NEW TERMINAL BUILDING & APRON SITE SOUTHEND AIRPORT ROCHFORD ESSEX

ARCHAEOLOGICAL EXCAVATION AND MONITORING





FIELD ARCHAEOLOGY UNIT July 2011

NEW TERMINAL BUILDING & APRON SITE SOUTHEND AIRPORT ROCHFORD ESSEX

ARCHAEOLOGICAL EXCAVATION AND MONITORING

Prepared By: Phillippa Sparrow	Signature:
Position: Supervisor	Date:
Checked By: Mark Atkinson	Signature:
Position: Unit Manager	Date:

Document Ref.	2273rep.doc
Report Issue Date	July 2011
Circulation	Stobart Developments
	ECC Historic Environment Management
	Essex Historic Environment Record
	Southend Museum

As part of our desire to provide a quality service, we would welcome any comments you may have on the content or the presentation of this report. Please contact the Archaeological Fieldwork Manager, at the

Field Archaeology Unit,

Fairfield Court, Fairfield Road, Braintree, Essex CM7 3YQ Tel: 01376 331470 Fax: 01376 331428

© Field Archaeology Unit, Essex County Council, c/o County Hall, Chelmsford Essex CM1 1QH

	CONTENTS	Page No.
SI	UMMARY	1
1.	INTRODUCTION	3
2.	BACKGROUND	4
3.	AIMS AND OBJECTIVES	6
4.	METHOD	6
5.	FIELDWORK RESULTS	7
6.	FINDS AND ENVIRONMENTAL MATERIAL	14
7.	CONCLUSIONS & ASSESSMENT OF RESULTS	22
A	cknowledgements	24
Bi	ibliography	25
AI AI	PPENDICES PPENDIX 1: FIELDWORK DATA PPENDIX 2: FINDS AND ENVIRONMENTAL MATERIAL PPENDIX 3: ARCHIVE INDEX PPENDIX 4: EHER SUMMARY	27 30 34 35
1. 2. 3. 4. 5.	GURES Site location Terminal area plan, showing all features South Apron area, showing all features North Apron area, showing all features Selected sections 1-11 Selected sections 12-19 Plan of all Prehistoric remains	

PLATES

Cover: Excavating a prehistoric pit, south Apron area

- 1. General view of Terminal area
- 2. General view of south Apron area
- 3. Ditch 59
- 4. Ditch 164
- 5. Ditch terminal 65
- 6. Post-hole 33 in ditch terminal 32
- 7. Pit 102
- 8. Pit 104
- 9. Pit 109
- 10. Gully 82
- 11. Tree hole 69
- 12. Ditch/channel 112

NEW TERMINAL BUILDING & APRON SITE SOUTHEND AIRPORT, ROCHFORD, ESSEX ARCHAEOLOGICAL EXCAVATION AND MONITORING

Client: Stobart Developments

FAU Project No: 2273

NGR: TQ 8750 8900 Planning App. No: 97/00526/OUT

Site Code: RFAT10 OASIS Ref: 85212

Dates of Fieldwork: 02 to 25 November 2010 & 31 March to 15 April 2011

SUMMARY

A total area of 0.74ha was archaeologically excavated in advance of the construction of a new terminal building and associated aircraft apron at Southend Airport. The site, comprising three distinct parts (Terminal, North Apron and South Apron areas), was located on the eastern side of the airport, toward the Southend Victoria to London Liverpool Street railway line and its new station and car park.

The archaeological potential of the site was originally evaluated in 1998 and the presence/survival of prehistoric below-ground remains established. Since then, additional evaluations and watching briefs on airport development both previous and subsequent to this have also revealed the presence of further remains, primarily of prehistoric date, in this general vicinity. The Terminal and Apron site was found to contain the remains of a number of ditches, pits and/or post-holes, gullies and other features, mostly of prehistoric date but also post-medieval and modern. A range of artefacts of these and other periods were collected during the course of excavation.

The occurrence of Mesolithic and Neolithic worked flints hints at an early presence in the landscape. However, it is not until the Bronze Age that a rectilinear field system, delineated by boundary ditches, is imposed upon the landscape. Within these enclosures and fields, the presence of pits and post-holes, some of which contain charcoal and small quantities of pottery, burnt and worked flint, and burnt bone, suggest occupation activity. Two distinctive pits contain assemblages of flint working waste and flint-working tools that indicate on-site production and may be the product of structured deposition. These prehistoric features display similar character, alignment and artefactual content to others found during previous

investigations in the wider vicinity. All are evidently surviving fragments of a widespread later Bronze Age landscape.

No remains of Iron Age, Roman or medieval date were encountered, though a small quantity of pottery and brick/tile of these periods occurred residually in later features or as unstratified material, suggesting this location was peripheral to contemporary settlement. A single ditch of post-medieval date was identified, probably deliberately backfilled in preparation for the construction of the WW1/WW2 airfield. A range of 20th century features were uncovered that presumably relate to the airfield and airport use of the site, most seemingly relating to drainage.

1.0 INTRODUCTION

This report presents the results of archaeological investigation carried out in advance of the construction of a new terminal building and its associated aircraft apron, at London Southend Airport (NGR TQ 8750 8900), conducted by Essex County Council Field Archaeology Unit (ECC FAU). The fieldwork was undertaken in response to a condition placed on planning consent (97/00526/OUT) by Rochford District Council, following specialist advice from the Essex County Council Historic Environment Management team (ECC HEM) given in line with Planning Policy Statement 5. The fieldwork was carried out in accordance with a brief (ECC HEM 2010) and written scheme of investigation (ECC FAU 2010), and was monitored by ECC HEM on behalf of the local planning authority. The work, as reported here, comprised the following:

- Excavation within the footprint of the new terminal building (3450sq m)
- Excavation within the footprint of the apron (i.e. aircraft standing area) (3960sq m)

Monitoring and recording of groundworks for construction of the water attenuation tank, dirty water tank and drainage runs associated with the new terminal and apron was anticipated, but the opportunity to undertake this further work was not presented.

Both terminal and apron areas were located, adjacent to one another, on the east side of the airport and in essence constitute a single site. Other archaeological works have recently been conducted in this vicinity of the airport, as part of the same enhancement scheme that includes development of a multimodal transport interchange. Most recently, these have included monitoring and recording of works associated with the construction of a new railway station (Atkinson 2009) and its car park (Atkinson 2010). The construction sites of a new Control Tower and diversion of the taxiway nearest the terminal building were not archaeologically investigated, being approved as Permitted Development.

Bound and digital copies of this report will be supplied to Stobart Developments (including a copy for the Local Planning Authority), ECC HEM and the Essex Historic Environment Record (EHER). A digital copy of the report will be uploaded on the online access to the index of archaeological investigations (www.oasis.ac.uk). The site archive and copies of the report will be deposited at Southend Museum.

2.0 BACKGROUND

2.1 Location, Geology and Topography (Fig. 1)

The development area is located toward the south-eastern end of London Southend Airport, within the current airside perimeter, c.1.25km south of Rochford town centre, and just west of the Southend Victoria to London Liverpool Street railway line and its newly-constructed airport rail station and car park (TQ 8750 8900) (Fig.1). It is bound to the east and south-east by a service road and fence that mark the perimeter of the airside. The site itself is broadly level and occupied by a perimeter taxiway/access track and grassland.

The site lies on a surface geology of undifferentiated river terrace deposits overlying Thames Group clay, silt, sand and gravel. Based on observations during previous investigations in this vicinity, the site is likely to have been built-up and levelled as part of the airfield/airport creation.

2.2 History and Archaeology

The development lies within a general area of established archaeological interest and potential. A number of investigations have been undertaken and findspots recorded in both the immediate and wider proximity. The vicinity has also been the subject of various desk-based assessments and environmental impact assessments in recent years (e.g. Heppell 2003; 2004), which have served to collate and evaluate the evidence produced by previous works. Most pertinent to this scheme is the DBA produced by Jacobs consultancy (Preston 2009).

This wider content includes extensive Iron Age, Roman and Saxon remains at the Temple Farm Industrial Estate to the north-east (EHER 13751-5, 9733-5, etc.), Neolithic burials and Iron Age pottery to the north within the airport area (EHER 9605-6), and a range of Roman to post-medieval remains beneath the housing immediately east of Southend Road (EHER 9685). Particularly indicative of the general incidence of remains in the landscape, are the prehistoric and Roman sites at Westbarrow Hall Farm (Dale 2001) which lies to the west of the airport.

Within the eastern part of the airport, where construction of a new rail station, car parking and terminal is ongoing as part of the completion of an overall multi-modal transport interchange scheme, evaluation and subsequent monitoring by FAU has identified the presence of remains of various dates. Prehistoric (probably Bronze Age) and medieval features (EHER 18227-8), and a number of buildings associated with the WW2 airfield have

been recorded (Atkinson 2009, 2010; Ennis 2007; Germany 2005; Wardill 1998). Outside the airport, immediately to its south-east, investigations at Warners Bridge (EHER 16956) revealed further prehistoric ditches of probable Bronze Age date (Foreman and Germany 1997).

The 1998 trial trenching work immediately to the west of the railway identified a low density of ditches and pits of prehistoric date, but also areas of disturbance to a depth of 1.5m and the presence of relatively substantial thicknesses of overburden deposits (Wardill 1998). This vicinity was revisited in 2006 and 2010, when car park construction works were monitored. The presence of as much as 0.8m of overburden was substantiated and the remains of a probably prehistoric pit identified (Ennis 2007; Atkinson 2010). To the east of the railway, trial trenching and subsequent monitoring of enabling works associated with the construction of the new rail station established the presence of a quantity of small prehistoric pits and two 15th-16th century ditches, the latter speculated to possibly be associated with a near-by settlement (Atkinson 2009; Germany 2005).

Specific to the new terminal building and apron site, Trenches 5 and 6 of the 1998 evaluation were located within the current site area. These contained a quantity of prehistoric remains, primarily parallel ditches that clearly extend further across this vicinity and may have other remains in association. Further ditches found in evaluation trenches in what is now the new car park can also be projected to head in the direction of this site. The crouched burial and Iron Age pottery found a short distance to the north-east of the new terminal site (EHER 9505-6) could be associated.

The site was first used as an airfield by the Royal Flying Corps during the First World War. It developed as a civil airport between the wars before being requisitioned by the RAF in 1939 as a fighter base. It returned again to its current civil use in 1946 at which time it was equipped with a concrete runway. Various structures associated with the use and defence of the WW2 airfield have been recorded to the east, alongside the railway line (Wardill 1998). Some still stand, but others have been demolished. The 2009 desk-based assessment additionally identified the approximate location of a Pickett-Hamilton fort (a rare type of retracting pillbox) to the north-east of the new terminal site (Preston 2009). Other significant WW2 remains and possibly WW1, as yet unidentified, may exist elsewhere in this vicinity of the airport.

3.0 AIMS AND OBJECTIVES

3.1 Aims

The general aim of the excavation was to establish the location, extent, date, character, condition, significance, and quality of any surviving archaeological remains exposed during groundworks and to consider the results of the work in relation to the regional research agenda for the east of England (Brown & Glazebrook 2000).

3.2 Objectives

The specific objectives of the investigation were:

- To identify and investigate any further prehistoric remains indicative of settlement or exploitation of the landscape;
- To identify and investigate remains of Roman or medieval date indicative of settlement or exploitation of the landscape;
- To recover ecofactual and environmental material in order to further understand the nature of the landscape;
- To identify and investigate previously unknown remains relating to the operation and defence of the WW2 airfield.

4.0 METHOD

The archaeological fieldwork was carried out in accordance with the Institute for Archaeologists *Standards and Guidance for Archaeological Excavation* (IfA 2008) and the Association of Local Government Officers' *Standards for Field Archaeology in the East of England* (Gurney 2003). The ECC FAU uses its own recording system (ECC FAU 2006).

4.1 Excavation

Terminal area:

The excavation of the new Terminal building footprint was conducted in two stages; the topsoil was removed to a depth of between 0.3 and 0.45m over an area of 3450sq m (Plate1). This was sporadically monitored by the supervising archaeologist as it did not extend into the recently-deposited levelling layer. The second stage of machine excavation involved the removal of the levelling layer; this was conducted under archaeological supervision. The southern third of the site, excluding the baggage handling area, was stripped of the levelling layer prior to the arrival of the supervising archaeologist, as such it

was considerably over-cut. The south-western corner was over-cut by at least 0.5m, unsurprisingly there were no identifiable archaeological features in this corner. The northern area of the footprint was heavily tracked over once it had been excavated, as a result it was necessary to excavate slightly deeper in order to identify the underlying archaeological deposits, which turned out to be very shallow.

The archaeological deposits were very similar to the natural clayey silt across the site and were therefore difficult to identify. Feature identification was further hindered by the occasional machine tracking across the excavated area without the permission of the supervising archaeologist.

Apron area:

The excavation of the Apron area was undertaken by mechanical excavator under the constant supervision of an experienced supervising archaeologist. Excavation was variably conducted using one or two excavating machines working side-by-side in order that the supervising archaeologist could monitor. The topsoil and thin subsoil were removed in order to reveal the archaeological horizon. In contrast with the previous phase of excavation, minimal machine over-cutting occurred, though feature definition was similarly difficult (Plate 2).

4.2 Recording, finds retrieval and Environmental sampling

All identifiable archaeological deposits were investigated and recorded by hand, as per the methodology stated in the WSI. All artefactual material was collected from investigated features and deposits and removed from site for analysis. All deposits containing burnt bone were fully sampled (100% of the fill was sampled) in order to retrieve as much bone as possible. A selection of other burnt and datable deposits were bulk sampled for charred plant macrofossil retrieval and analysis.

5.0 FIELDWORK RESULTS

The combined terminal footprint and aircraft apron excavations revealed a range of archaeological features cut into the natural brickearth sub-soil (Figs.2-4). The principal remains of interest comprised a probably later Bronze Age ditch complex and associated scattered pits and/or post-holes - some of which were speculated to be the truncated remains of cremation burials at their time of excavation. A small quantity of later features

was also found in the southern parts of the site. These included a post-medieval ditch and the construction cut for a 20th century building close to an area of modern disturbance. All of the archaeological features were cut into the natural orange-brown clayey silt brickearth and overlain by darker orange-brown clayey silt subsoil which was of an average thickness of 0.15m. A thin levelling layer, around 0.2m thick and overlying the subsoil, was present in the southern part of the terminal building area and comprised a light yellow re-deposited brickearth containing small quantities of clinker and residual pottery. Topsoil was present to an average depth of 0.35m across the site. The site sloped very gradually down to the northeast with a fall of around 0.5m. The surviving tops of archaeological features were encountered between 0.45m and 0.7 below the surface.

The Apron area was bisected, into northern and southern parts, by the extant remains of a taxi-way/perimeter track. Observation during its clearance established that its construction had severely disturbed the underlying ground and so no further archaeological investigation was carried out below it. The Terminal and Apron areas were separated by approximately 20m of ground that was not required to be stripped, for construction needs, to a deep enough extent to expose the archaeological horizon. This too was not therefore investigated, though some archaeological features correlate between the two site areas and further remains might reasonably be expected to occur in between.

The recorded archaeological remains are described and discussed, below, by broad period. Details of all recorded contexts are presented in Appendix 1 and finds data can be found in Appendix 2. Due to duplication of context numbering between the 1998 evaluation and 2010-11 excavation, context numbers from the earlier works are distinguished in the text by being prefixed with an 'f' (e.g. ditch f47). Figures and plates referenced in the text are located toward the back of this report. The plans of all recorded features are shown on Figures 2-4.

5. 1 Prehistoric

Many of the features described within this section contained only very small and degraded sherds or crumbs of prehistoric pottery, the majority of which were impossible to collect due to their poor state of preservation. In the absence of later material, the small quantities of worked and burnt flint present in their fills have been accepted as indicating their early date.

Enclosure ditch system

Part of a ditched enclosure complex, comprising eight ditches and a gully, was revealed across the combined site areas. The majority (ditches 7, 22/65, 29, 32, 44, 91/99/166 and

164) were all aligned north-west to south-east, while the remaining ditch 54/59 was aligned perpendicular (i.e. north-east to south-west). Ditch 7 was first encountered in the 1998 evaluation and recorded as f47, similarly ditch 22/65 was recorded as f52 and ditch 29 recorded as f44.

Ditches 7, 29, 54/59, 91/99/166 and 164 were relatively substantial features ranging in depth between 0.73m and 0.98m (Fig. 5; Plates 3 and 4). Ditches 32 and 22/65 were considerably shallower ranging between 0.3m and 0.45m (Fig.5; Plate 5). There are some discrepancies apparent between the recorded remains of the 1998 evaluation and their later further investigation. Ditch f47 was recorded as being wider than its northward continuation, ditch 7. It is possible that the southern part of pit 11 was not discerned in 1998 and removed as part of f47. Other than this, it is noteworthy that none of the ditches intersected and it is presumed that these delineate parts of a single, perhaps fairly extensive, rectilinear enclosure system that occupied this landscape.

Parts of four tangible land units are defined by the ditch system exposed within the Terminal and Apron site. NE-SW aligned ditch 54/59 extends significantly further to the north-east, as demonstrated by its continuation as ditch f03 in evaluation trench 2, c.40m distant. Parallel boundaries represented by 07/f47/22/f52/65 and 29/32 could perhaps delineate a c.4m-wide droveway or routeway through these enclosures, with the various gaps along them allowing access between them. However, the interrupted and, in places, shallow nature of boundary ditches 07/f47/22/f52/65 and the presence of a number of post-holes cut into their bases (Plate 6) might alternatively suggest that this was a secondary fenced boundary inside the enclosure - perhaps used to control stock movement in and out of it? Alternatively, elements of this part of the enclosure system could in fact be earlier; pottery evidence from ditch segment 65 suggests a Middle Bronze Age date for this feature.

All the ditches yielded modest amounts of worked and burnt flint and prehistoric pottery that suggest a Late Bronze Age date for the enclosure system (apart from ditch f52/65). However, it is likely that much of the worked flint from ditch 91 in fact probably derives from pit 88, which it cuts. The fills of ditches 07 and 29 also contained significant quantities of charcoal, which may be significant in relation to the presence of pits with charcoal-rich fills located further west (see below).

Elsewhere, in-filled ditch 29 was cut by further post-holes 26 and 62 and ditch 54/59 by stakeholes 04 and 52, perhaps hinting at some sort of perpetuation or marking of these boundaries after the ditches themselves became in-filled.

Pits and/or post-holes

The vast majority of the forty-five discrete cut features recorded are judged to be either pits or post-holes and all to be of likely prehistoric date and therefore broadly contemporary with the use of the enclosure system described above. Indeed, there is only a single instance of an inter-cutting relationship between a pit and ditch (pit 88 is cut by ditch 91). However, few are clearly distinguished by size and morphology as unequivocally being one or the other. Additionally, some were speculated in the field to be possible cremation graves. Overall, there seems to be little coherent spatial patterning of these features, though it is notable that none were present in the northern area of the Apron site. Those interpreted as being components of the enclosure system have been described and discussed above and are not given further consideration here.

Larger pits

Oval or circular features in excess of c.0.50m length/diameter (i.e. 2, 6, 20, 26, 36, 38, 40, 42, 56, 62, 86, 88, 102, 120 and 122) are identified as the more obvious candidates for functioning as pits (e.g. Plate 7). Most had single fills containing no finds, though pit 36 contained pottery, and pot crumbs were observed to be present in 86.

The most notable pits are relatively large oval features 88 and 102 (Fig. 5). Similarly sized and shaped, these pits contained significant assemblages of flintworking tools, debitage and products (see section 6.1 flint report), along with quantities of prehistoric pottery. The fills were charcoal-rich and also contained small quantities of burnt flint and burnt bone reminiscent of smaller pits to their south judged in the field to be possible cremation burials (see below). Given their similar alignments and positioning in relation to the end of ditch 164 (Fig. 3), it is speculated that these two distinctive pits and their contents constitute placed or structured deposits of later Bronze Age date.

Smaller pits

The smaller discrete features generally ranged between 0.20 and 0.45m in width/diameter and were relatively shallow. Fourteen of these (pits 84, 104, 108, 109, 128, 131, 133, 141, 144, 146, 151, 156, 158 and 177) were tentatively identified as cremation graves in the field and excavated as such (e.g. Plates 8 and 9). All contained charcoal-rich fills and most included burnt flints, some prehistoric pottery and a few worked flints. Crucially, burnt bone was collected from pits 84, 109, 133, 146, 151 and 158. Where only present as flecks, bone was also observed to be present in the fill of pit 141. However, it should be borne in mind that other features, such as larger pits 088 and 102 and ditches 007 and 029, also contained charcoal-rich fills with very small quantities of burnt bone in some. Also, while pottery sherds

were present in these putative cremation burials, there is no evidence that these constituted the remains of container vessels. Finally, by weight, the quantities of burnt bone in these pits are not very significant, varying between 1g in pit 102 and 100g in pit 146. Nor is the highly burnt and fragmented bone recovered identifiably human or otherwise (see section 6.1 bone report). On balance, it is therefore likely that these fourteen pits do not constitute the remains of burials. They do, however, form a distinct sub-set of the recorded pits, all being confined to the southern Apron area and with all but charcoal-rich pits 109 and 128 located south of boundary ditch 91/99/166 (Fig.7). These constitute the majority of the pits/post-holes identified in this area of the site and are scattered across its middle, perhaps with a discernible cluster of those containing burnt bone toward its eastern limit. If indeed not graves, these pits constitute the strongest indication of domestic occupation within the enclosure system.

Other smaller-sized pits (i.e. those not containing burnt material) across both the Terminal and Apron areas of the site were generally unremarkable, relatively shallow and contained single fills yielding very few artefacts of any kind. The only exception was pit 36, located in the north of the Terminal area, which contained prehistoric pottery. No meaningful patterning of these pits/post-holes is evident

Gullies

Gully/ditch 44 was only 0.07m deep extended beyond the northern limit of the Terminal area. 6.0m-long gully 82 (Plate 10) was the only discrete linear that survived in the south of the Terminal area, perhaps indicating that had the south-western corner of the site been stripped under the supervision of an archaeologist further remains might have been found. Although neither gully contained any dating evidence, it is noteworthy that both conformed to the prevailing alignments of the surrounding enclosure system and could perhaps have constituted parts of foundations of structures occupying the enclosure interiors.

Miscellaneous

The largest of the discrete features comprised four irregularly-shaped entities ranging in width between 1.6 and 3.0m. Pits 24, 45, 69 and 80 are conjectured to be tree-holes, as indeed might some of the other unnumbered natural features in the northern part of the Terminal area. Of particular note is tree-hole 69 (Plate 11), which if indeed the location of a tree, may have been chosen as a fixed and conspicuous marker in the landscape to mark a corner of some of the enclosures in this landscape. While nearby tree-hole 24 could be construed to be aligned on 69 and ditch 54/59, others display no meaningful patterning within that part of the enclosure system exposed. The fill of tree-hole 80 contained an

artefact assemblage comprising pottery, worked flint and (intrusive?) animal bone that might suggest the deliberate clearance of its tree in the prehistoric period.

5.2 Late Iron Age, Roman and Medieval

Although no features of Late Iron Age, Roman or medieval date were identified within the investigated sites, the incidence of residual Roman material is notable. Post medieval ditch 179, located toward the south of the Apron site, contained fragments of Roman pottery and tile, while in the north of the Apron site parallel modern ditches 112, 124 and 136 yielded further small quantities of pottery and tile.

It would appear that scattered material of this date was present within the topsoil prior to the creation of the WW1 and WW2 airfield and present airport, some of it incidentally becoming deposited in the backfills of more recent features. It is assumed that this location was either open cultivated or unused land from late prehistory to medieval periods and beyond.

5.3 Post-medieval

Post-medieval land-use is similarly assumed to be that of cultivated farm land that endured until the creation of the WW1/WW2 airfield.

Ditch 76/78/173/179 ran east-west across the Terminal and south Apron areas, and is clearly part of a field boundary that is evident on historic mapping of the late 19th and early 20th centuries. Two fragments of 18th/19th century brick, ironwork, a coke fragment and the remains of a burnt-out tree stump were retrieved from its single fill. It is suggested that this feature might have been deliberately backfilled as part of the incorporation of the site into the airfield, with the burnt-out tree stump representing disposal of site clearance debris. The incidence of residual prehistoric and Roman period artefacts, such as pottery, tile, burnt and worked flint in some of its excavated segments is again noted.

5.4 Modern

As to be expected of a WW2 airfield and active airport, a variety of linear and discrete features of 20th century date were recorded within the investigated sites. Some of these were clearly drainage and service runs, often alongside and associated with the taxiways. A sewerage tank together with the corner of a small brick-built building were exposed at the southern edge of the Terminal site. As it has not been possible to correlate these remains with a specific structure depicted on the plans of the WW2 airfield, they are presumably later but could perhaps belonged to its WW1 predecessor. The interior of the small building had

been infilled with 20th century demolition material. The majority of these clearly 20th century remains exposed within the site were not further recorded or investigated beyond being planned.

Most noteworthy of the modern remains was a number of parallel ditches or channels encountered in the north Apron area. Aligned north-east to south-west, all had near vertical sides and roughly flat bases (Plate 12); though a slight variation in alignments and an intercutting relationship defines two overlapping sets of ditches/channels.

The earlier, comprising ditches 112, 114, 117 and 124/126/139, were of broadly similar proportions (c.0.9m wide and 0.6m deep, though 124 *et al* was smaller), and spaced between 5.0m and 7.0m apart. As additional ditches were not found to either east or west, the four would seem to be a complete set. The later set comprised ditches 119, 136 and 138. At 0.56m wide and 0.26m deep, ditch 119 was less substantial than the others and marks the eastern extent of this series. Ditches 136 and 138 were c.0.8m wide and 0.5m deep. Spacing varied between 7.5m and 8.0m. The westward continuation of this series was not established. Notably, their profiles and proportions were similar to those of the earlier series.

Despite evidently being two distinct series of parallel ditches, all contained uniform and clean silty-brickearth fills. Initially speculated to be of some antiquity, these features were investigated in some detail resulting in the recovery of a small quantity of finds including abraded prehistoric and Roman pottery sherds, worked and burnt flint and Roman tile from ditches 112, 124, 136 and 139. However, sparse fragments of post-medieval glass, brick/tile and shell were also recovered from ditches 114, 117, 124 and 138 that indicate the residual nature of the diagnostically earlier material. Finally, a piece of possibly burnt bakelite-type plastic was recovered from ditch 139 which would seem to signal a firmly 20th century date for these parallel features.

The full extent and function of the parallel ditches/channels was not determined by the investigation. Their distinctive straight alignments, near-vertical sides, roughly flat bases and broadly uniform dimensions might suggest that they were cut using an early mechanical excavator. They might have functioned as drainage channels, perhaps being part of the original airfield construction works. Significantly, a series of four near-identical parallel ditches was recorded in Trench 4 of the 1998 evaluation, located some 200m north-east of the north Apron area (Wardill 1998, 12, figs.5 and 6). While these yielded only Late Iron Age

and Roman period pottery, their odd nature was noted and discussed with reference to other excavated parallels for which medieval or later dates had been proposed (Wardill 1998, 21).

6.0 FINDS AND ENVIRONMENTAL MATERIAL

by Alan Jacobs

6.1 Finds

A quantity of fragments of pottery, brick, tile, mollusc shell, and animal bone was recovered from stratified contexts. All of the material has been sorted into context and recorded by count and weight. The finds are described and tabulated as Appendix 2 and include material extracted from the environmental samples.

Prehistoric pottery

All fabrics are defined by the Essex County Council Prehistoric Type Series, unless otherwise stated (Brown 1988 & 1995).

A total of 220 sherds, weighing 777g, were recovered from the topsoil and 17 stratified contexts. These nearly all consisted of extremely abraded small fragments and as such only two rim forms were recovered. The recovered material consisted primarily of flint-tempered sherds (Fabric B and C); these were evidently fragments of large coarse ware jars. Fabric B was present in eight stratified and one unstratified contexts (U/S, 8, 85, 90, 103, 134, 140, 167 and 178). The single definable form consisted of an example with a slightly everted rim (context 103). Fabric C was present in eight contexts (Test pit 1, 57, 90, 94, 103, 125, 160 and 178). Both fabric types are hand made, relatively well fired with a distinct oxidised outer surface. Larger fragments of flint are predominantly present on the outer surfaces of fabric C and it is possible that the variation in the fabric mean that they could originate from the same jar.

Other fabrics represented included fabric U (context U/S, 31, 35, 66, 170). Some of this flinty vesicular fabric may be earlier, with rim sherds of a jar (context 66) with in-turned rim and internal bevel, of Middle Bronze Age date (N. Brown pers. comm.). Also present were fabrics E (Context 81) a flinty fabric, G (context 8, 90, 94, 140, 169) a clean sandy fabric, and fabric I (context 81) a coarser sandy fabric. Finally a later Iron Age sherd (fabric P, context U/S) is also definable.

Most of the material from this group is extremely abraded and fragmentary. The balance of the sherds would appear to date to the Late Bronze Age with a few pieces of earlier Middle Bronze Age date. The assemblage is similar in character to material recovered from extensive earlier excavations (Germany and Foreman 1997; Wardill 1998; Germany 2005; Atkinson 2009). The lack of decoration and extremely abraded nature of the pottery is common to all of these excavations. If anything, the average sherd weight is smaller in this assemblage, being only 3g. The assemblage recovered from the Warner's Bridge excavation (Germany and Foreman 1997) was of similar size at 1555g over all, while individual sherds averaged 4.3g. The Warner's Bridge material was tentatively dated to the 9th century BC, based upon the dominance of the flint tempered wares and the lack of decoration on the thinner walled finer vessel fragments. This would be a very similar group.

Roman pottery

All fabrics are defined by the Essex County Council Type Series (Going 1987) with additions from the Stansted Airport excavations (Wallace *et al* 2004, 285-312), unless otherwise stated.

A total of 27 sherds weighing 99g were recovered from the topsoil and just three stratified contexts. These nearly all consisted of extremely abraded small fragments and as such only two clearly dateable Roman forms were identified. The pottery group consisted primarily of much-abraded Black Surfaced ware (fabric BSW, 34/45) sherds recovered from just two contexts (U/S and 113). Only a single form was identifiable; that of a globular jar (G1/1.1) of 1st century date, recovered from the unstratified context. Fine Grey ware (fabric GRF, 39) recovered from three contexts (u/s, 113 and 125), again includes only the single identifiable form of an oval bodied jar with a slightly over hanging rim (G24.1/2), dating to the 2nd to 4th century (context 113). Sandy Grey Ware (fabric GRS, 47), a fragment of unidentified (UPOT) Roman pottery and a single sherd of South Gaulish Samian ware (fabric SGSW, 60) were recovered from the fill of ditch 179 (context 180). All were extremely abraded and all are residual in later context. Although of too small a size for statistical analysis, this assemblage is large enough to characterise Roman activity in this area as very peripheral.

Medieval pottery (by Helen Walker)

Three sherds of pottery, weighing 15g, were excavated from two contexts. A single, extremely abraded sherd was found unstratified, which in spite of its poor condition can be identified as Mill Green Ware, showing traces of red and white slip on the exterior surface. It most likely dates from the mid 13th to 14th centuries (though could be later) and given the location of this find, it may have been made at the Rayleigh High Road production centre,

rather than that at Mill Green, near Ingatestone. Linear feature 124 (fill 125) produced single abraded body sherds of Medieval Coarse Ware and Sandy Orange Ware, their occurrence together suggesting a 13th to 14th century date. The small amount of pottery and the level of abrasion suggest that it is residual, but its presence does indicate a low level of medieval activity in the area.

Worked Flint and Associated Stone Objects

The struck material consisted of 231 fragments recovered from 26 contexts and weighing 1088g. This material was mostly in good condition, exhibiting little evidence of abrasion on the surface ridges. Most of the material was recovered from pits and ditch fills and would suggest deposition *in situ* with manufacture of the artefacts undertaken on site. The presence of chippings recovered from the bulk soil samples (contexts 90, 103 and 169) would support this. The material recovered consisted of 96 flakes, 11 blades, 14 scrapers, four bladelets, six cores, one point, one fragment of waste piece and 91 chippings. In addition four hammer stones were recovered in association with the flint debitage (context 103 and 169) and are also described here.

The blades are well knapped, with an average length of 30mmm. These should date from the Early Neolithic onwards, due to the absence of distinct Mesolithic artefacts such as microliths. The scrapers all suggest later dates of Neolithic or Bronze Age. The most clearly diagnostic scraper comes from pit 102; this has a fine invasive pressure flaking around the distal end of a blade. This artefact should be Neolithic but could also date from the Early Bronze Age. The large point from pit 107 and the large denticulate from pit 102 are both probably Bronze Age in date.

Recovered stone objects included four examples of hammerstones, weighing 1338 grams from pit 102 (context 103) and test-pit 3 context 169 that derives from pit 88. These include one near-complete in quartzitic sandstone, a similar example approximately three quarters present and a smaller flattened hexagonal-shaped example. Hammerstones are rarely found on prehistoric sites; they are carefully shaped and would have been used to rough out the flint artefacts - a further indication of flint working being undertaken on site. None are intrinsically dateable.

The largest groups of flint artefacts are clearly associated with the two pits 88 (including test pit 3 context 169 and material in truncating ditch 91) and 102. These two features contain a considerable amount of flint and include diagnostic pottery/flint dating them to the Late Bronze Age (contexts 90, 92, 93 and 103). Also included in these groups are three hammer

stones and a fragment of quernstone, as well as burnt flint and the small flint chippings recovered from the bulk soil samples. This is a very clear indication of the domestic nature of this site.

Burnt flint

A total of 128 pieces of burnt flint, weighing 608g, was retrieved from 20 contexts. The material consisted primarily of naturally-fractured small pieces of gravel flint and was recovered from both ditch and pit fills across the site, including those containing charcoal and burnt bone. Further, non-collected, tiny fragments of burnt flint were observed in the fills of these and additional features. The collected material was closely associated with the worked flint, with one example of burnt flint debitage from ditch 91 (fill 92). This is clear indication that this material is predominantly Bronze Age in date, though some inevitably was found residually in the post-medieval and modern ditches. The material was fairly heavily burnt and is presumably indicative of domestic activity in this vicinity.

Burnt Bone

Generally small, and highly fragmented, quantities of burnt bone were recovered from 10 contexts and consisted of an estimated 1491+ fragments weighing 225g. Due to its fragmentary nature, virtually all of this material was extracted from bulk soil samples, most of which were taken from small pits with charcoal-rich fills tentatively identified in the field as possible prehistoric cremation burials. The presence of tiny burnt bone fragments or flecks was noted in other pit fills, but not collected.

Sample	Context	Count	Wt (g)	Description
3	85	15	2	Small fragments of highly burnt bone, largest piece 18mm in
4	85	8	4	size, fragments of long bones present.
5	85	6	2	
6	85	51	8	
7	85	5	1	
8	90	12	2	Small fragments of highly burnt bone.
9	107	0	0	No collectable bone present.
10	109	220+	32	Small fragments of highly burnt bone.
12	103	2	1	Small fragments of highly burnt bone.
14	134	100+	12	Small fragments of highly burnt bone, largest piece 16mm in size, fragments of long bones present.
16	140	350+	40	Large quantity of small fragments of highly burnt bone, largest piece 22mm in size, fragments of long bones present.
17	147	600+	100	Considerable numbers of small fragments of highly burnt bone, largest piece 18mm in size, fragments of long bones present.
18	149	2	1	Small fragments of highly burnt bone.
19	159	120+	20	Small fragments of highly burnt bone, largest piece 13mm in
				size, fragments of long bones present.
Total		1491	225	

The bone is uniformly highly burnt and grey white in colour, with the majority of fragments less than 5mm in size. The texture and size of the fragments could perhaps support the identification of this material as being human cremated bone. However, only a very few fragments can be defined as deriving from long bones, and no skull fragments were definable, so no species identification is possible. None of the individual feature assemblages comprised enough material to be classified as large enough to fall within the weight range for prehistoric cremation burials, which is usually between 200 and 2000g (Duhig 2003).

Along with the charcoal, this burnt bone could possibly derive from a dispersed cremation site (i.e. debris from one or more pyres), rather than constitute distinct bodily remains interred in individual graves. However, the lack of fuel ash slag and the very small amounts of fired clay across the site as well as the small amounts of highly fragmented charcoal would argue against this (Roberts 2009, 80-81). It is more likely that some or all of this material is animal bone and, as such, perhaps results from the deposition of domestic hearth waste.

Other finds

Four fragments of Roman tile weighing 278g were recovered. These consisted of three fragments of a Tegula (contexts 35 and 180), and an unidentifiable fragment (context 180). Medieval tile was present in only a single context (116) and consisted of three fragments of a ridge tile. These weighed 56g and were in a sandy well-fired fabric dating to the 13th to 16th century. A total of six more modern brick/tile fragments were recovered (contexts 79, 115 and 174); these weighed 378g and were in a fairly well fired orange sandy fabric. These fragments are most likely of post-medieval or modern date. The single identifiable modern tile fragment weighed 48g and was 10mm in thickness. This dated to the 19th to 20th century.

A single fragment of coke or clinker weighing 2g was recovered from modern ditch 173 (fill 174). The only example of modern glass consisted of a fragment of the neck of 18th to 19th century green brown beer/wine bottle (context 137), that weighed eight grams. Two fired clay fragments were recovered (context 178) weighing 24g, most probably fragments of daub. Only a single fragment of a possible quern stone (context 93), weighing 466g, was recovered from a prehistoric feature, ditch 91 (possibly deriving from pit 88?). This fragment had a worn under surface, not enough of the form survives for closer identification. Only a single iron object, a fragment of lawn mower blade weighing 190g, was recovered from

modern context (174). A single small fragment of Bakelite-type plastic was recovered from modern context (140), this weighed just 1g.

Very little organic material was recovered. Only three charcoal fragments (context 159 and 169) weighing 2g, and a single fragment of mollusc shell (context 140) also weighing 2g were collected. Animal bone was present in just a single context (81); amounting to 31 fragments weighing just 30g and most likely representing modern intrusive material. Very abraded fragments of long bone are present, along with many small fragments of unidentifiable material. The nature of the soil in this area, where only cremated fragments of ancient bone have been recovered from site, would indicate very poor survival conditions for organic remains. As such, this recovered material is unlikely to be of significance.

The small quantities of recovered miscellaneous artefacts limits any interpretation beyond that of representing casual rubbish disposal on the land surface, in a very peripheral location to contemporary settlement.

Conclusion

In overview, the finds assemblage from this site is very scrappy, the pottery lacking clearly definable prehistoric forms; this is similar to sites previously excavated in the area (Germany and Foreman 1997; Wardill 1998; Germany 2005; Atkinson 2009). The flint assemblage reinforces a Late Neolithic to Bronze Age date for activity in this vicinity, again similar to the evidence from earlier excavations at Southend Airport. The fills of pit 88 (including test pit 3 and re-deposited material in ditch 91) and nearby pit 102 have produced a substantial part of the flint assemblage with a clear Late Bronze Age date and are the clearest indication of domestic activity and flint tool manufacture, with the survival of both tools and debitage. There is a more broadly definable scattered activity elsewhere dating from the Neolithic to Bronze Age represented by pottery, worked flint and burnt flint. Taken with the very small fragments of heavily burnt bone present in the charcoal-rich fills of some of the pits, this would more likely be indicative of domestic activity in this area during the Later Bronze Age, rather than funerary, as postulated in the field.

Ditch 65 (fill 66) alone contains clear evidence of middle Bronze Age activity, although the nature of the pottery fabrics recovered does not preclude some of it being of earlier date.

The later material is all unstratified or residual and produced a very limited finds assemblage that does little beyond indicating very peripheral activity in this area during the Iron Age, Roman, or later periods. Again, this has been a feature of previous excavations in this area.

This level of activity could be found in most fields across Essex, and most likely reflects the peripheral nature of the site in relation to nearby settlement, merely reflecting agricultural manuring or casual loss. Care should be taken in attributing dates to later features given the high levels of residuality in this area.

No further work is currently required on any of the finds. All but the modern materials should be retained.

6.2 Environmental material

A total of 20 soil samples were collected from post-holes, pits and ditch fills, mainly of prehistoric date. These were primarily taken to investigate the nature of the cremation fills and environment of the site, and comprised entirely of bulk samples. The samples were selected primarily because of the visible charcoal and fragments of bone, the post/holes and pits were judged to look like cremation burials during excavation. Processing was therefore undertaken to recover artefacts/bone as well as organic remains. These were incorporated with the hand-excavated material and are discussed in the finds report. All samples were processed and assessed.

All the bulk soil samples were processed by wet sieving with flotation using a 0.5mm mesh and collecting the flotation fraction (flot) on a 0.5mm sieve. The residue was then dried and separated using 2mm and 4mm sieves. All the material larger than 2mm (the coarse fraction) was sorted and assessed by eye, the finer material was retained. The flot has been dried, examined by eye and assessed for the presence of ecofactual material such as seeds, the results are summarised below.

The processed samples are summarised in the table below. All flots were found to contain mostly modern root fibre and small amounts of fine charcoal. Other inclusions are noted below.

Sample No.	Context	Context type	Weight/ Litres	Residue (g)	Flot (g)	Notes
1	8	Ditch fill	23kg/28	318	8	Small amounts of charcoal &
						burnt flint in the residue
2	61	Ditch fill	12kg/5	58	4	Very small amounts of charcoal
3	85	Pit Fill spit	7kg/5	108	4	Small amounts of charcoal, burnt
		1 (Crem?)				flint & bone in the residue
4	85	Pit fill spit	5kg/6	182	6	Small amounts of charcoal, burnt
		2 (Crem?)				flint & bone in the residue
5	85	Pit fill spit	5kg/6	172	6	Small amounts of charcoal, burnt
		3 (Crem?)				flint & bone in the residue
6	85	Pit fill spit	6kg/5	136	10	Small amounts of charcoal, burnt

		4 (Crem?)				flint & bone in the residue
7	85	Pit fill spit	7kg/5	16	4	Small amounts of charcoal &
		5 (Crem?)				burnt bone in the residue
8	90	Pit fill	8kg/6	44	4	Small amounts of charcoal, burnt
						flint, pottery & bone in the
						residue
9	107	Pit fill	12kg/10	72	22	Small amounts of charcoal &
		(Crem?)				burnt flint. No bone in residue
10	109	Pit fill	17kg/20	152	16	Small amounts of charcoal and
		(Crem?)				burnt flint & bone in the residue.
11	106	Pit fill	9kg/16	132	22	Small amounts of charcoal
12	103	Pit fill	13kg/15	72	12	Small amounts of charcoal, burnt
						flint, pottery, very little bone.
						Numerous small flint chips in the
						residue
13	130	Pit fill	10kg/18	80	8	Small amounts of charcoal &
						burnt flint in the residue
14	134	Pit fill	14kg/16	54	4	Small amounts of charcoal,
		(Crem?)				burnt flint & bone in the residue
15	132	Pit fill	16kg/14	80	8	Small amounts of charcoal
						&burnt flint in the residue
16	143	Pit fill	15kg/12	200	6	Small amounts of charcoal &
		(Crem?)				bone in the residue
17	147	Pit fill	17kg/20	786	106	Large amounts of charcoal.
		(Crem?)				Some carbonised seed, burnt
						flint & bone in the residue
18	149	Pit fill	7kg/10	100	14	Large amounts of charcoal &
		(Crem?)				burnt flint & bone in the residue
19	159	Pit fill	20kg/20	458	120	Large amounts of charcoal,
		(Crem?)				some carbonised seed, burnt flint
						& bone in the residue
20	178	Pit fill	16kg/15	158	16	Very small amounts of charcoal,
						pottery & burnt flint in the residue

The environmental samples floated poorly, largely being fine clays that needed to be soaked before floatation. All organic material was recovered. Most of the flots consisted primarily of modern root fibre with many small fragments of wood charcoal, only a few samples (17 and 19) contained visible examples of carbonised seed. The amount of organic material recovered in floatation was generally fairly small given the size of the samples, indicating poor organic presence/survival in these features. Modern root fibre was present in nearly all samples indicating some contamination.

The residues were generally very small, a distinct feature of this area of Essex with relatively few stones or fragments of flint in the soil matrix. Nearly all the features sampled contained many burnt flint fragments, some pottery (samples 10, 12, 16 and 20) and small amounts by weight of finely broken fragments of burnt bone (samples 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 17,18 and 19). No mollusc shells were definable within this material.

The low quantities and poor quality of the organic material indicates little potential for these samples to further our understanding of the prehistoric environment. There are too few

seeds present for meaningful study, whilst the charcoal is very fragmentary limiting the possibility of identification to species, at least in the better understood features from this site. No further work is required on any of the environmental material. The extracted finds, flots and the finer residues from the possible cremations (see bone report) should be retained. All other materials can be discarded.

7.0 CONCLUSIONS & ASSESSMENT OF RESULTS

Amounting to 0.74ha in extent, the Terminal and Apron site is the largest open area archaeologically investigated within the Southend Airport site to date. As such, it has presented the opportunity to verify and expand upon the results of the various evaluations and watching briefs previously undertaken within this eastern part of the airport.

The variable depth of burial, primarily due to levelling works associated with airfield and airport creation has been demonstrated, with overburden deposits generally decreasing in depth westwards. Allied to this, truncation and disturbance of undisturbed subsoil deposits and of buried archaeological remains has also been shown to be variable, though generally not too severe. Indeed, even though the legibility of surviving features within the brickearth surface geology has been shown to be poor, as amplified by the disparities of feature detection between the 1998 evaluation trench and the subsequent open area excavation, a variety of remains have been identified and recorded across the site. It is likely that only the most ephemeral and shallow remains have been lost to historic farming and 20th century development, except in parts of the site subject to over-cutting during machine clearance.

Prehistoric land-use

The presence of apparently residual flintwork of Mesolithic and Neolithic date hints at early occupation and exploitation of this landscape, but no tangible transformation and ordering of the land is visible until the late Prehistoric, when a rectilinear enclosure system is imposed. The ditches delineating these enclosures are most likely of Late Bronze Age date, though elements could be earlier, and can be demonstrated to extend significantly beyond the Terminal and Apron site (Fig.7). Further parts of ditch 54/59 were recorded within the 1998 evaluation trench 2, and other prehistoric ditches on similar alignments in trenches 2, 3 and 4 might reasonably be assumed to constitute further parts of the same enclosure system. The prehistoric ditches found during the 1997 Warners Bridge site investigations (Germany

and Foreman 1997) were also broadly on the same alignment and are likely to be a southward component of the same system.

The enclosure system and the numerous post-holes and small pits are judged to be broadly contemporary and to constitute a single phase or episode of land-use. However, there are some hints of slightly more complex development involved. Pits 88 and 102, if indeed paired, could be the earliest features recorded and perhaps be closely associated with ditch 164 - itself therefore possibly a precursor of ditch 91/99/166 alongside. Clearly pit 88 predates ditch 91 and the structured nature of the contents of both pits sets them apart. The apparently earlier, Middle Bronze Age, date of ditch 22/f52/65 might also suggest a degree of evolution of this enclosure system.

Whether or not the remainder of the pits and/or post-holes predate, accompany or post-date the enclosure system is difficult to determine given the distinct lack of stratigraphic relationships, precise dating evidence and meaningful spatial patterning on which to attempt to phase the prehistoric remains. With regard to the latter, most of the pits in the Apron area contain charcoal-rich fills, which often include burnt bone and pottery, while those in the Terminal site do not. Whether this makes these a distinct group, perhaps with cremation burial-like undertones, that accompanies ritual pits 88 and 102 and therefore predate the enclosure ditches, is unclear. This said, the smaller pits, whether containing charcoal-rich fills or not, are very similar to those found within the new rail station facilitation works on the opposite side of the railway line (Atkinson 2009; Germany 2005) and are clearly part of a wider-spread Bronze Age activity.

Taken as a whole, this picture of Late Bronze Age enclosure and of settlement and agricultural exploitation of the landscape that these prehistoric remains suggest accords with the perceived wider pattern of landscape development and use in south-east Essex. As such, this work has contributed significantly to the research objective of identifying and investigating any further prehistoric remains indicative of settlement or exploitation of the landscape. Certainly, the extent of prehistoric activity at this location, as previously proposed on the basis of evaluation results (Germany 2005, fig.5), can be demonstrated to be erroneous, with their extent and survival likely to be much greater. However, at the same time, the very poor survival of organic remains such as bone and of environmental material such as seeds unless burnt, confirms the limited potential to increase understanding of the nature of the prehistoric landscape by means of their retrieval and study.

Later land-use

The absence of Iron Age, Roman and early medieval features further clarifies that this location presumably sits between the known occupation sites at Westbarrow Hall to the west and Temple Farm to the east. The presence of residual Roman artefacts in later features suggests that some degree of use or exploitation extended this far from one or both of them in this period. Late medieval ditches were previously found to the north-east in Trench 9 of the 2005 evaluation of the 'Transport Interchange' site (Germany 2005, 7), but no features of this date extend this far south or west.

Land-use in the post-medieval period and into the mid 20th-century was evidently agricultural, with ditch 78/173/179 denoting a historic field boundary running across the southern end of the site which was probably in-filled as part of the airfield development. While it is not possible to correlate other 20th century remains with specific episodes in the life of the airfield and airport, it is possible that some of them do relate to its WW1 and/or WW2 use. However, those modern remains encountered were not of particular significance and contribute little to our understanding of the nature and development of the historic airfield. That said, the enigmatic sets of linear ditches/channels remain intriguing as a further example of a type of feature group noted elsewhere in South Essex (Great Wakering, Crowe 1984 and Reidy 1997; Barling Marsh, Wade 1994) and further afield (Harlow, Robertson 2004; Takeley, Robertson 2006). These have been variously accorded medieval to Napoleonic date, so the Apron area examples clearly add to the dating debate.

ACKNOWLEDGEMENTS

The ECC FAU would like to thank Stobart Developments for commissioning and funding the archaeological excavation. Stobart Developments' Project Manager, Matt Severs, and Nigel Muddiman of Buckingham Group are thanked for their assistance in facilitating the fieldwork. The archaeological fieldwork was supervised by Phillippa Sparrow, who was assisted by Trevor Ennis, Andrew Letch, John Hewitt and Andrew Lewsey. The finds were processed by Phillippa Sparrow, and analysed and reported upon by Alan Jacobs, with guidance from Hazel Martingell on the worked flint assemblage and from Nigel Brown on the prehistoric pottery. The figures were produced by Andrew Lewsey. The project was managed by Mark Atkinson, who also completed and edited the report, and was monitored by Adam Garwood of the Essex County Council Historic Environment Management team on behalf of the local planning authority.

BIBLIOGRAPHY

Atkinson, M.	2009	Rail Station Site, Southend Airport, Rochford, Essex: Archaeological monitoring, FAU rep. 2040
Atkinson, M.	2010	Car Park Construction Site, Southend Airport, Rochford, Essex: Archaeological monitoring, FAU rep. 2215
Brown, N.	1988	'A Late Bronze Age enclosure at Lofts Farm, Essex' <i>Proc. Prehist.</i> Soc. 54. 249-302
Brown, N.	1995	'Later Bronze Age and Early to Middle Iron Age pottery.' in Wymer, J and Brown, N., <i>Excavation at North Shoebury: settlement and economy in south-east Essex 1500BC-AD1500</i> . E. Anglian Archaeol. 75 , 77-88
Brown, N. & Glazebrook, J.	2000	Research and Archaeology: a Framework for the Eastern Counties, 2. research agenda and strategy, E. Anglian Archaeol. Occ. Pap. 8
Butler, C.	2005	Prehistoric Flintwork, Tempus Books
Crowe, K.	1984	Great Wakering 1984: Report on Excavations by Southend Museum, Southend Museum Report.
Dale, R.	2001	Westbarrow Hall Farm, Rochford, Essex: archaeological evaluation. FAU rep. 412
Duhig, C	2003	'Human Remains' in Hinman, M., A Late Iron Age Farmstead and Romano-British Site at Haddon, Peterborough. British Archaeological Report, British Series, no 358
ECC FAU	2007	Site Recording Manual
ECC FAU	2010	Written Scheme of Investigation for excavation & monitoring at site of new terminal building, London Southend Airport, Rochford, Essex
ECC HEM	2010	Archaeological excavation & monitoring: new terminal building, Southend Airport, Rochford. ECC HEM brief, June 2010
Ennis, T.	2007	New Car Park, Southend Airport, Southend-on-Sea, Essex: Archaeological Monitoring. FAU rep. 1710
Germany, M.	2005	Transport Interchange, Southend Airport, Rochford, Essex: archaeological evaluation by trial trenching, FAU rep.1513
Germany, M. and Foreman, S.	1997	The south-eastern corner of Southend Airport, adjacent Warners Bridge, Southend-on-Sea: Archaeological evaluation and excavation. FAU rep.273/281
Going, C.J.	1987	The Mansio and Other Sites in the South-eastern Sector of Caesaromagus: the Roman pottery, Chelmsford Archaeology. Trust Rep. 3.2, Council. Brit. Archaeology. Res. Rep. 62
Gurney, D.	2003	Standards for Field Archaeology in the East of England, E. Anglian Arch. Occ. Pap. 14
Heppell, E.	2003	St Laurence and All Saints Church, Eastwood, Essex: Archaeological desk-based assessment and site inspection. FAU rep. 1112
Heppell, E.	2004	Journeymans Way, Southend-on-Sea: Archaeological desk-based assessment. FAU rep. 1370
Preston, J.	2009	London Southend Airport: cultural heritage desk based assessment. Jacobs (job no. B1199200)
Reidy, K.	1997	'A Middle Bronze Age site at Great Wakering', Essex Archaeol. Hist. 28, 1-11

Roberts, C.	2009	Human Remains in Archaeology: a handbook, CBA Practical Handbook No 19
Robertson, A.	2004	Mark Hall School, Harlow, Essex: Archaeological Excavation, ECC FAU rep.1401
Robertson, A.	2006	Priors Green, Takeley, Essex: Archaeological Excavation, Phase 1, Stage 2, ECC FAU rep.1478
Wade, A.J.	1994	Barling Marsh, Barling Magna, Essex: An Archaeological Watching Brief. ECC FAU Report.
Wallace, C.	2004	'The Roman Pottery' in <i>Excavations at Stansted Airport: The prehistoric and Romano-British</i> , E. Anglian Archaeol. 107
Wardill, R.	1998	London Southend Airport, Essex: Archaeological Evaluation and Building Survey Report. FAU rep. 475

APPENDIX 1: FIELDWORK DATA

Feature No	Туре	Filled by	Feature Description	Date
002	Pit	001	Oval. 0.60 x 0.52 x 0.17m deep. Single fill. No finds.	Prehist?
004	Stakehole	003	Oval? 0.26 x 0.23 x 0.19m deep. Single fill. No finds. Cuts fill of ditch 054.	Prehist?
006	Pit	005	Oval. 0.90 x 0.66 x 0.20m deep. Single fill. No finds.	Prehist?
007	Ditch	008, 009	Aligned NW-SE.13.50 x 1.60 x 0.4m+ deep. Part of eval ditch f47. Cuts fill of pit 011. Post-hole 010 in base.	LBA
010	Post-hole	008	Rounded. 0.42m diam x 0.46m deep. Cut into base of ditch 007. Same fill as ditch. No finds.	LBA
011	Pit	012	Oblong. 2.70 x 0.65 x 0.40m deep. Single fill. No finds.	Prehist?
014	Stakehole	013	Oval, tapering. 0.24 x 0.21 x 0.15m deep. Single fill. No finds.	Prehist?
016	Natural feature?	015	Slot/scoop. 0.60 x 0.25 x 0.13m deep. Single fill. No finds.	-
018	Pit	017	Circular. 0.40m diam x 0.13m deep. Single fill. No finds.	Prehist?
020	Pit	019	Oval. 0.80 x 0.58 x 0.17m deep. Single fill. No finds.	Prehist?
022	Ditch	021	Aligned NW-SE. Rounded terminal to NW. 5.50+ x 0.92 x 0.30m deep. Single fill. No finds. Part of ditch 065 & f52.	LBA
024	Pit	023	Irregular. 3.0 x 2.0 x 0.43m deep. Single fill. No finds. Possibly natural?	Prehist?
026	Pit	025	Oval. 0.68 x 0.64 x 0.32m deep. Single fill. No finds. Cuts fill of ditch 029.	Prehist?
027-028	Unused	-	-	-
029	Ditch	031, 061, 060, 030	Aligned NW-SE. 40.0+ x 1.35 x 0.64m deep. SE end uncertain. Fills cut by pit 062. Part of eval ditch f44.	LBA
032	Ditch	034	Aligned SE-NW. Rounded terminal to NW. 4.0+ x 0.96 x 0.47m deep. Single fill.	LBA
033	Post-hole	034	Circular. 0.40m diam x 0.18m deep. Cut into base of ditch 032. Shares fill with ditch.	LBA
036	Pit	035	Oval. 0.80 x 0.90 x 0.11m deep. Single fill.	LBA
038	Pit	037	Oval. 0.70 x 0.45 x 0.06m deep. Single fill. No finds.	Prehist?
040	Pit	039	Irregular. 0.80 x 0.45 x 0.05m deep. Single fill. No finds.	Prehist?
042	Pit	041	Oval. 0.62 x 0.45 x 0.07m deep. Single fill. No finds.	Prehist?
044	Gully	043	Aligned NW-SE. Rounded terminal to SE. 4.0+ x 0.60 x 0.07m deep. Single fill. No finds.	Prehist?
045	Pit	046	Irregular. 1.85 x 0.82 x 0.17m deep. Single fill. No finds.	Prehist?
048	Gully	047	Aligned N-S. 4.0 x 0.95 x 0.25m deep. Rounded terminals to either end. Single fill. No finds.	Prehist?
050	Pit	049	Circular. 0.45m diam x 0.10m deep. Single fill. No finds.	Prehist?
052	Post-hole	051	Circular 0.20m diam x 0.12m deep. Single fill. No finds. Cuts fill of ditch 054.	Prehist?
054	Ditch	053, 064	Aligned NE-SW. 35m+ x 1.80m x 0.77m deep. No finds. Part of ditch 059. Fills cut by post-hole 051.	LBA
056	Pit	055	Oval. 1.10 x 0.95 x 0.39m deep. Single fill. No finds.	Prehist?
059	Ditch	057, 058	Aligned NE-SW. 35.0+ x 1.25 x 0.74m deep. Pot crumbs. Part of ditch 054.	LBA
062	Pit	063	Oval. 0.63 x 0.50 x 0.16m deep. Single fill. No finds. Cut into fill of ditch 029.	Prehist?
065	Ditch	066	Aligned NW-SE. Broad irregular terminus to SE. 16.0 x 1.40 x 0.37m deep. Part of ditch 022 & f52.	MBA?
068	Post-hole	067	Circular. 0.44m diam x 0.05m deep. Single fill. No finds.	Prehist?

069	Treehole?	070 - 073	Irregular. 1.60 x 0.77 x 0.82m deep.	-
074	Post-hole	075	Oval. 0.44 x 0.36 x 0.26m deep. Single topsoily fill. No finds.	Modern?
076	Ditch	077	Aligned E-W. 22.0+ x 0.90 x 0.18m deep. Single fill. No finds. Part of ditch 078.	Post-med
078	Ditch	079	Aligned E-W. 22.0+ x 0.90 x 0.27m deep. Single fill. Part of ditch 076.	Post-med
080	Tree hole	081	Irregular. 3.0 x 1.8m. Single fill. Cut by unnumbered modern disturbance.	-
082	Gully	083	Narrow slot/gully. Aligned NE-SW. 6.40 x 0.25 x 0.10m deep. Single fill. No finds.	Prehist?
084	Pit (crem burial?)	085	Oval. 0.50 x 0.40 x 0.26m deep. Single charcoal-rich fill, inc. burnt bone.	LBA
086	Pit	087	Irregular, truncated. 0.52+ x 0.77 x 0.27m deep. Single fill. Baked clay & pot crumbs (not collected).	LBA
880	Pit	089, 090	Oval, truncated. 0.82 x 0.35+, 0.25m deep. Fills cut by ditch 091. Charcoal, pot, flint & burnt bone in fill.	LBA
091	Ditch	092 - 094	Aligned NW-SE. 46.0+, 1.36 x 0.98m deep. Cuts fills of pit 088. Part of ditch 099 & 166.	LBA
096	Ditch	095	Aligned NW-SE. ?? x 1.72m x 0.37m deep. Single fill. No finds. Part of ditch 098. Later re-ex as ditch 164?	-
098	Ditch	097	Aligned NW-SE, terminal to NW. ?? x 1.68 x 0.30m deep. Part of ditch 096. Later re-ex as fill of ditch 164?	-
099	Ditch	100, 101	Aligned NW-SE. 46.0+ x 1.90 x 0.80m deep. Part of ditches 91 and 166. Charcoal in fills. No finds.	LBA
102	Pit	103	Oval. 0.85 x 0.68 x 0.23m deep. Single fill, inc. charcoal & burnt bone.	LBA
104	Pit	105, 106	Oval. 0.64 x 0.40 x 0.26m deep. Charcoal. No finds.	LBA
108	Pit	107, 111	Circular. 0.5m diam x 0.30m deep. Charcoal fill over silt, no burnt bone.	LBA
109	Pit (crem burial?)	110	Oval. 0.46 x 0.51 x 0.20m deep. Single charcoally fill, inc. burnt bone.	LBA
112	Ditch	113	Aligned N-S. 41.0+ x 0.93 x 0.67m deep. Single fill.	Modern
114	Ditch	115	Aligned N-S. 29.5+ x 0.92 x 0.61m deep. Single fill.	Modern
117	Ditch	116	Aligned NE-SW. 22.0+, 1.50 x 0.52m deep. Single fill. Cuts fill of ditch 119.	Modern
119	Ditch	118	Aligned NE-SW. 25.0+ x 0.56m x 0.26m deep. Single fill. No finds. Fill cut by ditch 117.	Modern
120	Pit	121	Circular. 0.52m diam x 0.19m deep. Single fill. No finds.	Prehist?
122	Pit?	123	Elongated oval. 0.78 x 0.44 x 0.20m deep. No finds.	Prehist?
124	Ditch	125	Aligned N-S. 35.0+ x 0.38 x 0.35m deep. Single fill. Part of ditch 139. Same as 126.	Modern
126	Ditch	127	Aligned N-S. ?? x 0.40 x 0.37m deep. Single fill. No finds. Same as 124.	Modern
128	Pit	129, 130	Circular. 0.42m diam x 0.22m deep. Upper fill charcoal-rich.	LBA
131	Pit	132	Circular. 0.38m diam x 0.20m deep. Single charcoally fill.	LBA
133	Pit (crem burial?)	134	Sub-circular. 0.42m diam x 0.16m deep. Single fill, inc. charcoal and burnt bone.	LBA
136	Ditch	135	Aligned N-S. 17.5+ x 0.80 x 0.50m deep. Single fill.	Modern
138	Ditch	137	Aligned N-S. 7.0+ x 0.80. Unexcavated. Single fill.	Modern
139	Ditch	140	Aligned N-S. 35.0+ x 0.68 x 0.37m deep. Single fill. No finds. Part of ditch 124.	Modern
141	Crem pit	142, 143	Irregular ovoid. 0.54 x 0.48 x 0.19m deep. Both fills inc. charcoal & burnt bone. No finds.	LBA
144	Pit	145	Circular. 0.46m diam x 0.18m deep. Single charcoally fill. No finds.	LBA

146	Pit (crem burial?)	147	Circular. 0.43m diam x 0.29m deep. Single charcoally fill, inc. burnt bone frags.	LBA
151	Pit (crem burial?)	148, 149, 150	Circular. 0.42m diam x 0.30m deep. Middle fill charcoalrich, inc. burnt bone frags.	LBA
152	Pit?	153	Sub-circular. 0.26 x 0.22 x 0.22m deep. Single fill. No finds.	Prehist?
154	Pit?	155	Sib-circular. 0.21 x 0.18 x 0.15m deep. Single fill. No finds.	Prehist?
156	Pit	157	Circular. 0.57m diam x 0.31m deep. Single charcoally fill. No finds.	LBA
158	Pit (crem burial?)	159	Oval. 0.43 x 0.38 x 0.17m deep. Single charcoal-rich fill, inc. burnt bone.	LBA
160	Unknown	161	Unexcavated linear. Fill contains tarmac, glass, etc.	Modern
162	Pit/slot	163	Oval? 0.80+ x 0.68 x 0.21m deep. Single fill. No finds.	Prehist?
164	Ditch	165, 168	Aligned NW-SE. Rounded terminal to SE. 17.0+ x 1.88 x 0.73m deep. Pot crumbs (not collected).	LBA
166	Ditch	167, 170	Aligned NW-SE. 46.0+ x 1.43 x 0.79m deep. Part of ditch 091 & 099.	LBA
169	Finds	-	Collected from test-pit 3 cut into ditch 091(and pit 088?)	LBA
171	Ditch	172	Aligned SW-NE. 1.5+ x 0.58 x 0.53m deep. Only seen below ditch seg 173. Single fill.	Prehist
173	Ditch	174	Aligned E-W. 26.5+ x 0.65 x 0.52m deep. Single fill. Cuts fill of ditch 171. Part of ditch 179.	Modern
175	Ditch	176	Aligned WNW-ESE. 4.0+ x 0.99 x 0.46m deep. Single fill.	Prehist?
177	Pit	178	Irregular. 0.33+ x 0.42 x 0.12m deep. Single fill.	LBA
179	Ditch	180	Aligned E-W. 26.5+ x 1.40 x 0.46m deep. Single fill. Part of ditch 173.	Post-med

APPENDIX 2: FINDS AND ENVIRONMENTAL MATERIAL

No.	Feature	Count	Wt (g)	Description	Date
U/S		5	40	Roman Pottery, very abraded sherds of Fine Grey Ware (GRF), not further definable	1st to 4th cent
		10	25	Roman pottery sherds, Black Surface ware (BSW), very abraded, including rim of globular jar.	1st to 2nd cent
		1	2	Mill Green ware showing traces of red and white slip, extremely abraded	Mid 13th to 14th cent or later
		1	48	Tile, modern oxidised fabric 10mm in thickness.	Modern
		2	26	Burnt flint, fragments (discarded)	Modelli
		1	8	Worked flint, blade butt part	
		1	2	Prehistoric pottery sherd very abraded fabric U, no surfaces surviving.	Middle Bronze Age?
		4	16	Prehistoric pottery sherd abraded fabric B, oxidised with burnt interior.	Late Bronze Age?
		2	4	Prehistoric pottery sherds very abraded fabric P, no surfaces surviving.	Iron Age
Test Pit		1	18	Worked flint core, dark grey fabric.	
1		2	1	Worked flint flakes.	
•		1	2	Burnt flint, fragment (discarded)	
		1	4	Prehistoric pottery sherd very abraded fabric C.	Bronze Age?
8	7	1	26	Worked flint, core	5101120 / 1g0 :
J	'	2	18	Worked flint, core Worked flint, flakes	
		2	2	Burnt flint, fragment (discarded)	
		1	4	Prehistoric pottery sherd very abraded fabric G, no surfaces surviving.	Late Bronze Age?
		1	2	Prehistoric pottery rim sherd of a small globular urn? 140mm diameter, 3% EVE. Abraded fabric B.	Late Bronze Age?
9		1	10	Worked Flint, flake	
		4	6	Worked flint, blade fragments	
31	29	3	4	Prehistoric pottery sherds very abraded fabric U, no surfaces surviving.	Bronze Age?
		1	1	Worked flint, flake	
34	32	5	8	Burnt flint, fragments (discarded)	
		1	2	Worked flint, primary flake, burnt	
		2	4	Worked flint, tertiary flakes	
		1	16	Worked flint, waste piece	
35	36	8	22	Prehistoric pottery sherd very abraded fabric U, no surfaces surviving.	Bronze Age?
57	59	1	2	Prehistoric pottery sherd, abraded fabric C.	Iron Age?
		1	14	Worked flint, core,	
		1	2	Worked flint, flake, grey with light grey patches, cortex still present.	
66	65	4	28	Prehistoric pottery rim sherds of a jar with in turned rim and internal bevel, 320 mm in diameter, 4% EVE. The surface of the sherds are smoothed and have a soapy texture, abraded fabric U.	Middle Bronze Age
		1	2	Worked Flint, tertiary flake trimming	
		1	10	Worked flint, tertiary flake, burnt	
		2	2	Worked flint, tertiary bladelets	
		3	22	Burnt flint, fragment (discarded)	
72	69	1	20	Worked flint, scraper on core fragment	
79	78	2	420	Brick, fragments of a fairly well fired orange fabric	18th to 19th cent
			120	with distinct white inclusions, the surfaces are much abraded limiting identification, but appear to indicate a thickness of 54 to 55mm, and to have rounded arises.	Tour to Tour cont
81	80	31	30	Animal Bone, many abraded and very fragmented pieces, some evidently from long bones too small and abraded to define further.	Modern intrusive material?
		1	2	Prehistoric pottery sherd, abraded fabric E.	Late Bronze Age?
		1	4	Prehistoric pottery sherd, abraded fabric I.	Late Bronze Age?
		2	4	Worked flint, small flakes	

85	84	85	17	Burnt bone, small very fragmentary pieces.	Late Bronze Age?
00		17	12	Burnt flint, fragments (discarded)	Late Brenze 7 tge .
		1	2	Prehistoric pottery sherd abraded fabric B, oxidised with burnt interior.	Late Bronze Age?
90	88	3	36	Worked Flint, flakes	
90		1	1	Worked flint, blade fragment	
		6	2	Worked flint, chippings	
		20	4	Burnt flint, fragments (discarded)	
		12	52	Prehistoric pottery sherd abraded fabric B, oxidised	Late Bronze Age
				with burnt interior.	
		6	10	Prehistoric pottery sherds fine fabric G, micaceous.	Late Bronze Age
		20	48	Prehistoric pottery sherd abraded fabric C, oxidised	Late Bronze Age
				with burnt interior.	
92	91	1	6	Worked flint, flake, burnt	
93	91	1	466	Sandstone fragment of quern stone? 100mm by 70mm by 50mm. Worn underneath smooth or	
				shaped outer edge.	
		1	2	Worked flint, tertiary flake	
		1	4	Worked flint secondary flake	
		9	2	Worked flint, flakes.	Loto Dronzo Ago?
			32	Prehistoric pottery sherd abraded fabric C, oxidised with burnt interior.	Late Bronze Age?
		2	4	Prehistoric pottery sherds fine fabric G, micaceous.	Late Bronze Age?
97	98	1	1	Prehistoric pottery sherds very abraded fabric U, no surfaces surviving.	Middle Bronze Age?
103	102	1	348	Stone, sandstone hammer stone, indications of impact on one surface, 65mm diameter.	
		1	338	Stone, quartzitic sandstone, fragment of quern, 65mm by 60mm.	
		23	162	Worked flint, flakes	
		2	24	Worked flint, retouched flakes	
		1	34	Worked flint, denticulate on large flake	
		4	6	Worked flint, small scraper/flakes.	
		1	56	Worked flint, core	
		14	18	Worked flint, tertiary flakes.	
		1	74	Worked flint, block	
		10	22	Worked flint, secondary flakes.	
		56	10	Worked flint, chippings	
		9	14	Worked flint, blades	
		5	66	Worked flint, scrapers	
		1	8	Worked flint, scraper with invasive pressure flaking on distal end.	Bronze Age
		2	1	Burnt bone, small fragments of cremated bone.	
		25	38	Prehistoric pottery sherds abraded fabric oxidised with burnt interior, fabric B, and including one sherd with a slightly everted rim, definable as a courseware jar.	Late Bronze Age
		40	247	Prehistoric pottery sherds abraded fabric oxidised with burnt interior, fabric C. This group seems to relate to a single large jar with a single flat topped flared rim sherd.	Late Bronze Age
107	108	6	4	Burnt flint, fragments (discarded)	
109	110	3	10	Burnt flint, fragments (discarded)	
		1	3	Prehistoric pottery sherd, abraded fabric I.	Late Bronze Age?
		220	32	Burnt bone, small fragments.	
113	112	2	24	Worked flint, primary flakes.	
		1	16	Worked flint, scraper on flake	
		1	1	Worked flint, chipping	
	1	13	62	Burnt flint, fragments (discarded)	
	1	1	1	Charcoal, fragment	
		2	12	Prehistoric pottery sherd abraded fabric B, oxidised with burnt interior.	Late Bronze Age?
		1	4	Roman Pottery, sherd of Fine Grey Ware (GRF) jar rim G24, 3%, 220mm diameter, not further definable	2nd to 4th cent
		6	24	Roman pottery sherds, Black Surface ware (BSW),	Roman

				much abraded.	
115	114	2	1	Mollusc shell, small fragments	
		3	2	Brick/tile, very small unidentifiable fragments of sandy oxidised fabric.	13th to 20th cent
116	117	3	56	Tile, curved roof tile fragment, ridge tile, sandy over fired fragment, 14mm in thickness.	13th to 16th cent
		5	28	Mollusc shell, oyster.	
125	124	1	1	Worked flint, chipping	
120	124	12	90	Burnt flint, fragments (discarded)	
		2	4	Mollusc shell, oyster.	
		7	26	Prehistoric pottery sherds abraded fabric oxidised	Late Bronze Age?
			20	with burnt interior, C.	Late Bronze Age.
		2	2	Roman pottery sherds, fine grey ware (GRF), very abraded base of a small beaker?	Roman
128	(129/130)	3	2	Burnt flint, fragments (discarded)	
132	131	9	2	Burnt flint, fragments (discarded)	
134	133	100	12	Burnt bone, small fragments of cremated bone	
			1	(estimated).	L . D . A . O
		4	4	Prehistoric pottery sherd abraded fabric B, oxidised with burnt interior.	Late Bronze Age?
125	124	1	6	Medieval coarse ware, body sherd, very abraded	Late 12th to 14th cent
		1	7	Sandy orange ware, body sherd, unglazed, very abraded	13th to 16th cent
135	136	2	84	Tile, Roman Imbrex fragment, orange soft fabric much abraded.	Roman
		6	10	Fired Clay, fragments.	
137	138	1	8	Glass, part of the neck of a beer or wine bottle. Green/brown and heavily tarnished, laminated texture.	18th to 19th cent
140	139	1	1	Plastic, fragment of burnt Bakelite? (discarded)	Modern
1.0	100	1	2	Mollusc, oyster shell.	Modern
		3	10	Burnt flint, fragments (discarded)	
		2	4	Prehistoric pottery sherds abraded fabric B, thin walled fabric.	Late Bronze Age?
		1	10	Prehistoric pottery sherd abraded fabric C, oxidised with burnt interior.	Late Bronze Age?
		3	4	Prehistoric pottery sherds fine fabric G, micaceous.	Late Bronze Age?
143	141	350	40	Burnt bone, small very fragmentary pieces (estimated).	
147	146	600	100	Burnt bone, small very fragmentary pieces (estimated).	
		2	6	Burnt flint, fragments (discarded)	
159	158	120	20	Burnt bone, small very fragmentary pieces of highly burnt bone (estimated).	
		1	1	Charcoal, fragment.	
<u></u>		2	2	Burnt flint, fragments (discarded)	
165	164	4	14	Worked flint, flakes.	
		1	2	Worked flint, scraper (thumbnail)	
167	166	14	238	Burnt flint, fragments.	
		5	52	Worked Flint, flakes	
		2	4	Worked flint, blade fragments	Lata D. A. C.
400	Tno	1	6	Prehistoric pottery sherd unabraded, fabric B.	Late Bronze Age?
169	Тр3	1	558	Stone, flattened hammer stone, oval shaped with one flattened surface indications of use, surface has been smoothed, 78mm diam.	
		1	350	Stone, three quarters of quartzitic sandstone, hammer stone with one flattened surface,	
				indications of use, 60mm diam.	
		1	82	Stone, flattened octagonal hammer stone, shaped with flattened upper and lower surfaces indications	
		4.4	110	of use, 53mm by 36mm by 32mm.	
		14	112	Worked flint, flakes.	
		13	8	Worked flint, chippings	<u> </u>

		1	2	Worked flint, scraper fragment	
		1	4	Worked flint, blade.	
		1	46	Worked flint, core	
		4	30	Burnt flint, fragments.	
		2	1	Charcoal, fragments.	
		1	2	Prehistoric pottery sherd abraded fabric G, reduced	Late Bronze Age?
			_	fabric, fine ware?	
		1	14	Prehistoric pottery sherd abraded fabric M, oxidised with burnt interior.	Late Bronze Age?
170	166	6	28	Worked flint, flakes	
		1	32	Burnt flint, fragment (discarded)	
		1	4	Prehistoric pottery sherds very abraded fabric U, no	Middle Bronze
				surfaces surviving.	Age
172	171	1	2	Worked flint, blade	
		1	1	Worked flint, chipping	
174	173	1	190	Iron, fragment of lawn mower blade.	20th century
		1	6	Brick/tile, burnt fragment	19th to 20th cent
		1	2	Coke, fragment	Modern
175	176	6	22	Worked flint, flakes	
178	177	2	2	Worked flint, flakes.	
		2	2	Worked flint, bladelets	
		1	34	Worked flint, denticulated, flaked and retouched	
				point on a large flake territory.	
		2	12	Burnt flint, fragments.	
		2	24	Fired Clay, possibly fragments of daub.	
		22	102	Prehistoric pottery sherd abraded fabric B, oxidised	Late Bronze Age?
			 	with burnt interior.	
		34	74	Prehistoric pottery sherd abraded fabric C, oxidised with burnt interior.	Late Bronze Age?
180	179	7	42	Burnt flint, fragments.	
100	173	1	8	Worked flint, flake.	
		1	116	Roman Tile, fragment of Tegula, soft orange fabric,	Roman
		'	110	19mm thick?	Roman
		1	178	Roman Tile, fragment of box flue, 23mm thick, fine	Roman
				soft orange fabric, partially burnt.	
		1	1	Roman pottery, Grey Sandy Ware (GRS, FABRIC 47), extremely abraded.	Roman
		1	1	Roman pottery, (UPOT), extremely abraded.	Roman
		1	2	Roman pottery, South Gaulish Samian (SGSW)	Mid 1st to early 2nd cent
Total		2175	6198		

APPENDIX 3: ARCHIVE INDEX

NEW TERMINAL BUILDING & APRON SITE, SOUTHEND AIRPORT, ROCHFORD, ESSEX (RFAT 10)

Index to the Archive

File containing:

1. Introduction

- 1.1 Brief for Excavation
- 1.2 WSI for Excavation

2. Research Archive

- 2.1 Excavation Report (1 bound, 1 unbound copy)
- 2.2 Finds Archive Report
- 2.3 Environmental samples/material report
- 2.4 CD Rom (inc. reports, photo images)

3. Site Archive

- 3.1 Context Record Register (4 sheets)
- 3.2 Original Context Records 001 to 180 (27 and 28 voided)
- 3.3 Soil Sample Register (1 sheet)
- 3.4 Soil Sample Record Sheets (20 sheets)
- 3.5 Plans Register (7 sheets)
- 3.6 Sections Register (6 sheets)
- 3.7 Levels Register (3 sheets)
- 3.8 Photographic Register (2 sheets) + thumbnail sheet of digital images
- 3.9 Photograph prints (80 hard copy colour prints)

Not in Files:

Site Drawings:

7 plan sheets (pencil on drawing film) 6 section sheets (pencil on drawing film)

1 box of finds

(inc. pottery, worked flint, burnt bone, stone objects, tile & brick, fine enviro residues and ecofacts)

APPENDIX 4: EHER SUMMARY SHEET

Site Name/Address: New Terminal & Apron Site, Southend Airport, Southend, Essex					
Parish:	District: Rochford				
NGR: TQ 8750 8900	Site Code: 85212				
Type of Work: Archaeological Excavation	Site Director/Group: Phillippa Sparrow ECC FAU				
Date of Work: 02-25 Nov 2010 and 31 Mar-15 Apr 2011	Size of Area Investigated: 7400sq m				
Location of Finds/Curating Museum: Southend Museum	Funding Source: Developer				
Further Work Anticipated? No	Related EHER Nos: 9605-6, 16956, 18227-8				
Final Report: EAH round-up	OASIS Ref: 85212				

Periods Represented: Prehistoric, Roman, medieval, post-medieval, modern

SUMMARY OF FIELDWORK RESULTS:

A total area of 0.74ha was investigated in advance of the construction of a new terminal building and associated aircraft apron located on the eastern side of the airport, toward the Southend Victoria to London Liverpool Street railway line and its new station and car park. The site and its wider vicinity had previously been evaluated by trial trenching in 1998 and the prehistoric remains found. Additional evaluations and monitoring briefs on airport development both previous and subsequent to this have also revealed the presence of further remains, primarily of prehistoric date, in this general vicinity. Area excavation of the Terminal and Apron site uncovered the remains of a number of ditches, pits and/or post-holes, gullies and other features, mostly of prehistoric date but also post-medieval and modern.

Prehistoric

The residual occurrence of Mesolithic and Neolithic worked flints hints at an early presence in the landscape. A rectilinear field system, delineated by boundary ditches, ws imposed upon the landscape in the later Bronze Age. Pits and post-holes, some of which contain charcoal and small quantities of pottery, burnt and worked flint, and burnt bone, were found in association with the enclosure ditches and suggest occupation activity. Two distinctive pits contained assemblages of flint working waste and flint-working tools that indicate on-site production and may constitute structured deposits. These prehistoric features display similar character, alignment and artefactual content to others found during previous investigations in the wider vicinity. All are evidently surviving fragments of a widespread later Bronze Age landscape.

Roman & Medieval

No features of Iron Age, Roman or medieval date were encountered, though a small quantity of Roman and medieval pottery and brick/tile occurred residually in later features or as unstratified material, suggesting this location was peripheral to contemporary settlement.

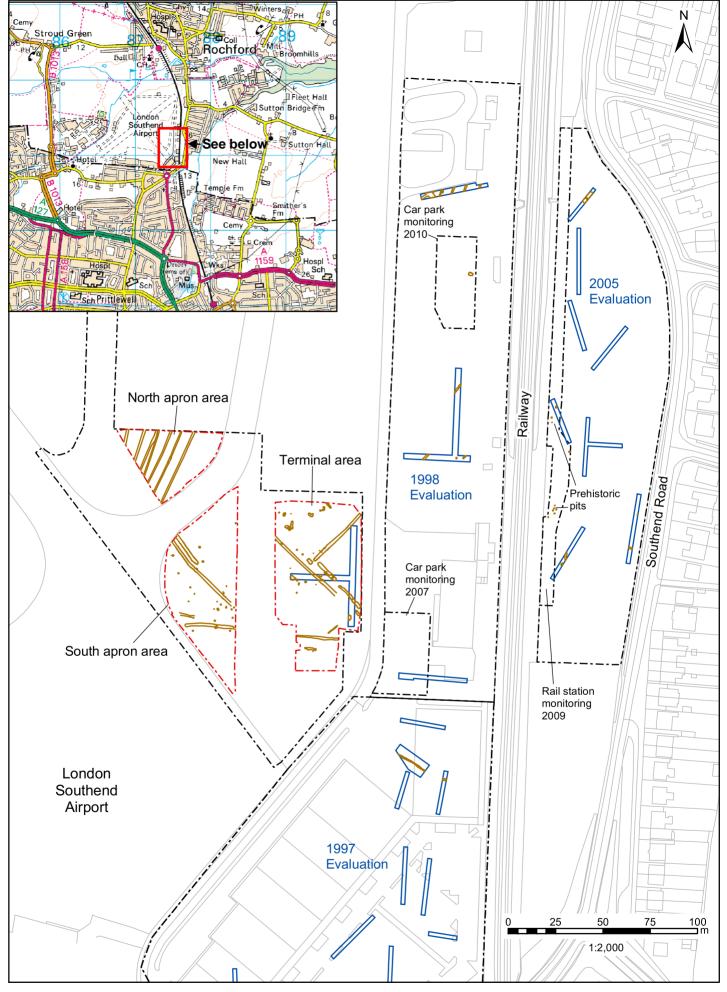
Post-medieval & Modern

A single ditch of post-medieval date was identified, probably deliberately backfilled in preparation for the construction of the WW1/WW2 airfield. A range of 20th century features were recorded that presumably relate to the airfield and airport use of the site, most seemingly relating to drainage.

Previous Summaries/Reports:

Wardill, R. 1998 London Southend Airport, Essex: Archaeological Evaluation and Building Survey Report. FAU rep. 475

Author of Summary:	Date of Summary: 07 July 2011
Phillippa Sparrow and Mark Atkinson	



Mapping reproduced by permission of Ordnance Survey on behalf of the Controller of HMSO. Crown copyright. Licence no.LA100019602.

Fig.1. Location plan of areas of archaeological work





Fig.2. Terminal area plan



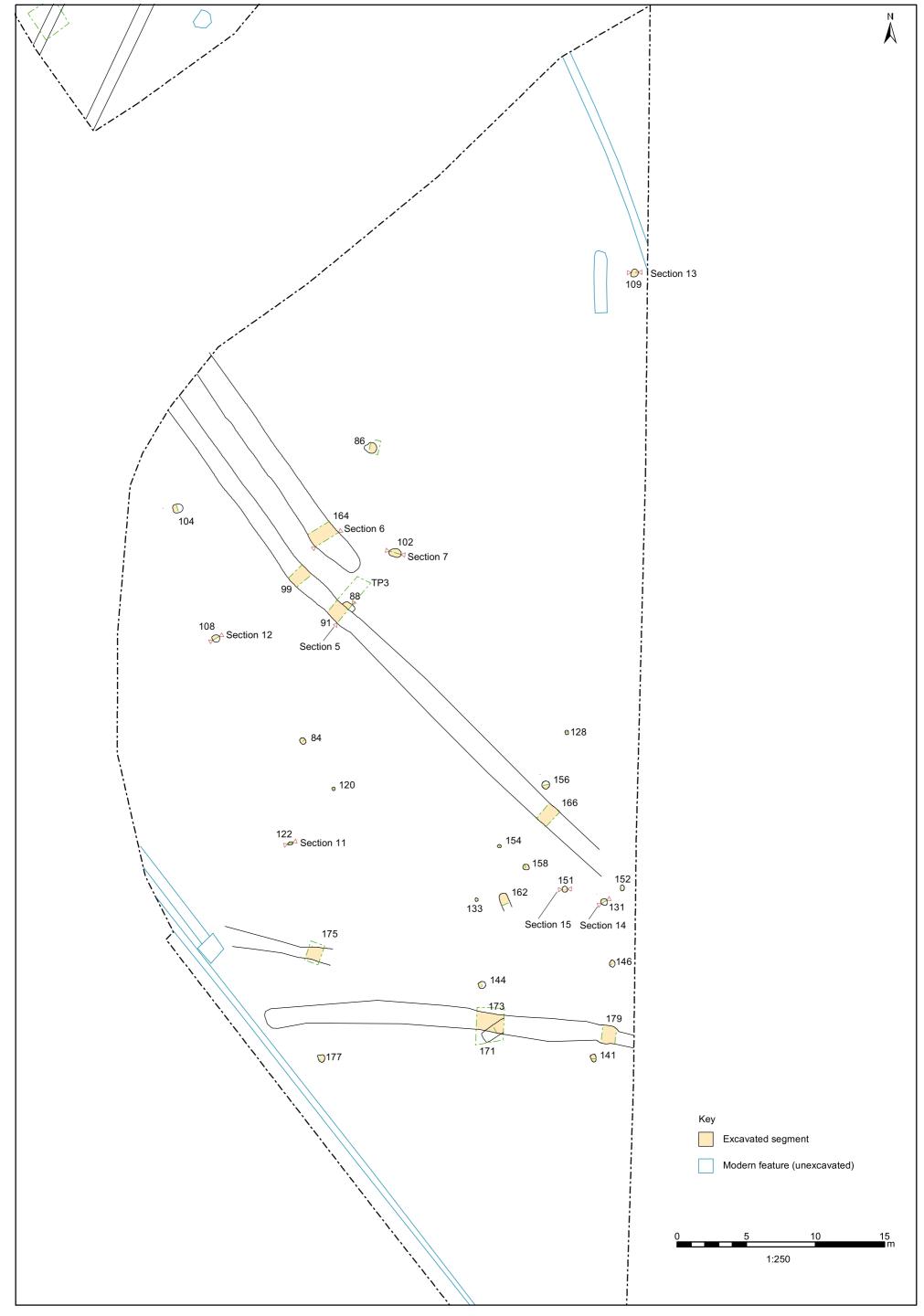


Fig.3. South Apron area plan

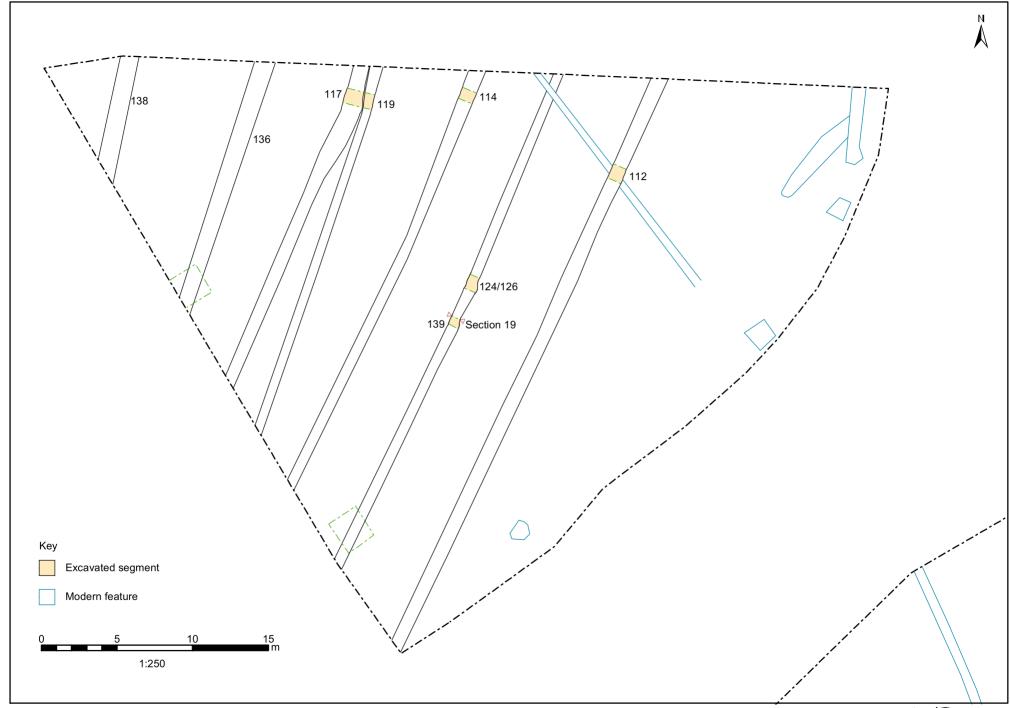


Fig.4. North Apron area plan



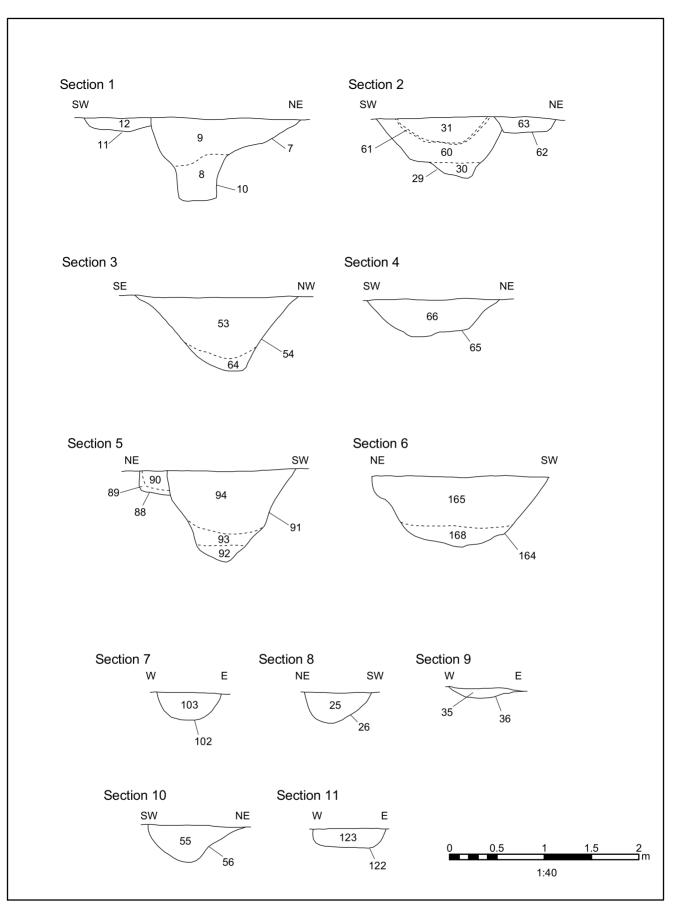


Fig.5. Sections 1 -11



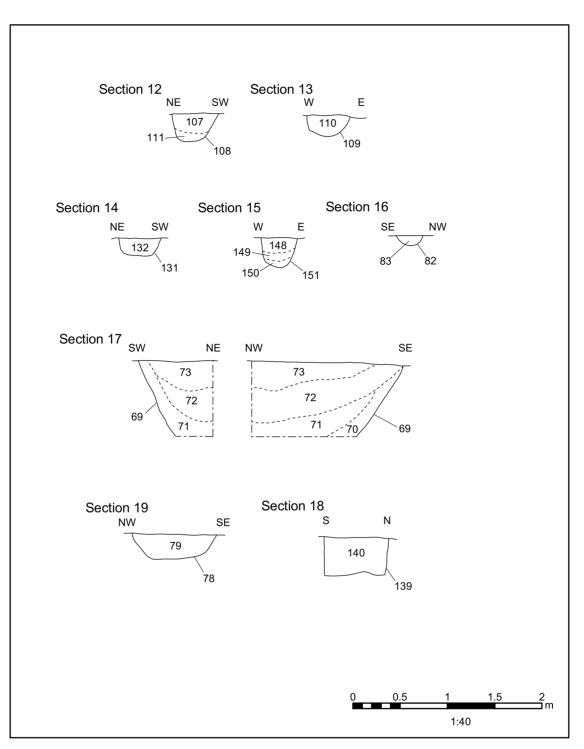


Fig.6. Sections 12 -19





Fig.7. Plan of all Prehistoric features

apping reproduced by permission of Ordnance Survey on behalf of the Controller of HMSO. Crown copyright. Licence no.LA10001960.





Plate 1. General view of Terminal area, looking north



Plate 2. General view of south Apron area, looking north



Plate 3. Ditch 59, looking south-west (1m scale)



Plate 4. Ditch 164, looking south-east (2m scale)



Plate 5. Ditch terminal 65, looking north-west (1m scale)



Plate 6. Post-hole 33 in ditch terminal 32, looking north-west (1m scale)



Plate 7. Pit 102, looking south-east (1m scale)

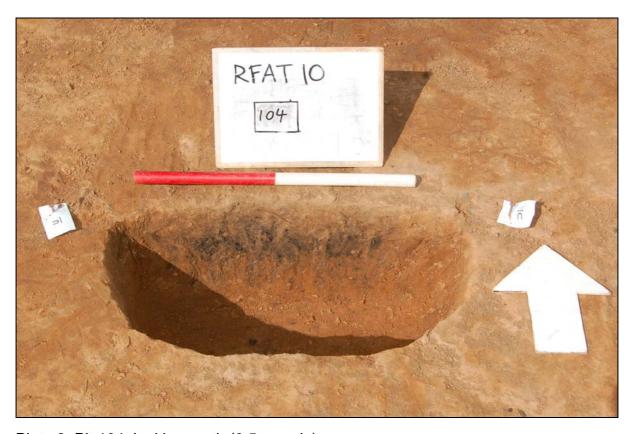


Plate 8. Pit 104, looking north (0.5m scale)

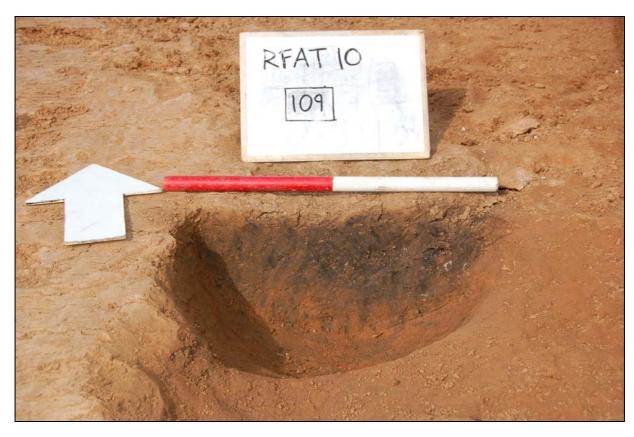


Plate 9. Pit 109, looking north (0.5m scale)



Plate 10. Gully 82, looking NW (0.1m scale)



Plate 11. Tree hole 69, looking north-east (1m scale)

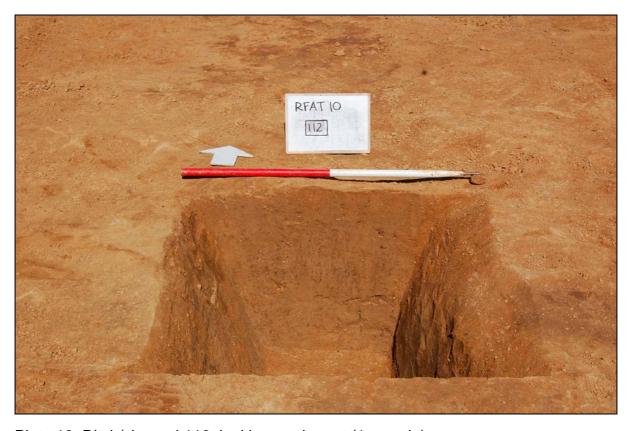


Plate 12. Ditch/channel 112, looking north-east (1m scale)