## ARCHAEOLOGICAL SOLUTIONS LTD

## MILL HOUSE FARM, CHADWELL ST MARY, ESSEX

## AN ARCHAEOLOGICAL EVALUATION

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NGR: TQ 6583 7899	Report No: 3479				
District: Essex	Site Code: THMH10				
Approved: Claire Halpin	Project No: 3617				
Signed:	Date: Feb 2010				

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# OASIS SUMMARY SHEET

Project details									
Project name	Mill House I	Farm, Ch	adwell St Mary	, Esse	x				
In January and Februar archaeological evaluation Mary, Essex (NGR TQ proposed construction archaeological potential Branch (ECC HEM).	on (trial trenc 6583 7899) of an agricul	hing) or . The d tural res	n land at Mill evaluation wa servoir. The s	House as und site lie	e Farm, Chadwo lertaken prior to es within an are	ell S o the ea c			
There is an abundance Chadwell St Mary and undertaken as part of targeted the cropmarks ditches, pits and postho pottery recovered was c	d West Tilbu the current s. The eval bles. Few of	ury. An project uation r the feat	aerial photo (Palmer, 200 evealed a rin tures produce	ograph 9), an g ditc d datii	ic assessment of the trial tren h, gullies, enclo ng evidence, bu	wa nche osure			
Project dates (fieldwork)	04/01/10 - 0	03/02/10							
Previous work (Y/N/?)	Ν		work (Y/N/?)	Y					
P. number	P3617	Site co	de	THM	H10				
Type of project	Archaeologi geoarchaeo			erial	photographic	an			
Site status	Within an ar	rea of arc	chaeological po	otential					
Current land use	Agricultural	field							
Planned development	Reservoir								
Main features (+dates)	Ring ditch, e	enclosure	e ditches, gullie	es, pits	and postholes				
Significant finds (+dates)	Late Bronze	e Age/eal	rly Iron Age poi	ttery					
Project location									
County/ District/ Parish	Essex		West Tilbury		Chadwell St M	lary			
HER/ SMR for area	Essex HER								
Post code (if known)	-								
Area of site	5.11 hectar	res							
NGR									
Height AOD (max/ min)									
Height AOD (max/ min) Project creators									
Height AOD (max/ min)									
Height AOD (max/ min) Project creators	c. 28.50-251	m AOD							
Height AOD (max/ min) Project creators Brief issued by	c. 28.50-25	m AOD							
Height AOD (max/ min) <b>Project creators</b> Brief issued by Project supervisor/s (PO)	c. 28.50-25	m AOD	nadwell St Mary	, Esse	x				
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Height AOD (max/ min) <b>Project creators</b> Brief issued by Project supervisor/s (PO) Funded by Full title	c. 28.50-25 ECC HEM Tim Schofie RJD Ltd Mill House F	m AOD eld Farm, Ch	,	, Esse	X				

## MILL HOUSE FARM, CHADWELL ST MARY, ESSEX AN ARCHAEOLOGICAL EVALUATION

## SUMMARY

In January and February 2010, Archaeological Solutions Limited (AS) conducted an archaeological evaluation (trial trenching) on land at Mill House Farm, Chadwell St Mary, Essex (NGR TQ 6583 7899). The evaluation was undertaken prior to the proposed construction of an agricultural reservoir. The site lies within an area of archaeological potential identified by Essex County Council Historic Environment Branch (ECC HEM).

The desk-based assessment (Unger, 2008) noted that the site's close proximity to the River Thames suggested the potential for prehistoric activity. Chadwell St Mary and West Tilbury lie in the Pleistocene river valley which has a high potential for Lower and Middle Palaeolithic remains. Excavations and cropmarks at Gun Hill, 1km to the southwest, revealed a Bronze Age ditch, postholes and numerous sherds of pottery. Iron Age activity comprises a considerable amount of settlement evidence including a domestic house excavated c.1km to the south-west. An Iron Age trackway was documented along the line of the current High House Lane that borders the field to the west. Iron Age pits and postholes have also been found c. 875m to the south-west.

There is an abundance of cropmarks recorded by air photography in the area of Chadwell St Mary and West Tilbury. An aerial photographic assessment was undertaken as part of the current project (Palmer, 2009), and the trial trenches targeted the cropmarks. The evaluation revealed a ring ditch, gullies, enclosure ditches, pits and postholes. Few of the features produced dating evidence, but the pottery recovered was consistently late Bronze Age/early Iron Age.

## 1 INTRODUCTION

1.1 In January and February 2010, Archaeological Solutions Limited (AS) conducted an archaeological evaluation on land proposed for development at Mill House Farm, Chadwell St Mary, Essex (NGR TQ 6583 7899; Figs. 1-2). The evaluation was commissioned by RJD Ltd prior to the construction of an agricultural reservoir. The evaluation followed an archaeological desk-based assessment (Unger, 2008). It comprised an aerial photographic assessment (Palmer, 2009), a trial trench evaluation and a geoarchaeological assessment. As no organic sediments or other deposits with potential for palaeoenvironmental reconstruction were encountered in the geoarchaeological test pits, this element of the brief was not undertaken. The evaluation was undertaken prior to seeking planning permission.

1.2 The evaluation was conducted in accordance with a brief issued by the Essex County Council Historic Environment Branch (*Archaeological Evaluation at Mill House Farm, Chadwell St Mary* dated 16/09/2009), and a written scheme of investigation compiled by AS (dated 14/12/09). The project followed the procedures outlined in the Institute of Archaeologists' (IfA) *Code of Conduct,* and *Standard and Guidance for* 

*Archaeological Evaluations* (revised 1999). It also conformed to *Standards for Field Archaeology in the East of England* (Gurney 2003).

1.3 The aims and objectives of the evaluation were to determine the location, extent, date, character, condition, significance and quality of any surviving archaeological remains and geological deposits that may be threatened by the proposed development, in order that appropriate mitigation measures can take place.

# 1.4 The principal research aims were

- To assess the geo-archaeological and palaeo-environmental potential
- To clarify the nature and extent of the known cropmarks
- To assess the remainder of the area for other archaeological deposits
- To assess the ecofactual and environmental potential of the archaeological features and deposits
- To inform any mitigation strategy including preservation *in situ* and preservation by record

# Planning policy context

1.5 The relevant planning policies which apply to the effect of development with regard to cultural heritage are Planning Policy Guidance Note 15 'Planning and the Historic Environment' (PPG15) and Planning Policy Guidance Note 16 'Archaeology and Planning' (PPG16) (Department of the Environment).

1.6 PPG16 (1990) is the national Planning Policy Guidance Note which applies to archaeology. It states that there should always be a presumption in favour of preserving nationally important archaeological remains in situ. However, when there is no overriding case for preservation, developers are required to fund opportunities for the recording and, where necessary, the excavation of the site. This condition is widely applied by local authorities.

1.7 PPG15 (1994) is the national Planning Policy Guidance Note which applies to the conservation of the historic environment by protecting the character and appearance of Conservation Areas and protecting listed buildings (of architectural or historical interest) from demolition and unsympathetic change and safeguarding their settings as far as is possible. This condition is also widely applied by local authorities.

# 2 TOPOGRAPHY GEOLOGY AND SOILS

2.1 Mill House Farm is situated on the Thames terrace to the east of Chadwell St Mary. The site slopes from *c*.28.50 - 25m AOD from the south-west to the north-east towards the Thames Estuary (Fig.1). It is bounded to the east by Holford Road and west by High House Lane. Parallel to the northern field boundary is a farm track, and to the south is Mill House Farm and its associated outbuildings. The River Thames is approximately 4km to the south and east. The solid geology of the area is river terrace and marine alluvium (BGS,1995).

2.2 The Mill House Farm site is located between two different soil associations; that of the Hucklesbrook (571w) and Wallasea 1 (813f) associations (SSEW 1983). The

northern half is situated on soils of the Hucklesbrook Association, which are described as well drained coarse loamy and some sandy soils, commonly over gravel. The soils are suitable for cereals, vegetables and gravel extraction. To the south, however, lie the soils of the Wallasea 1 Association, which are described as deep stoneless noncalcareous and calcareous clayey soils overlying marine alluvium. This soil association is suitable for winter cereals and grassland.

# 3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The information below is a summary of that presented in the desk-based assessment (Unger, 2008).

## 3.1 Prehistoric

3.1.1 Chadwell St Mary and West Tilbury lie in the Pleistocene river valley which has a high potential for Lower and Middle Palaeolithic remains. There have been numerous Palaeolithic spot finds (EHER 1732, 1821 and 18617) including Acheulian handaxes and large scatters of handaxes within 1km of the site (EHER 1786). Neolithic activity is represented by a handaxe (EHE 1768) and a macehead (EHER 18616) found close to each other, *c*. 750m north-east of the site.

3.1.2 Excavations and cropmarks at Gun Hill (*c*. 1km to the south-west) revealed a Bronze Age ditch, postholes and numerous sherds of pottery (EHER 1764). Iron Age activity comprises a considerable amount of settlement evidence including a domestic house excavated *c*. 1km to the south-west (EHER 1790). An Iron Age trackway (EHER 1764) was documented along the line of the current High House Lane that borders the field to the west. Iron Age pits and postholes have also been found *c*.875m to the south-west (EHER 1685) suggesting a presence of Iron Age settlement in this area.

## 3.2 Romano-British

3.2.1 Locally it is believed that a Romano-British settlement was situated to the south of the road between Chadwell St Mary and Tilbury. The archaeological evidence indicates that Romano-British remains in the area appear to be focussed to the southwest. Antiquarian finds in the early  $20^{th}$  century reported the existence of a probable occupation area (EHER 1686). These remains included a pottery kiln, cremation urns, numerous assemblages of pottery and coins recovered from a location *c*. 875m southwest of the site. An excavation at Gun Hill (*c*. 1km south-west) recorded a rectangular enclosure, a field boundary system, a pottery kiln and kiln wasters (EHER 1791).

## 3.3 Anglo-Saxon

3.3.1 Excavations in Chadwell St Mary and West Tilbury area have revealed *grubenhaus* structures of Anglo-Saxon date, located by a cropmark survey c. 1km to the south-west (EHER 1792). Continual occupation throughout the prehistoric, Romano-British and Anglo-Saxon periods was evident. Postholes, pits and walls indicating a structure thought to be a grubenhauser were recorded. Loomweights and vessels dated the features from the 5<sup>th</sup> - 6<sup>th</sup> centuries.

3.4.1 Chadwell St Mary at the time of the Domesday Survey had a priest, and seven smallholders and pasture for 100 sheep (Morris, 1983). St Mary's Church is mostly of  $12^{th}$  century date but may have some Norman elements (Kelly's, 1890). No medieval remains have been found in close proximity to the site. Field boundaries and ditches located *c*.1km to the south-west indicate previous agricultural land use (EHER 1793). An excavation *c*. 1km to the north-west revealed a millstone, numerous sherds of medieval vessels and animal bone (EHER 1804). Medieval pottery has also been found *c*. 875m south-west of the site (EHER 1683).

# 3.5 Post-medieval

3.5.1 Chadwell St Mary continued to develop in the post-medieval period. Numerous 18<sup>th</sup> and 19<sup>th</sup> century buildings are listed in the village, including Mill House Farm, which is a 19<sup>th</sup> century two-storey Grade II listed building (EHER 119737). Prior to this building, a windmill was known to exist on the site of Mill House Farm (EHER 1806).

## 3.7 Undated

3.7.1 There is an abundance of reported cropmarks including linear features (Figs. 2 and 3) recorded by air photography in the area of Chadwell St Mary and West Tilbury, that remain unexcavated. Cropmarks have also been located on and surrounding the site (EHER 1750, 1753 and 1769). It is likely that these anomalies represent prehistoric ring ditches, round barrows and enclosure ditches.

## 3.8 Aerial Photographic Assessment

3.8.1 An aerial photographic assessment was undertaken by Air Photo Services as part of the current project (Palmer, 2009). The report noted cropmarks representing possible archaeological features within, and surrounding, the proposed development (Figs. 2 and 3).

## 3.9 Palaeo-environmental and Geo-archaeological Assessment

3.9.1 A palaeo-environmental and geo-archaeological assessment was undertaken following the excavation of the trial trenches. Areas of the archaeological trenches without features were examined with six test pits (Fig. 3) Dr Simon Lewis. His report is forthcoming.

# 4 METHOD OF WORK

4.1 Forty four proposed archaeological trenches encompassed the area of proposed development (Fig. 2). The first phase of the evaluation examined the northern part of the site (Trenches 1 - 13a, & 44), and was undertaken during a window in the cropping regime. The trenches within the Phase 2 area are to follow in the future once cropping conditions allow. The trenches were each 40m long. The evaluation trenches were focussed on the cropmarks and achieved a broad coverage of the site. They were located using a Leica 805 Total Station (TS).

4.2 Undifferentiated overburden was mechanically excavated. Thereafter all further investigation was undertaken by hand. Exposed surfaces were cleaned as appropriate and examined for archaeological features and finds. Deposits were recorded using *pro-forma* recording sheets, drawn to scale and photographed. Excavated spoil was checked for finds and the topsoil and trenches were scanned by metal detector. The TS was then used to accurately survey all features and trench locations.

## 5 DESCRIPTION OF RESULTS

Individual trench descriptions are presented below:

## Trench 1 Figs. 2 - 4

Sample section: North end, facing east 0.00 = 28.69m AOD				
0.00 – 0.38m	0.00 – 0.38m L1000. Topsoil. Dark blackish brown, loose, silty sand with moderate angular gravel			
0.38m – 0.47m L1001. Subsoil. Mid yellowish orange, loose, sandy gravel				
0.47m+	L1002. Natural drift geology. Light orange yellow, loose, sandy gravel			

Description: Trench 1 contained three ditches (F1026, F1028 and F1034) and two pits (F1030 and F1036). None of the features contained finds.

Ditch F1026 was linear in plan (1.80+ x 0.55 x 0.20m), orientated east / west. It had moderately steep sides and a concave base. Its fill, L1025, was a light orange brown, loose, silty sand with frequent angular gravel. No finds were present. Ditch F1026 was parallel to Ditch F1034, and they may be a continuation of the droveway ditches recorded in Trenches 6 and 13A (F1024 and F1032).

Ditch F1028 was linear in plan ( $1.24 + x 0.28 \times 0.24m$ ) orientated east / west. It had steep sides and a concave base. Its fill, L1027, was a mid greyish brown, loose, silty sand with frequent rounded gravel. No finds were present.

Ditch F1034 was linear in plan (1.40+ x 0.54 x 0.09m) orientated east / west. It had gently sloping sides and a concave base. Its fill, L1033, was a light brownish grey, loose, silty sand with moderate angular gravel stones. No finds were present. Ditch F1034 was cut by Pit F1036. Ditch F1034 was the northern most ditch of the possible droveway (Tr. 6 F1032; Tr.13A F1032)

Pit F1036 was oval in plan (1.0+ x 1.10+ x 0.32m). It had steep sides and a concave base. Its fill, L1035, was a mid greyish brown, loose, silty sand with moderate angular gravel stones. No finds were present. Pit F1036 cut Ditch F1034.

Pit F1030 was oval in plan (1.80 x 0.80 x 0.27m). It had moderately steep sides and a concave base. Its fill, L1029, was light orange brown, loose, sandy silt with moderate angular gravel. No finds were present.

## Trench 2 Figs. 2 - 4

Sample section: North end, facing east 0.00 = 28.53m AOD			
0.00 – 0.36m L1000. Topsoil. As above Trench 1			
0.36 – 0.47m L1001. Subsoil. As above Trench 1			
0.47m+	L1002. Natural drift geology. As above Trench 1		

Description: Trench 2 contained five ditches (F1099, F1097, F1056, F1058 and F1044) and six pits (F1095, F1082, F1064, F1062, F1060 and F1071). Ditch F1099 and Pit F1095 contained late Bronze Age/early Iron Age pottery.

Ditch F1099 was linear in plan (4.70+ x 1.00 x 0.32m), orientated NE/SW. It had moderately steep sides and a concave base. It had two fills, tabulated below. Ditch F1099 was cut by Pit F1095 and cut Ditch F1097. It may be a continuation of Ditch F1079 (Tr.12).

Fill	Description	Above	Below	Finds
L1100	Light orange brown, friable,	L1002	L1098	
Basal	sandy silt with frequent			
	angular gravel			
L1098	Dark greyish brown, friable,	L1100	L1001	LBA/EIA pottery
Upper	sandy silt with moderate			(14g)
	angular gravel			

Fills of Ditch F1099

Ditch F1097 was linear in plan ( $0.81 \times 0.56 \times 0.25m$ ), orientated NW/SE. It had steep sides and a concave base. Its fill, L1096, was a light brownish grey, friable, silty sand with occasional angular gravel. No finds were present. Ditch F1097 was cut by Pit F1095 and Ditch F1099.

Pit F1095 was oval in plan (1.00+ x 1.09 x 0.37m). It had moderately sloping sides and a concave base. Its fill, L1094, was a dark blackish brown, friable, sandy silt with occasional gravel stones. Late Bronze Age/early Iron Age pottery (52g) was present. Pit F1095 cut Ditches F1097 and F1099.

Pit F1082 was oval in plan (0.91 x 0.65 x 0.31m). It had steep sides and a concave base. It contained two fills, tabulated below.

Fill	Description	Above	Below	Finds
L1081	Mid greyish brown, friable,	L1002	L1080	-
Basal	sandy silt, with occasional			
	angular gravel			
L1080	Dark greyish brown, friable,	L1081	L1001	-
Upper	sandy silt with occasional			
	angular gravel			

Fills of Pit F1082

Ditch F1056 was linear in plan ( $1.80 + x 1.22 \times 0.50m$ ), orientated SE/NW. It had steep sides and a concave base. Its fill, L1055, was a dark orange brown, friable silty sand with occasional angular gravel. No finds were present. Ditch F1056 was cut by Ditch F1058.

Ditch F1058 was linear in plan ( $1.80+ \times 0.72 \times 0.50m$ ), orientated E/W. It had near vertical sides and a flat base. Its fill, L1057, was a light brownish orange, friable, sandy silt with frequent angular gravel. No finds were present. Ditch F1058 cut Ditches F1056 and was cut by Pits F1060 and F1062.

Pit F1071 was oval in plan (0.79+ x 1.11 x 0.38m). It had steep sides and a flat base. Its fill, L1070, was a dark greyish brown, friable, sandy silt with moderate angular gravel. No finds were present. Pit F1071 cut Pit F1062.

Pit F1062 was oval in plan ( $1.08 + x 1.86 \times 0.54m$ ). It had steep sides and a concave base. Its fill, L1061, was a light brownish grey, friable, silty sand with occasional angular gravel. No finds were present. Pit F1062 cut Ditch F1058 and Pit F1060. It was cut by Pit F1071.

Pit F1064 was oval in plan (0.40 x 0.40 x 0.52m). It had steep sides and a concave base. Its fill, L1063, was a dark orange brown, friable sandy silt with occasional gravel stones. No finds were present. Pit F1064 was cut by Pit F1062. It cut Pit F1060 and Ditch F1058.

Pit F1060 was oval in plan (0.80+ x 0.94 x 0.49m). It had steep sides and a concave base. Its fill, L1059, was a dark brownish grey, friable, silty sand with occasional gravel. No finds were present. Pit F1060 cut Ditch F1058 and was cut by Pit F1062.

Ditch F1044 was linear in plan ( $1.80+ \times 0.86 \times 0.20m$ ), orientated E/W. It had shallow sides and a concave base. Its fill, L1043, was a dark greyish brown, friable, sandy silt with moderate angular gravel. No finds were present. Ditch F1044 was also recorded in Trenches 4 and 5.

[	Sample section: West end, facing north				
	0.00 = 28.58.m  AOD				
	0.00 – 0.35m L1000. Topsoil. As above Trench 1				
	0.35 – 0.45m	L1001. Subsoil. As above Trench 1			
	0.29m+	L1002. Natural drift geology. As Above Trench 1			

Trench 3 Figs. 2 - 4

Description: Trench 3 contained Ditch F1038. No finds were present

Ditch F1038 was linear in plan (1.80+ x 1.48 x 0.21m), orientated N/S. It had moderately steep sides and a concave base. Its fill, L1037, was a mid orange brown, friable, silty sand and gravel. No finds were present. Ditch F1038 is probably the same feature as Ditch F1046 (Tr. 10) and Ditch F1111 (Tr. 7). No lengths of this ditch contained finds.

## Trench 4 Figs. 2 - 4

Sample section: North-east end, facing south-east 0.00 = 27.67m AOD				
0.00 – 0.40m L1000. Topsoil. As above Trench 1				
0.36 – 0.45m L1001. Subsoil. As above Trench 1				

0.40m+ L1002. Natural drift geology. As above Trench 1

Description: Trench 4 contained two pits (F1137, F1139), two postholes (F1133 and F1135) and two ditches (F1044 and F1144). None of the features contained finds

Pit F1139 was oval in plan (1.92 x 1.04+ x 0.52m). It had steep sides and an irregular base. Its fill, L1138, was a light brownish grey, friable, silty sand with occasional rounded gravel. No finds were present. Pit F1139 was cut by Pit F1137.

Pit F1137 was oval in plan (1.36 x 0.60+ x 0.32m). It had moderately steep sides and a flat base. Its fill, L1136, was a light brownish grey, friable, silty sand with frequent rounded gravel. Pit F1137 cut Pit F1139.

Posthole F1133 was oval in plan ( $0.40 + x \ 0.22 \ x \ 0.48m$ ). It had steep sides and a flat base. It contained two fills, tabulated below.

Fill	Description	Above	Below	Finds
L1142	Light brownish grey, friable	L1133	L1132	-
Post-	silty sand with frequent			
packing	rounded gravel			
L1132	Black loose sandy silt with	L1142	L1001	-
Posthole	Posthole moderate charcoal flecks and			
	rounded flint stones			

Fills of Posthole F1133

Posthole F1135 was oval in plan ( $0.30 \times 0.49 \times 0.47m$ ). It had steep sides and a flat base. Its fill, L1134, was a light brownish grey, friable silty sand with frequent rounded gravel. No finds were present.

Ditch F1044 was linear in plan (1.80+ x 1.70 x 0.17m), orientated E/W. It had shallow sides and a concave base. Its fill, L1043, was a dark greyish brown, friable, sandy silt with moderate angular gravel. No finds were present. Ditch F1044 was also recorded in Trenches 2 and 5.

Ditch F1144 was linear in plan (1.80+  $\times$  0.40  $\times$  0.20m), orientated NW/SE. It had moderately steep sides and a concave base. Its fill, L1143, was a mid reddish brown, friable silty sand with frequent rounded gravel. No finds were present.

## Trench 5 Figs. 2, 3 & 5

Sample section: North end, facing east 0.00 = 28.92m AOD			
0.00 – 0.37m L1000. Topsoil. As above Trench 1			
0.37 – 0.45m L1001. Subsoil. As above Trench 1			
0.45m+	L1002. Natural drift geology. As above Trench 1		

Description: Trench 5 contained four ditches (F1093, F1044, F1125 and F1127) and two pits (F1146 and F1129). Ditch F1093 contained a sherd of late Bronze Age/early Iron Age pottery.

Ditch F1093 was linear in plan ( $8.00+ \times 1.30 \times 0.22m$ ), orientated SW/NE. It had shallow sloping sides and a concave base. It contained two fills, tabulated below. Ditch F1093 cut Ditch F1044.

Fill	Description	Above	Below	Finds
L1092	Mid reddish brown, friable,	L1002	L1080	LBA/EIA pottery
Basal	silty sand with moderate			(2g)
	rounded gravel			
L1091	Dark greyish brown, friable,	L1081	L1001	-
Upper				
	angular gravel			

Fills of Ditch F1093

Ditch F1044 was linear in plan ( $1.80+ \times 0.75 \times 0.13m$ ), orientated E/W. It had gently sloping sides and a concave base. Its fill, L1043, was a dark greyish brown, friable, sandy silt with moderate angular gravel. No finds were present. Ditch F1044 was also recorded in Trenches 2 and 4. It was cut by Ditch F1093.

Pit F1146 was oval in plan ( $0.96 \times 0.50 + \times 0.17m$ ). It had moderately sloping sides and a flat base. Its fill, L1145, was a mid greyish brown, loose sandy silt with frequent gravel. No finds were present.

Ditch F1125 was 4.80m+ in total length and orientated NE/SW. It was excavated in segments, tabulated below. Ditch F1125 was cut by Pit F1129 and Ditch F1127.

Segment	Context	Plan	Segment	Profile	Fill	Finds
F1125A	L1124A	Linear	Dimensions 1.00 x 0.48	Moderately	Mid greyish	-
			x 0.08m	steep sides, concave base	brown, compact sandy silt with frequent angular gravel	
F1125B	L1124B	Linear	1.00 x 0.48 x 0.12m	Ditto	Ditto	-
F1125C	L1124C	Linear	1.00 x 0.48 x 0.16m	Ditto	Ditto	-

Excavated segments of Ditch F1125

Ditch F1127 was linear in plan ( $1.00+ \times 0.38 \times 0.18m$ ), orientated E/W. It had moderately sloping sides and a concave base. Its fill, L1126, was a mid greyish brown, compact sandy silt with frequent gravel. No finds were present. Ditch F1127 cut Ditch F1125.

Pit F1129 was oval in plan (0.68 x 0.52 x 0.12m). It had moderately steep sides and a concave base. Its fill, L1128, was a dark greyish brown, compact sandy silt with moderate angular gravel. No finds were present. Pit F1129 cut Ditch F1125.

## Trench 6 Figs. 2, 3 & 5

Sample section: North end, facing east 0.00 = 28.61m AOD

Mill House Farm, Chadwell St Mary, Essex

0.00 – 0.35m	L1000. Topsoil. As above Trench 1
0.35 – 0.45m	L1001. Subsoil. As above Trench 1
0.45m+	L1002. Natural drift geology. As above Trench 1

Description: Trench 6 contained three ditches (F1005, F1024 & F1032) and one pit (F1013). Ditches F1024 and F1032, and Pit F1013 contained late Bronze Age/early Iron Age pottery. A tree hollow was also present

Pit F1013 was oval in plan (0.90 x 0.76 x 0.28m). It had near vertical sides and a flat base. Its fill, L1006, was a dark blackish grey, loose sandy silt with frequent charcoal flecks. Late Bronze Age/early Iron Age pottery (22g) and burnt flint (27g) were present.

Ditch F1005 was curvi-linear in plan ( $1.80+ \times 1.56 \times 0.51m$ ). It had moderately steep sides and a concave base. It contained two fills, tabulated below. Ditch F1005 was also recorded in Trenches 9 and 13A.

Fill	Description	Above	Below	Finds
L1004	Light brownish yellow, friable silty sand with frequent angular gravel	L1002	L1003	LBA/EIA pottery (339g); CBM (9g) burnt
L1003	Mid blackish brown, friable silty sand with moderate angular gravel	L1004	L1001	flint (62g) Late Bronze Age/early Iron Age pottery (93g), CBM (9g)

Fills of Ditch F1005

Ditch F1024 was linear in plan (1.90+ x 0.96 x 0.36m), orientated NW/SE. It had moderately steep sides and a concave base. It contained two fills, tabulated below. Ditch F1024 was also recorded in Trench 13A (F1026) and Trench 1 (F1026). Ditch F1024 (=F1026) was the southernmost ditch of a possible droveway (parallel to Ditch F1032 (=F1034)).

Fill	Description	Above	Below	Finds
L1023	Light yellowish brown,	L1002	L1022	-
Basal	loose, silty sand with			
	frequent angular gravel			
L1022	Dark greyish brown, friable,	L1023	L1001	LBA/EIA pottery
Upper	sandy silt with occasional			(39g)
	angular gravel			

Fills of Ditch F1024

Ditch F1032 was linear in plan (2.00+ x 1.14 x 0.38m), orientated NW/SE. It had moderately steep sides and a concave base. Its fill, L1031, was a light greyish brown, loose, silty sand with moderate angular gravel. Late Bronze/early Iron Age pottery (7g) was present. Ditch F1032 was also recorded in Trench 13A (F1032) and Trench 1 (F1034). Ditch F1032 (=F1034) was the northernmost of a possible droveway, parallel to Ditch F1024 (=F1026).

## Trench 7 Figs. 2, 3 & 5

	Sample section: West end, facing north 0.00 = 28.30m AOD		
0.00 – 0.36m L1000. Topsoil. As above Trench 1			
0.36 – 0.44m L1001. Subsoil. As above Trench 1			
0.45m+	L1002. Natural drift geology. As above Trench 1		

Description: Trench 7 contained three pits (F1054, F1105 and F1107), two ditches (F1048 and F1111) and two postholes (F1050 and F1052). None of the features contained finds.

Pit F1054 was oval in plan ( $0.41 \times 0.41 \times 0.10m$ ). It had moderately steep sides and a flat base. Its fill, L1053, was a mid greyish brown, friable silty sand with moderate rounded gravel. No finds were present.

Ditch F1111 was linear in plan (1.80+  $\times$  0.77  $\times$  0.18m), orientated NE/SW. It had moderately steep sides and a concave base. Its fill, L1110, was dark reddish brown, friable silty sand with moderate rounded gravel. No finds were present. Ditch F1111 was also present in Trench 10 (F1046) and Trench 3 (F1038).

Posthole F1052 was oval in plan ( $0.54 \times 0.41 \times 0.11m$ ). It had moderately steep sides and a flat base. Its fill, L1051, was a mid brownish grey, friable silty sand with moderate rounded gravel. No finds were present.

Posthole F1050 was circular in plan (0.40 diam x 0.41m). It had near vertical sides and a flattish base. It contained two fills, tabulated below.

Fill	Description	Above	Below	Finds
L1103	Mid greyish brown, friable, silty	L1002	L1049	-
Post	sand with frequent small flint			
packing	and gravel			
Basal	_			
L1049	Dark brownish grey, friable,	L1103	L1001	-
Post pipe	sandy silt with moderate			
Upper	rounded flint and gravel			

Fills of Posthole F1050

Ditch F1048 was linear in plan (1.80+  $\times$  1.15  $\times$  0.48m), orientated N/S. It had steep sides and a flattish base. It contained two fills, tabulated below.

Fill	Description	Above	Below	Finds
L1108	Light brownish grey, friable, sandy silt with frequent rounded gravel	L1002	L1047	-
L1047	Light greyish brown, friable, silty sand with frequent rounded gravel	L1108	L1001	-

Fills of Ditch F1048

Pit F1107 was oval in plan (1.16 x 0.68 x 0.27m). It had steep sides and a flat base. Its fill, L1106, was a mid greyish brown, friable silty sand with frequent rounded gravel. No finds were present.

Pit F1105 was oval in plan ( $0.62 \times 0.78 \times 0.22m$ ). It had shallow sides and a flat base. Its fill, L1104, was mid brownish grey, friable silty sand with frequent rounded gravel. Burnt flint (11g) was present.

Trench	8	Figs.	2.	3	& !	5
	•		_,	-	~	

Sample section: West end, facing north 0.00 = 28.68m AOD		
0.00 – 0.33m	L1000. Topsoil. As above Trench 1	
0.33 – 0.37m L1001. Subsoil. As above Trench 1		
0.37m+	L1002. Natural drift geology. As above Trench 1	

Description: Trench 8 contained one posthole (F1113), and four pits (F1121, F1131, F1141 and F1102). Pit F1121 contained a relatively large assemblage of finds; large sherds of late Bronze Age/early Iron Age pottery (384g), an Fe fragment (3g) and burnt flint (101g). Three tree hollows were present

Posthole F1113 was oval in plan ( $0.54 \times 0.33 \times 0.45m$ ). It had vertical sides and a concave base. Its fill, L1112, was a mid greyish brown, loose, silty sand with frequent angular gravel. No finds were present.

Pit F1121 was oval in plan (1.40 x 0.60+x 0.32m). It had moderately steep sides and an irregular base. Its fill, L1120, was a mid orange brown, friable silty sand with occasional charcoal flecks and angular gravel. Large sherds of late Bronze Age/early Iron Age pottery (384g), intrusive Fe nail shank (3g) and burnt flint (101g) were present.

Pit F1131 was oval in plan (0.52 x 0.40 x 0.31m). It had steep sides and a concave base. Its fill, L1130, was a mid orange brown, friable, sandy silt with occasional charcoal flecks and angular gravel. No finds were present. Pit F1131 was cut by Pit F1141.

Pit F1141 was oval in plan (0.77 x 0.37+ x 0.20m). It had moderately sloping sides and a flat base. Its fill, L1140, was a mid greyish brown, friable sandy silt with occasional angular gravel. No finds were present. Pit F1141 cut Pit F1131.

Pit F1102 was rectangular in plan (4.00+ x 1.24+ x 0.70m). It had steep sides and a concave base. Its fill, L1101, was a mid greyish brown, compact sandy silt with occasional angular gravel. Late Bronze Age/early Iron Age pottery (11g) was present.

## Trench 9 Figs. 2, 3 & 6

'	Sample section: West end, facing north 0.00 = 28.65m AOD		
0.00 - 0.33m	L1000. Topsoil. As above Trench 1		

0.33 – 0.43m	L1001. Subsoil. As above Trench 1
0.43m+	L1002. Natural drift geology. As above Trench 1

Description: Trench 9 contained two ditches (F1005 and F1010) and three pits (F1012, F1017 and F1019). A tree hollow was present

Pit F1019 was irregular in plan (4.18+ x 0.60+ x 0.25m). It had steep sides and a flat base. Its fill, L1018, was a mid greyish brown, friable silty sand with moderate angular gravel.  $19^{th} - 20^{th}$  century pottery (3g) was present.

Pit F1017 was oval in plan ( $0.78 \times 0.44 + \times 0.39m$ ). It had steep sides and a flat base. It contained two fills, tabulated below.

Fill	Description	Above	Below	Finds
L1021	Light brownish yellow,	L1002	L1020	-
Basal	friable, silty sand with			
	moderate angular gravel			
L1020	Mid yellowish brown, friable,	L1021	L1001	-
Upper	silty sand with occasional			
	angular gravel			

Pit F1012 was rectangular in plan ( $0.70 \times 0.64 \times 0.23$ m). It had near vertical sides and a concave base. Its fill, L1011, was a light yellowish brown, friable silty sand with occasional charcoal flecks and angular gravel. No finds were present.

Ditch F1010 was linear in plan (1.80+  $\times$  1.14  $\times$  0.33m), orientated NW/SE. It had moderately steep sides and a concave base. It contained two fills, tabulated below.

Fill	Description	Above	Below	Finds
L1009	Light brownish yellow,	L1002	L1008	-
Basal	friable, silty sand with			
	frequent angular gravel			
L1008	Mid yellowish brown, friable,	L1009	L1001	LBA/EIA pottery
Upper	silty sand with moderate			(35g);
	angular gravel and			burnt flint (9g)
	occasional charcoal flecks			

Fills of Ditch F1010

Ditch F1005 was curvi-linear in plan (1.80+ x 1.60 x 0.48m). It had moderately steep sides and a concave base. It contained two fills, tabulated below. Ditch F1005 was also recorded in Trenches 6 and 13A.

Fill	Description	Above	Below	Finds
L1004	Light brownish yellow,	L1002	L1003	-
Basal	friable, silty sand with			
	frequent angular gravel and			
	occasional charcoal flecks			
L1003	Mid blackish brown, friable	L1004	L1001	Late Bronze
Upper	silty sand with moderate			Age/early Iron
	angular gravel			Age pottery
				(64g), burnt flint
				(62g)

Fills of Ditch F1005

## Trench 10 Figs. 2, 3 & 6

Sample section: West end, facing north 0.00 = 28.55m AOD				
0.00 - 0.36m	L1000. Topsoil. As above Trench 1			
0.36 – 0.47m L1001. Subsoil. As above Trench 1				
0.47m+	L1002. Natural drift geology. As above Trench 1			

Description: Trench 10 contained Ditch F1046, two pits (F1066 and F1085), and Posthole F1069. Two tree hollows were present

Ditch F1046 was linear in plan (1.80+ x 1.00 x 0.13m), orientated N/S. It had moderately steep sides and a concave base. Its fill, L1045, was a mid orange brown, friable silty sand with moderate angular gravel. No finds were present. Ditch F1046 was also present in Trench 3 (F1038) and Trench 7 (F1111).

Pit F1066 was oval in plan (2.16 x 1.20 x 0.74m). It had moderately steep sides and a concave base. It contained two fills, tabulated below. Pit F1066 was cut by Pit F1085.

Description	Above	Below	Finds
Light brownish grey, loose	L1002	L1065	-
silty sand			
Light yellowish grey, loose	L1109	L1001	-
silty sand with moderate			
angular gravel			
	Light brownish grey, loose silty sand Light yellowish grey, loose silty sand with moderate	Light brownish grey, loose silty sandL1002Light yellowish grey, loose silty sand with moderateL1109	Light brownish grey, loose silty sandL1002L1065Light yellowish grey, loose silty sand with moderateL1109L1001

Fills of Pit F1066

Pit F1085 was oval in plan ( $0.58 \times 0.30 + \times 0.24m$ ). It had steep sides and a flat base. It contained two fills, tabulated below.

Description	Above	Below	Finds
Light greyish white, loose,	L1002	L1083	-
sand			
Mid greyish brown, friable,	L1084	L1001	-
silty sand			
5	∟ight greyish white, loose, sand Mid greyish brown, friable,	Light greyish white, loose, L1002 sand Mid greyish brown, friable, L1084	Light greyish white, loose, L1002 L1083 Sand Mid greyish brown, friable, L1084 L1001

Fills of Pit F1085

Posthole F1069 was oval in plan (0.40 x 0.28 x 0.52m). It had steep sides and an irregular base. It contained two fills, tabulated below.

Fill	Description	Above	Below	Finds
L1068	Mid blackish brown, loose	L1002	L1067	-
Basal	sandy silt with occasional			
	angular gravel			
L1067	Light yellow brown, loose	L1068	L1001	-
Upper	sandy silt with moderate			
	angular gravel			

Fills of Posthole F1069

# Trench 11 Figs. 2, 3 & 6

Sample section: North end, facing east 0.00 = 28.14m AOD			
0.00 - 0.36m	L1000. Topsoil. As above Trench 1		
0.44 – 0.60m L1001. Subsoil. As above Trench 1			
0.60m+	L1002. Natural drift geology. As above Trench 1		

Description: Trench 11 contained three gullies (F1088, F1090 and F1123) and three postholes (F1115, F1117 and F1119).

Gully F1088 was curvi-linear in plan (7.00m+ total length). It was excavated in three segments, tabulated below. Gully F1088 cuts Gully F1090.

Segment	Context	Plan	Segment Dimensions	Profile	Fill	Finds
F1088A	L1087A basal	Curvi- linear	1.00 x 0.45 x 0.17m	Moderately steep sides, flattish base	Light greyish yellow, friable silty sand with moderate angular gravel	-
	L1086A Upper		1.00 x 0.45 x 0.13m		Mid brownish grey, friable silty sand with frequent angular gravel	-
F1088B	L1087B Basal	Curvi- linear	0.65 x 0.45 x 0.12m	Moderately steep sides, concave base	Light greyish brown, friable silty sand with occasional angular gravel	-
	L1086B Upper		0.65 x 0.45 x 0.15m		As above	-
F1088C	L1087C Basal	Curvi- linear	0.65 x 0.58 x 0.09m	Ditto	Light greyish yellow, friable silty sand with moderate angular gravel	-
	L1086C Upper		0.65 x 0.48 x 0.17m		As above	-

Excavated segments of Gully F1088

Gully F1090 was curvi-linear in plan (3.90m+ total length). It was excavated in two segments, tabulated below. Gully F1090 was cut by Gully F1088.

Segment	Context	Plan	Segment Dimensions	Profile	Fill	Finds
F1090A	L1089A	Curvi- inear	0.60 x 0.64 x 0.20m	Gradual sloping sides, flattish base	Mid greyish brown, friable silty sand with frequent angular gravel	-
F1090B	L1189B	Curvi- linear	0.62 x 0.58 x 0.16m	Moderately steep sides, concave base	Ditto	-

Excavated segments of Gully F1090 Mill House Farm, Chadwell St Mary, Essex Posthole F1115 was oval in plan (0.24 x 0.23 x 0.24m). It had near vertical sides and a concave base. Its fill, L1114, was a mid greyish brown, loose, silty sand with frequent angular gravel. No finds were present.

Gully F1123 was linear in plan (1.80+  $\times$  0.35  $\times$  0.10m), orientated SW/NE. It had shallow sides and a concave base. Its fill, L1122, was a mid greyish brown, compact sandy silt with frequent gravel. No finds were present.

Posthole F1117 was oval in plan ( $0.25 \times 0.24 \times 0.20m$ ). It had near vertical sides and a concave base. Its fill, L1116, was a mid greyish brown, friable silty sand with frequent angular gravel. No finds were present.

Posthole F1119 was oval in plan ( $0.25 \times 0.24 \times 0.18$ m). It had near vertical sides and a concave base. Its fill, L1118, was a mid greyish brown, friable silty sand with frequent angular gravel. No finds were present.

Sample section: West end, facing north 0.00 = 28.46m AOD			
0.00 – 0.32m	L1000. Topsoil. As above Trench 1		
0.32 – 0.39m L1001. Subsoil. As above Trench 1			
0.39m+	L1002. Natural drift geology. As above Trench 1		

## Trench 12 Figs. 2, 3 & 7

Description: Trench 12 contained two ditches (F1079 and F1077) and two pits (F1075 and F1073). Ditch F1077 contained late Bronze Age/early Iron Age pottery.

Ditch F1079 was linear in plan (2.20+  $\times$  0.94  $\times$  0.27m), orientated NE/SW. It had moderately steep sides and a flat base. Its fill, L1078, was mid greyish brown, friable silty sand with frequent rounded gravel. It contained no finds. Ditch F1079 is probably the continuation of Ditch F1099 (Tr. 2).

Ditch F1077 was linear in plan (2.00+ x 0.87 x 0.22m), orientated NE/SW. It had moderately steep sides and a flat base. Its fill, L1076, was a mid greyish brown, friable silty sand with frequent rounded gravel. Late Bronze Age/early Iron Age pottery (51g) was present.

Pit F1075 was oval in plan (1.65 x 0.60+ x 0.22m). It had shallow sides and a flat base. Its fill, L1074, was light greyish brown, friable silty sand with frequent rounded flint stones.

Pit F1073 was rectangular in plan (2.00+ x 1.50 x 1.20m+). It had vertical sides and its base was not reached. Its fill, L1072, was a dark brownish grey, loose silty sand with frequent rounded flint stones. Pit F1073 was a modern test pit.

## Trench 13A Figs. 2, 3 & 7

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Sample section: North-east end, facing west 0.00 = 28.67m AOD			
0.00 – 0.32m	L1000. Topsoil. As above Trench 1		
0.32 – 0.38m L1001. Topsoil. As above Trench 1			
0.38m+	L1002. Natural drift geology. As above Trench 1		

Description: Trench 13A contained seven ditches (F1005, F1016, F1024, F1032, F1040, F1042 and one modern field boundary ditch). Ditch F1005 contained late Bronze Age/early Iron Age pottery

A modern ditch was orientated E/W. It had been backfilled in recently and is shown on the current OS landmap.

Ditch F1016 was linear in plan (1.80+  $\times$  1.67  $\times$  0.42m), orientated NE/SW. It had moderately steep sides and a concave base. It contained two fills, tabulated below.

Fill	Description	Above	Below	Finds
L1015	Dark orange brown, friable	L1002	L1014	-
Basal	sandy silt with frequent			
	angular gravel			
L1014	Mid blackish brown, friable	L1015	L1001	-
Upper	silty sand with moderate			
	angular gravel			

Fills of Ditch F1016

Ditch F1005 was curvi-linear in plan ( $1.80+ \times 1.60 \times 0.49m$ ). It had moderately steep sides and a concave base. It contained two fills, tabulated below. Ditch F1005 was also recorded in Trenches 6 and 9.

Fill	Description	Above	Below	Finds
L1004	Light brownish yellow, friable silty sand with frequent angular gravel	L1002	L1003	-
L1003	Mid blackish brown, friable silty sand with moderate angular gravel	L1004	L1001	Late Bronze Age/early Iron Age pottery (228g)

Fills of Ditch F1005

Ditch F1024 was linear in plan (1.90+ x 0.96 x 0.36m), orientated NW/SE. It had moderately steep sides and a concave base. Its fill, L1022, was a mid greyish brown, friable silty sand with frequent angular gravel. No finds were present. Ditch F1024 was also present in Trench 1 (F1026) and 6 (F1024). Ditch F1024 (=F1026) is the southern most ditch of a possible droveway, parallel with Ditch F1032 (=F1034).

Ditch F1032 was linear in plan (1.80+ x 0.85 x 0.26m), orientated NW/SE. It had steep sides and a concave base. Its fill, L1031, was a light orangish brown, friable silty sand with frequent angular gravel. No finds were present. Ditch F1032 was also present in Trenches 1 (F1034) and 6 (F1032). Ditch F1032 (=F1034) is the northern most ditch of a possible droveway, parallel with Ditch F1024 (=F1026).

Ditch F1040 was linear in plan  $(3.00+ x 1.25 \times 0.21m)$ , orientated NE/SW. It had shallow sides and a concave base. Its fill, L1039, was a mid orange brown, friable silty sand with frequent angular gravel. No finds were present.

Ditch F1042 was linear in plan (1.80+  $\times$  0.98  $\times$  0.22m), orientated NE/SW. It had moderately steep sides and a narrow base. Its fill, L1041, was a mid orange brown, friable silty sand with occasional angular gravel. No finds were present.

# Trench 44 Fig. 2 - 3

Trench 44 was not excavated due to the position of overhead power cables. A total of 40m of trenching was added to Trenches 1 - 13A.

# 6 CONFIDENCE RATING

6.1 Modern ploughing had caused truncation throughout the trenches, excepting this it is not felt that any factors inhibited the recognition of archaeological features and finds.

# 7 DEPOSIT MODEL

7.1 The stratigraphy varied across the site predominantly due to the slope from south-west to north-east. Topsoil L1000 was a dark blackish brown, loose, silty sand with moderate angular gravel (0.32-0.44m thick). Below the topsoil Subsoil L1001 was a mid yellowish orange, loose, sandy gravel (0.04 - 0.16m thick with the deepest deposits in Trenches 2, 10 & 11). At the base of the stratigraphic sequence was the natural drift geology, L1002, a light orange yellow, loose sandy gravel (0.29 - 0.47m below the current ground level).

# 8 DISCUSSION

## 8.1 Summary of the archaeology

## 8.1.1 Archaeological features were found in each trench

Trench	Context	Descriptio	Date
		n	
1	1026 = F1024 (Trs. 6 (LBA/EIA) & 13A)	Droveway	-
		Ditch	
	1028	Ditch	-
	1030	Pit	-
	1034 = F1032 (Trs. 6 (LBA/EIA) & 13A)	Droveway	-
		Ditch	
	1036	Pit	-

2	1044 = F1044 (Tr.4) = F1044 (Tr.5)	Ditch	
2	1056	Ditch	-
	1058	Ditch	-
	1060	Pit	-
	1062	Pit	-
	1064	Pit	-
	1071	Pit	-
	1082	Pit	-
	1095	Pit	LBA/EIA
	1097	Ditch	-
	1099 = F1079 (Tr.12)	Ditch	LBA/EIA
3	1038 = F1046 (Tr.10) = F1111 (Tr.7)	Ditch	-
4	1044 = F1044 (Tr.5) = F1044 (Tr.2)	Ditch	-
	1133	Posthole	-
	1135	Posthole	-
	1137	Pit	-
	1139	Pit	-
			-
<i>_</i>	1144	Ditch	-
5	1044	Ditch	-
	1093	Ditch	LBA/EIA
	1125	Ditch	-
	1127	Ditch	-
	1129	Pit	-
	1146	Pit	-
6	1005 = F1005 (Tr.9) = F1005 (Tr.13A)	Ring Ditch	LBA/EIA
	1013	Pit	LBA/EIA
	1024 = F1024 (Tr.13A) = F1026 (Tr.1)	Droveway	LBA/EIA
		Ditch	20/02/0
	1032 = F1032 (Tr.13A) = F1034 (Tr.1)	Droveway	LBA/EIA
	1002 - 1 1002 (11.10A) - 1 1004 (11.1)	Ditch	
7	1048	Ditch	-
1	1040	DIICH	-
	1050	Deathala	
	1050	Posthole	-
	1052	Posthole	-
	1052 1054	Posthole Pit	-
	1052 1054 1105	Posthole Pit Pit	- - -
	1052 1054 1105 1107	Posthole Pit Pit Pit	-
	1052 1054 1105	Posthole Pit Pit	
8	1052 1054 1105 1107	Posthole Pit Pit Pit	- - -
8	1052 1054 1105 1107 1111 = F1038 (Tr.3) = F1046 (Tr.10)	Posthole Pit Pit Pit Ditch	- - -
8	1052 1054 1105 1107 1111 = F1038 (Tr.3) = F1046 (Tr.10) 1102 1113	Posthole Pit Pit Pit Ditch Pit Posthole	- - - - -
8	1052 1054 1105 1107 1111 = F1038 (Tr.3) = F1046 (Tr.10) 1102 1113 1121	Posthole Pit Pit Pit Ditch Pit Posthole Pit Pit	- - - - - - - LBA/EIA
8	1052 1054 1105 1107 1111 = F1038 (Tr.3) = F1046 (Tr.10) 1102 1113 1121 1131	Posthole Pit Pit Ditch Pit Posthole Pit Posthole Pit Pit Pit	- - - - -
	1052 1054 1105 1107 1111 = F1038 (Tr.3) = F1046 (Tr.10) 1102 1113 1121 1131 1141	Posthole Pit Pit Ditch Pit Posthole Pit Pit Posthole Pit Pit Pit Pit Pit Pit Pit Pit	- - - - - - - LBA/EIA - -
8	1052         1054         1105         1107         1111 = F1038 (Tr.3) = F1046 (Tr.10)         1102         1113         1121         1131         1141         1005 = F1005 (Tr. 6) = F1005 (Tr.13)	Posthole Pit Pit Ditch Pit Posthole Pit Posthole Pit Pit Pit Pit Ring Ditch	- - - - - - LBA/EIA - - LBA/EIA
	1052 1054 1105 1107 1111 = F1038 (Tr.3) = F1046 (Tr.10) 1102 1113 1121 1131 1141 1005 = F1005 (Tr. 6) = F1005 (Tr.13) 1010	Posthole Pit Pit Ditch Pit Posthole Pit Pit Pit Pit Pit Pit Ring Ditch Ditch Ditch	- - - - - - - LBA/EIA - - LBA/EIA LBA/EIA
	1052 1054 1105 1107 1111 = F1038 (Tr.3) = F1046 (Tr.10) 1102 1113 1121 1131 1141 1005 = F1005 (Tr. 6) = F1005 (Tr.13) 1010 1012	Posthole Pit Pit Ditch Pit Posthole Pit Posthole Pit Pit Pit Ring Ditch Ditch Ditch Pit Ring Ditch Pit Pit	- - - - - LBA/EIA - - LBA/EIA LBA/EIA LBA/EIA
	1052         1054         1105         1107         1111 = F1038 (Tr.3) = F1046 (Tr.10)         1102         1113         1121         1131         1141         1005 = F1005 (Tr. 6) = F1005 (Tr.13)         1010         1012         1017	Posthole Pit Pit Ditch Pit Posthole Pit Posthole Pit Pit Ring Ditch Ditch Ditch Pit Ring Ditch Pit	- - - - - - LBA/EIA - - LBA/EIA LBA/EIA LBA/EIA - -
9	1052         1054         1105         1107         1111 = F1038 (Tr.3) = F1046 (Tr.10)         1102         1113         1121         1131         1141         1005 = F1005 (Tr. 6) = F1005 (Tr.13)         1010         1012         1017         1019	PostholePitPitDitchPitPostholePit	- - - - - - - - - - - - - - - LBA/EIA - - - - - Modern
	1052         1054         1105         1107         1111 = F1038 (Tr.3) = F1046 (Tr.10)         1102         1113         1121         1131         1141         1005 = F1005 (Tr. 6) = F1005 (Tr.13)         1010         1012         1017         1019         1046 = F1038 (Tr.3), = F1111 (Tr.7)	Posthole Pit Pit Ditch Pit Pit Posthole Pit Pit Pit Pit Pit Ring Ditch Ditch Pit	- - - - - - - - - - - - - - - - - - -
9	1052         1054         1105         1107         1111 = F1038 (Tr.3) = F1046 (Tr.10)         1102         1113         1121         1131         1141         1005 = F1005 (Tr. 6) = F1005 (Tr.13)         1010         1012         1017         1019         1046 = F1038 (Tr.3), = F1111 (Tr.7)         1066	Posthole Pit Pit Pit Ditch Pit Posthole Pit	- - - - - - - - - - - - - - - - - - -
9	1052         1054         1105         1107         1111 = F1038 (Tr.3) = F1046 (Tr.10)         1102         1113         1121         1131         1141         1005 = F1005 (Tr. 6) = F1005 (Tr.13)         1010         1012         1017         1019         1046 = F1038 (Tr.3), = F1111 (Tr.7)         1066         1069	PostholePitPitDitchPitPostholePitPosthole	- - - - - - - - - - - - - - - - - - -
9	$\begin{array}{c c} 1052 \\ 1054 \\ 1105 \\ 1107 \\ 1111 = F1038 (Tr.3) = F1046 (Tr.10) \\ 1102 \\ 1113 \\ 1121 \\ 1131 \\ 1141 \\ 1005 = F1005 (Tr. 6) = F1005 (Tr.13) \\ 1010 \\ 1012 \\ 1017 \\ 1019 \\ 1046 = F1038 (Tr.3), = F1111 (Tr.7) \\ 1066 \\ 1069 \\ 1085 \end{array}$	PostholePitPitPitDitchPitPostholePit	- - - - - - - - - - - - - - - - - - -
9	1052         1054         1105         1107         1111 = F1038 (Tr.3) = F1046 (Tr.10)         1102         1113         1121         1131         1141         1005 = F1005 (Tr. 6) = F1005 (Tr.13)         1010         1012         1017         1019         1046 = F1038 (Tr.3), = F1111 (Tr.7)         1066         1069	PostholePitPitDitchPitPostholePitPosthole	- - - - - - - - - - - - - - - - - - -
9	$\begin{array}{c c} 1052 \\ 1054 \\ 1105 \\ 1107 \\ 1111 = F1038 (Tr.3) = F1046 (Tr.10) \\ 1102 \\ 1113 \\ 1121 \\ 1131 \\ 1141 \\ 1005 = F1005 (Tr. 6) = F1005 (Tr.13) \\ 1010 \\ 1012 \\ 1017 \\ 1019 \\ 1046 = F1038 (Tr.3), = F1111 (Tr.7) \\ 1066 \\ 1069 \\ 1085 \end{array}$	PostholePitPitPitDitchPitPostholePitOstholePitGully	- - - - - - - - - - - - - - - - - - -
9	1052         1054         1105         1107         1111 = F1038 (Tr.3) = F1046 (Tr.10)         1102         1113         1121         1131         1141         1005 = F1005 (Tr. 6) = F1005 (Tr.13)         1010         1012         1017         1019         1046 = F1038 (Tr.3), = F1111 (Tr.7)         1066         1085         1088         1090	PostholePitPitPitDitchPitPostholePitPitPitDitchPitDitchPitPitPitPitPitDitchPitPitDitchPitDitchPitDitchPitGullyGully	- - - - - - - - - - - - - - - - - Modern - - - - Modern - - - - - - - - - - - - - - - - - - -
9	1052         1054         1105         1107         1111 = F1038 (Tr.3) = F1046 (Tr.10)         1102         1113         1121         1131         1141         1005 = F1005 (Tr. 6) = F1005 (Tr.13)         1010         1012         1017         1019         1046 = F1038 (Tr.3), = F1111 (Tr.7)         1066         1069         1085         1088         1090         1115	PostholePitPitPitDitchPitPostholePitPitPitDitchPitDitchPitPitPitDitchPitDitchPitOitchPitOitchPitOitchPitOitchPitDitchPitDottholePitPostholePitGullyPosthole	- - - - - - - - - - - - - - - - - - Modern - - - - - - - - - - - - - - - - - - -
9	1052         1054         1105         1107         1111 = F1038 (Tr.3) = F1046 (Tr.10)         1102         1113         1121         1131         1141         1005 = F1005 (Tr. 6) = F1005 (Tr.13)         1010         1012         1017         1018         1066         1069         1085         1088         1090         1115         1117	PostholePitPitPitDitchPitPostholePitPitPitPitDitchPitPitPitPitOitchPitOitchPitGullyGullyPostholePostholePostholePostholePostholePosthole	
9	1052         1054         1105         1107         1111 = F1038 (Tr.3) = F1046 (Tr.10)         1102         1113         1121         1131         1141         1005 = F1005 (Tr. 6) = F1005 (Tr.13)         1010         1012         1017         1018         1066         1069         1088         1090         1115         1117         1119	PostholePitPitPitDitchPitPostholePitPitPitPitPitPitPitPitPitPitDitchPitPitDitchPitOstholePitPostholePitGullyGullyPostholePostholePostholePosthole	
9	1052         1054         1105         1107         1111 = F1038 (Tr.3) = F1046 (Tr.10)         1102         1113         1121         1131         1141         1005 = F1005 (Tr. 6) = F1005 (Tr.13)         1010         1012         1017         1018         1046 = F1038 (Tr.3), = F1111 (Tr.7)         1066         1085         1088         1090         1115         1117         1119         1123	PostholePitPitPitDitchPitPostholePitPitPitPitPitPitPitPitPitPitDitchPitPitDitchPitDitchPitPostholePitGullyGullyPostholePostholePostholePostholeQully	
9	1052         1054         1105         1107         1111 = F1038 (Tr.3) = F1046 (Tr.10)         1102         1113         1121         1131         1141         1005 = F1005 (Tr. 6) = F1005 (Tr.13)         1010         1012         1017         1018         1066         1069         1088         1090         1115         1117         1119	PostholePitPitPitDitchPitPostholePitPitPitPitPitPitPitPitPitPitDitchPitPitDitchPitOstholePitPostholePitGullyGullyPostholePostholePostholePosthole	

	1079 = F1099 (Tr.2 (LBA/EIA))	Ditch	-
13A	1005 = F1005 (Tr.6; LBA/EIA)	Ring Ditch	LBA/EIA
	= F1005 (Tr.9; LBA/EIA)		
	1016	Ditch	-
	1024 = F1024 (Tr.6; LBA/EIA) = F1026 (Tr.1)	Droveway	-
		Ditch	
	1032 = F1032 (Tr.6) = F1034 (Tr.1)	Droveway	-
		Ditch	
	1040	Ditch	-
	1042	Ditch	-

Summary of Archaeological Features

8.1.2 Of the 63 features recorded the majority were ditches (28) and pits (23). Postholes (9) and gullies (3) were also recorded. The features were broadly distributed throughout the trenches. The majority were contained in Trenches 2 (11) and 7 (7), and the least in Trenches 3 (1) and 12 (3). The remaining trenches contained between 4 and 6 features. Few features were dated.

8.1.3 Excluding the modern feature (Pit F1019 Tr.9), the features consistently date to the late Bronze Age/early Iron Age. Dated features were located in trenches in the central sector of the Phase 1 evaluation (Trench 2 (2); Trench 5 (1); Trench 6 (4); Trench 8 (1); Trench 9 (2); Trench 12 (1) and Trench 13 (1)). The majority of the dated features were contained in Trenches 2, 6 and 9. Pottery was generally found in small quantities (between 1 - 5 sherds). Ring Ditch F1005 (Trs. 6 & 13A), Pit F1095 (Tr.2) and Pit F1121 (Tr. 8) contained the larger assemblages (Appendix 1 Finds Concordance). Bone was not preserved. A few finds of burnt flint were recovered

8.1.4 Features were traceable from trench to trench e.g. Ditch F1044 (Trenches 2, 4, & 5), and Ditch F1038 (Tr.3) = F1046 (Tr.10) and F1111 (Tr.7). There was a good correlation between the archaeological features and the aerial photographic data (Fig.3) e.g. the segmented ring ditch (F1005 Trs. 6, 9 and 13A), and droveway (F1024 (Trs. 6 & 13A) = F1026 Tr.1) (F1032 (Trs. 6 & 13A) (F1034 Tr.1).

## 8.2 Interpretation of the site: archaeology and history

8.2.1 The evaluation has gone some way to characterising the cropmarks (Figs. 2 - 3), interpreted as a possible prehistoric settlement in the previous aerial photographic assessment (Palmer, 2009). The pottery associated with the features is late Bronze Age/early Iron Age. The cropmarks peter out in the south-west (Fig.2) where deeper alluvial soil may mask archaeological features (Palmer, 2009). Alternatively the cessation of features may be genuine, and reflect the topography.

8.2.2 The ring ditch was examined in Trenches 9, 6 and 13A (Figs. 2 - 3). The trenches revealed a curvilinear ditch (F1005) which contained late Bronze Age/early Iron Age pottery. Discrete features were also recorded within these trenches, in particular Pit F1013 which contained late Bronze Age/early Iron Age pottery (22g) and burnt flint (27g), and was located within the circumference of the ditch. A possible droveway, north-east of the barrow, was examined in Trenches 6 and 13A (F1024 & F1032), and may have continued into Trench 1 (F1026 & F1034). The ditches contained late Bronze Age/early Iron Age (Trench 6).

8.2.3 The remaining trenches examined field and enclosure ditches. Discrete features of late Bronze Age/early Iron Age date were recorded. F1088 and F1090 (Tr. 11) may represent drip gullies, indicative of dwellings. Neither contained finds.

## 8.3 Interpretation of the site: geology and topography

8.3.1 The features are located on the higher ground, on a slightly sloping relief. The ground falls away towards the north-eastern corner on to the upper slopes of the Thames estuary. The Thames is located approximately 4km to the south.

## 8.4 Finds and environmental evidence

8.4.1 The finds are generally limited in their scope. The pottery, though generally well-preserved, comprises mainly un-diagnostic sherds. No animal bone was recovered due to the highly acidic nature of the soil. Pottery recovered during wet sieving dated some features.

## 8.5 *Preservation of the archaeology*

8.5.1 The archaeological features were truncated, and plough marks cut the natural drift geology. Little modern disturbance was evident (Tr. 9 F1019)

## 8.6 Research potential

8.6.1 The research potential of the site is high. The site of the proposed agricultural reservoir lies on a late Bronze Age/early Iron Age settlement that further extends to the south.

8.6.2 The site contains archaeology dated to the late Bronze Age and early Iron Age. As such, it has the potential to provide some degree of information relating to the Bronze Age/Iron Age transition and its social and economic effects; this is identified as an important area of research in eastern England (Bryant 2000, 17). Brown and Murphy (2000, 10) state that the main gap in information regarding the Bronze Age in the east of England relates to the development of farming and the attendant development and integration of monuments, fields and settlements. Settlement patterns are identified as an important area of research for the Thames Estuary area (Williams and Brown 1999, 32). The site at Chadwell St Marv may inform on both of these areas of research as it has the potential to add to the corpus of information relating to the Bronze Age landscape of the east of England. The site may have the potential to provide some information regarding social organisation and settlement form and function in the early Iron Age and may inform on the subjects of settlement chronology and development of the agrarian economy (particularly with regard to field systems), all of which are identified as important research areas for the Iron Age in eastern England (Bryant 2000, 16-17).

## 8.7 Conclusions

8.7.1 A high potential for archaeological remains was indicated by the desk based assessment and subsequent cropmark assessment. Trenches targeting the cropmarks have revealed evidence of a late Bronze Age to early Iron Age enclosure

settlement with a possible associated funerary structure. Sparse finds recovered during the evaluation are of poor quality but have been found *in situ*, helping to date the features. Evidence of Bronze Age and Iron Age date in the surrounding area suggests that the site may form part of a fairly widespread late prehistoric landscape overlooking the Thames.

## 9 DEPOSITION OF ARCHIVE

9.1 The archive records, with an inventory, will be deposited with the finds from the site, at Thurrock Museum. The archive will be quantified, ordered, indexed, cross-referenced and checked for internal consistency. In addition to the overall site summary, it will be necessary to produce a summary of the artefactual and ecofactual data. The archive will be deposited within six months of the conclusion of the fieldwork.

## ACKNOWLEDGEMENTS

Archaeological Solutions would like to thank RJD Ltd for their co-operation and funding this archaeological evaluation, in particular Mr Andy Clark for his assistance.

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# APPENDIX 1 CONCORDANCE OF FINDS

THMH10: Chadwell St. Mary, Essex Concordance of finds by feature

Featur								
e	Context	Segment	Trench	Description	Spot Date	Pottery	CBM	Other
1005	1003	A	6	Ditch Fill	Late BA - Early IA	(5) 46g		B. Flint (2) 62g
1005	1003	В	9	Ditch Fill	Late BA - Early IA	(2) 75g (15)	9g	
		с	13a	Ditch Fill	Late BA - Early IA	218g		
1010	1008		6	Ditch Fill	Late BA - Early IA	(2) 35g		B. Flint (1) 9g
				Ring Ditch				
1013	1006		6	Fill	Late BA - Early IA	(3) 22g		B. Flint (2) 27g
1019	1018		6	Pit Fill	19th - 20th C	(2) 3g		
1024	1022	A	6	Ditch Fill	Late BA - Early IA	(4) 39g		
1032	1031	A	6	Ditch Fill	Late BA - Early IA	(2) 7g		
1077	1076		12	Ditch Fill	Late BA - Early IA	(4) 51g		
1093	1092		5	Ditch Fill	Late BA - Early IA	(1) 2g		B. Flint (1) 4g
1095	1094		2	Pit Fill	Late BA - Early IA	(15) 52g		
1099	1098		2	Ditch Fill	Late BA - Early IA	(1) 14g		
						(40)		Fe nail shank
1121	1120		8	Pit Fill	Late BA - Early IA	384g		(1) 3g
								B.Flint (5) 101g

### APPENDIX 2 SPECIALIST REPORTS

#### The Pottery

by Peter Thompson

The evaluation recovered 94 sherds weighing 931 grams. The whole assemblage, bar one small modern sherd from pit F1019 (L1018), is prehistoric and is a fairly homogenous group in terms of flint fabric and firing with predominantly orange surfaces and grey or brown cores. There is a lack of diagnostic forms. The pottery is quantified in Appendix 1.

The assemblage can be characterised as sparse to common, medium to coarse, white flint, usually also containing varying amounts of quartz sand. Several sherds contain slightly coarser temper of very coarse flint, and one sherd from ditch F1005 (1003 B) included coarser sand with rounded quartz and at least one pebble of rounded quartzite. Only one sherd, from ditch F1024 (L1022 A), does not contain any flint this sherd contains irregular vesicles from dissolved shell.

Ditch F1005 (L1003 C) contained a rim sherd from a shouldered jar with a short neck. The simple rim is rounded and has been smoothed outwards leaving a slight external fold, and there are faint dispersed finger tip marks either as decoration or left during manufacture. A simple flattened rim possibly from a cylindrical vessel came from pit F1121 (L1120), and another simple rounded rim came from ring ditch F1013 (L1006). No other sherds are finger or incise decorated, but seven sherds (7.5%) show a finer ware element with either burnished or smoothed surfaces and brown or dark grey surfaces, although the flint inclusions are generally as coarse as the 'coarse' wares. Several sherds have been wiped internally and three or four sherds have external wiping.

## Discussion

The presence of the finer burnished sherds and predominance of flint tempering indicates that the assemblage fits a late Bronze Age to early Iron Age date (11th-4th centuries BC). The lack of diagnostic profiles make narrower dating difficult the only example being the simple, slightly everted, thin rim with faint finger impressions from F1005 (1003 C), which is of similar type to some of those from Barrington's Farm, Orsett dating to the early Iron Age (Brown 1987, 27). Likewise the lack of decoration is problematic. Undecorated pottery or pottery with limited decoration is more characteristic of the late Bronze Age, but does not preclude it from being an undecorated early Iron Age assemblage. The lack of angular sherds and the predominance of flint temper would seemingly also support a late Bronze Age date. At North Shoebury there was a predominance of shell temper replacing flint in the early Iron Age (Brown 1995, 83), at Barrington's Farm, Orsett a wide range of fabrics including shell and vegetal temper appears in the early Iron Age and at Mucking there was also a diversity of fabrics from the late Bronze Age (Brown 1987, 28). At the Orsett causewayed enclosure site however, all the early Iron Age pottery was flint tempered (Brown 1995, 87). Finger or grass wiping was also an occasional feature of both late Bronze Age and early Iron Age pottery at North Shoebury (Brown 1995, 80 and 85). The exception is the shell tempered sherd from ditch F1024 (L1022) and indicative of the early Iron Age for south-east Essex: at North Shoebury it commenced around the 6<sup>th</sup> century BC (Brown 1995, 83). Unless the feature containing this atypical sherd is of a later date to the rest of the assemblage an 'early' early Iron Age

date, c.8<sup>th</sup>-6<sup>th</sup> centuries is therefore tentatively suggested, subject to further diagnostic pottery coming from the site.

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Key: C: (c.1mm diam) VC: very coarse flint (>1mm diam)

Feature	Context	Туре	Quantity	Date	Comment
1005	1003A	Ditch	5x46g C.Flint	Late	
				Bronze	
				Age –	
				Early Iron	
1005	1003 B	"	1x63g C.Flint	Age "	C. Flint wiped
1000	1000 B		1x12g C.		o. r init mpod
			Flint & C		C. Flint includes coarse to
			Sand		very coarse rounded quartz
					and quartzite
1005	1003 C	"	14x175g C.	"	C. Flint x1 short neck,
			Flint		simple rim, rolled outwards
			1x43g C. Flint		with slight pinching, x1 jar
			FIIII		wall leading to base angle C.Flint also contains rare
					fine burnt organics, internal
					wiping
1013	1006	Ring	3x22g C.Flint	**	C.Flint 1x simple rim to
		Ditch	_		possible pie crust deco but
					too faint to be sure
1010	1008	Ditch	2x35g VC.	"	VC Flint probably not burnt
			Flint		
1019	1018	Pit	1x2g	19 <sup>th</sup> -20 <sup>th</sup>	1x 1g?bakerlite
			Ref.white		
1024	1022 A	Ditch	earthenware 3x23g C.Flint	Late	
1024	1022 A	Diton	1x16g Shell	Bronze	
			TX TOg Offen	Age –	
				Early Iron	
				Age	
1032	1031 A	Ditch	2x7g C.Flint	"	
1077	1076	Ditch	4x51g C.	"	C.Flint2x internal wiping
1000	1000		Flint	"	
1093	1092	Ditch	1x2g C.Flint	"	C.Flint & Sand sparse flint,
1095	1094	Pit	& Sand 9x35g C.Flint	66	smoothed/polished surfaces C.Flint 4x17g burnished or
1090	1094	<b>-</b> IL	5x17g		polished surfaces
			VC.Flint		
1099	1098	Ditch	1x14g C.Flint	"	
	-				
1121	1120	Pit	40x384g	66	C.Flint 2x11g burnished, 1x
			C.Flint		simple flattened rim, 1x115g
					large body sherd with
					internal wiping and more

|--|

#### The Burnt Clay

Andrew Peachey

The trial trench evaluation recovered two fragments (9g) of burnt or baked clay from Ditch F1005 (L1003 Seg.B). Both fragments are comprised of oxidised orange red clay that is mixed with natural earth. These fragments could potentially represent small pieces of clay derived from daub or a hearth lining but could equally represent natural agglomerations of clay that have subsequently come into contact with fire.

#### The Burnt Flint

Andrew Peachey

The trench evaluation recovered a total of 11 fragments (201g) of sparsely distributed burnt flint. Pit F1121 (L1120) contained a total of five fragments (101g), while Ditches F1005 (L1003 Seg.A), F1010 (L1008), F1093 (L1092) and Ring Ditch F1013 (L1006) each contained two or less fragments of burnt flint. All the fragments recovered were relatively small and none showed any evidence of being worked before or after burning.

#### The Geoarchaeology

Dr. Simon G. Lewis

#### Introduction

This report summarises findings of geoarchaeological assessment of phase 1 area (at the northern end of the site). The work was done during a site visit on 11th February 2010.

Six test pits (TP1-6) were dug with a mechanical excavator within the footprint of the existing archaeological assessment trenches. Their locations were recorded by Archaeological Solutions personnel and are given approximately below.

TP1 N end of trench 1 TP2 W end of trench 10 TP3 N end of trench 5 TP4 SW end of trench 4 TP5 W end of trench 8 TP6 6m from W end of trench 9 Vertical logs were recorded for each test pit. Three bulk samples for gravel were recovered from the excavator bucket for coarse mesh sieving.

#### Results

The test pit logs are summarised below (all depths in metres).

## TP1

0.0 - 0.5	Soil
0.5 - 1.4	Massive gravel, clayey matrix, becoming cleaner medium coarse
	gravel with sandy matrix below 1.0m
1.4 - 3.6	Yellow/brown sand (10YR 6/8), gravel layer 0.2m thick at 2.0m
3.6 - 4.3+	Gravel, medium, clast-supported, flint dominated gravel

## TP2

0.0 - 0.4	Soil
0.4 - 1.15	Massive gravel, sandy clay matrix, vertical alignment of stones
1.15 - 2.0	Alternating sand and fine gravel, horizontally bedded
2.0 - 3.0	Yellow/brown sand
20 201	One was divine a series allocate a view series of flight devices and a marvel

3.0 - 3.9+ Gravel, medium-coarse, clast-supported, flint dominated gravel

## TP3

0.0 - 0.4	Soil
0.4 - 0.8	Massive poorly sorted gravel, clast-supported, some vertically orientated
	clasts
0.8 - 1.35	Sandy gravel, crudely horizontally bedded

- 1.35 2.5 Sand, with gravel layers at 1.6m and 1.8m,
- 2.5 4.2+ Gravel, medium-coarse, clast-supported, flint dominated gravel

## TP4

- 0.0 0.4 Soil
- 0.4 1.0 Massive poorly sorted gravel
- 1.0 1.7 Sand, pebbly with gravelly stringers
- 1.7 2.7 Sand, cross bedded, yellow brown colour (10YR 6/8)
- 2.7 4.0+ Gravel, medium-coarse, clast-supported, flint dominated gravel

## TP5

- 0.0 0.3 Soil
- 0.3 1.5 Gravel, fine-medium, clayey matrix at top, manganese staining in places
- 1.5 2.0 Gravelly sand, fine, clayey in places
- 2.0 2.8 Sand, yellow brown colour
- 2.8 4.3+ Gravel, medium-coarse, clast-supported, flint dominated gravel

## TP6

- 0.0 0.3 Soil
- 0.3 0.85 Gravel, coarse, poorly sorted
- 1.85 1.2 Sand, cross bedded

1.2 - 2.0	Gravel, crudely horizontally bedded, medium flint-dominated
2.0 - 4.0+	Gravel, medium-coarse, clast-supported, flint dominated gravel

No samples were taken for palaeoenvironmental analysis as no appropriate deposits were exposed in the test pits.

Three bulk samples of the basal gravel were recovered from TPs 2, 3 and 4. Approximately 100kg of gravel was sieved through a course mesh sieve as a means of rapid assessment for archaeological content. None was found.

#### Summary of findings

The six test pits shows broadly similar sequences. Fluvial gravel, presumably the Boyn Hill gravels of the River Thames, was present at the base of all the TPs. This is overlain by more variable deposits including sands and clayey gravels. These are partly of fluvial origin, with some indications of periglacial disturbance and/or downslope movement of gravels.

No organic sediments or other deposits likely to contain fossil material of use in palaeoenvironmental reconstruction or biostratigraphy were discovered. However, given the laterally discontinuous nature of such sediments, the possibility remains that these may be recovered in future assessment trenches or during the course of the gravel extraction, particularly when deeper sediments will be available for inspection.

No archaeological material was found during the course of this phase of the geoarchaeological assessment. Palaeolithic archaeology may be anticipated in two contexts: (1) in primary context, possibly associated with fine-grained sediments and (2) in secondary context through the fluvial gravels. Neither of these situations were encountered in the test pits.

Additional test pits will be dug as part of the next phase of the investigation. It should be noted that these are not penetrating the full thickness of the Pleistocene fluvial deposits at the site. The possibility remains that archaeological and palaeoenvironmentally significant sediments are present at the base of the Pleistocene sequence.

A small number of targeted boreholes would supplement the information from the test pits and may help to establish the nature of the basal part of the sequence. It is recommended that this option be considered once all the test pits have been dug.

#### Charred plant remains Alexandra Livarda

#### Introduction

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During the archaeological evaluation at Mill House Farm, Chadwell St Mary, Essex (NGR TQ 6583 7899) bulk soil samples were taken for the recovery of bioarchaeological remains. About one third of these were dated to the late Bronze/early Iron Age period.

#### Sampling and processing methods

A judgement-based sampling strategy was followed for the collection of soil samples, which resulted in 41 samples in total from various ditches, pits, gullies, postholes, and a cremation. All samples were processed by staff at Archaeological Solutions and were submitted for the present assessment. The light, floatable fraction (flot) was collected in a mesh with 0.25mm aperture, while a 1mm mesh was used to retain the heavy fraction (residue).

The flots were scanned in their entirety using a stereoscope with magnifications ranging from x7 to x45. The plant remains were recorded by category (cereal grain, chaff, other food plants, and wild species) and their names follow Stace (1997). The abundance of the archaeobotanical material was estimated according to the following rating system: + = <10 items; ++ = 10-50 items; +++ = 51-100 items; +++ = >100 items. Quantification was based on the minimum number of characteristic plant parts. Charcoal fragments and other organic remains were also noted, estimating their abundance with the same rating system.

## Results

## Late Bronze Age/Early Iron Age samples

Only thirteen of the samples had associated finds that allowed their dating to the late Bronze/early Iron Age period. The main components of all samples were cereal remains in the form of grains and/or chaff and significant, for most of them, amounts of charcoal fragments.

The fill of Pit F1095 (Sample 27) had the richest archaeobotanical assemblage of the dated samples. The bulk of its archaeobotanical material was glume bases of both emmer (*Triticum dicoccum* Schübl.) and spelt (*Triticum spelta* L.) wheat. Some cereal grains were also present, including possible spelt wheat but also barley (*Hordeum vulgare* L.). Wild species were very few, represented by the occasional grass (Poaceae) and knotgrass (*Polygonum* sp.) seed. A very similar picture of quite a few emmer and spelt wheat glume bases, a smaller amount of barley and wheat grains and the occasional wild species, was observed in the upper fill of Ditch F1099 (Sample 28), which was cut by Pit F1095. The only difference was the finding in the ditch of a single legume (Fabaceae). The lower fill of the same ditch (Sample 29), for which no dating was available, had a similar quantity and type of archaeobotanical evidence to the upper fill. So, unless some of the material is intrusive/part of the same deposit, crop processing and food preparation activities appear to have been regular in this part of the excavated area. The impression during the assessment of the material was that this

was the burnt refuse of largely the by-product of wheat dehusking and fine-sieving, which was disposed/found its way into open features such as Ditch F1099 and Pit F1095.

Other samples presenting a similar overall picture that is, mostly glume bases of emmer and/or spelt, a few cereal grains and wild species, but with smaller quantities of archaeobotanical material were Sample 34 from Posthole F1113 and Sample 20 from Pit F1074.

Sample 3, collected from Ditch F1005, was different to all the other dated samples in that it was dominated by a mixture of cereal grains, including barley and emmer wheat. It also included a few glume bases, wild seeds and a legume, amounting altogether, however, to fewer than ten items. Another sample (Sample 1) from the same ditch contained only a low amount of material other than charcoal, with an equal presence of cereal grains (barley and glume wheat) and chaff (including mainly glume bases but also barley rachis).

All the remaining dated samples (Samples 4 - 5, 14, 21 - 22, 30 and 35) retrieved from various ditches and pits across the site had a low quantity of a mixture of archaeobotanical remains, mostly cereal grains (barley, emmer and/or spelt wheat) and glume bases. Exceptions were Samples 21 and 22, collected from ditches in Trench 12, neither of which had any glume bases at all.

#### Undated samples

Most of these samples resembled the late Bronze/early Iron Age ones. The two richest Samples were 9 and 37 retrieved from pits F1013 and F1131 respectively. Both of these were dominated by glume bases of emmer and spelt wheat, but they also included barley and wheat grains and some wild species, suggesting the presence of dehusking and sieving/hand-cleaning by-products of crop processing together with the grains. More samples included the same mixture of glume dominated by-products and grains and wild species in lower quantities, such as Samples 23 (Pit F1082), 26 (Ditch F1105) and 33 (Posthole F1119), while Sample 24, also from Pit F1082, had only some glume bases.

Slightly different was Sample 10 from Pit F1012, which had predominantly cereal grains, most of which were identified as barley. The proximity of this pit to Ditch F1005, and the resemblance of their environmental samples, containing generally more cereal grains than other samples, may suggest slightly different food processing/deposition activities in this area of the site, assuming they are contemporaneous. Cereal grains as the occasional sole findings were recorded in Samples 7 (Ditch F1005), 13 (Ditch F1038), 19 (Cremation F1050), 36 (Gully F1123), 39 (Pit F1139), and 41 (Pit F1146). Sample 18 (Ditch F1046) contained a cereal grain and a seed of the daisy family (Asteraceae) and Sample 25 (Gully F1088) had only two poorly preserved, indeterminate wild seeds.

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Across the site many other samples, including Samples 2 (Ditch F1005), 6 (Ditch F1005), 8 (Pit F1012), 11 (Ditch F1016), 12 (Ditch F1024), 15 (Ditch F1032), and 32 (Posthole F1117), had a more or less equal mixture of cereal grains, glume bases and wild species in low quantities.

The similarity in the archaeobotanical composition of many and particularly the richer samples to those dated to the late Bronze/early Iron Age period may be suggestive of them being contemporaneous, although this can be used merely as an indication that would need further evidence for its validation.

Of all the samples studied, however, one stood out as significantly different to all others. This was Sample 17 (Ditch F1044), which was a mixed sample of a few cereal grains, a legume, a variety of wild species, tubers, and chaff. The chaff consisted of some straw nodes and cereal rachises that were tentatively identified as rye (*Secale cereale* L.), a cereal that is usually encountered much later, from the Roman period onwards (e.g. Zohary and Hopf 2000, 69-77).

Samples with no archaeobotanical remains other than charcoal were 16 (Ditch F1042), 31 (Posthole F1115), 38 (Posthole F1135), and 40 (Posthole F1133).

#### **Conclusions and Research Potential**

The environmental samples collected from the site at Chadwell St Mary revealed a particularly interesting array of archaeobotanical remains. Agriculture seems to be part of the site's activities, with evidence of crop processing and food preparation recorded across the excavated site. Emmer wheat, spelt wheat, and barley appear to be the main crops. Further sampling, if possible, and analysis holds the potential to shed light on the relative importance of the main crops and identify more accurately the stage of the crop processing activities that each sample derived from. In addition, although the wild species are not numerous they can still provide some insights into the particularities of the agricultural regime and husbandry methods.

A summary of the assessment results by sample can be found in Table 1.

#### Bibliography

Stace, C. 1997. New Flora of the British Isles. Cambridge University Press, Cambridge

Zohary, D. & Hopf, M. 2000. *Domestication of plants in the Old World. The origin and s*[*read of cultivated plants in West Asia, Europe and the Nile valley.* Oxford University Press, Oxford

Comments	Barley and wheat grains and chaff, small grasses and seeds of the daisy family	Cereals incl. barley grains, glume bases and a small grass	Cereal grains incl. barley and wheat, legume, emmer glume bases, grasses	Cereal grains and glume bases incl. emmer	Cereal grains incl. barley and wheat, glume bases and small grasses	Cereal grains incl. wheat, glume bases, a barley rachis and a small grass
Mm		+		+	+	
Sn	+	+	+	+	+	+
Ch	++++	+++	++++	++++	++++	+ + + +
Oth	++++	+	+	+++++	+++++++++++++++++++++++++++++++++++++++	<b>+</b> +
Md	+	+	+		+	+
Se			+			
Çf	+	+	+	+	+	+
Cgr	‡	+	‡	+	+	+
Flot (ml)	30	30	30	15	30	2
Dating	L BA - E IA		L BA - E IA	L BA - E IA	L BA - E IA	
Description	Ditch Fill	Ditch Fill	Ditch Fill	Ditch Fill	Ditch Fill	Ditch Fill
Area			В	В		U
Trench	6	9	9	9	6	13a
Context	1003	1004	1003	1004	1009	1003
Feature	1005	1005	1005	1005	1010	1005
Sz (I)	20	20	20	20	40	20
Sample	<del></del>	2	3	4	5	Q
	Sz (I)     Feature     Context     Trench     Area     Description     Dating     Flot     Cgr     Cf     Se     Wd     Oth     Ch     Sn     Mm       (ml)     (ml)	Iot     Cgr     Cf     Se     Wd     Oth     Ch     Sn     Mm       ml)     +     +     +     +     +     +     1       30     ++     +     +     +     +     +	Iot     Cgr     Cf     Se     Wd     Oth     Ch     Sn     Mm       30     ++     +     ++     ++     +     +     +       30     ++     +     +     ++     +     +       30     ++     +     +     +     +       30     +     +     +     +     +	Iot       Cgr       Cf       Se       Wd       Oth       Ch       Sn       Mm         30       ++       +       ++       ++       ++       +       +       +       +       1       30       30       30       1 <td>Iot       Cgr       Cf       Se       Wd       Oth       Ch       Sn       Mm         30       ++       +       +       ++       ++       +</td> <td>Iot       Cgr       Cf       Se       Wd       Oth       Ch       Sn       Mm         30       ++       +       +       ++       ++       +</td>	Iot       Cgr       Cf       Se       Wd       Oth       Ch       Sn       Mm         30       ++       +       +       ++       ++       +	Iot       Cgr       Cf       Se       Wd       Oth       Ch       Sn       Mm         30       ++       +       +       ++       ++       +

Table 1: Mill House Farm, Chadwell St. Mary, Essex (THMH10)

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Samolo																	
auline	Sz (I)	Feature	Context	Trench	Area	Description	Dating	Flot (ml)	Cgr	Ç	Se	Wd Oth	ch Ch		Sn	Мm	Comments
7	20	1005	1004	9		Ditch Fill		10	+			+	+ ++	++++	+		A cereal grain
80	20	1012	1011	0		Pit Fill		5	+	+		+	+++	+++++		+	A cereal grain, culm nodes and a wild seed
6	40	1013	1006	Q		Pit Fill		190	‡	‡		+ +	+	* *	+	+	Cereal grains incl. barley and wheat, many glume bases incl. emmer, a few wild seeds
10	10	1012	1011	o		Pit Fill		5	+	+		+ +	‡	+			Cereal grains incl. many barley seeds, a few glume bases and a seed of the daisy family
11	20	1016	1015	13a		Ditch Fill		30	+	+		+	÷	+			Cereals incl. wheat grain and a glume base and a wild seed
12	40	1024	1022	9	A	Ditch Fill		30	+	+		+	+++	++++++	+		A cereal grain and a glume base, wild seeds incl. seeds of the carrot family
13	40	1038	1037	3		Ditch Fill		60	+			+	+++			+	Cereal grains incl. barley and wheat
14	40	1040	1039	13a		Ditch Fill	L BA - E IA	40	+	+		+	+ +	+	‡		Cereal grains incl. barley and a few glume bases

Mill House Farm, Chadwell St Mary, Essex

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Sample	Sz (I)	Feature	Context	Trench	Area	Description	Dating	Flot (ml)	Cgr	Ç	SeV	Md C	Oth C	Ch	Sn N	Mm	Comments
15	40	1032	1031	9	A	Ditch Fill		70	+	+		+	‡	‡	+	+	A cereal grain and a few terminal glume bases, a seed of the carrot family
16	40	1042	1041	13a		Ditch Fill		20					+++	+	+		Only a few charcoal remains
17	40	1044	1043	2		Ditch Fill		130	+	‡	+	+	+	+++++	+		Cereals incl. barley grains, culm nodes, possibly rye rachis, a legume, tuber and a variety of wild seeds
18	40	1046	1045	10		Ditch Fill		30	+			+	+	+			A cereal grain and a seed of the daisy family
19	5	1050	1049	7		Cremation 1		5	+				+	++++			Cereals incl. a wheat grain
20	20	1074	1075	12		Pit Fill	L BA - E IA	40	+	++++		+	+	+ + + +	+		Cereal grains incl. barley, glume bases incl. emmer and bedstraw seeds
21	40	1077	1076	12		Ditch Fill	L BA - E IA	60	+				+++	++++	++++	+	A cereal grain
22	40	1079	1078	12		Ditch Fill	L BA - E IA	130	+	<u> </u>		+	+	+++++	+		Cereal grains incl. barley and a wild grass seed
23	10	1082	1080	2		Pit Fill		10	+	+		+	+	+++++			Cereal grains, glume bases and wild seeds

Mill House Farm, Chadwell St Mary, Essex

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Sample	Sz (I)	Feature	Context	Trench	Area	Description	Dating	Flot (ml)	Cgr	ŭ	Se	Wd Oth	th Ch		Sn Mm	Comments
23	10	1082	1080	2		Pit Fill		10	+	+		+	+	+ + +		Cereal grains incl. barley and wheat, glume bases and a few wild seeds
24	10	1082	1081	0		Pit Fill		30		+			+	++++	+	A few glume bases
25	40	1088	1087	11	A	Gully Fill		15		<u> </u>		+	+	++	+	A few wild seeds
26	6	1105	1103	2		Ditch Fill		15	+	+		+	· ·	++++++		A cereal grain, glume bases incl. emmer and a dock seed
27	10	1095	1094	5		Pit Fill	L BA - E IA	50	+	‡ ‡	<u> </u>	+	+	  	+	Cereal grains incl. barley and wheat, numerous glume bases incl. emmer and spelt, a few wild seeds
28	20	1099	1098	5		Ditch Fill	L BA - E IA	40	‡	‡	+	+ +	+	+++++	+	Cereal grains incl. barley and wheat, emmer and spelt glume bases, a legume and a few wild seeds
29	20	1099	1100	2		Ditch Fill		40	+	‡		+	+	+++++	+	Barley and wheat grains, many glume bases and a few wild seeds

 Table 1: (cont.)

 Mill House Farm, Chadwell St Mary, Essex

Sz (I)	Feature	Context	Trench	Area	Description	Dating	Flot (ml)	Cgr	Ç	Se	0 pM	Oth	ວ	Sn	ШШ	Comments
40	1102	1101	8		Pit Fill	L BA - E IA	40		+			++	+++	+		A couple of emmer glume bases
	1115	1114	11		Posthole		5					+	++	+		Some charcoal fragments
	1117	1116	11		Posthole		10	+	+		+	+	++++	+		A barley grain, some glume bases and a variety of wild seeds
	1119	1118	1		Posthole		5	+	+		+	+	+ +			A cereal grain, glume bases and a small grass seed
20	1113	1112	ω		Posthole	L BA - E IA	70	+	+++		+	++	++++	+		A cereal grain, glume bases incl. emmer and a few wild seeds
40	1121	1120	8		Pit Fill	L BA - E IA	30	+	+		+	++++	++++	+		A cereal grain, glume base and a small grass seed
10	1123	1122	11		Gully Fill		20	+				+	++	+		A barley grain
40	1131	1130	ω		Pit Fill		65	+	‡‡		+	+ + +	‡ ‡	+		Cereal grains incl. barley and wheat, emmer and possibly spelt glume bases, a few wild seeds
20	1135	1134	4		Posthole		15					+	+	+		A few charcoal fragments

Table 1: (cont.)

Mill House Farm, Chadwell St Mary, Essex

Barley and wheat grains and tuber	Some charcoal fragments	A cereal grain
+		
+	+	+
+++	+++	+
+	+	+
+		
+		+
210	5	10
Pit Fill	Posthole	Pit Fill
4	4	5
1138	1132	1145
1139	1133	1146
40	10	10
39	40	41
	40         1139         1138         4         Pit Fill         210         +          +	40         1139         1138         4         Pit Fill         210         +

## PHOTOGRAPHIC INDEX



Pit F1013, Ditch F1005, Trench 6, looking north



Gullies F1088 and F1090, Trench 11, looking south



Droveway Ditches F1024 and F1032, Trench 13A, looking north-west



Pits F1066 and F1085 and Posthole F1069, Trench 10, looking north













