

Archaeological Watching Brief Report
Lydd Wastewater Treatment Works
Jury's Gap Road
Lydd, Kent

NGR 60290 12040

ASE Project No: 4843 Site Code: LYW11

ASE Report No: 2011260 OASIS id: archaeol6-113243

By Greg Priestley-Bell With a contribution by Luke Barber

November 2011

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Abstract

Archaeology South-East was commissioned by 4 Delivery to undertake an archaeological and geo-archaeological watching brief during construction works at Lydd Wastewater Treatment Works.

The fieldwork did not identify any archaeological remains. The two major contributing factors to the negative results were probably the high level of modern disturbance recorded across the site and its location on a principal shingle ridge.

CONTENTS

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1.	(1	Intro	duction
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- 2.0 Archaeological Background and Potential
- 3.0 Archaeological Methodology
- 4.0 Results
- 5.0 Finds and Environmental Samples
- 6.0 Discussion
- 7.0 Conclusions

Acknowledgements Bibliography

HER Summary Sheet OASIS Form

TABLES

- Table 1: Quantification of site archive
- Table 2: Contexts Cable trench and draw pit excavation (south-east and south)
- Table 3: Contexts Cable trench and draw pit excavation (north and north-west)
- Table 4: Contexts Shaft excavation
- Table 5: Contexts Valve chamber excavation
- Table 6: Contexts Rising main pipeline excavation
- Table 7: Quantification of finds

FIGURES

- Figure 1: Site location
- Figure 2: Site in relation to Lydd Quarry excavations
- Figure 3: Plan of monitored works

1.0 INTRODUCTION

1.1 Project Background

1.1.1 Archaeology South-East (ASE) a division of The Centre for Applied Archaeology (CAA) at the Institute of Archaeology (IoA), University College London (UCL) has been commissioned by 4 Delivery Limited on behalf of their client Southern Water to undertake an archaeological and geo-archaeological watching brief during construction works at Lydd Wastewater Treatment Works (WWTW) at Jury's Gap Road, Lydd, Kent hereafter referred to as 'the site' (NGR 60290 12040; Figure 1).

1.2 Site Location and Geology

- 1.2.1 The site lies on the southern edge of Walland Marsh, which with Denge Marsh and Romney Marsh makes up the area collectively known as Romney Marsh. The site is situated between Brett's Lydd Quarry and Jury's Gap Road, c. 1.5km to the southwest of Church of All Saints in Lydd town centre.
- 1.2.2 The geology of the site consists of silty clays (alluvium) overlying ridges of Dungeness shingle. In general, where the approximate elevation of local shingle outcrops exceeds 2.5m AOD, the crests of the shingle ridges are exposed on the surface. The Dungeness shingle overlies marine sand and/or Tidal Flat Deposits.

1.3 Planning Background

- 1.3.1 Planning permission has been granted by Shepway District Council for construction works at Lydd Wastewater Treatment Works. The Heritage Conservation Group, Kent County Council (HCG KCC) has put a condition on consent requiring that a programme of archaeological investigation be carried out.
- 1.3.2 A specification for an archaeological watching brief was prepared by the HCG (KCC 2010).
- 1.3.3 All work was carried out in accordance with the specification (unless otherwise stated), and the relevant *Standards and Guidance* of the Institute for Archaeologists (IfA 2008).

1.4 Scope of Report

1.4.1 This report details the results of the fieldwork which was carried out by Greg Priestley-Bell (Senior Archaeologist) between 19th April 2011 and 23rd August 2011. The fieldwork was managed by Neil Griffin (Project Manager) and the post-excavation work by Jim Stevenson (Post-excavation Project Manager).

1.5 Aims and Objectives

- 1.5.1 The general aim of the archaeological watching brief is to contribute to heritage knowledge and to understand the stratigraphy of the area through the recording of any archaeological and palaeoenvironmental remains exposed as a result of excavations in connection with the groundworks. Particular attention will be made to the character, height below ground level, condition, date and significance of the deposits.
- 1.5.2 Specific aims of the watching brief (subject to constraints of the area under excavation) as listed in the specification (KCC 2010) are to:
 - Observe, excavate and record any evidence of human activity and determine its date, nature, extent and character
 - Determine the date and nature of deposits observable in the stratigraphy and thereby gain an understanding of the historic development of deposits in this area and suggest how the area may have been utilised by humans
- 1.5.3 Specific aims (*ibid*) of the palaeoenvironmental work are to:
 - Gain a clear record of the stratigraphy of this specific site
 - Determine the nature of deposits and provide an indication of the historic development of land in this area and suggest how it may have been utilised by humans

2.0 ARCHAEOLOGICAL BACKGROUND AND POTENTIAL

- 2.1 The archaeological background and potential of the site is based on the proximity of archaeological remains recorded in the HER.
- 2.2 The site lies in an area of considerable archaeological interest relating to multi-period findings at neighbouring quarry sites. Remains from the Brett Quarry site date from the prehistoric period to the present day. There have been a number of phases of archaeological investigation at the Brett Quarry site and archaeological findings include Bronze Age and Iron Age occupation evidence, an Iron Age possible timber trackway and evidence of whale butchery, a Late Iron Age/Roman salt-working site, areas of Roman occupation and cremation burials and an extensive medieval and post-medieval field system including a farmstead, buildings and activity areas.
- 2.3 The geology and natural topography of the site is complex and comprises alluvial silts and clays, banks of storm beach gravel (Dungeness shingle), peat deposits and deep channels. The depth and complexity of the deposits provides considerable potential for environmental evidence associated with the development of Romney Marsh and use and occupation on the waterlogged/marshy areas and the shingle ridges. On-going palaeoenvironmental, topographical and archaeological research on Romney Marsh continues to highlight the complexity of this area and the close links between the development of the shingle ridges, channels and saltmarsh, and the human settlement and exploitation of the marsh environment. For instance, any water-logged/peaty deposits can often reveal organic remains, such as seeds, wood, molluscs, which can provide information on the environment from the prehistoric period onwards.
- 2.4 The study of the accumulation of the shingle ridges reveals vital information on the development of Romney Marsh and how it has been used at various stages of its development. There is also the important aspect of reclamation which is considered to have probably commenced during the Romano-British period. The identification of the successive phases of ditch-digging and sea wall construction can provide considerable evidence concerning the process of reclamation of this unique area of Kent.

3.0 ARCHAEOLOGICAL METHODOLOGY

- 3.1 The monitored groundworks comprised:
 - Cable trench and draw pit excavation south-east and south
 - Cable trench and draw pit excavation north and north-west
 - Shaft excavation
 - Valve chamber (rising main) excavation
 - Recirculation rising main pipeline excavation
- 3.2 ASE monitored the excavations for all groundworks connected with the proposed improvement works. Excavation was undertaken using a flat bladed bucket and in a single direction, to enable archaeological remains to be recorded in plan before any further ground reduction took place. If possible, where archaeological remains were encountered, machine excavation ceased to allow remains to be investigated further.
- 3.3 All revealed surfaces were inspected. Any archaeological structures or features revealed were recorded in plan and section as appropriate according to the specification (KCC 2010). The main contractor allowed reasonable time to undertake any inspection or recording required.
- 3.4 The site archive is currently held at ASE offices in Portslade and will be offered to a suitable museum in due course.

Number of contexts	14
No. of files/paper record	1
Plan and sections sheets	1
Bulk Samples	n/a
Photographs digital	32
B+W	6
CS	6
Bulk finds	1 box
Registered finds	-
Environmental flots/residue	n/a

Table 1: Quantification of site archive

4.0 RESULTS (Figure 3)

4.1 Cable trench and draw pits (south)

Context	Туре	Description	Deposit Thickness	Height m. AOD
01	Deposit	Topsoil	0.20m	2.40
02	Deposit	Made ground	0.80m	2.20
03	Deposit	Natural (south-east)	N/A	1.40
04	Deposit	Natural (south)	N/A	

Table 2: Contexts - Cable trench and draw pit excavation (south)

- 4.1.1 The cable trench measured *c.* 70m long, 300mm wide and 1m deep; the three draw pits measured 1.2m x 1.2m and 1.2m deep
- 4.1.2 Topsoil [01] consisting of dark greyish brown clayey silt with occasional beach pebbles overlay made ground [02] consisting of mid/dark yellowish brown silty clay. To the south-east, deposit [02] overlay natural [03] consisting of mottled light/mid greyish yellow very fine silty sand. To the south, deposit [02] overlay natural [03] consisting of stiff mottled mid greyish yellow clay with up to 80% beach pebbles.

4.2 Cable trench and draw pits (north)

Context	Туре	Description	Deposit Thickness	Height m. AOD
05	Deposit	Topsoil	0.30m	2.40
12	Deposit	Concrete	0.15m	2.10
06	Deposit	Made ground	0.50m	1.95
07	Deposit	Natural	N/A	

Table 3: Contexts - Cable trench and draw pit excavation (north)

- 4.2.1 The cable trench measured 500mm wide and 500mm 1m deep; the five draw pits measured 1.5m-2m x 1.5m and 1m deep.
- 4.2.2 Topsoil [05], where present, consisted of very dark greyish brown very fine sandy silt with occasional beach pebbles. Concrete slab [12] road (where present) was up to 150mm thick. Topsoil [05] and concrete [12] overlay made ground [06] consisting of mid/dark greyish brown silty clay with occasional beach pebbles. Deposit [06] overlay natural [07] consisting of mid brownish grey loose shingle. Where concrete [12] overlay made ground [06], timber railway sleepers were noted down to 400mm-800mm below ground surface.

4.3 Shaft excavation

Context	Туре	Description	Deposit Thickness	Height m. AOD
07	Deposit	Natural shingle	4m- 5m	2.40
13	Deposit	Silty sand	<i>c.</i> 1m	
14	Deposit	Sand	N/A	

Table 4: Contexts – Shaft excavation

- 4.3.1 The shafts measured up to 4m in diameter and up to 8m deep.
- 4.3.2 Natural shingle [07] overlay a deposit [13] of silty sand (alluvium) which overlay a deposit (14) of mid brownish yellow silty sand (alluvium).
- 4.3.3 The excavation was carried out by a grab excavator, generally operating below water level. The method of excavation did not allow potential archaeological features or precise contacts between stratigraphic units to be identified, nor did it allow any useful palaeoenvironmental sampling. No finds were recovered.

4.4 Valve chamber excavation

Context	Туре	Description	Deposit Thickness	Height m. AOD
01	Deposit	Topsoil	0.20m	2.40
07	Deposit	Natural shingle	1.8m+	2.20

Table 5: Contexts – Valve chamber excavation

- 4.4.1 The valve chamber excavation measured 6m x 6m and 1.8m deep.
- 4.4.2 Topsoil [01], 200mm thick, consisted of mid yellowish brown sandy silt with 30% beach pebbles. Topsoil [01] overlay natural shingle [07] as above. Approximately 50% of the area had already been disturbed by existing pipework and building footings.
- 4.4.3 No features were identified and no finds recovered.

4.5 Recirculation rising main pipeline excavation

Context	Type	Description	Deposit Thickness	Height m.AOD
01	Deposit	Topsoil	0.15m	2.40
10	Deposit	Dump deposit	0.20m+	2.25
11	Deposit	Made ground	0.45m	2.05
15	Deposit	Buried topsoil	0.15m	1.60
07	Deposit	Natural shingle	N/A	1.45

Table 6: Contexts - Rising main pipeline excavation

- 4.5.1 The rising main excavation measured 500mm wide and 800mm-1m deep
- 4.5.2 Topsoil [01] as above, overlay 450mm of made ground [11] consisting of dark yellowish brown silty clay with up to 80% beach pebbles with occasional concrete, iron and plastic. Deposit [11] overlay a 150mm thick deposit [15] of mid yellowish brown clayey silt. Deposit [15] overlay natural shingle [07].
- 4.5.3 At the northern end of the trench, topsoil [01] overlay a dump deposit [10] of dark reddish brown sandy clayey silt with 50% stone fragments

5.0 FINDS AND ENVIRONMENTAL SAMPLES

Context	Pottery	Wt (g)	СВМ	Wt (g)	Stone	Wt (g)
10	1	5	2	352	7 (samples)	3345

Table 7: Quantification of finds

5.2 The Pottery by Luke Barber

5.2.1 A single relatively fresh sherd from the base of a glazed red earthenware vessel was recovered from [10]. The sherd is of a mid-18th to 19th century date.

5.3 Ceramic Building Material by Luke Barber

5.3.1 Context [10] produced two fragments of brick. The first consists of the corner of a refractory brick in a dull brown clay pellet filled (to 3mm) granular fabric (75g). The other appears to be from a cement brick some 67mm tall with a very hard mid grey matrix in which there are abundant red sandstone pellets to 3mm and rare white inclusions to 1mm (277g). A 19th- century date is probable for both pieces.

5.4 The Stone by Luke Barber

5.4.1 Context [10] produced two related stone types. There is one irregular piece (788g) of a hard dull red non-calcareous siltstone that shows some signs of heating. The other five pieces (2557g) are of hard laminated non-calcareous fossiliferous (with ferns) shale. All appear to be heavily burnt and are very irregular/fragmented. Although the exact source of this material is uncertain it is probable that it was transported to the site mixed with coal from one of England's coalfield areas.

5.5 Environmental Samples

5.5.1 No deposits with a sufficient degree of integrity for environmental sampling were encountered.

6.0 DISCUSSION

6.1 Cable trench and draw pits (south)

- 6.1.1 Made ground deposit [02] almost certainly related to landscaping associated with the construction of the existing wastewater treatment works (WWTW).
- 6.1.2 The eastern part of the cable trench revealed silty clay (alluvium) at its base, while the western part of the trench revealed the southern edge of the principal shingle ridge on which the existing WWTW stands.

6.2 Cable trench and draw pits (north)

6.2.1 This area had been extensively disturbed during groundworks relating to the existing WWTW. The underlying natural was loose shingle, indicating that the current groundworks in this area lay fully within the extent of the shingle ridge.

6.3 Shaft and Valve chamber excavation

- 6.2.2 Due to the necessary method of excavation of the two shafts, the depth of the shingle [07] at this location could not be precisely measured, however, it was likely to have been between 4m 5m. The significant depth of deposit [07] indicated that the shaft excavation was probably located close to the centre of a principal shingle ridge. This is supported by borehole data, kindly supplied by Richard Hambly, former Bretts Quarry manager, which records gravel depths exceeding 4m immediately to the north-west and again a little to the west of the current site. The borehole data also indicated that gravel depths rarely exceed 6m in any part of Lydd Quarry, underlining the particular scale of the shingle ridge on which the existing WWTW stands. The SW-NE orientation of the WWTW suggests that its location along the centre of the shingle ridge was a factor in the original design.
- 6.3.2 The silty sand [13] and sand [14] observed below the shingle [07] perhaps represents channel fill. Laminated sands and silts representing channel fill have been recorded to the south (Long *et al.* 2007, 193). No useful palaeoenvironmental samples or precise depth measurements could be taken due to the inaccessibility of the section and the mobility of the shingle and consequential below water mixing of deposits during excavation.

6.4 Recirculation rising main pipeline excavation

- 6.4.1 Deposit [11] was modern made ground of similar character to [02] and almost certainly related to landscaping associated with the construction of the existing wastewater treatment works (WWTW). Dump deposit [10] was hardcore imported into the site during the construction of the existing structures. The use of angular material as a base for construction was almost certainly due to the inherent mobility of the underlying beach pebbles.
- 6.4.2 Deposit [15] seen in the western part of the pipe trench was a buried topsoil that represented the ground surface immediately prior to the development of the site as a WWTW. Prior to development the site was part of a field almost certainly used for grazing. This is supported by the presence of several nearby 'Sheepfolds' shown on the 1877 OS map.

7.0 CONCLUSIONS

7.1 Archaeology

- 7.1.1 The watching brief did not identify any significant archaeological remains on the site. The two major contributing factors to the negative results were probably i) the high level of modern disturbance recorded across the site, and ii) the location of the site on a principal shingle ridge.
- 7.1.2 Probable Bronze Age remains discovered just to the north-west in Lydd Quarry Stage 8 (Fig 2) comprised small, discrete spreads of worked flint and burnt material on the surface of mobile shingle. Had such evidence been present on the current site it would almost certainly been thoroughly dispersed by the groundworks associated with the original construction of the WWTW (Priestley-Bell 2004).
- 7.1.3 Medieval and post-medieval remains recorded to the north in Lydd Quarry Stages 7 and 8 predominantly comprised ditches and gullies, most of which were cut into the silts and clays that fill the troughs between shingle ridges. Unusually, no ditches whatsoever were recorded in the central section of Lydd Quarry Stage 8 to the north; the conjectured alignment of the only ditch recorded in the southern part of Lydd 8 did not extend into the subject site (Barber and Priestley-Bell 2008 29-112). Only one ditch was recorded in the western part of Lydd Quarry Stage 7 to the north-east; again its conjectured alignment did not extend into the subject site (*ibid.* 29-112).
- 7.1.4 Results from Lydd Quarry as a whole have shown that far fewer ditches were cut into outcropping shingle than into silts and clays; this was likely to be because the first medieval ditches, on which the later field systems were based, were primarily for drainage to facilitate reclamation. The depth of the shingle recorded in the shaft excavation indicated that the site was probably centrally located on a principal shingle ridge, the northern edge of which was recorded in the Lydd Quarry Stage 7 work (Barber and Priestley-Bell 2008 29-112). Therefore, in view of the site's position, the presence of medieval and post-medieval ditches can be seen as far less likely than in off-ridge locations.

7.2 Geo-archaeology and Palaeoenvironmental Sampling

- 7.2.1 The results of the watching brief have indicated that the subject site is probably centrally located on a principal shingle ridge. In consequence, the works did not encounter any peat deposits: work at Lydd Quarry has indicated that peat generally occurs only within creeks, channels or troughs between ridges.
- 7.2.2 Although possible channel fill or tidal flat deposits were encountered below the shingle during the excavation of the shafts, no useful palaeoenvironmental samples or precise depth measurements could be taken. This was due to the necessary method of excavation which comprised below water level excavation and the concurrent downward movement of concrete rings. This operation rendered the excavated section not only inaccessible but impossible to be viewed. The mobility of the shingle and consequential below water mixing of deposits during excavation did not allow any meaningful separation of excavated deposits.

Acknowledgements

Archaeology South-East would like to thank 4 Delivery Limited for commissioning the watching brief and Wendy Rogers for her guidance throughout the project. The co-operation of Brian Penny of 4 Delivery Limited is also much appreciated.

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IfA 2008 Standards and Guidance for an Archaeological Watching Brief

Long, A, Waller, M, and Plater, J, 2007 'The late Holocene evolution of Romney Marsh/Dungerness Foreland depositional complex' in *Dungerness and Romney Marsh*, Exeter 189-207

Priestley-Bell, G, 2004 The Excavation of Prehistoric and Romano-British Remains and a Medieval Building and Ditch/Field System at Lydd Quarry (Stages 7-11), unpub ASE rep

HER Summary Form

Site Code LYW11							
Identification Name and Address	Lydd Wastewater Treatment Works, Jury's Gap Road, Kent.						
County, District &/or Borough	Kent, Shep	Kent, Shepway					
OS Grid Refs.	NGR 6029	0 12040					
Geology	Alluvium a	nd Dungern	ess shingle				
Arch. South-East Project Number	4843						
Type of Fieldwork	Eval.	Excav.	Watching Brief X	Standing Structure	Survey	Other	
Type of Site	Green Field	Shallow Urban	Deep Urban	Other Coasta	al alluvium		
Dates of Fieldwork	Eval.	Excav.	WB. 19 [/] 4/2011 to 23/8/2011	Other			
Sponsor/Client	4 Delivery	Limited	•				
Project Manager	Neil Griffin						
Project Supervisor	Greg Priestley-Bell						
Period Summary	Palaeo.	Meso.	Neo.	BA	IA	RB	
400 West Ossesses	AS						

100 Word Summary

Archaeology South-East was commissioned by 4 Delivery to undertake an archaeological and geo-archaeological watching brief during construction works at Lydd Wastewater Treatment Works. The fieldwork did not identify any archaeological remains. The two major contributing factors to the negative results were probably the high level of modern disturbance recorded across the site and its location on a principal shingle ridge.

OASIS Form

OASIS ID: archaeol6-113243

Project details

Project name An Archaeological Watching Brief during construction works at Lydd

Wastewater Treatment Works, Lydd, Kent

Short description of

the project

Archaeology South-East was commissioned by 4 Delivery to undertake an archaeological and geo-archaeological watching brief during construction works at Lydd Wastewater Treatment Works. The fieldwork did not identify any archaeological remains. The two major contributing factors to the negative results were probably the high level of modern disturbance recorded across the site and its location

on a principal shingle ridge.

Project dates Start: 19-04-2011 End: 23-08-2011

Previous/future work No / No

Any associated

project reference

codes

LYW11 - Sitecode

Type of project Recording project

Site status None

Current Land use Transport and Utilities 3 - Utilities

Monument type NONE None

Significant Finds NONE None

Investigation type 'Watching Brief'

Prompt Planning condition

Project location

Country England

Site location KENT SHEPWAY LYDD Lydd Wastewater Treatment Works, Jury's

Gap Road, Lydd Kent

Postcode TN29 9JN

Study area 8800.00 Square metres

Site coordinates TR 0290 2040 50.9466443449 0.888789766047 50 56 47 N 000 53

19 E Point

Height OD / Depth Min: 2.00m Max: 3.00m

Project creators

Name of Organisation

Archaeology South East

Project brief originator

Kent County Council

Project design originator

Kent County Council Heritage Conservation Group

Project

Neil Griffin/Jim Stevenson

director/manager

Project supervisor Greg Priestley-Bell

Type of

sponsor/funding

body

4D Ltd

Name of

sponsor/funding

body

4D Ltd

Project archives

Physical Archive

recipient

Local Museum

Physical Contents 'Ceramics', 'other'

Digital Archive

recipient

Local Museum

Digital Contents 'none'

Digital Media available

'Images raster / digital photography', 'Text'

Paper Archive

recipient

Local Museum

Paper Contents

'none'

Paper Media available

'Context sheet', 'Miscellaneous Material', 'Photograph'

Project bibliography 1

Grey literature (unpublished document/manuscript)

Publication type

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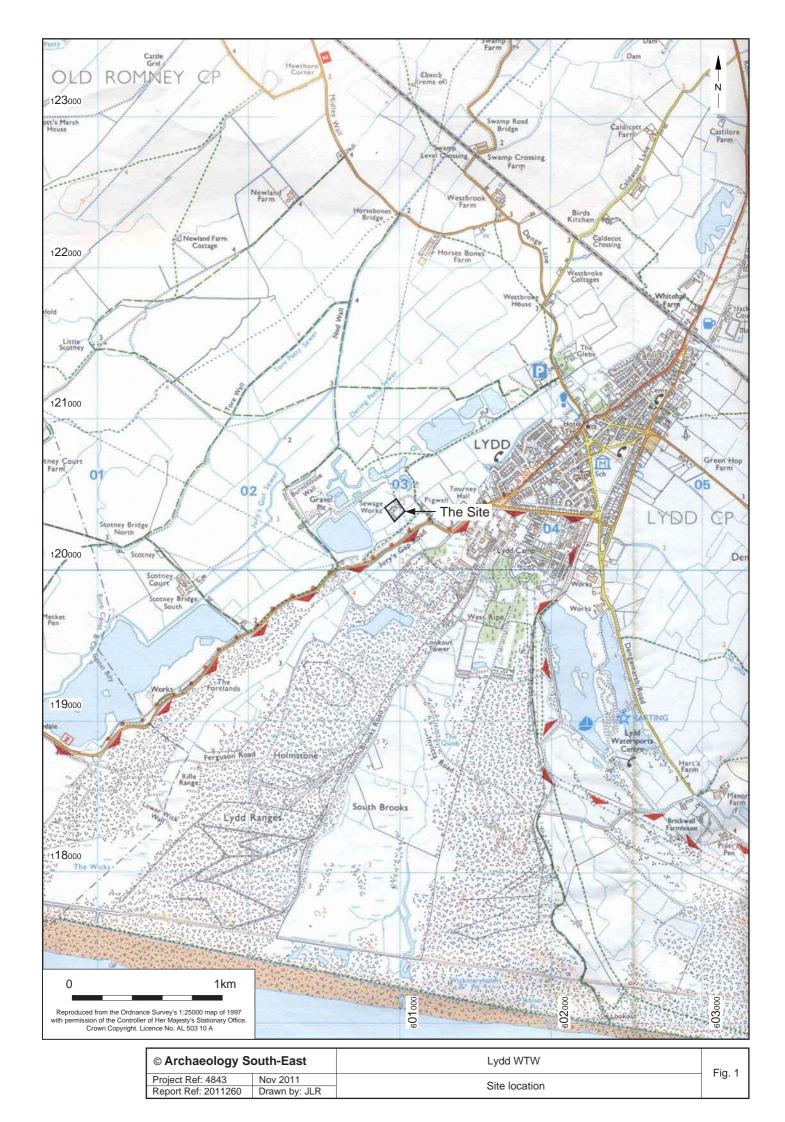
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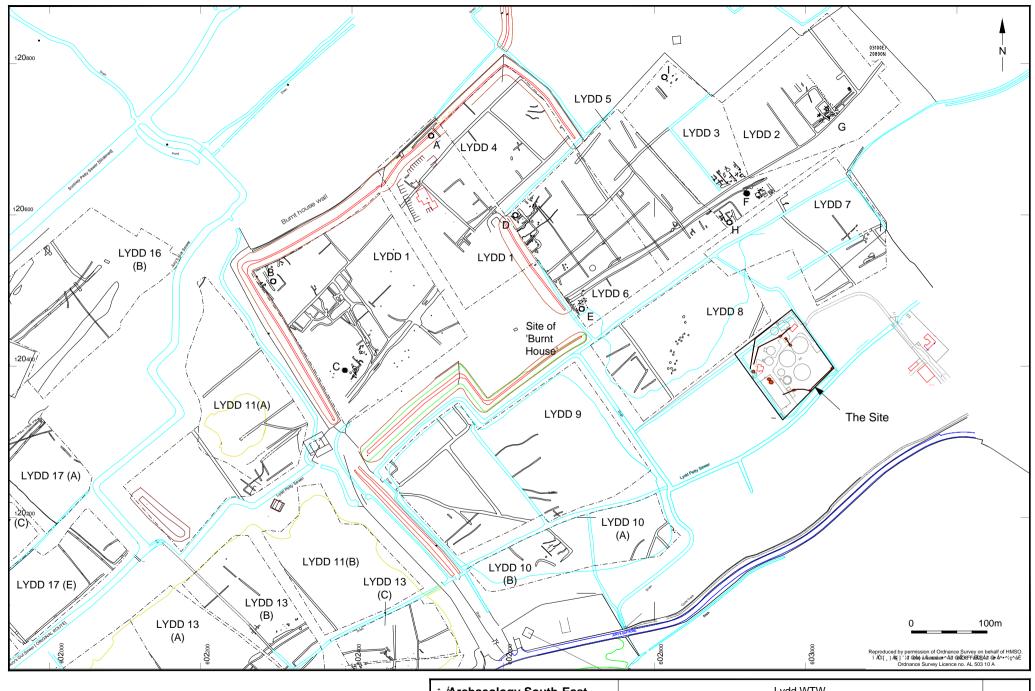
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Description Booklet

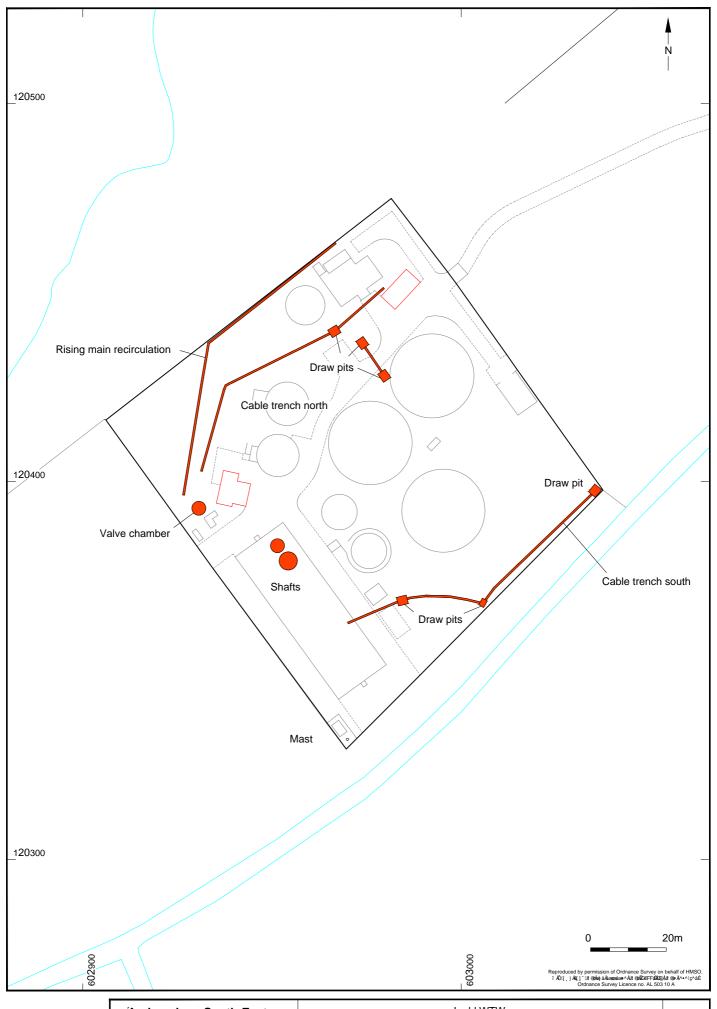
Greg Priestley-Bell (gregpbell@btinternet.com) Entered by

Entered on 6 November 2011





î Ærchaeology South-East		Lydd WTW	
Project Ref: 4843	Nov 2011	Site in relation to Lydd Quarry excavations	Fig. 2
Report Ref: 2011260	Drawn by: JLR	Site in relation to Lydd Quarry excavations	



î Ærchaeology South-East		Lydd WTW	
Project Ref: 4843 Nov 2011			Fig. 3
Report Ref: 2011263	Drawn by: JLR	Plan of monitored works	

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