



Land at Coldharbour Road/Wrotham Road Gravesend, Kent

Archaeological Desk-based Assessment





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GRAVESEND, KENT
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Front Cover: Plate from north west across site showing footpath across Site

Figure 1 Study Area with results from gazetteer

Figure 2 Map regression: a) Northfleet Tithe Map 1841
b) 1st Edition OS 1869-73
c) OS 1938 Edition

Plate 1 Removed due to copyright

LAND AT COLDHARBOUR ROAD/WROTHAM ROAD, GRAVESEND, KENT

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Summary

Wessex Archaeology was commissioned by Capital Enterprise Centres (Jersey) Ltd to undertake an archaeological desk-based assessment of Land at Coldharbour Road/Wrotham Road, Gravesend, Kent (the Site). The Site, centred on Ordnance Survey National Grid Reference (NGR) 563990 171533, covers an area of c. 2.3 hectares. At the time of writing, commercial development of the Site is envisaged. A circular Study Area extending for 1km from the centre of the Site has been considered in order to provide an archaeological and historical context for interpretation.

Extensive fieldwork undertaken over the past few decades in this area, including the Channel Tunnel Rail Link, the A2 road widening scheme and the construction of commercial properties, has resulted in a substantial archaeological record for this area. The area has extensive prehistoric remains, which have been observed from aerial photographs and, more recently, excavated. There is evidence for prehistoric funerary activity, Iron Age and Romano-British settlement associated with Watling Street (A2) and medieval settlement to the south of the A2 road. No evidence for the Anglo-Saxon period has been recorded in this area.

It has been noted from historic mapping that the Site prior to 1840s until today has been under agricultural practice, with no evidence for construction on the Site from this date. There are no Listed Buildings within the Study.

Previous impacts on the Site are limited to potential from plough damage due to agricultural practice, from cartographic sources no construction appears to have been undertaken on the Site. Potential impacts due to development activities include excavation, ground disturbance and ground compaction as a result of building, access, surfacing, service installation and landscaping measures. Any ground intrusive activity proposed at the Site beyond made ground could impact any surviving archaeological deposits or features that may survive *in situ*.

Overall, a **moderate to high** potential has been identified for the existence and survival of archaeological deposits within the Study Area. There is no known recorded archaeology within the Site footprint, but this is probably due to the Site having been under arable cultivation prior to the mid 19th century through to today. Predicted archaeology on the Site is likely to be limited to evidence of the prehistoric through to the Romano-British periods.

Based upon the results of the Desk-Based Assessment, archaeological evaluation is likely to be required prior to development in order to inform an appropriate mitigation strategy.

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GRAVESEND, KENT**

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This report was researched and compiled by Hilary Valler and the illustrations were prepared by Kitty Brandon. The project was managed for Wessex Archaeology (in London) by Peter Reeves.

LAND AT COLDHARBOUR ROAD/WROTHAM ROAD, GRAVESEND, KENT

Archaeological Desk-based Assessment

1 INTRODUCTION

1.1 Project Background

- 1.1.1 Capital Enterprise Centres (Jersey) Ltd commissioned Wessex Archaeology to undertake an archaeological desk-based assessment on Land at Coldharbour Road/Wrotham Road, Gravesend, Kent, hereafter, the Site.
- 1.1.2 The Site covers an area of c. 2.3 hectares, centred on National Grid Reference (NGR) 563990 177533 (**Figure 1**) and is proposed for commercial development.
- 1.1.3 The aim of the desk-based assessment (DBA) was to collate the known archaeological and historical information about the Site in the context of its surrounding area, and to assess, on the basis of that information and past impacts on the Site, the potential for undiscovered archaeological remains.
- 1.1.4 It also aimed to assess possible impacts on any archaeological resource likely to be caused by the development scheme and to suggest appropriate mitigation strategies.

1.2 Landscape and Geology

- 1.2.1 The Site comprises a field under crop. It is on level ground at an approximate elevation of 34m above Ordnance Datum (aOD).
- 1.2.2 The Site is rectangular shaped in plan with an area in the south east corner, not part of the Site. The Site is bounded by the A2 London to Canterbury road (Watling Street) on the south side; the A227 Wrotham Road on the east and Coldharbour Road along the north side with a spur road coming off it forming the entrance to a superstore on the west side.
- 1.2.3 The solid geology of the Site is shown to be of Thanet Sand formation overlying the Upper Chalk (British Geological Survey 1988, Sheet 271).

2 METHODOLOGY

2.1 Scope

- 2.1.1 The aim of this report is to detail the known information relating to archaeology and the historic environment and to assess the potential for the presence of previously unknown elements that may be impacted by the proposed development.
- 2.1.2 A Study Area with a 1km circular radius around the Site was consulted. Research for this report was undertaken from 9th to 12th July 2007. A brief summary of the sources consulted is given below.

2.2 Research

- 2.2.1 A number of publicly accessible sources of primary and synthesised information were consulted.

Kent Sites and Monuments Records Office

- 2.2.2 The Kent Sites and Monuments Records office maintains the Sites and Monuments Record (SMR) database of all recorded archaeological sites, findspots and archaeological events within Kent including Listed Buildings, Conservation Areas and Scheduled Monuments. The database was consulted for this report and a synthesised summary of the records located within the Study Area is presented in the Gazetteer in **Appendix 1**.

- 2.2.3 This database is not a record of all surviving elements of the Historic Environment but is a record of the discovery of a wide range of archaeological and historical components of the Historic Environment. The information held within it is not complete and does not preclude the subsequent discovery of further elements of the Historic Environment that are at present unknown. Where it was possible to gain such information from other sources such as summary reports the exact location could not be ascertained and therefore, general excavation areas have been illustrated (**Figure 1**).

Legislative and Planning Documents

- 2.2.4 The Kent and Medway Structure Plan (Adopted September 2003) was consulted to inform of any existing development controls relating to the historic environment. This document has been prepared in accordance with national guidelines including Planning Policy Guidance (PPG) Notes 15 and 16.
- 2.2.5 The Site is not within an Archaeological Priority Zone as defined within the Structure Plan (Kent and Medway Structure Plan, 2003).

Documentary Sources

- 2.2.6 A search of other relevant primary and secondary sources was carried out digitally, in Wessex Archaeology's own library, at the Kent SMR and at the Centre for Kentish Studies, Maidstone. The sources consulted are listed in the References section below.

Cartographic Sources

- 2.2.7 A search of historic manuscripts and Ordnance Survey maps was undertaken. The Centre for Kentish Studies was consulted for cartographic sources. The study of maps and other associated historical sources helps to clarify the archaeological potential of the Study Area in two ways. Firstly, it suggests aspects of the medieval and later land-use prior to its modern development. Secondly, it pinpoints areas within the Study Area which, as a result of that development, are likely to have become archaeologically sterile. The maps relevant to the Site are listed in the references section (**Appendix 2**).

Site Visit

- 2.2.8 The Site was visited on the 12th July 2007. The aim of the visit was to assess the general aspect, character, condition and setting of the Site and to

identify any potential impacts not evident from the sources. A photographic record of the visit was made and is held in the project archive.

Best Practice Guidance

- 2.2.9 This assessment has been carried out in accordance with the Institute of Field Archaeologists' *Standards and Guidance for Archaeological Desk-Based Assessment* (IFA 1994 revised September 2001).

Assumptions

- 2.2.10 The SMR data consists of secondary information derived from varied sources, only some of which have been directly examined for the purposes of this assessment. The assumption is made that this data, as well as that derived from other secondary sources, is reasonably accurate.

2.3 Legislative and Planning Background

National Legislation and Planning Guidance

Archaeology

- 2.3.1 The main legislation concerning the protection of important archaeological sites is the *Ancient Monuments and Archaeological Areas Act 1979* (as amended). This act provides for nationally important archaeological sites to be statutorily protected as Scheduled Ancient Monuments (SAM's). Under this act Scheduled Monument Consent (SMC) must be sought for any works which may affect a designated Scheduled Monument.
- 2.3.2 The principal national guidance on the importance, management and safeguarding of the archaeological resource within the planning process is *Planning Policy Guidance Note 16: Archaeology and Planning* (PPG 16) issued by the Department of the Environment in November 1990. The underlying principle of this guidance is that archaeological resources are non-renewable, stating that:

...Where nationally important archaeological remains, whether scheduled or not, are affected by proposed development there should be a presumption in favour of their physical preservation. (Para. 8)

Paragraph 19 states:

In their own interests...prospective developers should in all cases include as part of the research into the development of a site...an initial assessment of whether the site is known or likely to contain archaeological remains.

Paragraph 22 adds:

Local Planning Authorities can expect developers to provide the results of such assessments ...as part of their application for sites where there is good reason to believe there are remains of archaeological importance.

In addition paragraph 25 advises:

Where planning authorities decide that the physical preservation in situ of archaeological remains is not justified in the circumstance of the case...it would be entirely reasonable for the planning authority to satisfy itself,

before granting planning permission, that the developer has made appropriate and satisfactory provision for the excavating and recording of the remains. Such excavation and recording should be carried out before the development commences, working to a project brief prepared by the planning authority and taking advice from archaeological consultants.

Local Planning Guidance

- 2.3.3 The *Kent and Medway Structure Plan* Adopted September 2003 (KMSP) sets out detailed policies and specifications for development and land-use. The KMSP states that (Kent & Medway Structure Plan 2003a):

5.1.6 The emphasis should be on preserving archaeological sites 'in situ' (i.e. in their original position). If this is not appropriate or possible, then an archaeological investigation for the purpose of 'preservation by record' will be required before the site is developed. This is likely to involve a full archaeological excavation and recording of the site, conservation of any finds, and publication of the results. Provision should be made for the long-term storage of the site archive and finds, for future generations. Displays, both temporary and permanent, can help people to appreciate the value of archaeology and can provide a sense of history for new and existing communities.

The Kent Extensive Urban Archaeology Survey provides an overview of the archaeological resources of Kent's historic towns and sets out a framework for taking this into account in assessing development proposals. This will be adopted as Supplementary Planning Guidance.

Policy QL8 refers to archaeological sites and states that:

The archaeological and historic integrity of scheduled ancient monuments and other important archaeological sites, together with their settings, will be protected and, where possible, enhanced.

Where important or potentially important archaeological remains may exist, developers will be required to arrange for archaeological assessment and/or field evaluation to be carried out in advance of the determination of planning applications.

Where the case for development affecting an archaeological site is accepted, the archaeological remains should be preserved in situ. Where preservation in situ is not possible or justified, appropriate provision for preservation by record will be required.

3 RESULTS

3.1 Introduction

- 3.1.1 This section of the report details the archaeological constraints in terms of the proposed development and is based on information derived from the sources listed in the methodology, taking into account the likely effects of previous land use and the preservation of potential remains.

3.2 Legislative and Planning Constraints

- 3.2.1 For ease of reference details of any statutory and/or local planning designations are detailed separately below.

Scheduled Monuments

- 3.2.2 There are no Scheduled Monuments within the Study Area.

Areas of Archaeological Potential

- 3.2.3 There are no Areas of Archaeological Potential within the Study Area.

Listed Buildings

- 3.2.4 There are no Listed Buildings within the Study Area.

3.3 Archaeology

- 3.3.1 The wider Study Area reflects human habitation from the early prehistoric period through to the present day with an emphasis on evidence from the prehistoric and Romano-British periods, particularly associated with settlements in the area. With the plethora of fieldwork undertaken over the past few decades in this area, such as the Channel Tunnel Rail Link, the A2 road widening scheme and the construction of commercial properties, a substantial archaeological record has been established.

Prehistoric (500,000BC-AD43)

- 3.3.2 The landscape around the Site has produced a significant amount of evidence from the prehistoric period. As well as evidence recovered from archaeological fieldwork, probable prehistoric remains have been observed on aerial photographs of the local landscape (**Plate 1**). On the opposite side of the A2 (former Watling Street) from the Site, cropmarks of a planned field system have been recorded in two fields (**WA1** and **WA2**). These have been given a general interpretation as prehistoric in date. Fieldwork near to (**WA2**) was undertaken as part of the Channel Tunnel Rail Link (CTRL) work, at a site (Site Code: ARC TLG 98) along the south side of the A2 from Tollgate. Cropmarks in the form of a boundary ditch and pits were excavated (**WA3**) but did not produce more specific dates.

Palaeolithic (500,000BC-10,000BC)

- 3.3.3 Further evidence of archaeological remains in the area to the south east of the Site was recovered on a CTRL site (South East of Tollgate: Site Code: ARC TGS 97). A pointed bi-face handaxe was recovered from fieldwork on the site (**WA4**). Occasional finds have been recovered in the Study Area; two handaxes and nine pieces of debitage dating from the Lower to Middle Palaeolithic were recovered from Dundel's Farm to the north west of the Site (**WA5**).

Mesolithic (10,000BC-4000BC)

- 3.3.4 Very little evidence for this period has been recovered from the Study Area, a scatter of struck flint was dated to the Mesolithic or Neolithic period were

recovered during fieldwork on the A2 road widening scheme (Site Code: A2PC06) to the south west of the Site (**WA06**).

Neolithic (4000BC-2400BC) to Bronze Age (2400BC-700BC)

- 3.3.5 A polished stone axe dating to the Neolithic period was recorded to have been found at the allotments south of the Mid-Kent Golf Course (**WA7**).
- 3.3.6 Excavations by Oxford Archaeology (OA) at Tollgate for the CTRL (Site Code: ARC TLG 95) on a number of previously identified cropmarks revealed a sub-rectangular ditched enclosure, possibly the remains of either a mortuary enclosure or a long barrow (**WA8**). Datable evidence was retrieved with flint debitage on the south side of the ditch. A group of sarsen stones including a saddle quern of possible Neolithic or Bronze Age date, probably the remains of part of a megalithic monument were located to the east of Church Road, Singlewell (Site Code: ARC TLG 95) (**WA9**).
- 3.3.7 Between Hazells Farm and Northumberland Bottom works by Museum of London Archaeology Service (MoLAS) on the CTRL (Site Code: ARC WNB 98) recovered a Late Neolithic to Early Bronze Age double cremation with pottery beakers near to the Wrotham Road (**WA10**). A single cremation in an upturned vessel to the north of Hazells Farm dated to the Early Bronze Age was also recovered (**WA11**), with rubbish pits and metal working area, animal pens and associated buildings and cooking pits dating to the Later Bronze Age to Early Iron Age associated with the later occupation in the area (**WA15**). A late Bronze Age cremation and Deverel–Rimbury vessel and other possible associated cremations were recorded just to the south east of the Site at Northumberland Bottom (**WA14**).
- 3.3.8 Later evidence of features were recorded on the Tollgate Cropmark Complex (Site Code: ARC TLG 95) where a small dry valley, forming a sediment trap was examined for prehistoric activity dated to the Bronze Age (**WA16**). Fieldwork to the south east of the Site at Henhurst Road (Site Code: ARC TLG 98) recorded a Late Bronze Age artesian well which contained perforated clay slabs and pottery, indicating a settlement nearby (**WA17**).
- 3.3.9 Approximately 280km directly to the south of the Site on the A2 road widening scheme a beaker pit was found (**WA18**). This was less than 150m from the Beaker burials found on the line of the CTRL (**WA14**) and provides evidence that further remains of this period in this area.
- 3.3.10 Fieldwork undertaken adjacent to the site, on the western side was conducted by Kent Archaeological Rescue Unit (KARU) in 1992 and Oxford Archaeological Unit (OA) in 1994 (Mudd 1995). These events revealed a Late Neolithic/Early Bronze Age enclosure (**WA19**) with two associated parallel linear ditches interpreted as a droveway (**WA20**). The droveway was orientated north to south, measuring over 100m in length with associated ditches and gullies. The site provides good evidence for large-scale land division for this period in this area of Kent with the suggestion "...that the settlement was an arable counterpart to specialised transhumant pastoralism on higher and lower ground" (Mudd 1995, 363).
- 3.3.11 Further evidence of a possible Bronze Age settlement has been suggested from cropmarks of a circular/sub-circular enclosure with internal features and

entrance to the south east of the Site (**WA21**). Fieldwork at Tollgate (Site Code: ARC TLG 98) has provided evidence for occupation in the form of rubbish pits (**WA22**) between the Tollgate mortuary enclosure to the west and Church Road, Singlewell (not illustrated).

Iron Age (700BC-AD43) to Romano-British (AD43-410)

- 3.3.12 The A2 road widening scheme fieldwork undertaken by Oxford Archaeology (Site Code: A2PC06) provided a plethora of evidence for the Iron Age period. An Early Iron Age phase was found with a scatter of pits and postholes which included a probable four-post structure (**WA23**) to the south west of the Site. A settlement covering the Early, Middle and Late Iron Age stretched over 400m (**WA24**). Two parallel ditches orientated NNE-SSW which had been visible as a cropmark just to the east of the Tollgate Motel were noted to have probably represented successive Iron Age and more recent field boundaries (**WA25**). Also found during this fieldwork was a cluster of at least 7 four-post structures (**WA26**), just to the north of the Neolithic mortuary enclosure (**WA8**) and were presumed to be late prehistoric in date.
- 3.3.13 On the north side of Coldharbour Road part of a small Early Iron Age site was discovered during fieldwork (Mudd 1995) (**WA27**). A gold stater was found in 1921-2 during road widening of the A2 in the Tollgate Inn area (**WA28**); no further details of the archaeology appear to have been noted. The South East of Tollgate evaluation recovered a large pit which was 6 metres across with finds consisting of pottery, burnt and struck flint dating to the Late Iron Age/ Romano-British period (**WA29**).
- 3.3.14 Further evidence for the Middle Iron Age activity (**WA30**) was recovered at the Tollgate Cropmark Complex (Site Code: ARC TLG 95), though the nature of these activities were not specified in the evaluation report (Union Rail 1995, 1). A ditch trackway which had been partially visible on aerial photographs was uncovered during fieldwork on the site and was assumed to be of a late prehistoric period or later (**WA31**).
- 3.3.15 To the north of Hazells Farm a concentration of pits, one of which contained a 'ritual deposit' of animal carcasses and another a rare La Tène brooch were excavated during fieldwork for the CTRL (ARC WNB 98). Boundary ditches, roads, four post structures and enclosures with dispersed pits and enclosure ditches on the site and dated to the Mid to Late Iron Age (**WA32**). On the same site a large multi-phase enclosure contained horse burial, ovens/kilns, pits, postholes and a possible 'ritual cooking pit', with occupation dated between 1st century BC to around AD70 (**WA33**). The same site produced features associated with occupation and mining near Wrotham Road dated into the 3rd century AD. Occupation has also been indicated from this stage of fieldwork at Northumberland Bottom and Hazells Farm (**WA34**).
- 3.3.16 The CTRL fieldwork also recorded occupation features including rubbish pits and postholes of the Late Iron Age/Early Romano-British period at Tollgate (Site Code: ARC TLG 98) (**WA35**). Also on the site was a gravel road in a hollow way on either side of Henhurst Road. The road dates to the 1st century AD and is parallel to the later(?) Watling Street (A2) which is situated c. 360m to the north. It is suggested (Union Railways (South) Limited 2001) that the gravel road/hollow way is the first phase of Roman

Watling Street, replaced at the end of the 1st century AD (**WA36**). Associated with the gravel road are a series of large 'artesian wells' (**WA37**). They are mostly dated to the 1st century AD but one contained finds dated to the 2nd/3rd century AD. Ditches found during this stage of fieldwork were also dated to the Early Romano-British period (**WA38**).

- 3.3.17 A late 1st century AD rectangular ditch enclosure was recorded during fieldwork for the A2 road widening scheme (**WA39**). This included a single rich burial within the north east part of the large enclosure and a smaller burial enclosure outside the north west corner, within which further high status burials were found. The rich graves were all of 1st century AD date, but there were also probable early 2nd century AD cremations and a 3rd century AD inhumation within the burial enclosure. Several post-pits possibly indicating an aisled building were also found in the area.
- 3.3.18 In 1921-2 a circular cist of Roman tile was found during road widening operations 200 yards east of Northumberland Bottom. No funerary remains were found but two holes had been penetrated from the outside into the wall suggested that it had been previously robbed. It has since been removed and there is no trace of the cist now except in the SMR (**WA40**). Further reconstructions on the A2 in 1927 recovered a billon tetradracm of Diocletian (Alexandria Mint) from AD285 (**WA41**). Also mentioned in the SMR were cropmarks recorded from aerial photographs which have been interpreted as possibly Roman boundary ditches (**WA42**), a rectangular enclosed settlement without an entrance or internal features (**WA43** and **WA45**) and a settlement complex consisting of a rectangular enclosure with entrances and internal features (**WA44**). A well stratified shaft, probably a rubbish pit (**WA46**) was found near to the tile-cist (**WA40**) but has since been destroyed by road widening.

Anglo-Saxon (AD410–1066)

- 3.3.19 No evidence for this period has been recovered for the Study Area. There is a likely presence or potential for as yet unknown archaeological remains of this date due to other sites having been found in this area of Kent.

Medieval (AD 1066-1499)

- 3.3.20 The fieldwork undertaken directly adjacent to the Site by Oxford Archaeology (Safeway Site) recovered some deep chalk pits/shafts which could possibly have been 'deneholes'. No evidence to establish the purpose of the pits, if they were natural 'deneholes', wells or had been used (**WA47**), was recovered.
- 3.3.21 To the south of the Site at Northumberland Bottom during CTRL fieldwork (Site Code: ARC WNB 98), a medieval settlement was discovered (**WA48**). This comprised two phases of enclosures dating between 1050 and 1350 and included buildings, ovens and pits established on high ground. On lower ground at Hazells Farm malting ovens and enclosures were dated from 1100-1300, and pits and postholes were found to the east of Downs Road.
- 3.3.22 To the east along the CTRL line, medieval boundary/ driveway ditches (**WA49**) were recorded parallel to Church Road (Site Code: ARC TLG 98) and the continuation of the medieval settlement was recorded to the east on this phase of CTRL fieldwork (**WA50**).

- 3.3.23 The continuation of a 12th-14th century medieval settlement found on the CTRL (**WA48-WA50**) was also found during fieldwork on the A2 road widening scheme (**WA51**). This consisted of a series of small plots containing pits and buildings, most of the latter being sunken-floored, although there were also post- and slot-built structures.

Post-Medieval (AD1500–to date)

- 3.3.24 Evidence for the post-medieval period in this area has been established due to fieldwork undertaken surrounding the A2.
- 3.3.25 At Tollgate (Site Code: ARC TLG 95) evidence was found for the post-medieval period with a brick kiln sunk into the chalk bedrock outside of the Study Area to the east which was probably connected with the construction of houses/inns in the vicinity of Cobham Service Station during the 17th/18th century (**WA52**).
- 3.3.26 Further work for the CTRL to the north of Hazells Farm (Site Code: ARC WNB 98) has discovered a brick clamp (**WA53**).
- 3.3.27 The medieval settlement mentioned above (Para. 4.1.20-4.1.22) was cut across by a post-medieval trackway (**WA54**).
- 3.3.28 Chalk mining has taken place during the post-medieval period, these are evident at Tollgate (Site Codes: ARC TLG 98 and ARC TLG 95) with large, sometimes multi-galleried, chalk mines recorded to the east and west of Church Road (**WA55**) and at Tollgate Motel (**WA56**). A chalk well is also recorded on the SMR at 1.6 km north east of Court Wood. This is a single entrance shaft with an irregular layout of galleries over an area of 5x6m southwards from the shaft. Pick marks can be seen on the walls, with the mining estimated to have been undertaken during the 18th century (**WA57**).
- 3.3.29 The area on and around the Site appears to be under agriculture prior to the mid 19th century. On the Northfleet Tithe Map of 1841 (**Figure 2a**), the Site is split into two fields, apportion 507 and 508. The apportionment notes that both fields 507 and 508 were both under arable and occupied by William Hubble (Kent Archaeological Society Web Site). The junction where the A2, Watling Street, meets the Wrotham Road is named 'Northumberland Bottom' where a cluster of buildings are represented.
- 3.3.30 The use of the Site continues to be agricultural with the first edition Ordnance Survey (OS) map of 1869-71 (**Figure 2b**) a footpath meeting the A2 road from the north west and the two fields having been amalgamated to form a single large field. To the south of the A2 'Northumberland Bottom' is again noted and the 'Turnpike Gate Inn' is on the south east corner of the A2 and Wrotham Road, known as Tollgate. There are no further changes noted on the 2nd Edition Ordnance Survey map of 1908 (not shown). The 1938 edition of the Ordnance Survey shows that there has been an extensive change made to the A2 road with widening and raising of the road with the footpath still present (**Figure 2c**).
- 3.3.31 To the south west of the Site at Northumberland Bottom, the site of a former defence establishment has been completely destroyed during the CTRL construction and associated works in 1999. The site dates back to 1938 when a four-gun 4.5-inch heavy anti-aircraft battery was established with

barracks to the north west of the site. By 1942 a radar station was added. After the war the site was apparently used as a civil defence training camp until the 1960s. A Royal Observer Corp observation post was established in the vicinity, probably as a nuclear fall-out monitoring post, the location of which has not been established (**WA58**).

- 3.3.32 On the eastern side of the site, an electric substation has been constructed on the side of the A227 within a wooded area adjacent to the Site. The field to the east has been changed to incorporate a large junction with roundabouts coming from the A2 onto the Wrotham Road with the road direction slightly altered. It is unknown when these changes were implemented but would appear to have been in the middle to later half of the 20th century (**Figure 1** and **Plate 1**).

Unknown Date and Negative Evidence

- 3.3.33 The aerial photographs of the area have shown a plethora of archaeological features, some of which have been excavated and therefore, provide dates but others have provided little or no datable evidence. A linear feature excavated during fieldwork on CTRL at South East of Tollgate (Site Code: ARC TGS 97) contained charcoal and struck flint (**WA59**).
- 3.3.34 Some chalk pits (**WA60**) were recorded on the Safeway Site on Coldharbour Road adjacent to the Site. One further to the south east approximately 900m from the Site (**WA61**) in King Edward's Road, off Singlewell Road was found in 1936 and has four or possibly five chambers. The interpretation and date of these holes is undetermined; it has been suggested that they could be termed as 'deneholes' or chalk wells. The definition of a 'denehole' in the Victoria County History of Kent is that they "...were deep shafts used as secret hiding places, storehouses, or for other domestic purposes..." and goes on to say that when commenting about similar holes at Stankey Wood near Dartford Heath that "...these were not 'chalk wells' because there was plenty of bare chalk within a mile which would have been far easier to extract" (Victoria County History of Kent, 455). But as mentioned by Mudd (1995, 405) there may have been other factors such as land tenure or traditional rights and uses which played an important role in allocating resources such as chalk extraction and, therefore, no conclusion can be established.
- 3.3.35 As mentioned above (para.4.1.30), aerial photographs have shown features in the landscape. To the south east of the Site at Tollgate undated features have been noted from aerial photographs, two trackways (**WA62** and **WA63**) were recorded with a possible enclosure (**WA64**) and a small rectangular enclosure (**WA65**).

4 EXISTING AND POTENTIAL ARCHAEOLOGICAL IMPACTS

4.1 Existing Impacts

- 4.1.1 Knowledge of the recorded historic environment resource can assist in the prediction of buried archaeological remains that may be present or the absence of remains due to previous impacts on the Site.
- 4.1.2 The previous impact on the Site has been illustrated on the map regression exercise (**Figures 2a-c**), demonstrating that the Site has since the middle of the 19th century been under arable cultivation and no construction appears on more recent maps.
- 4.1.3 As a result of the Site being consistently under arable cultivation, conditions for the survival of potential buried archaeological remains prior to this date are considered to be **moderate**, though any remains may have suffered plough damage.

4.2 Potential Impacts

- 4.2.1 Development activities which may impact upon the historic environment resource include:
- Excavation, ground disturbance and ground compaction as a result of building, access, surfacing, service installation and landscaping measures.
 - Temporary land-take during construction phase including compounds, stockpiling, storage and temporary site access.
- 4.2.2 These activities could lead to the following effects on the historic environment resource:
- Permanent complete or partial loss of an archaeological feature or deposit as a result of ground excavation.
 - Permanent or temporary loss of the physical and/ or visual integrity of a feature, monument, building or group of monuments.
 - Damage to resources as a result of ground excavation.
 - Damage to resources due to compaction, desiccation or water-logging.
 - Damage to resources as a result of ground vibration caused by construction traffic.
- 4.2.3 All ground intrusive activity proposed at the Site beyond made ground will pose threats to any surviving archaeological deposits or features that survive *in situ*.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Archaeological Constraints

5.1.1 Overall, there is a **moderate to high** level of recorded archaeology dating from the prehistoric through to the Romano-British periods within the Study Area due to evidence for prehistoric funerary activity, Iron Age and Romano-British settlement associated with Watling Street (A2) and a medieval settlement to the south of the A2. No evidence for the Anglo-Saxon period has been recorded in the Study Area.

5.1.2 There is no known recorded archaeology within the Site footprint, but this is probably due to the Site having been under arable cultivation prior to the mid 19th century through to today. With the potential damage to archaeological remains through plough damage, it is therefore considered that there is a **moderate** potential for the survival of archaeological deposits within the Site footprint.

5.2 Further Works and Mitigation

5.2.1 As a result of previous fieldwork in the surrounding area, it is known that the Site is situated in an area of moderate to high archaeological potential, but with there being a consideration of possible plough damage due to agricultural practices over the past few centuries.

5.2.2 Based upon the results of the Desk-Based Assessment, archaeological evaluation is likely to be required prior to development in order to inform an appropriate mitigation strategy.

6 REFERENCES

Cartographic Sources

Map Title	Date	Scale	Source
Northfleet Tithe Map	1841	Unknown	Centre for Kentish Studies
1 st Edition OS	1869-71	6"	Centre for Kentish Studies
3 rd Edition OS	1908-09	1"	Centre for Kentish Studies
OS 1938 Edition	1938	1"	Centre for Kentish Studies

Aerial Photographs

Reference Number	Date	Source
3126	11 October 1946	Kent SMR
6387	13 July 1972	Kent SMR
Run 8/70	11 July 1990	Kent SMR

7 SOURCES

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Union Railways (South) Limited 2001, *Area 330 (Zone 4) Tollgate (ARC TLG 98) Post-excavation Assessment Report*

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<http://www.kmsp.org.uk/chapter05.html>

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<http://www.british-history.ac.uk/report.asp?compid=53754>

8 APPENDIX 1

Gazetteer of sites and findspots on Figure 1

WA No	Easting	Northing	Description	Period	Other References (GLSMR No/ Site Codes)
1	564290	170800	Cropmark of planned field system	Prehistoric	TQ67SW137
2	563930	171200	Cropmark of planned field system	Prehistoric	TQ67SW123
3			Boundary ditch and pits	Prehistoric	CTRL Site Code: ARC TLG 98 (MoLAS) Area 33 Arch Zone 4 Tollgate
4	564700	170900	Pointed bi-face handaxe	Palaeolithic	TQ67SW369 CTRL Site Code: ARC TGS 97 (MoLAS) South East of Tollgate
5	563510	172000	2 handaxes and 9 debitage fragments	Palaeolithic	TQ67SW453
6	563250	171550	Scatter of struck flint	Meso/Neo	A2PC06
7	564000	171000	Polished stone axe	Neolithic	TQ67SW22
8	564390	170970	Excavation of a number of previously identified cropmarks revealed a sub-rectangular ditched enclosure possibly remains of either mortuary enclosure or long barrow. Flint debitage on south side of ditch	Neolithic	TQ67SW418 CTRL Site Code: ARC TLG 95 (OA) Tollgate Cropmark Complex
9			Sarsen stones east of Church Road	LNEO-EBA	CTRL Site Code: ARC TLG 98 (MoLAS) Area 33 Arch Zone 4 Tollgate
10			Double inhumation with pottery beaker	LNEO-EBA	CTRL Site Code: ARC WNB 98 (MoLAS) Area 33 Arch Zone 3 Northumberland Bottom
11			Single cremation north of Hazells Farm	EBA	CTRL Site Code: ARC WNB 98 (MoLAS) Area 33 Arch Zone 3 Northumberland Bottom
12	565030	170770	Curving enclosure ditch containing a small oval of postholes, possibly a house and a large posthole	MBA	A2PC06
13	563700	171350	Ditch, palisade slop & unurned cremations with scatter of EIA pits (see WA21)	LBA	A2PC06
14			Cremation & Devill Rimbury vessel at Northumberland Bottom plus possible associated cremations	LBA	CTRL Site Code: ARC WNB 98 (MoLAS) Area 33 Arch Zone 3 Northumberland Bottom

15			Rubbish pits & metal working area, animal pens & associated buildings north of Hazells Farm	LBA	CTRL Site Code: ARC WNB 98 (MoLAS) Area 33 Arch Zone 3 Northumberland Bottom
16			Features	LBA	CTRL Site Code: ARC TLG 95 (OA) Tollgate Cropmark Complex
17			Artesian well	LBA	CTRL Site Code: ARC TLG 98 (MoLAS) Area 33 Arch Zone 4 Tollgate
18	564000	171250	Beaker pit	LBA	A2PC06
19	563810	171670	Settlement	LBA	TQ67SW177, OA Safeway site 1994
20	563810	171670	Ditches & gullies interpreted as droveways with attached settlement (WA18)	LBA	TQ67SW177, OA Safeway site 1994
21	564280	170680	Enclosed settlement	LBA	TQ67SW135
22			Occupation	LBA-EIA	CTRL Site Code: ARC TLG 98 (MoLAS) Area 33 Arch Zone 4 Tollgate
23	563700	171350	Pits & postholes including a four post structure	EIA	A2PC06
24	563100	171600	Settlement, EM&L Iron Age continuation of settlement from other fieldwork	IA	A2PC06
25	564330	171100	Two parallel n/s ditches field boundaries	IA	A2PC06
26	564420	171110	Cluster of at least 7 four-post structures	IA	A2PC06
27	563810	171670	Settlement	IA	TQ67SW177, OA Safeway site 1994
28	564000	171000	Gold stater	IA	TQ67SW19
29			Large pit	LIA-RB	CTRL Site Code: ARC TGS 97 (MoLAS) South East of Tollgate
30			Features	IA	CTRL Site Code: ARC TLG 95 (OA) Tollgate Cropmark Complex
31			Ditched trackway	LIA-RB	CTRL Site Code: ARC TLG 95 (OA) Tollgate Cropmark Complex
32			Occupation	IA	CTRL Site Code: ARC WNB 98 (MoLAS) Area 33 Arch Zone 3 Northumberland Bottom
33			Large multi-phase enclosure and road. Enclosure with horse burial etc	LIA-RB	CTRL Site Code: ARC WNB 98 (MoLAS) Area 33 Arch Zone 3 Northumberland Bottom
34			Occupation	Romano-British	CTRL Site Code: ARC WNB 98 (MoLAS) Area 33 Arch Zone 3 Northumberland Bottom
35			Occupation	LIA-RB	CTRL Site Code: ARC TLG 98 (MoLAS) Area 33 Arch Zone 4 Tollgate

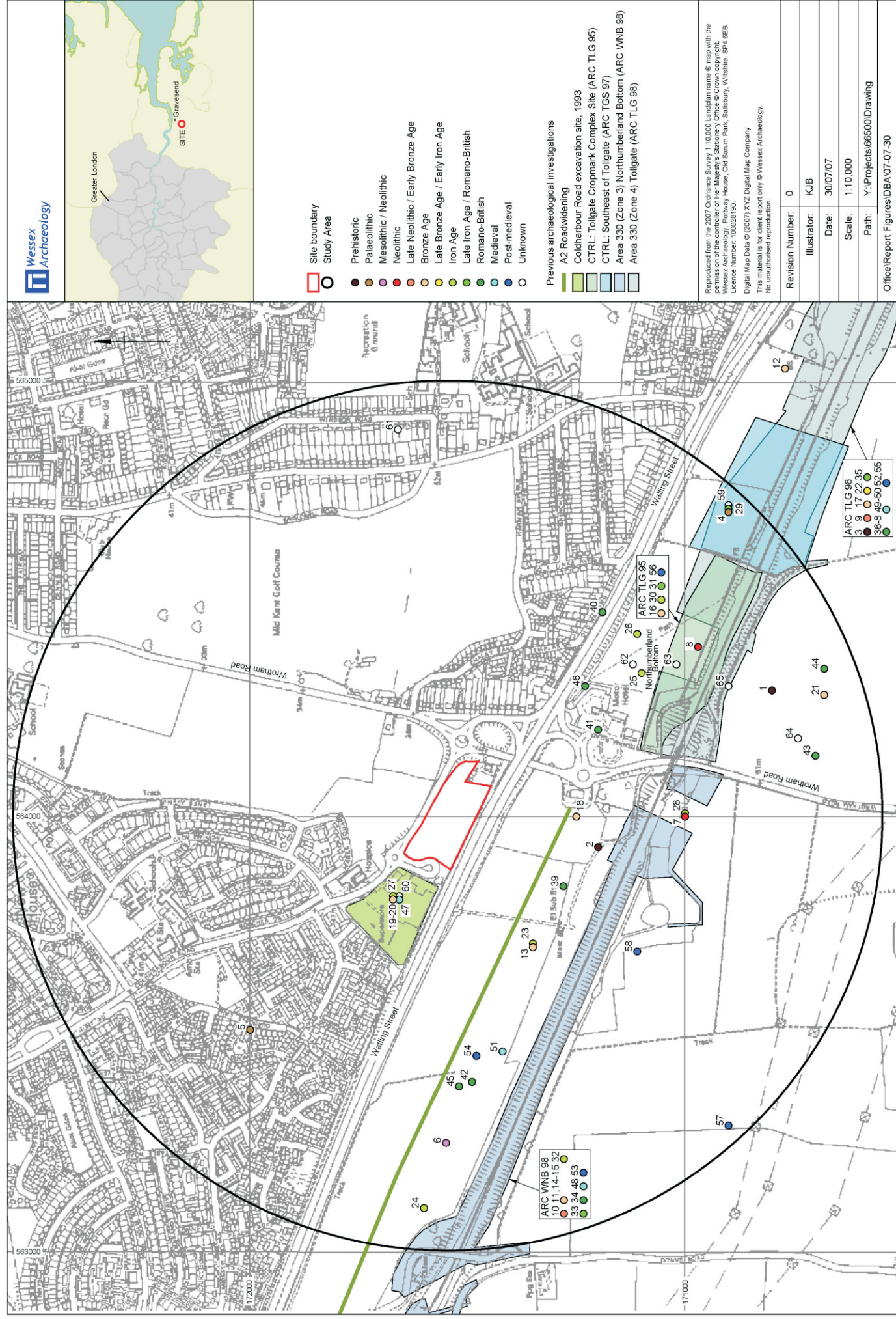
36			Gravel Road	Romano-British	CTRL Site Code: ARC TLG 98 (MoLAS) Area 33 Arch Zone 4 Tollgate
37			Series of artesian wells	Romano-British	CTRL Site Code: ARC TLG 98 (MoLAS) Area 33 Arch Zone 4 Tollgate
38			Ditches	Romano-British	CTRL Site Code: ARC TLG 98 (MoLAS) Area 33 Arch Zone 4 Tollgate
39	563840	171280	Rectangular ditch enclosure from 1 st century with single rich burial and small burial enclosure with further high status burials.	Romano-British	A2PC06
40	564470	171190	Cist	Romano-British	TQ67SW17
41	564200	171200	Coin AD285	Romano-British	TQ67SW11
42	563390	171490	Cropmark boundary ditch	Romano-British	TQ67SW140
43	564140	170700	Enclosed settlement	Romano-British	TQ67SW134
44	564340	170680	Enclosed settlement	Romano-British	TQ67SW127
45	563380	171520	Enclosed settlement	Romano-British	TQ67SW125
46	564300	171230	Pit	Romano-British	TQ67SW16
47	563810	171670	Chalk pit/well/denehole	Medieval	TQ67SW177, OA Safeway site 1994
48			Occupation	Medieval	CTRL Site Code: ARC WNB 98 (MoLAS) Area 33 Arch Zone 3 Northumberland Bottom
49			Boundary/droeway ditches	Medieval	CTRL Site Code: ARC TLG 98 (MoLAS) Area 33 Arch Zone 4 Tollgate
50			Occupation	Medieval	CTRL Site Code: ARC TLG 98 (MoLAS) Area 33 Arch Zone 4 Tollgate
51	563460	171420	12 th – 14 th century settlement including plots containing pits and buildings, the latter being sunken-floored, post and slot-built structures	Medieval	A2PC06
52			Brick kiln	Post-	CTRL Site Code: ARC TLG 98 (MoLAS) Area 33

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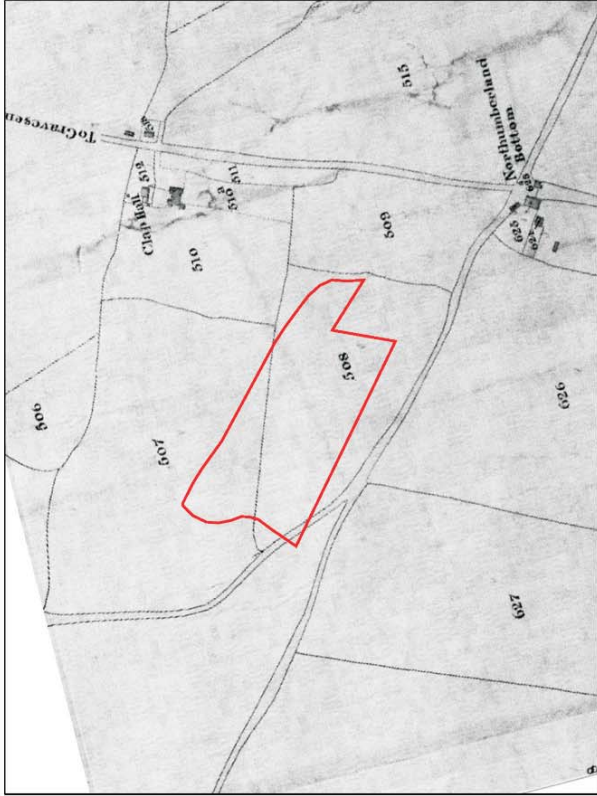
9 APPENDIX 2

Table of Archaeological Fieldwork in the Area

Site Code	Name of Site	Site works related to	Date	Undertaken by
UNKNOWN	Safeway Site	Safeway	1994	OA
ARC TLG 95	Tollgate Cropmark Complex	CTRL	1995	OA
ARC TGS 97	South East of Tollgate	CTRL	1997	MoLAS
ARC WNB 98	Area 33 Arch Zone 3 Northumberland Bottom	CTRL	1998	MoLAS
ARC TLG 98	Area 33 Arch Zone 4 Tollgate	CTRL	1998	MoLAS
A2PC06	A2 Road Widening Scheme	A2 Road Widening	2007	OA



Study Area with results from gazetteer



A. Northfleet Tithe map, 1841



B. 1st Edition Ordnance Survey map, 1889-73



C. Ordnance Survey map, 1938



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