

**THAMES WATER SURFACE WATER SEWER WORKS
BALDWYNS PARK, TILE KILN LANE**

BEXLEY

KENT, DA5

AN ARCHAEOLOGICAL WATCHING BRIEF

October 2008



COMPASS



ARCHAEOLOGY

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SITE CODE: TKL 08

NGR: TQ 50695 72476 (WEST), TQ 50857 72434 (EAST)

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October 2008

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Abstract

This report describes the results of an archaeological watching brief undertaken between 1st May to 13th May 2008 during groundworks in Baldwyn's Park, Tile Kiln Lane in the County of Kent. The watching brief was undertaken to cover a Thames Water engineering project along Tile Kiln Lane and Baldwyn's Park in which a new surface water sewer was to be laid.

The works consisted of preliminary topsoil stripping of an easement along the section of pipeline in open land to the north of Tile Kiln Lane. Open cut trenching was the undertaken to a depth of 3.2m for the new pipe trench and manholes, in the area to the north of Tile Kiln Lane. Within the road, directional drilling took place and was therefore excluded from the watching brief remit. The total length of trenching within the watching brief remit was 170m on a mainly east west alignment.

The SMR search revealed fourteen locations within a 500m radius of Tile Kiln Lane, where archaeological finds or features were recovered. Previous excavations revealed collections of artefacts dating to the Lower and Middle Palaeolithic periods including four handaxes that were excavated immediately south of Tile Kiln Lane, whilst to the east a collection of lithic artefacts comprising nine handaxes and eleven waste flakes were uncovered and dated to the same period. A series of Mesolithic and early Neolithic posthole and pit features were excavated 400m northeast of Tile Kiln Lane. This site revealed worked and burnt flint, fragments of daub and waste flakes.

There is also evidence of an early medieval boundary bank southwest of Tile Kiln Lane and a possible Saxon barrow or tumulus that lay to the southeast. The site lies just over 300m to the south of the Grade II listed country house of Baldwyns. Documentary records indicate that the estate goes back to medieval times, although relatively little is known of its early history. The house was rebuilt in the 17th century and again (in its present form) in the early 19th century.

Towards the end of the century the estate was leased to Hiram Maxim, and became the setting for a series of early experiments in powered flight. Towards the eastern end of the proposed pipe route and in areas immediately adjacent to the temporary site compound there are two quite regular features, which are unmarked but assumed to be pits dug for the extraction of gravel or similar material. These appear on subsequent maps and the larger of the two is presumably the forerunner of the pond that is marked on the recent Ordnance Survey map.

Trenching revealed a dark brown sandy topsoil and a lighter brown subsoil overlying patchy natural clay Head deposits and Thanet sands to a depth of over 3m (+36.20m OD). No gravels were observed and no finds or features were revealed during the course of the watching brief. All available deep trench sections were monitored for palaeoliths, but only sterile sands and clays were encountered.

Contents

	Page
1 Introduction	1
2 Site Location and Geology	1
3 Archaeological and Historical Background	3
4 Archaeological Objectives	4
5 The Archaeological Programme	6
5.1 Standards	6
5.2 Fieldwork	6
6 Post-Excavation Work	6
6.1 Finds and Samples	7
7 The Site Archive	7
8 The Archaeological Watching Brief	7
8.1 Topsoil Stripping	7
8.2 Summary of Archaeological Results	9
9 Summary and Conclusions	10
Appendix I: OASIS Data Collection Form	11
Appendix II: <i>Cantania Archaeologia</i> Summary	13
Appendix III: Extract from Kent Historical Environmental Record (SMR)	14

List of Figures

		Page
1	Site location based on the current Ordnance Survey, showing the groundworks covered by the Archaeological Watching Brief (highlighted in orange).	2
2	The pipe trench and compound in relation to the 2 nd Edition Ordnance Survey 25-inch map of 1895.	4
3	The pipe trench and compound in relation to the Ordnance Survey 25-inch map of 1907	5
4	The pipe trench and compound in relation to the Ordnance Survey 25-inch map of 1933	5
5	OS based map showing the section of the pipeline that was monitored, including the trench box visible in figure 6.	7
6	Trench box located as shown in the previous map (figure 5) looking west.	8
7	View looking west of the topsoil stripping in the area west of manhole BPSW7.	8
8	View looking west of manhole BPSW7.	9
9	North facing section from the stripping of the area between manhole BPSW7 and BPSW8.	10

1. Introduction

- 1.1** This report describes the results of an archaeological watching brief undertaken between 1st May and 13th May 2008 during groundworks in Baldwyn's Park, Tile Kiln Lane, Bexley, in the County of Kent.
- 1.2** The archaeological watching brief relates only to that section of the scheme within the administrative County of Kent, the boundary of which lies just to the east of the junction between Tile Kiln Lane and Baldwyns Park. In this area the pipe trench covers a distance of some 170m on a mainly east-west alignment, approximately located between NGR TQ 5070 7248 and TQ 5085 7244. It was anticipated that part of this length would have been directionally drilled, but the dense sands at the west end that occurred in thick patches caused logistical problems with the drilling equipment and therefore the groundworks had to be open cut. A temporary site compound was also be established just to the east of the construction route and immediately north of Tile Kiln Lane but the compound did not require stripping and therefore did not form part of the watching brief.
- 1.3** This watching brief forms a response to the recommendation by the Kent County Council Heritage and Conservation Unit in consultation with Thames Water and was monitored for KCC by Ben Found.
- 1.4** Compass Archaeology would like to thank Adam Egglesfield of Thames Water (Ecology and Heritage) for commissioning the project, Mike McCullum from Thames Water for his assistance on site and Ben Found, Archaeology Officer, Kent County Council.

2. Site Location and Geology

- 2.1** The site lies within mainly open land to the north of Tile Kiln Lane, and on a west-facing slope rising from 38m OD in the area of St Barnabas Church in the west to 40.6m OD in the area of the site compound. The British Geological Survey (1998. Dartford. Sheet 271) indicates that the surface drift geology is likely to be Head formation (described as silt, sand and clay with variable gravel, chalky in places). This overlies the Thanet Sand formation (sand, fine – grained, silty, green-coated nodular flints at base 6-30m), which outcrops to the south of the site. The localised presence of chalk is also indicated by the BGS and historic maps record several local deneholes (*cf.* fig 2). Deneholes are generally considered to be man made shafts dug to extract alkaline chalk or lime to use in arable agriculture to neutralise acidic soils and as a soil fertilise, a process known as marling.
- 2.2** Slightly further to the north there are River Terrace Deposits of Boyn Hill Gravel, which are known to be artefact bearing in this part of Kent and can contain palaeoliths (flint artefacts dating from the earliest occupation of Britain) of national importance.
- 2.3** However, recent ground investigations have established that in some places the Boyn Hill Gravel is much more extensive. It is also noted that a gravel pit is shown just to the northwest on the OS map of 1895 (*cf.* fig 2). Thus it has been suggested that the deposit may extend further south and into the area of the site

(consultation response by Ben Found of Kent County Council to Thames Water). This would have potential for palaeoenvironmental remains, and for evidence of Palaeolithic human activity. Four Palaeolithic handaxes have been found immediately to the south of Tile Kiln Lane, some 30m from the pipe route, and a further nine hand axes plus other worked flints are recorded some 200m to the east of the compound.

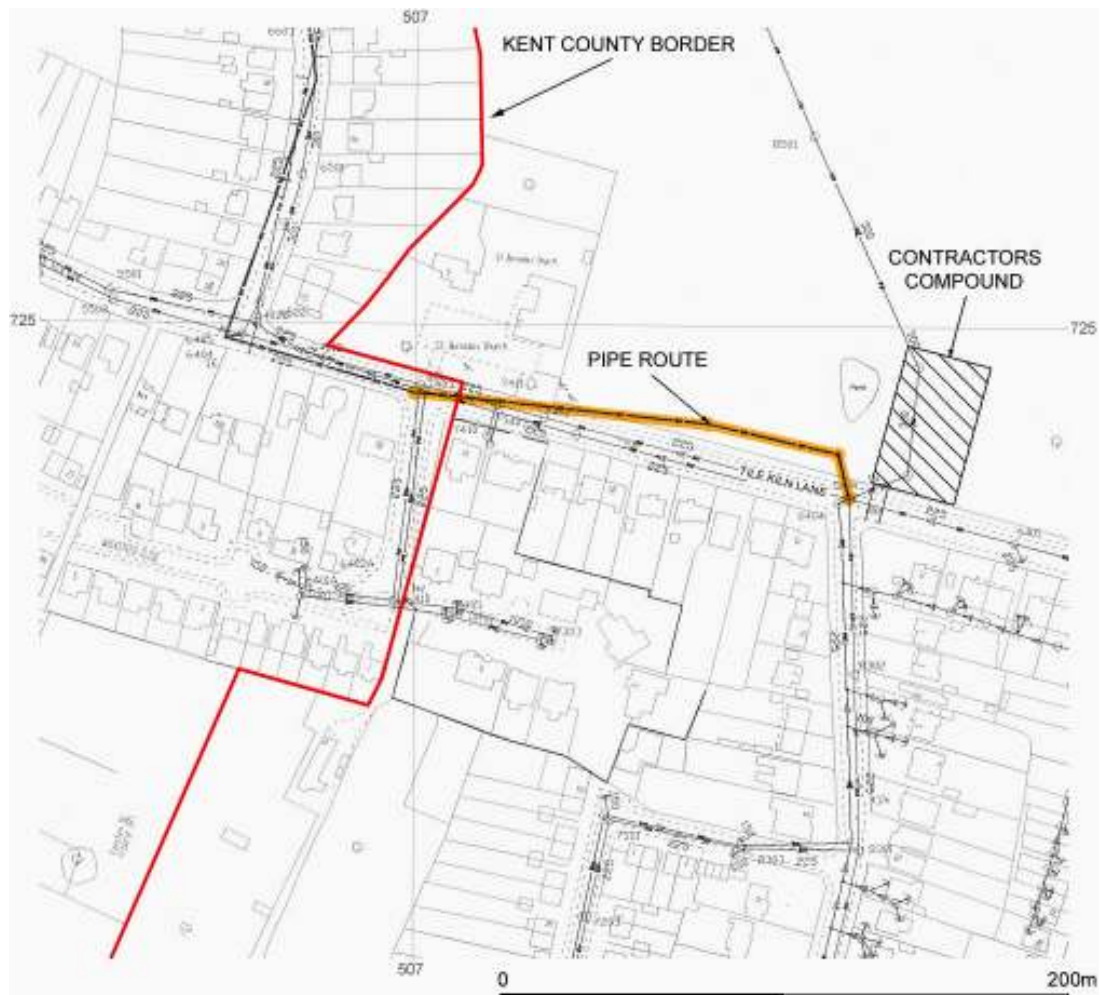


Fig 1: Current OS based map showing the route of the surface water sewer from the Kent County border in the west. The contractors' compound did not require any stripping and was therefore excluded from the watching brief.

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3 Archaeological and Historical Background

- 3.1 Excavations have revealed collections of artefacts dating to the Lower and Middle Palaeolithic periods, including four handaxes that were excavated immediately south of Tile Kiln Lane whilst to the east, a collection of lithic artefacts comprising nine hand axes and eleven waste flakes were uncovered and dated to the same period (MKE 968). A series of Mesolithic and early Neolithic post hole and pit features were excavated 400m northeast of Tile Kiln Lane that revealed worked and burnt flint, fragments of daub and waste flakes (TQ 57 SW 267-269).
- 3.2 There is also evidence of an early medieval boundary dyke or bank southwest of Tile Kiln Lane at a site called *Faesten dic* (MKE 973). Three potsherds have been recovered from this site as well as a small medieval type horseshoe. A Saxon barrow or tumulus lies to the southeast of the site although this site has now been developed and nothing is thought to remain.
- 3.3 The site lies just over 300m to the south of the Grade II listed country house of Baldwyns. For most of the 20th century this formed part of Bexley Hospital, until closure of the latter in the early 1990s and conversion of the house to provide residential apartments.
- 3.4 Documentary records indicate that the estate goes back to medieval times, although relatively little is known of its early history. *Baudiwins* was held by Lesnes Abbey until the Dissolution of the monasteries, and thereafter passed through a number of owners including the Crown. The house was rebuilt in the 17th century and again (in its present form) in the early 19th century. Towards the end of the century the estate was leased to Hiram Maxim, and became the setting for a series of early experiments in powered flight.
- 3.5 Historic maps do not show any significant development in the immediate vicinity of the site, although evidence for an historic boundary to the Park such as a ditch or wall footing is a possibility. The first of the maps (Fig 1) shows the line of Tile Kiln Lane as it is today, with the open land of Baldwyns Park to the north. Towards the eastern end of the proposed pipe route and in areas immediately adjacent to the temporary site compound there are two quite regular features, which are unmarked but assumed to be pits dug for the extraction of gravel or similar material.
- 3.6 The OS map of 1907 (Figure 3) records the development of a cemetery close to the western end of the study area, on land that is today occupied by St Barnabas' Church. The pipe construction will avoid this area, passing just outside the southeast corner of the plot.

4 Archaeological Objectives

- 4.1 The objectives of the archaeological watching brief are to contribute to knowledge of the area through the recording of any archaeological remains exposed as a result of excavations in connection with the groundworks. Particular attention being made to the character, height below ground level, condition, date and significance of the deposits.



Fig 2: The pipe trench and compound in relation to the 2nd Edition Ordnance Survey 25-inch map of 1895, covering approximately the same area as Figure 1 (*Kent Sheet IX.9*).



Fig 3: The pipe trench and compound in relation to the Ordnance Survey 25-inch map of 1907.

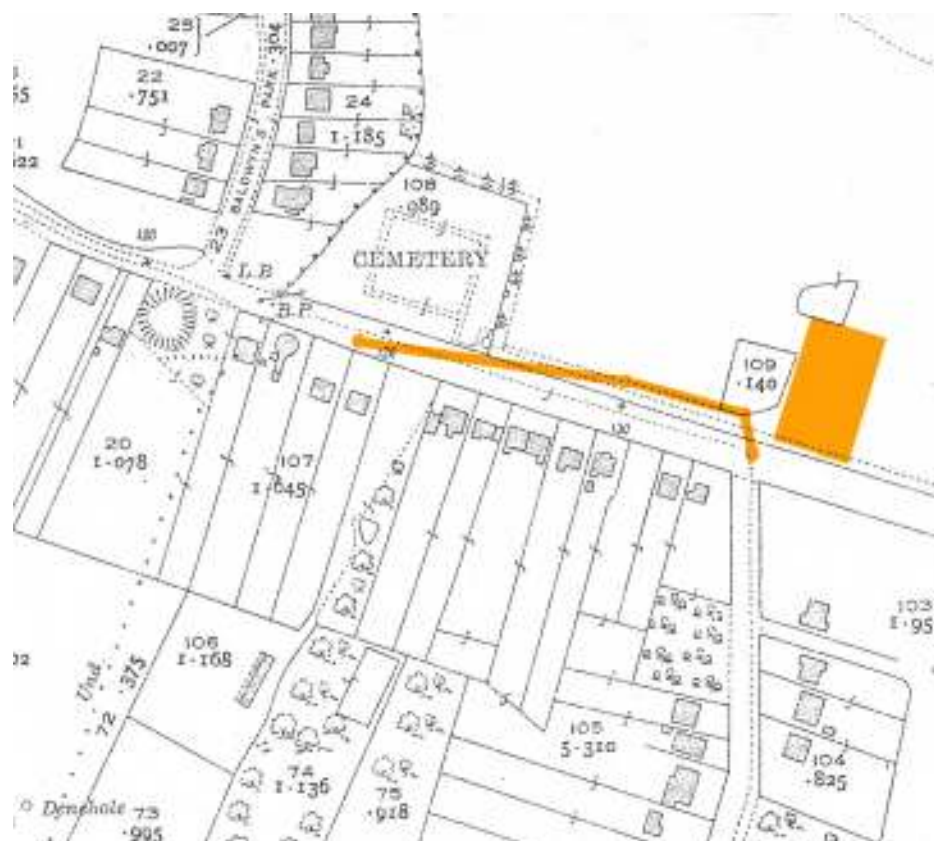


Fig 4: The pipe trench and compound in relation to the Ordnance Survey 25-inch map of 1933

5. The Archaeological Programme

5.1 Standards

The field and post-excavation work was carried out in accordance with English Heritage guidelines (in particular, *Standards and Practices in Archaeological Fieldwork, Guidance Paper 3*). Works also conformed to the standards of the Institute of Field Archaeologists (*Standard and Guidance for Archaeological Watching Briefs*). Overall management of the project was undertaken by a full Member of the Institute.

The recording system followed the procedures set out in the Museum of London recording manual. By agreement the recording and drawing sheets used were directly compatible with those developed by the Museum.

5.2 Fieldwork

5.2.1 Attendance

The archaeological watching brief took place during groundworks to the north of Tile Kiln Lane and within Baldwyns Park. Works were monitored so that any surviving archaeological features or finds could be investigated, identified and recorded.

It was understood that the groundworks would include topsoil stripping and larger pits for manholes, with excavation taking place up to a recorded depth of 3.2m. The basic watching brief required one archaeologist on site to monitor works and to investigate any potential archaeological features. It was agreed that if remains were exposed adequate time should be allowed for investigation and recording, although in the event there was no disruption to the works programme.

It was anticipated that part of the length of the pipe route would be directionally drilled, but the dense sands at the west end that occurred in thick patches caused logistical problems, including the drilling equipment getting stuck, and therefore much of the groundworks had to be open cut.

5.2.2 Methodology

All observed deposits and features were investigated and recorded in stratigraphic sequence, and where appropriate finds dating evidence recovered and recorded, although no finds or features were retained.

All areas of the watching brief were recorded as appropriate on *pro-forma* trench sheet. The investigations were recorded on a general site plan and related to the Ordnance Survey grid. The fieldwork record was supplemented as appropriate by photography (35mm and/or digital).

6. Post-Excavation Work

The fieldwork was followed by off-site assessment and compilation of this report, and by ordering of the site archive.

6.1 Finds and Samples

No significant finds or samples were discovered during the course of the watching brief, and thus no finds or samples were retained.

7. The Site Archive

The records from the archaeological project will be ordered in line with Museum of London *Guidelines for the Preparation of Archaeological Archives* and will be placed in the Museum of London Archaeological Archive as part of the ongoing programme of archive deposition. Only a paper and digital archive will be deposited. No significant finds were recovered from the watching brief.

8. The Archaeological Watching Brief

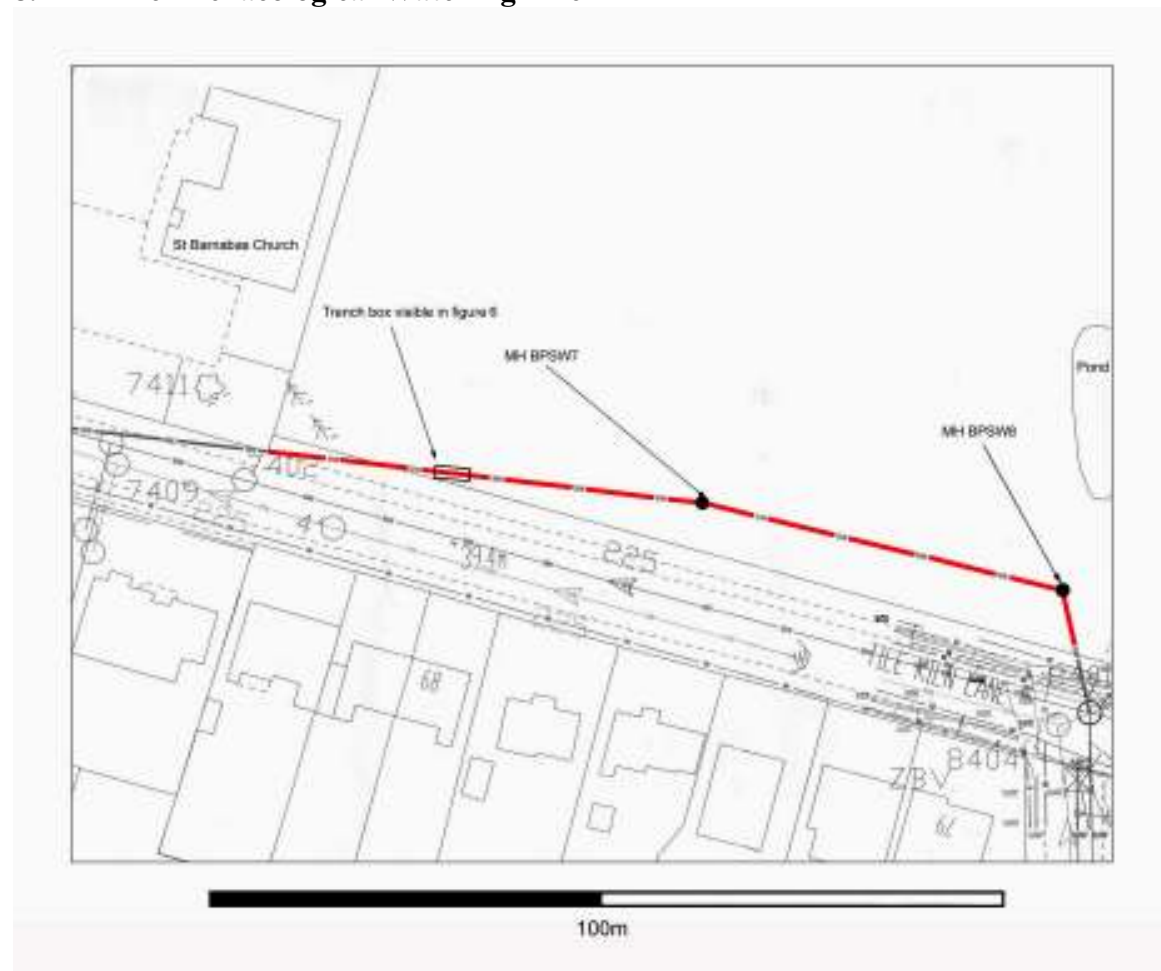


Fig 5: OS based map showing the section of the pipeline that was monitored (in red), including the trench box visible in figure 6

8.1 Topsoil Stripping

Monitoring of the topsoil stripping within the area of open ground north of Tile Kiln Lane commenced in the area adjacent to the southeast corner of St Barnabas Church. Initial visitation observed two deep sections with trench boxes installed up to the area of manhole BPSW7. The first (westerly) trench

box had dimensions of 3m x 3m and was 3.2m deep (+36.2m OD). The stratigraphic sequence within the trench box showed topsoil was observed to a depth of 400mm beneath which, was a clay deposit that was 1m deep. Fine natural sand was observed at the bottom of the trench (probably the differential Head deposits, but possibly the Thanet sands).

Excavation of manhole BPSW7 was also 3m x 3m and was excavated to a depth of 3.2m. The topsoil, which was recorded to a depth of 300mm, was observed above patchy sterile natural clay deposits (Head). Within this area of stripping, the soils were sterile and no finds or features of archaeological significance were observed.



Fig 6: Trench box located as shown in the previous map (figure 5) looking west.



Fig 7: View looking west of the topsoil stripping in the area west of manhole BPSW7.

Stripping of the topsoil between BPSW7 and BPSW8, in the area adjacent to the site compound, was observed along a section that was approximately 22m long, up to 3.9m wide and 550mm deep. A very dark brown sandy topsoil with flint gravel inclusions was observed to a depth of 300mm and overlay 170mm of a mid brown silty sand subsoil. Beneath these deposits a mottled grey brown clay natural was observed with patchy sand deposits up to the bottom of the stripped area, 550mm.



Fig 8: View looking west towards manhole BPSW7, showing the clay and natural sand that was visible at a depth of 550mm.

Throughout the areas that were monitored during the stripping, no finds or features were observed. The natural was observed to have chalk flecking and flint nodules but was archaeologically sterile. In the areas of deeper open cut only sterile natural clays and sands were exposed, no palaeoliths or archaeological finds or features were observed in the deeper sections.

8.2 Summary of Archaeological Results

No significant archaeological finds or features were exposed during the course of the watching brief. The exposed sequence of deposits observed during the monitoring consisted of topsoil and subsoil overlying clay and sand natural Head and Thanet Sand deposits, which included small inclusions of flint nodules in some locations. All the deposits derived from natural processes with minimal human interference.



Fig 9: North facing section from the stripping of the area between manhole BPSW7 and BPSW8, showing the topsoil, subsoil and natural found along this section of the surface water sewer.

9. Summary and Conclusions

9.1 Assessment of the results of the watching brief

The objectives of the archaeological watching brief were to contribute to knowledge of the area through the recording of any archaeological remains exposed as a result of excavations in connection with the groundworks. No evidence of prehistoric activity was uncovered despite the close proximity of several sites that have produced significant artefacts nor was there any evidence for early and post medieval activity within the area of stripping.

Appendix I: OASIS Data Collection Summary

OASIS ID: compassa1-47177

Project details

Project name	Thames Water Surface Water Sewer Works in Baldwyns Park, Tile Kiln Lane, Bexley, Kent: An Archaeological Watching Brief
Short description of the project	This report describes the results of an archaeological watching brief undertaken during groundworks in Baldwyn's Park, Tile Kiln Lane in the County of Kent. The watching brief was undertaken to cover a Thames Water engineering project along Tile Kiln Lane and Baldwyn's Park in which a new surface water sewer was to be laid. The works consisted of preliminary topsoil stripping of an easement along the section of pipeline in open land to the north of Tile Kiln Lane. Open cut trenching was the undertaken to a depth of 3.2m for the new pipe trench and manholes, in the area to the north of Tile Kiln Lane. No archaeological finds or features were observed during the course of the watching brief.
Project dates	Start: 01-05-2008 End: 13-05-2008
Previous/future work	Not known / No
Any associated project reference codes	TKL 08 - Sitecode
Type of project	Recording project
Site status	None
Current Land use	Vacant Land 2 - Vacant land not previously developed

Project location

Country	England
Site location	KENT DARTFORD WILMINGTON Thames Water Surface Water Sewer Works, Baldwyns Park, Tile Kiln Lane, Bexley, Kent, DA5: An Archaeological Watching Brief
Postcode	DA5
Study area	0.17 Kilometres
Site coordinates	TQ 5069 7247 51.4306501728 0.167963772237 51 25 50 N 000 10 04 E Line
Site coordinates	TQ 5085 7243 51.4302480374 0.170246868296 51 25 48 N 000 10 12 E Line
Height OD / Depth	Min: 38.00m Max: 40.60m

Project creators

Name of Organisation	Compass Archaeology
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	Compass Archaeology
Project director/manager	Geoff Potter

Project supervisor	Gill King
Type of sponsor/funding body	Thames Water Utilities

Project archives

Physical Archive Exists?	No
Digital Archive recipient	Unknown at this stage
Digital Contents	'none'
Digital Media available	'Images raster / digital photography'
Paper Archive recipient	Unknown at this stage
Paper Contents	'none'
Paper Media available	'Context sheet', 'Report', 'Unpublished Text'

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Thames Water Surface Water Sewer, Baldwyns Park, Tile Kiln Lane, Bexley, Kent, DA5: An Archaeological Watching Brief
Author(s)/Editor(s)	Henckert, J
Date	2008
Issuer or publisher	Compass Archaeology Ltd
Place of issue or publication	5-7 Southwark Street SE1 1RQ
Description	15 page bound report detailing an archaeological watching brief
Entered by	Jonathan Henckert (mail@compassarchaeology.co.uk)
Entered on	20 August 2008

Appendix II: *Cantania Archaeologia* Summary

An archaeological watching brief was undertaken during groundworks in Baldwyn's Park, Tile Kiln Lane in the County of Kent in May 2008 (TQ 50708 72497). The watching brief was undertaken to cover a Thames Water engineering project along Tile Kiln Lane and Baldwyn's Park in which a new surface water sewer was to be laid. The works consisted of preliminary topsoil stripping of the topsoil along an easement along the section of pipeline in open land to the north of Tile Kiln Lane. Open cut trenching was undertaken to a depth of 3.2m for the new pipe trench and manholes, in the area to the north of Tile Kiln Lane. Sterile sand and clay geology was exposed and examined. No archaeological finds or features were observed during the course of the watching brief.

Appendix III: Extract from Kent Historic Environmental Record (SMR)

SMR no.	Description	Location
TQ 57 SW 65 -MKE949	Site of a Saxon Tumulus/Barrow in Joyden's Wood, Dartford.	TQ 5103 7224
TQ 57 SW 70 - MKE954	This monument is listed as a tumulus of unknown date, which has been destroyed during development of this area.	TQ 5077 7206
TQ 57 SW 86 - MKE968	Four Acheulian hand axes were found while digging footings for a new house just off Tile Kiln Lane, Bexley, Bexley Hospital. Dated to the Lower to Middle Palaeolithic periods.	TQ 5090 7240
TQ 57 SW 93 - MKE973	Saxon Boundary Bank of early medieval date. Three potsherds have been recovered from the bank as well as a small medieval type horseshoe.	TQ 5024 7207
TQ 57 SW 95 - MKE975	Scatter of deneholes, their date is unknown although they were in existence in the 16 th century.	TQ 5055 7164
TQ 57 SW 133 - MKE1013	Find spot, a Tranchet axe, three cores, several blades and flakes, scrapers, a graver and microliths were recovered from this location in Joyden's Wood.	TQ 509719
TQ 57 SW 232	Early aircraft hanger and site of a test track, Baldwyns Park, Old Bexley Lane. Post-medieval date, 1891 AD to 1898 AD.	TQ 50808 72743
TQ 57 SW 233	Baldwyns Park estate, county house and former park. Formerly Hiram Maxim's home, this dated to 1800	TQ 5090 7278
TQ 57 SW 266	A north-south aligned ditch feature, located during site evaluation work in 2003. Its fill contained no finds.	TQ 5981 7071
TQ 57 SW 267	A sub circular pit up to 1.90m in diameter and up to 0.23m deep. Its fill contained some small fragments of daub, burnt flint and a waste flake. The feature was identified during site evaluation work in 2003 and is dated to the Mesolithic period.	TQ 5901 7318

TQ 57 SW 268	A series of sub circular post or stake holes up to 0.15m in diameter and up to 0.23m deep. The layout of the posts suggests some form of structure or fence and assumed to be contemporary with other prehistoric post holes found on this site	TQ 5904 7320
TQ 57 SW 269	A series of prehistoric pits and post hole features from the excavated area, with several containing debitage and worked flint diagnostically dated to late Mesolithic to early Neolithic activity on the site.	TQ 5125 7275
TQ 57 SW 270	A single post hole containing post medieval pottery found during excavation work at the Bexley Hospital Phase II site during 2001	TQ 5125 7275
TQ 57 SW 271	A collection of lithic artefacts comprising nine hand axes and eleven waste flakes recovered during evaluation and observation work between December 1999 and May 2002. Dated to the Lower and Middle Palaeolithic periods.	TQ 5917 7046