



Written Scheme of Investigation: Archaeological Watching Brief

Imperial College,
Sports Ground,
Sipson Lane,
Harlington UB3 5EH,
in the London
Borough of Hillingdon

HCUK Group is a multi-disciplinary environmental practice offering expert advice in archaeology, heritage, landscape, arboriculture, and planning. It began life in 2010 as Heritage Collective LLP, before becoming Heritage Collective UK Limited in 2014. In the coming years diversification saw the addition of Archaeology Collective, Landscape Collective and Planning Collective, before all strands came together to be branded under a single umbrella: HCUK Group, based on the acronym for the original company. A home working company since the beginning, we are pleased to employ a talented workforce of consultants and support staff, who are on hand to advise our clients.



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1. Introduction

Project Background

1.1 This Written Scheme of Investigation (WSI) has been prepared by Charlotte Vallance of HCUK Group on behalf of Imperial College London. It details a scheme of archaeological monitoring (watching brief) to be carried out at Imperial College Sports Ground, Sipson Lane, Harlington, UB3 5EH (centred on NGR: TQ 08220 77994). The Site is located approximately 400m west of Harlington Village in the district of Hayes, the London Borough of Hillingdon. The Site is approximately 0.17ha. in size and presently occupied by an area of mown/improved grassland located on the eastern edge of sports pitches owned by Imperial College London. The site is recorded to be part of a former landfill site which was in use receiving construction waste between 1987 and 1992.

1.2 Planning consent has been approved subject to conditions by London Borough of Hillingdon for planning application (1748/APP/2021/1971) for the '*Instillation of Multi-Use Games Area and associated development, including 3m high chain link boundary fencing and 6 x 8m high floodlighting columns*'.

1.3 A condition of the decision notice requires a programme of archaeological investigation (Condition 8) which states

No demolition or development shall take place until a stage 1 written scheme of investigation (WSI) has been submitted to and approved by the local planning authority in writing. For land that is included within the WSI, no demolition or development 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 demolition/development 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

Heritage assets of archaeological interest may survive on the site. The planning authority wishes to secure the provision of archaeological investigation and the subsequent recording of the remains prior to development, in accordance with Policy DMHB 7 of the Hillingdon Local Plan: Part Two - Development Management Policies (January 2020) and Policy HC1 of the London Plan (2021).

- 1.4** Advice for the work was prepared by Louise Davis, Archaeology Advisor for Historic England's Greater London Archaeology Advisory Service (GLAAS). She has recommended that the fieldwork should comprise an archaeological watching brief during construction:

"An archaeological watching brief should monitor the stripping of the topsoil and excavation of drainage channels. A watching brief involves the proactive engagement with the development groundworks to permit investigation and recording of features of archaeological interest which are revealed. A suitable working method with contingency arrangements for significant discoveries will need to be agreed. The outcome will be a report and archive."

- 1.5** Since condition 8 was published GLAAS have confirmed (email dated 05/01/22) that only one stage of archaeological watching brief fieldwork (with, or course, a report and archive) will be required to satisfy the condition. This WSI has been guided in its composition by the Chartered Institute for Archaeologists (CIfA) Code of Conduct¹, Standard and guidance for an archaeological watching brief², the Management of Research Projects in the Historic Environment (MoRPHE) issued by Historic England³ and adheres to paragraphs 189, and 194 - 195 of the procedural document National Planning Policy Framework⁴.

Geology and Topography

- 1.6** The British Geological Survey identifies the underlying solid geology across the Site as London Clay Formation – Clay, Silt and Sand, a sedimentary bedrock formed in the Palaeogene Period and indicative of a local environment previously dominated by deep seas. The solid geology is overlain by a mix of superficial deposits

¹ CIfA 2019

² CIfA 2020a

³ Historic England 2015a

⁴ MHCLG, 2021

comprising sand and gravel of the Taplow Gravel Member and clays and silts of the Langley Silt Member⁵.

Archaeological and Historic Background

- 1.7** A search of the Greater London Historic Environment Record (GLHER) was carried out in December 2021 which utilised a search radius of 500m from the Site as a study area. There are no known heritage assets in the Site and no previous archaeological investigations have taken place in the Site. The results from the GLHER suggest there is high potential for hitherto unknown below-ground archaeological remains in the Site from the early prehistoric period onwards. The impacts resulting from the Site's former use as a landfill site is currently unknown. The results of the GLHER search are presented below (including the MLO ref numbers for each record) and the locations of Archaeological Priority Areas, known heritage assets and previous archaeological investigations are presented on Figures 3, 4, and 5, respectively.

Archaeological Priority Zone and Areas

Heathrow Area-DLO36182

- 1.8** The Site lies within the Heathrow Archaeological Priority Zone (APZ), but beyond the extent of the Harlington Archaeological Priority Area (APA) (Figure 3) .
- 1.9** There is considerable archaeological evidence for this part of Greater London due to the extensive archaeological investigations that have taken place in relation to Heathrow Terminal 5 and mineral extraction. This APZ also includes the extents of the Harmondsworth, West Bedfont, Stanwell Cursus APAs, and most of the extent of the Harlington APA. The Cranford Park North APA lies just to the northwest of the Heathrow APZ.
- 1.10** The extensive archaeological work that has taken place in this area has provided significant evidence for continued use of an entire landscape from the Palaeolithic period. There is significant evidence for activity in the Neolithic period such as enclosures, a cursus (linear ritual enclosure), pits and field systems. Substantial areas of Bronze Age field systems have also been recorded with many linked settlements across the whole area, though particularly in the north and west. One of these settlements has been found within the Imperial College Sports Ground close to the Site. This activity continued into the Iron Age, which included the

⁵ Geology of Britain viewer | British Geological Survey (BGS)

enclosed settlement of 'Caesar's Camp' which comprised a number of roundhouses and also a rectilinear building interpreted as a temple. Evidence for Roman settlement activity is more limited, but shows a continuity of activity in areas like the Imperial College Sports Fields, Harlington, Victoria Lane, Home Farm, Harmondsworth, Longford and Perry Oaks.

- 1.11** There is a significant amount of Early Medieval activity recorded in this area. This includes settlement activity at Longford, Home Farm, south of Harmondsworth, Holloway Lane and Imperial College Sports Field. Much of the Medieval activity recorded on the GLHER relates to agricultural practices, such as field boundaries and ridge and furrow such as that recorded at Cranford Park, Perry Oaks, Home Farm, Bedfont Court and Harlington. A number of churches in the area have existing Medieval fabric and may have been established in the Saxon period. These churches would have had settlements linked to them, including settlement at Harmondsworth, Cranford Park and Harlington. It is known there were hamlets at Perry Oaks, Heathrow and Longford, which also included watermills.

Harlington-DLO36182

- 1.12** The Site lies 100m to the west of Harlington Area APA.
- 1.13** Archaeological work around Harlington has demonstrated that the landscape has been in almost continuous use since the mid Neolithic period.
- 1.14** Within the APA itself there are no records of prehistoric finds. However, extensive quarrying in the surrounding area has revealed evidence of settlement activity. Immediately to the west of the APA, multiple phases of work at RMC land and Wall Farm, north of Sipson Lane, have revealed a number of middle Neolithic pit groups/clusters and field systems. The number of pit groups from this date is of at least regional significance.
- 1.15** Work close to the Site at the Imperial College Sports Grounds recorded occupation activity during the Neolithic period, including a large rectangular enclosure and pits. In the late Bronze Age and early Iron Age a settlement site existed which continued to use the Neolithic enclosure, possibly as a pyre site, but also laid out a formalised landscape of fields, wells and enclosure. A late Iron Age/Romano-British enclosed settlement was laid out to the northwest of the Bronze Age settlement. This included a trackway with wayside burials and middens, and a complex arrangement of enclosures, wells, pits and possible roundhouses.
- 1.16** The area remained in use into the Saxon period. Early Saxon ditches, enclosures and a small inhumation cemetery were recorded at RMC land. Activity increased in the late Saxon period into the medieval period, particularly in the Wall Farm area,

and field systems, enclosures, pits, waterholes, wells and a small cemetery have all been recorded.

Early Prehistoric Period (c.450,000-400 BC)

MLO71994

- 1.17** A Palaeolithic flint was recovered from Imperial College Sports Ground, approximately 300m south of the Site, during excavations by Wessex Archaeology in 1998. The flint was found during monitoring of gravel extraction whilst the excavation was being undertaken.

MLO100470

- 1.18** A small assemblage of probable Mesolithic flints was recovered from RMC Land approximately 200m northeast of the Site, during excavations by Wessex Archaeology between 2000-2007. The assemblage contained several worked flints, the main identifiable type being end scrapers.

MLO97882

- 1.19** Two Mesolithic microliths and other pieces of worked flint were found through excavation approximately 400m north of the Site on RMC Land, by Wessex Archaeology in 2004. One of the two microliths was a geometric type of indeterminate form and the other was a D5 type. A number of end scrapers and denticulate tools were also thought to be of the same date.

Late Prehistoric Period (c 400BC-AD43)

MLO71995

- 1.20** Neolithic enclosures and pits were uncovered at Imperial College Sports Ground, approximately 300m south of the Site during excavations by Wessex Archaeology in 1997. The site comprised a large rectangular enclosure to the northeast of the site, at least six isolated shallow pits to the north and pit clusters.

- 1.21** The enclosure measured approximately 40m east to west and 15m north to south, and was divided by one internal ditch, that had been recut after it had initially filled up. Whilst the function of the enclosure is unknown magnetic susceptibility readings suggest evidence of possible burning within the enclosure, however, it cannot be known if this was contemporary activity or not. Within the area there are no known parallels, however, features near Stanwell Cursus are of a similar size and form, and similarities are also present with the Long Enclosure at Dorchester-on-Thames,

and to a lesser degree, the interrupted ditch forming the Normanton Down mortuary enclosure.

1.22 The pits formed two types: isolated features which were rich in finds, containing pottery, worked flints and worked stone; and morphologically similar features containing relatively small numbers of finds. The latter group included a concentration of 16 pits, of which four contained pottery. This large group was located close to an area of four pits that produced a large amount of Peterborough ware pottery.

1.23 The isolated pits included one which contained two small un-burnt fragments of human bone, in association with pottery, while another pit to the south contained 14 pieces of worked flint or stone including stone axe heads and a whetstone. It is thought that these isolated pits may have derived their function from their proximity to mortuary and other ritual structures, whilst the pit clusters were associated by a potential nearby settlement (not identified during excavations).

MLO2687

1.24 A Neolithic axe was recovered from a field to the north of Sipson Lane approximately 150m north of the Site. The axe was made from Hornblende Gneiss and is retained by the British Museum.

MLO100471

1.25 Neolithic Activity has been located approximately 300m to the north of the Site, running east from Wall Garden Farm, across RMC Land through to Nine Elms Farm. The Neolithic has been identified by numerous excavations from 2000 to 2009 by Wessex Archaeology which has revealed a significant area of activity largely comprising pits and a field system. The details of excavation are summarised below.

1.26 The first investigations on the site involved the recovery of 150-200 flints from fieldwalking, whilst the first evidence of possible Neolithic activity was found through excavation by the West London Archaeological Field Group in 1979. Excavation on the same site in 1981 uncovered further Neolithic features and finds. A small number of pits and scoops dug into the natural brickearth were uncovered. Struck flint and sherds of Late Neolithic (Mortlake style?) pottery were recovered from the pit and scoop fills. Struck flint, thought to be of later Neolithic date, was also recovered from the interface of topsoil and the brickearth. Several isolated prehistoric pits were found during excavation in Summer 1983, to the north and west of the area covered in 1979-1981. A single sherd of Ebbsfleet-type pottery and struck flint were recovered. Further evidence of Neolithic activity at the Sipson Lane site was found during a watching brief in 1984. Features from the later Neolithic were uncovered including: conjoining fragments of a single polished flint

axe from two shallow Neolithic scoops; and a small Mousterian handaxe recovered from the base of the natural brickearth.

- 1.27** Up to 85 Neolithic pits were uncovered at RMC Land, Harlington during excavations between 2000-2007. The pits were located across the site and varied between isolated pits and groups. Finds were recovered from most of the pits and included pottery, worked and burnt flint, worked stone and animal remains. The remnants of a possible field system, and two waterholes were found through excavation in 2004. The pits associated with this field system contained pottery of Peterborough Ware type, including Mortlake and possibly Ebbsfleet sub-styles.
- 1.28** Excavations south of the M4 and directly east of Walled Garden Farm, Hillingdon, in 2007 recovered two pits dated to the Late Neolithic period. Both the pits were sub-circular in plan. One pit located in the south of the site contained one sherd of Late Neolithic pottery. It measured 0.78m in diameter and 0.23m in depth. The second pit was located in the northeast of the site and only partially exposed in the excavation. It measured 0.86m by 0.57m and was 0.29m deep. The fill contained 16 sherds of Late Neolithic pottery.
- 1.29** The most recent excavations took place at Nine Elms Farm in 2009 and revealed five Neolithic features, of which four were pits and one was a tree throw hole. The features were dated by a small assemblage of finds including pottery and worked flint. The pits were between 0.4-1.6m wide and 0.1-0.3m deep, although one was sub-oval, it was 2.1m long by 1.4m wide and 1.2m deep. This pit was isolated and near the southwest edge of the site.
- MLO71997
- 1.30** Bronze Age occupation was uncovered at Imperial College Sports Ground, approximately 300m south of the Site during excavation by Wessex Archaeology in 1997. The early period was identified by a small amount of pottery whereas the Middle and late Bronze Age was more visible. The Middle Bronze Age saw the recutting of the Neolithic Enclosure (MLO71995) and the creation of a small cremation cemetery bounded by a ditch with a possible central entrance. The burials within this cemetery were mixture of urn and unurned cremations. The cremations consisted of at least four urned burials and two to three unurned, these comprised the remains of six individuals of which one was an infant/juvenile, one a sub adult, and four adults two of which are probably female. It is thought that the ground level was probably higher in this period, suggesting the position of the cemetery would have been one of focus in the Bronze Age. It is also possible that the Neolithic enclosure (MLO71995) was the site for pyres in the Bronze Age period.
- 1.31** The Middle and Later Bronze Age features were concentrated to the south of the site and included at least two sub-rectangular enclosures with internal divisions. Associated with these features was a large well or gravel pit and a possible drove

way which formed the west side of the southernmost enclosure. A six post structure was also uncovered and it is thought to date to the Late Bronze Age.

- 1.32** The earliest excavations on the site in 1986 had revealed a few sherds of pottery, probably of a Late Bronze Age date in a large oval feature. The lower, waterlogged, silts contained a few small fragments of wood.

MLO73807

- 1.33** A scatter of Iron Age to Romano-British pottery was recovered from the Imperial College Sports Ground approximately 450m to the west of the Site during evaluations by Wessex Archaeology in 1999. The scatter was located over the site of one trench and was recovered as the trench was excavated.

MLO100472

- 1.34** A Bronze Age settlement and field system was located between Wall Garden Farm and Nine Elms Farm, 300m to the north of the Site during excavations by Wessex Archaeology between 2000-2009. The site was mainly dated to the Middle Bronze Age to the early Iron Age; however a few features were clearly of a Bronze Age date. Generally, most of the features indicated a field system with little present in the way of domestic activity. Minor excavations occurred prior to the 2000-2009 excavations between 1980-1985 which saw features of a Late Bronze Age to Early Iron Age date recovered.

- 1.35** The earliest excavations around 1984 identified Bronze Age or Iron Age settlement features, including several pits and gullies. A considerable quantity of Deverel-Rimbury pottery was recovered from the upper fill of a wide shelving ditch during a watching brief on the same site in 1980 and 1984.

- 1.36** Excavations between 2000-2007 saw the Middle Bronze Age indicated by a small number of sherds located residually in features. Clear evidence of settlement occurred in the Late Bronze Age to Early Iron Age with the creation of ditched field boundaries and waterholes, small clusters of pits and isolated pits spread across the site. One Late Bronze Age pit contained burnt clay which was interpreted as a hearth and therefore suggests domestic activity. Two possible four post structures were identified to the south of the site and were dated due to no Iron Age pottery being present.

- 1.37** A section of a possible Bronze Age curvilinear enclosure ditch was found through excavation on the land south of the M4 and east of Walled Garden Farm in 2007. The ditch was aligned roughly east-west and measured 1.22m wide by 0.52m deep.

MLO71996

- 1.38** The remains of an Iron Age settlement were uncovered at Imperial College Sports Ground approximately 400m to the south of the Site during the second phase of excavations by Wessex Archaeology in 1998. The early and middle Iron Age was represented by a small amount of pottery with cut features only appearing towards the end of the period. The features include three roundhouses located to the east and south of a large multi-phased square enclosure (30m long) with an east facing entrance. Another rectangular enclosure may also be present, however, the remains were very ephemeral. Within the square enclosure a well, two gravel pits and a short gully were located, yet only the gully dated to the Iron Age. As the Romano-British settlement (MLO71998) was centred on the Iron Age settlement, these later features have probably truncated away many of the Iron Age features.

MLO60143

- 1.39** A scatter of flints was recovered from the topsoil of Little Harlington Field, approximately 300m to the west of the Site during an evaluation by Museum of London Archaeology Service in 1993. The flints were located across the site and comprised of one struck flint and a number of fire cracked pieces, all thought to be of a prehistoric date.

MLO73805

- 1.40** Undated cut features were located at Imperial College Sports Ground approximately 450m west of the Site during an evaluation by Wessex Archaeology in 1999.

- 1.41** The features included ditches and postholes that contained no datable finds. Ditches in one trench were uncertainly date to the Romano-British period and were noted for containing small amounts of worked/burnt flint and prehistoric pottery, the irregularities in the report means that they cannot be securely dated.

Romano-British (AD 43 – c. AD 410)

MLO71998

- 1.42** A Romano-British settlement was located at Imperial College Sports Ground approximately 300m south of the Site during excavations by Wessex Archaeology in 1997. The site shows evidence for three phases for activity, the earliest of which is the addition of a large enclosure to the existing Iron Age enclosure, and the continued use of the round houses. South of the trackway a number of enclosures were located suggesting animal husbandry was occurring at this time.

- 1.43** The late period sees the replacement of the enclosures with a pair of adjoining rectangular enclosures with few internal features or division. A midden is also spread over the area sealing part of the trackway and an inhumation and several

cremations. There is currently little information available about the cremated human bone, but the inhumation is known to be that of a 25-35 adult, probably male. A timber lined well was also located within this area as were numerous quarry pits.

MLO100474

- 1.44** A significant amount of evidence for Romano-British activity has been uncovered between Wall Garden Farm through to Nine Elms Farm 300m north of the Site.
- 1.45** Roman occupation and part of a probable field system were initially found through excavation at the site of Wall Garden Farm, Sipson Lane, by the West London Archaeological Field Group in 1979. It was suggested that one feature may have been a corn drier as carbonised barley was found in association with it. More features that appear to be related to this settlement were found during a watching brief in 1984. The features included rubbish-filled pits, boundary ditches and a large sub-oval gravel quarry.
- 1.46** The quarry pit had a waterlogged lower fill, which contained an interesting group of wooden objects. These included: part of a ladder of coppiced oak; a possible oak fence-plank with a spear-shaped terminal; part of a possible seat, or a rough three legged stool; a series of pointed birch stakes; and a possible perforated fishing net float of alder. Three more substantial timbers were also found, which may represent part of a timber framed building.
- 1.47** Between 2000-2007 Wessex Archaeology found 17 pits containing small amounts of pottery, four waterholes with evidence of wooden revetments and a small well. The site was enclosed by ditches, two of which extended into the Saxon phase (MLO100473). Pits, ditches and waterholes were also located, some are from the 2004 phase of investigations. Ten pits, two ditches, and two waterholes were found. Two ditches on the north-east corner of the site were curvilinear and roughly parallel, possibly forming a short segment of droveway.
- 1.48** In 2009 the eastern extent of the Roman occupation was identified, near to Nine Elms Farm. Only seven features were present, comprising two ditches, three pits and a tree throw, containing pottery. These indicate that the settlement did not extend much further. One of the ditches was L shaped and may represent part of a field enclosure although it only produced a single sherd of pottery.

Early Medieval (c. AD 410 – AD 1066)

MLO71999

- 1.49** A Saxon pit was uncovered during excavations at Imperial College Sports Ground approximately 400m south of the Site. The pit was the only one of its date on the site and contained early to middle Saxon pottery.

MLO100473

- 1.50** Saxon to Early Medieval settlement activity was located between Wall Garden Farm and Nine Elms Farm approximately 350m to the north of the Site. The early middle Saxon period was represented by pottery from a range of features including pits, ditches and waterholes, a possible trackway and enclosure were also present. A number of ditch sections are thought to define a possible sinuous east west trackway that maybe related to the enclosure.

Medieval (1066 –1485)

MLO72001

- 1.51** Medieval activity was uncovered during the second phase of excavations at the Imperial College Sports Ground approximately 400m south of the Site by Wessex Archaeology in 1998. The features were located to the south of the site and comprised small discontinuous lengths of ditches, probably forming a field system. A timber lined well was also uncovered and some of the waterlogged timbers were recovered. The size of the enclosures suggests animal husbandry activity and small-scale crop cultivation was occurring. The north side of a small enclosure was believed to be the periphery of the settlement. The remains of possible ridge and furrow were also visible although they were unable to be excavated.

MLO100475

- 1.52** Medieval activity was uncovered at between Walled Garden Farm and Nine Elms Farm, approximately 400m north of the Site during excavations by Wessex Archaeology between 2000-2009. A rectangular field system was present and incorporated a sequence of enclosures to the west and a possible trackway running east-south-east.

Post Medieval and Modern (1485-Present)

MLO72000

- 1.53** Post Medieval and Modern features were located at Imperial College Sports Ground approximately 400m north of the during excavations by Wessex Archaeology in

1997. The features included field boundaries, fence lines and drainage systems probably of a 19th century date.

MLO72591

- 1.54** Post Medieval activity was located near to Nine Elms Farm, Victoria Lane approximately 400m north-east of the Site of the during investigation by Wessex Archaeology in 2009. One of the features could not be clearly identified; it was over 11m wide and contained Post Medieval debris. Running west from this feature was a 1.3m wide ditch. Another ditch ran east-west across the centre of the site. In the centre of the site was a sub rectangular pit which was 2m long by 1.9m wide, it also contained late Post Medieval to Modern finds. The final two features were postholes which are probably part of a modern fence line.

MLO60144

- 1.55** A Post Medieval artefact scatter was located at Little Hillingdon Field, approximately 300m to the west of the Site during an evaluation by Museum of London Archaeology Service in 1993. The finds were Post Medieval in date and comprised of pottery, clay pipes, tile fragments and a bone handle and it was thought there had been heavy truncation of the site in the Post Medieval period.

MLO103964

- 1.56** Victoria Lane Burial Ground is located 250m east of the Site. The burial ground was established in 1871 by Harlington Burial Board at the same time as the extension to St Peter and St Paul's Churchyard was made. The site contains less than a hundred graves, contains no buildings and has railings at the entrance.

MLO75885

- 1.57** A Post Medieval ditch and pit were located 500m east of the Site during an evaluation at Harlington Hospice, St Peter's Way in 2001 by Compass Archaeology.

- 1.58** Historic mapping (Figure 6) shows that in the 19th century, the Site was located within agricultural land to the west of Harlington Village. A recent contaminated land report has confirmed that the Site was part of a former landfill site which was in use receiving construction waste between 1987 and 1992.

2. Aims and Objectives

Regional Research Aims and Objectives

- 2.1** The location of the Site within the Heathrow Archaeological Priority Zone (DLO36182) suggests there is high potential for archaeology in the Site dating from the Early Prehistoric period through to the Post Medieval period. There is significant evidence in the surrounding area for occupation in the Neolithic, Bronze Age, Iron Age and Roman periods as well as evidence for field systems, enclosures, trackways and buildings in the Early Medieval and Medieval periods. Archaeological research topics identified in *A Research Framework for London*⁶ for these periods applicable to this site may include:

Late Prehistoric Period: Early farming communities: The Neolithic and early Bronze Age (c 4000–1500 BC):

- Reconstructing the environment and ecology on a regional basis (P4)

Late Prehistoric Period: Dynastic polities to urban hinterland: the late Iron Age and early Roman period (c 150 BC–AD 50):

- Examining the evidence for a phase of renewed agricultural intensification in the London (P6).

Roman Period -Agriculture, woodcraft and fishing

- Analysing field and archive data to improve the understanding of agriculture practice in the region (R12).

Saxon Period-Topography and Landscapes

- Identifying rural land use and the extent of agricultural exploitation (S2).
- Linking landscapes and chronologies to determine the influence of the pre-existing landscape on subsequent development (S2).

Medieval Period -Topography and landscapes

- Understanding the influence of the environment on human habitation, and the impact of man on the environment (M2).

⁶ MOLA 2002

- Understanding what London and its region looked like to its medieval inhabitants and visitor (M2).

2.2 These research aims and objectives will be revised as necessary both during and after fieldwork in consultation with the GLAAS Archaeological Advisor to the London Borough of Hillingdon. The findings of the fieldwork with regards to dating, phasing, and evidence of different uses of the site will be key to informing these aims.

Archaeological Watching Brief Aims and Objectives

2.3 The general aims of the watching brief are:

- to ensure that the intrusive groundworks for the scheme are archaeologically monitored and that there is scope in the programme afforded to investigate and record any remains that are exposed.
- to determine the presence or absence of archaeological deposits or remains;
- to record the character, date location and preservation of any archaeological remains on Site; and
- to record the nature and extent of any previous damage to archaeological deposits or remains on Site.

2.4 The specific aims of the investigation are:

- To establish the presence or otherwise of any archaeological find and features within the topsoil as well as in the drainage ditches. To the west of the Site, an archaeological evaluation in 1993 recorded a scatter of prehistoric struck flints and pottery within the topsoil.

2.5 The objectives of the project are:

- to undertake work in accordance with national best practice and guidelines;
- to archaeologically record any deposits, features or structures of significance;
- to analyse any remains with reference to the existing documentary evidence for historical development and land use;
- to produce a written account to include: summary; site description; deposit descriptions deposit levels (relative to ordnance datum) conclusions;

- to disseminate the findings of the work in an illustrated report, integrating the findings of the archaeological watching brief to produce as comprehensive a record as possible; and
- provide an ordered archive.

3. Methodology

- 3.1** It has been agreed with the GLAAS that topsoil stripping and excavations for drainage channels will be subject to an archaeological watching brief. The proposed extent of the area to be monitored is shown on Figure 2 which is presented at the end of this document.
- 3.2** A watching brief will require proactive engagement with the development groundworks team to permit investigation and recording of features of archaeological interest which are revealed. A suitable working method with contingency arrangements for significant discoveries will need to be agreed.
- 3.3** Mechanical excavations during the groundworks will be subject to archaeological direction to allow for pro-active observation and recording. These will be monitored by a suitably qualified field archaeologist appointed by HCUK Group.
- 3.4** All groundworks will be carried out using appropriately sized plant fitted, wherever practicable, with a toothless bucket in a single direction and undertaken in a manner that would expose the underlying strata and any archaeological features or deposits. The machine will not track back over the surface until the monitoring archaeologist has had the opportunity to clean, inspect and record the exposed surfaces. Any potential archaeological remains exposed by the groundworks will be examined to assess their significance.
- 3.5** **The archaeological contractor will be afforded sufficient time, space and resources to investigate any potential archaeological deposits or features to their satisfaction in order to meet the aims and objectives of this specification.**
- 3.6** Examination and cleaning of all archaeological deposits will be by hand using appropriate hand tools. Archaeological deposits will be examined and recorded both in plan and section. A representative sample, sufficient to meet the objectives of the archaeological watching brief, of identified features will be investigated by hand and all features will be recorded. The sampling strategy will be employed in order to fully understand the archaeological results, however, typically, this will mean:
- Sections are cleaned sufficient to determine the layers and any cut features/structures present. This information is critical to understanding the depth at which significant archaeological remains are encountered. This information is pertinent as it can be compared with information about impact depth of the proposed development;
 - Linear features (ditches) should usually be sampled using a x1m slot;

- Discrete anomalies are normally sectioned (50% sample); and
- Information of geo-archaeological deposits and environmental remains (e.g. waterlogged plants) should also be sought at this stage.

3.7 Should significant archaeological deposits be encountered that are worthy of detailed archaeological investigation beyond what can be achieved with the watching brief, excavation will cease. A site meeting of HCUK Group Ltd, the archaeological contractor, the Archaeological Advisor for Greater London Archaeological Advisory Services, and the client will be held to assess the significance of the deposits and to decide on a strategy for sampling them to provide sufficient data for a useful assessment or subsequent mitigation strategy.

3.8 All works will be carried out in accordance with the Code of Conduct as set out by the Chartered Institute for Archaeologists⁷. Accordingly, the project team will abide by the CIfA's code of approved practice.

Finds

3.9 Artefacts from topsoil and subsoil and unstratified contexts will normally be noted but not retained unless they are of intrinsic interest (e.g. worked flint or flint debitage, featured pottery sherds, and other potential 'registered artefacts'). All artefacts will be collected from stratified excavated contexts except for large assemblages of Post Medieval or Modern material. Such material may be noted and not retained, or (if appropriate), a representative sample may be collected and retained.

3.10 All identified finds, artefacts, industrial and faunal remains will be collected and retained. Certain classes of building material can sometimes be discarded after recording if an appropriate sample is retained. No finds will, however, be discarded without the prior approval of the Archaeological Advisor at the Historic England Greater London Archaeological Advisory Service, the nominated archaeological advisors to the London Borough of Hillingdon.

3.11 Excavated material will be examined in order to retrieve artefacts to assist in the analysis of the spatial distribution of artefacts.

3.12 All finds, where appropriate, shall be washed. All pottery and other finds where appropriate, shall be marked with the site code and context number. Marking of finds will follow the requirements of the local museum.

⁷ CIfA, 2019

- 3.13** The finds assemblage will be retained for deposition with the site archive at the appropriate museum. Marking of finds will follow the requirements of the local museum.
- 3.14** All finds which constitute Treasure under the 1996 Treasure Act for England and Wales will be reported to the coroner by the finder within 14 days of discovery.
- 3.15** Any human remains will be left in situ, covered, and protected. If removal is essential, it can only take place under appropriate Ministry of Justice licence. Furthermore, if removal is essential, such removal will be in accordance with the *Excavation and post Excavation Treatment of Cremated and Inhumed Human Remains*⁸ and the *Guidelines for the Standards for Recording Human Remains*⁹ as set out by the CIfA.
- 3.16** Should finds that require immediate conservation be encountered, they will be exposed, lifted, cleaned, conserved, marked, bagged, and boxed in accordance with the guidelines set out in the United Kingdom Institute for Conservation *Conservation Guideline No. 2*¹⁰. Appropriate guidance set out in the Museums and Galleries Commissions *Standards in the Museum Care of Archaeological Collections*¹¹ and the current CIfA guidelines¹² will also be followed. Packaging of all organic finds and metalwork will follow the UKIC/Rescue guidelines, *First Aid for Finds*¹³. Any necessary, conservation and treatment of metalwork will be arranged in conjunction with specialist conservators.

Environmental Sampling

- 3.17** Environmental sampling during the watching brief will target a representative range of contexts from each phase. Should significant environmental deposits be encountered, they will be taken and processed in line with Historic England guidelines¹⁴ and our internal policy. Provision will be made for the requirement of the following samples:
- Bulk samples of 40-60 litres, or 100% of the context, for process using a floatation tank for the recovery of charred plant remains from the 'float' and artefacts such as small bones, mineralised plant remains, charcoal and hammer scale from the residues;

⁸ Mckinley & Roberts 2003..

⁹ Brickley & Mckinley 2004.

¹⁰ United Kingdom Institute for Conservation 1983

¹¹ Museums and Galleries Commission 1992.

¹² CIfA 2020b.

¹³ Leigh, Watkinson & Neal 1998.

¹⁴ Historic England 2011.

- Samples of 1-5 litres from waterlogged deposits for analysis of waterlogged plant remains. These may be taken as sub-samples from bulk samples;
- Samples of 5-15 litres from waterlogged deposits for analysis of insect remains and other macroscopic artefacts. These may be taken as sub- samples from bulk samples;
- Bulk samples of 100 litres for coarse sieving on site for specific artefacts such as animal bone;
- Samples of 2 litres for mollusc analysis, with associated continuous column samples;
- Monolith samples which may be sub-sampled for diatom, spore or pollen analysis; and
- Monolith samples for soil micromorphology.

3.18 All environmental samples will be assessed for potential through summary analyses by an environmental specialist.

3.19 Bulk samples will be processed as soon as possible or discarded with the agreement of the GLAAS Archaeological Advisor. Residues will be treated as part of the finds assemblage.

Scientific Dating

3.20 Where appropriate, samples for scientific dating will be taken. Provision will be made for:

- Dendrochronological analysis from timbers;
- C14 dating from organic material, which may be taken as sub-samples from bulk or;
- monolith samples; and
- Archaeomagnetic dating from hearths or other suitable deposits.

Recording System

3.21 A site code will be allocated ahead of any fieldwork commencing. This code will be used to label all sheets, plans and other drawings; all context and recording sheets; all photographs (but not negatives); all other elements of the documentary archive.

- 3.22** The recording system used will follow the Museum of London Archaeological Site Manual¹⁵. Context sheets will include all relevant stratigraphic relationships. If there is any doubt over recording techniques, the Museum of London Archaeological Site Manual will be used as a guide¹⁶.
- 3.23** A site location plan at an appropriate scale will be prepared by showing investigation area and development site in relation to surrounding locality.
- 3.24** This will be supplemented by a detailed plan, also at an appropriate scale, which will show the location of the areas investigated in relation to the overall site boundary.
- 3.25** Burials will be drawn at 1:10. Other detailed plans will be drawn at an appropriate scale, usually 1:50 or 1:20.
- 3.26** The extent of any visible archaeological deposits will be recorded in plan. Long sections showing layers and any cut features will be drawn at 1:50. Short sections will be drawn at 1:20.
- 3.27** Sections containing significant deposits, including half sections, will be drawn at an appropriate scale, usually 1:10 or 1:20. All sections will be related to the Ordnance Datum using spot heights and registers of sections and plans will be kept.
- 3.28** Upon completion of each significant feature at least one sample section will be drawn, including a profile of the top of natural deposits (extrapolated from cut features etc. if it has not been fully excavated). The stratigraphy will be recorded, even if no archaeological deposits have been identified.
- 3.29** An adequate photographic record will be made of and any significant archaeological remains, including photographs of sections. This will comprise high resolution digital photography, and must illustrate, in both detail and general context, the principal features and finds discovered. A photographic register detailing as a minimum, feature number, location and direction of shot will accompany the photographic record. The register will be kept on standard forms.

¹⁵ Museum of London Archaeology. 1994.

¹⁶ Ibid

4. Staffing and Programming

Staffing

- 4.1** The project will be managed on behalf of the client by HCUK Group. Full details of the contractor and the specialists likely to be used (who will be a CIfA Registered Organisation), will be provided to the Archaeological Advisor at the Historic England Greater London Archaeology Advisory Service, once appointed. Summary CVs can be supplied as required.

Programming and Resources

- 4.2** The start date for the commencement of the site works is not known at present.

Monitoring

- 4.3** The project will be monitored on behalf of the local planning authority by the Archaeological Advisor at the Historic England Greater London Archaeology Advisory Service. HCUK Group will make every effort to allow proper monitoring of the archaeological investigation. Any variations to written scheme of investigation will be put in writing and approval sought.

Access and Safety

- 4.4** Reasonable access to the Site will be arranged for the Archaeological Advisor from Greater London Archaeology Advisory Service who may wish to make site inspections to ensure that the archaeological investigations are progressing satisfactorily.
- 4.5** Before any site work commences, a full risk assessment document will be produced setting out the site-specific health and safety policies that will be enforced in order to reduce to an absolute minimum any risks to health and safety. This risk assessment will take into consideration and identify safe working procedures in light of Covid-19 restrictions. In addition to this risk assessment, the following considerations will also be made:
- All relevant health and safety regulations will be followed. Barriers, hoardings, and warning notices will be installed as appropriate. Safety helmets and visibility jackets will be used by all personnel as necessary.

- No personnel will work in deep unsupported excavations. No excavations will be undertaken below 1.2m depth as a maximum, but this may be less where ground conditions indicate less stability.

4.6 All site staff and site visitors will adhere to the Principle 5 of the CIfA (2019) Code of conduct; 'All accredited members and Registered Organisations have a duty of care to employees, colleagues and volunteers' and Rule 5.2; 'A member shall give due regard to the requirements of health and safety legislation relating to employees or to other persons potentially affected by their archaeological activities'.

5. Reporting, Archiving and Dissemination

Project Specific Reporting Requirements

- A single formal report on the results of the archaeological watching brief will be prepared on completion of the fieldwork. The report will conform to the Chartered Institute for Archaeologists Standards and Guidance for an Archaeological Watching Brief¹⁷ and will include;
- Non-technical summary (abstract);
- Introductory statements and site background;
- The aims and methods adopted in the course of the investigation;
- A description of the nature, extent, date, condition and significance of all archaeological deposits recorded during the investigation, with specialist opinions and parallels from other sites if appropriate;
- Illustrative material including maps, plans, sections, drawings and photographs as necessary;
- A catalogue of finds, including any specialist reports;
- A discussion and summary of the results, including a statement of significance;
- An index of the contents and location of the archive;
- Sources consulted;
- A copy of the WSI; and
- A copy of the OASIS record sheet.

5.2 The report will be submitted to the Archaeological Advisor at the Greater London Archaeology Advisory Service for comment within three months of completion of the fieldwork. Following approval, a digital copy of the report will be sent to the client. Subject to any contractual requirements on confidentiality, one digital copy (PDF file)

¹⁷ Chartered Institute for Archaeologists 2020a

of the report will be submitted to the Greater London Historic Environment Record within six months of completion of the report.

- 5.3** Provisions will be made for post-excavation assessment of the results should significant archaeological remains be encountered. Following completion of the fieldwork, discussions will be held with the Archaeological Advisor for Greater London Archaeological Advisory Services on the appropriateness or need for post-excavation assessment and subsequent. The archaeological contractor will retain full copyright of any report under the Copyright, Designs and Patents Act 1988 with all rights reserved; excepting that it hereby provides an exclusive licence to the client in all matters directly relating to the project as described in this document. Any document produced to meet planning requirements can be copied for planning purposes by the Local Planning Authority.
- 5.4** Any information deposited in the Historic Environment Record can be freely copied without reference to the originator for research or planning purposes.

Archive

- 5.5** The site code will be used to mark all plans, drawings, context and recording sheets, photographs, and other site material during excavation.
- 5.6** The site archive will be organised in accordance with CIfA's (2020b) *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives*¹⁸ and compatible with current requirements of the local museum.
- 5.7** On completion of the finds analysis, the landowner will be asked to sign a Deed of Transfer, transferring title of the finds to the appropriate local repository.
- 5.8** The minimum acceptable standard for the archival report is defined in Appendix 2 of the *Management of Research Projects in the Historic Environment - The MoRPHE Project Managers' Guide*¹⁹. It will include all materials recovered (or the comprehensive record of such materials) and all written, drawn, and photographic records relating directly to the investigations undertaken. It will be quantified, ordered, indexed and internally consistent. It will also contain a site matrix, a site summary, and brief written observations on the artefactual and environmental data.
- 5.9** United Kingdom Institute for Conservation guidelines for the preparation of excavation archives for long term storage²⁰ will be followed. With consent of the

¹⁸ CIfA, 2020b

¹⁹ Historic England 2015a.

²⁰ Walker, K 1990.

landowner, arrangements for the curation of the site archive will be agreed with the appropriate local repository.

- 5.10** Pursuant to these agreements, the archive will be presented to the appropriate local repository within six months of the completion of the fieldwork (unless alternative arrangements have been agreed in writing with the LPA). In addition, written confirmation from the client will be provided for the transfer of ownership.
- 5.11** The project will be registered and regularly updated as part of the OASIS project.
- 5.12** The recipient museum shall be granted licence for the use of the archive for educational purposes, including academic research, as long as such use is non-profit making and conforms to the Copyright and Related Rights Regulation 2003.

Dissemination

- 5.13** An illustrated report will be submitted for approval to the Archaeological Advisor for Greater London Archaeological Advisory Services.
- 5.14** Following submission and approval of the report:
- One bound and one digital copy of the report will be submitted to the LPA. The report will include the findings of the investigation as detailed above;
 - One digital copy of the report will be provided to the Greater London Historic Environment Record;
 - The archive will be prepared as detailed above and will include two bound copies of the report;
 - The shapefiles will be submitted to the Archaeological Advisor for Greater London Archaeological Advisory Services;
 - The (on-line) OASIS form will be completed for the project and the summary sheet included within the report.

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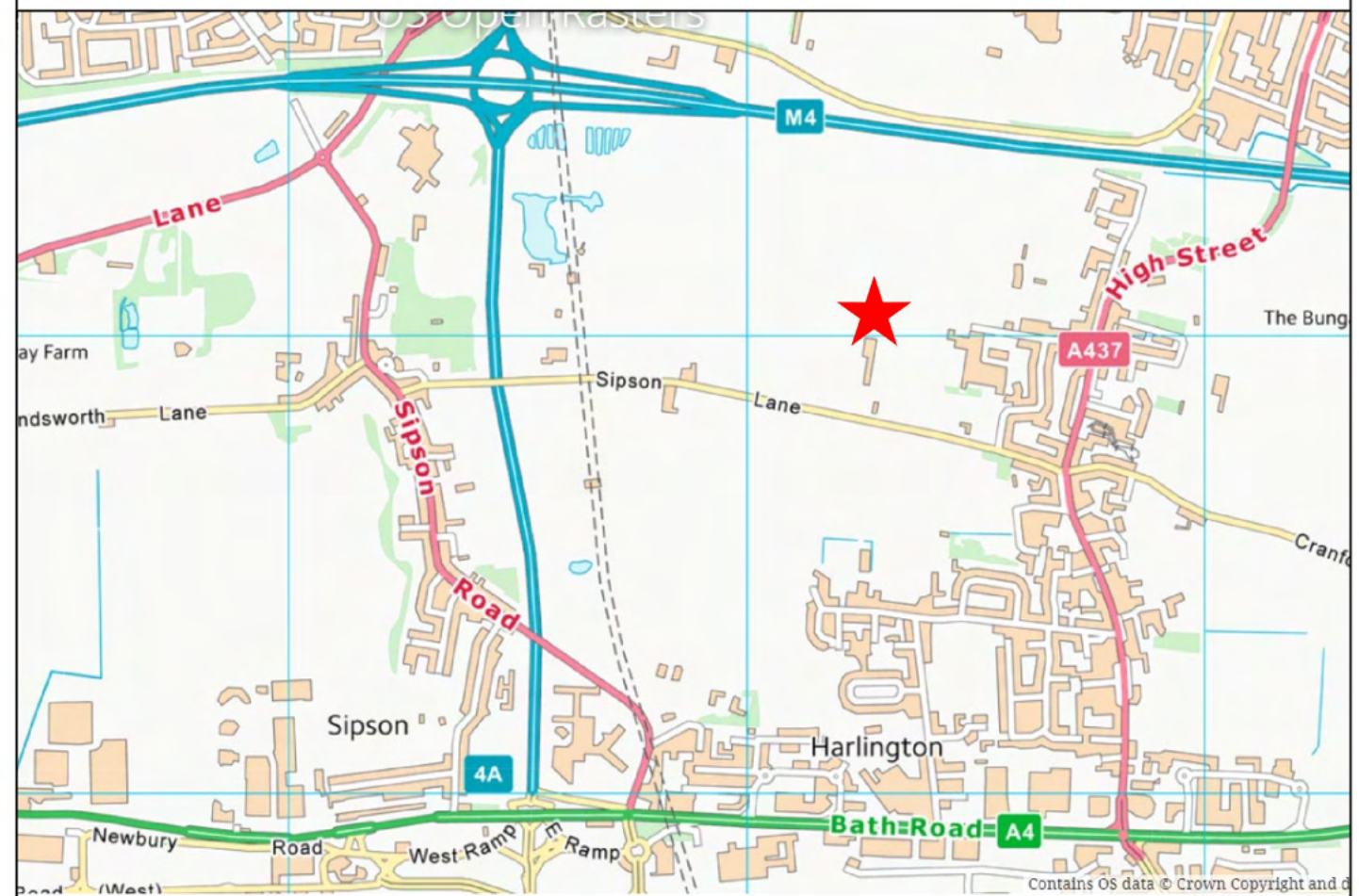
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Standards for Archiving and Reporting

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- Archaeological Archives: A Guide to Best Practice in Creation, Compilation, Transfer and Curation (Archaeological Archives Forum 2007)

7. Figures



Key:

Archaeology
Collective

HCUK
GROUP

Imperial College, Sipson
Lane, Harlington

Written Scheme of
Investigation

Figure 1
Site Location





Key:



 Archaeology
Collective

 HCUK
GROUP

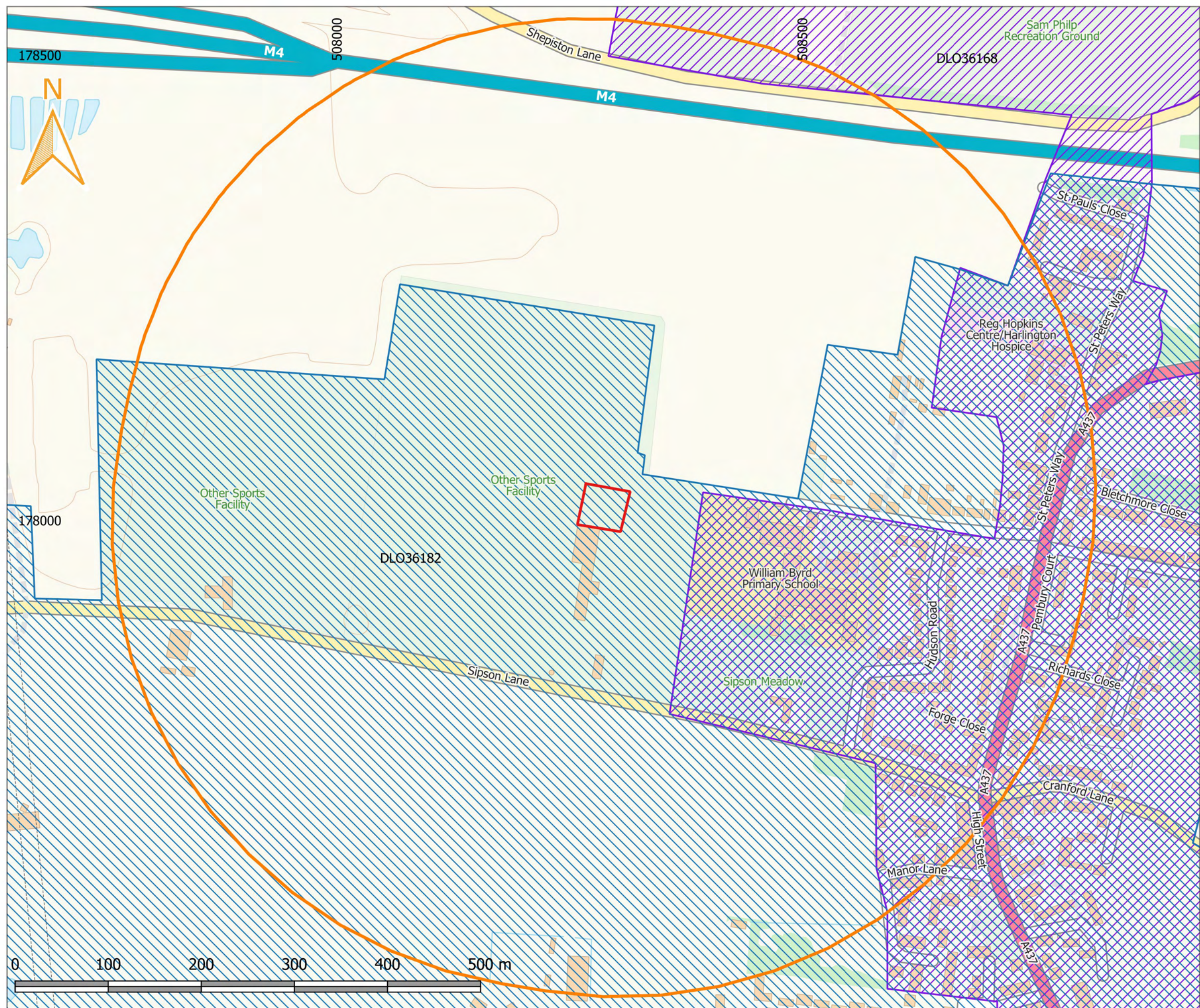
**Imperial College, Sipson
Lane, Harlington**

Written Scheme of
Investigation

Figure 2

Extent of the Proposed
Archaeological Watching
Brief





Key:

— Site

○ 500m Study Area

Archaeological Priority Area (APA)

▨ Harlington (DLO36168)

▨ Heathrow Area (DLO36182)

Archaeology Collective

HCUK GROUP

Imperial College, Sipson Lane, Harlington

Written Scheme of Investigation

Figure 3

Archaeological Priority Areas (APAs) within the 500m Study Area



Key:

- Site
- 500m Study Area
- Previous archaeological investigation

Archaeology
Collective

HCUK
GROUP

Imperial College, Sipson Lane, Harlington

Written Scheme of
Investigation

Figure 5

Previous archaeological
investigations within
the 500m Study Area



1839. Parish of Harlington Tithe Map



1881. OS 6-inch 1st Edition (surveyed 1861-2)

Contains OS data © Crown copyright and database right (2019)

Key:

— Site

Archaeology
Collective

HCUK
GROUP

Imperial College, Sipson
Lane, Harlington

Written Scheme of
Investigation

Figure 6
Historic Maps



Project No 07704 | 5/1/2022 | Drawn By: AJ