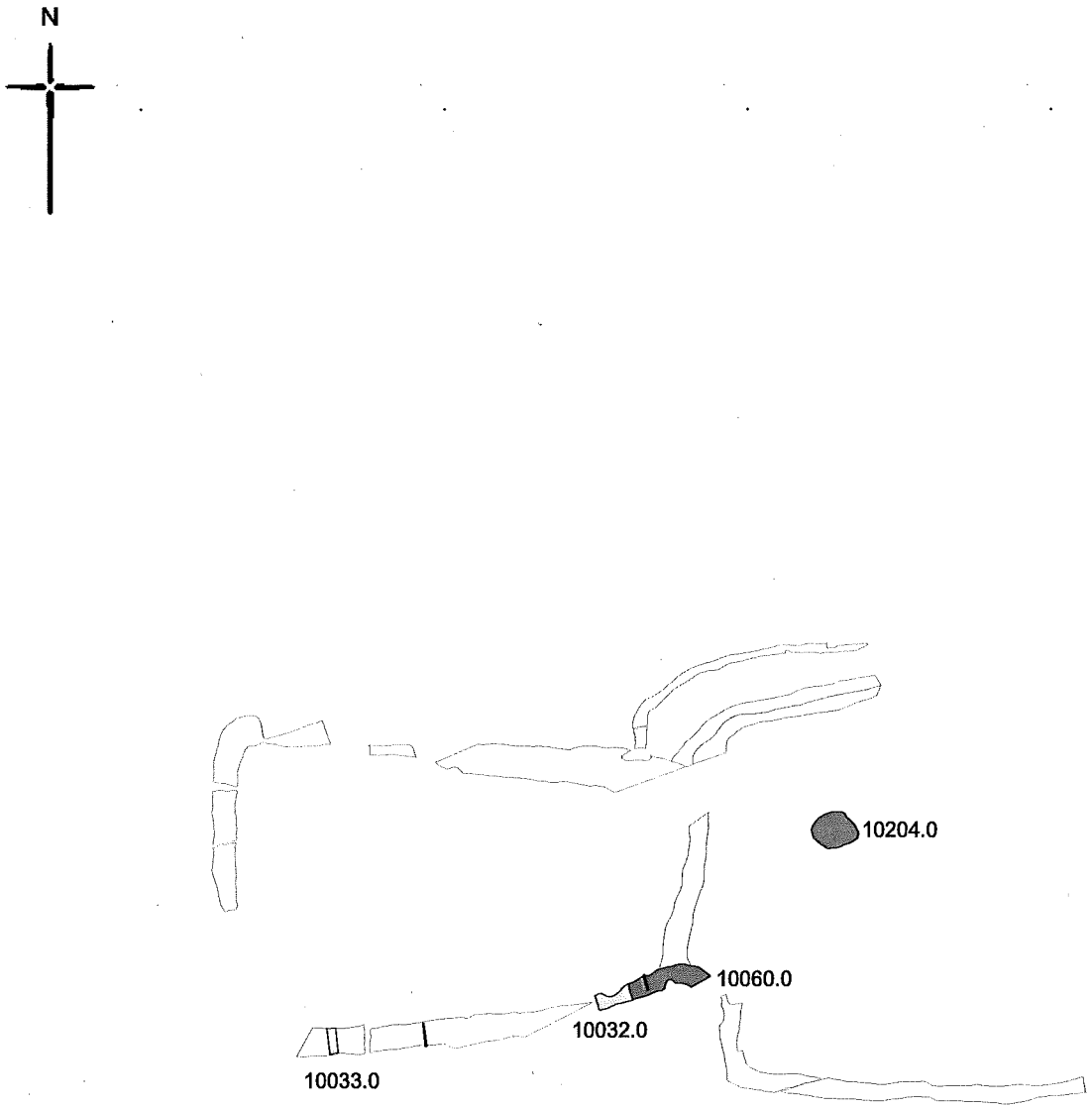

Fig 4 Late Iron Age or 1st century features at Great Sunnings Farm, probably associated with the use or disuse of the Middle/Late Iron Age enclosure

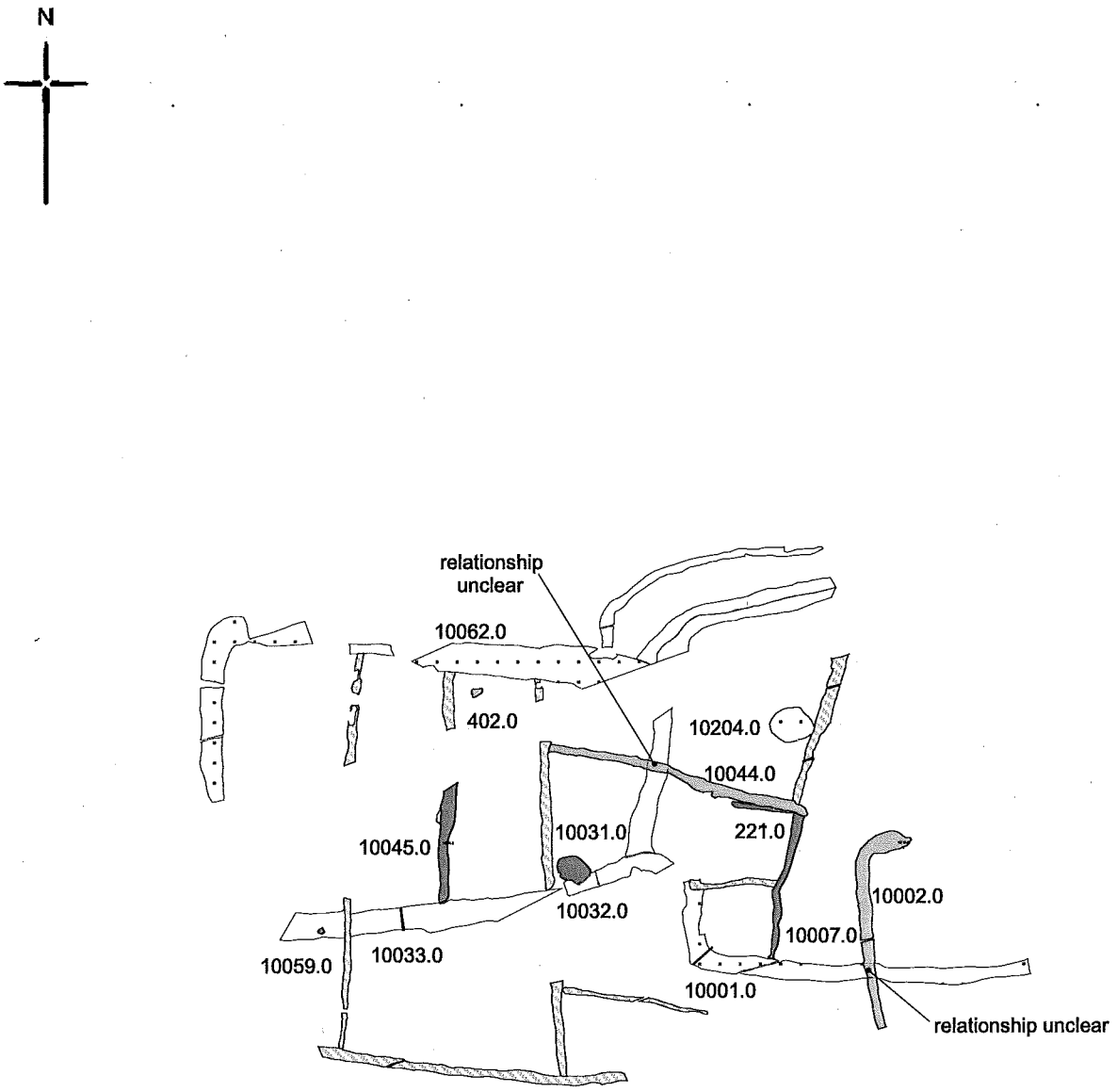

Fig 5 Early Roman features, which define a field system probably dating to AD70 150/160

5 Quantification and assessment

5.1 Post-excavation review

5.1.1 Completed tasks

This section lists the tasks completed so far prior to authorship of the post excavation assessment.

- Context sheets checked
- Context information entered into ORACLE database
- All located contexts are digitised as single contexts in AutoCAD, data extracted from multi-context plans at variously 1:20 and 1:100.
- ArcView GIS project generated of digitised contexts
- Linkage of ORACLE spot-dating to ArcView project
- Integration of MoLAS and other specialist reports

5.1.2 Problems with the archive and the assessment

Some of the principal problems encountered include

- Contextual relationships between features had not always been finalised, for instance it had not always been recorded whether a feature(s) was earlier, later or contemporary to another feature(s), but a physical relationship(s) was recorded. Hopefully these issues have been cleared up in most cases by clear dating evidence.
- The absence of an accurate site location survey. The digitised plan information has been located in GIS to the best of current knowledge by using modern boundaries marked on the Ordnance Survey and locating the site as a best fit within them. This was then checked and corrected against a rectified, digitised aerial photograph. An error in the grid was adjusted.
- The difficulty of locating features on multi-context plans.

The basic record of site was relatively less disordered (than, for example, Moor Hall Farm). Contexts were originally numbered 1–824. Feature numbers were widely employed. In this system a cut and its fill were given the same number. This has been left unchanged where possible, but obviously caused problems in features with more than one fill. In these situations the additional contexted fills were sandwiched within a number that denoted both the top fill that sealed them and the cut that contained them. Additional contexts 10001–10100 and 10201–205, were created to define the cuts in these circumstances. A further range, 10101–10143, was created to act as parent contexts for numbers recorded in section (transects etc). There are, therefore, 972 contexts entered into Oracle, under code UP-GS83, of which 327 (which including fills account for 908 of the site contexts). Of these 205 are provisionally

periodised. The most conspicuous shortfall after assessment is the absence of locational information for the cremation burials.

A provisional period was attached to 205 contexts based on the table below. This figure encompasses contexts allocated to periods 10 or 11. The number value has been entered in ORACLE in the entity number field at basic context level inputting. 889 contexts appear within the Bonn matrix dataset (UP_GS83.lst). The absentees are generally void. An edited and provisionally phased matrix version is also available in word (UPGS83A3MAT.doc).

PERIOD NAME	PERIOD CODE NUMBER
Natural	1
Mesolithic	2
Early/middle Neolithic	3
Late Neolithic/	4
EBA	5
MBA	6
LBA	7
EIA	8
MIA	9
LIA	10
Early Roman to c AD200	11
Late Roman (C3rd/4th)	12
Early/mid-Saxon	13
Saxo-Norman to c AD1200	14
Medieval	15
Post-Medieval	16
+ or void etc	101

Table 1 List of provisional periods applied to site sequence

5.2 Provisional post-assessment task list

- Photo index
- Location and AutoCAD digitisation of plans from hand drawn 1:20/1:100 plans for cremations and any other outstanding contexts.
- Complete digitisation of section locations/creation of parent context locations for strata recorded in section only
- Complete the attribution of context numbers to sections
- ArcView GIS project generated from all digitised contexts
- Creation of subgroups
- Inputting of context to subgroup mapping in Oracle database

- Sub-group annotation of context matrices
- Compilation of sub-group matrices in BONN/ArchEd
- Apply dating evidence to sub-group matrices
- Establish group structure and compile group descriptive text; compile group matrices
- Map subgroup to group data into ORACLE database
- Establish land use sequence and diagrams and compile land use descriptive text
- Map group to land use data into ORACLE database
- Establish periods; map period data into ORACLE database
- Establish period and/or phase driven plans using Arcview GIS linked with ORACLE completed dataset
- Principal author reading of MoL and other specialist publication reports
- Assessment of proximate sites data
- Establish final period and/or phase driven plans using Arcview GIS linked with ORACLE completed dataset
- Authorship of stratigraphic period text
- Finds review to finalize illustration and photography lists
- Full integration of all MoL and other specialist reports into stratigraphic text
- Prepare and submit stratigraphic, finds and environmental material to archive

5.3 The site archive and assessment: stratigraphic

Type	Description	Quantity	Notes
Context sheets	Excavation	972	Single context sheets
Plans	1:50	62 plans	Multi-context Plans of Areas A – F
Sections	1:10, 1:20	61 sheets	Sometimes described as 'segments' in primary archive
Miscellaneous		Not quantified	Notebooks, correspondence, project designs, finance documents, planning documentation, plans and summaries etc
Context matrices	Harris Bonn matrix data	2	Digital copies of context and plan matrices for entire site except 1977 evaluation trench
Photographs	B/W negatives	About 250	No ExCel index
Colour slides	Slides plastic folders	about 500	No ExCel index
Aerial photographs	Cropmark photos	Not quantified	NMR Aerial photographs

Table 2 Stratigraphic archive

5.4 Site archive and assessment : finds and environmental

Prehistoric pottery	167 sherds. Total 2.085kg
Worked flint	31 items, 2.252kg
LIA/Roman pottery	1075 sherds, weighing 13036g
Post-medieval pottery	10 sherds from an estimated 10 vessels, weighing 67g
Building material	13 boxes of which 7 recorded. All building material retained.
Accessioned finds	49
Animal bone	739 fragments of animal bone weighing 2.419 kg., 3 archive quality 'shoeboxes'
Conservation	8 artefacts (1 coin) and 1 bulk conserved, nothing to be treated

Table 3 Finds and environmental archive general summary

5.4.1 Prehistoric pottery

Charlotte Thompson

5.4.1.1.1 SUMMARY/INTRODUCTION

At just 167 sherds, this site assemblage is one of the smallest in the East London Gravels project, and was assessed in its entirety. It was recorded according to the guidelines set out by the Prehistoric Ceramics Research Group (PCRG 1995). The sherds were examined with a x20 binocular microscope and recorded by fabric form and decoration where appropriate. The pottery was also quantified by sherd count and weight.

5.4.1.2 Fabrics

All of the sites in the East London Gravels project have been recorded using a single type series that has been created during the assessment phase of the project. This type series can be found in the global assessment for prehistoric pottery.

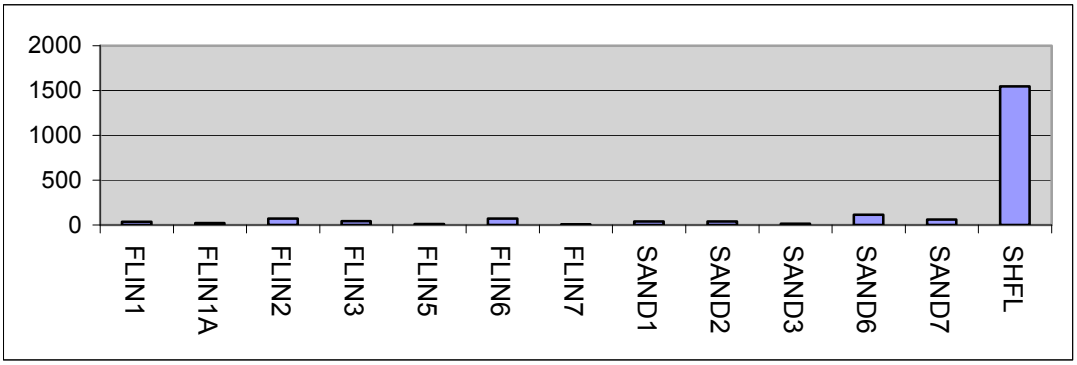

Table 4 Prehistoric pottery quantification by weight

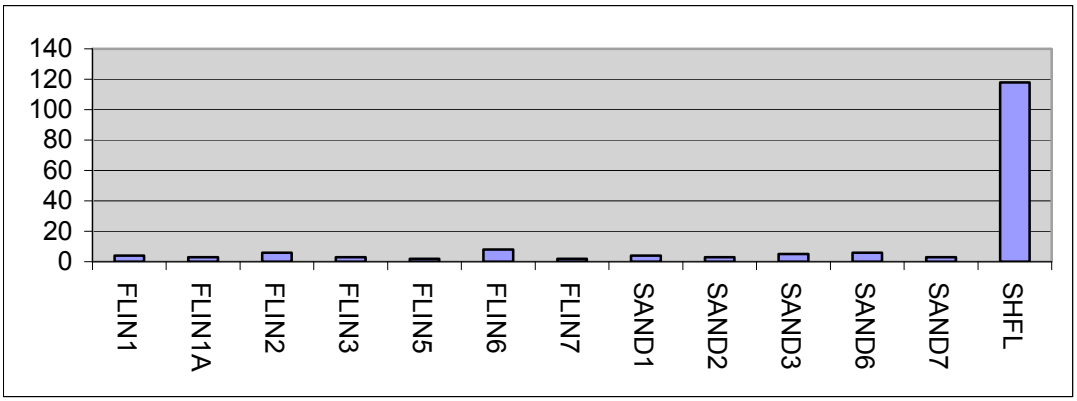

Table 5 Prehistoric pottery quantification by sherd count

SHFL, a shell and flint-tempered fabric, dominates the assemblage both by weight (71%) and sherd count (75%), and these sherds are from a single vessel from context [7]. The remaining sherds are evenly spread between flint-tempered and sand-tempered fabrics.

5.4.1.2.1 FORMS AND DECORATION

There is a good selection of diagnostic sherds in the site assemblage, two of which, in context [356] and [357], are likely to belong to the same burnished vessel. They are sherds made from SAND6, a glauconitic-temper fabric, and the footring base is very similar to Little Waltham form 13, an everted rim bowl or jar with a footring (Drury 1978, 54). At Little Waltham this form is principally made in a glauconitic fabric, and carbon dates associated with this form are mid to late 3rd century BC (ibid 126-127). Therefore these sherds can be dated to the Middle Iron Age.

Another diagnostic sherd is a small SAND2 rim from a jar in [248] which has fingertip decoration on the top of the rim that is likely to have been cable decoration. Cabled rims have also been found at Hunts Hill, Manor Farm, Warren Farm and Moor Hall Farm in the East London Gravels in Late Bronze Age and Early Iron Age contexts. Cabled rims are also found in Late Bronze Age sites such Broomfield (Brown 1995i) and the Late Bronze Age phase at Shoebury (Brown 1995ii), but also Early Iron Age sites such as Fox Hall Farm (Brown 1995iii). As this rim is made from a sandy fabric, it is more likely to be Early Iron Age.

There is a reconstructed rim and shoulder profile of a tripartite jar with an angular shoulder and a flared rim in SHFL in context [7]. The diameter seems to be 360mm and can be paralleled at the Early Iron Age site at Beacon Green (Brown 1992, 17). Unexpectedly, the jar appears to have a flint-gritted base, something that is generally associated with Late Bronze Age flint-tempered jars. However, as this vessel is an Early Iron Age form made in an uncommon shell and flint temper fabric, an Early Iron Age date is more appropriate. This context also contains a tripartite bowl with a concave neck that can be paralleled in the undecorated forms in the Darmsden-Linton group (Cunliffe 1991, 565).

5.4.1.2.2 DISCUSSION

At the time of writing this site has not been sub-grouped, but parent contexts were available. However, only two contexts are part of the same parent context, so little further grouping can be done at this stage.

This is a small site assemblage, and it should be noted that aside from context [7] which contains at least 118 fragmentary sherds from a single vessel, the mean average sherd count for the other contexts is two sherds.

The presence of diagnostic sherds has meant that individual vessels can be paralleled at sites such as Fox Hall Farm (Brown 1995iii) and Little Waltham (Drury 1978), and the assemblage is Early to Middle Iron Age. It seems clear that context [7], an ossuary pit, is Early Iron Age as it contains both the tripartite jar and tripartite bowl, although it remains to be confirmed whether the cremation(s) from F8 and F9 in Grid B are associated with this context. Equally, it is evidence that the glauconitic vessel with a footring in [356] and [357] is Middle Iron Age. However, the remaining contexts are too small to allow the Early to Middle Iron Age date to be to be further refined, and it is not possible to parallel the site assemblage as a whole.

5.4.1.3 Assessment work outstanding

The assemblage has been assessed in its entirety.

5.4.2 Prehistoric worked flint

Lynne Bevan

5.4.2.1 Summary/Introduction

The worked flint from this site was rapidly scanned according to the revised project design (Rowsome *et al*. 2002, 33). Due to the small size of the assemblage, flints were identified according to tool or waste type and, where possible, assigned a general date, as well as being quantified by number and weight. They were not, however, inputted into the MoLAS database, since a summary catalogue of the assemblage had been compiled in the past.

5.4.2.2 Discussion

A high proportion of the flint originally collected was found to comprise unworked chunks and pebbles, often water-rolled and broken by thermal, or other natural, agency. Some of these items had been mistakenly entered as artefacts in the hand-written draft catalogue.

The majority of the remaining 31 worked flints, weighing 2.252kg, comprised large rough chunks and flake cores characteristic of Late Bronze Age technology, and were often of poor quality. Flint colours ranged from light to medium brown and grey, often tinged with yellow. The unpredictable quality and, where present, thin remnant cortex, indicated that most, if not all, of the flint originated from a secondary, probably river gravel, source.

The only potentially chronologically-early items were a retouched blade of Later Mesolithic to Early Neolithic date (514) and a fragment from a split pebble core with blade detachments (1/FR 27) which might date to the Early Neolithic period. Two cores of probable Bronze Age date (1/FR 30 and FR 35) had been re-used as hammerstones, an indication of resource stress and that good quality flint was at a premium.

No formal tools and few retouched items were noted, which is suggestive of a Late Bronze Age date (Herne 1991), or possibly even an Early Iron Age date (Humphrey and Young 2003). A generally Iron Age date was also suggested for the collection by Elizabeth Healy (pers. comm.). The assemblage was comparable to similar material from the much larger assemblage recovered from the Late Bronze Age riverside zone at Runnymede Bridge, Egham, Surrey (Bevan forthcoming). A Late Bronze Age to Iron Age date would be in keeping with the prehistoric pottery from the site (see Thompson, this volume).

Traces of possible utilisation were noted on some of the material, although much of the unretouched flakes and other debitage appears to have sustained edge damage which is easily confused with utilisation.

5.4.3 LIA/Roman pottery

Joyce Compton ECC FAU

5.4.3.1 Introduction/methodology

The assessment of the LIA/Roman pottery from this site required a 25% sample to be taken, allowing pottery to be recorded from just twenty-six contexts. Context information was not available, so a random sample of eight boxes was selected from a total of thirty-one. Boxes containing obviously unstratified pottery were disregarded. Two of the sampled boxes contained near-complete vessels, so pottery from a ninth box was recorded to balance the sample.

The pottery was recorded by fabric and form onto Museum of London pottery pro forma sheets adapted for the project. The fabrics were recorded using the ECC FAU fabric series, and forms recorded using the type series devised for Chelmsford (Going 1987, 13-54) and that for *Camulodunum* (Hawkes and Hull 1947, 215-75). Reference was also made to the Southwark type series (Marsh and Tyers 1978) where appropriate. Once recording was completed, the data were entered onto an 'embedded' spreadsheet supplied by the Museum of London.

5.4.3.2 Previous work

Previous work has been undertaken on the pottery, but information regarding the full extent of this was not available. In the main, sherds had been individually bagged, each with a hand-written fabric description, and in most cases comparisons had been made to *Verulamium* pottery types, and to *Camulodunum* types, where appropriate. Extensive use had also been made of Thompson (1982). It was apparent from the fabric descriptions that many of the grey wares were unsourced (for instance, North Kent grey ware had not been recognised). In addition, putative Late Iron Age imports, although few in number, were wrongly assigned because of incorrect fabric identification. Many of the vessels have been reconstructed and much appears to have been drawn, although the drawn record looks to be more comprehensive than would be the case for modern publication.

5.4.3.3 Pottery factual data

The sampled LIA/Roman pottery assemblage comprised 1075 sherds, weighing a total of 13036g. There were three large groups of more than 100 sherds, six medium-sized

groups, and seventeen of less than 30 sherds each. Six contexts could not be closely dated within the Late Iron Age and Roman periods, and a further four could only be assigned broad dates. The character of the assemblage, however, is Late Iron Age and early Roman, and this is borne out by the close dates provided for the remaining contexts. Most of the datable pottery belongs to the 1st and 2nd centuries, with a probable latest date of AD150/60. The latest forms present are bead-rimmed dishes (B2 and B4) which are current from the mid 2nd to mid 3rd centuries. No 3rd-century and later fabrics, for instance Nene Valley colour-coated ware, were recorded, and latest Roman fabrics, such as Oxford red colour-coated ware, were also absent.

In contrast, large amounts of shell-tempered wares, in a variety of forms, were present throughout. Shell-tempered wares were superseded gradually during the early Roman period by vessels in sandier fabrics. The accepted date for this to occur fully is AD120-50, although little research in this direction has yet been published.

The pottery in the remaining boxes was scanned rapidly in order to confirm the early Roman nature of the assemblage. The pottery types appeared to be similar, with large quantities of shell-tempered wares present. No later Roman fabrics or forms were noted. The latest form appeared to be a funnel-necked beaker with narrow bands of rouletting on the body, perhaps dating to the 3rd century or later.

The presence of a number of very large flagons in Verulamium region white ware was also noted. These amphora-sized vessels are not common in central Essex.

5.4.3.4 Assessment work outstanding

Several closely-dated contexts contained a range of forms and fabrics and these should be recorded by EVE and analysed in detail. Since many contexts are split between several boxes, not all of the pottery from a single context was necessarily recorded during the assessment. Further recording work should take place in conjunction with stratigraphic information, leading to full study of targeted contexts, rather than the recording of the whole of the remaining pottery.

Comparison should be made with the pottery work done previously in order to assess the standard of recording.

5.4.3.5 List of groups for quantification

Not identified, for the reasons given above.

5.4.3.6 List of pottery for illustration

Much of the pottery seems to have been drawn previously, although the quality of the work will need to be assessed. A selected list of items which might merit publication could be drawn up from this body of work.

5.4.4 Post-medieval pottery (c 1500–1900)

Lyn Blackmore

5.4.4.1.1 SUMMARY/INTRODUCTION

Very little time was allocated for checking the pottery from this site. No pottery spot date list had been prepared, and as only a few boxes had been checked at the Passmore Edwards Museum the majority had no indications of the ceramic periods

represented within them. It was, therefore, impossible to make an educated guess at which contexts to examine. Discussion with Pamela Greenwood, however, indicated that there would be no Saxon pottery and that any post-medieval sherds would be in the early layers and associated with the mole drains ([42]). In the event there was only time to examine contexts [1] and [2], and the only material that could be found for [42] was CBM, but a rapid scan of the material for earlier prehistoric sherds revealed no obvious medieval or later pottery.

5.4.4.1.2 METHODOLOGY

The pottery was examined macroscopically and using a binocular microscope (x 20) where appropriate, and recorded on paper and computer using standard Museum of London codes for fabrics, forms and decoration. The numerical data comprises sherd count, estimated number of vessels and weight.

5.4.4.1.3 FABRICS

A sherd of Sunderland slipped ware bowl or dish was found in area A (unstratified). The other fabrics comprise transfer-printed wares, bone china/English porcelain and

5.4.4.1.4 FORMS

All the sherds are small; they mainly comprise tablewares but also include sherds from a large bowl or dish and a stoneware jar/bottle. The only item of note is part of a small figurine of a Chinaman (English porcelain/bone china),

5.4.4.1.5 DISCUSSION

The sherds that were examined are all small fragments of 19th-century material from the topsoil/uppermost layers and could have reached the site as a by-product of part of manuring the fields. Apart from the mole drain there does not seem to have been any post-medieval activity on the site.

5.4.4.2 Assessment work outstanding

Some 33 boxes of pottery were not examined, but no post-Roman material was noted in them by the Passmore Edwards Museum, or by the Essex and Specialist Services prehistoric and Roman specialists.

5.4.5 The building material

Ian Betts

5.4.5.1 Introduction/methodology

The sampled building material has been recorded using the standard recording forms used by the Museum of London. This has involved fabric analysis undertaken with a x10 binocular microscope. The information on the recording forms has been added to an Oracle database.

5.4.5.2 Iron Age Belgic brick

A considerable number of partially complete Belgic bricks were recovered, together with many more smaller fragments of fired clay which are also likely to be the same material. They are mostly in London area fabric group 3264 (individual types 2452, 3004, 3006)

One brick is particularly interesting having a round hole 9mm in diameter sloping at a 45º angle from the surface. The hole penetrates half the thickness of the brick.

Context	Length	Breath	Thickness
[110]	?	54mm	38-42mm
[128]	?	82	?
[229]	?	?	40-47
[267]	?	55-58	43-47
[290]	?	?	58-61
[353]	?	?	42-50
[432]	?	?	60
[517]	Over 98mm	76-77	60
[579]	?	?	49-50
[603]	?	?	58
[667]	?	73-74	54-56
[735]	?	?	48-57

Table 6 Size of Belgic bricks

From context [229] is part of what appears to be a mudbrick. This may be an unfired Belgic brick.

5.4.5.3 Iron Age daub

The undiagnostic daub fragments present are presumably Iron Age. There is no indication of function.

5.4.5.4 Post-medieval ceramic building material

5.4.5.4.1 FABRICS

Later fabrics

2275 (near 3094)

Undated fabrics

2271

5.4.5.4.2 FORMS

Roofing tile

Peg tile

The is a peg tile (fabric 2271), probably of post-medieval date, in context [1].

Drains and pipes

Context [327] produced part of a small water pipe approximately 69mm in diameter. This is in fabric 2275 and is probably 18th or 19th century in date.

5.4.5.5 Undated stone building material

A minute fragment of quartzite sandstone of uncertain function or date was found in context [38].

5.4.6 The accessioned finds

Angela Wardle

5.4.6.1 Introduction/methodology

The original site records list 12 accessions, which have been located and put on the MoLAS Oracle database, with the exception of SF 7, which is pottery . A further 15 loom weights and 23 bricks have been accessioned. There are potentially a further 33 fired clay objects to accession, some of which are fragmentary weights and bricks listed in the report by S Crotty (see below), although some of the fragments examined appear undiagnostic.

All finds require repackaging and labelling to archive standards. The iron nails (bulk finds) are stored with coloured silica which is now considered toxic and must be replaced.

UPGS83	preh/Iron age	Roman	unknown	total
stone				
ceramic	40	-	-	40
glass	-	1	-	1
Iron			3	3
copper		3	2	5
totals	39	4	5	49

Table 7 Summary of the accessioned finds by material and period

The SF report needs revision. There are several incorrect identifications, (corrected on Oracle). References are incomplete and there is no bibliography. The catalogue entries should be edited to a standardised format. No context or feature numbers are given and it is not possible to relate the finds to the site stratigraphy.

5.4.6.2 Previous work

Draft accessioned finds reports by S Crotty exist for selected registered finds and the ceramic finds which were not previously accessioned. The finds were examined in conjunction with these reports.

5.4.6.3 Categories by dating and materials

5.4.6.3.1 CERAMIC/FIRED CLAY

Fifteen triangular weights are of late Iron Age form and have now been given accession numbers. The draft report by S Crotty provides detailed descriptions, but no discussion – particularly of the dating or site provenance. All fragments are assigned to a loom weight fabric series. Baked clay fragments, several of which are also probably from loom weights are also described in the report, but it has not been

possible, in the time available to match the boxed fragments to the catalogue entries, which are listed by context. The fabric descriptions which appear to have been used are included with the pottery records but examination of a sample of the loomweights by a ceramic specialist suggests that the fabrics should be re-examined and the descriptions modified in line with current guidelines (PCRG 1995).

Twenty two 'Belgic bricks' are also catalogued, again with their own 'brick' fabric series, for which the same observations apply. Several are near complete. Again there are likely to be further examples among the fragments (Groups 4 and 5 in the report) and these remain to be accessioned. The precise function of these enigmatic objects, which vary considerably in size, is uncertain. It has been suggested that they are hearth or kiln furniture, but this is not proven, and they appear to have a regional (eastern) distribution (J Cotton pers comm).

In addition there are two more ceramic objects <1> [18], a sling shot (not identified in the catalogue) and <5> [667], a spindle whorl, both displayed in the Museum of London.

5.4.6.3.2 COPPER ALLOY

One coin <2> is a Claudian copy of AD 41–54 and part of a Colchester brooch <4> is also of mid-1st-century date. SF<3>, originally thought to be part of a brooch, is a clasp or mount. In addition there is a ferrule <8>, and a possible handle <12>, both likely to be of Roman date.

5.4.6.4 Functional analysis

The most closely dated artefacts are all Roman, dated to the mid 1st century AD. The loom weights and 'bricks' are conventionally Iron Age, but are likely to have continued in use in the post-conquest period.

Although the assemblage is small, it is possible to ascribe most objects to function and various activities are represented. The only item of personal ornament, the fragmentary brooch <4> is a common form on transitional/early Roman sites in south-eastern Britain. The finds provide limited information about the economy of the settlement. The spindle whorl and loom weights suggest the production of wool and the weaving of textiles although other uses for clay weights have been suggested (Poole 1984, 406). The slingshot is a weapon, presumably used in hunting.

The absence of bone artefacts which would normally be found on Iron Age and Roman sites is presumably due to acidic soil conditions which have destroyed the material.

There are no accessioned finds which can be dated independently to the later Roman period, although the project design suggests that late Roman occupation/field systems were identified.

5.4.6.5 Provenance of objects

Full stratigraphic grouping is not yet available (October 2003), but it is evident from preliminary interpretations that most come from ditches and pits. Many of the fired clay objects came from two context, [15] and [110].

5.4.6.6 Assessment work outstanding

It is possible that more ceramic objects will be recovered from the building materials which have not been fully examined.

5.4.6.6.1 LIST OF OBJECTS FOR INVESTIGATIVE CONSERVATION

5.4.6.6.2 LIST OF OBJECTS FOR ILLUSTRATION

<1> [18] sling shot

<5>[667] spindle whorl

5.4.7 Coins

5.4.7.1 Introduction/methodology

The single Claudian coin is included in the general summary above.

5.4.8 The plant remains

No botanical assessment undertaken.

5.4.9 The animal bone

Alan Pipe

5.4.9.1 Introduction/methodology

Each context group was described directly onto the MoLAS/MoLSS animal bone assessment database in terms of weight (kg), estimated fragment count, preservation, fragment size, species-composition, carcase-part representation and modification; and the recovery of epiphyses, mandibular tooth rows, measurable bones, complete long bones, and sub-adult age-groups. All identifications of species and skeletal element were made using the MoLSS Environmental Archaeology Section animal bone reference collection. When accurate identification to species or genus level was impossible, fragments were assigned to the approximate categories 'ox-sized' mammal or 'sheep-sized' mammal as appropriate. It should be noted that unidentifiable 'long bone fragments', whether of 'ox-sized' or 'sheep-sized' mammal, were recorded only in terms of their contribution to the overall bone weight and fragment count for each site and context group; they are not recorded in the detailed summary tables which deal with carcase-part representation, modification and recovery of sub-adult age-groups. In view of the generally very poorly preserved and highly fragmented nature of the hand-collected assemblage, the prevalence of unidentifiable, 'ox-sized' and 'sheep-sized' mammal long bone fragments, and the lack of recovery of fish, amphibians or small mammals, no attempt was made to assess the wet-sieved bone.

This site produced only 2.419 kg, approximately 739 fragments of generally poorly preserved animal bone mainly in the 25-75 mm size range. This material derived predominantly from adult ox horse and sheep/goat head and foot elements with a smaller component of upper and lower limb. There was a single recovery of adult pig upper limb from [15]. Evidence suitable for study of age-at-death derived from four mandibular tooth rows and nine epiphyses. There were no measurable bones or

complete long bones. There was no evidence for modification or the presence of sub-adult age groups.

When this material is grouped in terms of feature-type, it is clear that the bulk of the assemblage, 2.380 kg/approximately 672 fragments, derives from ditch fills, with a much smaller component, 0.244 kg/approximately 54 fragments, from pit fills. Material from gully and posthole fills provided only negligible quantities.

5.4.10 Conservation

5.4.10.1 Introduction/methodology

The following assessment of conservation needs for the accessioned and bulk finds from the excavations at Great Sunnings Farm, Upminster, encompasses the requirements for finds analysis, illustration, analytical conservation and long term curation. Work outlined in this document is needed to produce a stable archive in accordance with MAP2 (English Heritage 1992) and the Museum of London's Standards for archive preparation (Museum of London 1999).

	Material	**No. accessioned**	**No. conserved**	**No. to be treated** (see below)
Metals	Copper alloy	5 (1 coin)	5 (1 coins)	
	Iron	3	2	
Inorganics	Ceramics	39	1 + 1 bulk in LBL gallery	
	Glass	1		

Table 8 Summary of conservation work

Conservation support at the time of the excavation was provided by conservators working for Passmore Edwards Museum.

Treatments are carried out under the guiding principles of minimum intervention and reversibility. Whenever possible preventative rather than interventive conservation strategies are implemented. Procedures aim to obtain and retain the maximum archaeological potential of each object: conservators will therefore work closely with finds specialist and archaeologists.

5.4.10.2 Finds analysis/investigation

The accessioned finds were assessed by visual examination of both the objects and the X-radiographs, closer examination where necessary was carried out using a binocular microscope at high magnification. The accessioned finds were reviewed with reference to the finds assessments by Angela Wardle. No analytical work was identified by the small finds specialist.

5.4.10.3 Work required for illustration/photography

No items were identified as requiring conservation input to prepare them for photography or illustration.

5.4.10.4 Preparation for deposition in the archive

The metal and inorganic objects, appear to be stable. The small finds from this site were packed to the Passmore Edwards standards of the late 1980's, these are now considered to be inadequate for deposition in the LAARC. All the material, including the bulk finds, needs to be re-packed according to current best practice. It is suggested that the Museum of London Standard's for archive preparation (Museum of London 1999) are used.

5.4.10.5 Remedial work outstanding

There is no remedial work outstanding.

6 Potential of the data

6.1 Realisation of the original research aims

The original research aims are defined in Section 3.

6.1.1 General

- A complete assessment of this site would create a site archive that would realise **Research Aim 1** by contributing to an emerging research agenda for prehistoric and Romano-British activity in East London.
- The evidence for cremations (which represent a ritual or ceremonial use of the landscape) will contribute to realising **Research Aim 5**.
- The evidence for occupation on the site from the mid/late Iron Age and the early Roman period, together with associated ditches and field boundaries will realise **Research Aim 11**. The status of earlier occupation such as the possible late Bronze Age/early Iron Age hut, is less clear.

6.1.2 Ceramic and finds

- The assessment of the complete prehistoric pottery assemblage will contribute to the realisation of **Research Aim 2.** This site assemblage will also contribute to Research Aim 3 as there are diagnostic sherds that can be related to particular fabric categories. For example, the sherds of SAND6 can be dated to the Middle Iron Age because of fabric and form parallels at Little Waltham (Drury 1978). Such parallels would contribute to the Middle Iron Age part of the fabric type series.

6.1.3 Palaeolithic and Mesolithic

- The site will not contribute to the realisation of **Research Aim 4**. The worked flint assemblage is generally undatable and often unstratified and mainly comprises waste material occurring singly or in small groups, factors which preclude the need for further analysis of the assemblage as a whole.

6.1.4 Bronze Age

- The site does not contribute to the realisation of **Research Aim 6** or **Research Aim 7**.

6.1.5 Late Iron Age –- Roman transition

- The changing morphology of the occupation of the site is most evident over this period. The Middle or Late Iron Age double enclosure is replaced by a rectilinear filed system. The range, types and date of the pottery and accessioned finds

sampled during the assessment will contribute to the more precise dating of these features at analysis will realise **Research Aim 8**.

6.1.6 Roman

- The clear evidence for Roman field boundaries and the apparent lack of later Roman pottery in the assemblage will enable the site to contribute to the realisation of **Research Aim 9**.

6.1.7 Medieval and post-medieval

- The site will not contribute to the realisation of **Research Aim 10**.

6.2 General discussion of potential

6.2.1 Palaeolothic/Mesolithic/Neolithic/Bronze Age

The site has no potential for these periods. The small worked flint assemblage has Late Bronze Age characteristics but may be Early Iron Age in date. It has no potential for further analysis.

6.2.2 Early Iron Age

The Early Iron Age cremation(s) have potential for further study, although their location and number is currently poorly defined.

6.2.3 mid/late Iron Age and the impact of the Roman conquest

There is evidence for a mid-late Iron Age occupation on the site, in the form of an interlocking double enclosure. Analysis should focus on the refining of the chronology for the construction and disuse of this feature.

It is clear that analysis of the chronology of the site during this period offers considerable potential for examining the late Iron Age – Roman transition. This analysis will be complemented by the study of the accessioned finds assemblage, most of which is of late Iron Age date with some early Roman objects, including a Claudian coin. Do these denote Roman presence on site or the 'Romanisation' of the area.

The large collection of loom weights and fire clay 'bricks' merits specialist study and comparison with assemblages from other sites in the study area. There may be potential for defining the function of the 'bricks' through examination of a larger group.

6.2.4 Early Roman (to AD 200)

It is important to refine the dating evidence for the abandonment of the double enclosure and for the imposition of Romano-British fields over the cleared area. Through doing this the site has potential to inform on the chronology and character of the agricultural exploitation of London's hinterland. How quickly did this process take place?

6.2.5 Later Roman (AD 200 – 400)

After c AD 150/160 there seems to have been a significant decline in the amount of pottery deposited on the site. The site has the potential to contribute to a project wide analysis of this pattern.

6.2.6 Saxon, medieval and post-medieval

The site has no potential for these periods.

6.2.7 Other potential

The moderately large but, at best only moderately and generally poorly, preserved animal bone assemblage has some limited potential, when considered as part of the animal bone remains from the project sites as a whole, for study of the use and disposal of the major domesticates ox, sheep, and pig in terms of carcase-part selection and age-at-death, and to a much lesser extent, butchery technique and stature.

6.2.8 Aerial photography

There is considerable, but unquantified, potential for the use of rectified/digitised aerial photographs in order to extend the datable landscape features at Moor Hall Farm into the surrounding landscape.

7 Significance of the data

7.1 Local

The site has local significance for a number of reasons

- The site's prehistoric pottery assemblage provides evidence of Early and Middle Iron Age activity at this site.
- The prehistoric worked flint indicates some activity at the site occurring in the Late Bronze Age and possibly Early Iron Age.
- There is a demonstrable transition from an Iron Age enclosure to a Roman field system.
- The LIA/Roman pottery assemblage appears to have the potential to examine the transition from the Late Iron Age to the Roman periods. There is scope for examination of the range and source of the pottery types present for the Late Iron Age and early Roman periods.
- The presence of so many Belgic bricks allows more detailed analysis of this class of material and its relationship with the site
- If considered with the assemblages from other sites within this project, the animal bone assemblage will provide some insight into patterns of local exploitation and subsequent disposal of the major domesticates, particularly horse, ox, sheep/goat, pig and dog.

7.2 Regional

The site has regional significance for a number of reasons

- A number of Early Iron Age cremations are present on the site. The pottery is well dated.
- The potential for study of the shell-tempered wares within the LIA/Roman pottery assemblage should be emphasised, given the quantities and the range of forms. Taken in conjunction with the shell-tempered wares from other sites in the UELG study, plus the work done by Cheer for the pottery from Orsett Cock enclosure (1998, 93), there is scope for a full study and typology for shell-tempered wares in south Essex to be elucidated. Trade links could also be examined, in particular with North Kent and *Verulamium*, since much of the pottery seems to be not locally made.
- Within the accessioned finds assemblage, the presence of late Iron Age/Roman occupation is significant and has potential for study of late Iron Age settlement patterns and the Roman hinterland of London. How much is just continuity of occupation?

- If considered with the assemblages from other sites within this project, the animal bone assemblage has limited potential for comparison with contemporary sites throughout the London area particularly in terms of carcass-part selection and age-at-slaughter.

8 Appendix 1

Table 9 The animal bones from UP-GS83/summary

SITECODE	CONTEXT	WT (kg)	FRAGS	PRES	NOS	LMAM	MANDS	MEAS	EPIPHYSES	COMPLETE
UP-GS83	15	0.083	25-75mm	poor	25	1	0	0	1	0
UP-GS83	16	0.005	25-75mm	poor	10	1	0	0	0	0
UP-GS83	17	0.007	25-75mm	poor	6	1	0	0	0	0
UP-GS83	18	0.075	25-75mm	poor	30	1	0	0	0	0
UP-GS83	38	0.045	25-75mm	medium	10	1	0	0	0	0
UP-GS83	43	0.005	25-75mm	medium	2	1	0	0	0	0
UP-GS83	52	0.002	<25mm	poor	5	1	0	0	0	0
UP-GS83	53	0.001	<25mm	poor	1	1	0	0	0	0
UP-GS83	54	0.005	25-75mm	good	5	1	0	0	0	0
UP-GS83	107	0.032	25-75mm	poor	25	2	0	0	0	0
UP-GS83	109	0.098	>75mm	good	8	2	0	0	1	0
UP-GS83	110	0.162	25-75mm	poor	90	2	0	0	0	0
UP-GS83	116	0.012	25-75mm	good	5	1	0	0	0	0
UP-GS83	128	0.017	25-75mm	poor	5	1	0	0	0	0
UP-GS83	129	0.029	25-75mm	good	5	1	0	0	0	0
UP-GS83	136	0.02	25-75mm	medium	5	1	0	0	0	0
UP-GS83	137	0.04	25-75mm	good	8	1	0	0	0	0
UP-GS83	167	0.005	25-75mm	medium	5	1	0	0	0	0
UP-GS83	168	0.01	25-75mm	medium	5	1	0	0	0	0
UP-GS83	173	0.1	25-75mm	good	20	2	0	0	2	0
UP-GS83	177	0.33	>75mm	good	100	3	1	0	0	0
UP-GS83	178	0.23	25-75mm	medium	40	2	1	0	0	0
UP-GS83	179	0.3	25-75mm	medium	1	2	1	0	1	0
UP-GS83	181	0.001	<25mm	poor	10	1	0	0	0	0
UP-GS83	208	0.001	<25mm	good	1	1	0	0	0	0
UP-GS83	221	0.004	25-75mm	medium	2	1	0	0	0	0
UP-GS83	234	0.04	25-75mm	poor	20	2	0	0	0	0
UP-GS83	239	0.034	25-75mm	medium	8	1	0	0	0	0
UP-GS83	247	0.09	25-75mm	poor	7	1	0	0	1	0
UP-GS83	248	0.02	25-75mm	poor	10	1	0	0	0	0
UP-GS83	249	0.002	25-75mm	poor	3	1	0	0	0	0
UP-GS83	255	0.034	25-75mm	medium	10	1	0	0	0	0
UP-GS83	256	0.049	25-75mm	medium	4	1	0	0	1	0
UP-GS83	262	0.001	<25mm	medium	1	1	0	0	0	0
UP-GS83	267	0.065	25-75mm	poor	15	2	0	0	0	0
UP-GS83	309	0.001	<25mm	medium	1	1	0	0	0	0
UP-GS83	323	0.027	25-75mm	medium	4	1	0	0	0	0

UP-GS83	351	0.006	25-75mm	medium	11	2	0	0	0	0
UP-GS83	353	0.005	25-75mm	medium	1	1	0	0	0	0
UP-GS83	356	0.011	25-75mm	poor	7	1	0	0	0	0
UP-GS83	357	0.073	25-75mm	poor	1	1	0	0	0	0
UP-GS83	387	0.05	25-75mm	poor	30	2	0	0	1	0
UP-GS83	403	0.05	25-75mm	poor	25	2	0	0	0	0
UP-GS83	412	0.001	<25mm	medium	1	1	0	0	0	0
UP-GS83	420	0.005	25-75mm	poor	1	1	0	0	0	0
UP-GS83	426	0.03	25-75mm	poor	3	1	0	0	0	0
UP-GS83	435	0.055	25-75mm	poor	10	1	1	0	0	0
UP-GS83	436	0.03	25-75mm	poor	15	2	0	0	0	0
UP-GS83	444	0.025	25-75mm	medium	40	2	0	0	0	0
UP-GS83	573	0.002	<25mm	poor	15	2	0	0	0	0
UP-GS83	577	0.001	<25mm	poor	3	1	0	0	0	0
UP-GS83	599	0.02	25-75mm	poor	25	2	0	0	0	0
UP-GS83	602	0.015	25-75mm	poor	2	1	0	0	0	0
UP-GS83	603	0.001	<25mm	poor	1	1	0	0	0	0
UP-GS83	700	0.02	25-75mm	medium	3	1	0	0	0	0
UP-GS83	738	0.01	25-75mm	poor	5	1	0	0	0	0
UP-GS83	799	0.02	25-75mm	poor	25	2	0	0	0	0
UP-GS83	814	0.007	25-75mm	medium	3	1	0	0	1	0
TOTAL		**2.419**			**739**		**4**	**0**	**9**	**0**

Table 10 The animal bones from UP-GS83/detailed summary

SITECODE	CONTEXT	SPECIES	PART	AGE	STATE
UP-GS83	15	ox-sixed	vertebra/rib	mature	
UP-GS83	15	horse	head	mature	
UP-GS83	15	sheep-sized	head	mature	
UP-GS83	15	pig	upper limb	mature	
UP-GS83	16	ox	head	mature	
UP-GS83	18	ox	head	mature	
UP-GS83	18	horse	head	mature	
UP-GS83	38	ox	head	mature	
UP-GS83	54	ox-sixed	head	mature	
UP-GS83	109	ox	head	mature	
UP-GS83	109	ox	foot	mature	
UP-GS83	109	sheep/goat	lower limb	mature	
UP-GS83	110	ox	head	mature	
UP-GS83	110	ox-sixed	foot	mature	
UP-GS83	128	sheep/goat	head	mature	
UP-GS83	129	horse	head	mature	
UP-GS83	129	sheep/goat	lower limb	mature	
UP-GS83	137	ox	head	mature	
UP-GS83	137	sheep/goat	head	mature	
UP-GS83	167	ox	head	mature	
UP-GS83	173	ox	foot	mature	
UP-GS83	173	sheep/goat	head	mature	
UP-GS83	177	ox	head	mature	
UP-GS83	177	ox	horncore	mature	
UP-GS83	177	horse	head	mature	
UP-GS83	178	ox	head	mature	
UP-GS83	178	horse	head	mature	
UP-GS83	178	horse	foot	mature	
UP-GS83	179	ox	head	mature	
UP-GS83	179	ox	foot	mature	
UP-GS83	179	ox	upper limb	mature	
UP-GS83	179	horse	head	mature	
UP-GS83	179	sheep/goat	foot	mature	
UP-GS83	181	sheep/goat	head	mature	
UP-GS83	221	ox-sixed	vertebra/rib	mature	
UP-GS83	239	ox	head	mature	
UP-GS83	239	ox	foot	mature	
UP-GS83	247	ox	lower limb	mature	
UP-GS83	248	ox	head	mature	
UP-GS83	248	sheep/goat	head	mature	

UP-GS83	249	ox-sixed	head	mature	
UP-GS83	255	ox	head	mature	
UP-GS83	256	ox	foot	mature	
UP-GS83	267	ox	head	mature	
UP-GS83	267	ox	upper limb	mature	
UP-GS83	323	ox	lower limb	mature	
UP-GS83	353	ox	head	mature	
UP-GS83	356	ox	head	mature	
UP-GS83	357	ox	upper limb	mature	
UP-GS83	387	ox	lower limb	mature	
UP-GS83	403	ox-sixed	vertebra/rib	mature	
UP-GS83	412	sheep/goat	head	mature	
UP-GS83	420	sheep-sized	upper limb	mature	
UP-GS83	426	ox-sixed	upper limb	mature	
UP-GS83	435	ox-sixed	upper limb	mature	
UP-GS83	435	horse	head	mature	
UP-GS83	436	ox	head	mature	
UP-GS83	573	ox	head	mature	
UP-GS83	599	ox	head	mature	
UP-GS83	602	ox-sixed	lower limb	mature	
UP-GS83	700	ox	head	mature	
UP-GS83	814	ox	foot	mature	