

# An Archaeological Evaluation at Turncole Farm, Southminster, Essex

**Summary Report** 

NGR 598556, 197956 (TQ 98556, 97956)

Project No: 4533 Site Code: TWF 10

**Nick Garland MA** 

With a contribution by Anna Doherty

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# Nick Garland MA

With contributions by Gemma Ayton, Trista Clifford, Anna Doherty, Karine Le Hégarat, Sarah Porteus and Justin Russell

September 2010

Archaeology South-East
Units 1 & 2
2 Chapel Place
Portslade
East Sussex
BN41 1DR

Tel: 01273 426830 Fax: 01273 420866 Email: fau@ucl.ac.uk

#### Abstract

A programme of archaeological evaluation was undertaken by Archaeology South-East at Turncole Farm, Southminster, Essex, in advance of a proposed wind farm to be erected on the agricultural land.

The work was undertaken between the 13<sup>th</sup> and 17<sup>th</sup> September 2010 on behalf of RSK Environment Ltd and RES. Nineteen evaluation trenches, eac, measuring 30 metres in length, sampled the archaeology across the site. Five of these trenches sampled the proposed access roads while the remaining fourteen formed seven cross-shaped trenches at the base of each proposed wind turbine.

Due to the thick deposits of alluvium in this reclaimed marshland, the trenches were excavated to a maximum of 1 metre in depth. The surface of the alluvium varied in height from 1.053m OD in the north of the site and 0.2053m OD in the south of the site

The evaluation trenches demonstrated two areas of archaeological activity. A Roman saltern, known locally as a 'Red Hill' was uncovered in Trench 7 and produced a large quantity of Roman pottery including high status wares and a Roman coin. A post-medieval ditch was present in Trench 15 and corresponded with the boundaries associated with Old Turncole Farm and appears on the 1<sup>st</sup> century OS map.

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#### 1.0 INTRODUCTION

# 1.1 Site Background

1.1.1 Archaeology South-East (ASE), the contracting division of The Centre for Applied Archaeology at the Institute of Archaeology, University College London, were commissioned by RSK Environment Ltd on behalf of their clients, RES, to undertake an archaeological evaluation at Turncole Wind Farm, Turncole Farm Lane, Southminster, Essex (Fig 1, NGR 5991 1977).

# 1.2 Geology and Topography

- 1.2.1 The site is situated on a large area of flat reclaimed marshland which is now used for agricultural purposes. It lies below the 10 m above ordnance datum (AOD) contour. Aerial Photographs and Satellite imagery of the area reveal the traces a complex array of channels that existed in antiquity (Fig 3).
- 1.2.2 The British Geological Survey (BGS) sheet (259) shows that the site lies on London Clay overlain by Alluvium.

# 1.3 Planning Background

- 1.3.1 The proposed development will involve the construction of seven wind turbines and associated infrastructure. The archaeological works were carried out for inclusion within an Environmental Impact Assessment (EIA) ahead of a planning application for the proposed site.
- 1.3.2 A Written Scheme of Investigation (WSI) for an archaeological evaluation was produced by Archaeology South East in August 2010 and was submitted to Essex County Council for approval prior to the commencement of work (ASE 2010). The documentation consisted of aims and objectives to fulfil during the work as well as the methods to be used during the archaeological evaluation of the site, namely the excavation and recording of nineteen 30m long, 1.8m wide trial trenches.

#### 1.4 Aims and Objectives

- 1.4.1 The aims of this work were outlined in the WSI and are summarised below (ASE 2010).
  - To establish the presence or absence of archaeological remains within the footprint of the proposed development.
  - To determine the extent and minimum depth below modern ground level of any archaeological remains
  - To determine the nature and significance of any archaeological remains
  - To report on the results of the archaeological evaluation

#### 1.5 **Scope of Report**

1.5.1 This summary report details the findings of an archaeological evaluation undertaken by Nick Garland between the 13<sup>th</sup> and 17<sup>th</sup> September 2010. The project was managed by Jon Sygrave (Project Manager) and Jim Stevenson (Project Manager, Post-excavation).

#### 2.0 ARCHAEOLOGICAL BACKGROUND

# 2.1 Introduction to background

2.1.1 A Desk Based Assessment of 1 km radius of the proposed development areas was undertaken by RSK Ltd in 2010 as part of the wider EIA and is summarised below with due acknowledgment (RSK 2010).

#### 2.2 Palaeolithic

2.2.1 A single site of Palaeolithic remains were identified within the study area. A rolled axe head was found at the Goldsands Road Pit near Southminster to the east of the site and may date to this period.

# 2.3 Bronze Age

2.3.1 Bronze Age occupation of the study area is limited to a single Cropmark of a rectilinear enclosure at Burnham Wick, to the south of the site, which may date to the Bronze Age or Iron Age. However, the surrounding area has produced a greater density of Bronze Age activity including a hillfort at Asheldham Camp and also a multi-period site at Maldon/ Heybridge.

# 2.4 Iron Age

- 2.4.1 During the Iron Age, salt working starts to emerge in this area. A large number of Salterns' also referred to locally as 'Red Hills', have been found within the study area itself as well as surrounding the site. This activity lasted until the post-medieval period and a number of sites still remain undated, however, there are three that specifically date to the Iron Age at Broadward Farm and Turnocle Farm (immediately to the north of the proposed development site) and at Breadward farm (just to the west).
- 2.4.2 While Red Hills dominate much of the landscape, there is evidence for other Iron Age habitation of the area including a crop mark complex indicating an Iron Age settlement site SW of Oldmoor to the north of the site, a univallate hillfort at End Way Farm and an enclosure at Burnham Wick to the northwest. Further crop marks across the area may be indicative of further prehistoric remains dating to this period

# 2.5 Roman

2.5.1 The Roman period saw the building of roads, which run through the study area, to the Roman fort of at *Othona* at the eastern tip of the Dengie Peninsular to the north-east, a possible cemetery also exists at Tillingham to the north, along with continued salt working sites. A number of these salt working sites lay immediately surrounding the proposed development site at Little West Wick (100 metres to the south-west) and Redward Farm (500 metres to the south). A further earthwork enclosure at Pandole Wood to the north-west, has also been interpreted as a Roman camp.

# 2.6 Early Medieval

- 2.6.1 The early medieval period in this area saw a period of turmoil with increased raids on the eastern coastline and culminating in the Battle of Maldon of AD 991 between the Saxon settlers and Danish Viking raiders.
- 2.6.2 Further early medieval occupation exists of the *Othona* Roman Fort at Bradwell on Sea to the north-east, which became a Saxon Monastery during this period. Southminster itself is also known to have been a late Anglo-Saxon minster. Also a number of possible Grubenhaus were excavated at the multi-period site to the north of Heybridge to the north-west of the site.

# 2.7 Medieval

2.7.1 Historic map regression has revealed that in the medieval period the area was in the majority salt marsh, exploited for oyster farms, fish weirs and salt production. A medieval saltern has also been uncovered at Boreham Wick to the south-west and further activity in the form of medieval ditches were uncovered at Goldsands to the north-west of the site. However, high status sites are also present within this landscape such as moated sites at Broadward, immediately north of the purposed development site and Southminster Hall, located approximately 1 km to the north-west.

#### 2.8 Post medieval

- 2.8.1 The post-medieval period saw the reclamation of the salt marshes in this area for agricultural land after improved drainage techniques had started to be used. The historic mapping has shown that while the fields in this area used to be small scale and irregular, more recently they have become larger scale and more regular in shape demarcated by drainage ditches.
- 2.8.2 A number of properties were shown on the historic mapping possibly associated with the movement and amalgamation of farmsteads. Of these eight properties within the study areas six lie in close proximity to the development site. Middle west Wick, lies immediately to the south, Flake house lies further to the south, South Wick lies immediately to the east, , Plumborough to the north-east and Scrubweater Hall also to the east. The final property, referred to as 'Old Turncole' lies within the development itself to the eastern side and forms the old version of the present farm on which this development is proposed to occur.

#### 2.9 Modern

2.9.1 The modern period saw the area particularly during the Second World War, with a large number of pill boxes and other defensive structures built within the area. Six sites including a blockhouse, an anti aircraft gun site, gun emplacements and a land ground and flight station have been identified within the study area. A 1950s and 60s Royal Observer Corps post was also situated in the area in order to provide information in the event of a nuclear attack.

#### 3.0 ARCHAEOLOGICAL METHODOLOGY

- 3.1 Nineteen trial trenches, measuring 30m x 1.8m, were machine excavated across the area of proposed development under archaeological supervision (Figure 2). Fourteen trenches were excavated to test the archaeological potential of the wind turbine locations and due to construction impacts were excavated up to 1 metre in depth. These fourteen trenches formed a pattern seven cruciform trenches marking the location of the windmill base. The remaining five trenches were excavated to test the potential of the access routes and again due to construction impacts were excavated up to 0.6 metres in depth.
- 3.2 The trial trenches were scanned prior to excavation using a Cable Avoidance Tool (CAT). All of the trenches were excavated under constant archaeological supervision, using a 13 ton 360° excavator, fitted with a toothless ditching bucket. Revealed surfaces were manually cleaned in an attempt to identify any archaeological deposits or features. The sections of the trenches were selectively cleaned to observe and record their stratigraphy. All spoil removed from the trenches was scanned visually and also scanned with a metal detector for the presence of any stray, unstratified artefacts.
- 3.3 All encountered archaeological deposits, features and finds were recorded according to accepted professional standards in accordance with the approved ASE Written Scheme of Investigation using pro-forma context record sheets. Archaeological features and deposits were planned at a scale of 1:20 and sections generally drawn at a scale of 1:10. Deposit colours were verified by visual inspection.
- 3.4 A full photographic record of the trenches and associated deposits and features was kept (including monochrome prints, colour slides and digital), and will form part of the site archive. The archive is presently held at the Archaeology South-East offices at Portslade, East Sussex, and will in due course be offered to a suitable local museum.
- 3.5 Only undifferentiated topsoil, subsoil and overburden of recent origin was removed by machine and kept separately. The excavation was taken, in spits of no more than 0.1m for the top and sub soil, down to the top of the first significant archaeological horizon or the maximum depth of construction levels.

Number of Contexts	45 contexts
No. of files/paper record	1 folder
Plan and sections sheets	2 sheets
Bulk Samples	4 samples
Photographs	21 colour slides, 21 B+W, 46 digital

Table 1: Quantification of site archive

#### 4.0 ARCHAEOLOGICAL EVALUATION RESULTS

4.1 Nineteen trenches were excavated under archaeological supervision, fourteen to a depth of 1m (Trenches 3 to 6, 8, 9, 11 to 14 and 16 to 19) and the remaining 5 to a depth of 0.6 metres (Trenches 1, 2, 7, 10 and 15). For ease of understanding each of the cruciform trenches excavated for the windmill bases have been described together. Of the nineteen, seventeen revealed no archaeological remains.

# 4.2 Trench 1

Number	Туре	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
1/001	Layer	Ploughsoil	N/A	N/A	0.3 m	1.353
1/002	Layer	Alluvium	N/A	N/A	To depth	1.053

Table 2: Recorded contexts within Trench 1

Summary

- 4.2.1 The alluvium [1/002], a mixed greyish blue and light orange clay with shell inclusions, was observed between 1.0805m OD in the north-east of the trench and 1.0255m OD in the south-west of the trench. A layer of ploughsoil, [1/001], a mid brown clayey silt, lay over the alluvium.
- 4.2.2 No artefacts or archaeological features or deposits were present.

#### 4.3 Trench 2

Number	Туре	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
2/001	Layer	Ploughsoil	N/A	N/A	0.28 m	1.1505
2/002	Layer	Alluvium	N/A	N/A	To depth	0.8705

Table 3: Recorded contexts within Trench 2

Summary

- 4.3.1 The alluvium [2/002], a mixed greyish blue and light orange clay with shell inclusions, was observed between 0.963m OD in the north of the trench and 0.778m OD in the south of the trench. A layer of ploughsoil, [2/001], a mid brown clayey silt, lay over the alluvium.
- 4.3.2 No artefacts or archaeological features or deposits were present.

# 4.4 Trenches 3 and 4

Number	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
3/001 & 4/001	Layer	Ploughsoil	N/A	N/A	0.35 m	0.876
3/002 & 4/002	Layer	Alluvium	N/A	N/A	To depth	0.526

Table 4: Recorded contexts within Trenches 3 and 4

# Summary

- 4.4.1 The alluvium [3/002] and [4/002], a mixed greyish blue and light orange clay with shell inclusions, was observed across both trenches. The level of the alluvium was observed at 0.495m OD to the north, 0.486m OD to the east, 0.542m OD to the south and 0.581m OD to the west of the trench. A layer of ploughsoil, [3/001] and [4/001], a mid brown clayey silt, lay over the alluvium.
- 4.4.2 No artefacts or archaeological features or deposits were present.

#### 4.5 Trenches 5 and 6

Number	Туре	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
5/001 & 6/001	Layer	Ploughsoil	N/A	N/A	0.35 m	0.7086
5/002 & 6/002	Layer	Alluvium	N/A	N/A	To depth	0.3586

Table 5: Recorded contexts within Trenches 5 and 6

Summary

- 4.5.1 The alluvium [5/002] and [6/002], a mixed greyish blue and light orange clay with shell inclusions, was observed across both trenches. The level of the alluvium was observed at 0.3935m OD to the north, 0.3335m OD to the east, 0.316m OD to the south and 0.3915m OD to the west of the trench. A layer of ploughsoil, [5/001] and [6/001], a mid brown clayey silt, lay over the alluvium.
- 4.5.2 No artefacts or archaeological features or deposits were present.

# **4.6 Trench 7** (Figure 4)

Context	Type	Description	Max.	Max.	Deposit	Height
Number			Length	Width	Thickness	m.AOD
7/001	Layer	Ploughsoil	N/A	N/A	0.35 m	0.9035
7/002	Layer	Alluvium	N/A	N/A	N/A	0.5535
7/004	Layer	Burnt silt clay	N/A	N/A	0.10 m	0.5830
7/005	Layer	Shell deposit	N/A	N/A	0.15 m	0.4830
7/006	Layer	Mixed deposit	N/A	N/A	0.35 m	0.3330
7/007	Layer	Alluvium	N/A	N/A	N/A	0.5535
7/008	Layer	Alluvium	N/A	N/A	N/A	0.5535

Table 6: Recorded Contexts within Trench 7

Summary

- 4.6.1 The alluvium [7/002], a mixed greyish blue and light orange clay with shell inclusions, was observed between 0.521m OD in the south-east of the trench and 0.586m OD in the north-west of the trench. A layer of ploughsoil, [7/001], a mid brown clayey silt, lay over the alluvium.
- 4.6.3 Two layers of alluvial deposits [7/002] and [7/007], lay in sequence under the topsoil in south-eastern end of the trench. Roman pottery dating to the late 3<sup>rd</sup> century was recovered from alluvial layer [7/002]. A section through this material down to 1 metre in depth uncovered a sequence of burning episodes interwoven with alluvial events suggesting that this area was continually reused.
- 4.6.2 Underlying [7/007] was a layer of scorched /burnt silt clay [7/004], uncovered in the northern end of the trench, which seems to represent a layer of dumped burnt material. This layer contained a large quantity of Roman pottery that has been dated to the late 3<sup>rd</sup> century AD (see 5.2). A Roman coin, dating between the 1<sup>st</sup> century BC and 2<sup>nd</sup> century AD was also recovered from burning later [7/004].
- 4.6.4 A layer of oyster shell, [7/005] lay underneath [7/004]. This layer contained a small group of Roman pottery that has been dated to the 1<sup>st</sup> half of 3<sup>rd</sup> century AD. This layer in turn sealed a deposit of alluvium mixed with burnt material; [7/006] which also contained Roman pottery dating to this period. This pottery included a piece of Gaulish samian with a pottery stamp on the base.

#### 4.7 Trenches 8 and 9

Number	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
8/001 & 9/001	Layer	Ploughsoil	N/A	N/A	0.4 m	0.6053
8/002 & 9/002	Layer	Alluvium	N/A	N/A	To depth	0.2053

Table 7: Recorded contexts within Trenches 8 and 9

Summary

- 4.7.1 The alluvium [8/002] and [9/002], a mixed greyish blue and light orange clay with shell inclusions, was observed across both trenches. The level of the alluvium was observed at 0.191m OD to the north, 0.234m OD to the east, 0.176m OD to the south and 0.2205m OD to the west of the trench. A layer of ploughsoil, [8/001] and [9/001], a mid brown clayey silt, lay over the alluvium.
- 4.7.2 No artefacts or archaeological features or deposits were present.

#### 4.8 Trench 10

Number	Туре	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
10/001	Layer	Ploughsoil	N/A	N/A	0.35 m	0.9583
10/002	Laver	Alluvium	N/A	N/A	To depth	0.6083

Table 8: Recorded contexts within Trench 10

# Summary

- 4.8.1 The alluvium [10/002], a mixed greyish blue and light orange clay with shell inclusions, was observed between 0.619m OD in the east of the trench and 0.5975m OD in the west of the trench. A layer of ploughsoil, [10/001], a mid brown clayey silt, lay over the alluvium.
- 4.8.2 No artefacts or archaeological features or deposits were present.

# 4.9 Trenches 11 and 12

Number	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
11/001 & 12/001	Layer	Ploughsoil	N/A	N/A	0.35 m	0.7238
11/002 & 12/002	Layer	Alluvium	N/A	N/A	To depth	0.3738

Table 9: Recorded contexts within Trenches 11 and 12

# Summary

- 4.9.1 The alluvium [11/002] and [12/002], a mixed greyish blue and light orange clay with shell inclusions, was observed across both trenches. The level of the alluvium was observed at 0.2905m OD to the north, 0.461m OD to the east, 0.303m OD to the south and 0.441m OD to the west of the trench. A layer of ploughsoil, [11/001] and [12/001], a mid brown clayey silt, lay over the alluvium.
- 4.9.2 No artefacts or archaeological features or deposits were present.

# 4.10 Trenches 13 and 14

Number	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
13/001 & 14/001	Layer	Ploughsoil	N/A	N/A	0.32 m	0.77
13/002 & 14/002	Layer	Alluvium	N/A	N/A	To depth	0.45

Table 10: Recorded contexts within Trenches 13 and 14

# Summary

- 4.10.1 The alluvium [13/002] and [14/002], a mixed greyish blue and light orange clay with shell inclusions, was observed across both trenches. The level of the alluvium was observed at 0.4575m OD to the north, 0.428m OD to the east, 0.4105m OD to the south and 0.474m OD to the west of the trench. A layer of ploughsoil, [13/001] and [14/001], a mid brown clayey silt, lay over the alluvium.
- 4.10.2 No artefacts or archaeological features or deposits were present.

# **4.11 Trench 15** (Figure 5)

Number	Type	Description	Max.	Max.	Deposit	Height
			Length	Width	Thickness	m.AOD
15/001	Layer	Ploughsoil	N/A	N/A	0.32 m	0.9515
15/002	Layer	Alluvium	N/A	N/A	N/A	0.6315
15/003	Cut	Cut of ditch	Tr.	1.6 m	0.18 m	0.355
15/004	Fill	Fill of ditch	Tr.	1.6 m	0.18 m	0.355

Table 11: Recorded Contexts within Trench 15

#### Summary

- 4.11.1 The alluvium [15/002], a mixed greyish blue and light orange clay with shell inclusions, was observed between 0.736 OD in the north of the trench and 0.527 OD in the south of the trench. A layer of ploughsoil, [15/001], a mid brown clayey silt, lay over the alluvium. One archaeological feature was uncovered within this trench.
- 4.11.2 A ditch, [15/003] ran across the trench in a north-west to south-east orientation. It was concave in profile with gradually sloping sides and was filled by a dark greyish brown silty clay [15/004]. Fragments of 18<sup>th</sup> to 19<sup>th</sup> century pottery, 17<sup>th</sup> to 18<sup>th</sup> century ceramic building material (CBM), post-medieval nails, fired clay and charcoal were recovered from the fill of this feature.

# 4.12 Trenches 16 and 17

Number	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
16/001 & 17/001	Layer	Ploughsoil	N/A	N/A	0.4 m	0.8395
16/002 & 17/002	Layer	Alluvium	N/A	N/A	To depth	0.4393

Table 12: Recorded contexts within Trenches 16 and 17

# Summary

- 4.12.1 The alluvium [16/002] and [17/002], a mixed greyish blue and light orange clay with shell inclusions, was observed across both trenches. The level of the alluvium was observed at 0.404m OD to the north, 0.404m OD to the east, 0.4565m OD to the south and 0.493m OD to the west of the trench. A layer of ploughsoil, [16/001] and [17/001], a mid brown clayey silt, lay over the alluvium.
- 4.12.2 No artefacts or archaeological features or deposits were present.

# 4.13 Trenches 18 and 19

Number	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
18/001 & 19/001	Layer	Ploughsoil	N/A	N/A	0.35 m	0.7341
18/002 & 19/002	Layer	Alluvium	N/A	N/A	To depth	0.3841

# Table 13: Recorded contexts within Trenches 18 and 19

Summary

- 4.13.1 The alluvium [18/002] and [19/002], a mixed greyish blue and light orange clay with shell inclusions, was observed across both trenches. The level of the alluvium was observed at 0.400m OD to the north, 0.397m OD to the east, 0.3665m OD to the south and 0.373m OD to the west of the trench. A layer of ploughsoil, [18/001] and [19/001], a mid brown clayey silt, lay over the alluvium.
- 4.13.2 No artefacts or archaeological features or deposits were present.

#### 5.0 THE FINDS

**5.1** A small collection of finds was recovered during the evaluation at Turncole Wind Farm, Southminster. A summary can be found in Table 14 below.

Context	Pot	wt (g)	CBM	wt (g)	Bone	wt (g)	Stone	wt (g)	Iron	wt (g)	Fired clay	wt (g)	charcoal	wt (g)
7/002	45	490									1	8		
7/004	43	376												
7/005	12	216												
7/006	3	26												
7/008			1	<2	1	<2					1	6		
15/004	2	4	4	58	21	264	1	<2	2	20	4	30	1	<2
Total	105	1112	5	58	22	264	1	0	2	20	6	44	1	0

Table 14: Quantification of finds

# **5.2** The Roman Pottery by Anna Doherty

5.2.1 A fairly large concentration of pottery of late 2<sup>nd</sup> to mid/late 3<sup>rd</sup> century date was recovered from layers exposed in Trench 7. This amounts to a total of 103 sherds, weighing 1108 grams and amounting to 0.55 EVEs. The pottery was recorded using fabric and form codes developed by Essex County Council Field Archaeology Unit, for work on the Elms Farm, Heybridge assemblage, which is largely based on the published form-series from Chelmsford (Going 1987; Biddulph et al in prep). It was quantified by sherd count, weight and EVE.

Fabric	Expansion	Sherds	Wt (g)	EVE
ABAET	Baetican amphora	1	14	
ALH	Alice Holt grey ware	4	32	
BB	Black-burnished style ware	3	32	
BB1	Black-burnished ware 1	1	6	
BB2	Black-burnished ware 2	4	38	0.05
BSW	Black-surfaced ware	1	6	0.08
CC	Unsourced colour-coated ware	1	4	
GRF	Fine grey ware	3	12	
GRS	Coarse grey ware	66	546	0.26
HAB	Hadham black-surfaced ware	1	10	
HAR	Hadham reduced ware	3	14	
HAX	Hadham oxidised ware	6	68	0.16
LSH	Late shell-tempered ware	1	4	
MICW	Miscellaneous Iron Age tradition fabrics	1	24	
CGSW	Central Gaulish samian ware	2	20	
STOR	Storage jar fabric	5	278	·

Fabric	Expansion	Sherds	Wt (g)	EVE
Total		103	1108	0.55

Table 15 - Pottery summary

- 5.2.2 The vast majority of the assemblage is made up by undiagnostic grey wares probably of local origin. Only small quantities of regionally-traded coarse wares were identified, including BB1, BB2 and Hadham black-surfaced ware. Most of the rim sherds come from common coarse ware forms, including G24 necked jars, a fairly strongly everted rim G9 jar and number of Black-burnished ware derived bowl and dish forms. The rounded rim dish form B4 is the most common type and this suggests that most activity in this area predates the mid 3<sup>rd</sup> century when this form was replaced by the B6 bead-and-flange bowl. There is one example of a B6 bowl from colluvium [7/002]. There is also one example of a fine-ware bowl form, loosely imitating samian form Dragendorff 31, in Hadham fine oxidised ware.
- 5.2.3 Of particular note is a stamped base of a Lezoux samian dish or bowl (probably a later 2<sup>nd</sup> century Dragendorff 31), which has a production date of AD120-200, from context [7/006]. The partial stamp reads AIAVCI[..] and is likely to be a die of the potter Alaucus. Further research on the stamp may help to narrow down the production date of this vessel. The only other diagnostic sherd in this context is in Hadham black-surfaced ware, dated to AD160-300. It is therefore possible that this context dates to the late 2<sup>nd</sup> century: marginally earlier than the other layers. However, it is equally likely that this vessel may have been curated for some time after its production, as it is fairly common to find 2<sup>nd</sup> century samian in 3<sup>rd</sup> century groups.
- 5.2.4 Overall the range of fabrics and forms is generally consistent with a date in 1<sup>st</sup> half of the 3<sup>rd</sup> century; however a few sherds suggest that some of the layers, particular colluvium [7/002], and possibly burnt deposit [7/004], could have been laid down slightly beyond this date. The presence of a small quantity of probable Alice-Holt Farnham ware may be of chronological significance, since this ware was not usually distributed as widely as to Essex until the late 3<sup>rd</sup> century. Similarly Hadham oxidised wares, which are represented by 6 sherds, are usually dated to after c.AD250 although most of the sherds are coarse examples which may have been sporadically distributed to Essex prior to this date (Going 1987, 3). There is also a single sherd in a shell-tempered fabric which appears to be non-local in origin, as it contains punctate brachiopod fossil shell, which is usually associated with fabrics from sources in the midlands. Again large quantities of midlands shelly wares would usually be associated with late Roman groups, although one sherd does not provide very convincing evidence of a late date, given the absence of some very common late 3<sup>rd</sup> to 4<sup>th</sup> century fabric and form types, particularly Oxfordshire red-slipped wares.
- 5.2.5 The assemblage as it stands is of some local significance as it represents relatively large stratified groups and may be worthy of publication as a short note, based on the above text. However, in the event that further excavation on the site produces a larger Roman assemblage, this material should be fully integrated into any future report.

# **5.3** The post-Roman pottery by Trista Clifford

5.3.1 Context [15/004] contained two small fragments of blue transfer ware china, probably deriving from plates, dating to the 18-19<sup>th</sup> century.

# 5.4 The Ceramic Building Material by Sarah Porteus

- 5.4.1 A total of 5 fragments of ceramic building material (CBM) with a combined weight of 64g were recovered from three contexts. A provisional fabric series for the site was drawn up with the aid of a x10 binocular microscope. Context [7/008] contained a flake in fabric R1 (1/4g), a fine pale pink-orange calcareous fabric with abundant fine calcareous inclusions. Context [15/04] contained fragments of peg tile (3/58g) in fabric T1, a brownish orange fine fabric with fine micaceous sparkles and very sparse coarse quartz of 17<sup>th</sup> to 18<sup>th</sup> century date. Also recovered from [15/004] was an abraded brick fragment (1/2g) of unknown date in fabric B1, a sandy orange fabric with sparse coarse rounded quartz inclusions.
- 5.4.2 The material should be retained for comparison with material recovered from any future archaeological investigations.

# **5.5** The Animal Bone by Gemma Ayton

5.5.1 A small animal bone assemblage has been recovered from contexts [7/002], [7/008] and [15/004]. The assemblage contains 25 fragments that have been hand-collected. The bone is in a poor condition displaying evidence of surface erosion and the majority of the assemblage is unidentifiable. The NISP (Number of Identifiable Specimens) is shown in Table 16.

	[7/002]	[7/008]	[1504]
MEDIUM- MAMMAL	1	1	[1001]
LARGE-MAMMAL			1
SHEEP/GOAT	2		
HORSE			2
UNIDENTIFIABLE			18

Table 16: NISP counts

- 5.5.2 The identifiable assemblage contains fragments of sheep/goat molars and two conjoining fragments from a horse humerus. The remainder of the assemblage is formed of small, eroded pieces of bone that cannot be identified to taxa or element.
- 5.5.3 Due to the size and condition of the assemblage, the bone has no potential for further statistical analysis.

# 5.6 The Fired Clay by Trista Clifford

5.6.1 Six fragments of fired clay were recovered from three individual contexts,

- (Table 14). The fabrics are similar: moderate fine sand tempered with occasional quartz inclusions up to 5mm; those from context [15/004] also contain occasional organic voids. None of the fragments are diagnostic of form or function.
- 5.6.2 Whilst having no potential for further work alone, the fired clay should be retained pending further investigation of the site and integrated with any other material recovered.

# 5.7 The Ironwork by Trista Clifford

- 5.7.1 Two general purpose, square sectioned nail stems were recovered from context [15/004]. Both are missing their heads. They are likely to be of similar date to the pottery and CBM from the same context.
- 5.7.2 The ironwork holds no potential for further work but should be studied in conjunction with any other ironwork recovered during further work on the site
- **5.8** The stone by Trista Clifford
- 5.8.1 A small piece of burnt slate was recovered from context [15/004].
- 5.9 The Registered Finds by Trista Clifford
- 5.9.1 A single Roman coin, RF<1>, came from context [7/004]. The coin is a Roman As or Dupondius dated to 27BC- AD260. Unfortunately the coin is highly corroded and both faces are illegible and the ruler, exact denomination and therefore date are uncertain.
- 5.9.2 The coin may benefit from conservation in order to prevent deterioration in its condition.

# 6.0 THE ENVIRONMENTAL SAMPLES By Karine Le Hégarat

# 6.1 Introduction

6.1.1 A total of four bulk samples of between 20 and 40 litres were taken during evaluation work at Turncole Farm, Southminster, to establish evidence for environmental remains such as wood charcoal, macrobotanical remains, fauna and mollusca. This report characterises the assemblage, providing preliminary information regarding activities taking place at the site and past vegetation. Samples <1, 2 and 3> were taken from a series of stratigraphically consecutive deposits within Trench 7 (a layer containing evidence of burning [7/004], a layer of mollusca [7/005] and a deposit of alluvium mixed with burnt material [7/006]). Roman pottery was recovered from these contexts. Sample <4> was taken from the fill of ditch [15/003], which represents a post-medieval field boundary.

#### 6.2 Methods

6.2.1 Samples were processed in their entirety in a flotation tank, although mollusca were removed from sample <2> prior to processing to prevent damage. The residues and flots were retained on 500µm and 250µm meshes respectively and were air dried prior to sorting. The residues were passed through graded sieves and each fraction sorted (Appendix 1). Flots were scanned under a stereozoom microscope at magnifications of x7-45 and their contents recorded (Appendix 2). Preliminary identifications of the charred macrobotanicals have been made through comparison with reference material held at the Institute of Archaeology, University College London and reference texts (Cappers *et al.* 2006, Jacomet 2006, NIAB 2004). Nomenclature used follows Stace (1997).

# 6.3 Results

6.3.1 The flots contained high proportions of uncharred botanical remains including fine roots, stem fragments, modern chaff elements as well as seeds such as bramble (*Rubus* sp.), elder (*Sambucus nigra*), knotweeds/docks (*Polygonum/Rumex* sp.), sedge (*Carex* sp.), bedstraws/woodruff (*Galium/Asperula* sp.) and speedwell (*Veronica* sp.). When deposits remain waterlogged until being exposed, uncharred seeds such as these can be preserved in anoxic conditions. However, as there was no evidence for waterlogged deposits at this site, the seeds are probably modern or relatively recent contaminants introduced through root action.

# 6.3.2 Samples <1, 2 and 3>, contexts [7/004], [7/005] and [7/006]

Small quantities of wood charcoal fragments were present in these samples. The fragments were predominantly small and only occasional fragments greather than 4mm in size were noted. Macrobotanical remains including charred crop remains and wild/weed seeds were evident in all three samples. The charred cereal remains consisted of wheat (*Triticum* sp.), barley (*Hordeum* sp.) and unidentified grains (Cerealia) as well as some chaff elements and fragments of stem. Although present in each of these deposits,

glume bases of emmer and spelt wheat that were moderately well preserved were more frequent in sample <3>. Non cereal crops were represented by one fragment of a small round and poorly preserved legume (Fabaceae) that may represent a vetch/tare (Vicia/Lathyrus sp.) or pea (Pisum sp.). Charred wild/weed seeds were also present in these samples and so far, identified taxa included bedstraws/ woodruff/ madder (Galium/ Asperula/ Rubia sp.), knotweeds/ docks (Polygonum/ Rumex sp.), wild grasses (Poaceae), seeds of the goosefoot (Chenopodiaceae) family as well as possible mustard/ cabbage (cf. Sinapis/ Brassica sp.), pondweed (cf. Potamogeton sp.), buttercup (cf. Ranunculus sp.) and possible seeds of the carrot (Apiaceae) family. While one possible clover (cf. Trifolium sp.) seed was noted in sample <1>, charred seeds of this common plant found mainly on grassland and disturbed grounds, although also known to be used as fodder, were more abundant in sample <3>. Fauna as well as marine mollusca were also represented in these samples. The small assemblage of bones (burnt and unburnt) included a broken tooth from a sheep (Sibun pers. comm.). Mollusca dominated the residues from sample <2> and consisted mainly of oyster (Ostrea edulis) shells although a limited amount of common egg cockel (Laevicardium crassum) shells were also noted.

# 6.3.3 Sample <4>, context [15/004]

The flot and residue produced a small quantity of wood charcoal fragments the majority of which were <4mm in size although occasional larger fragments were also present. The charcoal was generally well preserved. Macrobotanical remains were infrequent in the sample consisting of a single unidentified poorly preserved cereal grain, several charred wild/weed seeds of the goosefoot (Chenopodiaceae) family and some unidentified stem fragments.

#### 6.4 Discussion

- Sampling has confirmed the presence of environmental remains including wood charcoal fragments, a moderate quantity of charred crops and weeds, some burnt and unburnt bones as well as mollusca. The small but relatively diverse assemblage of charred crop remains and wild/weed seeds provide evidence for waste of arable and domestic activities in the deposits. Both wheat and barley are indicated and glume bases confirm the presence of non-free threshing glume wheat such as spelt or emmer. The presence of waste glumes might be indicative of domestic crop processing activities within the immediate excavated area or that crop processing waste was redeposited in this location. The large assemblage of mollusca (in layer [7/005]) within the sequence of deposits supports the onsite interpretation of midden deposits. Unfortunately the botanical assemblage is too limited to determine whether these cereals were grown locally and fully processed at this location or whether they were imported to the site part processed. Samples from Trench 7 also provide some evidence for plants used for fodder although these could equally represent arable weeds introduced among the crops as the majority of the wild/weed taxa indicated are common arable weeds and grassland taxa. Pond weed provides limited evidence for damp ground conditions in the vicinity.
- 6.4.2 The assemblage of wood charcoal fragments is small and although it could

provide information regarding the woody taxa present, no identifications have been undertaken as the data would be limited and provide little indication of the taxa targeted for fuel. Charcoal fragments may also be suitable for dating, however, dates have already been obtained from some artefacts (pottery sherds from contexts [7/004], [7/005] and [7/006] and ceramic building material as well as pottery from context [15/004]) and the environmental remains are unlikely to refine the dating further.

6.4.3 These samples have revealed interesting but limited evidence for domestic activities associated with Roman land use and any further work at the site should integrate the botanical and mollusca assemblages recovered. The assemblage of mollusca is of particular interest as it may provide information regarding sea food harvesting strategies associated with the Roman occupation.

#### 7.0 DISCUSSION

# 7.1 Introduction to discussion

7.1.1 The evaluation at Turncole Farm revealed only two areas of activity within Trenches 7 and 15, as discussed below. The other seventeen trenches were excavated and proved to be negative to construction levels.

# 7.2 Trench 7

- 7.2.1 Trench 7 represents a period of activity dated to the Roman period and containing successive layers of dumped and alluvial deposits. The red spread of burnt material first encountered in the investigation of Trench 7 is indicative of a saltern, known locally as 'Red Hills'. Within 2 km of the location of Trench 7 there are eight known 'Red Hills' dating to the Iron Age/Romano-British period, four of which are in the immediate vicinity and shown on Figure 2.
- 7.2.2 The excavation of these layers and the retrieval of a sizeable pottery assemblage has allowed the dating of the 'Red Hill' to the 3<sup>rd</sup> century AD. This is a relatively late date in comparison to the majority of Red Hills in the Essex region which usually date to the pre or post conquest period, spanning approximately from BC 100 to 100 AD (Fawn et al 1990). Whether this information suggests that this site is unique within Essex or that evidence for continual use in the Roman period has not yet been found in this area is difficult to ascertain. However, the medieval salt industry in this area suggests the latter.
- 7.2.3 It has also been possible to individually date the layers excavated in Trench 7 with the earliest layers representing the early 3<sup>rd</sup> century and the most recent dating to the end of the 3<sup>rd</sup> century. However, a degree of caution is prudent regarding these dates due to the human (repeated industrial activity) and natural disturbance (alluvial movement) that occurs in the vicinity of these features (Fawn et al 1990).
- 7.2.4 The lack of briquetage, which is normally associated with salt working areas, is curious. However, this may be because only a small percentage of the area was sampled by evaluation or perhaps this represents an area of occupation associated with salt production rather than the industrial activity itself. This can be reinforced through the presence of domestic activity from the environmental samples and the high status pottery, such as samian ware, which also suggests habitation of this area

# 7.3 Trench 15

- 7.3.1 Trench revealed a section through a post-medieval ditch as its most southern extent. The fairly recent finds of pottery and CBM date this feature to approximately the 19<sup>th</sup> century and after studying the historic maps for this location, the feature appears to correspond to a field boundary or drainage ditch shown on the 1<sup>st</sup> edition 1880 OS map (Fig. 6).
- 7.3.2 On the 1st edition this boundary lies in close proximity to the location of

'Turncole', or what is now known as 'Old Turncole', parts of which still survive (Fig 6). Due to this proximity the boundary/drainage ditch was probably associated with this old farmstead and had since been backfilled.

# 8.0 CONLUSIONS

- **8.1** The evaluation at Turncole Farm has established the presence of archaeological remains in certain parts of the site, along some of the proposed access roads for the wind turbines.
- 8.2 The work has confirmed that while no archaeological evidence its likely to be present at the location of the wind turbines to a depth of 1 metre. Where found, (Trench 7 and Trench15) archaeological remains survive at a depth of approximately 0.3 metres, immediately below the present level of the plough soil.
- **8.3** The archaeological remains have corroborated details about the post-medieval field divisions as shown on the 1<sup>st</sup> edition OS mapping as well as indicating the presence of Roman salt working in the proposed development site.
- 8.4 Even though only a small part of a possible 'Red Hill' was uncovered during the evaluation, it does indicate some interesting conclusions. The absence of briquetage and presence of some high status pottery recovered in the evaluation trench may indicate that this was not the centre of salt production but perhaps associated with it. Recent excavations at Stanford-le-Hope have uncovered a settlement associated with the salt working industry and perhaps the evidence from Trench 7 at Turncole Farm, as well as the abundance of similar sites within a 2 km radius, suggests a similar occupation (Oxford Archaeology 2010).

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# **SMR Summary Form**

Site name/Address: Turncole Farm, Turncole Farm Lane, Southminster, Essex					
Parish: Southminster	District: Maldon				
<b>NGR:</b> 598556, 197956	Site Code: TWF 10				
Type of Work: Field Evaluation	Site Director/Group: Nick Garland/Archaeology South-East				
<b>Date of Work:</b> 13.09.10 – 17.09.10	Size of Area Investigated:				
Location of Finds/Curating Museum: Archaeology South-East offices/ Central Museum, Southend-on-Sea	Funding source: Developer				
Further Seasons Anticipated?: Yes	Related EHCR No.s:				

Final Report: no

Periods Represented: Roman / Post-Medieval

#### **SUMMARY OF FIELDWORK RESULTS:**

A programme of archaeological evaluation was undertaken by Archaeology South-East at Turncole Farm, Southminster, Essex, in advance of a proposed wind farm to be erected on the agricultural land.

The work was undertaken between the 13<sup>th</sup> and 17<sup>th</sup> September 2010 on behalf of RSK Environment Ltd and RES. Nineteen evaluation trenches, eac, measuring 30 metres in length, sampled the archaeology across the site. Five of these trenches sampled the proposed access roads while the remaining fourteen formed seven cross-shaped trenches at the base of each proposed wind turbine.

Due to the thick deposits of alluvium in this reclaimed marshland, the trenches were excavated to a maximum of 1 metre in depth. The surface of the alluvium varied in height from 1.053m OD in the north of the site and 0.2053m OD in the south of the site.

The evaluation trenches demonstrated two areas of archaeological activity. A Roman saltern, known locally as a 'Red Hill' was uncovered in Trench 7 and produced a large quantity of Roman pottery including high status wares and a Roman coin. A post-medieval ditch was present in Trench 15 and corresponded with the boundaries associated with Old Turncole Farm and appears on the 1<sup>st</sup> century OS map.

# Previous Summaries/Reports:

An Archaeological Evaluation at Turncole Farm, Southminster, Essex, Summary Report.

Author of Summary: N Garland	Date of Summary: 28.09.10

# OASIS ID: archaeol6-83475

Project details

Project name Turncole Farm, Southminster

> A programme of archaeological evaluation was undertaken by Archaeology South-East at Turncole Farm, Southminster, Essex, in advance of a proposed wind farm to be erected on the agricultural land.

> The work was undertaken between the 13<sup>th</sup> and 17<sup>th</sup> September 2010 on behalf of RSK Environment Ltd and RES. Nineteen evaluation trenches, eac, measuring 30 metres in length, sampled the archaeology across the site. Five of these trenches sampled the proposed access roads while the remaining fourteen formed seven cross-shaped trenches at the base of each proposed wind turbine.

Short description of the project

Due to the thick deposits of alluvium in this reclaimed marshland, the trenches were excavated to a maximum of 1 metre in depth. The surface of the alluvium varied in height from 1.053m OD in the north of the site and 0.2053m OD in the south of the site.

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Project dates Start: 13-09-2010 End: 17-09-2010

Previous/future

work

Yes / Yes

Any associated

project reference TWF10 - Sitecode

codes

Field evaluation Type of project

Site status None

Current Land use Cultivated Land 3 - Operations to a depth more than 0.25m

Monument type **RED HILL Roman** 

Significant Finds **POT Roman** 

Methods &

techniques

'Targeted Trenches'

Development type Wind farm developments

**Prompt** Planning condition

Position in the planning process

Pre-application

**Project location** 

Country England Site location ESSEX MALDON SOUTHMINSTER Turncole Farm

Postcode CMO<sub>7</sub>

Study area 2092379.00 Square metres

TQ 98556 97956 51.6447425167 0.870169283366 51 38 41 N 000 52 Site coordinates

12 E Point

Height OD / Depth

Min: 0.21m Max: 1.05m

Project creators

Name of Organisation

Archaeology South East

Project brief originator

**Essex County Council** 

Project design originator

RSK Environment Ltd

Proiect

Jon Sygrave director/manager

Project supervisor Nick Garland

Type of

sponsor/funding

Dean and Chapter

body

Project archives

Physical Archive

recipient

Local Museum

Physical Contents 'Animal Bones', 'Ceramics', 'Environmental', 'Metal', 'other'

Digital Archive

recipient

Local Museum

'Animal

**Digital Contents** Bones', 'Ceramics', 'Environmental', 'Metal', 'Stratigraphic', 'Survey', 'other'

'Images raster / digital photography', 'Survey', 'Text'

Digital Media available

Paper Archive Local Museum

recipient

'Animal Paper Contents

Bones', 'Ceramics', 'Environmental', 'Metal', 'Stratigraphic', 'Survey', 'other'

Paper Media available

'Context sheet','Map','Photograph','Plan','Report','Unpublished Text'

Project bibliography 1

Publication type

Grey literature (unpublished document/manuscript)

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Author(s)/Editor(s) Garland, N

Other

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Entered on 29 September 2010

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7622 Weight (g) 44  $\alpha$ Marine Molluscs **Appendix 1**: Residues quantification (\* = 0-10, \*\* = 11-50, \*\*\* = 51-250, \*\*\*\* = >250) and weights (in grams). Weight (g) 2 Crem Bone 2-4mm  $^{\circ}$ Weight (g)  $\infty$  $^{\circ}$ \* inc. tooth Bone and Teeth 2 22 7 Weight (g) 4 Charcoal <4mm Weight (g) 7 2 Charcoal >4mm \* sub-Sample Volume 4 20 20 4 40 20 20 Sample Volume litres Ditch fill - Ditch [15/003] Layer - Mixed deposit Layer - Burnt deposit Layer - Shell deposit Context / deposit type 15/004 7/005 900/2 7/004 Context Sample Number  $^{\circ}$ က 4

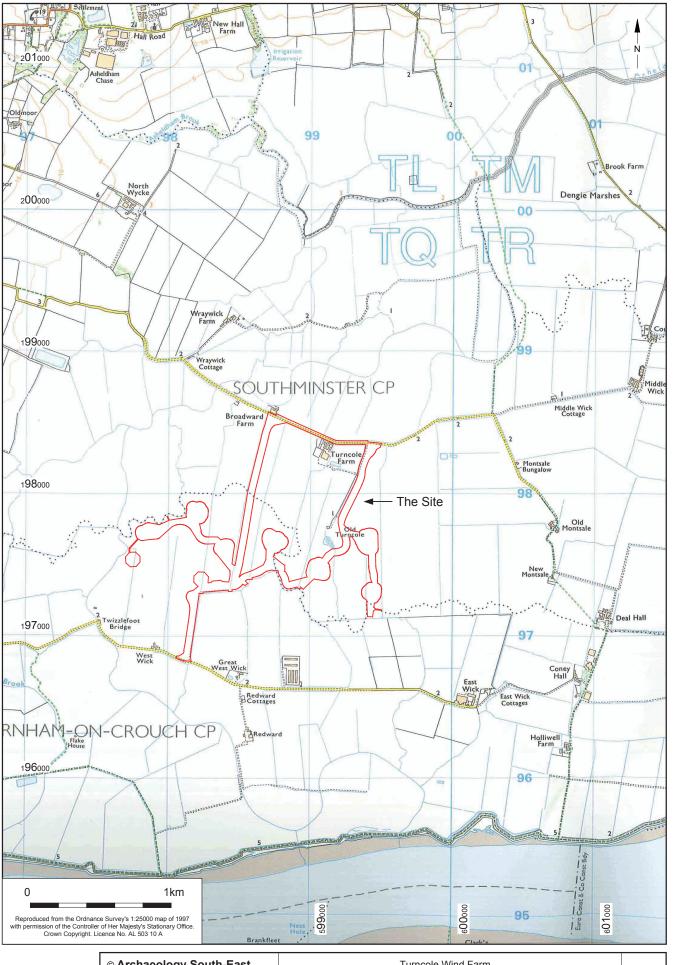
28

Appendix 2: Flots quantification (\* = 0-10, \*\* = 11-50, \*\*\* = 51 - 250, \*\*\* = >250) and preservation (+ = poor, ++ = moderate, +++ = good).

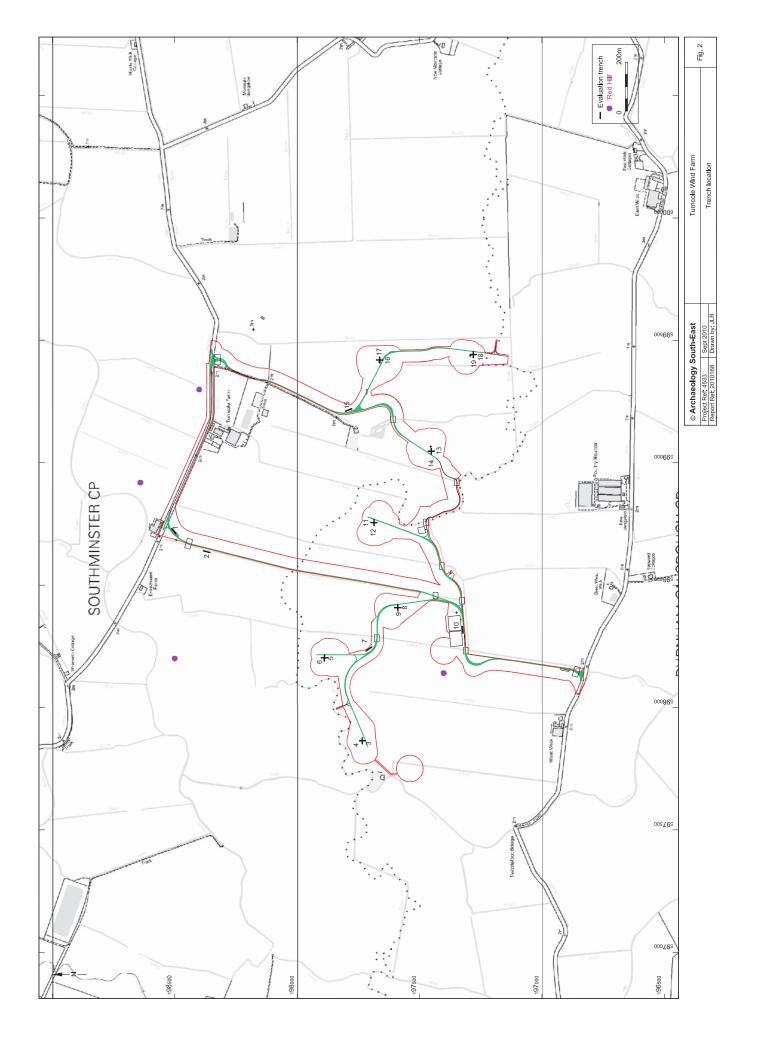
Ind debris hammerscale		¿*	
Marine molluscs		*** %	
Preservation	+ to +	‡	+ 0 ‡
enoifisatifitnebl	Glume bases ( <i>T.</i> spelta and <i>T.</i> dicoccum)	Glume base (cf. 7. spetta)	Glume bases (T. spelta and T. dicoccum), unidentified stem frags
other botanical charred	*	*	*
Preservation	<b>+</b>	‡	+ \$ ‡
ldentifications	Chenopodiaceae, cf. Galium/Asperula/Rubia sp., cf. Potamogeton sp., cf. Trifolium sp., cf. Sinapis/Brassica sp., unidentified seeds	cf. Galium/Asperula/Rubia sp., Poaceae, cf. Ranunculus sp.	Polygonum/Rumex sp., Poaceae, cf. Trifolium sp., cf. Apiaceae, unidentified seeds
weed seeds charred	*	*	*
Preservation	+ to	‡	+ + t
enoifsoifiitnebl	Cerealia indet., <i>Triticum</i> sp., Fabaceae	<i>Triticum</i> sp., Cerealia	Hordeum sp., cf Cerealia
crop seeds charred	*	*	*
Charcoal <2mm	* *	* * *	* * *
Charcoal <4mm	* * *	*	*
Charcoal >4mm	*	*	
seeds uncharred	** Caryophyllaceae indet., Chenopodiaceae, Galium/Asperula sp., Polygonum/Rumex sp.		** Rubus sp., Chenopodiaceae indet
% Juəmibəs		2	ى
Лисһаггед %	84	82	80
Flot volume ml	210	150	19
weight g	14	80	2
Sontext	7/004	2/005	900/2
Sample Number	-	2	ო

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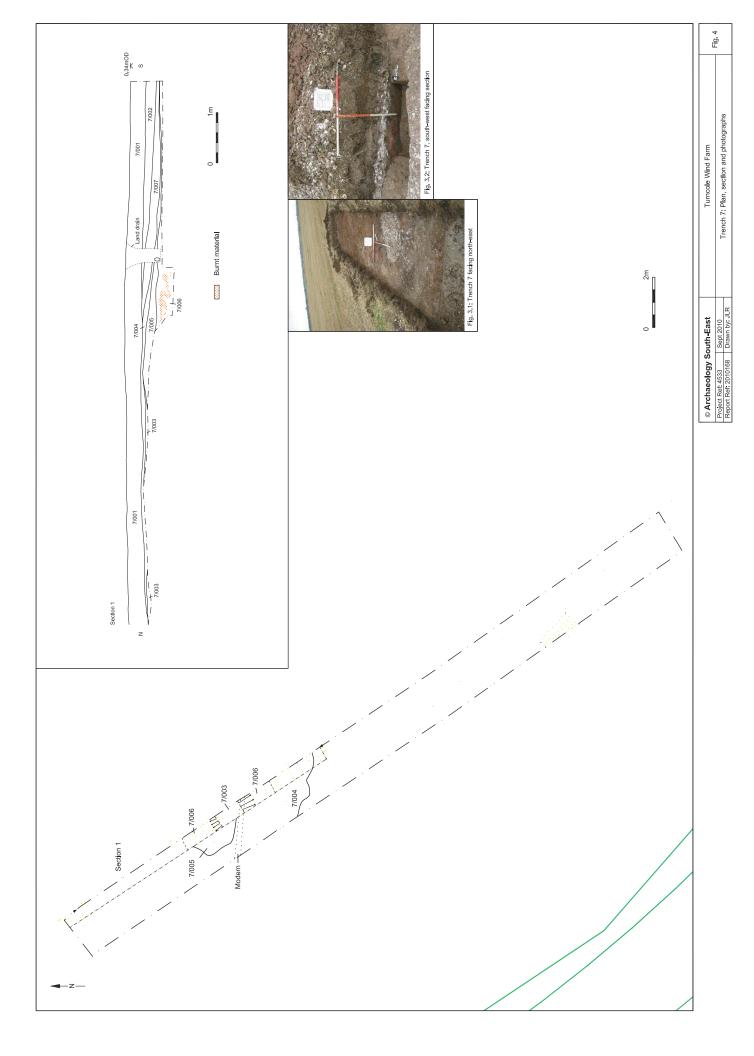
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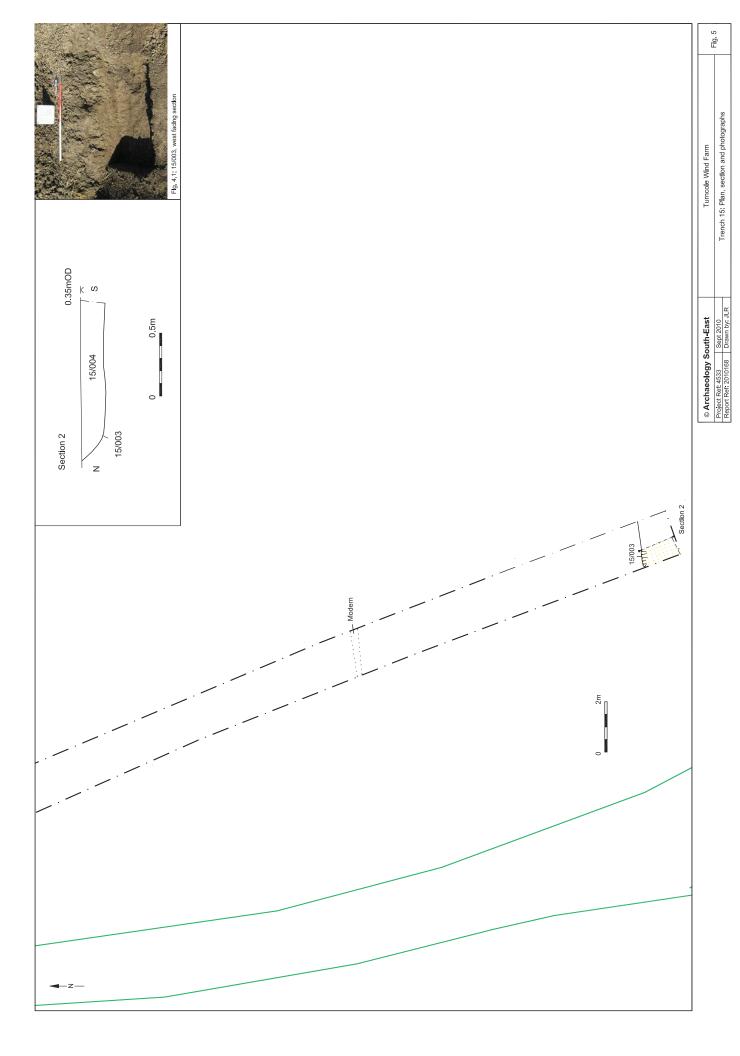


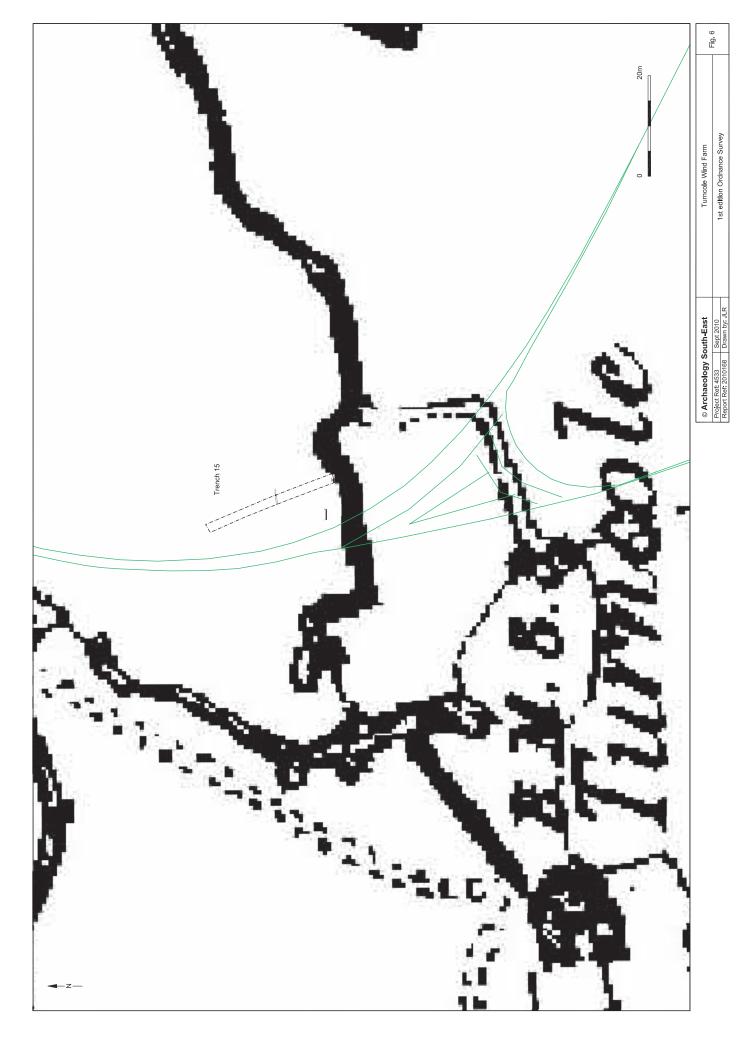
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Project Ref: 4533	Sept 2010	Site location	
Report Ref: 2010168	Drawn by: JLR	Site location	











**Head Office** Units 1 & 2 2 Chapel Place Portslade East Sussex BN41 1DR Tel: +44(0)1273 426830 Fax:+44(0)1273 420866

email: fau@ucl.ac.uk

Web: www.archaeologyse.co.uk



London Office Centre for Applied Archaeology Institute of Archaeology University College London 31-34 Gordon Square, London, WC1 0PY Tel: +44(0)20 7679 4778 Fax:+44(0)20 7383 2572 Web: www.ucl.ac.uk/caa

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