

**Archaeological and Geoarchaeological Investigation
on the Route of the Ashford Orbital Park Sewer
Ashford, Kent**

**NGR: 602348 141978
NGR: TR 02348 41978**

**Project No: 3980
Site Code: AOS09**

**ASE Report No: 2011082
OASIS id: archaeol6-103054**

By Dylan Hopkinson, Chris Pine, Greg Priestley-Bell

**With contributions from Lucy Allott, Gemma Ayton
Luke Barber, Trista Clifford, Anna Doherty
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Illustrations by Dylan Hopkinson and Justin Russell

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Abstract

Archaeology South-East was commissioned by 4Delivery Limited to carry out a programme of archaeological and geoarchaeological investigation during and ahead of groundworks associated with the new Ashford Orbital Sewer, Ashford, Kent. The work comprised three elements:

- *Geoarchaeological evaluation at Waterbrook Park Pumping Station.*
- *Evaluation by trial trench of three discrete areas: Waterbrook Park Pumping Station, pipeline corridor north of the M20 and Alsops Road Pumping Station.*
- *Watching brief along the route of the pipeline trenching between Waterbrook Park Pumping Station and the Bybrook Wastewater Treatment Works.*

The Geoarchaeological evaluation of the Waterbrook road pumping station site confirmed that undisturbed Weald Clay was overlain by head/colluvium/alluvium and suggest that the site lies at the edge of palaeochannel with an upper bank slope dipping towards an alluvial band / corridor to the north of the site.

Archaeological evaluation of the Waterbrook pumping station site revealed two possibly prehistoric ditches of similar character that perhaps represented elements of a field system. A medieval possible pond produced pottery dating from mid/late 14th century to early/mid 15th century. A shallow linear post-medieval/modern feature was possibly the result of early mechanical mineral extraction, perhaps brickearth digging. A ditch, infilled in modern times and was probably a field boundary/drainage ditch.

No archaeological remains were recorded during the evaluation of the pipeline corridor to the north of the M20.

Archaeological evaluation of the Alsops Road Pumping Station site revealed a Middle/Late Bronze Age pit that perhaps served as a well. The small size of the proposed well might suggest that it was associated with domestic settlement rather than for watering livestock. A very truncated Middle/Late Bronze Age small pit or post-hole was also recorded.

During the watching brief phase of the works, probable post-medieval quarrying was identified at three locations.

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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) was commissioned by 4Delivery Ltd (4D) to undertake a programme of archaeological investigation during groundworks associated with the installation of the new 'Ashford Orbital Sewer', Ashford, Kent (Fig. 1; centred on NGR: 602348 141978). Henceforth this is referred to as 'the site', 'the sewer route' or 'the route'.

1.1.2 Installation of the sewer consisted of the following three main elements of groundwork:

- 4.1km of pipeline trenching and working easement
- A new Pumping Station at Alsops Road
- A new Pumping Station at Waterbrook Park

1.2 Site location

1.2.1 The route of the sewer runs from the existing Bybrook Wastewater Treatment Works, under the Network Rail Line and the M20 and then through Willesborough following Cradlebridge Drive, Harvey Avenue, Earls Avenue/Hunter Avenue, Bentley Road and Alsops Road. It then crosses beneath the CTRL and along Crowbridge Road and The Boulevard, Bad Munstereifel Road (the A2070) to Waterbrook Pumping Station (Fig. 1).

1.3 Planning background

1.3.1 The pipeline and the majority of associated works fall within the definition of Permitted Development under the Town and Country Planning (General Permitted Development) Order, 1995 (S.I 1995/418). The proposed pumping stations at Alsops Road and Waterbrook Park required planning permission. 4Delivery Ltd adhere to a code of Best Practice whereby the potential impact of their activities on archaeological remains is considered and mitigation strategies implicated. Southern Water's Environmental Management System Manual 226: Archaeology (EMS226) defines their objectives and responsibilities for the management of the archaeological resource.

1.3.2 An Archaeological Desk Based Assessment was prepared for the area of proposed route (DBA; ASE 2007). This document outlined recommendations for geoarchaeological and archaeological investigation along the route and was formed in consultation with Wendy Rogers (Senior Archaeological Officer, Heritage Conservation Group, Kent County Council; HCGKCC).

1.3.3 The actual route was altered slightly from the proposed route described in the DBA and thus a new HER (Historic Environment Record) search was requested by HCGKCC to inform the new route.

1.3.4 Subsequently, a Written Scheme of Investigation (WSI; ASE 2009) was prepared outlining the proposed methodology and mitigation strategy. The WSI was approved by Wendy Rogers in advance of commencement of works.

1.4 Scope of Report

1.4.1 The fieldwork was undertaken by Dave Honess and Dylan Hopkinson (Archaeologists), Chris Pine (Geoarchaeologist) and Greg Priestley-Bell and Dan Swift (Senior Archaeologists) between 13th July 2009 and 22nd July 2010. The fieldwork was managed by Jon Sygrave (Project Manager) and the post excavation by Jim Stevenson (Post-excavation Project Manager).

1.4.2 The phases of fieldwork covered in this report are:

- Evaluation of land at Waterbrook Park
- Evaluation of land at Alsop's Rd
- Evaluation - Pipeline corridor north of M20
- Watching brief on the pipeline trenching and working easement

1.5 Aims and objectives

1.5.1 The aims and objectives of the fieldwork as detailed in the WSI (*ibid*) were:

General Aims

- A general aim was to record the nature, extent, date, character, quality, significance and state of preservation of any archaeological features and deposits affected by Ashford Sewer and associated works.
- A further general aim was to assess and record the nature, extent, date, character, quality, significance and state of preservation of the alluvial sequence and any palaeo-environmental remains affected by Ashford Sewer
- Report on the results of the fieldwork and publish and disseminate information as appropriate

Research Aims

- Assess the extent to which any remains of Neolithic to Roman date are associated with / similar to the remains recently uncovered at Waterbrook Farm.
- Are any Iron Age remains uncovered associated with the Late Iron Age spread of occupation of South Ashford?
- Are any of the remains uncovered associated with the nearby Roman Road and Romano British nearby Farmstead?
- Do any of the remains relate to the medieval Manorial complex of Hawkeswell?
- Particular attention should be paid to the continuity of land use from the prehistoric / Romano British period and the medieval landscape.

This has been suggested for other areas of the Weald, particularly Kent (SERF seminar October 2007).

Research Objectives

- Detail the remains found at Waterbrook Farm and compare the characteristic aspects (artefacts / feature type / environmental and faunal evidence) with any remains of Neolithic – Roman date found during the Ashford Sewer works. Do these suggest a similar type of occupation?
- Assess dating evidence, feature type and orientation of ditches / boundaries of Iron Age remains in relation to the settlements at Park Farm East and Brisley Farm. Are there substantive differences / similarities?
- Plot any Iron Age boundaries / ditches and compare in plan and orientation to the Park Farm East / Brisley Farm Iron Age ditch / enclosure systems.
- Are any field boundaries Roman in date? Plot these in relation to the Romano-British farmstead and assess the degree to which they may be associated. Assess any charred plant or faunal remains from features of this date to attempt to reconstruct the subsistence regime.
- Compare any medieval or post medieval remains, particularly boundary ditches, with the cartographic evidence to assess how they may relate to the Hawkeshill Manorial complex (if at all).
- Compare all ditches, but particularly those of prehistoric date to the cartographic sources to assess the potential of continuity of land boundaries from the prehistoric into the medieval and later periods.

2.0 BACKGROUND

2.1 As discussed above (1.3.3), changes in the sewer route meant that the DBA (ASE 2007) only covered the southern area of the actual route and thus a new 1km wide HER search was requested. The sites are shown on Fig. 1 and listed in Appendix 2. The following discussion summarises understanding of the archaeology of the area and is derived from the DBA (*ibid*), the WSI (ASE 2009), and the HER search:

2.2 Geology and Topography

2.2.1 The following is derived from Appendix 1 of the WSI (*ibid*).

2.2.2 *Cretaceous bedrock sequences* (in ascending stratigraphic order; Fig. 2)

2.2.3 The Weald Clay Formation (the oldest and at southern end of route corridor) consists of silty clay and clayey silt, with silts, sands, ironstones and clay ironstones. Typically, these clays are grey, weathering to mottled orange/yellow or steel grey, or red, retaining that colour in weathered condition.

2.2.4 The Atherfield Clay Formation consists of clays, silty clays and clayey silts (especially in upper part); locally sandy in upper part; locally glauconitic. In an unweathered state they are dark grey or black. When weathered they change to chocolate brown, bluish grey and brown, mottled pinkish brown to orange.

2.2.5 The Hythe Formation consists of alternating sandy limestones and glauconitic sandy mudstones.

2.2.6 The Sandgate Formation consists of fine sands, silts and silty clays, commonly glauconitic; some sands are limonitic or calcareous; some soft sandstones are also present.

2.2.7 The Folkestone Formation consists of medium- and coarse-grained, well-sorted cross-bedded sands and weakly cemented sandstones; including calcareous sandstones.

2.2.8 In all cases these sequences supply sediment for input into alluvium, fluvial sands and gravels and the local head sequences. Identification may be difficult in places where superficial head deposits (see below) may appear very similar to weathered bedrock elements.

2.2.9 *Local geomorphology* (Fig. 3)

2.2.10 The local geomorphology is determined by a number of features including the broad NW/SE trend of the bedrock geology within the Weald in this area, linked to the superimposed drainage pattern created by the rivers draining the Weald. Significantly, Ashford sits at the confluence of a number of channels draining through the Weald as evidenced by the distribution of alluvial sediments.

2.2.11 The southern end of the sewer route rests within an area of alluvium forming a broad basin like feature at a confluence of a number of smaller, meandering valley floor forms, one of which is the East Stour River.

2.2.12 To the north the sewer route runs towards the higher ground to the east of the River Stour that drains northwards towards Canterbury.

- 2.2.13 Superficial sediments along the sewer route consist of three broad categories of deposits: alluvium, head and sands and gravels.
- 2.2.14 Alluvium, extensively preserved across much of the sewer route, normally consists of soft to firm consolidated, compressible silty clay, but can contain layers of silt, sand, peat and a basal gravel laid down on or within a floodplain of the river. A stronger, desiccated surface zone may also be present. Usually a Holocene age is implied for most alluvium; however, the basal gravel is typically late Devensian in age. Alluvium may also bury older Pleistocene sequences.
- 2.2.15 By contrast, head consists of polymict deposits consisting of gravel, sand and clay depending on upslope source and distance from source. They are often poorly sorted and poorly stratified forming as a result of solifluction and/or hillwash and soil creep. Usually these are of Pleistocene age.
- 2.2.16 Finally, sand and gravel may be present and represents high energy fluvial systems deposited under cold climates during the 'ice ages'. Usually these occur as ribbons of sediment alongside floodplains or patches of deposits on valley sides. These may range in age from the late Devensian to early Pleistocene in age.

2.3 Geoarchaeological potential

- 2.3.1 In order to provide a framework for observations to be made within the route corridor it is necessary to consider the nature of the relationship between human activity and the spatial distribution of that activity within the landscapes (both ancient and modern). Within a geoarchaeological framework this is most easily achieved by considering the local geo-morphological context along with depositional conditions and the associated nature of human activity.
- 2.3.2 From a human perspective, the higher ground through the central part of the sewer route represents dry ground areas throughout the history of occupation (at least for the Holocene) while those associated with alluvium will have a more complex history, sometimes dry, sometimes wet. The sewer route runs both adjacent to the edge of the floodplain at its extreme southern end and transversely across the floodplain along the route of CTRL. Often critical to human activity are edge alluvial areas where boundaries between dry and wet ground occur.
- 2.3.3 *Human activity*
- 2.3.4 Human activity within the floodplain of major rivers is known to be diverse and the nature of the activities varies through time (Brown, 1997). These activities can range from kill sites on the edge of channels through to major port and harbour constructions and associated urban structures along rivers. The floodplains themselves have often been used for agricultural activity since the Neolithic and many routeways cross these areas. Consequently, evidence for many of these activities may be buried within floodplain areas where alluvium has been deposited.
- 2.3.5 More recently, it has been noted (Bates and Whittaker, 2004) that considerable evidence for human activity at the edge of floodplains, or the dry ground/wet ground interface, also exists.

- 2.3.6 Human activity away from the river and floodplains and on the interfluvies between channels etc. is less easy to predict. Activity in these areas is likely to be different to that on the floodplain.

2.4 Palaeolithic

- 2.4.1 Kent is rich in finds of Palaeolithic material (Wymer 1982: 8). Most of this material is derived from essentially secondary contexts, comprising isolated finds of artefacts, usually handaxes, and tends to concentrate in the major river valleys, particularly the Thames and its tributaries the Cray, Darent and Medway (Lewis 2000a; Lewis 2000b). Most of these finds were redeposited in river gravels laid down by post-glacial fluvial activity. Similar gravels in the lower reaches of the Stour valley, in the area around Canterbury (eg at Fordwich and Sturry), have produced many similar finds (Roe 1981:104-8).
- 2.4.2 Recent work at Park Farm, on the southern side of Ashford, has also uncovered a sequence of artefact horizons within the alluvial deposits of a former shoreline or floodplain, including one identified as Upper Palaeolithic (Bates 1993) and interpreted as the possible site of seasonal settlement and/or riverside hunting (CAT 1992; Hicks 1992). Other, isolated finds have also been made from the Ashford area (Anon. 2001). No Palaeolithic finds are known along the sewer route itself.

2.5 Mesolithic

- 2.5.1 The Mesolithic period is by nature elusive and only few *in situ* settlement sites are known in Kent, at rock shelter sites such as High Rocks, near Tunbridge Wells, and low-lying riverine sites such as Lower Halstow. However, similar sites probably await discovery sealed beneath later alluvial deposits.
- 2.5.2 Most often, Mesolithic sites are represented by concentrations of flintwork, often in clusters that may correspond to discrete activity zones. Much of the evidence focuses on the Wealden forests and the coastal marshlands, two areas of high resource potential (Drewett, Rudling & Gardiner 1988: 23).
- 2.5.3 A single flint knife, found during ploughing in the 1930s was found c. 600m from the sewer route (Fig. 1; 1) and a number of flint blades have been found at Park Farm, to the west of the sewer route.

2.6 Neolithic

- 2.6.1 The Neolithic was a period of increasing temperatures and the beginnings of more settled human occupation. It is marked by forest clearance and the development of permanent farming systems. Evidence for settlement sites of this period in the area are scarce, and many suitable locations in coastal and floodplain areas are likely to be deeply buried beneath later deposits. River valleys such as the Stour have, in the past, received less archaeological attention than the adjacent Chalk Downlands, (Whittle 1999, 61).
- 2.6.2 Current archaeological evidence suggests that during the Neolithic period limited attempts to exploit the Weald for agricultural purposes were made. This may be due to poorly drained soil and extensive woodland cover. The sandy soils of the Greensand Ridge located to the north of the sewer route would have provided a more tenable location for early agriculturalists.

- 2.6.3 In spite of this, possible Neolithic features and significant quantities of worked flint have recently been identified at Waterbrook Farm, at the southern end of the route.
- 2.6.4 Five Neolithic findspots are recorded close to the sewer route in the HER; a polished greenstone axe, found during ploughing in the 1930s (Fig. 1; 1), two flint flakes found during a watching brief (Fig. 1; 2), a flint scatter found on the site of a balancing pond (Fig. 1; 3), an arrowhead found in a ploughed field (Fig. 1; 4) and a number of worked flints residual within later features (Fig. 1; 5).
- 2.6.5 Further evidence of extensive Neolithic flint scatters have also recently been excavated by Waterbrook Avenue (near the Waterbrook Park pumping station), and several sections of an interrupted ditch containing Neolithic pottery have recently been excavated to the south of, and aligned on, the Waterbrook Park pumping station (pers. comm. Wendy Rogers).

2.7 Bronze Age

- 2.7.1 The Early Bronze Age is associated with new types of pottery such as Beaker, the emergence of metalwork, the construction of new types of ceremonial sites, notably round barrows often forming linear cemeteries on ridges. The Middle and Late Bronze Age saw a change in emphasis away from ceremonial and monumental landscapes towards the development of large-scale agricultural landscapes, typified by blocks of field systems associated with scattered settlements. As in earlier periods, the river valleys may hold great potential, as demonstrated by metalwork finds from the Medway, Len and Darent valleys (Yates 2004) as well as funerary and farming evidence from the Beult and the Tiese (Swift forthcoming).
- 2.7.2 There is an abundance of artefactual evidence from the Weald, but its archaeological potential is greatly enhanced by the results of recent excavations in the area, which suggest that the exploitation of clay was more significant than previously thought. Results include the identification of a possible Bronze Age field system at Westhawk Farm, to the south of Ashford, and evidence of intense Late Bronze Age/Early Iron Age occupation, and a large Middle Bronze Age cemetery (*pers comm.* Wendy Rogers, KCC) at Waterbrook Farm, immediately east of the southern end of the scheme.
- 2.7.3 Three sites of Bronze Age date are recorded within the area of the sewer route. A group of Early Bronze Age boundary ditches and possible Late Bronze post-holes, recorded during excavations at Boys Hall Road (Fig. 1; 6), a concentration of features found in an evaluation in 1992, including a ditch and a number of pits and postholes suggesting a possible settlement focus (with further evidence recently located in excavations by Wessex Archaeology, Fig. 1; 7), and Late Bronze Age features adjacent to the scheme (Fig. 1; 8). Recent work at the truck-stop south of Waterbrook Park has recovered further evidence of Bronze Age activity.

2.8 Iron Age

- 2.8.1 The Iron Age is characterised by increasing evidence for field systems, the development of defended sites and stronger influences from the Continent, with evidence in the later Iron Age for contact with Belgic tribes in Gaul. Evidence from the Early Iron Age suggests a diminished population and a degree of self-sufficiency (Dunkin and Yates 2006: 6) followed by an apparent hiatus in the occupation of lowland areas of the south-east during the Middle Iron Age. The evidence suggests

an abandonment of the land, which may have its roots in a systemic socio-political collapse (Jim Stevenson *pers.comm.*, cites Yates 2007).

- 2.8.2 By the Late Iron Age the evidence indicates an expanding population and increasing settlement activity occurs throughout Kent (Parfitt 2004). Caesar's famous comment in 54 BC of an 'extremely large' population, and ground '...thickly studded with homesteads...and the cattle very numerous' reflects his experience of the coastal plain, and the Ashford area was no exception.
- 2.8.3 Recent fieldwork at Brisley Farm, on the southern outskirts of Ashford, has revealed extensive evidence of Late Iron Age settlement and funerary practices (Stevenson & Johnson 2004) with suggestions of continuity into the Roman period indicating the densely occupied nature of settlement in this area during the Later Iron Age. Further evidence of Iron Age activity in the area comes from recent work to the south and east of Waterbrook Farm, located just beyond the southern end of the sewer route. This has produced evidence of intense occupation of the area during the Late Bronze Age / Early Iron Age transitional period, including structural remains, cremation burials and boundary ditches.
- 2.8.4 A considerable amount of Iron Age material has been found in the area of the sewer route to the south of CTRL. Part of an enclosure comprising deep ditches 50m apart was evaluated in 1990 (Fig. 1; 10), a late, possibly Belgic settlement site comprising shallow ditches, gullies and pits was evaluated also in 1990 (Fig. 1; 11); elements of field systems (now destroyed by warehouses) were found also in 1990 (Fig. 1; 12); further field systems were investigated in 1990 and 1993 (Fig. 1; 13 and 14); a series of linear features were recorded north of CTRL in 1993 and 1997 (Fig. 1; 15); linear features have been found in 1993 (Fig. 1; 16); two Late iron Age gullies oriented NNW-SSE (Fig. 1; 17); further N-S gullies were found in 2005 (Fig. 1; 18); and a series of ditches, gullies and cremation burials were found on the site of a balancing pond (Fig. 1; 19). A chance find of an Iron Age coin was found in the vicinity in 1870 (Fig. 1; 9).

2.9 Romano-British

- 2.9.1 Kent experienced contact with Rome from an early date, first with trade and then conquest. Following the Roman invasion of AD43, the region became heavily settled, particularly along the principal route, Watling Street, which linked Richborough with the major urban centres of Canterbury, Rochester and London. Stone Street was subsequently constructed southwards from Rochester, to access the iron resources of the Weald. Much of Kent was characterised by pre-Roman native type farmsteads, although the distribution of other Roman sites and finds are widespread, with all the main river valleys including the Stour being well populated.
- 2.9.2 The Wealden clay lands south of the Downs have traditionally been seen as less densely settled than the richer coastal plain, although the intensification of agriculture on poorer clay soils seen in the Iron Age continues in the Roman period (Jones 1989, 129). Furthermore, a previously unknown Romano-British roadside settlement was excavated at Westhawk Farm, on the south side of Ashford, at the junction of two important Roman roads.
- 2.9.3 One of these roads (Margary 1973: route 130), aligned south west to north east, led from Tenterden, and the iron producing region of the Weald, to Canterbury, the tribal capital of the Cantii. The other road (Margary 1973: route 131), which passes south

east to north west c. 1km to the south of the sewer route, linked the Roman port and military establishment at Lympne with the Roman town at Rochester.

- 2.9.4 Two Romano-British sites are recorded within the area of the scheme. Late Iron Age/Early Romano-British features and cremation burials to the east of Boys Hall Moat (Fig. 1; 19), and a number of small enclosures and post-holes interpreted as a farmstead with two cremations (Fig. 1; 20).

2.10 Anglo-Saxon

- 2.10.1 Although Kent was one of the first areas to be heavily settled by Germanic peoples, they tended to prefer the more tractable soils of the coastal plain and the river valleys. The densest occupation in the early Anglo-Saxon period seems to have been in the north-east of the county, the heartland of the kingdom of the *Cantware*, protected to the west by the Medway and to the south-west by the Weald (Hawkes 1982: 74).

- 2.10.2 Penetration of the Ashford area seems to have taken place slightly later, in the 6th century according to funerary evidence (Drewett, Rudling & Gardiner 1988: 254). Anglo-Saxon society, as deduced from the early law codes and from cemetery studies, was hierarchical, and this fact would have been reflected in the settlement pattern, with a hierarchy of sites of differing status. The highest were those held by the king, and one such royal vill existed at Wye, to the north-east of Ashford. The place-name Kingsnorth also reflects a royal link, as it derives from 'Kinds snode', meaning detached land belonging to a royal estate (Glover 1982: 112).

- 2.10.3 Other place-names suggest the area was occupied to some extent during this period: the name Sevington translates as 'Saegifu's farmstead', Saegifu being a Saxon woman (Glover 1982: 169). The name Willesborough refers to 'Wifel's mound or tumulus' (Glover 1982: 207), possibly indicating the presence of Saxon burial activity in the area. No Anglo-Saxon material has been recorded within the area of the sewer route.

2.11 Medieval

- 2.11.1 The sewer route falls within the Weald Sub-Province of the South Eastern Province of Roberts & Wrathmell's rural settlement classification (Roberts & Wrathmell 2000). The landscape is characterised by high densities of dispersed settlements consisting of farmsteads, associated field systems that were later enclosed (Williamson 2000: 65), moated sites and hamlets bearing the names 'green' or 'dene' (Roberts and Wrathmell 2000: 43-44).

- 2.11.2 Sevington (Seivetone) is mentioned in the Domesday Book (1086), although no entries were found for Willesborough or Kingsnorth. Sevington was situated within the Hundred of Longbridge and was held by 'Maino' ('the Breton?') from Hugh de Montfort. The settlement accounted for around 120 acres (1/2 sulung), comprising land sufficient for 1 plough, 8 acres of meadow, a mill, a church and priest, a villager and 6 smallholders. The associated manorial complex may have been located at Sevington Court, and it has been suggested that the site of the medieval mill may be that of the post-medieval Willesborough Mill (Cross 1990) situated on a tributary of the Stour to the north of the sewer route.

- 2.11.3 Six medieval sites are recorded within the area of the sewer route. Two large ditches and a cobbled surface (possibly a ford) found on the site of a balancing pond in 1999

(Fig. 1; 3); a moated site, the former Boys Hall and a scheduled ancient monument – the moated site has a fishpond to the south-west and the earthwork remains of a formal garden to the north-west (Fig. 1; 21); a medieval pit (Fig. 1; 22); a small enclosure identified as a possible former building (Fig. 1; 23); linear features, possibly boundary/drainage ditches excavated in 1997 (Fig. 1; 24), together with a small pit; further medieval activity, including ditches and a small rectangular building containing hearths excavated in 2002 (Fig. 1; 25).

2.12 Post-medieval

2.12.1 The sewer route is bisected by the CTRL which was originally the South Eastern Railway line from London to Dover, via Ashford which opened in 1842 (Kent County Council & English Heritage 2003: 7). The Ashford, Rye and Hastings line, built in 1850, is located to the west. Prior to the arrival of the railway, agriculture was the mainstay of Ashford's economy (Kent County Council & English Heritage 2003: 7) and its immediate environs.

2.12.2 The census returns for the parishes of Sevington, Willesborough and Kingsnorth reveal that agricultural production was dominated by wheat, barley and oats, with agricultural labourers accounting for most of the adult male population of each parish in 1931 (Southall 2004). However, the economic importance of Ashford increased following the introduction of the railway, and its population grew accordingly, expanding sixfold during the 19th century and reaching 14,351 by 1921 (Page 1974, 363). The population growth also extended to some of Ashford's peripheral parishes and, within the area of the sewer route, this was particularly striking in Willesborough where the population increased from 442 in 1801 to 1,022 fifty years later, quadrupling to 4,979 by 1931 (Southall 2004). Much of the population growth within the area reflects the general economic growth of neighboring Ashford, although the expansion of Willesborough is specifically related to the establishment of the Newtown Railway Works in 1846, located immediately west of the area of the sewer route, and the construction of Alfred Town, or New Town - an estate of workmen's cottages built to house the employees (Southall 2004 cites Wilson, 1870- 71; Kent County Council & English Heritage 2003: 7).

2.12.3 Construction of the M20 motorway and the A2070 Orbital Road, during the final decades of the 20th century further encouraged a rapid spread in housing and industrial development on the southern perimeter of Ashford. This is particularly evident where the previously isolated settlements of South Willesborough, Sevington and Aylesford Green have been united by domestic and industrial growth.

2.12.4 Ten post-medieval sites are recorded within the area of the sewer route. Only four are directly relevant to scheme: a former early 20th- century brickworks (Fig. 1; 30); an area of possible ridge and furrow (Fig. 1; 31); the formal gardens associated with site 21 (Fig. 1; 33); and a grade II Listed Labour Club housed in a building of early post-medieval origin (Fig. 1; 39). The remainder comprise discrete buildings associated with the railway works (Fig 1; 27-29), the Ashford Waterworks (Fig 1; 26 & 35), and air-raid shelters (Fig 1; 32 & 34).

2.11 Undated

2.1.31 Three 'undated' sites are recorded within the area of the scheme, a soilmark suggestive of an enclosure or drain (Fig. 1; 36); a linear feature interpreted as a trackway (Fig. 1; 37) and a ploughed-out bank (Fig. 1; 39).

3.0 METHODOLOGY

3.1 Evaluation - Waterbrook Park Pumping Station (Fig. 4)

- 3.1.2 Machine excavation by mechanical tracked excavator fitted with a toothless bucket and under constant archaeological supervision continued to the top of significant archaeological deposits or to the surface of geological drift deposits, whichever was uppermost. Machine excavation was undertaken in spits of no more than c. 200 mm thickness. Spoil heaps and trench bases were scanned visually and with a metal detector as was the spoil derived from excavated features.
- 3.1.3 All encountered archaeological deposits, features and finds were recorded according to accepted professional standards in accordance with the approved WSI (ASE 2009) using pro-forma context record sheets. Samples for environmental remains (waterlogged wood, macro-plants, pollen and micro-fauna etc) were taken in accordance with the WSI (*ibid*).
- 3.1.4 A full photographic record of the trenches and associated deposits and features was kept (including monochrome prints, colour slides and digital), and will form part of the site archive.
- 3.1.5 Trenches were backfilled and compacted upon completion but no formal re-instatement (e.g. turf etc.) was undertaken.

3.2 Evaluation - Pipeline corridor north of M20 (Fig. 5)

- 3.2.1 In the farmland immediately north of the M20 an archaeological watching brief was maintained during the stripping of topsoil along the pipeline corridor (easement). In the event, the topsoil strip was not of sufficient depth to reach the top of the archaeological horizon, and an archaeological evaluation to determine archaeological potential was instead undertaken. Five x 20m x 1.8m evaluation trenches (Trench 5-Trench 9) were excavated along the route of the pipe trench an area of c. 7000m²
- 3.2.2 The archaeological work was carried out as summarised above in sections 3.1.2 – 3.1.5.

3.3 Evaluation - Alsops Road Pumping Station (Fig. 6)

- 3.3.1 Three archaeological trenches (Trench 10, Trench 11 and Trench 13), measuring 10m x 1.8m were excavated to evaluate an area of c. 600m² at the site of the Alsops Road pumping station. Four trenches had been proposed, but Trench 12 could not be excavated due to the presence of underground services including pipework and inspection chambers in that location.
- 3.3.2 The archaeological work was carried out as summarised above in sections 3.1.2 – 3.1.5.

3.4 Sewer Trench Watching Brief (Fig. 1)

- 3.4.1 The majority of the sewer pipe route was located within existing roads and mechanical excavations were monitored in a watching brief. The pipe trench measured c. 1m wide by up to 2.7m deep. The trench was not entered by ASE staff unless permitted by the 4D health and safety officer.

- 3.4.2 Works were conducted by two teams of civil engineers excavating sections of trench to a suitable depth for installing shoring prior to further excavation inside the shoring. As the depth of the trench deepened the shoring was pushed down and this generally continued up to a maximum depth of 2.70 metres before moving onto the next section of trench.
- 3.4.3 As a result of this working procedure it was not possible to see a full section at any time except for between small gaps between hydraulic shoring and metal shuttering or at the advancing end of the excavated trench. Sufficient time was afforded the monitoring archaeologist to investigate the sewer trench.
- 3.4.4 The watching brief was maintained throughout the works and it soon became apparent through discussion and agreement with Wendy Rogers that the works could be effectively monitored on an intermittent basis.
- 3.4.5 Three sections of the route did not require monitoring:
- Tunnelled crossing of the M20
 - Running of pipe work through existing service tunnel under CTRL
 - Directional drilling from Maruwa Trading Company to Waterbrook Park
- 3.4.6 The archaeological monitoring was carried out in accordance with methodology as described within the WSI (ASE 2009).

3.5 The Archive

Number of Contexts	112
No. of files/paper record	1
Plan and sections sheets	1
Bulk Samples	5
Photographs Digital	127
B+W	28
CS	29
Bulk finds	1 Box

Table 1: Quantification of site archive

- 3.5.1 The site archive and finds are currently held at ASE offices in Portslade and will be offered to Ashford Museum when all work has been completed.

4.0 RESULTS

4.1 Evaluation - Waterbrook Park Pumping Station (Figs. 4 and 7)

Trench 1

Context	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
1/01	Deposit	Topsoil	Tr.	Tr.	0.30m max.	40.09
1/02	Deposit	Colluvium	Tr.	Tr.	0.20m-0.25m	39.79
1/03	Deposit	Natural	Tr.	Tr.	n/a	39.59
1/04	Cut	Ditch	3.8m	0.95m		39.59
1/05	Fill	Ditch fill			0.31m	
1/06	Cut	Land drain	1.5m	Unknown		39.58
1/07	Fill	Silty clay			Unknown	

Table 2: Trench 1 contexts

- 4.1.1 The topsoil [1/01] was c. 300mm thick and consisted of mid yellowish brown sandy silt with occasional gravel and stone. This overlay colluvium [1/02] which was c. 200mm – 250mm thick and consisted of light mottled grey/reddish brown very silty clay. The build-up of colluvial deposit [1/02] was the result of soil creep down the moderately steep SW-NE slope, and its deposition on a relatively level area in the northern part of the site, beside an old water course. Deposit [1/02] overlay weathered Weald Clay [1/03] consisting of mid-dark reddish brown sandy, silty clay with frequent gravel and stone.
- 4.1.2 At the eastern end of the trench an undated ditch [1/04] with a silty clay fill [1/05], measuring 950mm wide and 310mm deep, was identified running SW-NE at 39.59m OD. No finds were recovered. Fill [1/05] not sampled (undated).
- 4.1.3 An apparently modern land drain [1/06] with silty clay fill [1/07] was also recorded, running parallel to ditch [1/04]. No finds were recovered. Fill [1/06].

Trench 2

Context	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
2/01	Deposit	Topsoil	Tr.	Tr.	0.25m	40.47
2/02	Deposit	Colluvium	Tr.	Tr.	0.25m max.	40.22
2/03	Deposit	Natural	Tr.	Tr.	n/a	39.97
2/04	Cut	Clay Extraction?	9m	0.8m max.		39.96
2/05	Fill	Silty clay			0.08m	
2/06	Cut	Clay Extraction?	9m	0.8m max.		39.97
2/07	Fill	Silty clay			0.08m	

Table 3: Trench 2 contexts

- 4.1.3 The topsoil [2/01] was c. 250mm thick and similar to deposit [1/01]. This overlay colluvium [2/02] which was up to c. 250mm thick and similar to deposit [1/02]. Deposit [2/02] overlay weathered Weald Clay as in Trench 1.
- 4.1.4 A linear cut [2/04]/[2/06] with silty clay fills [2/05] and [2/07], measuring at least 7.5m long, c. 1m wide and 80mm deep, ran SE-NW across the trench at 39.97m AOD. The base of the cut consisted of a series of parallel grooves that had apparently been mechanically produced. One piece of residual worked flint was recovered from fill [2/05] and two fragments of CBM from fill [2/07]. Fills [2/05] and [2/07] not sampled.

Trench 3

Context	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
3/01	Deposit	Topsoil	Tr.	Tr.	0.30m max.	39.28
3/02	Deposit	Colluvium	Tr.	Tr.	0.55m max.	38.98
3/03	Deposit	Natural	Tr.	Tr.	n/a	38.43
3/04	Cut	Pond	6.8m	Tr.		39.02
3/05	Fill	Upper	6.0m	Tr.	0.35m	
3/06	Fill	Lower	6.8m	Tr.	0.15m	
3/08	Spread	Burning	1.7m	0.60m	0.01m	39.02
3/09	Spread	Burnt material			0.01m	39.02

Table 4: Trench 3 contexts

- 4.1.5 Topsoil [3/01] was c. 300mm thick and similar to deposit [1/01]. Topsoil overlay colluvium [3/02] which was up to c. 550mm thick and similar to deposit [1/02]. Deposit [3/02] overlay weathered Weald Clay as recorded in Trench 1 and Trench 2.
- 4.1.6 The northern section of a probable circular feature [3/04] was revealed, measuring at least 6.5m in diameter and at least c. 550mm deep. The upper sandy clay fill [3/05] (sampled <01>) produced a significant quantity of 14th to 15th century pottery and post-medieval CBM, while the sandy clay lower fill [3/06] (sampled <02>) produced 13th century pottery.
- 4.1.7 An area of *in situ* burning [3/08] lay on the north-eastern edge of cut [3/04] and extended for c. 700mm down the profile of feature [3/04]. An associated silty clay spread of burnt material [3/09] (not shown on plan) produced a small quantity of C13th- pottery. Deposits [3/08] and [3/09] not sampled (poor integrity).

Trench 4

Context	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
4/01	Deposit	Topsoil	Tr.	Tr.	0.30m max.	39.27
4/02	Deposit	Colluvium	Tr.	Tr.	0.18m-0.30m	38.97
4/03	Deposit	Natural	Tr.	Tr.	n/a	38.67
4/04	Cut	Ditch	1m	0.35m		39.12
4/05	Fill	Ditch fill	1m	0.35m	0.17	
4/06	Cut	Ditch	1.8m	0.65m		38.52
4/07	Fill	Ditch fill	1.8m	0.65m	0.30m	

Table 5: Trench 4 contexts

- 4.1.8 Topsoil [4/01] was up to 300mm thick and similar to deposit [1/01]. Topsoil overlay colluvium [4/02] which was between c. 180mm – 300mm thick and similar to deposit [1/02]. Deposit [4/02] overlay weathered Weald Clay as recorded in Trench 1, Trench 2 and Trench 3. The central part of the trench was occupied by a concrete slab that could not be removed due to the presence of a nearby service.
- 4.1.9 A ditch [4/06] with clayey silt fill [4/07], running broadly N-S and measuring 1.3m wide and 750mm deep, was revealed at the eastern end of the trench. The fill [4/07] produced modern materials including plastic.
- 4.1.10 A second ditch [4/04] was recorded at the western end of the trench, measuring 700mm wide and 180mm deep. No dating evidence was recovered. Fill [4/05] not sampled (undated).

Geoarchaeological Test Pits 1&2

- 4.1.11 Two geoarchaeological test pits (GTP 1&2) were excavated. Previous review of extant geotechnical data for the site comprised of test pit and borehole logs indicating that the investigation / development area lay at a location where alluvial deposits might be encountered (see section 2.2 above).
- 4.1.12 The test pits were located where proposed engineering / installation works associated with the construction of a pumping station and valve chamber were anticipated to have maximum impact and likely to impact on any potential archaeological and palaeoenvironmental resource.
- 4.1.13 At GTP 1 the recorded sequence comprised of an approximately 0.40m deep light brown very firm and compact blocky structured topsoil unit overlying a c.0.50-0.80m deep sub soil unit of light mottled grey/reddish brown very silty clay that in turn contacted a grey brown sandy, silty clay that became more clayey with depth (weathered Weald Clay). The pit was progressed to c. 2.50 metres to prove Weald Clay.
- 4.1.14 At GTP 2 the upper c. 0.90 metres of stratigraphy is considered equivalent to sequence recorded in Test Pit 1. At c. 0.90m depth subsoil contacts mid orange brown clay silts that are moderately firm and compact and exhibit weak discontinuous laminations. The laminations become more pronounced with depth when sand fraction increases. Due to side collapse of the test pit excavation ceased at c. 2.30 metres depth.

4.2 Evaluation - Pipeline corridor north of M20 (Fig. 5)

Trench 5

Context	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
5/01	Deposit	Topsoil	Tr.	Tr.	0.30m	41.00
5/02	Deposit	Made ground	Tr.	Tr.	0.90m max.	40.70
5/03	Deposit	Natural	Tr.	Tr.	n/a	39.80

Table 6: Trench 5 contexts

4.2.1 Topsoil [5/01] was c. 300mm thick and consisted of mid yellowish brown slightly clayey sandy silt with occasional gravel. Topsoil overlay made ground [5/02] up to 900mm deep and consisting of mid yellowish brown very clayey silt with 5% mixed building material including plastic, metal, modern CBM and concrete fragments. Deposit [5/02] overlay natural (Head Brickearth) [5/03] consisting of mid yellowish brown very sandy silt with occasional gravel.

Trench 6

Context	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
6/01	Deposit	Topsoil	Tr.	Tr.	0.30m	41.00
6/02	Deposit	Colluvium	Tr.	Tr.	0.50m max.	40.70
6/03	Deposit	Natural	Tr.	Tr.	n/a	40.20

Table 7: Trench 6 contexts

4.2.2 Topsoil [6/01] was 300mm thick and consisted of mid yellowish brown very fine sandy silt. Topsoil overlay colluvium [6/02] up to 500mm deep and consisting of mid yellowish brown very fine sandy silt with occasional sub-angular gravel. Deposit [6/02] overlay natural (Head Brickearth) [6/03] consisting of light yellowish brown very sandy silt with frequent rooting/worm trails.

Trench 7

Context	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
7/01	Deposit	Topsoil	Tr.	Tr.	0.30m	41.00
7/02	Deposit	Colluvium	Tr.	Tr.	0.55m max.	40.70
7/03	Deposit	Natural	Tr.	Tr.	n/a	40.15

Table 8: Trench 7 contexts

4.2.3 Topsoil [7/01] was 300mm thick and consisted of mid yellowish brown very fine sandy silt. Topsoil overlay colluvium [7/02] up to 550mm deep and consisting of mid yellowish brown very fine sandy silt with occasional sub-angular gravel. Deposit [7/02] overlay natural (Head Brickearth) [7/03] consisting of light yellowish brown very sandy silt with frequent rooting/worm trails.

Trench 8

Context	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
8/01	Deposit	Topsoil	Tr.	Tr.	0.30m	41.00
8/02	Deposit	Made ground	Tr.	Tr.	0.30m	40.70
8/03	Deposit	Natural	Tr.	Tr.	n/a	40.40

Table 9: Trench 8 contexts

4.2.4 Topsoil [8/01] was 300mm thick and consisted of mid yellowish brown very fine sandy silt. Topsoil overlay made ground [8/02] up to 300mm deep and consisting of dark greyish brown very fine sandy clay with occasional modern building materials including brick and concrete fragments. Deposit [8/02] overlay natural (Head Brickearth) [8/03] consisting of mid yellowish brown very sandy silt with frequent rooting/worm trails.

Trench 9

Context	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
9/01	Deposit	Topsoil	Tr.	Tr.	0.30m	40.00
9/02	Deposit	Colluvium	Tr.	Tr.	0.30m	39.70
9/03	Deposit	Natural	Tr.	Tr.	n/a	39.40

Table 10: Trench 9 contexts

4.2.5 Topsoil [9/01] was 300mm thick and consisted of mid yellowish brown very fine sandy silt. Topsoil overlay colluvium [8/02] up to 300mm deep and consisting of mid yellowish brown very fine sandy silt with occasional sub-angular gravel. Deposit [9/02] overlay natural (Head Brickearth) [9/03] consisting of light yellowish brown very sandy silt with frequent rooting/worm trails.

4.3 Evaluation - Alsops Road Park Pumping Station (Figs. 6 and 8)

Trench 10

Context	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
10/01	Deposit	Made ground	Tr.	Tr.		43.88
10/02	Deposit	Made ground	Tr.	Tr.		
10/03	Deposit	Made ground	Tr.	Tr.		
10/04	Deposit	Made ground	Tr.	Tr.	Total made ground 0.65m	
10/05	Cut	Pit Waterhole	2.45m	1.7m		43.23
10/06	Fill	Waterhole fill	2.45m	1.7m	1.12m	
10/07	Deposit	Natural			n/a	43.25
10/08	Dump deposit	Charcoal	0.20m	0.20m	0.10m	42.13
10/09	Cut	Pit	0.35m	0.35m		43.33
10/10	Fill	Pit fill	0.35m	0.35m	0.09m	
10/11	Cut	Post-hole?	0.40m	0.40m		43.29
10/12	Fill	Post-hole? fill			0.30	

Table 11: Trench 10 contexts

- 4.3.1 Deposits [10/01], [10/02], [10/03] and [10/04] totalled up to 600mm thick and consisted of light/mid greyish yellow silty clay with occasional modern CBM and stone fragments. Deposit [10/1] overlay natural (Head Brickearth) [10/07] consisting of light/mid greyish yellow silty clay with occasional manganese clumps.
- 4.3.2 A cut [10/05], measuring 2.45m x 1.7m and 1.12m deep, contained a fill [10/06] (sampled <04>) of dark mottled yellowish grey/reddish brown sandy silty clay with occasional flints, charcoal and ochre and produced Middle/Late Bronze Age pottery. A dump deposit [10/08] (sampled <05>) of mottled bluish grey/reddish brown silty clay with 20% charcoal lay at the base of cut [10/05].
- 4.3.3 The eastern end of feature [10/05] was cut by a possible post-hole [10/11], measuring c. 400mm in diameter and c. 300mm deep that contained a fill [10/12] of mid greyish brown silty clay. No finds were recovered. Fill [10/12] was not sampled.
- 4.3.4 A cut [10/09], measuring 350mm in diameter and 90mm deep, contained a fill [10/10] of mid greyish brown silty clay that produced Middle/Late Bronze Age pottery. Fill [10/10] was not sampled (poor integrity).
- 4.3.5 After consultation with Wendy Rogers the western end of Trench 10 was extended to the south by c. 2m in order to fully expose the extent of cut [10/05].

Trench 11

Context	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
11/01	Deposit	Made ground	Tr.	Tr.	0.50m	43.90
11/02	Deposit	Made ground	Tr.	Tr.	0.40m	43.40
11/03	Deposit	Natural	Tr.	Tr.	n/a	43.00

Table 12: Trench 11 contexts

4.3.6 Deposit [11/01] was up to 500mm deep and consisted of mid grey silty sand with 70% mixed modern building materials including roadstone, concrete fragments and brickdust. Deposit [11/01] overlay a 400mm deep deposit [11/02] of mid yellowish/greenish brown silty clay with occasional modern CBM. Deposit [11/02] overlay natural (Head Brickearth) [11/03] consisting of mid greyish yellow silty clay.

Trench 12

Not excavated.

Trench 13

Context	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
13/01	Deposit	Made ground	Tr.	Tr.	0.40m	43.95
13/02	Deposit	Made ground	Tr.	Tr.	0.50m	43.55
13/03	Deposit	Natural	Tr.	Tr.	n/a	43.03

Table 13: Trench 13 contexts

4.3.7 Deposit [13/01] was up to 400mm deep and consisted of mid grey silty sand with 70% mixed modern building materials including roadstone, concrete fragments and brickdust. Deposit [13/01] overlay a 500mm deep deposit [13/02] of mid yellowish brown silty clay with occasional modern CBM. Deposit [13/02] overlay natural (Head Brickearth) [13/03] consisting of mid greyish yellow silty clay.

4.4 Watching Brief (Figs. 1, 2, 3, 9, 10 and 11)

4.4.1 The watching brief element of the archaeological monitoring followed the route of the pipeline trenching between Waterbrook Park Pumping Station directly south of the A2070 (Bad Munstereifel Road) to the Bybrook Wastewater Treatment Works north of the M20 following the route of existing roads.

4.4.2 The results of the watching brief are given here following the route of the works from south to north.

4.4.3 The Boulevard – (Ground level 39.46m – 40.25m AOD)

4.3.4 The lowest deposit identified was greenish-brown to orangey-brown sandy-silt [100] interpreted as Weald Clay. This was encountered at depths of between 0.77m and 1.60m below ground level (BGL) and was in places truncated [101] to a depth of 2.30m BGL. This is most likely evidence of post-medieval clay quarrying.

4.4.5 Where there was less or no truncation, the Weald Clay was directly overlain by a thick layer of sterile orangey-brown fine sand between 0.90m and 1.50m thick [102]. This was sealed by a 0.30m thick base layer of limestone chips [103] and the 0.50m thick concrete road base [104]. This was in places finished with a tarmac road surface 0.30m thick [105].

4.4.6 No archaeological deposits or features were observed.

Context	Type	Description	Deposit Depth
100	Deposit	Weald Clay	0.83m +
101	Trunc	Quarrying?	-
102	Deposit	Sterile Sand	0.90m - 1.50m
103	Deposit	Made Ground – Limestone chips	0.30m
104	Deposit	Road Base - Concrete	0.50m
105	Deposit	Tarmac	0.30m

Table 14: List of contexts identified on The Boulevard

4.4.7 Crowbridge Road – (Ground level 39.10m – 42.53m AOD)

The lowest deposit observed was a layer of silty clay that ranged in hue from light brown to bluish grey at the lowest levels observed [106]. This was identified at depths of between 0.30m to 2.00m BGL. In the instances where this deposit of Weald Clay was observed closest to ground level the first 0.30m were observed to have gravel inclusions [107] interpreted as a possible subsoil. In most observations however this gravelly layer had been truncated during road engineering [108].

4.4.8 The Weald Clay was overlain by various elements of made ground including deposits of redeposited natural clay with gravel and concrete inclusions 1.30m thick [109]; sterile sand levelling 0.40m thick [110]; and type one gravel rich made ground 0.15m to 0.57m thick [111].

4.4.9 The made ground and levelling deposits were sealed by the road itself which typically comprised a concrete base layer up to 0.30m thick [112]; and a tarmac road surface up to 0.15m thick [113].

4.4.10 No archaeological deposits or features were observed.

Context	Type	Description	Deposit Depth
106	Deposit	Weald Clay	1.70m +
107	Deposit	Possible Subsoil	0.30m
108	Truncation	Road preparation - Levelling	-
109	Deposit	Made Ground – redeposited natural	1.30m
110	Deposit	Made Ground – sterile sand	0.40m
111	Deposit	Made Ground – gravel	0.15m to 0.57m
112	Deposit	Road Base - Concrete	0.30m
113	Deposit	Tarmac	0.15m

Table 15: List of contexts identified on Crowbridge Road

4.4.11 Alsops Road and Bentley Road – (Ground level 39.10m – 40.37m AOD)

4.4.12 The lowest deposit was Weald Clay, a mid-orange sandy-silt identified at around 0.35m below ground level [114]. In one instance this had a blackish grey colour up to 0.40m thick [115], likely to have been caused by chemical staining.

4.4.13 The Weald Clay had been truncated during construction of the road [116]. At the southern end of Alsops Road, close to the CTRL, this truncation was much deeper to depths of c. 1.90m BGL. This increased depth of truncation is probably associated with the construction of the CTRL. At this location, the Weald Clay was observed to be overlain by a 0.70m thick layer of silty clay which was rich in very hard bluish-grey limestone [117], thought to be the risings from the construction of the CTRL. Elsewhere along Alsops road truncated Weald Clay was sealed by road makeup deposits; either 0.20m of lenses of gravel [118] or 0.22m of reinforced concrete road base [119] sealed by 0.06m to 0.15m of tarmac [120].

4.4.14 No archaeological deposits or features were observed.

Context	Type	Description	Deposit Depth
114	Deposit	Weald Clay	1.55m +
115	Deposit	Weald Clay – Stained	0.40m
116	Truncation	Road preparation - Levelling	-
117	Deposit	Made Ground – redeposited natural	0.70m
118	Deposit	Made Ground – gravel lenses	0.20m
119	Deposit	Road Base - Concrete	0.22m
120	Deposit	Tarmac	0.06m to 0.15m

Table 16: List of contexts identified on Alsops Road and Bentley Road

4.4.15 Hunter Avenue – (Ground level 39.52m – 43.42m AOD)

4.4.16 The lowest deposit encountered on Hunter Avenue was a deposit of solid mudstone [121] (probably Hythe Formation); this was 1.47m thick and was identified towards the north of Hunter Avenue, close to Hunter Road at a depth of 1.08m BGL.

4.4.17 Elsewhere along the Avenue; just north of Eastern Gardens and Western Gardens, the lowest deposit was a 0.40m thick layer of fine orangey-brown sand [122] (probably Sandgate Formation) identified at a depth of 2.10m BGL.

4.4.18 Both the mudstone [121] and orangey brown sand [122] were overlain by sandy-silt [123], which ranged in colour from orangey brown to light yellow and in some places

appeared to have been stained black by petro-chemicals. This deposit is perhaps a mixture of head deposits and alluvium.

- 4.4.19 The top of [123] was identified at between 0.48m and 0.80m BGL and appeared to have been truncated by the road construction [124]. This truncation was sealed by made ground of sandy silt and concrete rubble [125] up to 0.40m thick; then by the 0.30m thick reinforced concrete road base [126] and finally the 0.20m thick tarmac road surface [127].
- 4.4.20 At the southern end of Hunter Avenue the pipe trench crossed the site of a former quarry [150]. The northern edge of the quarry lay opposite nos. 23 and 25 Hunter Avenue; a slight change of slope can still be seen today. Between nos. 23 and 15 the depth of the quarry reached an apparent maximum of c. 2m BGL; opposite numbers 13 and 15 Harvey Avenue, the base of quarry pit [150] lay at c. 1.6m BGL.
- 4.4.21 The outline of the quarry is shown on the first edition 1876 OS map (Fig. 10); on the second edition OS map of 1898 (Fig. 11) the feature is shown as 'Old Quarry' by which time it has presumably ceased production. It seems likely that the quarry initially supplied trackbed stone during the construction of the South Eastern Railway line that was opened in 1842.
- 4.4.22 Following its disuse, the quarry had apparently been used for the disposal of rubbish: a dark organic deposit [151] contained mixed late 19th- to early 20th-century material including pottery, CBM, glass, bone and metal. The finds were noted on site and not recovered.
- 4.4.23 A large quantity of stone rubble [152] was also noted at depths up to 1.5m BGL. This material represents spoil from the quarrying process and suggests that the bedrock geology in this area is almost certainly of the Hythe Formation which varies from sandy limestones to glauconitic sandy mudstones. By at least 1931, perhaps as early as 1907, the quarry had been completely infilled.

Context	Type	Description	Deposit Depth
121	Deposit	Mudstone (Hythe Formation)	1.47m +
122	Deposit	Natural sand (Sandgate Formation)	0.40m
123	Deposit	Alluvium / head deposit	1.55m
124	Truncation	Road preparation - Levelling	-
125	Deposit	Made Ground – concrete rubble	0.40m
126	Deposit	Road Base - Concrete	0.30m
127	Deposit	Tarmac	0.20m
150	Cut	Stone quarry	1.6m-2m
151	Deposit	Rubbish	1.2m-1.6m
152	Deposit	Stone rubble	1.4m-2m

Table 17: List of contexts identified on Hunter Avenue

4.4.24 Hunter Road – (Ground level 43.42m – 46.51m AOD)

- 4.4.25 The sequence of deposition on Hunter Road was fairly uniform along its length with lowest observed layers of sandy silt, probable head deposit, identified from a depth of 0.45m to 0.53m BGL [128]. These deposits ranged in hue from greenish-grey; bluish-grey; to orangey-brown. There was also a zone towards the north of the road that appeared to have been stained blackish blue by petro-chemicals.

4.4.26 The head deposit had been truncated by the construction of the road [129]. The road was constructed of a 0.30m thick bedding layer of 'type one' reddish brown gravel [130] and this was sealed by a 0.20m thick layer of tarmac [131].

4.4.27 No archaeological deposits or features were observed.

Context	Type	Description	Deposit Depth
128	Deposit	Head deposit	2.05m +
129	Truncation	Road preparation - Levelling	-
130	Deposit	Made Ground – gravel	0.30m
131	Deposit	Tarmac	0.20m

Table 18: List of contexts identified on Hunter Road

4.4.28 **Earls Avenue** – (Ground level 45.28m – 46.51m AOD)

4.4.29 The lowest deposit [132] was orangey-brown to greenish-grey sandy silt, probable head deposit, identified at 0.32m BGL. This was at least 1.93m thick at the limit of excavation and had been truncated on its upper surface by construction for the road [133].

4.4.30 The sequence of road construction commenced with a bedding layer of rubble 0.14m thick [134]; followed by a 0.14m thick bed of reinforced concrete [135]; and finished with a 0.04m thick tarmac road surface [136].

4.4.31 No archaeological deposits or features were observed.

Context	Type	Description	Deposit Depth
132	Deposit	Head deposit	1.93m +
133	Truncation	Road preparation - Levelling	-
134	Deposit	Made Ground – rubble	0.14m
135	Deposit	Road Base - Concrete	0.14m
136	Deposit	Tarmac	0.04m

Table 19: List of contexts identified on Earls Avenue

4.4.32 **Harvey Road** – (Ground level 45.28m – 41.32m AOD)

4.4.33 The lowest layer identified was a 1.70m thick deposit of sandy clay, probable head deposit, which was mid greenish-grey at the base and light yellowish-brown at the top [137]. Sealing this was a 0.60m thick layer of mid greenish-grey sandy clay that contained occasional CBM [138].

4.4.34 [138] was characteristic of pit backfill; as is supported by the presence of roof tile fragments within the deposit. Although no cut was discernible, the common method of extraction left only very narrow baulks of natural between separate pits which are usually only identifiable in plan over large areas. Extensive areas of probably 19th- to early 20th- century 'extraction have been identified by the author at several locations in Kent, most recently during ongoing investigations at quarries at Faversham, Borough Green and Charing (Priestley-Bell in prep.). [138] had been truncated by construction for the road [139].

4.4.35 The road was formed from a 0.20m thick made ground layer of 'type one' gravel [140] that formed a base layer for the road. This was sealed by a reinforced concrete layer 0.15m thick [141], and a 0.05m thick layer of tarmac [142].

4.4.36 With the exception of the probable claypit backfill, no archaeological deposits or features were observed.

Context	Type	Description	Deposit Depth
137	Deposit	Head deposit	1.70m +
138	Deposit	Claypit backfill?	0.60m
139	Truncation	Road preparation - Levelling	-
140	Deposit	Made Ground – gravel	0.20m
141	Deposit	Road Base - Concrete	0.15m
142	Deposit	Tarmac	0.05m

Table 20: List of contexts identified on Harvey Road

4.4.37 **Cradle Bridge Drive** – (Ground level 38.59m – 41.32m AOD)

4.4.38 The lowest deposit identified was sandy silt, probable head deposit and/or alluvium, which ranged from orangey-brown at the base of the trench to bluish-grey at the top of the observed layer [143]. This was seen to be at least 1.50m thick and in patches had been stained bluish black at the top of the deposit.

4.4.39 This was truncated by construction for the road [144].

4.4.40 The first of these road deposits was a 0.20m thick layer of made ground consisting of light brown sand and gravels, patches of bituminous gravel and crushed concrete rubble [145]. This was overlain by a reinforced concrete base 0.25m thick [146] with a 0.02m thick tarmac road surface to finish the sequence [147].

Context	Type	Description	Deposit Depth
143	Deposit	Head deposit / alluvium	1.50m +
144	Truncation	Road preparation - Levelling	-
145	Deposit	Made Ground – sand, gravel, rubble	0.20m
146	Deposit	Road Base - Concrete	0.25m
147	Deposit	Tarmac	0.02m

Table 21: List of contexts identified on Cradle Bridge Drive

5.0 FINDS AND ENVIRONMENTAL SAMPLES

5.1 A small assemblage of finds was recovered during the evaluations. A summary is outlined in Table 22.

Context	Pot	Wt (g)	CBM	Wt (g)	Bone	Wt (g)	WF	Wt (g)	FCF	Wt (g)	Stone	Wt (g)	Fe	Wt (g)	F. Clay	Wt (g)
2/05							1	4								
2/07			2	128												
Tr 3 u/s	1	70														
3/01							2	20								
3/02	2	6	7	180									1	62		
3/05	43	416	17	446									1	22		
3/06	13	44			3	6										
3/09	2	8														
10/06	6	32			400	176	5	96	14	202	6	272			7	36
10/10	9	78														
Total	76	654	26	754	403	182	8	120	14	202	6	272	2	84	7	36

Table 22: Quantification of the finds

5.2 Finds have all been washed and dried or air dried after which they were counted, weighed and bagged by material and by context. None of the finds necessitated further conservation nor did any of the metalwork require X-ray. Finds have all been recorded in full on pro forma sheets for archive. Two finds were assigned unique Registered Finds numbers (RF <00>), one of which on further inspection proved to be a nail head and has therefore been discussed with the bulk ironwork. Registered finds have been recorded individually. All finds have also been entered onto digital datasheets and are stored according to IFA guidelines.

5.3 The Prehistoric Pottery by Anna Doherty

5.3.1 A small assemblage of Middle to Late Bronze pottery, amounting to 22 sherds, weighing 105 grams were recovered from the fills of two pits in Trench 10. The pottery was examined using a x20 binocular microscope and quantified by sherd count and weight.

5.3.2 The following three site specific fabric groupings were defined, according to the guidelines of the Prehistoric Ceramics Research Group:

FLIN1 Moderate, very ill-sorted flint, within a relatively quartz-free matrix. Most examples are in the range c.0.5-2.5mm but there are rare large examples of up to 8mm in size,

FLIN2 Overall a coarser fabric than FLIN1 but with moderate, better-sorted, flint inclusions of c. 2-4mm, within a relatively quartz-free matrix

LIME1 Sparse, pale yellow, fine-grained but relatively hard sedimentary inclusions, which react with acid. They are moderately-sorted and range in size from 0.5-2mm; again the matrix is relatively quartz-free

Fabric	Sherd Count	Weight (g)
FLIN1	20	80
FLIN2	1	21
LIME1	1	4
Total	22	105

Table 23: Quantification of prehistoric pottery fabrics

5.3.3 The most diagnostic of the two groups, [10/006], contains a very thick-walled base sherd, in an exceptionally coarse flint-tempered fabric (FLIN2), likely to belong to the Middle Bronze Age Deverel-Rimbury Urn tradition. This was accompanied by a number of fragmentary sherds in a slightly finer but more ill-sorted flint-tempered ware (FLIN1), also suggestive of a Middle or Late Bronze Age date. The most diagnostic sherd in this group suggests that this context may have been sealed towards the beginning of the Late Bronze Age. It is a small rimsherd from a plain profile Urn-like vessel with deeply tool-impressed decoration along the top of the rim, creating a crenelated effect. This is paralleled by a vessel from a Late Bronze Age group from Newington, near Folkestone (Macpherson-Grant 1992, fig 4, 59). It is in a very unusual fabric, containing sparse, fine-grained, pale sedimentary inclusions (probably limestone).

5.3.4 The other group, [10/010] contains a number of thick-walled body sherds all of one vessel in moderately coarse but very ill-sorted flint-tempered fabric, again suggesting a Middle to Late Bronze Age date.

5.4 The post-Roman pottery by Luke Barber

5.4.1 The archaeological work recovered 65 sherds of post-Roman pottery, weighing 656g, from six individually numbered contexts. The vast majority of the assemblage is of the medieval to Transitional periods (61 sherds weighing 545g) all of which was recovered from the evaluation. This material can all be paralleled with fabrics from the Brisley Farm excavations, the fabric codes for which are cited here (Barber forthcoming). The remaining pottery is all of late post-medieval date and was recovered from a single context during subsequent work. The pottery is generally in good condition, consisting of small to medium unabraded sherds. Although there is some signs of acid weathering from the subsoil the sherds do not appear to have been extensively reworked. On the whole residuality appears to be very low.

5.4.2 The earliest pottery from the site consists of small unabraded sherds from sand and shell tempered cooking pots likely to be of 13th- century date (Brisley Fabric 1c). The 13 sherds (44g) from [3/06] are all from the same cooking pot base and the two sherds (8g) from [3/09] could also belong to the same vessel. Unfortunately no feature sherds are present in the assemblage to help refine the dating of this earliest pottery. Later 13th- to mid/late 14th- century fine/medium sand tempered wares are represented by only a few sherds (Brisley Fabric 2c). The two conjoining pieces in [3/02] could be late in the range while those from [3/05], comprising both cooking pots and glazed jugs (3/26g) are clearly abraded/residual in that deposit.

5.4.3 The majority of the assemblage is of mid/late 14th- to early/mid 15th- century date. An unglazed reduced jug strap handle in well fired medium sand tempered ware (Brisley Fabric 4fi) was unstratified in Trench 3 but the main group was recovered from [3/05].

This includes 24 sherds (327g) in well fired buff fine/medium sand tempered ware (Brisley Fabric 4a) including several sherds from a bung-hole pitcher with strap handle and pieces of an internally glazed base. In addition the context contained 16 smaller sherds (62g) of harder fired fine sand tempered earthenwares (oxidised and reduced) (Brisley Fabric 4b) from at least three different vessels more typical of the late 14th to mid 15th centuries.

5.5 The Ceramic Building Material by Sarah Porteus

- 5.5.1 Ceramic building material (CBM) was recovered from three contexts. Heavily mortared broken brick fragments from context [2/07] appear to have been used within a coarse creamy yellow sandy lime mortar, dating of the brick is difficult as both fragments are incomplete though a post-medieval date seems probable. Roofing tile recovered from contexts [3/02] and [3/05] is mostly of 17th to 19th century date and made of a local calcareous Kentish fabric (Canterbury Archaeological Trust fabric CATrench 32). In addition two fragments of abraded possible late Medieval or early post-medieval peg tile were also recovered from [3/02] and [3/05] in an orange fabric with moderate to coarse red iron rich inclusions and cream silt marbling and a finer fabric with cream silt banding and fine mica sparkles respectively. A fragment of fine silty peg tile and vitrified curved tile fragment from context [3/05] could not be dated.

5.6 The Fired Clay by Elke Raemen

- 5.6.1 An assemblage comprising nine fragments (wt 42g) was recovered from two individually numbered contexts. Three different fabrics were identified, listed in Table 24.

Fabric	Description
F1	Sparse fine sand-tempered. Occasional iron oxide inclusions to 1mm. Occasional organic temper.
F2	Sparse fine sand-tempered.
F3	Sparse fine sand-tempered with occasional iron oxide inclusions to 1mm.

Table 24: Overview of the fired clay fabrics

- 5.6.2 Forms are mostly amorphous, including eight fragments from [10/06], which has been ceramically dated to the Mid to Late Bronze Age. The only piece retaining some features was recovered from the topsoil in Trench 9 and is therefore undated. The fragment, in F1, consists of the end of a circular-sectioned rod. Although the full diameter does not survive, it would have measured approximately 29mm. Although reminiscent of a briquetage form, the diameter is too small for the object to represent a pedestal, whereas the piece is too well finished to suggest it formed part of a short rod. Its function therefore remains unclear.

5.7 Worked Flint by Karine Le Hégarat

- 5.7.1 Nine struck flint artefacts weighing 62g were recovered during the course of the archaeological work at the site. The small assemblage of flints was recovered from four individual contexts within four trenches (Trenches 2, 3, 8 and 10). The pieces exhibit moderate to extensive edge-damage and are clearly redeposited in later archaeological contexts. Four pieces are recorded as broken. Evidence of surface modification is uncommon with only one flint exhibiting incipient traces of bluish white surface discolouration. Dark brown to almost black very fine-grained flint with a thin

abraded cortex is the most frequently occurring raw material in the assemblage. One piece is manufactured from light grey coarse grained flint with frequent cherty inclusions.

5.7.2 The assemblage is small and with the exception of one miscellaneous retouched piece it consists entirely of pieces of flint debitage including five flakes, one blade-like flake fragment, one shattered piece and one core dressing piece. No diagnostic pieces were recovered. However, the artefacts exhibit technological attributes that can provide limited dating evidence. The majority of the assemblage is composed of thin soft hammer struck flakes, often associated with a Mesolithic or Neolithic date. The core face/edge rejuvenation flake from [3/01] displays platform-edge abrasion which suggests a broad Mesolithic-Neolithic date. A small flake from [8/01] exhibited multi directional flake scars on the upper face which might indicate an axe thinning flake (Neolithic period). The mesial part of a blade-like flake fragment from [3/01] shows partial low angle short retouches on the right-hand side and may also be of Mesolithic or Neolithic date.

5.7.3 No closely datable material was recovered from the site. However, based only on technological attributes, the small assemblage indicates earlier prehistoric activity in the area.

Context	Flake	Blade-like flake fragment	Shattered piece	Core dressing	Misc. retouched piece	Total piece	Total weight
2/05		1				1	4
3/01				1	1	2	21
8/01	3					3	8
10/06	2		1			3	29
Total	5	1	1	1	1	9	62

Table 25: Worked flint quantification

5.8 The Geological Material by Luke Barber

5.8.1 The archaeological work recovered just five pieces of stone (271g), all from context [10/06] of the evaluation. These consist of five pieces (232g) of weathered Lower Greensand chert and a single 39g flint pebble. Both types occur naturally in the vicinity of the site through Tertiary reworking of the original beds.

5.9 The Ironwork by Elke Raemen

5.9.1 A small assemblage of ironwork was recovered, consisting of three heavy duty nail fragments (wt 116g) from two different contexts. Included is a fragment from colluvium [3/02], which also contained a 14th-century piece of pottery. Possible pond [3/04] (fill [3/05]), dated ceramically to the 14th- to 15th-centuries, contained a further two fragments including a rectangular nail head measuring 27.8 by 30mm (RF <2>).

5.9.2 As only a few fragments were recovered, none of which are in situ, no conclusions can be drawn from this assemblage.

5.10 Textile Production by Trista Clifford

- 5.10.1 A plain, conical lead weight (RF <1>) was recovered from possible pond [3/04] (fill [3/05]), dated ceramically to the 14th- to 15th-centuries. Its symmetrical form as well as the size of the central hole renders it most likely a spindle whorl, although a function as netsinker cannot be excluded. Dimensions are 26.9mm diameter with the central hole ranging from 9.65 to 9.9mm. The piece measures 12.5mm high.

5.11 Animal Bone by Gemma Ayton

- 5.11.1 Context [3/06] produced three fragments of animal bone. The fragments are small and much of the surface has been eroded. The fragments are not identifiable to species but appear to have been part of a long bone.
- 5.11.2 Context 10/06 produced a large quantity of small, badly preserved bone weighing 98g. The unidentifiable fragments range in size from 1-8mm. The context also contained 8 cattle mandibular teeth including a third molar and a fourth pre-molar that are in wear.
- 5.11.3 Due to the size and poor preservation of this assemblage, it holds no potential for further analysis and no further work is required.

5.12 Environmental samples by Karine Le Hégarat and Lucy Allott

Introduction

- 5.12.1 A total of nine bulk soil samples were taken during archaeological work at Ashford Orbital Sewer for the retrieval of environmental remains such as charcoal, charred macrobotanical remains, fauna and mollusca. Samples were taken from two Middle/Late Bronze Age pit features and one medieval pit feature. This report characterises these assemblages by providing an overview of the sample contents and aims to provide information regarding the agricultural economy, fuel use and the local vegetation environment.

Methods

- 5.12.2 Samples were processed in their entirety in a flotation tank, the flots and residues were captured on 250µm and 500µm meshes and were air dried prior to sorting. The residues were sieved through 4mm and 2mm geological sieves and each fraction sorted for environmental and artefact remains (Table 26). The flots were scanned under a stereozoom microscope at x7-45 magnifications and an overview of their contents including abundance and preservation recorded (Table 27). Identifications of macrobotanical remains have been made using modern comparative material and reference texts (Cappers *et al.* 2006; Jacomet 2006; NIAB 2004). Due to poor preservation no identifications have been provided for the charcoal assemblage. Nomenclature and habitat information used follows Stace (1997).

Results

- 5.12.3 Sampling produced very small flots measuring between <2ml and 2ml the majority of which were dominated by uncharred material with only occasional charred botanical remains evident. When deposits remain sufficiently moist, are well sealed and/or when the water table is high uncharred seeds can be preserved in anoxic conditions.

Such conditions were encountered at this site. Deposits in pit/well [10/09] and pit [10/05] were recorded as waterlogged and deposits in the possible pond [3/04] were recorded as moist. Uncharred botanical remains may therefore be contemporary with the infilling of these features.

Middle to Late Bronze Age

- 5.12.4 Seven samples were taken from pit ([10/05] G15 and G16) dated to the Middle/Late Bronze Age. Sample <5> taken from the primary fill [10/08] of pit [10/05] G15 produced a small quantity of charcoal including infrequent fragments >4mm in size. Some pieces contained sediment particles and sediment concretions were also noticed on several pieces. Charred cereal remains were recovered from the residue and included five moderately well preserved caryopses of wheat (*Triticum* sp.). A small amount of fire cracked flint and some small pieces of stone were also recorded in the residue.
- 5.12.5 The fill [10/06] of pit or well [10/05] G16 was excavated and investigated in a series of 100cm spits. A total of six samples were taken from the feature, representing the basal layer (<4> basal), distinct spits (<4> 100-200cm; <4> 200-300cm; <4> 300-400cm) as well as a succession of spits (<4> 300-600cm; <4> general sample). There was a paucity of environmental remains in feature [10/05] with only small quantities of charcoal and charred macrobotanical remains evident. The assemblage of charcoal consisted principally of small fragments with infrequent wood charcoal fragments >4mm in size. Sediment concretions noted on a large proportion of the fragments provide some evidence for sediment infiltration.
- 5.12.6 Although charred macroplants were uncommon in the flots, the residues from all six samples contained a small amount of charred botanical remains. The sparse assemblage comprised charred crop remains including wheat (*Triticum* sp.) some of which were caryopses of emmer/spelt (*T. dicoccum/spelta*), charred wild/weed seeds including probable fescue (cf. *Vulpia* sp.) and other unidentified grasses (Poaceae) as well as a single ribwort plantain (*Plantago lanceolata* L.) and one indeterminate charred plant remain. Very few other environmental remains were noted apart from sporadic small unburnt and burnt mammal bone fragments. A small amount of fire cracked flint, small pieces of stone, pottery fragments and a single piece of flint were present in the residues. These samples provide no clear evidence for differences through the pit/well infill.
- 5.12.7 Uncharred seeds were moderately common in these deposits. Elder (*Sambucus nigra*), knotgrass/dock (*Polygonum/Rumex* sp.), black nightshade (*Solanum nigrum*), bristly oxtongue (*Picris echinoides*) and white clover (*Trifolium cf. repens*) as well as some monocotyledon stems and some very fine roots were recorded.

C.13th - mid 15th

- 5.12.8 Two samples were extracted from the possible pond [3/04] G7. Both sample <1> from the upper fill [3/05] and sample <2> from the secondary fill [3/06] produced small quantities of charcoal fragments, predominantly <2mm in size. The most abundant uncharred seeds were elder with small quantities of blackberry (*Rubus* sp.) and goosefoot (Chenopodiaceae) taxa also present. Although no charred macroplant remains were noted in the upper deposit, the secondary fill contained moderately well preserved charred cereal grains including barley (*Hordeum* sp.) and wheat (*Triticum* sp.) some of which have been identified as possible bread wheat (*T. cf. aestivum*). A single broad bean (*Vicia faba*) was also present in the lower deposit. No other

environmental remains were recorded in either sample however a small quantity of pottery was recovered from the residue.

Discussion

- 5.12.9 Bulk environmental samples confirmed the presence of small assemblages of environmental remains including charcoal, charred macrobotanicals and faunal remains. Despite the scarcity of charred remains, sampling has provided limited evidence for agricultural crops at the site. The Middle to Late Bronze Age feature contained infrequent caryopses of wheat including grains of emmer and spelt that are both typical cereals of this period. By contrast a broader range of crops are evident in features dated to the medieval period with free-threshing bread wheat, barley and broad bean indicated. Although data from this site are exceptionally limited, providing no indication of the scale of cultivation or whether the crops were grown locally they broadly support trends for the region.
- 5.12.10 Evidence for vegetation habitats is also limited. Ribwort plantain typically grows on grassland. Seeds of elder were common and although this tree grows in a range of habitats including woods, hedges and waste ground it is often found on manured soils and produces edible fruit. White clover is associated with grassland while black nightshade, knotgrass/dock, blackberry and bristly oxtongue are species typical of cultivated or otherwise disturbed ground and may have occurred in the immediate vicinity of the site. The majority of charcoal fragments were small and heavily concreted and may have amalgamated gradually in these slow silting features. Sediment particles that have percolated into the wood fragments provide evidence for episodes of saturation and drying that may be associated with fluctuations in the water table.

Table 26: Residues quantification (* = 0-10, ** = 11-50, *** = 51 – 250, **** = >250) and weights (in grams)

Period	Group	Sample Number	Context	Spit (if relevant eg. cremation)	Context / deposit type	Sample Volume litres	sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charred botanicals (other than charcoal)	Weight (g)	Bone and Teeth	Weight (g)	Crem Bone 4-8mm	Weight (g)	Crem Bone 2-4mm	Weight (g)	Other (eg ind, pot, cbm)
Middle to Late Bronze Age	15	5	10/08		Fill of pit [10/005]	5	5	**	<2	***	<2	* <i>Triticum</i> sp.	<2							Stone */<2g – FCF **/8g
Middle to Late Bronze Age	16	4	10/06		Fill of pit [10/005]	10	10	**	<2	***	<2	* Poaceae, <i>Triticum</i> sp.	<2							FCF **/38g
Middle to Late Bronze Age	16	4	10/06	300-600	Fill of pit [10/005]	20	20	**	<2	***	4	* <i>Triticum</i> cf. <i>spelta/dicoccum</i>	<2	*	<2	*			<2	FCF ***/118g – Pot **/2g
Middle to Late Bronze Age	16	4	10/06	300-400	Fill of pit [10/005]	10	10	*	<2	***	2	* <i>Triticum</i> sp., Cerealia	<2	*	<2					FCF */24g – Pot */<2g
Middle to Late Bronze Age	16	4	10/06	200-300	Fill of pit [10/005]	10	10	*	<2	***	4	* <i>Triticum</i> sp., Cerealia, cf. <i>Vulpia</i> sp., Poaceae	<2	*	<2		*		<2	FCF **/38g – Flint */<2g – Pot*/<2g
Middle to Late Bronze Age	16	4	10/06	100-200	Fill of pit [10/005]	10	10	*	<2	**	<2	* Cerealia, <i>Triticum</i> sp.	<2	*	<2					FCF **/12g – Stone */4g – Pot */<2g
Middle to Late Bronze Age	16	4	10/06	Basal	Fill of pit [10/005]	10	10	**	<2	***	2	* <i>Triticum</i> cf. <i>spelta/dicoccum</i> , Cerealia	<2	*	<2					FCF ***/118g – Pot */<2g

Period	Group	Sample Number	Context	Spit (if relevant eg. cremation)	Context / deposit type	Sample Volume litres	sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charred botanicals (other than charcoal)	Weight (g)	Weight (g)	Bone and Teeth	Weight (g)	Crem Bone 4-8mm	Weight (g)	Crem Bone 2-4mm	Weight (g)	Other (eg ind, pot, cbm)
C.13th - mid 15th	7	1	3/05		Upper fill of pit [3/04]	40	40	**	4	***	2										Pot */10g
C.13th - mid 15th	7	2	3/06		Secondary fill of pit [3/04]	20	20	*	<1	**	2	* <i>Vicia faba</i>		<2							Pot */6g

Table 27: Flots quantification (* = 0-10, ** = 11-50, *** = 51 – 250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good)

Sample Number	Context	Spit (if relevant eg. cremation)	Weight g	Flot volume ml	Uncharred %	Sediment %	seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation
5	10/08		<2	<2	45	25	* <i>Trifolium cf. repens</i> , <i>Sambucus nigra</i>		**										
4	10/06		<2	2	50	42	* <i>Trifolium cf. repens</i> , <i>Sambucus nigra</i>		**										
4	10/06	300-600	<2	<2	90	7	* <i>Solanum nigrum</i>		**										
4	10/06	300-400	<2	2	60	36	* <i>Sambucus nigra</i>		*					*	<i>Plantago lanceolata</i>	+			
4	10/06	200-300	<2	<2	90	9			*										
4	10/06	100-200	<2	<2	38	58	* <i>Sambucus nigra</i>		*										

Sample Number	Context	Spit (if relevant eg. cremation)	weight g	Flot volume ml	Uncharred %	sediment %	seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation
4	10/06	Basal	<2	2	80	7	* <i>Picris</i> echioides, <i>Solanum</i> <i>nigrum</i> , <i>Sambucus</i> <i>nigra</i> , <i>Polygonum</i> / <i>Rumex</i> sp.		*	**	*	<i>Triticum</i> sp.	+ to ++				*	CPR frag.	+
1	3/05		<2	<5	80	10	***lots of <i>Sambucus</i> <i>nigra</i> seeds		*	***									
2	3/06		<2	<5	21	4	** <i>Rubus</i> sp., <i>Sambucus</i> <i>nigra</i> , Chenopodiaceae		*	***	**	<i>Triticum</i> sp., <i>Hordeum</i> sp.	++						

6.0 DISCUSSION

6.1 Evaluation - Waterbrook Park Pumping Station

- 6.1.1 The evaluation revealed remains from perhaps three broad periods: possible prehistoric, medieval (13th century – mid 15th century) and post-medieval/modern.

Possible Prehistoric

- 6.1.2 Two ditches of similar character, [1/04] in Trench 1 and [4/04] in Trench 4, were orientated broadly at right angles and were perhaps elements of a field system. Although both ditches were undated, the indistinct nature of their cuts and the character of the fills may suggest a possible prehistoric origin. If the ditch alignments were extended, their predicted intersection would lie c. 5m to the east of GTP2 (Fig. 7).

Medieval

- 6.1.3 A possible pond [3/04] was identified in Trench 3; it measured at least 6.5m in diameter and produced pottery dating from mid/late 14th century to early/mid 15th century. Gleying of the lower fill [3/06] indicated that it had been waterlogged over a long period. An area of *in situ* burning [3/08] on the north-eastern edge of the feature extended c. 700mm down the profile of the cut of the pond. Thirteenth-century pottery was recovered from an associated layer [3/09] of burnt clay clumps fragments. At the time of the burning event, the pond was only partly silted up/water-filled (level of groundwater would not be constant).

Post-medieval/Modern

- 6.1.4 A shallow linear feature [2/04]/[2/06] identified in Trench 2 was possibly the result of mechanical mineral extraction, perhaps brickearth quarrying. Alternatively, the feature might have been produced by some process related to arable cultivation.
- 6.1.5 Ditch [4/06] in Trench 4 had been infilled in modern times and was probably a field boundary/drainage ditch. The construction of the A2070 roundabout and feeder road would have created a narrow, orphaned strip which would have been impractical as a separate field, rendering ditch [4/06] redundant.

Geo-archaeological/palaeoenvironmental

- 6.1.6 The shallow topsoil and sub soils units (colluvium) at the location of GTP 1 are considered to have only low palaeoenvironmental potential. Their archaeological potential has been assessed by conventional archaeological test trenching.
- 6.1.7 At GTP 2 sediments lying below c. 0.90 metres to maximum recorded / observed depth (c.2.20m) are interpreted as weathered alluvium. The composition and structure of the unit suggest these alluvial sands may have been re-worked though fine particle sizes suggest re-working will have been under low energy regimes so potential for archaeology, if present, to be preserved *in situ* should be considered as moderate.
- 6.1.8 The rapid change in sequence between test pits suggests a channel edge, upper bank

slope dipping towards an alluvial band / corridor to the north of the site.

6.2 Evaluation - Pipeline corridor north of M20

- 6.2.1 No archaeological features were identified and no significant finds were recorded recovered. In this area, the surface geology was observed to be Head Brickearth that had probably been subject to some reworking by water action.
- 6.2.2 The substantial deposit of made ground [5/02] and [8/02] is almost certainly associated with the construction of the nearby eastbound carriageway of the M20 motorway.

6.3 Evaluation - Alsops Road Park Pumping Station

- 6.3.1 The evaluation revealed significant remains from only one period, the Middle/Late Bronze Age. Substantial deposits of made ground were almost certainly associated with the early 20th-century expansion of the nearby railway and the recent construction of the Channel Tunnel Rail Link (CTRL).
- 6.3.2 Cut [10/05] represented a Middle/Late Bronze Age pit that perhaps served as a waterhole as suggested by the morphology of the feature: the broad shallow end of the pit sloped down towards the deepest part, thereby allowing access. In addition, the gleyed character of the fill indicated waterlogging over a long period, suggesting that much of the pit lay below the water table. This is supported by analysis of the charcoal recovered from the base of the feature [10/05] which has identified a significant level of concretion which had probably formed during periods of saturation.
- 6.3.3 The small size of the proposed waterhole might suggest that it was associated with domestic settlement rather than for watering livestock. The presence of a cattle jawbone lying on the sloping base of the feature was very likely an example of structured deposition, perhaps an act of decommission.
- 6.3.4 Cuts [10/09] and [10/11] were very truncated Middle/Late Bronze Age small pits or post-holes that were almost certainly associated with the activity represented by waterhole [10/05].

6.4 Watching Brief

- 6.4.1 Geological observations made throughout the watching brief provide good correlation with the geological background of the sewer route discussed above in 2.2 and shown on Figs 2 and 3.
- 6.4.2 To the south of the route at The Boulevard, Weald Clay was sealed beneath alluvial and/or head deposits and there was probable evidence of post-medieval quarrying. The contemporary ground surface was at c. 40m OD.
- 6.4.3 North of this at Crowbridge Road, Alsops Road and Bentley Road, Weald Clay was nearer to the surface, thinly sealed beneath a gravelly head deposit in places. The contemporary ground surface rose to c. 42.50m OD before dropping again to c. 40.50m OD to the north.

- 6.4.4 North of this at Hunter Avenue during the 19th-century elements of the Hythe Formation were quarried for limestone as marked on early OS maps (Figs. 10 and 11). These limestone and mudstone elements were beneath elements of the Sandgate Formation which was in turn capped with alluvium and/or head deposits. Contemporary ground level rose to c. 43.50m OD.
- 6.4.5 To the north again at Hunter Road, contemporary ground level continued to rise to up to c. 46.50m OD. Here head deposits capping the underlying geology were exposed. At Earls Avenue and Harvey Road contemporary ground level fell to c. 41.50m OD and there was further evidence of post-medieval quarrying of head deposits.
- 6.4.6 Finally at Cradle Bridge Road the land fell away to c. 38.50m OD and probable head deposit and/or alluvium was exposed.

6.5 Addressing the research agenda:

- 1.5.1 The section discusses the potential of the results of the various phases of fieldwork to address the project research aims and objectives as detailed in the WSI (ASE 2009).

1.5.1 General Aims

- A general aim was to record the nature, extent, date, character, quality, significance and state of preservation of any archaeological features and deposits affected by Ashford Sewer and associated works.

Potential: to further our understanding of the history of the Ashford town area and contribute to the Kent SMR.

- A further general aim was to assess and record the nature, extent, date, character, quality, significance and state of preservation of the alluvial sequence and any palaeo-environmental remains affected by Ashford Sewer

Potential: to advance our knowledge of the surface geology of the Ashford town area.

- Report on the results of the fieldwork and publish and disseminate information as appropriate

Potential: the results of the fieldwork are not considered significant enough to warrant further publication.

1.5.2 Research Aims

- Assess the extent to which any remains of Neolithic to Roman date are associated with / similar to the remains recently uncovered at Waterbrook Farm.

Potential: low - two undated ditches were *possibly* prehistoric in origin; however the paucity of worked flint and absence of fire-cracked flint recovered suggests a low level of prehistoric activity on the site.

- Are any Iron Age remains uncovered associated with the Late Iron Age spread of occupation of South Ashford?

Potential: low - negative evidence

- Are any of the remains uncovered associated with the nearby Roman Road and Romano British nearby Farmstead?

Potential: low - negative evidence

- Do any of the remains relate to the medieval Manorial complex of Hawkeswell?

Potential: low - the 13th- to mid 15th-century possible pond was apparently an isolated feature

- Particular attention should be paid to the continuity of land use from the prehistoric / Romano British period and the medieval landscape. This has been suggested for other areas of the Weald, particularly Kent (SERF seminar October 2007).

Potential: low – negative evidence

1.5.3 Research Objectives

- Detail the remains found at Waterbrook Farm and compare the characteristic aspects (artefacts / feature type / environmental and faunal evidence) with any remains of Neolithic – Roman date found during the Ashford Sewer works. Do these suggest a similar type of occupation?

Potential: low – the BA possible waterhole and associated features were the only securely dated remains identified from the broad Neolithic – Roman period.

- Assess dating evidence, feature type and orientation of ditches / boundaries of Iron Age remains in relation to the settlements at Park Farm East and Brisley Farm. Are there substantive differences / similarities?

Potential: low – only two undated *possibly* prehistoric ditches were recorded

- Plot any Iron Age boundaries / ditches and compare in plan and orientation to the Park Farm East / Brisley Farm Iron Age ditch / enclosure systems.

Potential: low – negative evidence

- Are any field boundaries Roman in date? Plot these in relation to the Romano-British farmstead and assess the degree to which they may be associated. Assess any charred plant or faunal remains from features of this date to attempt to reconstruct the subsistence regime.

Potential: low – negative evidence

- Compare any medieval or post medieval remains, particularly boundary ditches, with the cartographic evidence to assess how they may relate to the Hawkeshill Manorial complex (if at all).

Potential: low - the 13th- to mid 15th-century possible pond was apparently an isolated feature; two nearby ditches may have been associated but were judged to be perhaps prehistoric in character.

- Compare all ditches, but particularly those of prehistoric date to the cartographic sources to assess the potential of continuity of land boundaries from the prehistoric into the medieval and later periods.

Potential: low – only two undated ditches recorded

6.6 Conclusions

It is not proposed that any further publication be produced as the results do not seem to merit further work and no new research aims or objectives have been identified.

Appendix 1

Table 29: Summary of borehole and test pit data (Y – present, N – absent, WC – Weald Clay Formation, AC – Atherfield Clay Formation, HB– Hythe Formation, SB – Sandgate Formation, FB – Folkestone Formation)

Investigation	Made ground	Alluvium	Head	Gravel	Bedrock
BH 1	Y	Y	N	Y	WC
BH 2	Y	Y	N	Y	WC
BH 3	Y	Y	N	Y	WC
BH 4	Y	Y	N	Y	WC
BH 5	Y	Y	N	Y	WC
BH 6	Y	Y	N	N	WC
BH 7	Y	Y	N	N	WC
BH 8	Y	N	N	N	SG
BH 9	Y	N	Y	N	SG
BH 10	Y	N	N	N	FB
BH 11	Y	N	?	N	FB/SG
BH 12	Y	N	N	N	FB
BH 13	Y	N	Y	N	SG
BH 14	Y	N	Y	N	SG
BH 15	Y	N	Y	N	SG
BH 16	Y	Y	N	Y	WC
BH 101	Y	N	Y	N	WC
BH 102	Y	N	Y	N	WC
BH 103	Y	N	Y	N	WC
BH 104	Y	Y	N	N	WC
BH 105					
BH 106	Y	N	N	N	WC
TP 1	Y	Y	N	Y	WC
TP 2	Y	Y	N	Y	WC
TP 3	Y	Y	N	Y	WC
TP 4	Y	Y	N	Y	WC
TP 5	Y	Y	N	Y	WC
TP 6	Y	Y	N	Y	
TP 7	Y	Y	N	N	WC
TP 8	Y	Y	N	N	WC
TP 9	Y	Y	N	N	WC
TP 14	Y	N	N	N	WC
TP 15	Y				
TP 16	Y	N	Y	N	WC
TP 17	Y	N	N	N	WC
TP 18	Y	N	Y	N	WC
TP 19	Y	Y	N	N	WC
TP 20	Y	Y	N	N	WC

Investigation	Made ground	Alluvium	Head	Gravel	Bedrock
TP 25	Y	N	Y	N	WC
TP 26	Y	N	N	N	HB
TP 27	Y	N	N	N	HB
TP 28	Y	N	N	N	HB
TP 29	Y	Y	Y		
TP 30	Y	N	Y	N	HB
TP 31	Y	N	Y	N	HB
TP 32	Y	N	Y	N	HB
TP 33	Y	N	N	N	SB
TP 35	Y	N	Y	N	SB
TP 36	Y	N	N	N	SB
TP 37	Y	N	N	N	SB
TP 39	Y	N	Y	N	SB
TP 40	Y	N	Y	N	SB
TP 41	Y	N	N	N	SB
TP 42	Y	N	Y	N	SB
TP 43	Y	N	N	N	SB
TP 44	Y	N	Y	N	FB
TP 45	Y	N	Y	N	FB
TP 50	Y	N	Y		
TP 51	Y	N	N	N	FB
TP 101	Y				
WS 101	Y	N	N	N	AC

Table 30: Geoarchaeological summary of test pits and boreholes

Investigation	Geoarchaeological summary (Holocene)	Geoarchaeological summary (Pleistocene)
BH 1	Buried archaeology in/under alluvium	Reworked artefacts in gravels
BH 2	Buried archaeology in/under alluvium	Reworked artefacts in gravels
BH 3	Buried archaeology in/under alluvium	Reworked artefacts in gravels
BH 4	Buried archaeology in/under alluvium	Reworked artefacts in gravels
BH 5	Buried archaeology in/under alluvium	Reworked artefacts in gravels
BH 6	Buried archaeology in/under alluvium	
BH 7	Buried archaeology in/under alluvium	
BH 8	Any archaeology in/below made ground	
BH 9		Artefacts in/on/below Head
BH 10	Any archaeology in/below made ground	
BH 11	Any archaeology in/below made ground	
BH 12	Any archaeology in/below made ground	
BH 13		Artefacts in/on/below Head
BH 14		Artefacts in/on/below Head
BH 15		Artefacts in/on/below Head
BH 16	Buried archaeology in/under alluvium	Reworked artefacts in gravels
BH 101		Artefacts in/on/below Head
BH 102		Artefacts in/on/below Head
BH 103		Artefacts in/on/below Head
BH 104	Buried archaeology in/under alluvium	
BH 106	Any archaeology in/below made ground	
TP 1	Buried archaeology in/under alluvium	Reworked artefacts in gravels
TP 2	Buried archaeology in/under alluvium	Reworked artefacts in gravels
TP 3	Buried archaeology in/under alluvium	Reworked artefacts in gravels
TP 4	Buried archaeology in/under alluvium	Reworked artefacts in gravels
TP 5	Buried archaeology in/under alluvium	Reworked artefacts in gravels
TP 6	Buried archaeology in/under alluvium	Reworked artefacts in gravels
TP 7	Buried archaeology in/under alluvium	
TP 8	Buried archaeology in/under alluvium	
TP 9	Buried archaeology in/under alluvium	
TP 14	Any archaeology in/below made ground	
TP 15		
TP 16		Artefacts in/on/below Head
TP 17	Any archaeology in/below made ground	
TP 18		Artefacts in/on/below Head
TP 19	Buried archaeology in/under alluvium	
TP 20	Buried archaeology in/under alluvium	
TP 25		Artefacts in/on/below Head
TP 26	Any archaeology in/below made ground	
TP 27	Any archaeology in/below made ground	
TP 28	Any archaeology in/below made ground	
TP 29	Buried archaeology in/under alluvium	Artefacts in/on/below Head
TP 30		Artefacts in/on/below Head
TP 31		Artefacts in/on/below Head

Investigation	Geoarchaeological summary (Holocene)	Geoarchaeological summary (Pleistocene)
TP 32		Artefacts in/on/below Head
TP 33	Any archaeology in/below made ground	
TP 35		Artefacts in/on/below Head
TP 36	Any archaeology in/below made ground	
TP 37	Any archaeology in/below made ground	
TP 39		Artefacts in/on/below Head
TP 40		Artefacts in/on/below Head
TP 41	Any archaeology in/below made ground	
TP 42		Artefacts in/on/below Head
TP 43	Any archaeology in/below made ground	
TP 44		Artefacts in/on/below Head
TP 45		Artefacts in/on/below Head
TP 50		Artefacts in/on/below Head
TP 51	Any archaeology in/below made ground	
TP 101		
WS 101	Any archaeology in/below made ground	

Appendix 2: HER data

Figure 1 No.	HER No.	Location	Description
1	TR 04 SW 20 - MKE3959	TR 02400 41300	Mesolithic flint knife and neolithic axe found in ploughsoil; 50m to the south of Willesborough Church.
2	TR 04 SW 136	TR 02786 40896	Two prehistoric worked flint flakes were recorded at a site adjacent to the Boys Hall Moat at Orbital Park.
3	TR 34 SW 601 - MKE17512	TR 03070 40680	Medieval features and prehistoric flint scatter, Boys Hall balancing pond.
4	TR 04 SW 18 - MKE3957	TR 01890 41180	Neolithic arrowhead found in about 1946 on the surface of a ploughed field in South Willesborough. The arrowhead is approximately 3.5cm in length and triangular in shape without barbs or tang.
5	TR 04 SW 104 - MKE17383	TR 02900 40800	A number of neolithic or possibly bronze age worked flints were recovered from various features and in association with more recent material at Boys Hall moat. All the pieces are residual, but they suggest that there was an area of neolithic or possibly bronze age activity in the area.
6	TR 04 SW 127 - MKE18117	TR 03000 41260	Evidence of prehistoric activity comprising several boundary or drainage ditches, postholes, a pit and a worked flint scatter. Of the four post holes, three contained flint tempered pottery sherds possibly dating to the late bronze age. The fourth was located slightly away from the others and contained prehistoric pottery dating from 50BC-AD50. A series of intercutting ditches was thought to be boundary ditches: these contained prehistoric worked flints and late bronze age pottery. The circular pit that was also revealed further evidence of prehistoric activity in the form of flake and blade core flint debris, prehistoric pottery and uncharred seeds preserved by waterlogging. The evidence at the site indicated that it was abandoned and not re-occupied until the medieval period.
7	TR 04 SW 102	TR 03070 40210	An archaeological evaluation in 1992 revealed a concentration of features including at least one ditch and a number of pits and post holes. A considerable quantity of pottery was also discovered, and the combination of this evidence seems to indicate the presence of a prehistoric, possibly late bronze age settlement.
8	TR 04 SW 137	TR 02537 40847	Two Iron Age gullies orientated north-north west and south-south east, found at the Courtyard, Orbital Park.
9	TR 04 SW 6 - MKE3945	TR 02000 41000	An uninscribed gold coin was exhibited to the British Archaeological Association in 1870. This coin was thought to date from the iron age, and was supposedly found in Willesborough, near Ashford although the precise location of the findspot is unknown. Unfortunately no further details about the artefact or its discovery are available.
10	TR 04 SW 70	TR 02700 41000	Possible iron age enclosure near Boys Hall, comprise a pair of wide deep ditches 50m apart, interpreted as the south part of a large

Figure 1 No.	HER No.	Location	Description
			enclosure that corresponds to a pair further north. Late iron age flint tempered pottery dating to the 1st-3rd centuries BC was found in the ditch fill.
11	TR 04 SW 71	TR 03150 40550	A late iron age possibly Belgic settlement site was found near Sevington in 1990. Badly ploughed remains were examined by trenching revealing several shallow features including a ditch on the east side of the site and a grouping of smaller ditches, gullies and pits were interpreted as a small farmstead or similar settlement. Pottery dating to the late 1st century BC and early 1st century AD were also found.
12	TR 04 SW 83	TR 02240 40450	Elements of late iron age field systems have been recovered in an area to the south of South Willesborough. The area is now covered by warehouses, and although similar features have been discovered around Sevington; no further details about the site are known.
13	TR 04 SW 84	TR 03320 40510	Parts of late iron age field systems were recovered near Sevington. Associated with this are definite areas of late iron age (possibly Belgic) settlements with further settlement likely beyond Ashford rail terminal.
14	TR 04 SW 86	TR 03220 40260	Parts of a late iron age field system were recovered in an area to the south of Sevington. Similar features and late iron age settlement evidence have been found in the area around Sevington and areas to the south of South Willesborough, however no further details are known.
15	TR 04 SW 96	TR 02690 41160	A series of linear features were recorded in the north west of a site near Boys Hall Road. These were found to contain some sherds of Late Iron Age - Early Roman pottery. The grog tempered pottery, when analysed, was not considered to be "Romanised".
16	TR 04 SW 105 - MKE17384	TR 03000 40640	Linear cuts with large amounts of iron age pottery have been found at the site of Boys Hall moat. Identification of this site as possibly a late iron age, perhaps Belgic, settlement is based on the identification of a site of this period to the north east of Boys Hall.
17	TR 04 SW 137	TR 02537 40847	Two Iron Age gullies found at the Courtyard, Orbital Park. The first gully, which was exposed for a length of 9 metres, was found in the northern corner of the site. The second gully was found towards the southern corner and recorded for 5 metres. A number of Pottery sherds were recovered from both gullies were dated to the Late Bronze Age. They were an average of 0.10-0.11m deep and 0.34m wide.
18	TR 04 SW 164	TR 02670 40600	Parts of two late iron age gullies have been revealed during construction at Orbital Business Park. The north western gully contained a few small rounded flints and four pieces of late iron age pottery dating from 150 BC - 50 AD, three of which were conjoining fragments from a grog-tempered bead rimmed jar. The second gully in the south eastern part of the site contained further pottery sherds and two fragments of burnt clay, also dating to the period from 150B-50AD.

Figure 1 No.	HER No.	Location	Description
19	TR 34 SW 600 - MKE17434	TR 03080 40680	Ditches, gullies and cremations of late iron age/Romano-British date were found in 1999 as part of a programme of archaeological investigation along the Channel Tunnel Rail Link, adjacent to Boys Hall Moat. In an ditch discovered in the south west corner of the site were found 64 sherds of late iron age/early Romano-British pottery and smaller quantities of this material were found in gullies and ditches throughout the site. A smaller cluster of pits in the south east corner of the site contained the remains of at least four in situ cremation burials within late iron age/early Romano-British pots, and there was also evidence of grave goods.
20	TR 04 SW 72	TR 02500 40720	A Romano-British farmstead settlement was identified near Boys Hall after a number of small enclosures and post holes were discovered during evaluation work in advance of development. Some 1st and 2nd century pottery was found at the site but there were no building materials. Two cremation burials (one with the crushed remains of four vessels) were also found and these were of 2nd century date.
21	TR 04 SW 2 - MKE3941	TR 03000 40730	A medieval moated site is located to the west of Sevington with a post-medieval house & formal gardens. This is the site of the old Boys Hall, and is scheduled as an ancient monument. The moat is 40m by 28m in size and is water filled and in good condition. There is a fish-pond on the south west side and a well preserved group of earthworks to the north west representing the remains of formal garden including a number of complex water features and an additional moat. The enclosing bank and ditch has been completely destroyed on the north and badly mutilated and reduced elsewhere.
22	TR 04 SW 87	TR 03350 40510	A medieval pit was near Sevington in close proximity to the town. Recovered from the backfill of this pit was pottery dated to c. 1150/75 - 1200 AD.
23	TR 04 SW 88	TR 03250 40320	A small enclosure near Sevington has been identified as the possible location of a former building of late medieval date. Another enclosure and forestall to the north of this area contains later buildings and it is suggested that this may mark a shift of occupation.
24	TR 04 SW 95	TR 02690 41160	Medieval linear features, probably a boundary and/or drainage ditches, and one small pit were found in the north west corner of a site excavated by the Museum of London in 1997. Found within the infill of these features were small quantities of sand and flint-tempered pottery dating to the 12th to 14th centuries.
25	TR 04 SW 128 - MKE18120	TR 03000 41300	An archaeological excavation in 2001 was undertaken near Boys Hall and produced evidence of medieval activity comprising ditches and a small rectangular timber framed building containing hearths as well as an isolated hearth located adjacent to the building. Two narrow linear features were found running parallel north-west to south-east, and these contained pottery dating from AD1175-1250. A number of post holes on the site contained pottery dating to the AD 1125-1250. The building itself was enclosed on two sides by ditches, and contained within the fill of one of these was a copper-alloy ring and pottery dated

Figure 1 No.	HER No.	Location	Description
			between AD1175 - 1250. The site had previously been occupied in the prehistoric period (TR 04 SW 127) but was abandoned until the medieval period.
26	TR 04 SW 21 - MKE3960	TR 01900 42800	A late 19th century water pumping station was located in Ashford. This building is first marked on the Ordnance Survey 2nd edition map of c.1895, indicating that it was constructed between the creation of this and the 1st edition map of c.1861. This building was demolished in 1999 and the engines were reportedly removed to a Mid-Kent Water depot.
27	TR 04 SW 57 - MKE9431	TR 02080 41480	Former workshop, Newtown Railway Works. Formerly used for sheet making, the brick L-shaped range was built by 1871, although the form altered considerably by 1898. The building became a pattern making workshop by the early C20 & is now an enterprise centre.
28	TR 04 SW 63 - MKE9437	TR 01840 41500	Paint Store, Newtown Railway Works. Built between 1850 and 1871, the paint store is the only surviving building on the site with fire-resistant features. It was latterly used as an electroplating shop & is now a workshop.
29	TR 04 SW 67 - MKE9441	TR 01800 41600	Channel House. Part of a late C19 wall is incorporated into the modern building (post 1968). It is now decorated with a mural.
30	TR 04 SW 81	TR 02520 40940	Brickworks, Sevington. The site of a brick field and brick works are shown on the Ordnance Survey 3rd and 4th edition maps of c.1905-1940 respectively. These features are not visible on the earlier Ordnance Survey edition maps and no tanks or buildings are now visible, suggesting these works had a short period of use.
31	TR 04 SW 85	TR 02890 40100	Post medieval farm and ridge and furrow, Sevington. Waterbrook Farm is first recorded in 1659, and in 1706 barns, stables, outhouses, orchards, gardens, a yard and backsides are mentioned. The presence of two ponds and managed watercourses on the 1838 tithe map suggest a mill but none is known of; fish ponds and traps are an alternative use. Other buildings in the vicinity consist of lodges and sheep-folds or dips. Waterbrook Farm remains a working farm today although it is uncertain whether any of the original buildings remain intact. Traces of possible ridge and furrow field systems have been recorded to the west of Waterbrook Farm.
32	TR 04 SW 92 - MKE9192	TR 01970 42210	Air raid shelter, North School, Ashford. An underground communal air raid shelter is situated next to buildings at North School, Ashford. The monument is made of concrete and is a single corridor trench made on a zig zag plan designed to hold 300 people. There are 3 staircased entrances and 2 vertical escape hatches at both ends as well as remains of timber benches, lighting and toilets. The monument is now thought to be partially demolished and part filled with concrete. A similar shelter is also located at South School, Ashford.
33	TR 04 SW 114 - MKE17435	TR 02890 41000	Boys Hall formal gardens - Sevington railhead. A late iron age/early Romano-British and medieval site was found in an area to the west of

Figure 1 No.	HER No.	Location	Description
			Boys Hall road on the edge of Sevington parish. This area was the subject of an archaeological investigation in advance of Channel Tunnel Rail Link works. An area, possibly a layer, of ragstone was also found, and it is suggested that this may relate to 17th century formal gardens at Boys Hall Moat. To the south east of this another spread of ragstone was found and this may possibly represent the base of a wall associated with the Boys Hall Moat formal gardens. A large cut feature was also found and interpreted as a pond or moat and this also had a ragstone foundation.
34	TR 04 SW 120 - MKE17680	TR 02200 42530	Air Raid Shelter, Norton Knatchbull School, Ashford. A World War II air raid shelter was discovered during work to extend Norton Knatchbull School in Ashford. The shelter is of the single corridor type on an L-shaped plan and could hold approximately 100 teachers and children. There is one staircase entrance and two vertical escape hatches at either extremity of the corridor. At the foot of the entrance staircase is a single toilet chamber. An airlock to protect from gas attacks is now rotted away.
35	TR 04 SW 21 - MKE3960	TR 01900 42800	2 water pumps at Ashford waterworks. These water pumps are of 1881 and the machinery is supported by 2 cast iron fluted Doric columns. The machinery is intact though not now in use. They are housed in a contemporary 1 storey red brick building with slate roof and semi-circular fixed casement. Included for industrial archaeology interest.
36	TR 04 SW 35 - MKE3974	TR 02480 40320	Linear feature/soilmark. Linear feature has been identified to the east of Sevington and may possibly be part of an enclosure, moat or drain. This conclusion is tentative and it may be the case that this 'feature' is in fact a modern soilmark, however it is identified on the Ordnance Survey 1st edition map of c.1861.
37	TR 04 SW 36 - MKE3975	TR 03110 41100	A linear feature is located in the east of Sevington parish and this appears to be a trackway, although could also be related to drainage or an old field boundary.
38	TR 04 SW 41 - MKE3980	TR 02440 40270	The remains of a bank are depicted on the Ordnance Survey 1st to 4th edition maps spanning the period from c.1861 to c.1940. This feature is now ploughed out and the field name suggests it was of no archaeological significance.
39	TR 04 SW 341 - MKE21969	TR 02340 41460	Willesborough and District Labour Club. Grade II listed building. Main construction periods 1066 to 1999. Former hall-house, later social club. Medieval west crosswing, 1591 east crosswing with former open hall replaced c1800 when the building was clad in brickwork and mainly mid C19 sashes. Late C20 additions to west and north not of special interest. Timberframed building refronted in brickwork, roughcast to the rear, with roof in 4 hips clad in late C20 pantiles. Two storeys; 5 windows. Irregular fenestration, mainly later C19 sashes but 1 blocked early C19 sash to the rear. Medieval west crosswing has to ground floor an axial beam with 1 1/2 inch chamfer. First floor has partition with medieval downbraces and top of 1591 staircase with moulded knob. Front room has frame with

Figure 1 No.	HER No.	Location	Description
			<p>arched braces, C18 door, old floorboards and dragon beam showing that the front was originally jettied. The rear room to the west crosswing has an C18 3 plank door. Probable original roof of coupled rafters and collars. The former open hall was rebuilt c1800. The ground floor has been much altered in the late C20. The first floor retains an early C19 6-panelled door and the roof is of c1800. The 1591 east crosswing has gunstock jowled posts on the ground floor, a chamfered axial beam to the rear room and open fireplace with wooden bressumer bearing the marks of spit machine. Front room has stone 4-centred arched fireplace with blank shields in spandrels and high stops. Floor joists have dragon beam, proving that this crosswing was originally jettied. First floor of east crosswing has stone 4-centred arched fireplace dated W T 1591, restored in C19. Front room has frame with midrail and original floorboards. Rear room has 4 gunstock jowled posts, axial beam with chamfer and lambs tongue stops and open fireplace. Late C18 winder staircase near chimneystack leads to roof of clasped side purlins and windbraces.</p>

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Acknowledgements

ASE would like to thanks 4D for commissioning the work and Wendy Rogers for her continued guidance throughout the project.

HER Summary Form

Site Code	AOS09					
Identification Name and Address	Ashford Orbital Park Sewer, Ashford, Kent					
County, District &/or Borough	Kent					
OS Grid Refs.	NGR TR0215 4040 centred					
Geology	Hythe Beds of the Greensand Ridge to north, Weald Clay and Atherfield Clay to south					
Arch. South-East Project Number	3890					
Type of Fieldwork	Eval. X	Excav. X	Watching Brief X	Standing Structure	Survey	Other
Type of Site	Green Field	Shallow Urban X	Deep Urban	Other		
Dates of Fieldwork	13/7/2009 to 13/8/2010	Excav.	WB.	Other		
Sponsor/Client	4Delivery Limited					
Project Manager	Jon Sygrave and Jim Stevenson					
Project Supervisors	Dylan Hopkinson, Greg Priestley-Bell, Dan Swift					
Period Summary	Palaeo.	Meso.	Neo.	BA X	IA	RB
	AS	MED X	PM X	Other Modern X		
<p>100 Word Summary</p> <p><i>Archaeology South-East was commissioned by 4Delivery Limited to carry out a programme of archaeological/geoarchaeological investigation during groundworks associated with new Ashford Orbital Sewer, Ashford, Kent.</i></p> <p><i>Watching brief: probable post-medieval brickearth extraction was identified along the western half of Harvey Road, and a probably 19th-century ragstone quarry was identified in the southern end of Harvey Avenue.</i></p> <p><i>Evaluation - Waterbrook Pumping Station: two possibly prehistoric ditches of similar character that perhaps represented elements of a field system. A medieval possible pond produced pottery dating from mid/late 14th century to early/mid 15th century. A shallow linear post-medieval/modern feature was possibly the result of early mechanical mineral extraction, perhaps brickearth digging. A ditch, infilled in modern times and was probably a field boundary/drainage ditch.</i></p> <p><i>Evaluation - pipeline corridor to the north of the M20: no significant archaeological remains.</i></p> <p><i>Evaluation - Alsops Road Pumping Station: Middle/Late Bronze Age pit that perhaps served as a waterhole. A very truncated Middle/Late Bronze Age small pit or post-hole that was also recorded.</i></p>						

OASIS Form

OASIS ID: archaeol6-103054

Project details

Project name Ashford Orbital Park Sewer

Short description of the project Archaeology South-East was commissioned by 4Delivery Limited to carry out a programme of archaeological/geoarchaeological investigation during groundworks associated with new Ashford Orbital Sewer, Ashford, Kent. The work comprised two elements: i) a watching brief along the route of the pipeline trenching between Waterbrook Park Pumping Station and the Bybrook Wastewater Treatment Works; ii) evaluation by trial trench of three discrete areas: a) Waterbrook Park Pumping Station (together with geoarchaeological test pitting), b) pipeline corridor north of the M20 and c) Alsops Road Pumping Station. During the watching brief phase of the works, significant archaeological features were recorded in only two areas: probable post-medieval brickearth extraction was identified along the western half of Harvey Road, and a probably 19th-century ragstone quarry was identified in the southern end of Harvey Avenue. Archaeological evaluation of the Waterbrook Pumping Station site revealed two possibly prehistoric ditches of similar character that perhaps represented elements of a field system. A medieval possible pond produced pottery dating from mid/late 14th century to early/mid 15th century. A shallow linear post-medieval/modern feature was possibly the result of early mechanical mineral extraction, perhaps brickearth digging. A ditch, infilled in modern times and was probably a field boundary/drainage ditch. No significant archaeological remains were recorded during the evaluation of the pipeline corridor to the north of the M20. Archaeological evaluation of the Alsops Road Pumping Station site revealed a Middle/Late Bronze Age pit that perhaps served as a well. The small size of the proposed well might suggest that it was associated with domestic settlement rather than for watering livestock. A very truncated Middle/Late Bronze Age small pit or post-hole that was also recorded.

Project dates Start: 13-07-2009 End: 13-08-2010

Previous/future work No / No

Type of project Recording project

Site status None

Current Land use Other 11 - Thoroughfare

Current Land use Other 13 - Waste ground

Current Land use Industry and Commerce 4 - Storage and warehousing

Monument type PIT Bronze Age

Monument type POND Medieval

Monument type CLAYPIT Uncertain

Monument type QUARRY Modern

Significant Finds	POT Bronze Age
Significant Finds	POT Medieval
Investigation type	'Part Excavation','Watching Brief'
Prompt	Planning condition

Project location

Country	England
Site location	KENT ASHFORD SEVINGTON Ashford Orbital Park Sewer, Ashford, Kent
Postcode	TN24
Study area	1.30 Kilometres
Site coordinates	TR 0215 4040 51.1265438777 0.889285462401 51 07 35 N 000 53 21 E Point
Height OD / Depth	Min: 38.59m Max: 45.28m

Project creators

Name of Organisation	Archaeology South East
Project brief originator	Kent County Council
Project design originator	Archaeology South-East
Project director/manager	Jon Sygrave
Project supervisor	Greg Priestley-Bell
Type of sponsor/funding body	4D Ltd

Project archives

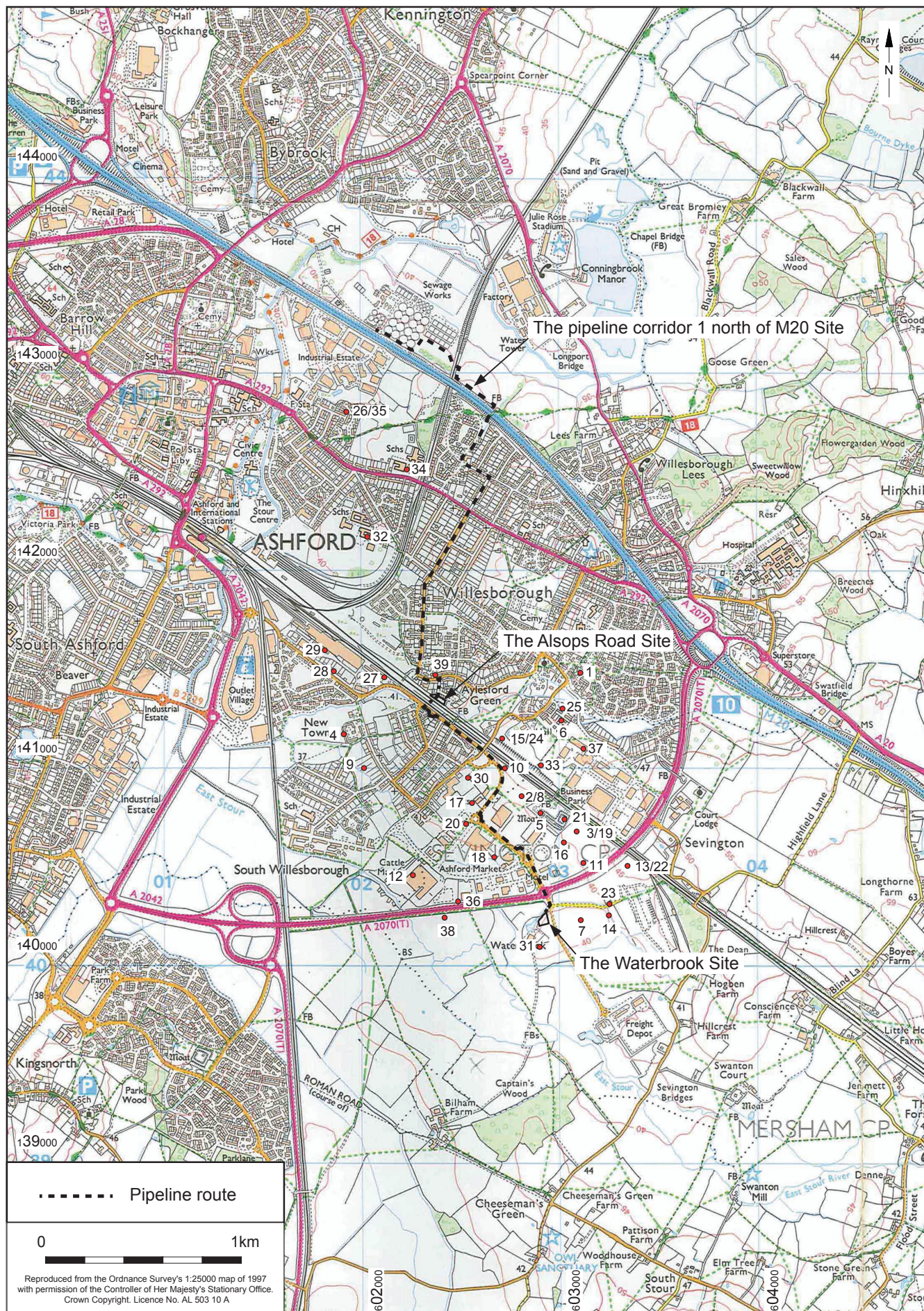
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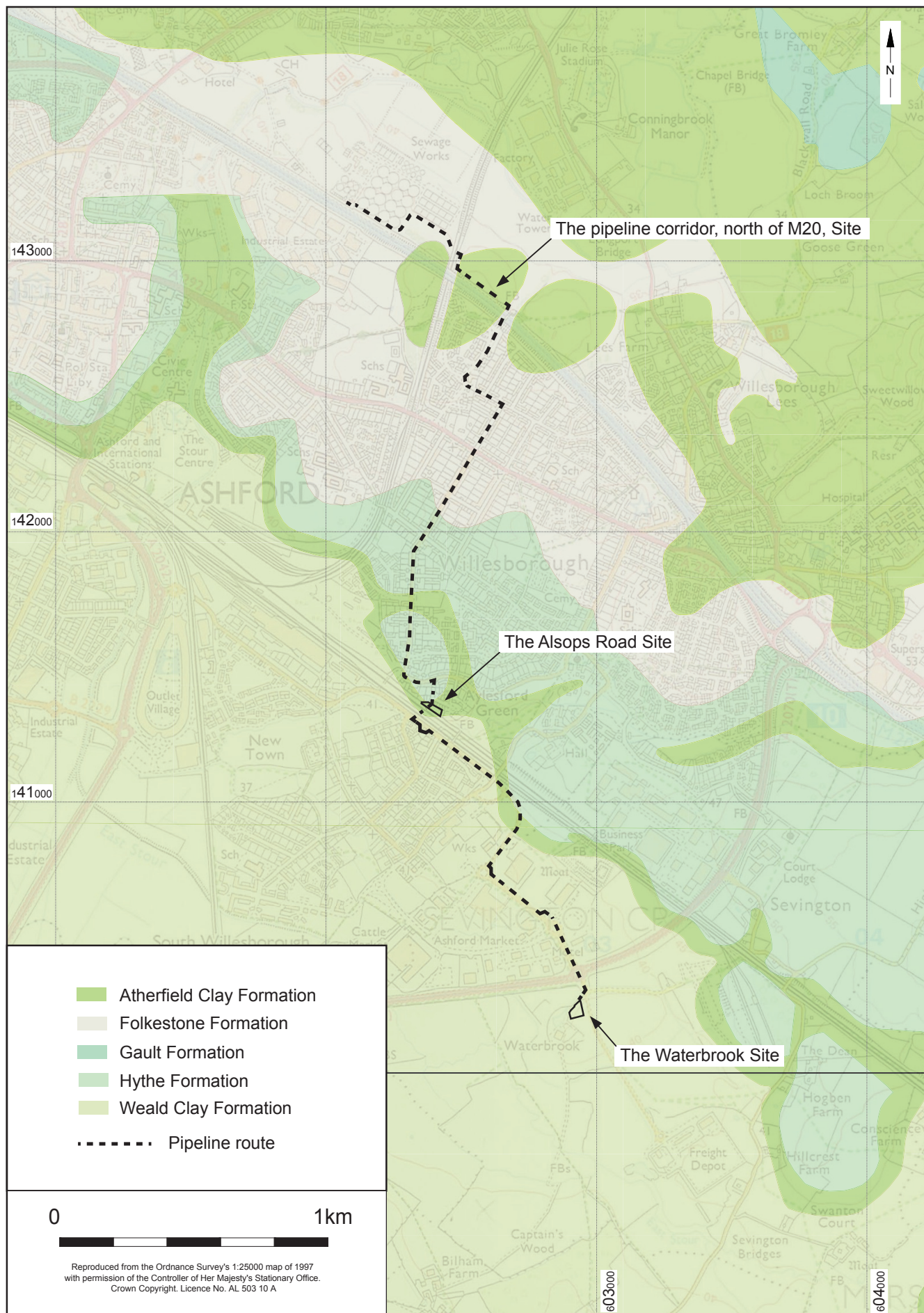
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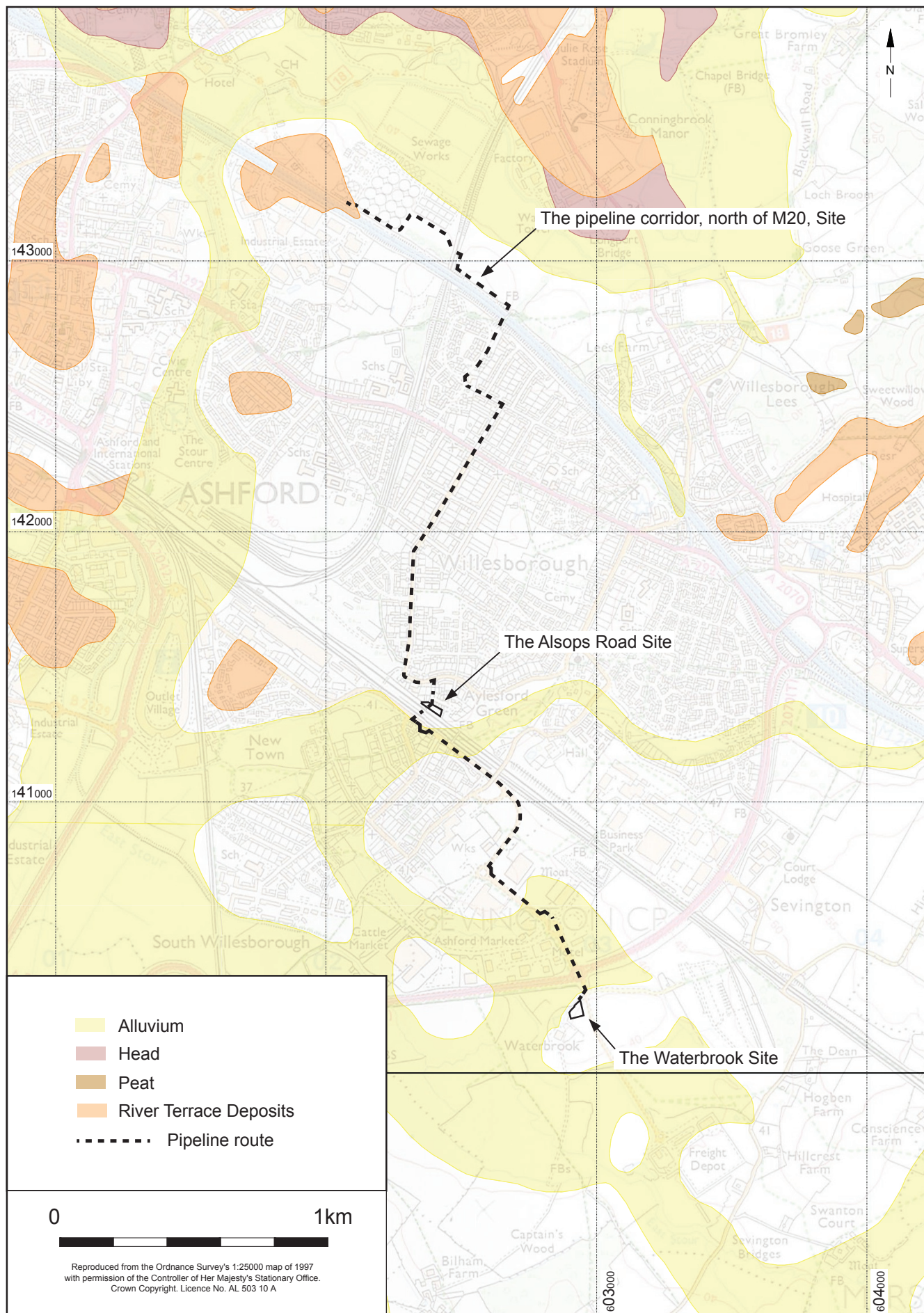
**Project
bibliography 1**

Publication type Grey literature (unpublished document/manuscript)
Title Archaeological investigation of the route of the Ashford Orbital Pa\rk Sewer
Author(s)/Editor(s) Hopkinson, D., Pine, C. and Priestley-Bell, G.
Other bibliographic details 2011082
Date 2011
Issuer or publisher Archaeology South-East
Place of issue or publication Portslade
Description Booklet

Entered by Greg Priestley-Bell (gregpbell@btinternet.com)
Entered on 12 June 2011



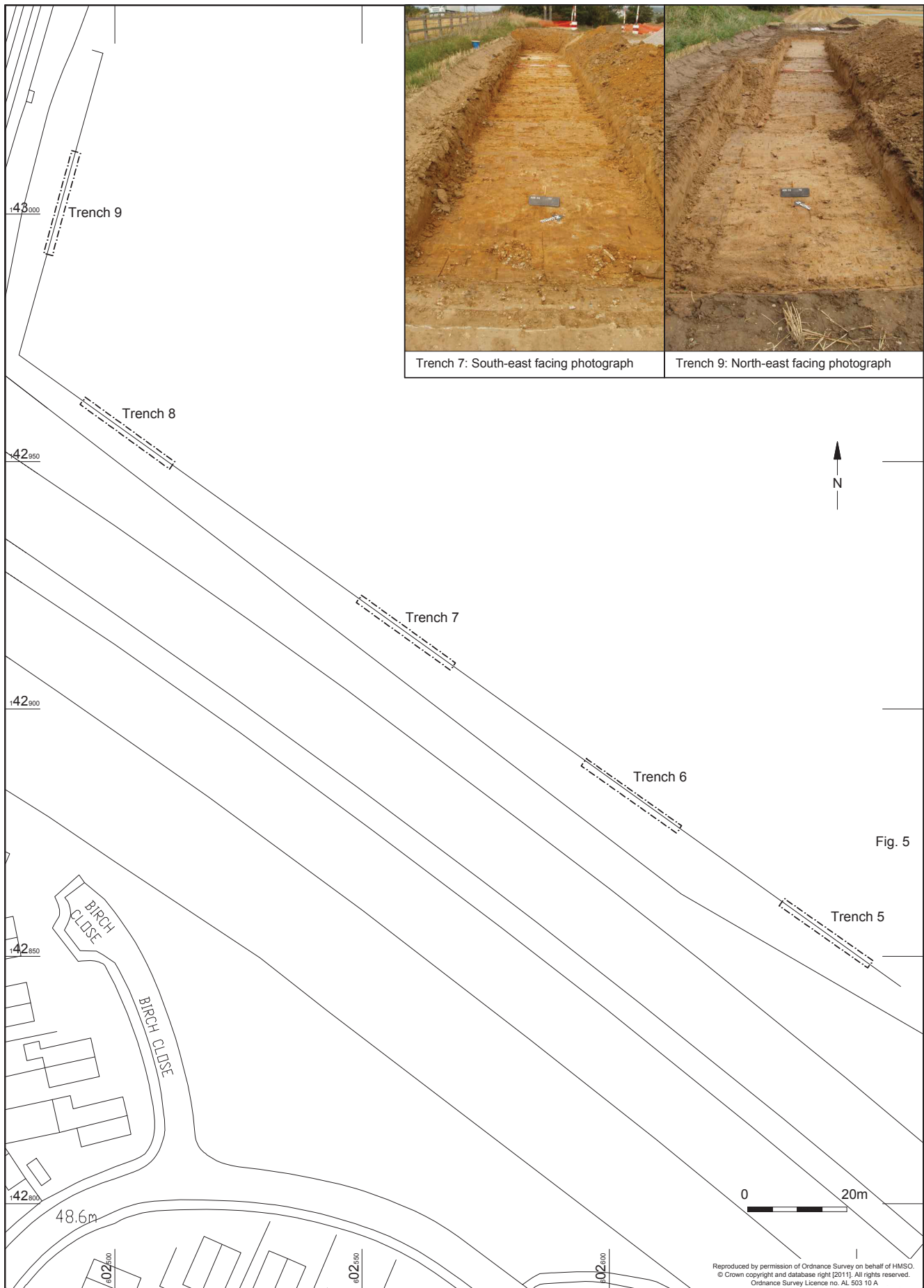






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© Archaeology South-East		Ashford Orbital Sewer	Fig.4
Project Ref: 3980	June 2011	The Waterbrook site: Trench locations	
Report Ref: 2011082	Drawn by: JLR		



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Ashford Orbital Sewer

Project Ref: 3980

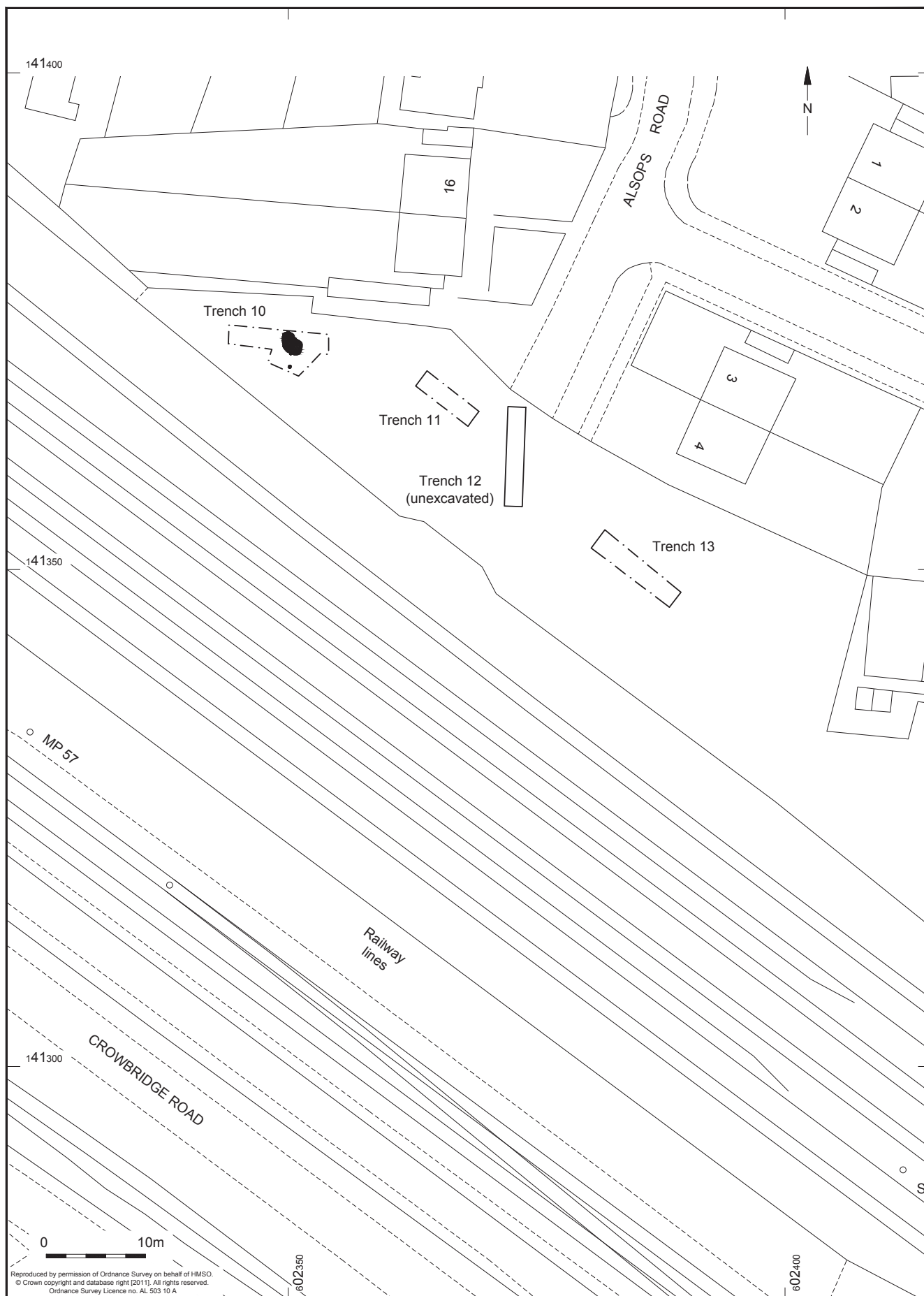
June 2011

Report Ref: 2011082

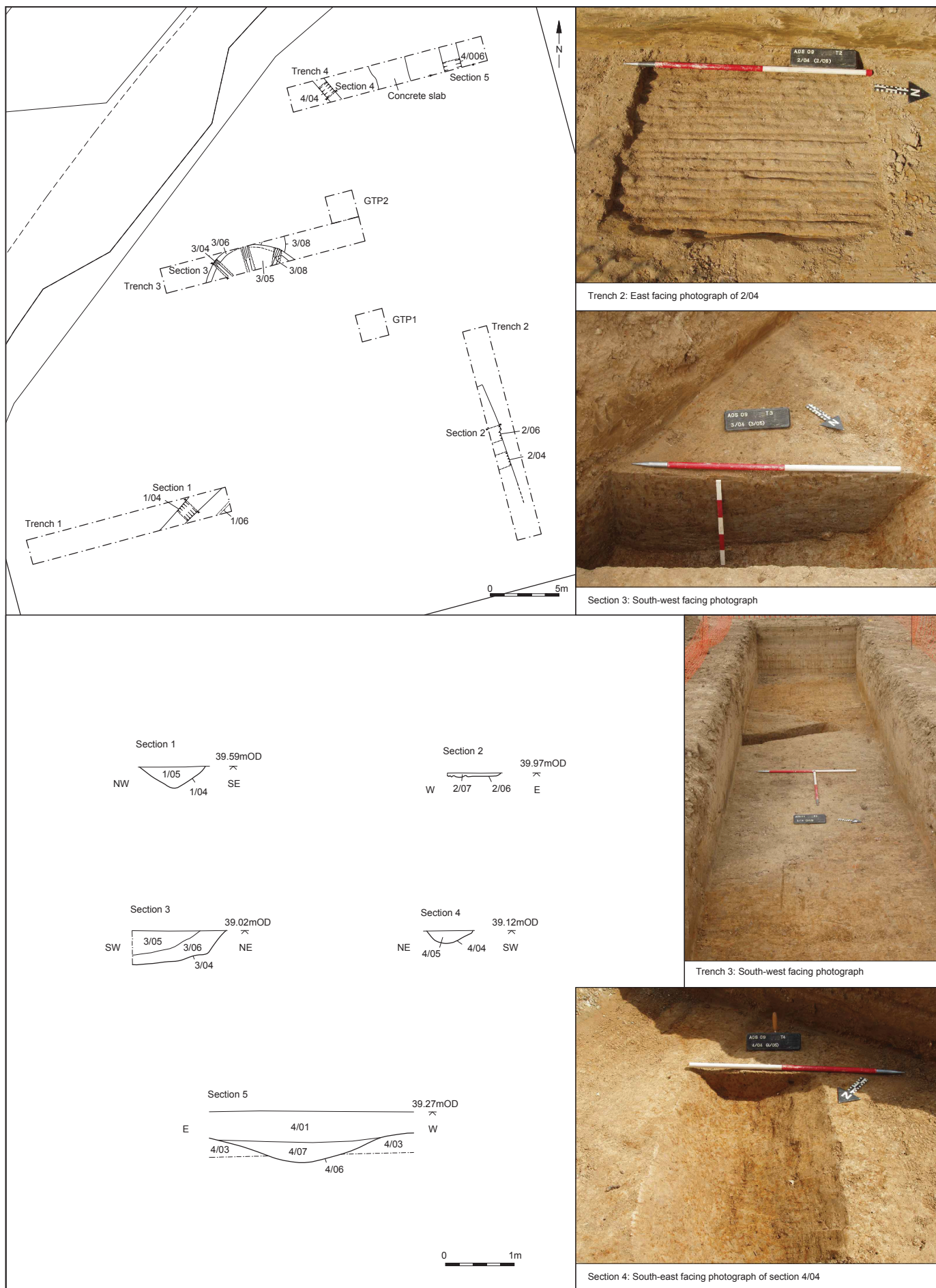
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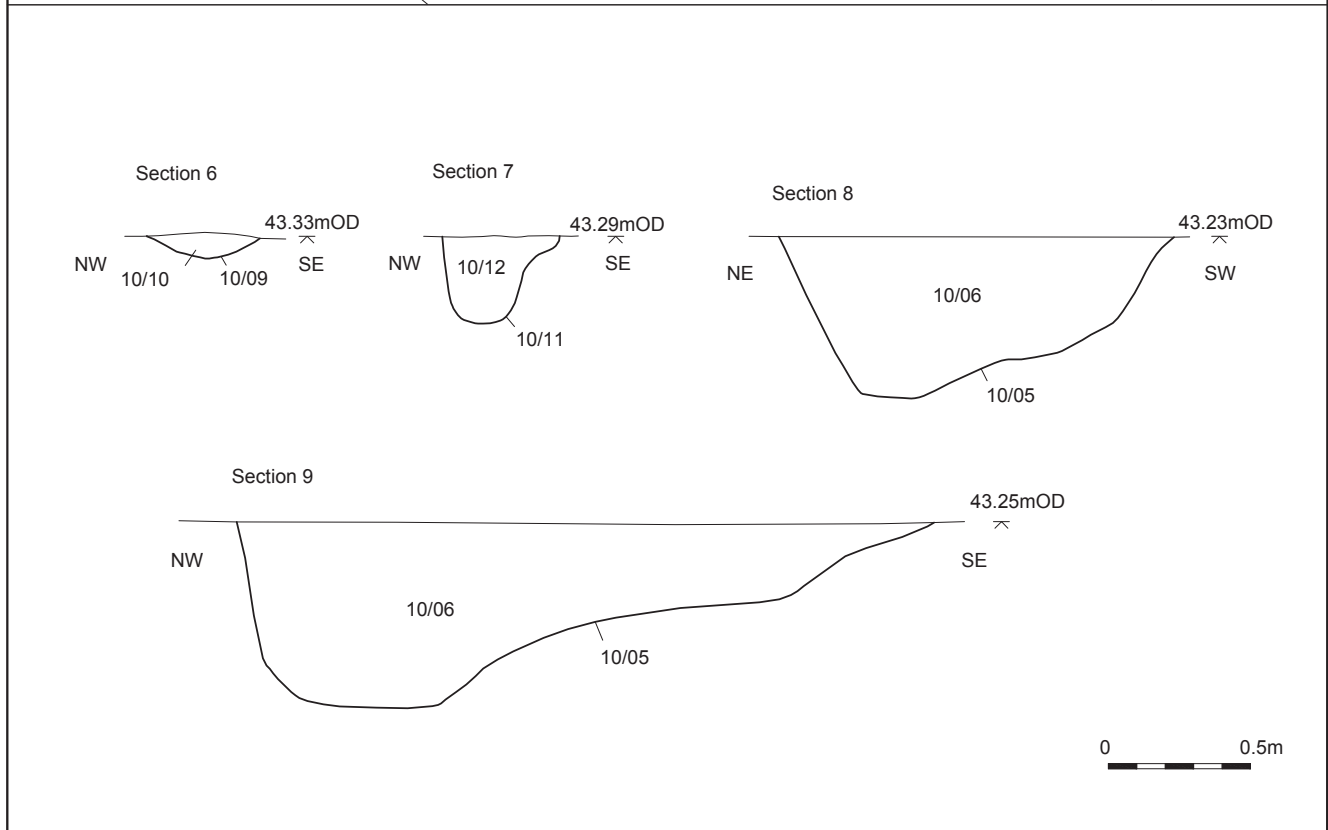
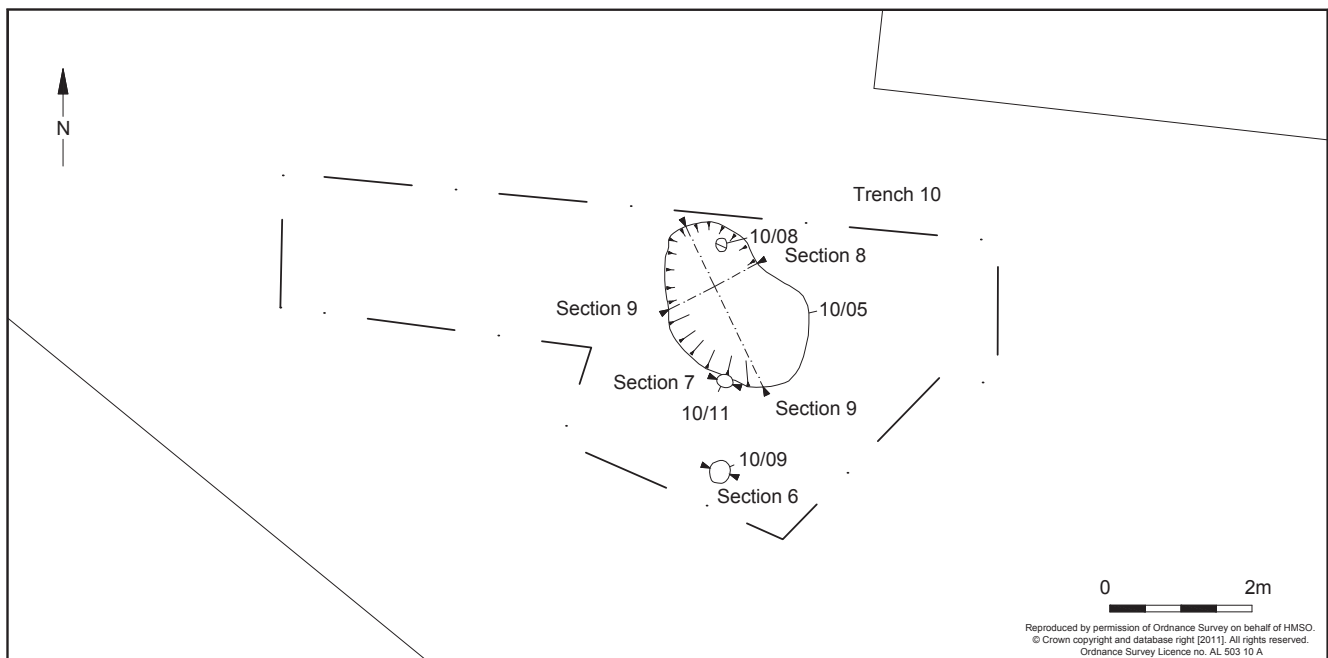
Pipeline corridor north of M20: Trench locations and photographs

Fig. 5



© Archaeology South-East		Ashford Orbital Sewer	Fig. 6
Project Ref: 3980	June 2011	Alsops Road site: Trench locations	
Report Ref: 2011082	Drawn by: DJH		







The Boulevard



Crowbridge Road



Corner of Bentley Road and Alsops Road



Hunter Avenue



Hunter Road



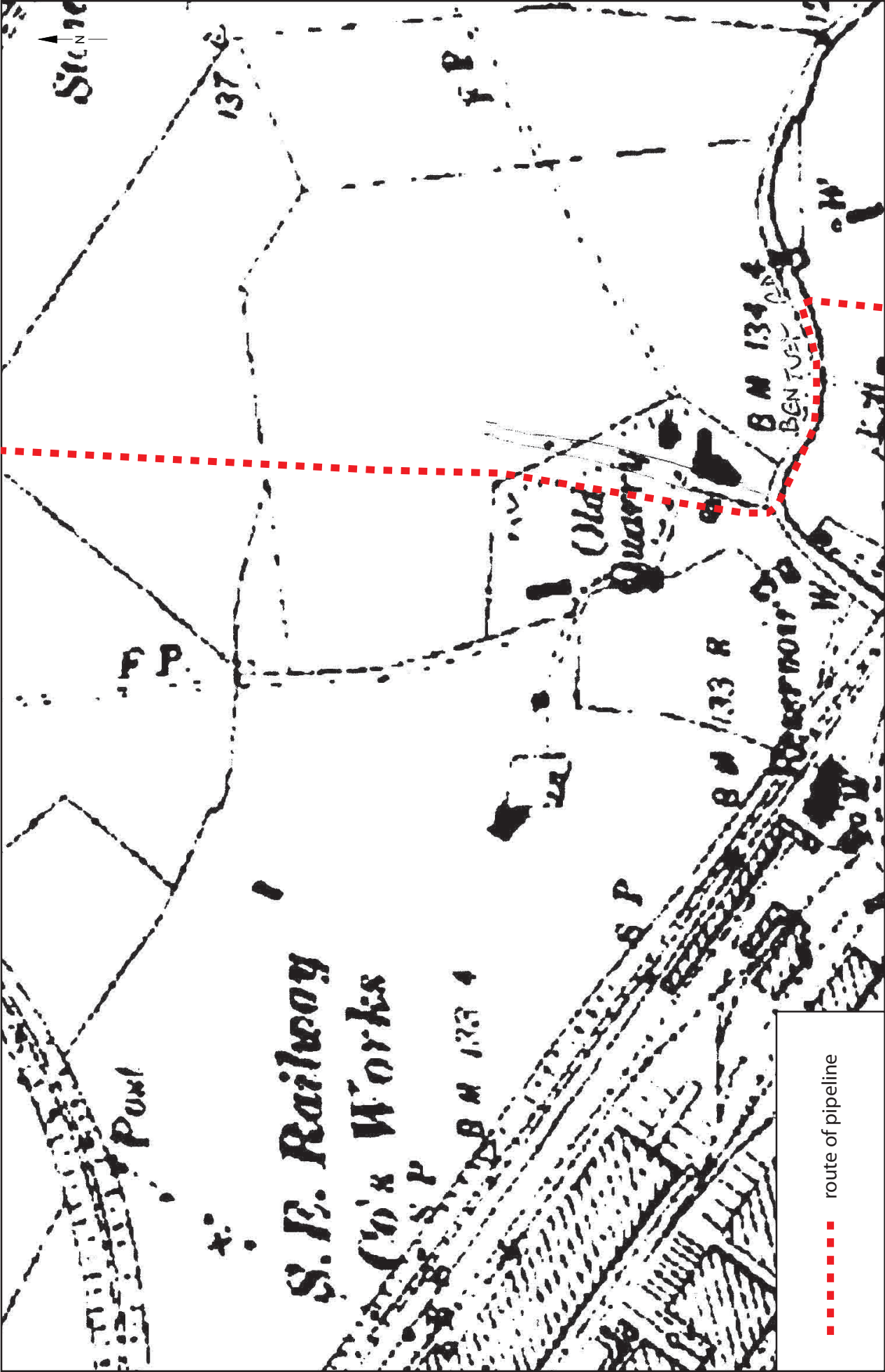
Earls Avenue

© Archaeology South-East		Ashford Orbital Sewer	Fig. 9
Project Ref: 3980	May 2011	Photographs of stratigraphy identified during watching brief	
Report Ref: 2009182	Drawn by: DJH		



© Archaeology South-East		Ashford Orbital Sewer	
Project Ref: 3980	July 2011	First edition 1876 OS map showing route of pipeline through quarry	
Report Ref: 2011082	Drawn by: LD		

Fig. 10



© Archaeology South-East		Ashford Orbital Sewer	
Project Ref: 3980	July 2011	Second edition '1898 OS map showing route of pipeline through 'old quarry'	
Report Ref: 2011082	Drawn by: LD		

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