

Archaeological Evaluation Report Southend Airport Solar Farm Rochford Essex

NGR: TQ 86714 89622

ASE Project No: 8436

Site code: RFAP15

ASE Report No: 2015365



December 2015

7.02 Report 110. 2010

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ASE Report No: 2015365 OASIS ID: archaeol6-235438

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Date of Issue:	December 2015	
Revision:		

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Abstract

Archaeology South-East was commissioned by Vantage Planning Ltd, on behalf of Stobart Rail, to conduct an archaeological evaluation by trial trenching at London Southend Airport, Rochford. The evaluation was carried out in advance of the construction of a solar farm on an area of grassland at the north-western perimeter of the airport. The investigation was carried out in September 2015 and consisted of twenty-six evaluation trenches deployed over the 3.7ha development area.

The site lies within an area of significant archaeological interest, with multiple areas of prehistoric remains located within 1km of the development area; at Hall Road, at Westbarrow Farm and within the airport itself. The Westbarrow Farm project, the nearest of these to the current site, identified the presence of Late Iron Age and Roman features and artefacts, indicating likely continuous land use and occupation.

Archaeological features were recorded in nine of the twenty-six trenches, all located in the northern part of the site and mainly dating to the Late Iron Age to Early Roman transition period. The features comprise a probable corner of an enclosure ditch, possible drainage gullies, other ditches that may have been field boundaries, postholes and stakeholes that may have formed structures, as well as pits probably for rubbish disposal. The finds retrieved from the fills of these features – comprising pottery, animal bone, oyster shell, charcoal, a loomweight and fragments of daub – suggest occupation activity on or near the site. No burials were revealed; however, the base of a pedestal jar was found in the subsoil which may have been redeposited from a disturbed cremation burial.

Two probable field boundary ditches in Trench 5 date contain pottery of Roman date and are probably versions of the same field boundary which was a recut of an earlier (Late Iron Age/Early Roman) ditch. These features demonstrate that there was continuity in landuse from the Late Iron Age until at least the mid 2nd century AD.

There then appears to be a hiatus of activity; the only later features being infrequent and scattered, and dated to the medieval or post-medieval periods.

The proposed development of this site is judged to have a potentially low to moderate impact on the below-ground archaeological remains present, though this appears restricted only to its northern part and to groundworks that intrude below 0.5m below the present ground surface.

It is anticipated that the Rochford District Council planners, on the advice of the ECC Place Services' Historic Environment advisor, will require some form of archaeological mitigation works to be undertaken either prior to, or during, construction. This is likely to concentrate on selected parts of the northern end of the development area.

CONTENTS

1	.0	Introduction

- 2.0 Archaeological Background
- 3.0 Archaeological Methodology
- 4.0 Results
- 5.0 Finds
- 6.0 Environmental Samples
- 7.0 Discussion and Conclusions

Bibliography Acknowledgements

Appendix 1: Summary of archaeologically negative trenches

Appendix 2: Finds Quantification Appendix 3: EHER Summary Appendix 4: OASIS Form

Tables

Iddics	
Table 1:	Quantification of the site paper archive
Table 2:	Quantification of artefact and environmental samples
Table 3:	Summary of deposits and features in Trench 1
Table 4:	Summary of deposits and features in Trench 2
Table 5:	Summary of deposits and features in Trench 3
Table 6:	Summary of deposits and features in Trench 4
Table 7:	Summary of deposits and features in Trench 5
Table 8:	Summary of deposits and features in Trench 6
Table 9:	Summary of deposits and features in Trench 7
Table 10:	Summary of deposits and features in Trench 8
Table 11:	Summary of deposits and features in Trench 10
Table 12:	Summary of deposits and features in Trench 11
Table 13:	Summary of deposits and features in Trench 13
Table 14:	Post-Roman pottery quantification
Table 15:	Brick and tile fabric descriptions
Table 16:	Fired clay fabric descriptions
Table 17:	Animal bone NISP (Number of Identifiable Specimens) count
Table 18:	Soil sample residue quantification
Table 19:	Soil Sample flot quantification

Evaluation: Southend Airport Solar Farm, Essex

ASE Report No: 2015365

Figures

Figure 12:

Cover image: Water being pumped out of ditches in Trench 5, view north

Trench 13, plan, section and photographs

Figure 1: Site location
Figure 2: Trench locations

Figure 3: Trench 1, plan, sections and photographs
Figure 4: Trench 2, plan, sections and photographs
Figure 5: Trench 3, plan, sections and photograph
Figure 6: Trench 4, plan, section and photographs
Figure 7: Trench 5, plan, sections and photographs

Figure 8: Trench 6, plan and sections Figure 9: Trench 6, photographs

Figure 10: Trench 8, plan, section and photographs
Figure 11: Trench 19, plan, section and photographs

Figure 13: Selected photographs

1.0 INTRODUCTION

1.1 Site Background

- 1.1.1 Archaeology South-East (ASE), the contracting division of the Centre for Applied Archaeology (CAA), Institute of Archaeology (IoA), University College London (UCL) was commissioned by Vantage Planning Ltd, on behalf of the client Stobart Rail, to conduct an archaeological trial trenching evaluation at Southend Airport, Rochford, Essex (Figure 1).
- 1.1.2 The evaluation was carried out in advance of the construction of a solar farm to provide electricity for the airport.
- 1.1.3 The site is located at National Grid Reference TQ 8671 8962 and comprises a 3.7ha grass field at the north-western edge of the airport hereafter referred to as 'the site'. It is located to the north of Southend-on-Sea and 1.25km southwest of Rochford. The site lies on the airside perimeter and is bounded on the east by an access road and a fuel farm and to the north by runway and a fire practice area. To the west the site is bounded by an airport security fence and beyond that is a watercourse (Figures 1 and 2).

1.2 Geology and Topography

- 1.2.1 The geology of the site is mapped by the British Geological Survey is river alluvium consisting of clay, silt, sand and gravel overlying London Clay (BGS Map Viewer, viewed 2/10/15).
- 1.2.2 The site is under rough grass and is located on a floodplain, immediately east of a tributary of The River Roach. This watercourse appears to have been straightened and diverted from its original course (Figures 1 and 2). A former drain (now partially filled in) traversed the eastern side of the site from south to north as shown on 1950s OS mapping. This can be seen on the ground and on Google Earth photographs. The land is broadly level and varies in height from 7.24m to 8.82m AOD.

1.3 Planning Background

- 1.3.1 The evaluation was carried out as a condition to a planning permission (Rochford District Council ref 15/00190/FUL) for a solar farm and was requested by ECC Place Services, who provide archaeological advice to the District Council. The brief provided by ECC Place Services (2015) requested a 4% sample of the 3.7ha area, with an extra 1% held in contingency. This 4% sample equated to 27 trenches each measuring 2m x 30m (though Trench 27 was not subsequently excavated as it fell outside the site boundary).
- 1.3.2 Work was undertaken in accordance with a Written Scheme of Investigation (ASE 2015b) that had been approved by Alison Bennett of ECC Place Services prior to commencement.

1.4 Scope of the Report

1.4.1 This report presents the results of an archaeological evaluation at the site, Essex, carried out between 14th and 25th September 2015.

1.4.2 The report describes and interprets the results of the evaluation, and assesses the potential for the survival of archaeological remains on the wider site. The likely impact of the proposed development of the site upon the heritage resource is considered. The report also aims to discuss the results within the context of other known archaeological sites within the area.

2.0 ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

2.1.1 The site is located in an area of uncertain, but probably moderate to high, archaeological potential with various finds and archaeological events being recorded on the EHER in the close vicinity (Figure 1), but not within the site itself. A geophysical survey carried out on the site in February 2015 did not identify any magnetic anomalies that clearly defined traces of archaeological remains (ASE 2015a). Prior to this no archaeological investigations had taken place on the site.

2.2 Prehistoric and Roman

- 2.2.1 In general, prehistoric remains are well attested in the Southend/Rochford area, many having been recovered during brickearth extraction. The site is located within a landscape, dating from the Bronze Age through to the present day. This landscape is becoming increasingly better understood and documented as a result of archaeological fieldwork.
- 2.2.2 Within the airport, 0.6km to the east of the site, at TQ 873895, a Neolithic crouched inhumation burial was found below Iron Age occupation material (EHER 9605 and 9606). No further information about the circumstances of this find is available on the EHER except that it was recorded in the mid 1950s.
- 2.2.3 Various archaeological investigations have taken place between 1995 and 2013 at the south-eastern corner of the airport, between 0.6km and 1km to the south-east of the site. These were carried out in response to the creation of car-parks, a new rail station and extensions to the terminal. These investigations are not described in detail here and a useful summary up to 2012 can be found in Atkinson 2012. Prehistoric (probably Bronze Age) pits and ditches covering a wide area were identified and argued to be parts of a widespread enclosed late prehistoric landscape (EHER 18227).
- The closest archaeological fieldwork to the site to have taken place is an evaluation of a 29ha parcel of land west of Westbarrow Hall Farm, just 0.2km to the west of the site and centred on NGR TQ 8640 8980. The fieldwork was carried out in advance of brickearth (London Clay) extraction and commenced with a fieldwalking evaluation in 1996 (Brooks 1996; EHER 17443). The fieldwalking survey identified surface scatters of prehistoric, Romano-British, medieval, post-medieval and modern artefacts. The Prehistoric and Roman finds showed a very clear concentration in the north-east corner of the survey area, particularly a 3ha spread of prehistoric pottery and burnt flints with several significant groupings centred on NGR TQ 864 898. A total of 14 sherds of prehistoric date were discovered of Late Bronze Age or possibly Early Iron Age date. 31 worked flints were also recovered. It was concluded that the concentrations of pottery and burnt flint occur together and may indicate settlement. A large quantity of Roman brick and tile was recovered indicating the presence of a Roman occupation site outside the area of the evaluation. There was no evidence of any significant level of Roman activity in the south half of the survey site.
- 2.2.5 The fieldwalking survey at Westbarrow Hall Farm was followed in 1997 by the

Evaluation: Southend Airport Solar Farm, Essex

ASE Report No: 2015365

excavation of sixty-one trial trenches over the site, carried out by Essex County Council Field Archaeology Unit (Dale 2001; EHER 17441-3). Features with dates ranging from the Bronze Age to modern times were recorded. The densest concentration of features and artefacts were in the northern half of the evaluation site which corresponds with the results from the fieldwalking. Here there had been considerable past activity with the earliest evidence pointing to Middle Bronze Age as the founding date for occupation of the site. The settlement may have expanded in the Early Iron Age (the date of the majority of the Iron Age pottery) and continued to be inhabited during the Middle and Late Iron Age. The Roman artefacts pointed to the settlement moving towards the north-east and beyond the area investigated. The evaluation site was interpreted as being on the edge of a zone of Roman activity, within field systems of this date. Feature types included boundary ditches, hearth-like structures and post-holes, indicating the presence of timber structures. The density of features in the southern part of the evaluation area was lower than that of the northern area, but a similar range of feature types and chronology was recorded.

- Various finds have been made at Cherry Orchard Brickfield. Considerable remains of Iron Age occupation have been observed here and the grid reference given is TQ 857 895 which is west of Cherry Orchard Road, nearly 1km to the west of the site. A watching brief was carried out on mineral extraction in the area, by D.G. Macleod of Southend Museum, on behalf of ECC (EHER 9553).
- Also at Cherry Orchard Brickfield, in the same location as the Iron Age finds, a grave or graves were disturbed during extraction for brickearth in 1953 (EHER 9552). Two Samian platters were found; two cups; a decorated beaker; a large cylindrical flagon of blue-green glass; an unusual grey beaker with dotted panels; a buff flagon; an iron lamp-holder; fragments of pottery; animal bones and nails. The date of the deposit is c120-140AD. Between 1953 and 1956, three other cremation burial groups were found on the same site.
- 2.2.8 More recently, an evaluation conducted nearby at Hall Road (see Figure 1; ECC site RFHR12) revealed two phases of prehistoric activity, Early Neolithic and Middle Iron Age, with evidence of a later phase of medieval cultivation and perhaps settlement (ECC FAU 2009 and 2012).

2.3 **Anglo-Saxon and Medieval**

- 2.3.1 Westbarrow Hall Farm is situated only a short distance to the west of the current site, on the opposite side of the tributary at NGR TQ 865895. The evaluation recovered six small sherds of late 5th- or early 6th-century date. mostly residual in later features (Dale 2001; EHER 17441-3).
- 2.3.2 Westbarrow Hall Farm was first recorded as 'Partricheswyk' in 1273 (EHER 48177). On the 1st to 4th edition OS maps it is shown as a house and range of farm buildings with a number of ponds. The house and farm buildings had gone by the time of the 1950s OS map and now the site is occupied by a large pond and a clump of trees.
- 2.3.3 Medieval features speculated to relate to the periphery of Partricheswyk were recorded in the evaluation at Westbarrow Hall Farm in 1997 (Dale 2001; EHER

17441-3). The main evidence of medieval activity here was a group of large, related ditches located in the north-east of the site. Inter-cutting ditches in one trench were aligned northwest/south-east and contained a large quantity of medieval pottery dating from the 10th to the 14th centuries AD, with the majority belonging to the latter part of this date range. These ditches probably constituted a boundary that remained in use for some time and required occasional reinstatement. Further medieval ditches and pits were located but these did not form a coherent group

2.4 Post-medieval

- 2.4.1 The area has been previously exploited for its plentiful London Clay, which lies just under the surface, to manufacture tiles and bricks. Extraction sites at Westbarrow Hall Farm and Cherry Orchard Farm to the west of the site have already been mentioned. Tiles were made at the point of extraction as evidenced by a tile kiln which was found and partly excavated on the east side of Cherry Orchard Lane at TQ 859 895 during a watching brief on an extension to the brickfield. It is thought to be 18th or 19th century in date (EHER 9554). There is no evidence for clay pits or tile/brick making on the site itself however.
- 2.4.2 OS maps dating from the 1870s onwards show the site as an open field. It may have never been ploughed, Its elongated shape and location next to a watercourse suggest that it may always have been used as water meadow, or else marginal land, until it was incorporated into the airfield.

2.5 Modern

- 2.5.1 Southend Airport (or more correctly 'London Southend Airport') started life as Rochford Airfield. It was constructed in 1915 and used in the First World War for training airmen and to attempt to intercept German raids on London. By 1918 the airfield featured the grass landing grounds, four large hangars, four MT sheds and sufficient living and working accommodation for 600 men. Between the wars the airfield was released from its military function and gliding and air displays took place there. With the outbreak of the Second World War in 1939 the airfield returned to its military function and was used as a forward fighter base. In 1944 it was also used for armament practice and as a barrage balloon centre (http://www.pastscape.org.uk/hob.aspx?hob.id=1410928, accessed 8/10/15).
- 2.5.2 An RAF plan of the airfield from 1945 shows the location of airfield features and buildings, many of which have been demolished. There was a concentration of buildings on the south and east perimeters of the airfield. The northern and western sides of the airfield, where the site is located, contained fewer buildings and included as aircraft pen and hangars, flight offices and bomb stores. Three Pickett-Hamilton Forts occupied the grass landing area of the airfield, two of which are thought to still be still extant.
- 2.5.3 After World War Two, it was again a civil airport. In 1955-1956 two hard runways were added. In 1995 there was a major programme of refurbishment at the airport, some airport buildings were demolished, and others renovated. The field making up the site itself, while part of the airfield, does not appear to have been built on or used for airfield activities.

2.6 Aims and objectives of the project

- 2.6.1 The aims of the project, as described in the WSI (ASE 2015b), were to determine the presence or absence of any archaeological remains and to establish their character, location, extent, date, quality and significance. Any archaeological remains uncovered by the evaluation were to be assessed against the wider background of previous fieldwork in the area; in particular, to evaluate if any of the previously observed archaeological remains within the wider vicinity of the site continue within the site perimeter.
- 2.6.2 In the event that significant discoveries were made the resulting report was to consider site significance and potential with reference to research themes and questions identified in Research and Archaeology: a framework for the Eastern Counties, 2. Research agenda and strategy (Brown and Glazebrook 2000) and Research and Archaeology Revisited: a revised framework for the East of England (Medlycott 2011).

3.0 ARCHAEOLOGICAL METHODOLOGY

3.1 Fieldwork Methodology

- 3.1.1 The archaeological evaluation took place between 14th and 25th September 2015 and was conducted in accordance with a Written Scheme of Investigation (ASE 2015b).
- 3.1.2 Twenty-six evaluation trenches (numbered 1–26) were excavated (Fig.2). Trench 27 was not excavated (on the advice of Andy Weight from Stobart Rail) as it was found to lie outside the development area. Trenches were excavated using a tracked 14-ton 360° mechanical excavator under archaeological supervision. All trenches were 30m long, except Trenches 2 and 25 which had to be cut short due the presence of the metal security fence on the western boundary.
- 3.1.3 Generally, the trenches were machine-excavated to depths of up to between 0.5m and 0.8m below ground level in order to remove the overburden deposits and expose the surface of the undisturbed natural deposit. In some locations machine-excavation continued to greater depths in order to test the natural strata. Mechanical excavation continued to the surface of archaeological deposits or to the top of the natural deposit in all trenches.
- 3.1.4 Archaeological features were hand excavated; either 50% of discrete features or 1m segments of larger features were excavated. Wherever possible, segments were located across intercutting features to determine the relationships.
- 3.1.5 Archaeological features, soil horizons and the natural strata were recorded using a unique sequence of context numbers for each trench. They were drawn in plan (at scales of 1:20 or 1:50, as appropriate) and section (at scales of 1:10 or 1:20, as appropriate). The drawn records were located by reference to survey points at each end of the trench located using a GPS. Written records (trench and context descriptions) were made on *pro forma* trench recording sheets or on the section drawings.
- 3.1.6 A digital photographic record was made, consisting of high-resolution .jpg images.
- 3.1.7 Where present, finds were retrieved from all excavated deposits and identified by context number to a specific deposit. These have been processed according to ASE and ClfA guidelines (ASE 2011 and ClfA 2014). All pottery and other finds where appropriate were marked with the site code and appropriate context number.
- 3.1.8 Environmental samples were taken from well-stratified deposits that were deemed to have potential for the preservation/survival of ecofactual material. Bulk soil samples (a minimum 40 litres or 100% of context) were collected for wet sieving and flotation, and for finds recovery.

3.2 Archive

3.2.1 The fieldwork archive is currently held at the offices of ASE in Witham and Portslade and will be deposited with Southend Museum within three months. The nature and contents of the archive are described in Tables 1 and 2.

Item	Quantity
Context sheets	75
Section sheets	8
Plan sheets	0
Colour photographs	0
B&W photos	0
Digital photos	109
Context register	0
Drawing register	1
Watching brief forms	0
Trench Record forms	26

Table 1: Quantification of site paper archive

Item	Quantity
Bulk finds	12.65kg
Registered finds (number of)	3
Flots and environmental remains from bulk	2
samples	
Palaeo-environmental specialists sample	0
samples (e.g. columns, prepared slides)	
Waterlogged wood	0
Wet sieved environmental remains from bulk	2
samples	

Table 2: Quantification of artefact and environmental samples

4.0 RESULTS

4.1 Introduction

4.1.1 Archaeological deposits and features were recorded in nine evaluation trenches, all located in the northern part of the site (Fig. 2). Otherwise, the evaluation revealed a straightforward sequence of topsoil over subsoil over natural strata, as described below (4.2). The archaeologically negative trenches are listed in section 4.15 and their deposit sequence details tabulated in Appendix 1.

4.2 General soil descriptions

- 4.2.1 Natural geology was London Clay a clayey silt which varied in colour from orange to yellow, often with manganese flecks present. Patches of gravel were present in some of the trenches. In Trench 5 the natural was sealed by a greater depth of topsoil and subsoil and was a mid brown-grey silty clay with orange flecks.
- 4.2.2 Natural geology was sealed by yellowish clayey silt subsoil usually between 0.15m and 0.3m thick. The subsoil was similar in texture and appearance to the natural geology below, apart from being more greyish yellow in hue. In Trenches 1-6, 9, 13, 18 and 25 the subsoil contained artefactual material including oyster shell, animal bone, prehistoric/early Roman pottery, medieval pottery and peg-tile.
- 4.2.3 The topsoil was approximately 0.24-0.33m thick in most trenches and was dark blackish brown firm silty clay. It had a clear interface with the underlying subsoil. The topsoil was sealed by a turf layer forming the current ground surface.
- 4.2.4 All features cut the natural geology and were sealed by subsoil.

4.3 Trench 1 (Fig. 3)

Depth: 0.46-0.7m

Ground level: 7.29m AOD (N), 7.25m AOD (S)

Context	Type	Description	Length x width m	Thickness/ depth m	Date
1/001	Layer	Topsoil - dark blackish brown firm silty clay	Trench	0.25-0.3	Modern
1/002	Layer	Subsoil - orange brown sandy clay to mid greyish brown silty clay. Contains peg-tile	Trench	0.2-0.3	Post- medieval or later
No number	Layer	Natural silty clay	Trench	@0.45 -0.6	-
1/003	Cut	Elongated pit	1.5 x 0.9	0.12	LIA/Roman
1/004	Fill	Primary fill of [1/003] – soft yellow brown clayey silt		0.08	LIA/Roman
1/005	Fill	Main fill of [1/003] – soft grey silt with occasional charcoal frags		0.10	LIA/Roman
1/006	Fill	Single fill of [1/007] – dark blue grey silty clay with occasional charcoal		0.18	Post- medieval
1/007	Cut	Pit cutting ditch [1/009]	1.2+ x 2.2	0.12	Post- medieval
1/008	Fill	Single fill of [1/009] – mid blue grey silty clay		0.3+	Undated

1/009	Cut	Possible ditch or pit	1.8+ x 3.4	0.3+	Undated
1/010	Fill	Single fill of [1/011] – mid blackish grey		0.1	Undated
		silty clay with moderate charcoal			
1/011	Cut	Stakehole	0.25	0.1	Undated
1/012	Fill	Single fill of [1/013]- mid blackish grey		0.12	Undated
		silty clay with moderate charcoal			
1/013	Cut	Stakehole	0.25	0.12	Undated
1/014	Fill	Single fill of [1/015]- mid blackish grey		0.08	Undated
		silty clay with occasional charcoal			
1/015	Cut	Stakehole	0.25	0.08	Undated

Table 3: Summary of deposits and features in Trench 1

- 4.3.1 Trench 1 was located at the most northerly part of the site. Conditions were wet and muddy and the trench filled up completely with water soon after the features had been excavated and recorded. The trench contained one medieval/post-medieval pit, one undated possible pit or ditch, one Late Iron Age/early Roman pit, and a group of three undated stakeholes.
- 4.3.2 A slot was dug through a patch of mid grey silty clay in the northern half of the trench. A possible northern edge of the feature was identified but the southern extent was not discernible and therefore its length and width could not be defined. Excavation of the slot showed that there were actually two features here a pit [1/007] cutting a probable ditch or pit [1/009] (Fig.3, section 5).
- 4.3.3 Shallow pit [1/007] was 2.2m wide and probably only half of it was exposed within the trench. Only 0.12m deep, it contained a single fill from which peg-tile, iron nails, animal bone, 16th-17th century vessel glass, oyster shell, a possible jetton <RF1> dated 13th-17th century, and a small amount of 14th century and 17th century pottery were retrieved. These finds give an overall post-medieval date (17th century) for this pit. The peg-tile in the surrounding subsoil may have derived from this feature.
- 4.3.4 Feature [1/009] was investigated within a 0.3m deep slot positioned along the eastern trench edge. Its northern edge was located but not its southern, nor its base reached. A very small amount of animal bone and a tiny fragment of CBM were retrieved from its single fill [1/008], although it is possible that the CBM may in fact have derived from the overlying pit [3/007]. Its relationship with pit [3/007] makes it 17th century or earlier in date.
- 4.3.5 At the southern end of the trench was a small shallow oval pit [1/003], the west end of which extended beyond the trench limit. It contained two fills, the lower from which Late Iron Age and early Roman pottery was collected.
- 4.3.6 To the south of pit [1/003] were three circular post- or stakeholes [1/011], [1/013] and [1/015]. All uniformally 0.25 diameter, but only surviving to a depth of 0.08-0.12m, these may have formed part of a structure. None contained dating evidence in their single fills.

4.4 Trench 2 (Fig. 4)

Depth: 0.46-0.59m

Ground level: 7.57m AOD (E), 7.74m AOD (W)

Context	Туре	Description	Length x Width m	Thickness / depth m	Date
2/001	Layer	Topsoil - dark blackish brown firm silty clay	Trench	0.33	Modern
2/002	Layer	Subsoil – yellowish brown clayey silt. Contains a single Roman pot sherd	Trench	0.2	undated
2/003	Layer	Natural – yellowish silt with manganese flecks and patches of gravel	Trench	@0.52	-
2/004	Fill	Upper fill of [2/005]		0.46	LIA/Early Roman
2/005	Cut	Ditch [2/005]	2.2+ x 1.1	0.46	LIA/Early Roman
2/006	Cut	Pit or posthole	0.66	0.35	LIA/Early Roman?
2/007	Fill	Single fill of [2/006]		0.35	LIA/Early Roman?
2/008	Fill	Single fill of [2/009]		0.2	Early Roman
2/009	Cut	Pit with irregular base	0.8 x 0.65	0.2	Early Roman
2/010	Fill	Single fill of [2/011]		0.2	Early Roman
2/011	Cut	Pit	1.0 x 0.73	0.2	Early Roman
2/012	Fill	Single fill of [2/013]		0.18	undated
2/013	Cut	Posthole	0.2 x 0.23	0.18	undated
2/014	Fill	Single fill of [2/015]		0.15	undated
2/015	Cut	Pit/posthole	0.45 x 0.38	0.15	undated
2/016	Fill	Single fill of [2/017]		0.4	LIA/Early Roman
2/017	Cut	Ditch	2.2+ x 1.3	0.4	LIA/Early Roman
2/018	Fill	Single fill of [1/019]		0.42	LIA/Early Roman
2/019	Cut	Pit	0.9+ x 0.75+	0.42	LIA/Early Roman
2/020	Fill	Single fill of [2/021]		0.45	Early Roman
2/021	Cut	Ditch	> 2.2+ x 1.0	0.45	Early Roman
2/022	Fill	Primary fill of [2/005]		0.06	LIA/Early Roman

Table 4: Summary of deposits and features in Trench 2

4.4.1 Trench 2 was situated at the north-western corner of the site. It was cut short to 20.2m length due to the presence of a metal security fence. Despite this, it was one of the archaeologically densest trenches, containing nine features; three ditches, one stakehole, four postholes and one pit, all thought to be Late Iron

Age/early Roman in date. The deeper features filled up with water quickly.

- 4.4.2 Ditches [2/017] and [2/021], at the east end of the trench, ran parallel to each other on a NNW-SSE alignment. Separated by a gap of only c.0.5m, they were probably related. The two ditches seemingly cut underlying pit [2/019], though this was not clear in section as the fills of all three features was the same grey silt (Fig. 4, section 12). All contained sufficient Late Iron Age/early Roman pottery to date them to this period. Of particular interest is the presence in all three features of the same type of flint tempered wheel-thrown comb-decorated pottery which perhaps indicates that they were backfilled at the same time; all also contained animal bone.
- 4.4.3 Ditch [2/005] was located at the western end of the trench and was aligned NNE-SSW. It had two discernible fills, the main fill being grey silty clay [2/004] containing Late Iron Age/early Roman pottery. Bone and shell were also in evidence and it was clear that the feature had been deliberately backfilled some time in this period. As such, it may be assumed to have been contemporary with the two ditches and pit at the eastern end of the trench.
- 4.4.4 In between the ditches was a cluster of five discrete features probably two pits, one pit or posthole, one small posthole and one stakehole. Pit [2/009] had an irregular plan and base possibly caused by animal burrowing. It contained 1st century AD Roman pottery and some animal bone. Sub-oval pit [2/011] also contained 1st century AD pottery and some animal bone. Rounded posthole [2/006] extended beyond the northern trench limit and yielded one small piece of pottery that may be early Roman or may be prehistoric. Circular posthole [2/015] contained two fragments of fired clay. Oval stakehole [2/013] was adjacent to [2/015] and may be associated; its fill did not contain any finds and it remains undated but may perhaps be assumed to be contemporary with the other features. No meaningful patterning to these discrete features can be discerned.

4.5 Trench 3 (Fig. 5)

Depth: 0.5m

Ground level: 7.42m AOD (N), 7.27m AOD (S)

Context	Туре	Description	Length x Width m	Thickness / depth m	Date
3/001	Layer	Topsoil – dark blackish brown silty clay, turf	Trench	0.27	Modern
3/002	Layer	Subsoil – mid blue-grey silty clay with occasional CBM and charcoal	Trench	0.22	undated
3/003	Layer	Natural Geology – silty clay varying from orangey brown to blue grey	Trench	@0.49	-
3/004	Fill	Single fill of [3/005]		0.16	Early Roman
3/005	Cut	Pit	1.92 x 1.7	0.16	Early Roman
3/006	Fill	Single fill of [3/007]		0.15	undated
3/007	Cut	Pit/posthole	0.5 x 0.45	0.15	undated

3/008	Cut	Possible ditch or could be subsoil. Unexcavated	2+ x 2+	undated
3/009	Fill	Single fill of probable ditch [3/008]. Unexcavated		undated

Table 5: Summary of deposits and features in Trench 3

- 4.5.1 All features were located in the southern end of the trench. They consisted of two pits and a possible ditch. Only one feature (a Late Iron Age/early Roman pit) was dated.
- 4.5.2 Shallow, roughly circular, pit [3/005] contained a sufficient amount of Late Iron Age/Early Roman pottery to date it to this period. It also yielded some animal bone and fragments of an iron knife blade <RF2> of probable Roman date.
- 4.5.3 To the south of [3/005] was a smaller circular pit/posthole [3/007] which is undated. It was cut into the fill of possible ditch [3/008], which had charcoal and CBM fragments on the surface. This possible ditch [3/008] was not excavated and it is uncertain whether it was a real feature or actually just a subsoil remnant.

4.6 Trench 4 (Fig. 6)

Depth 0.3-0.6m

Ground level: 7.38m AOD (E), 7.19m AOD (W)

Context	Type	Description	Length x Width m	Thickness / depth m	Date
4/001	Layer	Topsoil – dark blackish brown silty clay, turf	Trench	0.3	Modern
4/002	Layer	Subsoil – mid orange-brown silty clay with peg-tile, animal bone, vessel glass, brick and LIA/Early Roman pottery	Trench	0.25	Post- medieval or later
4/003	Layer	Natural Geology – blue-grey silty clay with orange specs	Trench	@0.55	
4/004	Fill	Single fill of pit [4/005]		0.25	LIA/Early Roman
4/005	Cut	Pit	2.8+	0.25	LIA/Early Roman

Table 6: Summary of deposits and features in Trench 4

- 4.6.1 Like the other trenches in the vicinity this trench filled up with water and was recorded under wet conditions.
- 4.6.2 Subsoil [4/002] was particularly finds-rich and yielded the base of a Late Iron Age pedestal urn (see 5.3.4). Although such vessels are often found in cremation burials, there was no evidence for a grave from which it could have derived.
- 4.6.3 Near where the pedestal urn base was found, in the central third of the trench, the natural silty clay was slightly darker than in the rest of the trench. No edges to the darker material were seen and it was therefore not taken to be a feature and it was left unexcavated.

4.6.3 The trench contained one archaeological feature, possibly circular pit [4/005] at the eastern end, of which only its northern edge was exposed and excavated in very wet conditions. The pit's fill was a mid blue grey clay silt with occasional charcoal. Small black fragments of burnt clay were present at the eastern extent. It contained a mix of pottery comprising a sherd of Late Iron Age/early Roman, two sherds of Middle Iron Age and one sherd of medieval. A piece of fire cracked flint and some fired clay was also present. The finds dating evidence is not definitive, but it is assumed that the medieval pottery is intrusive that the pit is most likely Late Iron Age/ early Roman.

4.7 Trench **5** (Fig. 7)

Depth: 0.5 - 0.7m

Ground level: 7.37m AOD (N), 7.48m AOD (S)

Context	Type	Description	Width x Length m	Thickness / depth m	Date
5/001	Layer	Topsoil – dark blackish brown silty clay, turf	Trench	0.35	Modern
5/002	Layer	Subsoil – mid blue grey silty clay containing struck flint, and 1 LIA/early Roman pot sherd	Trench	0.35	undated
5/003	Layer	Natural Geology – mid brown/grey silty clay with orange specks	Trench	@0.70	-
5/004	Fill	Single fill of [5/005]		0.08	undated
5/005	Cut	Pit/posthole	0.4	0.08	undated
5/006	Fill	Single fill of [5/007], inc burnt animal bone. Soil sample <2>		0.35	Roman
5/007	Cut	Ditch	2+ x 1.25	0.35	Roman
5/008	Fill	Single fill of [5/009]		0.35	Roman
5/009	Cut	Ditch, probable recut	2.2+ x 1.25	0.35	Roman
5/010	Fill	Single fill of [5/011]		0.10	LIA/Early Roman
5/011	Cut	Ditch	2.2+ x 2	0.10	LIA/Early Roman

Table 7: Summary of deposits and features in Trench 5

- 4.7.1 Trench 5 was located in the north-eastern corner of the site. The trench was bisected by a roughly NE-SW aligned, partially backfilled drain, c.4m-wide (see Section 1.2.2). This is shown on maps from the 1950s and was clearly a modern feature and therefore the trench was dug in two segments in order to avoid this drain. Apart from this feature, the trench contained three intercutting ditches and one undated pit/posthole, all at the northern end of the trench. Two of the ditches are early Roman (possibly 2nd century AD) and one is Late Iron Age or early Roman. The features filled with water very quickly which did not aid their investigation.
- 4.7.2 Latest ditch [5/007] ran on a WNW-ESE alignment. Its single fill [5/006] contained both burnt and unburnt animal bone and a relatively large quantity of Early Roman pottery, including samian ware and a fragment of mortaria which

date the context to AD 120-140. It also contained iron chisel <RF3> of 1st century AD date. Bulk soil sample <2> was collected from this fill for environmental analysis and further finds retrieval. This ditch cut ditch [5/009] and may represent a slightly later re-alignment of the boundary previously marked by ditches [5/009] and [5/011].

- 4.7.3 Ditch [5/009] was of similar proportions to its assumed replacement [5/007], but ran on a NW-SE alignment. Its single fill contained a quantity of early Roman pottery, dated to AD 60-120, and some animal bone. It cut ditch [5/011] and is likely to be a recut of it.
- 4.7.4 Earliest ditch [5/011] was on the same NW-SE alignment as ditch [5/009], but was much shallower and perhaps wider. It is probably an earlier version of the same boundary or drainage feature. It contained some Late Iron Age pottery and an early Roman sherd, as well as fire cracked flint and animal bone. It could be Late Iron Age or early Roman (1st century AD) in date. The three ditches all had blue grey silty clay fills of varying degrees of lightness.
- 4.7.5 Circular small pit/posthole [5/005] was located a short distance south of the intercut ditches. Its fill [5/004], a dark blue grey clay silt with occasional charcoal, did not contain any finds or have any relationship with the other features in the trench but it may well have been contemporary with them.

4.8 Trench 6 (Figs 8 and 9)

Depth: 0.5-0.8m

Ground level: 7.74m AOD (N), 7.78m AOD (S)

Context	Type	Description	Width x Length m	Thickness / depth m	Date
6/001	Layer	Topsoil – dark blackish brown silty clay, turf	Trench	0.33	Modern
6/002	Layer	Subsoil – light greyish brown compact clay containing LIA/ early Roman pottery	Trench	0.17	undated
6/003	Layer	Geology – greyish orange silty clay	Trench	@0.5	-
6/004	Fill	Single fill of [6/005]		0.11	LIA/Early Roman
6/005	Cut	Small ditch/gully	2.2+ x 0.5	0.11	LIA/Early Roman
6/006	Fill	Single fill of [6/007]			Early Roman
6/007	Cut	Ditch, possibly one side of an enclosure	3+ x 1.3	0.33	Early Roman
6/008	Fill	Single fill of [6/009]		0.10	LIA/Early Roman
6/009	Cut	Small pit/posthole	0.3	0.10	LIA/Early Roman
6/010	Fill	Single fill of [6/011]		0.07	?
6/011	Cut	Small pit	0.4	0.07	?
6/012	Fill	Upper fill of [6/013]		0.20	LIA/Early Roman
6/013	Cut	Ditch	3+ x 2+	0.42	LIA/Early Roman

6/014	Fill	Lower fill of [6/013]		0.22	LIA/Early
					Roman
6/015	Fill	Single fill of [6/016]		0.28	Early
					Roman?
6/016	Cut	Ditch	>2 x 1.7	0.28	Early
					Roman?
6/017	Deposit	Deposit, mixed with natural	unknown	> 0.37	Late Iron
					Age?

Table 8: Summary of deposits and features in Trench 6

- 4.8.1 Trench 6 was located at the north-western side of the site. It contained seven features pits and ditches and a deposit all dated or likely to date to the Late Iron Age/early Roman period. The edges of some of the features were not easily discernible as the natural deposit was somewhat mixed and there may have been traces of subsoil mixed in with it. This may have been due to the water action on the flood plain.
- 4.8.2 The subsoil contained some Late Iron Age/early Roman pottery which probably derived from the features/deposits below.
- 4.8.3 Although initially thought to be a single curving ditch in the middle of the trench, it was established that this was probably two intersecting ditches [6/007] and [6/016]. [6/007] was a probably NE-SW aligned ditch. Its single fill contained pottery and animal bone. [6/016] was a similarly proportioned ditch that seemed to run roughly NW-SE. Its bluish grey clay fill also contained pottery. These ditches met at the eastern trench limit and so their precise relationship was not ascertained. Given the similarity of their cuts, fills and dating evidence, it is possible that rather than inter-cutting they were in fact adjoining perhaps forming the corner of a rectilinear enclosure.
- 4.8.4 Ditch [6/016] did not cut natural on its north side but instead cut a deposit of mixed yellow and grey clay with no clear edges [6/017]. A slot was dug through this deposit (and into ditch [6/016]). Animal bone and a fired clay object, possibly a loomweight, was found within it. It is possible that these finds actually derive from ditch [6/016] as the two were not clearly distinguishable.
- 4.8.5 Two further ditches were located at the southern end of the trench. The larger of these was east-west aligned ditch [6/013] which was at least 3m wide and extended beyond the end of the trench. A segment was excavated across this probable field boundary ditch, which proved to be 0.42m deep. Its primary fill 6/014] contained one sherd of Late Iron/early Roman pottery and animal bone, oyster shell and occasional charcoal. Its upper fill [6/012] also contained Late Iron Age/early Roman pottery.
- 4.8.6 Narrow, NW-SE aligned ditch/gully [6/005] crossed the trench just north of [6/013], their presumed intersection occurring immediately east of the trench. Its single fill contained a piece of oyster shell but no datable finds. It is perhaps likely to have been a drainage ditch and probably contemporary with the other features in the trench.
- 4.8.7 Small, slightly oval, pit or posthole [6/009] was located to the north of ditch/gully [6/005]. It had a dark fill with occasional charcoal and contained one sherd of Late Iron Age/Roman pottery.

4.8.8 Another small circular pit [6/011] was located toward the north of the trench. This had a greyish brown clay fill with flecks of charcoal, but no finds except some fired clay or overfired brick. It is assumed that this feature is also Late Iron Age or Roman in date.

4.9 Trench 7 (Fig. 13)

Depth: 0.48 -1.08m

Ground level: 7.42m AOD (E), 7.41m AOD (W)

Context	Type	Description	Thickness / depth m	Date	
7/001	Layer	Topsoil – dark brownish grey silty clay, turf	Trench	0.22	Modern
7/002	Layer	Made-ground layer of light greyish brown compact clay containing animal bone, oyster shell and peg-tile	Trench	0.58 -0.71	Modern
7/003	Layer	Grey gravel - imported	Trench	0.15	Modern
7/004	Layer	Presumed natural geology – orange gravel	Trench	@ 1.0	-

Table 9: Summary of deposits and features in Trench 7

- 4.9.1 This trench did not contain any archaeological features but cannot be classified as a 'blank' trench because the lack of archaeology was caused by disturbance along the length of the trench. The trench was machine-dug to 0.48m depth for the majority of its length; however, two deeper sondages were dug either end to test the depth of the natural. As soon as the deeper sondages were dug water quickly flooded the trench.
- 4.9.2 Topsoil [7/001] sealed a very compact clay layer [7/002], which contained finds. Where the trench was dug deeper at both ends of the trench, this clay layer was seen to be between 0.58 and 0.71m thick and to seal an obviously modern dump of grey gravel [7/003]. Presumed natural orange gravel [7/004] was only encountered at depth of approximately 1m.
- 4.9.3 Similar deposits were encountered in Trench 11, which is adjacent to Trench 7. The grey gravel [7/003] had the appearance of a recently imported material and it was not encountered in any of the other trenches except Trench 11. Madeground [7/002] contained a variety finds and was presumably redeposited or reinstated material. It seems likely that this vicinity of the site had been reduced to a depth of c.1.0m before being infilled and reinstated. The total extent or the reason for this is unclear.

4.10 Trench 8 (Fig. 10)

Depth: 1m -1.1m

Ground Level: 7.46m AOD (N), 7.6m AOD (S)

Context	Туре	Description	Width x Length m	Thickness / depth m	Date
8/001	Layer	Topsoil – dark brown silty clay, turf	Trench	0.60	Modern
8/002	Layer	Subsoil – clean light brown yellow clay	Trench	0.50	Medieval or later
8/003	Layer	Natural geology – clean yellow clay, slightly gravelly	Trench	@1.10	-
8/004	Fill	Single fill of [8/005]. Soil sample <1>		0.10	LIA/Early Roman
8/005	Cut	Pit	0.5	0.10	LIA/Early Roman

Table 10: Summary of deposits and features in Trench 8

4.10.1 This trench was very waterlogged. It contained one small, rounded,pit [8/005], at its south end, which had a dark greyish clay fill that contained charcoal and occasional flecks of burnt animal bone. Bulk soil sample <1> was collected from this for environmental analysis and further finds retrieval. The pottery in its fill dates it to the Late Iron Age/early Roman period.

4.11 Trench 10 (Fig. 11)

Depth: 0.35-0.5m

Ground Level: 7.65m AOD (E), 7.99m AOD (W)

Context	Туре	Description	Width x Length m	Thickness / depth m	Date
10/001	Layer	Topsoil – dark brownish grey silty clay, turf	Trench	0.20-0.26	Modern
10/002	Layer	Subsoil – mid greyish brown silty clay	Trench	0.15-0.36	?
10/003	Layer	Natural geology – light greyish orange compact silty clay with manganese flecks	Trench	@ 0.35-0.51	
10/004	Fill	Upper fill of [10/006]	1.07	0.30	LIA/Early Roman
10/005	Fill	Lower fill of [10/006] – dump of burnt material	0.52	0.42	LIA/Early Roman
10/006	Cut	Pit	0.7	0.42	LIA/Late Iron Age/Early Roman
10/007	Fill	Single fill of [10/008]		0.61	LIA/Early Roman
10/008	Cut	Ditch	2+ x 1.85	0.61	LIA/Early Roman

Table 11: Summary of deposits and features in Trench 10

- 4.11.1 Trench 10 was located on the west side of the site, south of Trench 6. It contained two features a ditch and a pit, both dating to the Late Iron Age or early Roman periods.
- 4.11.2 Ditch [10/008] was probably north-south aligned and was relatively deep at 0.61m. Its single fill contained a quantity of oyster shell and animal bone and one sherd of Late Iron Age/Early Roman pottery.
- 4.12.3 The infilled ditch was cut by roughly circular pit [10/006]. This contained two fills, the lower of which was clay, blackened with charcoal, and appeared to be a dump of burnt material. The upper fill contained a small amount of Late Iron Age/Early Roman pottery. Its dating is not clear, as the recovered finds could have derived from the ditch below.

4.13 Trench **11** (Fig. 13)

Depth: 0.77m -1.2m

Ground Level: 7.4m AOD (N), 7.49m AOD (S)

Context	Type	Description	Width x Length m	Thickness / depth m	Date
11/001	Layer	Topsoil – dark brownish grey silty clay, turf	Trench	0.22 0.27	Modern
11/002	Layer	Made-ground – light greyish brown compact clay containing one sherd of medieval pottery and some animal bone	Trench	0.30-0.38	Modern
11/003	Layer	Grey gravel - imported	Trench	0.58	Modern
11/004	Layer	Presumed natural geology – orange gravel	Trench	@1.1	-

Table 12: Summary of deposits and features in Trench 11

- 4.13.1 This trench did not contain any archaeological features but cannot be classified as a 'blank' trench because the lack of archaeology was caused by disturbance along the length of the trench. The trench was dug to 0.8m depth for the majority of its length; however three deeper sondages were dug within it to test the depth of the natural. As soon as the deeper sondages were dug water quickly flooded the trench. In the southern part of the trench a plastic water pipe was exposed.
- 4.13.2 Topsoil [11/001] sealed a very compact and sticky clay layer [11/002] which contained finds and had the appearance of having been deliberately compressed by a roller. Where the trench was dug deeper, this clay layer was seen to be between 0.30 and 0.38m thick and to seal an obviously modern dump of grey gravel [11/003]. Presumed natural orange gravel [11/004] was only encountered at in the southern end of the trench, at 1.1m depth.
- 4.13.3 Similar deposits were encountered in Trench 7, which is adjacent to Trench 11. The grey gravel [11/003] had the appearance of a recently imported material and it was not encountered in any of the other trenches except Trench 7. The most feasible explanation is that there had been a large hole dug in this area which was filled in with gravel and capped with clay and topsoil. It is assumed that any earlier archaeological remains present in this vicinity would have been

removed by this ground disturbance.

4.14 Trench **13** (Fig. 12)

Depth: 0.6 - 0.7m

Ground Level: 7.6m AOD (N), 8.06m AOD (S)

Context	Type	Description	Width x Length m	Thickness / depth m	Date
13/001	Layer	Topsoil – dark brownish grey silty clay, turf	Trench	0.3-0.4	Modern
13/002	Layer	Subsoil – mid blue grey sandy clay containing oyster shell	Trench	0.30	?
13/003	Layer	Natural geology – light orangey brown sandy clay with grey patches	Trench	@0.6-0.7	
13/004	Fill	Single fill of [13/005]		0.32	Medieval
13/005	Cut	Gully	2.4+ x 0.55	0.32	Medieval
13/006	Fill	Single fill of [13/007]		0.30	Medieval or later
13/007	Cut	Pit	0.9 x 0.6	0.30	Medieval or later

Table 13: Summary of deposits and features in Trench 13

- 4.14.1 Trench 13 was located on the north-east side of the site, near some trees. Root disturbance was evident. The features were excavated under wet conditions. One medieval gully and one medieval or later pit were found at the northern end of the trench.
- 4.14.2 Gully [13/005] was aligned NE-SW. Where excavated, its mid blue-grey silty fill contained two sherds of medieval pottery and a small quantity of animal bone.
- 4.14.3 The infilled gully was cut by oval pit [13/007]. Its dark grey sandy clay fill did not contain finds.

4.15 Blank trenches

4.15.1 Trenches 9, 12 and 14-26, mostly distributed across the southern two-thirds of the site (Fig. 2), were excavated but found to be devoid of archaeological remains. Unlike Trenches 7 and 11, no significant truncation or disturbance activity was identified in them and the absence of remains is assumed to be real. Details of the deposit sequence of topsoil, subsoil and natural strata encountered in each are presented in Appendix 1.

5.0 FINDS

5.1 Introduction

5.1.1 A moderately sized assemblage of finds was recovered during the evaluation. All finds were washed and dried or air dried as appropriate. They were subsequently quantified by count and weight and were bagged by material and context (Appendix 2). All finds have been packed and stored following ClfA guidelines (2014). No further conservation is required.

5.2 Flintwork by Karine Le Hégarat

5.2.1 The evaluation produced three pieces of flint, weighing 12g, that are considered to be humanly struck Two were hand collected from contexts [5/002] and [6/004], and the third one came from bulk soil sample <02>, from context [5/006]. All the pieces consist of flakes. The example from context [5/002] displays blade scar removals on the dorsal surface, suggesting that the artefact may be Mesolithic or Early Neolithic in date. The other two are not chronologically diagnostic.

5.3 Prehistoric and Roman Pottery by Anna Doherty

- 5.3.1 A moderate-sized assemblage of later Iron Age/earlier Roman pottery was recovered during the evaluation, amounting to 467 sherds weighing 6.06kg. A single large group contains some diagnostic Hadrianic material but the vast majority of the pottery appears to have been deposited in the 1st century AD; there are also some hints of slightly earlier residual material.
- 5.3.2 Previous evaluation to the west of the site, at Westbarrow Hall Farm, produced a much larger prehistoric assemblage than that found during the current work (Brown 2001). However, there are a few probable residual sherds comparable to those identified in the Middle Iron Age assemblage from Westbarrow Hall Farm. In particular fill [4/004] of pit [4/005] produced two hand-made necked jar forms: one in a sandy ware containing sparse ill-sorted flint of up to 2.5mm and the other in a very fine sandy ware. Although these sherds are in relatively good condition they were directly associated with one bodysherd in a Late Iron Age/early Roman coarse sandy ware and another medieval rimsherd, making it unlikely that the earlier sherds are contemporary with the feature. Another pottery group from fill [5/010] also contained a few sherds in possible Middle Iron Age fabrics, including some very partial rim sherds in a glauconitic ware as well as hand-made sandy wares and sandy wares with flint; however, again these were associated with later material: in this case a probable example of North Gaulish white ware (dated AD10-80).
- 5.3.3 The majority of the pottery assemblage is typical of the period c.AD10-70 and most groups are largely composed of grog-tempered wares, sandy or sparsely grog-tempered black surfaced wares and early shell-tempered wares with the occasional sherd in Roman sandy grey or oxidised wares. Associated forms are mostly bead rim or necked cordoned jars. Subsoil in Trench 4 also produced a large portion of a grog-tempered pedestal jar. These forms are often associated with cremations, as at the 1st century BC cemetery at North Shoebury (Thompson 1995, Figs 69-70) and the completeness of this sherd could suggest that it had been redeposited from a funerary feature. Pedestal vessels are also

generally more common in earlier Aylesford Swarling assemblages, although they may have continued in production into the early Roman period.

- Many of the stratified 1st century AD groups lack fabrics which can be certainly ascribed to the post-conquest period although they often feature grog-tempered wares with very even grey firing colour or non-tempered wheel-thrown sandy black surfaced wares. These suggest that many of the features were sealed in the very early Roman period, though it remains possible that they were open and in use in the Late Iron Age. Interestingly, many of the groups containing material belonging to the 1st century AD also produced a few sherds flinttempered pottery, usually with quite well-sorted inclusions ranging from 0.5-2mm in size. It is possible that some of this is residual material of Middle Iron Age date. Flint-tempered wares do not tend to be a feature of Late Iron Age/early Roman assemblages in central or northern Essex. However, flinttempering is extremely common during this period in north Kent, particularly east of the Medway. In one case, in fill [6/008] of pit [6/009], a diagnostic 1st century AD bead rim iar with combed decoration (which has clear parallels in North Kent assemblages) was associated with a flint-tempered fabric, suggesting that flint-tempering was indeed contemporary in this period in the Southend area.
- 5.3.5 Two contexts, both from Trench 5, appear to be of slightly later date; however, overall their composition is similar to the rest of the assemblage, suggesting that they may contain some residual material. Fill [5/008] of ditch [5/009] produced a rimsherd in a fine grey North Kent/Thameside fabric, probably from a poppyhead beaker (dated AD70-120). The largest individual pot group from the site (96 sherds, weighing 1170g) came from fill [5/006] of ditch [5/007]. Although it also featured quite a high proportion of probable 1st century AD tempered wares, it contained some material which was clearly produced after c. AD120 including a Dragendorff 33 cup in central Gaulish samian ware, a black-burnished style rounded rim bowl (Going 1987, form B2) and a hammerhead mortarium in an unsourced (probably local) oxidised ware.

5.4 Post-Roman Pottery by Helen Walker

- .4.1 A total of eighteen sherds weighing 145g were excavated from five contexts and has been catalogued according to Cunningham's typology of post-Roman pottery in Essex (Cunningham 1985, 1-16; Table 14). Some of Cunningham's rim codes are quoted in this report.
- 5.4.2 The earliest pottery comprises single sherds of shell-and-sand-tempered ware from context [4/004], the fill of pit [4/005], and from layer [11/002]. This is of a type common at sites in south-east Essex, close to the River Thames, and unlike shelly fabrics in other parts of Essex, this type persists well into the 13th century. However, one of the sherds is a rim sherd of Cunningham's type B2, which is datable to c.1200. Layer [9/002] produced the largest amount of pottery, all comprising medieval coarseware. Finds include a flanged rim perhaps from a bowl and a probable H1 rim in Hedingham coarseware. All the material from this layer could date to the 13th century. Two further small abraded sherds of medieval coarseware were recovered from context [13/005], the fill of gully segment [13/005], and may also be of this date.
- 5.4.3 Later pottery was recovered from context [1/006], the fill of pit [1/007],

comprising a very abraded sherd of Mill Green ware and the rim of a black-glazed ware small bowl or porringer. The sherd of Mill Green ware has an internal glaze, which would indicate it is from a vessel-type other than a jug and is of later medieval date, perhaps belonging to the 14th century. The black-glazed ware sherd is most likely to be 17th century.

Con- text	Feature	Sherd Nos	Wt (g)	Pottery – ware and featured sherds	Date	
1/006						
		1	8	Black-glazed ware: everted rim, rilled externally and glazed internally, perhaps from small bowl or porringer	17th C	
4/004	4/005	1	13	Shell-and-sand-tempered ware: B2 rim	c.1200	
9/002						
		2	26	Medieval coarseware: borderline early medieval ware, a flanged rim and body sherd from the same vessel, perhaps a bowl, in a red-brown coarseware with a grey core	13th C	
		3	14	Hedingham coarseware: joining sherds (although all fresh breaks) from rim and shoulder of cooking-pot, probably an H1-type rim, but edge has broken off	13th C	
11/002	Layer	1	22	Shell-and-sand-tempered ware: base sherd, fire-blackened on underside, abraded	11th-13th C	
13/004	13/005	2	8	Medieval coarseware: joining sherds (although breaks are fresh) coarse sands, abraded	Later 12th- 13th C	
		18	145			

Table 14: Post-Roman pottery quantification

5.5 Ceramic Building Materials by Isa Benedetti-Whitton

- 5.5.1 A total of 49 pieces of ceramic building material (CBM) was recovered from six evaluation contexts: [1/002]; [1/006]; [1/008]; [4/002]; [7/002] and [18/002]. Tile was found in the greatest quantity, 1121g of the total 1910g (58%), all of which appears to be post-medieval date. Brick pieces were far less common, and were in every instance bar one very abraded and fragmentary to the extent that the original shape could not be discerned. Also included in the assemblage were some fragments too fragmentary to distinguish original form; these were counted and weighed as 'spall' before discard.
- 5.5.2 In terms of fabric, both tile and brick represented a fairly homogenous group (see Table 15). The brick fabric was very similar to the tile fabric in terms of matrix and inclusions, with the only substantial difference being in the apparent effect of the firing process, which created a hard, 'laminated' look within many of the tiles and a more 'blurred' and micaceous brick fabric. Only one brick was found intact enough to enable dimensions to be taken, although it was otherwise too burnt to assess fabric. This brick, from [4/002], is very thin at only 45mm thick, and unfrogged. The only known parallel would be with 17th century Dutch clinker bricks.

Fabric code	Description
T1	Dense reddish fabric with moderate coarse-very coarse Fe-rich inclusions; sparse-to-moderate unsorted white and grey quartz; very sparse pale streaking and pale silty deposits.
B1	Very similar to T1; often slightly micaceous; sparse very coarse flint sherds and pebbles; Fe inclusions appear more 'blurred' than in the tile fabric.

Table 15: Brick and tile fabric descriptions

5.6 Fired Clay by Isa Benedetti-Whitton

- 5.6.1 A relatively small assemblage of fired clay comprising of 61 pieces and weighing 1532g was collected from twelve evaluation contexts. Three quite distinct fabrics were identified by eye (see Table 16); the most common with 26 examples was F2, a beige or 'buff' coloured fabric that often had a core reduced to black. Fabric F3 was only slightly less common with 23 examples, whilst only 10 pieces were identified as F1.
- 5.6.2 At least two fragments of F2 from context [5/006] can be firmly identified as daub as they have clear wattle impressions with a diameter of c.5-12mm. A further five fragments (F1 and F2) including from context [6/017] appear to be pieces broken from functional objects (loom weights?), as they have either a partial or fully intact corner or 'apex'. None, however, survive enough for their original function to be determined.
- 5.6.3 Although the remainder of the fired clay is likely to have been the product of human activity it was too fragmentary to be diagnostic.

Fabric code	Description
F1	Slightly streaky, Fe-rich fabric with sparse coarse-to-very coarse Fe-rich material and sparse pebbles.
F2	Buff coloured fabric (often with very reduced/ black core); sparse pebbles and flint fragments.
F3	Near sterile, very fine silty fabric. Slightly soft, even when thoroughly fired.

Table 16: Fired clay fabric descriptions

5.7 Nails by Trista Clifford

5.7.1 A small assemblage of eight iron nails weighing a total of 27g was recovered from [5/006] and [1/006]. Three complete examples have domed circular heads with diameters of 11-12mm; the remaining fragments are incomplete stems.

5.8 Glass by Elke Raemen

- 5.8.1 Three fragments of glass were recovered (weight c.40g) from two different contexts. Context [4/002] contained two fragments from a green glass wine bottle. Included are part of the neck and a body shard. The fragments can only be broadly dated to c.1650-1735.
- 5.8.2 The third piece was recovered from [1/006] and comprises a small body shard from a cylindrical vessel (e.g. goblet), decorated with opaque white *vetro a fili*

trails which were marvered flat. The fragment is of probable 16th-century date, though could be as late as the 17th century.

5.9 Shell by Trista Clifford

5.9.1 A small assemblage of 39 shell fragments weighing 542g were recovered from 11 separate contexts. Two species are represented: *Ostrea edulis* (Common oyster) and *Mytilus edulis* (Common mussel). Both are edible and as such the assemblage probably represents consumption debris. No parasitic activity, indicative of a wild food resource, was noted.

5.10 Registered Finds by Trista Clifford

5.10.1 Registered finds have been washed and/or air dried as appropriate to their material. Objects have been packed appropriately in line with CIFA guidelines (2014). All objects are assigned a unique registered find number (RF<00>) and recorded on the basis of material, object type and date.

Coins

5.10.2 A possible jetton was recovered from context [1/006]. The object is a thin copper alloy sheet, roughly circular in shape, c.60% complete. Most of the outer surface is corroded away and the edges are ragged. The object measures 19mm in diameter. If it is a jetton, a date range of 13-17th century is possible.

Tools

- 5.10.3 Two fragments from a small whittle tanged iron knife blade, RF<2>, came from [3/004]. The form most closely resembles Mannings type 10, with the tang set back below the line of the back of the knife (Manning 1985, 113). Originally an early type, it continues throughout the Roman period and is common across Roman Britain.
- 5.10.4 Lastly, context [5/006] contained a complete iron chisel, RF<3>. The chisel measures 130mm in length and the form is similar to an example from Hod Hill, dated to the 1st century AD (Manning 1985, 9)

5.11 Animal Bone by Gemma Ayton

5.11.1 A small assemblage of animal bone containing 146 fragments has been hand-collected from 23 contexts. A further 88g of calcined bone was recovered from bulk samples. The bones were found alongside Late Iron-Age and Early Roman pottery.

Methods

5.11.2 The assemblage has been recorded onto an Excel spreadsheet in accordance with the zoning system outlined by Serjeantson (1996). Wherever possible the fragments have been identified to species and the skeletal element represented. Elements that could not be confidently identified to species, such as long-bone and vertebrae fragments, have been recorded according to their size and identified as large, medium or small mammal. The assemblage does not contain any recordable mandibles or measurable bones.

The Assemblage

5.11.3 The assemblage is in a moderate to poor state of preservation being highly

fragmented and displaying considerable signs of weathering on the surfaces of the bones. Of the 146 fragments recovered by hand, 103 were identifiable to taxa with a further 8 identifiable fragments recovered from the bulk samples (Table 17). The domestic taxa recovered include cattle, caprine, pig, horse and dog. No wild species were identified.

Taxa	NISP
Cattle	21
Sheep/Goat	20
Pig	4
Horse	1
Dog	1
Large Mammal	35
Medium Mammal	29

Table 17: Animal bone NISP (Number Of Identifiable Specimens) count

- 5.11.4 Both meat-bearing and non-meat bearing bones are represented and no evidence of butchery has been noted though the absence of such marks may be caused by the poor state of preservation. Both fused and unfused bones were present. Calcined bones were recovered from samples <1> and <2> (fills of pits [8/005] and ditch [5/007] respectively) including medium-mammal longbone fragments and a pig tooth.
- 5.11.5 Many of the bones have suffered post-depositional breakage and have been refitted during the identification phase. Canid gnawing was noted on specimens from contexts [5/006] and [18/002]. A dog mandible fragments was recovered from context [5/008] providing further evidence regarding their presence on-site.
- 5.11.6 No particular concentration of animal bones was noted with most contexts containing less than ten fragments providing further evidence that the origin of the assemblage is likely to be domestic rather than industrial.

6.0 ENVIRONMENTAL SAMPLES by Angela Vitolo and Lucy Allott

6.1 Introduction

6.1.1 During archaeological mitigation at the site, two bulk soil samples were taken to recover environmental material such as charred plant macrofossils, wood charcoal, fauna and mollusca as well as to assist finds recovery. The samples were taken from the fills of a small pit (<1> [8/004]) and a ditch (<2> [5/006]), both containing burnt bones. The following report summarises the contents of these samples and discusses the contribution that the environmental remains can give in regards to the local vegetation environment, fuel use and selection and the agricultural economy or other plant use.

6.2 Methodology

- 6.2.1 Samples were processed by flotation in their entirety. The flots and residues were captured on 250µm and 500µm meshes respectively and were air dried. The dried residues from the flotation samples were passed through graded sieves of 8, 4 and 2mm and each fraction sorted for environmental and artefactual remains (Table 18). Artefacts recovered from the samples were distributed to specialists, and are incorporated in the relevant sections of this volume where they add further information to the existing finds assemblage. The flots were scanned under a stereozoom microscope at 7-45x magnifications and their contents recorded (Table 19). Identifications of macrobotanical remains have been made through comparison with published reference atlases (Cappers et al. 2006, Jacomet 2006; NIAB 2004), and nomenclature used follows Stace (1997).
- 6.2.2 Charcoal fragments recovered from the heavy residue of the samples were fractured along three planes (transverse, radial and tangential) according to standardised procedures (Gale & Cutler 2000). Specimens were viewed under a stereozoom microscope for initial grouping, and an incident light microscope at magnifications up to 400x to facilitate identification of the woody taxa present. Taxonomic identifications were assigned by comparing suites of anatomical characteristics visible with those documented in reference atlases (Hather 2000; Schoch et al. 2004; Schweingruber 1990). Identifications have been given to species where possible, however genera, family or group names have been given where anatomical differences between taxa are not significant enough to permit satisfactory identification. Taxonomic identifications of charcoal are recorded in Table 18, and nomenclature used follows Stace (1997).

6.3 Results

- 6.3.1 Both flots contained a large amount of uncharred twigs and rootlets, which are probably modern contaminants that infiltrated the deposits through root action. Charred plant remains were limited to one wheat (*Triticum* sp.) caryopsis from the heavy residue of sample <1>. The caryopsis was poorly preserved, with a severely abraded surface, although its shape was retained, allowing the genus identification.
- 6.3.2 Wood charcoal fragments were present in both samples and were moderately frequent in sample <1> pit fill [8/004]. Oak (*Quercus* sp.) was the only taxonomic identification obtained for the assemblage from sample <1>, while

sample <2> from the fill of ditch [5/006] contained cherry/blackthorn (*Prunus* sp.) and Maloideae taxa (a group which includes apple, hawthorn, whitebeam, rowan) in addition to oak. Both samples contained an assortment of fragments from roundwood as well as fragments with relatively flat ring growth curvature (suggesting they derive from larger wood specimens). Preservation was generally good with a small amount of evidence for sediment percolation and abrasion.

6.3.3 The residues contained much burnt bone, as well as pottery, fire cracked flint, magnetic material, fired clay, flint and an iron object.

6.4 Discussion

6.4.1 The retrieved samples were generally very poor in charred macro plant remains and do not allow a discussion on diet, agricultural economy or herbaceous vegetation at the site. Wood charcoal remains were a little better represented and suggest that a range of taxa and types of wood (mature as well as small roundwood) were collected and used for fuel. Both samples derive from secondary (at least) deposits rather than representing primary, in situ accumulations of fuel that could be directly associated with burning activities. As such they are likely to contain amalgams of fuel waste and on their own these assemblages provide only limited information regarding the types of wood used at the site. These samples have nevertheless shown the potential for other archaeological features in the vicinity to also preserve charcoal and charred plant remains. Any future work at the site should continue sampling targeting primary deposits in particular.

Sample Number	Context	Context / deposit type	Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Idenitifications	Charred botanicals (other than charcoal)	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	t (g)	Burnt Bone 2-4mm	Weight (g)	Other (eg ind, pot, cbm)
1	8/004	Pit	20	***	20	***	4	Quercus sp. (25), Quercus sp. rw (1)	*	<2			*	<2	**		**	10	FCF */4 - Magnetised Material **/2
2	5/006	Ditch	30	**	4	**	<2	Quercus sp. (8), Quercus sp. rw (5), Prunus sp. (4), Maloideae (2), Indet rw (1)			**	24	**	24	**		**	<2	Pot **/90 - F.Clay **/34 - Flint */<2 - FCF 88/108 - FE */6 - Magnetised Material **/2

Table 18: Residue quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Charcoal <2mm	Crop seeds charred	Identifications	Preservation
1	8/004	0.6	50	50	80	10	*	*	Triticum sp. (1)	+
2	5/006	6.5	200	200	80	10	**			

Table 19: Flot quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams

7.0 DISCUSSION AND CONCLUSIONS

7.1 Overview of stratigraphic sequence

- 7.1.1 A fairly straightforward sequence of natural London Clay overlaid by varying depths of yellowish clayey silt subsoil and sealed by topsoil was observed in all trenches apart from Trenches 7 and 11. It appears that some sort of modern truncating activity, that had subsequently been filled and reinstated, had occurred in the vicinity of these particular trenches. The extents of this disturbance, to a recorded maximum depth of 1.1m below the present ground surface, have not been established.
- 7.1.2 All identified archaeological features cut the natural geology, and/or other features, and they were mainly encountered between 0.5m and 0.6m depth below ground level. They were sealed by subsoil and topsoil.
- 7.1.3 The incidence of remains was of low to moderate density across the northern third of the site. The trenches in central and southern areas of the site did not contain any archaeological features. Had any remains been present in Trenches 7 and 11, modern truncation and disturbance activity had almost certainly completely removed them.

7.2 Deposit survival and existing impacts

- 7.2.1 The recorded features, pits, ditches, gullies and post/stakeholes, had all been subject to some degree of truncation, presumably by agricultural cultivation, that has resulted in an estimated loss of up to 0.5-0.6m of their upper portions. The precise mechanism for this is unclear; being on the flood plain it seems unlikely that this land hase been used for anything other than as pasture/water meadow for most of its history and the flooding of the evaluation trenches experienced during the evaluation extercise would substantiate this. However, efforts to drain the site (see the drain marked on the 1950s OS map and seen partially backfilled on the ground Section 1.2.2) may have provided sufficient drainage to make the field suitable for arable agriculture in recent times.
- 7.2.2 A significant amount of artefactual material was observed to be present within the subsoil in Trenches 1, 2, 3, 4, 5, 6, 9, 13, 18 and 25. Fragments of oyster shell, animal bone, late prehistoric/early Roman pottery (including the large pedestal base in Trench 4), medieval pottery and fairly large pieces of peg-tile were recovered. Many of these artefacts did not show signs of abrasion. Perhaps introduced through ploughing, and perhaps some of it during manuring if fields, this material reflects the general date range of the features and deposits underlying the subsoil. The subsoil is itself presumably a modified soil at least in part deriving from the reworking and leaching of the upper part of the natural deposit and of the upper parts of any archaeological features/deposits cut into it.
- 7.2.3 Truncation disturbance of the deposit sequence down to c.1.1m depth was recorded in Trenches 7 and 11, where modern gravel had been deliberately been used to backfill what appeared to be a large hole. The nature of this disturbance can only speculated and may be connected to activities of the airfield. A need for clay, e.g. to build embankments of some kind (perhaps for anti-aircraft gun emplacements) may have been the cause. Alternatively the

modern gravel layer may have been laid as a base for something, or perhaps this area was very prone to flooding and the gravel had a drainage function. Historic maps and Google Earth do not show anything in this spot, so whatever it was it was probably filled and the land reinstated fairly rapidly. The geophysical survey similarly does not show any anomalies in this part of the field. The made-ground clay layer sealing the modern gravel in these two trenches looked similar to the subsoil in the other trenches and also contained similar artefactual material, but had been seemingly compressed. It appears therefore that the subsoil had been stripped off and then put back in after the gravel had been laid but had been compressed perhaps with a roller.

7.3 Discussion of archaeological remains by period

Pre-Late Iron Age

7.3.1 Prehistoric material was present in the form of worked flint and Middle Iron Age pottery occurring residually in certain Late Iron Age and Roman features. However there were no actual features recorded that dated to earlier than the Late Iron Age (late 1st century BC).

Late Iron-Age/Early Roman

- 7.3.2 The main phase of land use activity evidently occurred in the last half of the 1st century BC to c.AD 70, according to the ceramic evidence retrieved. A total of 21 features across nine trenches (Trenches 1-6, 8-10 and Trench 13) can be assigned to this Late Iron Age to Early Roman transition period phase, or else almost certainly dated by association with other features. Some of the undated features in close proximity could also be contemporary.
- 7.3.3 The features comprise a probable corner of an enclosure ditch in Trench 6, possible drainage gullies, other ditches that may have been field boundaries, postholes and stakeholes that may have been parts of structures, and pits probably for rubbish disposal. The finds contained within the fills of these features, comprising pottery, animal bone, oyster shell, charcoal, a loomweight and fragments of daub, suggest the presence of occupation activity on or near the site.
- 7.3.4 No burials were revealed, however a base of a grog-tempered pedestal jar was found in the subsoil in Trench 4. These vessel forms are often associated with cremation burials and the completeness of this sherd could suggest that it had been redeposited from a funerary feature. However, no such remains were identified by the evaluation.
- 7.3.5 The layout and character of this settlement and its associated agricultural landscape could not be clearly made out, given that only a 4% sample of the site was evaluated. The subsequent watching brief that was carried out on the cable trenching found similar looking features/deposits with comparable artefacts but the trenches were too narrow to be able to give any meaningful results (ASE forthcoming).
- 7.3.6 The Early and Middle Iron Age occupation found at Westbarrow Farm, and the Middle Iron Age occupation at Hall Lane, are not in evidence at the Solar Farm site. It would seem that on this site the occupation starts in the Late Iron Age with no precursors. How this relates to the nearby sites is unclear. At Westbarrow Farm there was Late Iron Age occupation evidence, including pits

with charcoal-rich fills, but this was mainly concentrated in the north-eastern part of the evaluation area and there does not seem to be a geographical link between the two sites.

Roman – AD 70-140

- Two intercutting and roughly parallel ditches in Trench 5 are the only features that contained pottery of post- AD70 date. The recovered pottery was of later 1st century to 2nd century AD date. These are probably successive recuts of an earlier (Late Iron Age/Early Roman) boundary. These features demonstrate that there was some degree of continuity in land use from the Late Iron Age until at least the mid 2nd century AD. Interestingly, the pottery from one of these ditches dates to AD120-140, which is the same date as one of cremation groups found at Cherry Orchard Brickfield to the west, which demonstrates that there was wider general activity in the area at this date. No Roman building material was found in any of the features in Trench 5 or elsewhere on the solar farm site and there is little to suggest Roman period settlement activity, at least after c.AD70. This is in contrast to Westbarrow Farm, where a large quantity of Roman brick and tile was recovered from the fieldwalking in the north-eastern area but nothing significant in the southern area. The Westbarrow Farm trenching recorded Roman field boundary ditches, hearth-like structures and post-holes, indicating the presence of timber structures, which possibly suggests that the settlement moved towards the north-east and beyond the area investigated.
- 7.3.7 It is postulated that Late Iron Age/Early Roman occupation at the solar farm site may have shifted from here in the later 1st or 2nd centuries and the area left largely as fields. Whether the settlement relocated north-westwards to the north-eastern side of the Westbarrow Farm site is unclear.

Medieval or Post-medieval

7.3.8 Three medieval or post-medieval features were recorded demonstrating a low level of land use activity at this location in the landscape during these periods. This presumably reflects the wet and marginal nature of the ground here.

7.4 Potential impact on archaeological remains

- 7.4.1 The evaluation has shown that archaeological remains are present and survive within the northern third of the solar farm site. These remains are buried c.0.5m to 0.6m below ground level. The potential impact of solar farm construction groundworks is likely to be low to moderate adverse, with only deeper intrusive works, such as cable trenches, necessarily disturbing any such remains in this part of the site.
- 7.4.2 The likely impact of the solar farm construction within the southern two-thirds of the site is judged to be negligible.

7.5 Consideration of project aims and potential research objectives

- 7.5.1 The fieldwork has fulfilled its aims to determine the presence or absence of any archaeological remains and to establish their character, location, extent, date, quality and significance.
- 7.5.2 This site, particularly when considered alongside the results of investigations at

Westbarrow Hall and Hall Road, has some potential to explore the Late Iron Age to early Roman transition period land use of the Rochford area. Indeed, there is scope to study its landscape development and management in relation to other Thames Estuary sites such as at North Shoebury and the wider southeast Essex (Wymer and Brown 1995).

7.6 Conclusions

- 7.6.1 The evaluation of the Southend Airport solar farm site has demonstrated that archaeological remains are present within the northern third of the site. These remains are primarily of Late Iron Age/Early Roman date and likely relate to the agricultural management and exploitation of this landscape during this period, presumably associated with an occupation site in the surrounding vicinity.
- 7.6.2 The proposed development of this site is judged to have a potentially low to moderate impact on the below-ground archaeological remains present, though this will be restricted only to its northern part and to groundworks that intrude below 0.5m below the present ground surface.
- 7.6.3 It is anticipated that the Rochford District Council planners, on the advice of the ECC Place Services' Historic Environment advisor, will require some form of archaeological mitigation works to be undertaken either prior to, or during, construction. This is likely to concentrate on selected parts of the northern end of the development area.

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ACKNOWLEDGEMENTS

ASE would like to thank Vantage Planning Ltd for commissioning the project on behalf of Stobart Rail Ltd. Andy Weight of Stobart Rail Ltd was particularly helpful in arranging access. Alison Bennett of ECC Place Services provided advice and monitored the project.

Andrew Leonard managed the fieldwork and Jim Stevenson managed the post-excavation process. Kate Clover directed the fieldwork and was assisted by Rob Cullum, Kim Hosking, Samara King and Lorna Webb. Lukasz Miciak was responsible for the site survey and Andrew Lewsey produced the figures for this report.

Appendix 1: Summary of archaeologically negative trenches

Trench	Heights of trench m AOD	Context	Type	Description	Thickness/ Depth m
Tr 9	7.29 – 7.87	9/001	Layer	Topsoil; dark blackish brown, firm silty clay	0.4
		9/002	Layer	Subsoil; dark brownish black clay silt. Contains pottery and shell	0.5
		9/003	Layer	Natural; yellowish grey clay	@ 0.9
Tr12	7.62- 7.65	12/001	Layer	Topsoil, dark brownish grey, firm silty clay	0.25
		12/002	Layer	Subsoil; yellowish grey clay silt	0.20-0.35
		12/003	Layer	Natural; yellow clay silt	@0.45-0.6
Tr 14	7.82- 7.96	14/001	Layer	Topsoil; dark brownish grey, firm silty clay	0.25
		14/002	Layer	Subsoil; greyish yellow clay silt	0.25
		14/003	Layer	Natural; yellow clay silt	@ 0.5
Tr 15	7.76- 7.81	15/001	Layer	Topsoil; dark brownish grey, firm silty clay	0.18-0.32
		15/002	Layer	Subsoil; mid greyish brown, firm silty clay	0.28
		15/003	Layer	Natural; light orange/grey brown, plastic clay	@0.46-0.5
Tr 16	7.64- 8.11	16/001	Layer	Topsoil; dark brownish grey, firm silty clay	0.21
		16/002	Layer	Subsoil; mid greyish brown, firm silty clay	0.29
		16/003	Layer	Natural; light greyish brown, plastic clay	@ 0.5
Tr 17	8- 8.01	17/001	Layer	Topsoil; dark brownish grey, firm silty clay	0.26
		17/002	Layer	Subsoil; mid orange brown, firm silty clay	0.26
		17/003	Layer	Natural; light greyish brown, plastic clay	@0.52
Tr 18	7.6-7.96	18/001	Layer	Topsoil; dark brownish grey, firm silty clay	0.19
		18/002	Layer	Subsoil; mid greyish brown, firm silty clay. Contains peg-tile, animal bone and other CBM	0.29
		18/003	Layer	Natural; light greyish brown, plastic clay	@0.48
Tr 19	8- 8.17	19/001	Layer	Topsoil; dark brownish grey, firm silty clay	0.22
		19/002	Layer	Subsoil; mid greyish brown, firm silty clay	0.28
		19/003	Layer	Natural; light orange grey, plastic clay	@0.5
Tr 20	8.04- 8.12	20/001	Layer	Topsoil; dark brownish grey, firm silty clay	0.16
		20/002	Layer	Subsoil; mid greyish brown, firm silty clay	0.19
		20/003	Layer	Natural; light greyish brown mottled with orange, compact clay	@0.35

Trench	Heights of trench m AOD	Context	Туре	Description	Thickness/ Depth m
Tr 21	8.13- 8.47	21/001	Layer	Topsoil; dark brownish grey, firm silty clay	0.16
		21/002	Layer	Subsoil; mid greyish brown, firm silty clay	0.24
		21/003	Layer	Natural; varied from mid orange/grey brown clay to mid brownish grey compact clay	@0.4
Tr 22	7.93- 8.21	22/001	Layer	Topsoil; dark brownish grey, firm silty clay	0.24
		22/002	Layer	Subsoil; mid greyish brown, firm silty clay	0.20
		22/003	Layer	Natural; mid orange/grey brown, plastic clay	@0.44
Tr 23	8.62- 8.63	23/001	Layer	Topsoil; dark brownish grey, firm silty clay	0.20
		23/002	Layer	Subsoil; mid greyish brown, firm silty clay	0.23
		23/003	Layer	Natural; mid yellow/greyish brown, firm clay	@0.43
Tr 24	8.15- 8.26	24/001	Layer	Topsoil; dark brownish grey, firm silty clay	0.26
		24/002	Layer	Subsoil; mid greyish brown, firm silty clay	0.22
		24/003	Layer	Natural; light greyish brown, plastic clay	@0.48
Tr 25	8.48-	25/001	Layer	Topsoil; dark brown friable silt	0.28
	8.82	25/002	Layer	Subsoil; light yellowish brown clay silt. Contains one piece of pottery	0.21
		25/003	Layer	Natural; mid grey mottled with orange, clay silt	@0.49
Tr 26	8.4	26/001	Layer	Topsoil; mid brown, friable sandy silt	0.25
		26/002	Layer	Subsoil; light orange clay silt	0.25
		26/003	Layer	Natural; light grey clay	@ 0.5

Appendix 2: Finds Quantification

context	pottery	wt	СВМ	wt	Bone	wt	Shell	wt	Flint	wt	FCF	wt	Fe	wt	F.Clay	wt	Glass	wt
	pottery	(g)		(g)	Бопе	(g)		(g)	FIIII	(g)	FCF	(g)	ге	(g)		(g)	Giass	(g)
1/002	1	24	7	350			2	56							2	36		<u> </u>
1/005	8	28			6	16												
1/006	4	46	23	718	11	36	14	70					5	20	6	110	1	0
1/008			1	2	2	26	1	<2										
10/004	3	38																
10/007	1	4			8	174	13	240										
11/002	1	22																
13/002							2	36										
13/004	2	8																
18/002			1	46	9	420												
2/002	1	40																
2/004	33	998			10	124	4	18							3	254		
2/007	1	<2			5	16												
2/008	4	28			3	6												
2/010	6	30			5	24												
2/014															2	14		
2/016	20	138			1	2									12	216		
2/018	11	128			22	228	2	10							4	42		
2/020	6	70			6	112												
2/022	6	62					4	64										
25/002	1	8																
3/004	13	28			6	14							2	8				
4/002	5	484	13	792	8	118											2	40

Archaeology South-East Evaluation: Southend Airport Solar Farm, Essex ASE Report No: 2015365

		wt		wt	_	wt	<u> </u>	wt		wt		wt	_	wt		wt		wt
context	pottery	(g)	CBM	(g)	Bone	(g)	Shell	(g)	Flint	(g)	FCF	(g)	Fe	(g)	F.Clay	(g)	Glass	(g)
4/004	5	108									1	62			13	128		
5/002	1	10							1	8								
5/006	96	1170			18	92							1	76	7	38		
5/008	42	696			5	44												
5/010	11	150			3	14					3	120			1	22		
6/002	7	62																
6/004	8	66			4	6	1	4	2	8					2	32		
6/006	168	1538			2	6												
6/008	1	62																
6/010					1	2									3	104		
6/012	1	4																
6/017					21	438									1	510		
7/002			1	92	2	104	3	24										
8/004	7	56																
9/002	13	90					1	20										
surface nr 10/007	1	38																
Total	488	6234	46	2000	158	2022	47	542	3	16	4	182	8	104	56	1506	3	40

Appendix 3: EHER Summary

Site name/Address: Southend Airport Solar F	arm, Rochford, Essex
Parish: Rochford	District: Rochford
NGR: TQ 86714 89622	Site Code: RFAP15
Type of Work: Evaluation	Site Director/Group: Kate Clover Archaeology South-East
Date of Work: 14th – 25th September 2015	Size of Area Investigated: 3.7 ha
Location of Finds/Curating Museum: Southend Museum	Funding source: Client
Further Seasons Anticipated?: Yes	Related HER Nos:
Final Report: Roundup in EAH	OASIS ref: archaeol6- 235438

Periods Represented: Late Iron Age, Early Roman, Roman, Medieval?, Post-medieval

SUMMARY OF FIELDWORK RESULTS:

Archaeological evaluation by trial trenching was undertaken on land prposed for the construction of a solar farm at London Southend Airport. The 3.7 ha development area was located on the north-western perimeter of the airport, in close proximity to Westbarrow Hall where evaluation in 1997 had recorded the presence of late prehistoric, Roman and Early Saxon period remains. The solar farm site was investigated by means of the excavation of twenty-six evaluation trenches.

Archaeological features were recorded in nine trenches, all located in the northern part of the site and primarily dating to the Late Iron Age to Early Roman transition period. The features comprise a probable corner of an enclosure ditch, gullies, other ditches that may have been field boundaries, postholes and stakeholes that may have formed structures, and pits probably for rubbish disposal. The finds retrieved from their fills suggest occupation on or near the site.

Two probable field boundary ditches in Trench 5 date contain pottery of Roman date and are probably versions of the same field boundary which was a recut of an earlier (Late Iron Age/Early Roman) ditch. These features demonstrate that there was continuity in landuse from the Late Iron Age until at least the mid 2nd century AD.

There then appeared to be a hiatus of activity; the only later features being thin on the ground and dated to the medieval or post-medieval period

Previous Summaries/Reports:	
Geophysics report 2015 (same ASE project no. 8	3436)
Author of Summary:	Date of Summary:
K. Clover	December 2015

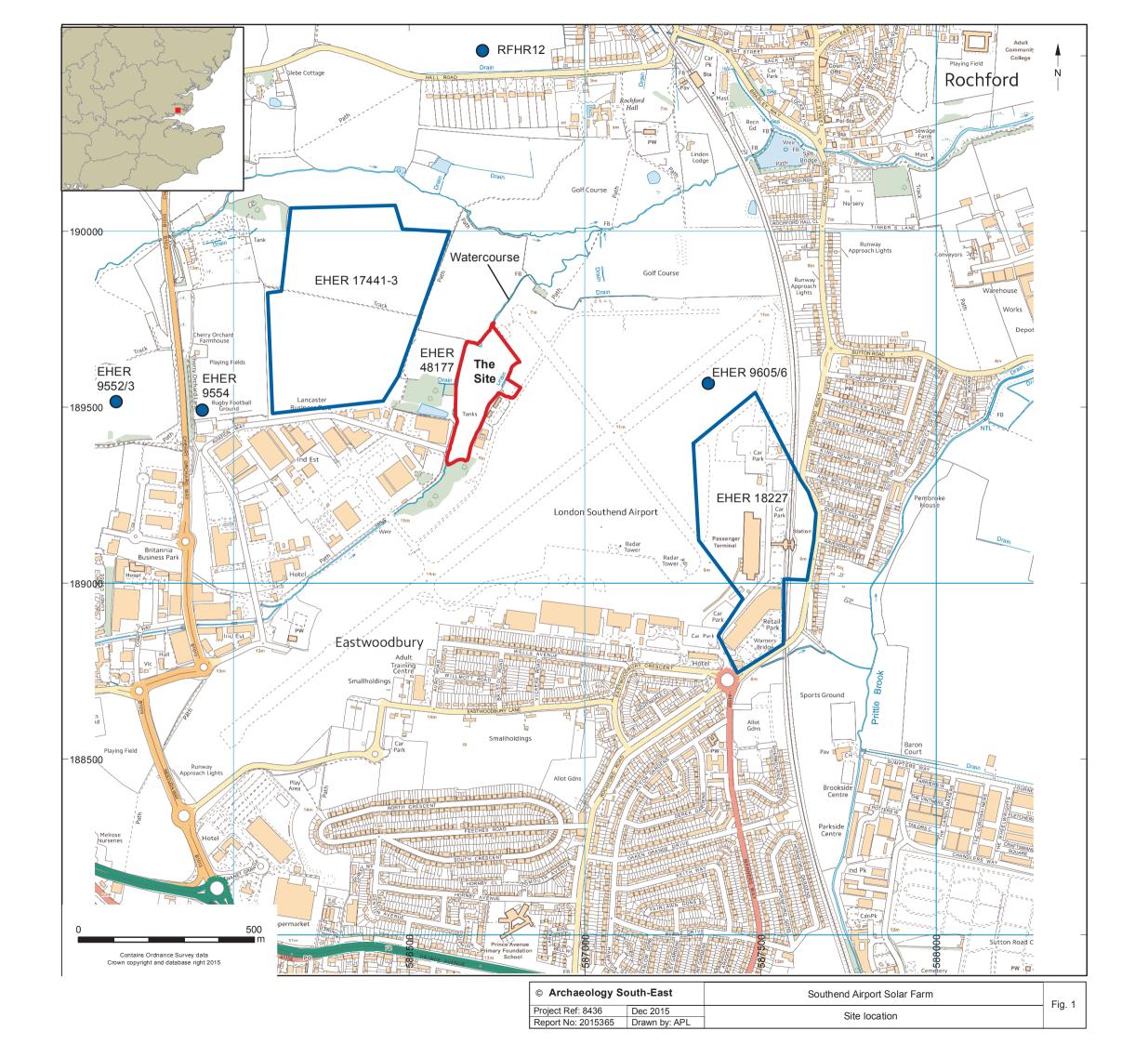
Appendix 4: OASIS Form

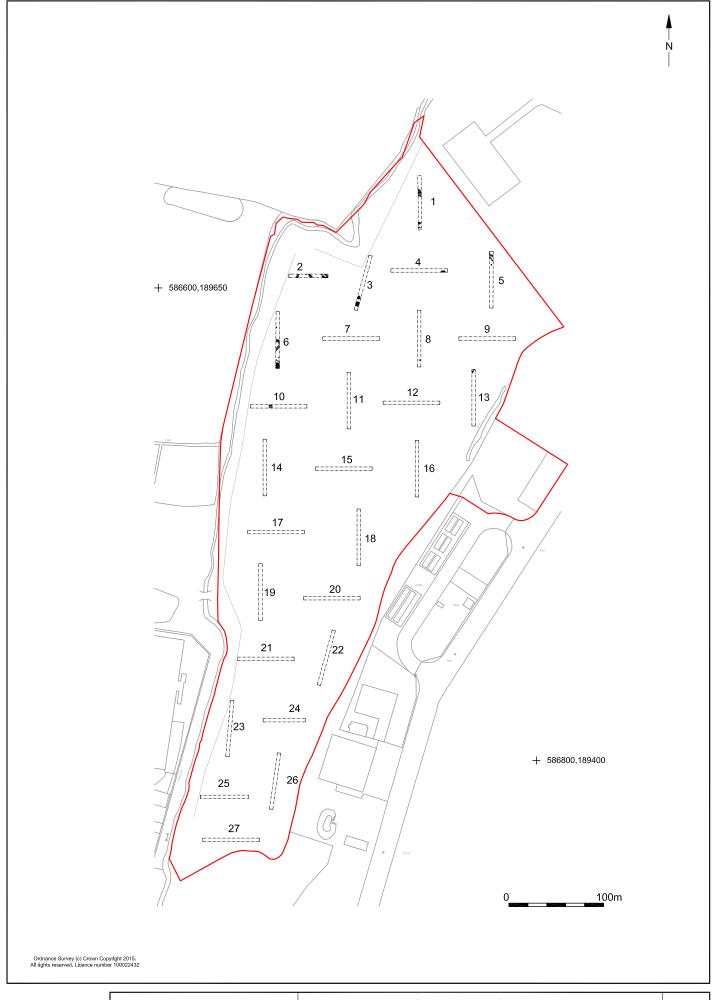
OASIS ID: archaeol6-235438

Project details	
Project name	Southend Airport Solar Farm
Short description of the project	Archaeological evaluation by trial trenching was undertaken on land prposed for the construction of a solar farm. The 3.7 ha development area was located on the north-western perimeter of the airport, in close proximity to Westbarrow Hall where evaluation in 1997 had recorded the presence of late prehistoric, Roman and Early Saxon period remains. The solar farm site was investigated by means of the excavation of twenty-six evaluation trenches. Archaeological features were recorded in nine trenches, all located in the northern part of the site and primarily dating to the Late Iron Age to Early Roman transition period. The features comprise a probable corner of an enclosure ditch, gullies, other ditches that may have been field boundaries, postholes and stakeholes that may have formed structures, and pits probably for rubbish disposal. The finds retrieved from their fills suggest occupation on or near the site. Two probable field boundary ditches in Trench 5 date contain pottery of Roman date and are probably versions of the same field boundary which was a recut of an earlier (Late Iron Age/Early Roman) ditch. These features demonstrate that there was continuity in landuse from the Late Iron Age until at least the mid 2nd century AD. There then appeared to be a hiatus of activity; the only later features being thin on the ground and dated to the medieval or post-medieval period.
Project dates	Start: 14-09-2015 End: 25-09-2015
Previous/future work	Yes / Yes
Associated project reference codes	RFAP15 - Sitecode 8436 - Contracting Unit No.
Type of project	Field evaluation
Site status	None
Current Land use	Other 15 - Other
Monument type	DITCHES Late Iron Age DITCHES Roman PITS Late Iron Age PITS Roman
Significant Finds	POTTERY Middle Iron Age POTTERY Iron Age POTTERY Roman LOOMWEIGHT Late Iron Age
Methods & techniques	"Sample Trenches"
Development type	Solar Farm
Prompt	Direction from Local Planning Authority - PPS
Position in the planning process	After full determination (eg. As a condition)

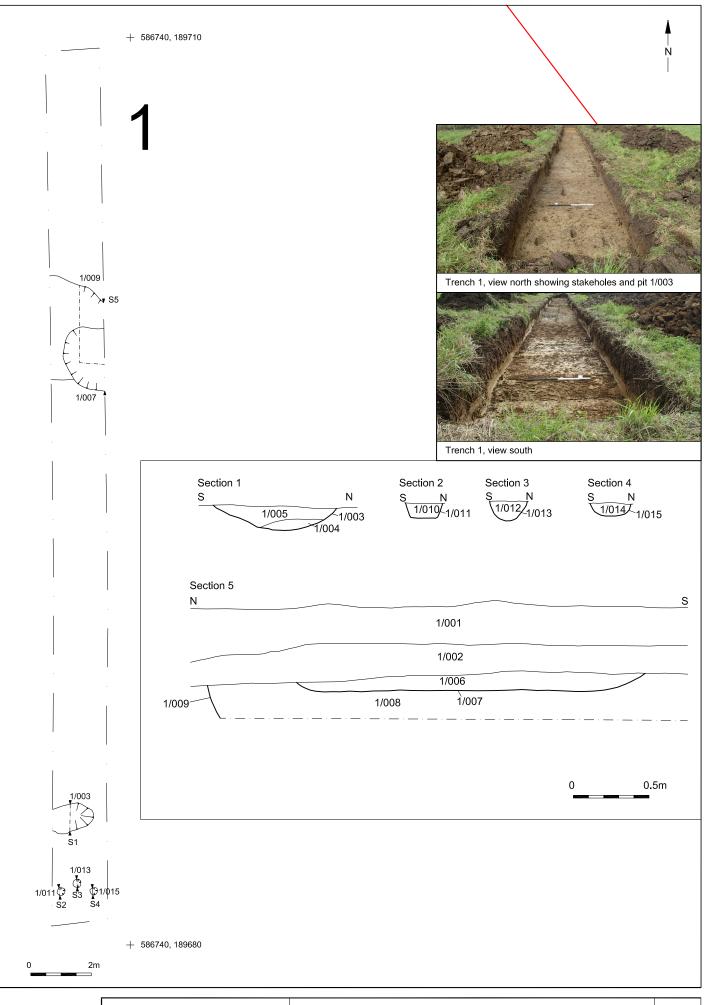
Project location	
Country	England
Site location	ESSEX ROCHFORD ROCHFORD Southend Airport Solar Farm
Postcode	SS2 6YF
Study area	3.7 Hectares
Site coordinates	TQ 8671 8962 51.573942088187 0.694703364623 51 34 26 N 000 41 40 E Point
Height OD / Depth	Min: 6.85m Max: 8.3m
Project creators	
Name of Organisation	Archaeology South-East
Project brief originator	Essex County Council Place Services
Project design originator	ASE
Project director/manager	Andrew Leonard
Project supervisor	Kate Clover
Type of sponsor/funding body	Client
Name of sponsor/funding body	Airport: Stobart Rail
Project archives	
Physical Archive recipient	Southend Museum
Physical Archive ID	RFAP15
Physical Contents	"Animal Bones","Environmental","Glass","Metal","Worked stone/lithics"
Digital Archive recipient	Southend Museum
Digital Archive ID	RFAP15
Digital Contents	"other"
Digital Media available	"Geophysics","Images raster / digital photography","Images vector","Spreadsheets","Survey","Text"
Paper Archive recipient	Southend Museum
Paper Archive ID	RFAP15
Paper Contents	"other"
Paper Media available	"Context sheet","Correspondence","Map","Photograph","Plan","Report","Section"
Entered by	Kate Clover (k.clover@ucl.ac.uk)
Entered on	22 December 2015

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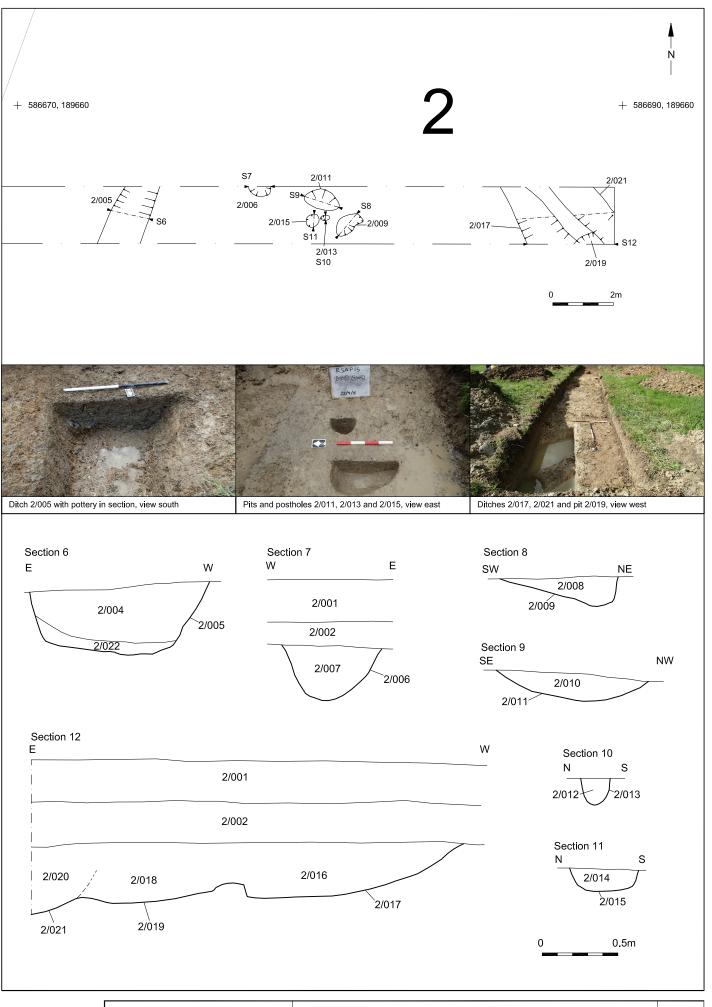




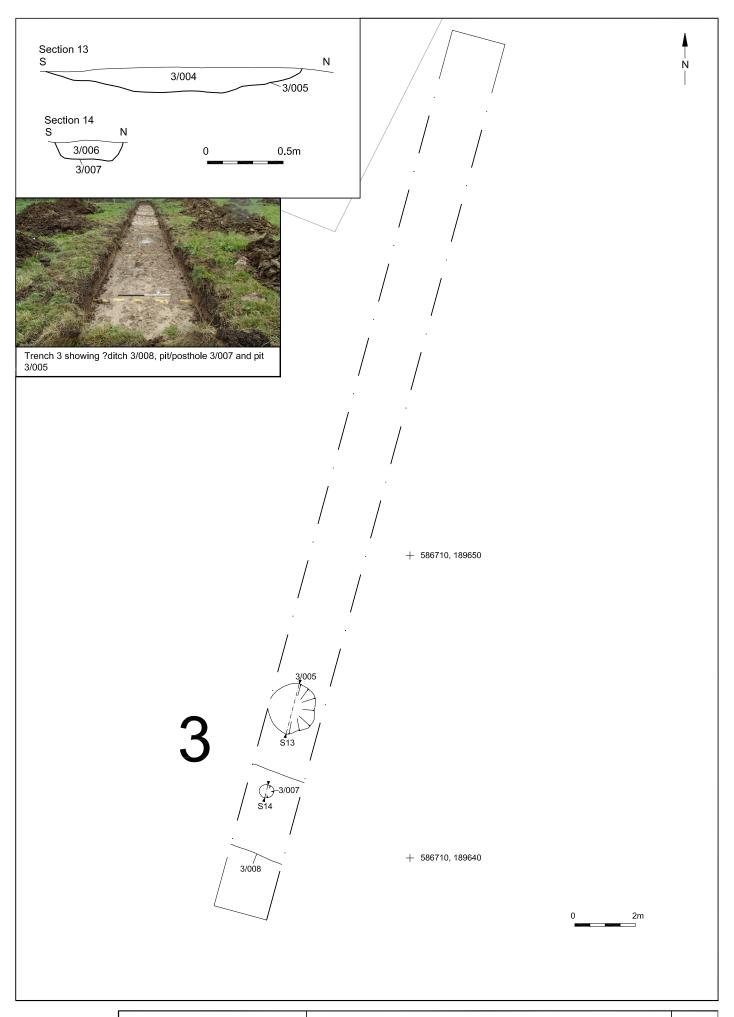
© Archaeology S	outh-East	Southend Airport Solar Farm	Fig. 2
Project Ref. 8436	Sept 2015		1 lg. 2
Report Ref: 2015365	Drawn by: APL	Trench locations	



© Archaeology South-East	Southend Airport Solar Farm	Fig. 3
Project Ref: 8436 Oct 2015	Trench1 plan, sections and photographs	1 lg. 5
Report Ref: 2015365 Drawn by: APL	Trenditi plan, sections and photographs	



© Archaeology Sout	th-East	Southend Airport Solar Farm	Fig. 4
Project Ref. 8436 Oct 2015		Trench 2 plan, sections and photographs	1 19. 4
Report Ref: 2015365 D	rawn by: APL	Trenon 2 plan, sections and photographs	

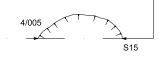


© Archaeology S	outh-East	Southend Airport Solar Farm	Fig. 5
Project Ref: 8436 Oct 2015		Trench 3 plan, sections and photographs	1 19. 0
Report Ref: 2015365	Drawn by: APL	Trefficit 5 plant, sections and photographs	



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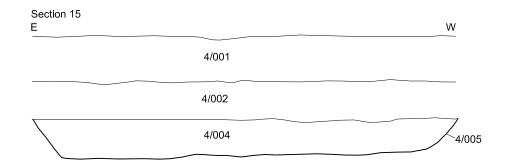


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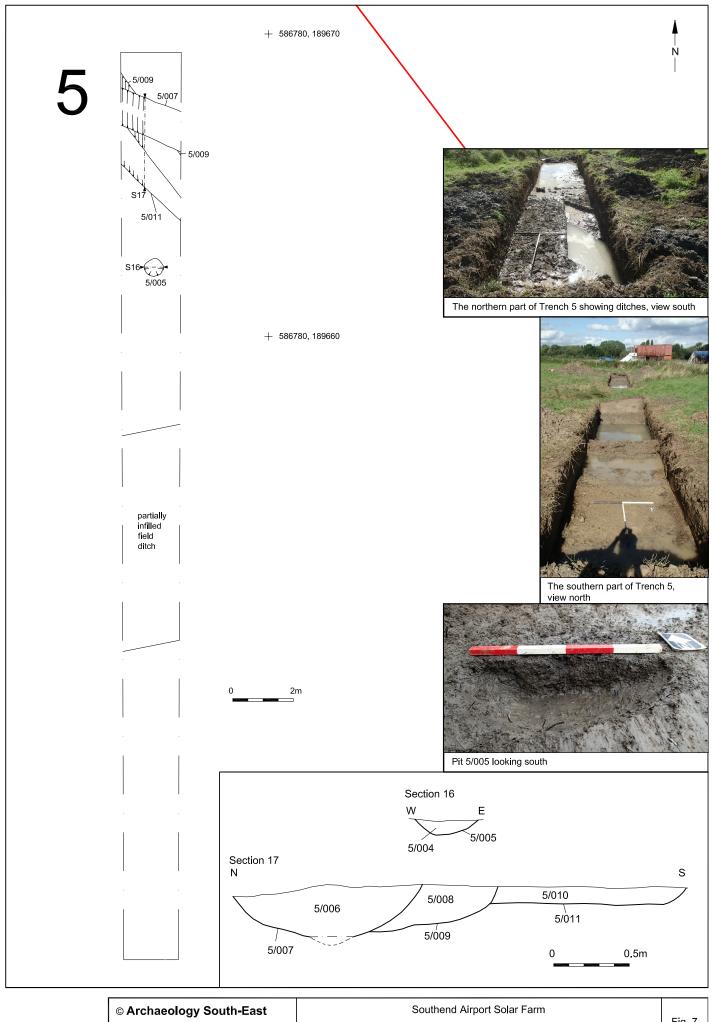


Pit 4/005 view south Trench 4 view west

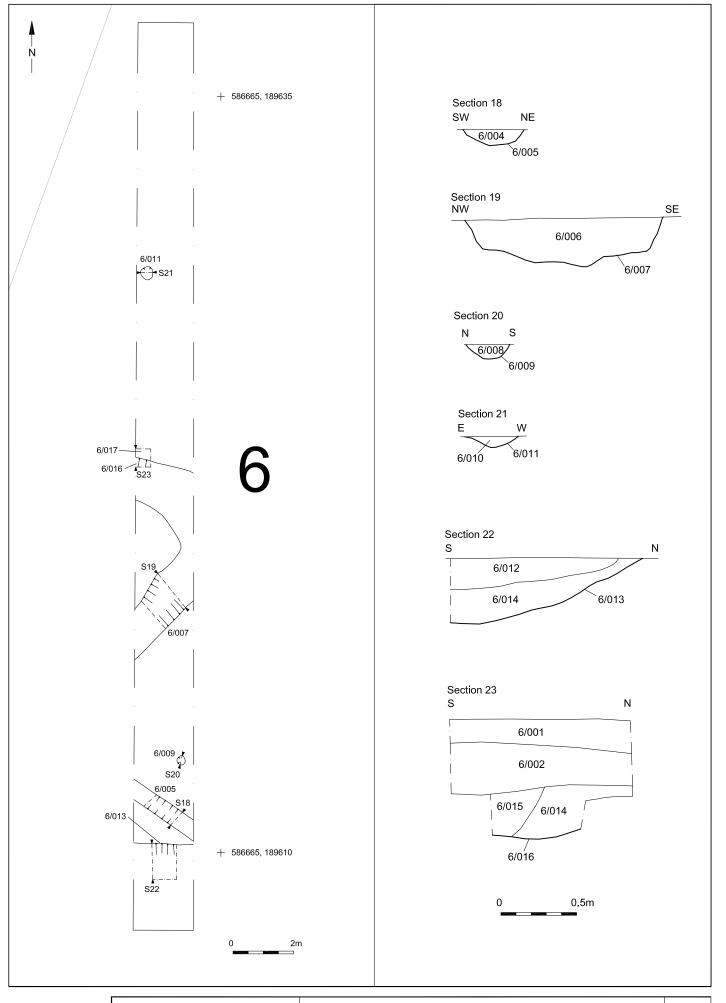


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	Project Ref. 8436	Oct 2015	Tranch 4 plan, sections and photographs	119.0	
	Report Ref: 2015365	Drawn by: APL	Trench 4 plan, sections and photographs		l



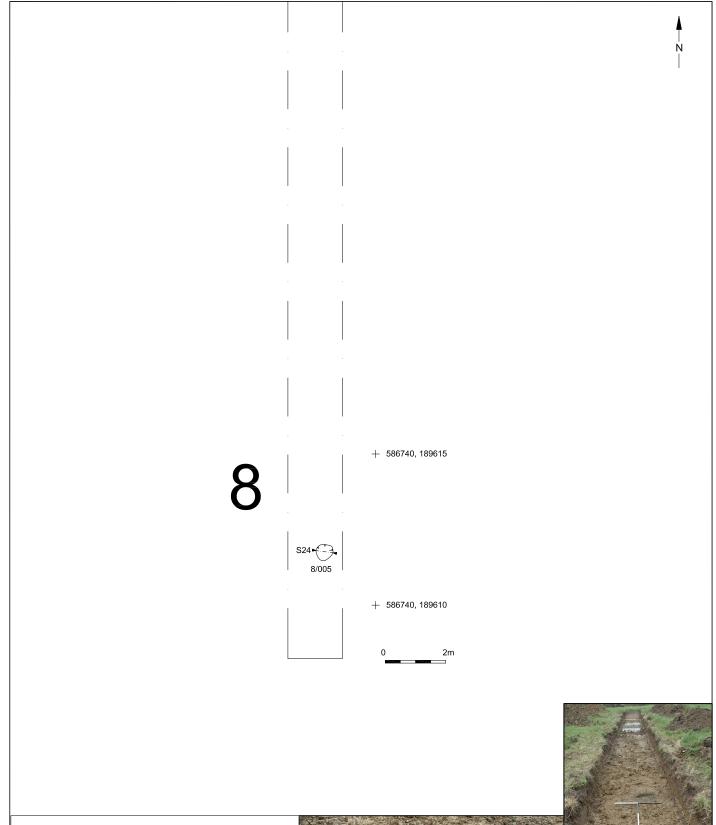
© Archaeology S	outh-East	Southend Airport Solar Farm	Fig. 7
Project Ref: 8436	Oct 2015	Trench 5 plan, sections and photographs	1 lg. /
Report Ref: 2015365	Drawn by: APL	Trench 5 plan, sections and photographs	



© Archaeology S	outh-East	Southend Airport Solar Farm	Fig. 8
Project Ref: 8436	Oct 2015	Trench 6 plan and sections	i ig. o
Report Ref: 2015365	Drawn by: APL	Trench 6 plan and sections	



⊚ Archaeology S	Archaeology South-East Southend Airport Solar Farm		Fig. 9
Project Ref: 8436	Oct 2015	Trench 6 photographs	1 19.5
Report Ref: 2015365	Drawn by: APL	Trench 6 photographs	





Pit 8/005, view south	Trench 8, view north
Pit 8/005, view south	Trench 8, view no

⊚ Archaeology S	outh-East	Southend Airport Solar Farm	Fig.10
Project Ref: 8436	Oct 2015	Tronch 8 plan, sections and photographs	1 19.10
Report Ref: 2015365	Drawn by: APL	Trench 8 plan, sections and photographs	



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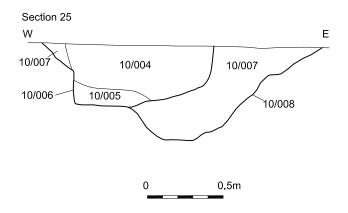




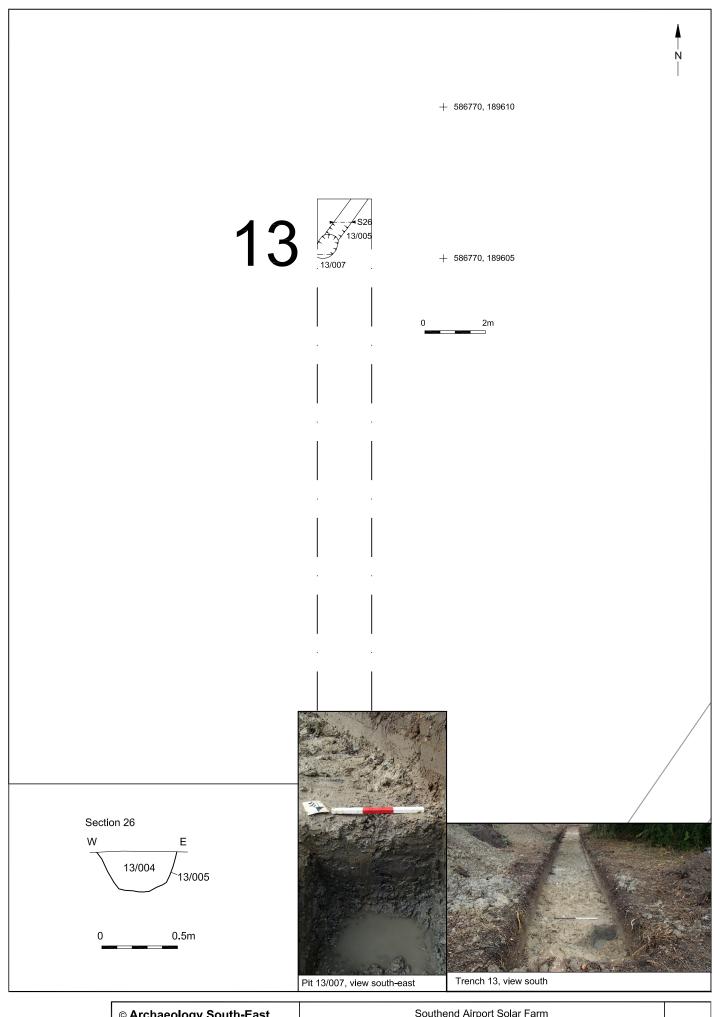
Pit 10/006 and ditch 10/008, view north



Trench 10, working shot, view west



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	Project Ref. 8436	Oct 2015	Tronch 10 plan, sections and photographs	1 19. 11	
	Report Ref: 2015365	Drawn by: APL	Trench 10 plan, sections and photographs		



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Project Ref: 8436 Oct 2015	Trench 13 plan, sections and photographs	1 19. 12
Report Ref: 2015365 Drawn by: APL		



Trench 7, view west





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Project Ref. 8436	Oct 2015	Selected photographs	1 19. 13	
Report Ref: 2015365	Drawn by: APL			

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