Archaeology South-East

ASE

An Archaeological Evaluation Report
Union Park, Uxbridge, London Borough of Hillingdon

NGR 505370 181320

Planning Ref: 1197/APP/2015/4164
ASE Project No: 160418
Site Code: PBH16

ASE Report No: 2017025
OASIS id: archaeol6-275163

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Abstract

This report presents the results of an archaeological evaluation carried out by Archaeology South-East at Union Park, Packet Boat Lane, Uxbridge between the 9th and 17th January 2017. The fieldwork was commissioned by CgMs Consulting.

The evaluation comprised eight trenches and revealed natural Lynch Hill Gravels between 26.85m and 28.15m aOD; *the gravels were overlain by natural Langley silts in some areas particularly in the north of the site and lay between 27.37m and 27.81m aOD. Deposits of alluvial clay were recorded in some parts of the site but appeared to have been heavily truncated.*

A probable palaeochannel lay in the north of the site; this feature is likely to be of natural origin and dating evidence suggests that it infilled naturally over a long period between the Middle Neolithic and Middle Bronze Age. The fills were alluvial and fluvial in nature and indicate that the site lay within a varying yet damp environment, not conducive to human occupation. Despite this, a probable structured deposit was present; a partial Middle Bronze Age vessel retrieved from the upper fills of the palaeochannel.

The palaeochannel was overlain by modern leveling deposits and road surfaces indicating that the site has undergone severe horizontal truncation from modern developments; these deposits were consistent across the site. This truncation is likely to have removed any possible shallower archaeological features on site leaving only the channel extant.

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1.0 INTRODUCTION

1.1 Site Background

1.1.1 Archaeology South-East (ASE) was commissioned by CgMs Consulting to carry out an archaeological field evaluation at Union Park, Uxbridge, London Borough of Hillingdon hereafter 'the site'. The site is centred at National Grid Reference (NGR 505370 181320) its location is shown on Figure 1.

1.1.2 The site comprises a roughly rectangular plot of land, lying immediately to the east of the Grand Union Canal.

1.2 Geology and Topography

1.2.1 The British Geological Study (BGS 2016) records that the study site is underlain by London Clay with superficial deposits of Lynch Hill Gravel Member (sand and gravel). The gravels are in places overlain by deposits of Langley Silt Member.

1.2.2 The site lies on the east side of the Colne Valley that in turn marks the boundary between Buckinghamshire to the west and the Borough of Hillingdon to the east. The site lies on generally level ground, set at c.28m AOD and comprises a broadly rectangular plot of approximately 1.4ha to the north of Packet Boat Lane. The site is bound to the west by the Grand Union Canal, to the east by properties principally facing onto Packet Boat Land and Fernes Lane, and to the north by Sefton Way.

1.3 Planning Background

1.3.1 Planning permission was granted by Hillingdon Borough Council (Ref. No.: 1197/APP/2015/4164) for the demolition of Block C and the end of Block B and the erection of four replacement buildings of five-storeys in height, as well as extensions to Blocks A and B to five-storeys. The works also include the excavation of basement car parking, provision of landscaping and amenity space and the enhancement of site boundaries including improved access to the Grand Union Canal.

1.3.2 An archaeological desk-based assessment (DBA) was compiled in support of the planning application (Archaeology Collective 2015). This document highlighted the moderate potential for both early and later prehistoric remains and medieval remains, and the high potential for late post-medieval remains.

1.3.3 Planning permission was granted subject to the following conditions:

15. Prior to commencement of the development hereby approved, a stage 1 written scheme of investigation (WSI) shall have been submitted to and approved by the local planning authority in writing. For land that is included within the WSI, no excavation works/development hereby approved shall take place other than in accordance with the agreed WSI, and the programme and methodology of site evaluation and the nomination of a competent person(s) or organisation to undertake the agreed works. If heritage assets of archaeological interest are identified by stage 1 then for those parts of the site which have archaeological interest a stage 2 WSI shall be submitted to and approved by the local planning

authority in writing. For land that is included within the stage 2 WSI, no excavation works/development hereby approved shall take place other than in accordance with the agreed stage 2 WSI which shall include:

A. The statement of significance and research objectives, the programme and methodology of site investigation and recording and the nomination of a competent person(s) or organisation to undertake the agreed works.

B. The programme for post-investigation assessment and subsequent analysis, publication & dissemination and deposition of resulting material. This part of the condition shall not be discharged until these elements have been fulfilled in accordance with the programme set out in the stage 2 WSI.

REASON
To safeguard the potential archaeological interest of the site in accordance with 'saved' policies BE1 and BE3 of the Unitary Development Plan (2012); policy 7.8 of the London Plan (FALP 2015); and National Planning Policy Framework (2012).

16. Following the review of the results of the Stage 1 evaluation required under Condition 15, if heritage assets worthy of preservation in situ are identified then no development shall take place until details of the foundation design or altered basement design and construction method to protect archaeological remains have been submitted to and approved in writing by the local planning authority. The development shall be carried out in accordance with the approved details.

REASON
To safeguard the potential archaeological interest of the site in accordance with 'saved' policies BE1 and BE3 of the Unitary Development Plan (2012); policy 7.8 of the London Plan (FALP 2015); and National Planning Policy Framework (2012).

1.3.4 Accordingly, an Archaeological Written Scheme of Investigation (ASE 2016) was prepared prior to the commencement of this phase of works, this document set out the methodology for the evaluation. All works were carried out in accordance with this document and with the CIfA standards and guidance (CIfA 2014a, b and c) and the Greater London Archaeology Advisory Service (GLAAS) Standards for Archaeological Work (Historic England 2015).

1.4 Scope of Report

1.4.1 This report details the results of the archaeological evaluation carried out on the site between the 9th and the 16th January 2017. It has been prepared in accordance with the Written Scheme of Investigation (ASE 2016). The work was carried out by Ian Hogg (Senior Archaeologist), Nathalie Gonzales (Archaeologist) and Jonny Gardener (Assistant Archaeologist). The fieldwork was managed by Andy Leonard, the post-excavation work by Jim Stevenson and Dan Swift.

2.0 ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

2.1.1 The following information is a summary drawn from an archaeological Desk-Based Assessment prepared for the site (Archaeology Collective, 2015). For further detail please refer to the original DBA.

2.2 Prehistoric

2.2.1 Motorway construction and the aggregates industry have provided a great deal of evidence for the early prehistoric periods in the Colne Valley (MLO58401, DLO36183). The Upper Palaeolithic and Mesolithic periods are well represented, in particular on the floor of the Colne Valley where numerous sites have been preserved undisturbed beneath later peat and alluvium. The Upper Palaeolithic/Mesolithic site at Three Ways Wharf, 3km southeast of the site (MLO19923, 58401-3, ELO4801-4, ELO10123) is nationally important (Lewis, 1991; Lewis & Rackham, 2001). Within the vicinity of the site further evidence of Mesolithic activity has been recovered 0.7km southeast of the application site at Trout Road (MLO98397) where a flint blade was recovered during an evaluation of the Honeywell Site. The tool was unabraided and recovered from the interface between the natural gravel and overlying alluvium.

2.2.2 Two other entries on the HER relate to finds and an apparently natural feature which are identified only as 'prehistoric'. Approximately 80m to the southwest of the site, an evaluation on Packet Boat Lane in 1989 recorded a 'probable stream channel of prehistoric date' (MLO 23948) whilst 450m to the southeast, a number of burnt flints, commonly associated with the prehistoric period, were recovered (MLO71185).

2.2.3 There is limited evidence of Bronze Age activity within the Colne Valley. Approximately 3km to the northeast, in Uxbridge, part of a Bronze Age field system was recorded. In close proximity to this, an early Bronze Age cremation and other early Bronze Age to early Iron Age features were also found (Butler & Meager, 2013). Further ditches of a similar date were found 2.5km south at Townmead School in West Drayton (Masefield, 1999).

2.2.4 Similarly, evidence of Iron Age settlement is sparse within the Colne Valley and primarily comprises a few isolated find spots and probable occupation sites. Settlement evidence from this period was found c.3km northeast at Western Avenue, Uxbridge and 4km northeast at Long Lane, Ickenham. Excavations along the Harefield to Southall Gas Pipeline revealed late Iron Age/early Roman settlement edge activity in Newyears Green and Ickenham (Masefield, 1999).

2.2.5 Within the vicinity there is only one recorded entry relating to the later prehistoric period. Approximately 80m west of the site along Packet Boat Lane, an evaluation recorded a ditch of probable late Bronze Age or early Iron Age date (MLO23949).

2.3 Roman

2.3.1 A Roman road is thought to have run northwards from Laleham through the Colne Valley to St. Albans, it has been suggested that this was a route linked by a spur from Harefield to a road running on the other side of the Colne from Chorley Wood and Langley Park (Viatores 165). Other old roads and trackways on the Middlesex side of the Colne are possibly of Roman origin (Cockburn, King & McDonnell, 1969).

2.3.2 Within the area, c.900m northeast of the site, lies the Cowley Archaeological Priority Area, designated because of the potential for discovering evidence for this area's Roman origins. The focus of this is believed to be in the vicinity of St Laurence Church. There are two entries relating to this period on the HER, both also within the Cowley APA with the first being documentary evidence for a Roman road which was first mentioned in 1913 (MLO2731). Thought to be associated with this feature, unspecified 'Roman remains' were recovered from the same area in 1959 (MLO4532).

2.4 Anglo Saxon and Medieval

2.4.1 Domesday references include Parish names such as: Harefield (Herefelle), Ickenham (Ticheham) and Ruislip (Riselepe). All of these names are Old English formations and so evidently originated before 1086, indicating that these areas were settled pre- Conquest. Uxbridge emerged as the economic focus of the area in the late 12th century when it was granted the right to hold a Thursday market (Pugh, 1922).

2.4.2 Following the Norman Conquest, the focus of occupation in this area appears to have been the settlement at Cowley and adjacent estates. One such estate was Cowley Hall (MLO68648), identifiable within land at Cowley and Colham from c. 1245. The hall is again referred to in 1327 and by c.1465, may have comprised a small house belonging to the Charlton family. The site of the hall lies c. 630m to the north of the application site in land to the north of Dagnall Crescent.

2.4.3 There is also evidence of a smaller settlement c. 100m to the east of the site formerly known as 'Three House Holds' or 'Three Houses' but later renamed Cowley Peachey. Even in 1747 this settlement only comprised ten houses focused along what is now High Road, around its intersection with Packet Boat Lane. One of these buildings survives to the east of the site and is a Wealden House known as 'The Old Cottage' (MLO 85138). Further localised settlement is recorded during this period to the south along High Street in Yiewsley (MLO73150).

2.4.4 Adjacent to the river Colne and situated c.480m to the northwest of the application site is the site of the former Yiewsley Mill (MLO68652) which operated during the medieval period under the name of Bury Mill and belonged to the manor of Colham.

2.4.5 In general, terms, medieval occupation in this area appears to have focused on the higher valley sides of the Colne Valley, to the east of the application site. There is however, evidence for medieval settlement a short distance to the east of the application site and although this is believed to have been a

very small hamlet during this period, the possibility that some form of development took place along Packet Boat Lane cannot be discounted.

2.5 Post-medieval and modern

2.5.1 The Grand Union Canal (formerly Grand Junction Canal) was constructed, between 1793 and 1798, and forms the site's western boundary. The precise extent of disturbance caused by early 19th century engineering works associated with the canal is unclear although it is possible that land on either side of Packet Boat Lane became a focus for activity at least during the construction of the bridge carrying the road over the canal.

2.5.2 Despite the establishment of a number of settlements in the area during the medieval period, it is clear from 18th century maps that this remained a largely rural landscape throughout much of the post-medieval period. Roque's map of 1754 shows the hamlet of 'Three Houses' immediately to the east of the site with a patchwork of fields occupying land to the east of High Road. Cowley is shown as a discrete settlement some way to the northwest, as is Yiewsley which lies to the south. The land within the floodplain to the west of the site is shown as un-enclosed and may well have served as seasonal pasture in the summer months.

2.5.3 The Ordnance Surveyor's drawing of 1811 shows the Grand Junction Canal along with some new development to the south of the application site and Packet Boat Lane, although the major settlements continue to form isolated communities within a largely open rural landscape. The site at this time remains undeveloped.

2.5.4 The 1881 Ordnance Survey map of the area continues to show the application site as a single open field and whilst there is little further settlement of the immediate vicinity, the floodplain to the west of the canal appears to have come under agricultural management, involving the establishment of field boundaries and possibly the draining of this land. This map also shows the Great Western Railway (Uxbridge Branch) running to the east of Cowley Peachey and the establishment of a significant building, in its own grounds, to the south of Packet Boat Lane which is identified on later maps as Clock House. The Ordnance Survey maps of 1885 and 1899 indicate that little significant change occurred within or adjacent to the application site during the closing years of the 19th century.

2.5.5 The Ordnance Survey map of 1914 indicates the site was in use as allotment gardens although the settlement of Cowley Peachey does not appear to have noticeably grown in size. To the east of the railway line however, there is evidence of the encroachment of urban development with a series of new, higher density housing schemes. To the south of Packet Boat Lane and the dock served the canal, a chair factory has been established. By 1934, the progress of these housing developments is much clearer and although largely confined to the area east of the High Road, development of the plots fronting onto Packet Boat Lane has also taken place. Nonetheless, the site continues to be shown as undeveloped and this is reinforced by an aerial photograph dating to 1945 which illustrates an open and un-cultivated field. To the south of Packet Boat Lane, the sizable 'Clock House' was demolished at some point

between 1934 and 1945 and the Chair Factory, established in the early 20th century, was enlarged to include an engineering works.

2.5.6 At some point between 1945 and 1963, the first major development took place within the site, namely the establishment of a saw mill in the southern part of the plot. This comprised a large, 'L' shaped building with two smaller ancillary buildings to the east and a circuit of access roads leading from Packet Boat Lane and encircling the main mill. It is probable that the surrounding land within the application site also underwent some form of surface treatment in order to make it usable as storage for the timber. Whilst urban development of this area remains limited at this time, the development of land to the east of High Road is nearing completion with most of the formerly open land by this time occupied by planned housing.

2.5.7 The Ordnance Survey map of 1970-72 gives further detail of the layout of the timber yard surrounding the sawmill within the site although the buildings themselves do not appear to have been enlarged or added to. The principal development in the surrounding area comprises the establishment of planned housing across the fields to the north. The map of 1988 – 90 shows further development of the site with the construction of a large, 'T' shaped building set against the canal towpath and to the northwest of the main sawmill building. There has been further industrialisation of the land to the south of the application site and east of the canal although the land between the canal and Fray's River remains only sparsely occupied.

2.5.8 The site underwent wholesale re-development during the last decade of the 20th century when the sawmill and timber yard were cleared to make way for an office/ light industrial centre called Union Park. This comprised three blocks of units situated not only across the sites of the former sawmill buildings but also in areas of the former timber yard to the southwest and northeast. The surrounding land within the site was hard-surfaced at this time which presumably included the construction of drainage and other sub-surface service runs.

2.6 Recent geoarchaeological investigations

2.6.1 Geoarchaeological coring was undertaken on the site in January 2016 (AEA, 2016) in order to record and sample the sequence as undisturbed sediment; fully assess the geoarchaeological and sedimentological faces in profile and across the site; and to obtain samples for the palaeo-environmental assessment of pollen, diatoms, molluscs (marine, freshwater, brackish and terrestrial), and waterlogged plant remains.

2.6.2 The sequences revealed that the present land surface was almost level confirming the nature of the palaeo-geography and gravel island recorded in the deposit models.

2.6.3 Natural gravels were reached in 8 of the 9 boreholes by c.1m BGL, except borehole 5, which encountered concrete to c.2m. Clays or silty clays of potential archaeological relevance were encountered above the gravels in at least 3 cores (2, 6 and 7) all located in the centre of the impact zone.

2.6.4 No peat or organic deposits were encountered, and none of the fine-grained deposits, although wet on recovery, looked waterlogged, so waterlogged preservation seems unlikely

3.0 RESEARCH AIMS AND OBJECTIVES

3.1 General Aims

The general aims of the archaeological evaluation were:

- To establish the presence or absence of archaeological remains and deposits with palaeoenvironmental potential within the footprint of the proposed development.
- To determine the survival, extent and minimum depth below modern ground level of any such remains
- To determine the nature and significance of any archaeological deposits
- To enable the archaeology advisor at GLAAS to make an informed decision as to the requirement for any further archaeological work at the site.

3.2 Specific Research Aims

The specific aims of the evaluation were:

- Is there any evidence of Prehistoric activity or palaeochannels within the site?
- Is there any evidence of Bronze Age or Iron Age activity on the site?
- Is there any evidence of medieval activity on the site?
- Is there any evidence for post-medieval activity associated with the building of the canal?

Specific research aims to be considered as part of the project with reference to the research framework for London Archaeology (Museum of London, 2002) were:

- *P2, para 4: Extending the analysis of different modes of flintworking (defined by, for example, Wymer 1999, 6–12 and Barton 1997, 19–24) to establish whether, as White and Schreve suggest (2000, 15–20), they are culturally significant*

- *L2, para 2: Understanding how the proximity of the metropolis, the largest urban conurbation in Britain, affected the lives of people living and working in the immediate surrounding area*

4.0 ARCHAEOLOGICAL METHODOLOGY

4.1 Fieldwork Methodology

4.1.1 The WSI (ASE 2016) for the evaluation provided for the excavation of eight trenches, measuring 30.0m x 1.8m (Fig. 2). Subsequently, due to special constraints and services all of the trenches had to be moved and six of them were shortened (Trenches 1, 3, 4, 6, 7 and 8). The reasoning behind these alterations is discussed further below.

4.1.2 The trial trenches were excavated using a 360 back-hoe excavator equipped with a toothless bucket and under constant supervision by ASE. Machine excavation proceeded to a depth at which the top of archaeological levels, or the top of natural deposits, were exposed, whichever was the higher.

4.1.3 The trench re-alignments were authorised on site by Laura O'Gorman (GLAAS Archaeological Officer) who also approved the work once complete. The trenches were backfilled using the excavated material in the approximate stratigraphic sequence in which they were excavated and were left level on completion. No other reinstatement or surface treatment was undertaken.

4.1.4 Excavation and recording strategy was in accordance with the WSI (ibid) and with CIfA *Standards and Guidance* (CifA 2014a).

4.2 Archive

4.2.1 The site archive is currently held at the offices of ASE and will be deposited at a local museum in due course. The contents of the archive are tabulated below (Tables 1 and 2).

Context sheets	44
Section sheets	4
Plans sheets	0
Colour photographs	0
B&W photos	0
Digital photos	42
Context register	1
Drawing register	0
Watching brief forms	0
Trench Record forms	8

Table 1: Quantification of site paper archive

Bulk finds (quantity e.g. 1 bag, 1 box, 0.5 box 0.5 of a box)	4 bags
Registered finds (number of)	0
Flots and environmental remains from bulk samples	0
Palaeoenvironmental specialists sample samples (e.g. columns, prepared slides)	0
Waterlogged wood	0
Wet sieved environmental remains from bulk samples	0

Table 2: Quantification of artefact and environmental samples

5.0 RESULTS

5.1 Trench 1

5.1.1 Trench 1 was located in the north-west of the site; it was east to west aligned and measured between 0.52-1.31m in depth (Figures 2 and 5). The eastern part of the trench was not fully excavated due to the presence of a large drain overlain by a thick concrete slab. The individual context information is presented in Appendix 1.

5.1.2 The natural Lynch Hill gravels [1/005] were observed at the western end of the trench at a height of 27.20m aOD. The gravels were sealed by a blue grey clay alluvial deposit [1/004] 0.50m in thickness. The alluvium was overlain by a modern levelling deposit for the current road surface [1/003] comprising red brown silt gravel 0.60m in thickness. The levelling deposit was overlain by an orange sand bedding deposit [1/002] between 0.11m and 0.12m thick; this was in turn sealed by the road surface [1/001] comprising concrete sets and measuring 0.08m in thickness.

5.1.3 No archaeological remains were recorded in this trench.

5.2 Trench 2

5.2.1 Trench 2 was located in the north-east of the site; it was east to west aligned and measured between 0.48-1.20m in depth (Figures 2 & 5). The central portion of the trench was not excavated due to a large concrete slab covering a live drain. The individual context information is presented in Appendix 1.

5.2.2 The natural Lynch Hill gravels [2/007] were observed in the eastern half of the trench between 27.46m and 28.14m aOD. The gravels were overlain by mid brown yellow clay silt Langley Silts [2/006] present at the western end and centre of the trench and measuring between 0.20m and 0.25m in thickness. At the western end of the trench the Langley Silts sealed by a blue grey clay alluvial deposit [2/004] 0.13m in thickness. The alluvium was overlain by a concrete slab [2/004] in the centre and west of the trench, it measured between 0.25m and 0.42m in thickness. The concrete was sealed by a modern levelling deposit for the current road surface [2/003] comprising red brown silt gravel between 0.15m and 0.30m in thickness. The levelling deposit was overlain by an orange sand bedding deposit [2/002] between 0.05m and 0.15m thick; this was in turn sealed by the road surface [2/001] comprising concrete sets and measuring 0.08m in thickness.

5.2.3 No archaeological remains were recorded in this trench.

5.3 Trench 3

5.3.1 Trench 3 was located in the north-west of the site, it was north-south aligned and measured between 0.25-1.15m in depth (Figures 2 & 5). The trench was moved slightly east to avoid services and was subsequently shortened due to live drainage runs in the south of the trench. The individual context information is presented in Appendix 1.

5.3.2 The natural Langley Silts [3/006] were observed in two sondages in the trench

between 27.37m and 27.55m aOD. The gravels were overlain by a blue grey clay alluvial deposit [3/005] between 0.30m and 0.40m in thickness. The alluvium was overlain by a modern made ground deposit [3/004] in the north of the trench; it comprised mid grey clay with frequent rubble inclusions and measured 0.20m in thickness. The made ground was sealed by a modern levelling deposit for the current road surface [3/003] comprising red brown silt gravel between 0.35m and 0.40m in thickness. The levelling deposit was overlain by an orange sand bedding deposit [3/002] between 0.07m and 0.12m thick; this was in turn sealed by the road surface [3/001] comprising concrete sets and measuring 0.08m in thickness.

5.3.3 No archaeological remains were recorded in this trench.

5.4 Trench 4

Context	Type	Interpretation	Length	Width	Depth	Height
4/001	Masonry	Road surface	30.00	1.80	0.08	28.40-28.42
4/002	Layer	Bedding deposit	30.00	1.80	0.10	28.32-28.34
4/003	Layer	Levelling deposit	30.00	1.80	0.40-0.50	28.22-28.24
4/004	Fill	Fill, upper	3.50	1.80	0.40	27.67-27.72
4/005	Fill	Fill, intermediate	13.50	1.80	0.30	27.64-27.74
4/006	Fill	Fill, tertiary	13.50	1.80	0.25-0.42	27.36-27.74
4/007	Fill	Fill, secondary	13.50	1.80	0.05-0.15	27.32
4/008	Cut	Palaeochannel	13.50	1.80	0.90	27.67-27.72
4/009	Fill	Fill, basal	2.00	0.90	0.08	27.28
4/010	Layer	Langley Silt	21.30	1.80	0.91	27.72
4/011	Layer	Lynch Hill Gravels	25.00	1.80	-	26.85-27.22

Table 3: Trench 4 list of recorded contexts

5.4.1 Trench 4 was located in the north-east of the site, it was north-northwest to south-southwest aligned and measured between 0.95-1.40m in depth (Figures 2, 3 and 4). Three small portions of the trench were not excavated due to services.

5.4.2 The natural yellow arrange Lynch Hill Gravels [4/011] were recorded within sondages in the north and the south of the trench at between 26.85m and 27.22m aOD. Throughout much of the trench, the gravels were overlain by deposits of mid yellow Langley Silts [4/010] up to 0.91m in thickness.

5.4.3 The Langley Silts were cut by a feature interpreted as a channel [4/008]; the channel was aligned north-west to south-east, only the eastern edge of the channel was visible so it could actually be an elongated pond or pool. It measured at least 13.50m in length, at least 1.80m in width and 0.90m in depth.

The channel had a flat base and the eastern side of the channel sloped steeply; despite this, given the alluvial nature of the fills it remains unclear whether the feature is anthropogenic.

5.4.4 The primary channel fill [4/009] comprised pale grey gravel sand with inclusions of shell; it measured 0.08m in thickness; this basal fill was radiocarbon dated to 3320-2930 cal BC. The secondary fill [4/007], a dark brown silt peat with occasional sandy lenses, measured between 0.05m and 0.15m in thickness. The tertiary fill [4/006] comprised pale grey silt sand between 0.25m and 0.42m thick. This was sealed by a fill of dark blue grey silt clay [4/005] 0.30m thick. This fill contained animal bone and struck flint as well as a partially complete pot of Middle Bronze Age date; the pot contained a fragmentary cattle scapula which given its size is unlikely to have originally been deposited within the vessel. The upper channel fill [4/004] consisted of mid grey brown silt clay up to 0.40m thick. Despite the possible structured deposition of the pot, these fills appear to have accrued naturally, as the channel slowly silted up.

5.4.5 The channel fills were sealed by a levelling deposit comprising brown red gravel [4/003] between 0.40m and 0.50m in thickness. The levelling deposit was in turn overlain by an orange sand bedding deposit [4/002] 0.10m thick; this was overlain by the road surface [4/001] comprising concrete sets 0.08m thick.

5.5 Trench 5

5.5.1 Trench 5 was located in the east of the site, it was north-south aligned and measured between 0.51-0.79m in depth (Figures 2 & 5). The trench was moved slightly north to avoid services and a skip. The individual context information is presented in Appendix 1.

5.5.2 The natural Lynch Hill gravels [5/005] were recorded between 28.10m and 28.15m aOD. The gravels were overlain by a modern levelling deposit for the current road surface [5/004] comprising red brown silt gravel between 0.10m and 0.35m in thickness. The levelling deposit was overlain by a concrete slab [5/003] between 0.10m and 0.18m in thickness. The concrete was sealed by an orange sand bedding deposit [5/002] between 0.06m and 0.10m thick; this was in turn sealed by the road surface [5/001] comprising concrete sets and measuring 0.08m in thickness.

5.5.3 No archaeological remains were recorded in this trench.

5.6 Trench 6

5.6.1 Trench 6 was located in the centre of the site, it was north-south aligned and measured between 1.15-1.16m in depth (Figures 2 & 5). The trench was moved east due to the need to maintain an access route as well as the presence of live services. It was abandoned at a length of 5.00m due to power cable running along the length of the trench. The individual context information is presented in Appendix 1.

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5.6.2 The excavation ceased above the natural deposits due to the presence of power cables running the length of the trench. The earliest deposit observed

was mid blue grey alluvium [6/003] measuring at least 0.20m in thickness. The alluvium was sealed by the mid brown red gravel levelling deposit observed in every trench [6/002] measuring between 0.85m and 0.88m in thickness. The levelling deposit was overlain by an asphalt surface [6/001] between 0.08m and 0.10m in thickness.

5.6.3 No archaeological remains were recorded in this trench.

5.7 Trench 7

5.7.1 Trench 7 was located in the centre of the site, it was north-south aligned and measured between 1.15-1.16m in depth (Figures 2 & 5). The trench was moved east due to the need to maintain an access route as well as the presence of live services. It was abandoned at a length of 5.00m due to power cable running along the length of the trench. The individual context information is presented in Appendix 1.

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5.7.2 The natural Lynch Hill gravels [7/004] were recorded between 27.56m and 27.63m aOD. In the centre of the trench the gravel was overlain by mid yellow Langley Silts [7/003] measuring up to 0.24m in thickness. The Langley Silts were sealed by the mid brown red gravel levelling deposit observed in every trench [7/002] measuring between 0.66m and 0.80m in thickness. The levelling deposit was overlain by an asphalt surface [6/001] between 0.06m and 0.08m in thickness.

5.7.3 No archaeological remains were recorded in this trench.

5.8 Trench 8

5.8.1 Trench 8 was located in the south of the site, it was north-east to south-west aligned and measured 0.63m in depth (Figures 2 & 5). The trench shortened and subsequently abandoned due presence of live services on the line of the trench. The individual context information is presented in Appendix 1.

5.8.2 The excavation ceased above the natural deposits due to the presence of power cables running the length of the trench. The earliest deposit observed was the mid brown red gravel levelling deposit observed in every trench [8/003] measuring at least 0.50m in thickness in thickness. The levelling deposit was overlain by an orange sand bedding deposit [8/002] 0.05m thick; this was in turn sealed by the road surface [8/001] comprising concrete sets and measuring 0.08m in thickness.

5.8.3 No archaeological remains were recorded in this trench.

6.0 THE FINDS

6.1 Summary

6.1.1 A small assemblage of Bronze Age finds was recovered from a single context during the evaluation at Union Park, London Borough of Hillingdon. All finds were washed and dried or air dried as appropriate. They were subsequently quantified by count and weight and were bagged by material and context (Table 4). All finds have been packed and stored following CIfA guidelines (2014).

Context	Lithics	Weight (g)	Pottery	Weight (g)	Bone	Weight (g)	Fire Cracked Flint	Weight (g)
4/005	3	5	63	391	27	69	9	52
Total	3	5	63	391	27	69	9	52

Table 4: Finds quantification

6.2 The Flintwork

The evaluation produced a single small flake fragment weighing <1g and nine fragments of burnt unworked flint weighing 52g. All the pieces came from context [4/005]. The worked piece represents the proximal end of a very fine flake. It is entirely recorticated light blue. The fragment is very small, but based on technological traits, it is likely to be Mesolithic or Early Neolithic in date. The nine burnt fragments are heavily calcined to a white colour, and display small cracks.

6.3 The Prehistoric Pottery

6.3.1 Fill [4/005] of palaeochannel [4/008] produced 63 sherds of prehistoric pottery weighing 391g. The pottery derives entirely from one fragmented but partially-complete vessel (Figure 3). The vessel appears to have been broken longitudinally and about 40% of its circumference survives. A fragmented large mammal scapula, probably originally deposited as an intact bone, was found directly overlying or partly within the broken vessel; however, it seems fairly unlikely to represent original contents because the vessel would have been far too small to contain a bone of this size.

6.3.2 The fabric is flint-tempered with a fairly dense quartz-free matrix, containing moderate, moderately-sorted flint-inclusions, mostly of c.0.2-2.5mm with a few rare examples up to 4mm. The vessel is a small, plain profile, slightly ovoid or barrel-shaped form of small size (diameter c.120mm). A single applied boss was noted close to the rim.

6.3.3 The vessel is quite a typical example of a Middle Bronze Age Deverel-Rimbury ‘knobbed cup’. This vessel type is a fairly uncommon element in domestic Middle Bronze Age assemblages and tends to be found disproportionately in funerary contexts in the Upper Thames Valley (Needham 1987, 111). The form has also been noted in the Thames Estuary area, where it is less strongly associated with burials but appears to occur predominantly in structured deposits. For example, at North Shoebury, one example was placed whole in

a pit and sherds from another were laid flat, filling a shallow depression (Brown 1995, 80; Fig 62.15 & 63.29). Another partially-complete example was found in the primary fill of a pit which contained no other artefactual material, at Brays Lane, Rochford (Doherty in prep).

6.3.4 The context of deposition, within the fill of a palaeochannel may further hint that this is a deliberately placed vessel, as the phenomenon of structured deposition in watery places is especially prevalent in the Thames region (e.g. Lambrick & Robinson 2009, 288-294).

6.4 The Animal Bone by Hayley Forsyth-Magee

6.4.1 A small assemblage of animal bone containing 44 fragments and weighing 73g was recovered from the evaluation excavation. The bones were hand-collected from one context [4/005] a palaeochannel, and are in a poor-moderate state of preservation with signs of surface erosion. No complete bones are present.

6.4.2 Of the 44 bone fragments present only six could be identified to taxa. Context [4/005] contained a large mammal long bone fragment and a small collection of bones including a large mammal scapula in fragments and a cattle 3rd phalanx, associated with a Deverel-Rimbury pottery vessel of Middle Bronze Age date. The large mammal scapula was deposited as a complete bone (Figure 3), partially overlying the vessel, a bone of this size would not fit inside. The placement of animal bone with the vessel suggests that these items were deliberately deposited. The unidentified faunal remains consist of negligible small fragments, most likely related to the fragmented large mammal scapula based on macroscopic analysis. No evidence of butchery, burning, gnawing, pathology or non-metric traits were recorded.

7.0 DISCUSSION AND CONCLUSIONS

7.1 Overview of stratigraphic sequence

7.1.1 The natural Lynch Hill Gravels were recorded across the site between 26.85m and 28.15m aOD; natural Langley silts were found in some areas particularly in the north of the site between 27.37m and 27.81m aOD, these deposits were generally quite thin but were observed at 0.91m at their greatest thickness. In general, natural deposits appeared to be sloping downwards from east to west towards the River Colne; this slope has likely been significantly lessened by modern truncation.

7.1.2 The Langley silts were cut by a probable palaeochannel in Trench 4; the feature was filled by alluvial and fluvial deposits, the base of which was dated to the Middle Neolithic around 3000 BC; a partially complete pot recovered from one of the upper fills suggests structured deposition. The vessel was of Middle Bronze Age indicating that the channel took in excess of 1000 years to 'silt up'; this length of time is suggestive of a natural channel rather than anthropogenic activity. The geoarchaeological assessment (QUEST 2017, Appendix B) noted that the deposits had been laid down under varying conditions including low and moderate energy environments.

7.1.3 The natural deposits were occasionally overlain by alluvial clay layers suggesting the site lay in a damp environment, probably associated with the River Colne. The lack of these deposits in many trenches is likely to be because of later horizontal truncation. In all trenches the underlying natural and alluvium was sealed by modern levelling deposits and road surfaces associated with the previous development.

7.2 Deposit survival and existing impacts

7.2.1 All trenches showed signs of heavy modern truncation, firstly with numerous services and drainage runs present but also through severe horizontal truncation. The underlying deposits were uniformly sealed by modern gravel levelling deposits with occasional areas of concrete slab; these were in turn overlain by road surfaces and asphalt. Any overlying soil horizons had been completely removed during the previous construction phases leaving only the underlying geology and occasional patches of alluvium. The modern surfaces are almost completely level suggesting that the slightly east to west slope seen in the geology had been partially negated with truncation most severe in the higher eastern side of the site.

7.2.2 The survival of the palaeochannel in Trench 4 owns more to its size and depth than to a lack of truncation in this area; it is also likely that the channel lay in a lower lying area, which could have suffered slightly less truncation than the surrounding ground. The lack of Langley Silts in the east of the site could also feasibly be down to the heavy truncation.

7.3 Discussion of archaeological remains

7.3.1 The only feature found during the evaluation was the probable palaeochannel in Trench 4. Given only one edge of the feature was observed, it could feasibly be an elongated pool or pond; unfortunately, the trench could not be extended

to ascertain the full width of the feature due to live services to the west and the demolition of adjacent building to the east. The fills within the feature were all alluvial or fluvial in nature suggesting deposition in varying but generally damp conditions. The primary channel fill was dated to the Middle Neolithic while the upper fills were Middle Bronze Age indicating the feature took a great length of time to fill up; this suggests a natural rather than anthropogenic feature.

7.3.2 The partially complete Middle Bronze Age vessel recovered from the upper fills of the channel suggest structured deposition and show that even if the channel itself was naturally formed human occupation was present in the area.

7.4 Consideration of research aims

7.4.1 The evaluation has succeeded in addressing the general aims of the evaluation as outlined in the WSI (ASE 2016). The evaluation found that the site showed evidence of heavy horizontal truncation from previous developments with modern deposits directly overlying the natural deposits and alluvium across the entire site.

7.4.2 The only feature recorded on site was a possible palaeochannel likely to be of natural origin; this feature contained alluvial and fluvial fills suggesting natural accumulation within varying damp environments. Dating suggests that the feature took in excess of 1000 years to fill in. Finds included a partial pot, suggesting structural deposition and hinting at Bronze Age activity in the area.

7.4.3 The palaeochannel and alluvial and fluvial deposits show that the site lay within a varying yet generally damp environment during the Neolithic and Bronze Age; this environment would not have been conducive to occupation. The lack of other features suggests that the site was not heavily utilised in these periods although the degree of modern truncation would have also severely affected any shallower features. Despite this lack of activity, the probable structured deposition seen within the palaeochannel suggests occupation within the surrounding area.

7.4.4 Only a single struck flint was recovered from the site, it was of Mesolithic or Early Neolithic date and was residual within the channel. Given the limited nature of the flint, it is not possible to address the relevant research question.

7.4.5 No evidence of Iron Age, medieval or post-medieval activity was found, this could be due to the modern truncation seen across site.

7.5 Conclusions

7.5.1 The evaluation established that the site had undergone severe horizontal truncation associated with later 20th century developments leading to the removal of any overlying soil deposits and most likely areas of alluvium and Langley Silts.

7.5.2 Despite the truncation, a probable palaeochannel was recorded in the north of the site, it is likely to be of natural origin with the fills showing deposition within a both moderate and low energy environments. While the site itself would have been damp and rather unsuitable for occupation, structured deposition suggested by the presence of a partial pot as well as animal bone indicates

Bronze Age occupation within the wider area.

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HER Summary

Site code	PBT16					
Project code	160418					
Planning reference	1197/APP/2015/4164					
Site address	Union Park, Uxbridge					
District/Borough	London Borough of Hillingdon					
NGR (12 figures)	50537 18132					
Geology	Lynch Hill Gravels, Langley Silts					
Fieldwork type	Eval					
Date of fieldwork	09-01-2017 to 17-01-2017					
Sponsor/client	CgMs Consulting					
Project manager	Andy Leonard					
Project supervisor	Ian Hogg					
Period summary				Bronze Age		
					Modern	
Project summary	*The evaluation comprised eight trenches and revealed natural Lynch Hill Gravels between 26.85m and 28.15m aOD*; *the gravels were overlain by natural Langley silts in some areas particularly in the north of the site and lay between 27.37m and 27.81m aOD. Deposits of alluvial clay were recorded in some parts of the site but appeared to have been heavily truncated.* *A probable palaeochannel lay in the north of the site; this feature is likely to be of natural origin and dating evidence suggests that it was infilled naturally over a long period between the Middle Neolithic and Middle Bronze Age. The fills were alluvial and fluvial in nature and indicate that the site lay within a varying yet damp environment, not conducive to human occupation. Despite this, probable structural deposit was seen with a partial Middle Bronze Age vessel retrieved from the upper fills of the palaeochannel.* *The feature was overlain by modern leveling deposits and road surfaces indicating that the site has undergone severe horizontal truncation from modern developments. This truncation is likely to have removed any possible shallower archaeological features on site.*					

OASIS Form

OASIS ID: archaeol6-275163

Project details	
Project name	Union Park, Uxbridge
Short description of the project	The evaluation comprised eight trenches and revealed natural Lynch Hill Gravels between 26.85m and 28.15m aOD; the gravels were overlain by natural Langley silts in some areas particularly in the north of the site and lay between 27.37m and 27.81m aOD. Deposits of alluvial clay were recorded in some parts of the site but appeared to have been heavily truncated. A probable palaeochannel lay in the north of the site; this feature is likely to be of natural origin and dating evidence suggests that it infilled naturally over a long period between the Middle Neolithic and Middle Bronze Age. The fills were alluvial and fluvial in nature and indicate that the site lay within a varying yet damp environment, not conducive to human occupation. Despite this, probable structural deposit was seen with a partial Middle Bronze Age vessel retrieved from the upper fills of the palaeochannel. The feature was overlain by modern levelling deposits and road surfaces indicating that the site has undergone severe horizontal truncation from modern developments. This truncation is likely to have removed any possible shallower archaeological features on site.
Project dates	Start: 09-01-2017 End: 16-01-2017
Previous/future work	Yes / Not known
Any associated project reference codes	PBT 16 - Sitecode
Any associated project reference codes	160418 - Contracting Unit No.
Type of project	Field evaluation
Site status	None
Current Land use	Vacant Land 1 - Vacant land previously developed
Monument type	PALAEOCHANNEL Late Prehistoric
Significant Finds	POTTERY Middle Bronze Age
Significant Finds	ANIMAL BONE Middle Bronze Age
Methods & techniques	"'Sample Trenches'"
Development type	Urban residential (e.g. flats, houses, etc.)
Prompt	National Planning Policy Framework - NPPF

Position in the planning process	After full determination (eg. As a condition)
Project location	
Country	England
Site location	GREATER LONDON HILLINGDON UXBRIDGE Union Park, Uxbridge
Postcode	UB8 2GH
Study area	1.4 Hectares
Site coordinates	TQ 0537 8132 51.520469798867 -0.481112250315 51 31 13 N 000 28 52 W Point
Height OD / Depth	Min: 26.85m Max: 27.81m
Project creators	
Name of Organisation	Archaeology South-East
Project brief originator	GLAAS
Project design originator	CgMs Consulting
Project director/manager	Andy Leonard/Jim Stevenson
Project supervisor	Ian Hogg
Project supervisor	Paulo Clemente
Type of sponsor/funding body	CgMS
Name of sponsor/funding body	CgMs Consulting
Project archives	
Physical Archive recipient	LAARC
Physical Contents	"Animal Bones","Ceramics","Worked stone/lithics"
Digital Archive recipient	LAARC
Digital Contents	"Stratigraphic","Survey"
Digital Media available	"Images raster / digital photography","Survey","Text"
Paper Archive recipient	LAARC
Paper Contents	"Stratigraphic","Survey"
Paper Media	"Context sheet","Plan","Section"

available

Entered by	Ian Hogg (ian.hogg@ucl.ac.uk)
Entered on	8 February 2017

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Appendix A

Trench	Context	Type	Interpretation	Thickness	Height
1	1/001	Masonry	Road surface	0.08	28.45-28.50
1	1/002	Layer	Bedding deposit	0.11-0.12	28.37-28.42
1	1/003	Layer	Levelling deposit	0.60	28.26-28.30
1	1/004	Layer	Alluvium	0.50	27.70
1	1/005	Layer	Lynch Hill Gravel	-	27.20
2	2/001	Masonry	Road surface	0.08	28.44-28.52
2	2/002	Layer	Bedding deposit	0.05-0.15	28.36-28.44
2	2/003	Layer	Levelling deposit	0.15-0.30	28.29-28.31
2	2/004	Masonry	Concrete	0.25-0.42	28.01-28.03
2	2/005	Layer	Alluvium	0.13	27.61-27.76
2	2/006	Layer	Langley Silt	0.20-0.25	27.48-27.66
2	2/007	Layer	Lynch Hill Gravels	-	27.46-28.14
3	3/001	Masonry	Road surface	0.08	28.42-28.51
3	3/002	Layer	Bedding deposit	0.07-0.12	28.34-28.43
3	3/003	Layer	Levelling deposit	0.35-0.40	28.22-28.35
3	3/004	Layer	Made ground	0.20	27.87-27.95
3	3/005	Layer	Alluvium	0.30-0.40	27.67
3	3/006	Layer	Langley Silt	-	27.37-27.55
5	5/001	Masonry	Road surface	0.08	28.53-58.59
5	5/002	Layer	Bedding deposit	0.06-0.10	28.45-28.51
5	5/003	Masonry	Concrete slab	0.10-0.18	28.35-28.41
5	5/004	Layer	Levelling deposit	0.10-0.35	28.23-28.25
5	5/005	Layer	Lynch Hill Gravels	-	28.10-28.15
6	6/001	Masonry	Asphalt surface	0.08-0.10	28.46-28.53
6	6/002	Layer	Levelling deposit	0.85-0.87	28.38-28.45
6	6/003	Layer	Alluvium	0.20	27.53-27.57
7	7/001	Masonry	Asphalt surface	0.06-0.08	28.51-28.57

Trench	Context	Type	Interpretation	Thickness	Height
7	7/002	Layer	Levelling deposit	0.66-0.80	28.43-28.51
7	7/003	Layer	Langley Silts	0.24	27.81
7	7/004	Layer	Lynch Hill Gravels	-	27.56-27.63
8	8/001	Masonry	Road surface	0.08	28.49-28.51
8	8/002	Layer	Bedding deposit	0.05	28.41-28.43
8	8/003	Layer	Levelling deposit	0.50	28.36-28.38

Table 5: Archaeologically negative trenches: list of recorded contexts

Appendix B QUEST REPORT

Appendix B QUEST REPORT

DOCUMENT HISTORY:

REVISION	DATE	PREPARED BY	SIGNED	APPROVED BY	SIGNED	REASON FOR ISSUE
v1	07/02/17	Rob Batchelor				First edition

CONTENTS

1. NON-TECHNICAL SUMMARY

A program of geoarchaeological fieldwork and radiocarbon dating was carried out by Quaternary Scientific (University of Reading) in connection with the proposed development of land at Union Park, Uxbridge, London Borough of Hillingdon. The work was commissioned by CgMs Consulting and undertaken in conjunction with excavations carried out by Archaeology South East. The aims of the investigation were: (1) to clarify the composition, nature, distribution and age of the sediments beneath the site; (2) to evaluate the potential of these sediments for providing information on the environmental history of the site, and evidence of human activity.

The results of the geoarchaeological fieldwork have contributed to our understanding of the Pleistocene and Holocene stratigraphic sequence in this area of the Colne Valley. The surface of the Wolstonian Lynch Hill Gravels (where recorded) is indicative of a slight downward slope from east to west across the site, towards the River Colne. Langley Silt is present in various places across the site, and alluvial deposits towards the north. The pattern of deposits however is in no doubt effected by truncation. Trenches 1-3 & 5-8 are not considered of further archaeological, geoarchaeological or palaeoenvironmental interest due to the thinness/truncation of the Langley Silt, and thinness/inorganic nature of the alluvial deposits contained within them.

Archaeological, geoarchaeological and palaeoenvironmental interest in the site is restricted to the area of Trench 4, in which a north-west to south-east aligned natural channel is recorded, cutting into the Langley Silt. The channel was infilled with deposits indicative of various speeds of waterflow. Radiocarbon dating indicates that the channel infilling took place between the middle Neolithic and middle Bronze Age, though this may have been interrupted by periods of non-deposition and/or erosion.

The sediments from the channel have the potential to contain a wealth of further information on the past landscape, through the assessment/analysis of palaeoenvironmental remains. Such investigations have previously been carried out on Mesolithic deposits at nearby sites. Limited records exist however, for the later prehistoric periods. It is therefore recommended that a programme of assessment and (if necessary) analysis is carried out on the monolith and bulk samples from Trench 4 to provide a rare record for these periods in the River Colne Valley. Not only will this work be of importance to understanding the history of the site, but it will contribute to our knowledge and understanding of the region as a whole.

2. INTRODUCTION

2.1 Site context

This report summarises the findings arising out of the fieldwork and radiocarbon dating undertaken by Quaternary Scientific (University of Reading) land at Union Park, Uxbridge, London Borough of Hillingdon. (NGR: TQ 05372 81322; Figures 1 & 2). The work was commissioned by CgMs Consulting and undertaken in conjunction with excavations carried out by Archaeology South East. The site lies on the eastern margin of the floodplain of the River Colne, lying on generally level ground at an elevation of *ca.* 28m OD and occupying an area of approximately 1.4ha to the north of Packet Boat Lane. The site is bounded to the west by the Grand Union Canal, to the east by properties facing onto Packet Boat Land and Fernes Lane, and to the north by Sefton Way.

The British Geological Survey (BGS) (http://mapapps2.bgs.ac.uk/geoindex/home.html) shows the site underlain by London Clay bedrock, overlain within the area of the site by Wolstonian Lynch Hill Gravel. The site is surrounded by superficial deposits of Langley Silt, the BGS mapping suggesting that these deposits do not occur within the area of the site itself. However, on the basis of recent geotechnical investigations at the site (Jomas Associates, 2014), remnants of the Langley Silt may be present beneath the site. During these investigations a total of ten window sample boreholes were put down to a depth of between 1 and 4m below ground level (bgl). These boreholes confirm a sequence of Lynch Hill Gravel, the surface of which lies at between 0.5 and 1.9m bgl, either overlain by variably silty, sandy and clayey deposits considered to represent alluvium or Langley Silt up to 1.2m in thickness (WS1, WS3, WS4b, WS5, WS9, WS10), or Made Ground (WS2, WS6-8).

2.2 Archaeological, geoarchaeological and palaeoenvironmental significance

With regards to the Palaeolithic archaeological potential of the deposits at the site, Wymer (1988) records Palaeolithic artefacts from the 'Gravels' in the Yiewsley area (most likely from the Lynch Hill Gravel). Elsewhere in Greater London at Creffield Road, Acton, Brown (1886; 1887) described a 'working floor' lying on a seam of black-stained gravel (Lynch Hill Gravel) immediately beneath the brickearth (Langley Silt), which he thought to be humic staining on an extensive land surface. He also identified two further seams or surfaces at depth within the gravels associated with small numbers of unrolled flint tools. He reported (Brown, 1887) 10 or 12 flint artefacts from the Lynch Hill gravel, 8 or 10 from the upper part and 2 from the lower. In contrast, Collins (1978), working in the Yiewsley area, suggested that within the Lynch Hill terrace sequence, artefacts may be more common in the lower part of the gravels. Bazely *et al.* (1991) did not support the idea of an extensive stable land surface at the top of the Lynch Hill Gravel, as the humic component is more likely to be manganese staining and they noted the flints that Brown had collected were not in pristine condition, though not badly rolled.

The silt-rich deposits known as 'brickearth' (the Langley Silt) that frequently overly the Lynch Hill Gravel in this area of Uxbridge, and in many places elsewhere in southern Britain, are considered to be of Late Devensian age. This unit has a silt content ranging up to *ca.* 70%, and is generally regarded as a mixture of windblown silt, redistributed by surface wash, and mixed with local fine-grained sediment (for example derived from the bedrock London Clay). With regards to its archaeological

potential, archaeological investigations at Creffield Road (Brown, 1886; 1887) recovered Levallois artefacts from deposits which would now be described as the Langley Silt. Later excavation at Creffield Road (Bazely *et al*., 1991) exposed the Langley Silt and the gravels of the underlying Lynch Hill Gravel, but recovered artefacts only from the Langley Silt.

Geoarchaeological investigations elsewhere in this area of the Colne Valley, including at Three Ways Wharf (Lewis & Rackham, 2011), William King Flour Mill (Grant et al., 2014) and Uxbridge Business Park Plot 5 (Stastney, 2014) have shown that considerable potential exists for the survival of fine-grained and in places highly organic alluvial deposits dating to the Mesolithic period, as well as evidence for Mesolithic human activity within these horizons. Even in the absence of the archaeological remains, the sediments have the potential to contain a wealth of further information on the past landscape, through the assessment/analysis of palaeoenvironmental remains (e.g. pollen, plant macrofossils and insects) and radiocarbon dating. So called environmental archaeological or palaeoenvironmental investigations can identify the nature and timing of changes in the landscape, and the interaction of different processes (e.g. vegetation change, human activity, climate change, hydrological change) thereby increasing our knowledge and understanding of the site and nearby area. In the case of human activity, palaeoenvironmental evidence can include: (1) decreases in tree and shrub pollen suggestive of woodland clearance; (2) the presence of herbs indicative of disturbed ground, pastoral and/or arable agriculture; (3) charcoal/microcharcoal suggestive of anthropogenic or natural burning, and (4) insect taxa indicative of domesticated animals.

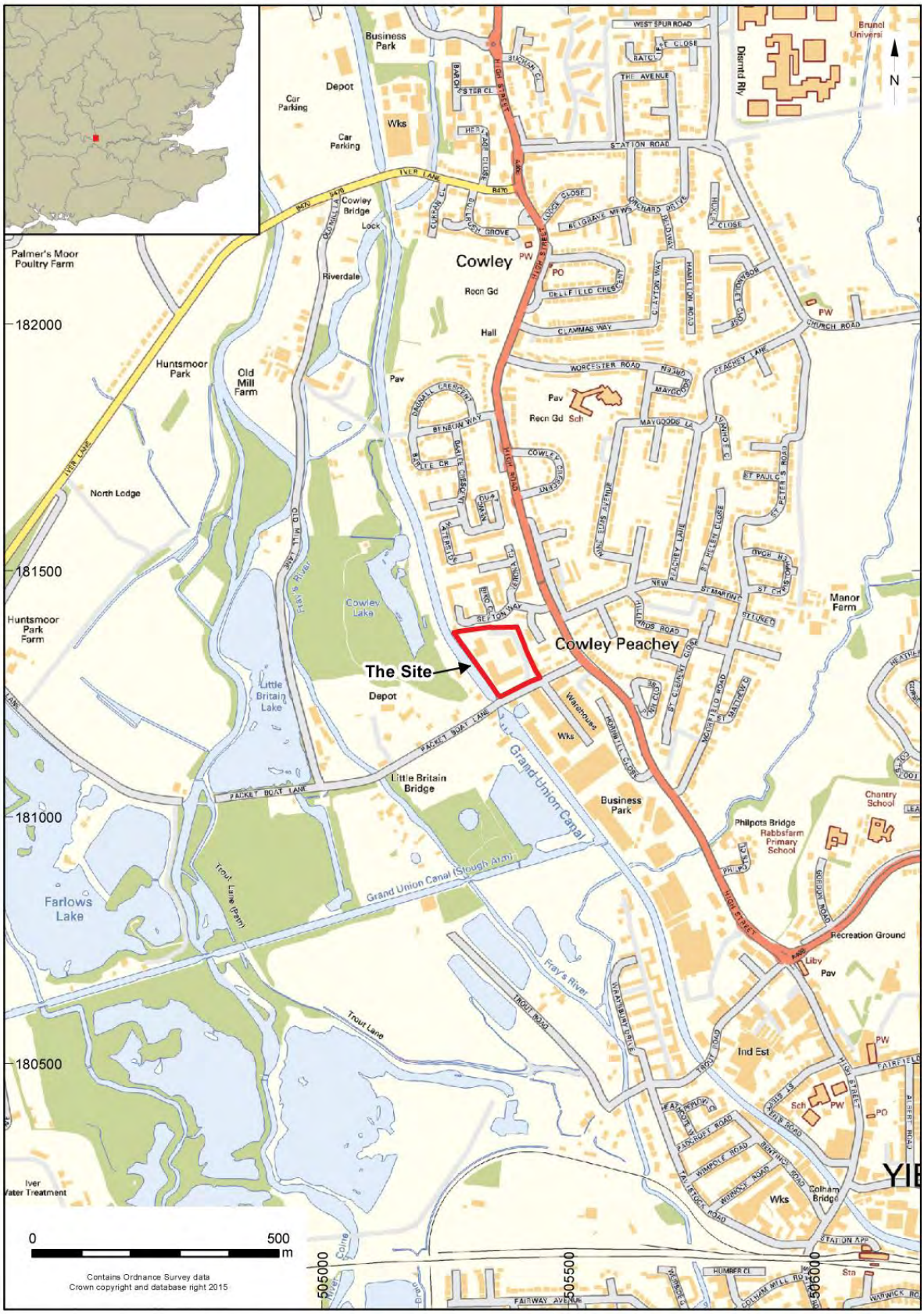
2.3 Aims and objectives

Additional sedimentary records are therefore required in order to enhance our understanding of the sub-surface stratigraphy at the Union Park site, and to assess its palaeoenvironmental and Palaeolithic archaeological potential. Five significant research aims relevant to the geoarchaeological investigations at the site are outlined here:

1. To clarify the nature of the sub-surface stratigraphy across the site;
2. To clarify the nature, depth, extent and date of any alluvial, Langley Silt or Lynch Hill Gravel deposits;
3. To investigate whether the sequences contain any artefact or ecofact evidence for prehistoric or historic human activity.

In order to address these aims, the following objectives are proposed:

1. To describe the sedimentary sequences within a minimum of three archaeological trenches in selected areas of the site (see Figure 2);
2. To excavate sondages at one end of these trenches to examine the Lynch Hill Gravel, and to examine this unit for any surviving Palaeolithic artefacts;
3. To use the stratigraphic data from the new geoarchaeological and geotechnical boreholes, and existing geotechnical borehole data to produce a deposit model of the major depositional units across the site, and to characterise the depositional sequence in more detail;
4. To make recommendations for any further archaeological/palaeoenvironmental investigations at the site.
5. To publish the results of the site investigations, depending on the significance of the findings.



© Archaeology South-East		Union Park, Uxbridge	Fig. 1
Project Ref: 160418	Jan 2017	Site location	
Report No: 2017025	Drawn by: APL		

Figure 1: Location of the Union Park, Uxbridge site (reproduced from Archaeology South East, 2017).

Figure 2: Archaeological trenches at the Union Park, Uxbridge site (reproduced from Archaeology South East, 2017).

3. METHODS

3.1 Fieldwork

An archaeological evaluation was carried out by Archaeology South East in January 2017; eight trenches were opened. A geoarchaeological site visit was carried out during which all eight archaeological trenches were examined. Monolith and bulk sampling was undertaken on sections 1 & 2 within Trench 4. Both sampling types are useful for a range of geoarchaeological and palaeoenvironmental analyses. The 50cm monolith tins were hammered into the section, whilst 10 litre bulk samples were taken in 5cm spits adjacent to the monolith tins. Each sample was clearly labelled using a permanent marker pen with the orientation ('top' and 'base') and depth ('cm' or 'm', BGL or OD), and recorded on the archaeological section drawing.

3.2 Lithostratigraphic description

The lithostratigraphy of the monolith samples from sections 1 & 2 was described in the laboratory using standard procedures for recording unconsolidated sediment and organic sediments, noting the physical properties (colour), composition (gravel, sand, clay, silt and organic matter) and inclusions (e.g. artefacts). The procedure involved: (1) cleaning the sample using a scalpel; (2) recording the physical properties, most notably colour using a Munsell Soil Colour Chart; (3) recording the composition; e.g. gravel, fine sand, silt and clay; (4) recording the degree of peat humification and (5) recording the unit boundaries e.g. sharp or diffuse. The results of the geoarchaeological descriptions of the boreholes are displayed in Tables 1 & 2.

3.3 Bulk sample processing

One 20 litre sample of the Langley Silt from the northern end of Trench 4 was processed for the recovery of Palaeolithic artefacts. The extraction was carried out using wet sieving through a 0.5cm mesh size. The retained material was dried, bagged and labelled for specialist identification.

3.4 Radiocarbon dating

A single large fragment of wood was extracted from the base of the Holocene sequence in Section 1 of Trench 4. The wood was fragile and unidentifiable, but was deemed suitable for radiocarbon dating following cleaning and removal of the bark layer. The sample was submitted for AMS radiocarbon dating to Beta Analytic INC, Radiocarbon Dating Laboratory, Florida, USA. The results have been calibrated using OxCal v4.0.1 Bronk Ramsey (1995, 2001 and 2007) and IntCal13 atmospheric curve (Reimer et al., 2013). The results are displayed in Table 3.

4. RESULTS AND INTERPRETATION OF THE LITHOSTRATIGRAPHIC DESCRIPTIONS & RADIOCARBON DATING

All eight archaeological trenches were examined during the course of the geoarchaeological investigations. Services were frequently encountered; in some cases truncating the entire sequence within the trenches (Trenches 6 & 8). The Made Ground rested on a thin (<25cm thick) layer of Langley Silt, or directly onto the surface of the Lynch Hill Gravel (Trenches 3, 5, 7 & the western end of Trench 2); a thin (10-50cm) layer of blue grey Holocene alluvium was also recorded overlying the Langley Silt (Trenches 2 and 3) or resting directly on the Lynch Hill Gravels in Trench 1 (Figures 2 & 3; Archaelogy South East, 2017). The surface of the Lynch Hill Gravel (where recorded) ranged between approximately 27.2 and 28.2m OD, indicative of a slight downward slope from east to west across the site, towards the River Colne. The Langley Silt appears to be present in various places across the site, and the alluvial deposits towards the north. The pattern of deposits however is in no doubt effected by truncation.

Trench 4 also contained a sequence of Lynch Hill Gravels (context [4/011]) which rested at approximately 27m OD across the trench and was overlain by Langley Silt (context [4/010]) reaching up to 91cm in thickness (Archaeology South East, 2017). A large bulk sample was taken from the Langley Silt at the western end of the trench for laboratory-based wet-seiving. This process resulted in the recovery of a small quantity of flint gravels; none of which on initial inspection had the appearance of Palaeolithic artefacts (to be confirmed by a lithic specialist).

Sharply cutting the Langley Silt towards the centre of the trench was northwest – southeast aligned feature [4/008], of which only the eastern edge was visible. It measured at least 13.5m in length, 1.8m in width and 0.9m in depth. A sequence of fine-grained and organic-rich sediments were deposited within the feature (contexts [4/009], [4/007] & [4/006]) (Archaeology South East, 2017). Monolith samples were taken through these deposits in sections 1 & 2 for laboratory-based description; bulk samples were also taken in spits through section 1 adjacent to the monolith sample (Figures 4 & 5).

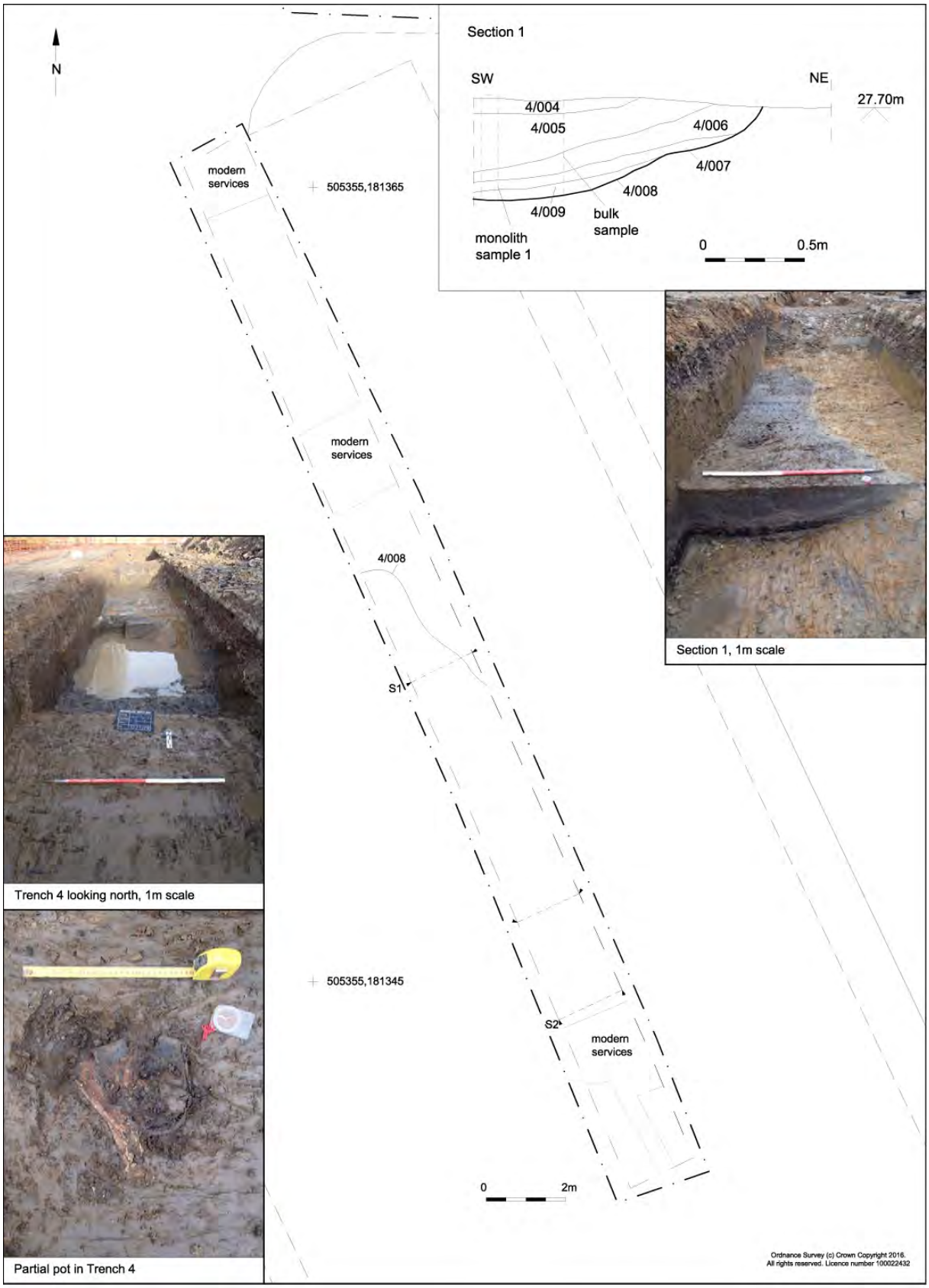
Laboratory-based description reveals that the feature was initially infilled by gravel and course sand (context [4009]) representing deposition in a moderate to high energy fluvial environment. It is overlain by a silty sandy peat with organic matter Mollusca, wood and possibly charcoal fragments (context [4007]); this is indicative of a decrease in the flow of water, and transition towards semi-aquatic / semi-terrestrial conditions. However, the frequent occurrence of sand indicates continued episodes of higher energy flow. A radiocarbon date taken on unidentifiable wood from the base of [4/007], indicates deposition during the middle Neolithic period (3330-2920 cal BC / 5280-4870 cal BP). There is the limited possibility that this wood fragment was derived from an older souce, and thus this date should be considered the oldest possible age of this layer.

The organic-rich layer is overlain by sands and sandy clay with occasional gravel fragments, suggestive of an increase in the flow of energy, and continued infilling of the channel feature (contexts [4/006] & [4/005]. The presence of charcoal, lithics, animal bone and recorded within

context [4/005] provide unequivocal evidence of human activity. One pottery vessel towards the top of the context was dated to the middle Bronze Age and found in association with a large mammal scapula, suggestive of deliberate placement (Archaeology South East, 2017). This also indicates that infilling of the channel feature lasted from the middle Neolithic to middle Bronze Age, though whether this period of deposition was continuous or interrupted by phases of non-deposition/erosion is unknown.

© Archaeology South-East		Union Park, Uxbridge	Fig. 5
Project Ref: 160418	Jan 2017	Trenches 1-3, 5-8 photographs	
Report Ref: 2017025	Drawn by: APL		

Figure 3: Trench 1-3 & 5-8 photographs (reproduced from Archaeology South East, 2017)



© Archaeology South-East		Union Park, Uxbridge	Fig. 3
Project Ref: 160418	Jan 2017	Trench 4, Section 1 and photographs	
Report Ref: 2017025	Drawn by: APL		

Figure 4: Trench 4, Section 1 plan and photographs (reproduced from Archaeology South East, 2017)

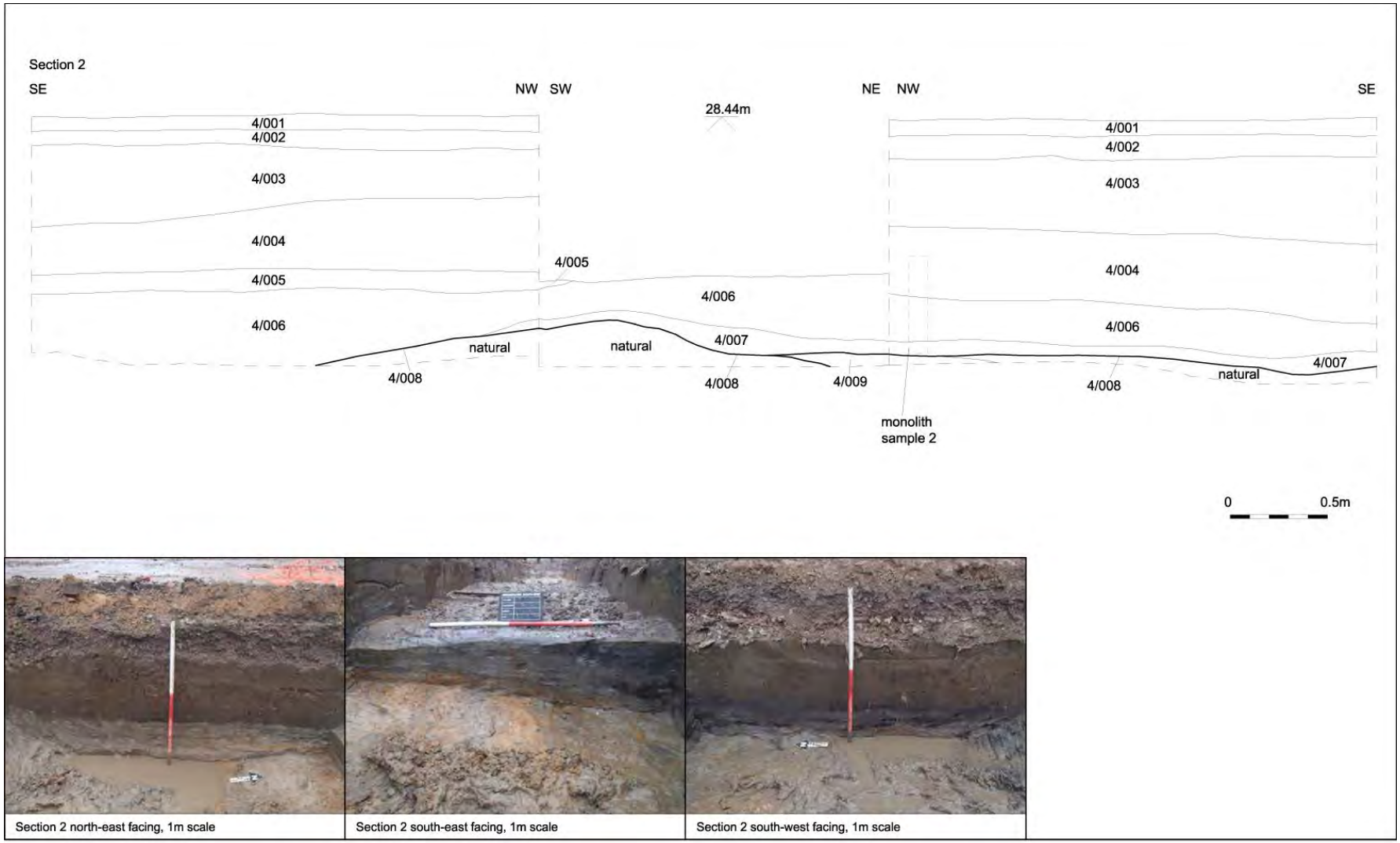


Figure 5: Trench 4, Section 2 plan and photographs (reproduced from Archaeology South East, 2017)

Table 1: Lithostratigraphic description of Monolith 1, Section 1, Trench 4, Union Park, Uxbridge, London Borough of Hillingdon

Depth (m OD)	Depth (m from top of column)	Context number	Description
27.75 to 27.57	0 to 0.18	[4/004] / [4/005]	5YR 2.5/1; As4; Black clay with iron staining throughout and traces of rooting and charcoal; diffuse boundary into:
27.57 to 27.52	0.18 to 0.23	[4/005]	5YR 3/1; Ga1, As3; Very dark grey clay with light coloured sand particles throughout; diffuse boundary into:
27.52 to 27.43	0.23 to 0.32	[4/006]	7.5YR 3/2; Ga4; Dark brown sand with traces of Mollusca (whole & broken) and organic material; diffuse boundary into:
27.43 to 27.36	0.32 to 0.39	[4/007]	7.5YR 2.5/1; Sh2, Ag2; Black silty unidentifiable peat, with wood and ?charcoal fragments; diffuse contact into:
27.38 to 27.27	0.39 to 0.48	[4/009]	7.5YR 4/1 & 7.5YR 4/2; Ga3, Gg1; Very dark grey & brown gravelly sand with traces of Mollusca.

Table 1: Lithostratigraphic description of Monolith 2, Section 2, Trench 4, Union Park, Uxbridge, London Borough of Hillingdon

Depth (m OD)	Depth (m from top of column)	Context number	Description
27.73 to 27.38	0 to 0.35	[4/004] / [4/005]	10YR 2/1; Ga1, As3; Black sandy clay with fine gravel, iron staining and traces of charcoal; sand content increases from 0.29 to 0.35cm; diffuse boundary into:
27.38 to 27.32	0.35 to 0.41	[4/006]	7.5YR 2.5/1; Sh2, Ag2; Black silty unidentifiable peat, with wood and ?charcoal fragments; diffuse contact into:
27.32 to 27.23	0.41 to 0.50	[4/007]	2.5YR 4/2; Ga4; Dark greyish brown sand.

Table 3: Results of the radiocarbon dating, Monolith 1, Section 1, Trench 4, Union Park, Uxbridge, London Borough of Hillingdon

Laboratory code / Method	Material and location	Depth (m OD)	Uncalibrated radiocarbon years before present (yr BP)	Calibrated age BC/AD (BP) (2-sigma, 95.4% probability)	δ13C (‰)
BETA-456687	Context [4/007], Section 1, Trench 4	27.38 to 27.36	4430 ± 30	3330-2920 cal BC (5280-4870 cal BP)	-27.5

5. DISCUSSION, CONCLUSIONS & RECOMMENDATIONS

A program of geoarchaeological fieldwork and radiocarbon dating was instigated to: (1) clarify the composition, nature, distribution and age of the sediments beneath the site, and (2) evaluate the potential of these sediments for providing information on the environmental history of the site, and evidence of human activity.

The results of the geoarchaeological fieldwork have contributed to our understanding of the Pleistocene and Holocene stratigraphic sequence in this area of the Colne Valley. The surface of the Wolstonian Lynch Hill Gravels (where recorded) rest between approximately 27.2 and 28.2m OD, indicative of a slight downward slope from east to west across the site, towards the River Colne. The Langley Silt appears to be present in various places across the site, and the alluvial deposits towards the north. The pattern of deposits however is in no doubt effected by truncation. Trenches 1-3 & 5-8 are not considered of further archaeological, geoarchaeological or palaeoenvironmental interest due to the thinness/truncation of the Langley Silt, and thinness/inorganic nature of the alluvial deposits contained within them.

Archaeological, geoarchaeological and palaeoenvironmental interest in the site is restricted to the area of Trench 4, in which a north-west to south-east aligned natural channel is recorded, cutting into the Langley Silt. The channel was infilled with deposits indicative of various speeds of waterflow. Radiocarbon dating indicates that the channel infilling took place between the middle Neolithic and middle Bronze Age, though this may have been interrupted by periods of non-deposition and/or erosion.

In addition to the identified archaeological remains (Archaeology South East, 2017) the sediments from the channel have the potential to contain a wealth of further information on the past landscape, through the assessment/analysis of palaeoenvironmental remains (as outlined in section 2.2). Such investigations have previously been carried out at the nearby Three Ways Wharf (Lewis & Rackham, 2011), William King Flour Mill (Grant et al., 2014) and Uxbridge Business Park Plot 5 (Stastney, 2014) sites, providing reconstructions for the Mesolithic period. Limited records exist however, for the later prehistoric periods. It is therefore recommended that a programme of assessment and (if necessary) analysis is carried out on the monolith and bulk samples from Trench 4 to provide a rare record for these periods in the River Colne Valley. Not only will this work be of importance to understanding the history of the site, but it will contribute to our knowledge and understanding of the region as a whole.

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