

WEMBLEY TRUNK MAIN

Archaeological Desk-Based Assessment

Prepared by

NETWORK ARCHAEOLOGY LTD

On behalf of

DALCOUR MACLAREN

For

THREE VALLEYS WATER

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NON-TECHNICAL SUMMARY

This archaeological desk-based assessment relates to a proposed water pipeline. The Wembley Trunk Main comprises a Proposed Pipeline Route and two Route Options (A and B) in the London Borough of Brent. The Proposed Pipeline Route starts at the junction of Watford Road and Harrow Road near Butler's Green (NGR 516775 185468) and ends on Wembley Hill Road, opposite the Royal Route at Wembley Stadium (NGR 518909 185519). The two Route Options both start and finish within the south-eastern corner of Vale Farm Sports Ground (NGR 517198 185876 to 517476 185750).

This report presents the results of a desk-based study of published archaeological information in the public domain lying within a 1 kilometre wide Study Corridor centred on the Proposed Pipeline Route and Route Options. Searches of national and county databases, the study maps, aerial photographs and written sources, have identified 139 sites of archaeological importance. All the sites studied have been graded according to their perceived archaeological importance. The scale of impact of the proposed scheme upon each archaeological site has been assessed, and the significance of each impact determined (taking into account the importance of each site).

The report identifies the extent of known archaeological constraints within the Study Corridor and provides a preliminary assessment of their significance. It assesses the site-specific value/importance of the archaeology and thereby the overall potential impact of the proposed pipeline route.

The Proposed Pipeline Route directly impacts upon six locally important sites, which include former post-medieval field boundaries, possible land drains or ridge and furrow, and the post-medieval Wembley open-air baths. The Proposed Pipeline Route also has an uncertain impact upon 18 sites, two of which are impacted upon twice. Sites with uncertain impacts include post-medieval field boundaries, Wembley Park and two railway/underground lines.

Route Option A directly impacts upon one locally important site, a post-medieval field boundary, and the impacts upon three further field boundaries are uncertain.

Route Option B directly impacts upon one locally important site, a field boundary, and this option also has an uncertain impact upon four post-medieval field boundaries.

A staged approach to the archaeological investigation and mitigation of the proposed pipeline route is recommended. The low potential for archaeology coupled with the likelihood that any surviving archaeology would have been significantly truncated by previous development in the Study Corridor, means that the most appropriate recommendation is that of a watching brief. This would be focused on areas where the survival of archaeology would be greatest, such as open areas. Attention should also be paid to the section of the proposed route near Watford Road, which falls within the Sudbury Archaeological Priority Area, as designated by the Brent Unitary Development Plan.

1 INTRODUCTION

1.1 Purpose of the report

This report presents the results of an archaeological desk-based assessment of a proposed water pipeline at Wembley, London Borough of Brent (Figure 1).

1.2 Commissioning bodies

The archaeological assessment was commissioned by *Dalcour Maclaren* for *Three Valleys Water*. The archaeological consultant was *Network Archaeology Ltd*, a professional archaeological organisation which specialises in managing archaeological issues associated with the design and construction of pipelines.

1.3 Proposed pipeline

1.3.1 Reasons for building the pipeline

Three Valleys Water is planning to construct a 450mm diameter pipeline for the transportation of water in the Wembley area (junction of Watford Road and Harrow Road to Wembley Hill Road at Wembley Stadium).

1.3.2 Proposed Route and Route Options

Three Valleys Water is currently considering a Proposed Route and two Route Options (see Figures 1-5). Throughout this report references to these specific route designs will be capitalised as above. In discussions that apply to the proposed pipeline in general terms, or to any or all current or future designs of the pipeline it will be described as ‘proposed pipeline’ without capitalisation.

1.3.3 Pipeline construction

The majority of the proposed pipeline is to be built using an open cut technique. The working width will be typically 20m in open areas, but due to the urban context of this proposed pipeline there will be no working width in areas of street works. There are three areas of the Proposed Pipeline Route where an auger bore will be used. These are: underneath the railway line where the route crosses from Acacia Avenue to Lancelot Road; where the Proposed Route crosses Park Lane into Lea Gardens; and possibly at Lantern Close where buildings 20-33 are to be demolished.

1.4 Staged approach to archaeological investigation

Three Valleys Water intends to adopt a staged, multi-discipline approach to water pipeline construction.

This archaeological assessment forms the first stage in what is expected to be a detailed investigative programme of archaeological research, investigation and mitigation during the design phase and construction phase of the pipeline.

1.5 Legislation, regulations and guidance

The proposed pipeline and any temporary works fall within the definition of Permitted Development under the Town and Country Planning (General Permitted Development) Order, 1995 (S.I. 1995/418), and therefore do not require planning consent from The Local Planning Authority or any other permission.

Three Valleys Water, however, adheres to the Code of Practice on Conservation, Access & Recreation (Water Industry Act 1991), whereby the Company is obliged to consider, and mitigate the consequences of its activities upon the archaeological resource.

The Hedgerow Regulations (1997) define a set of archaeological and historical criteria used for determining whether hedges are 'Important' (see Appendix B). Intention to remove such a hedge requires prior notification to the local planning authority, which may within 28 days issue a retention notice preventing removal if the hedgerow meets one of the criteria for importance.

The Brent Unitary Development Plan (adopted January 2004) sets out a number of policies related to the historic environment. Policy BE24 refers to Locally Listed Buildings and states:

'The special character of buildings on the local list will be protected and enhanced. Proposals for the demolition and unsympathetic alteration of locally listed buildings (including parts of buildings) will be discouraged unless alternative use of the building is unviable or the planning benefits for the community substantially outweigh the loss resulting from demolition'.

Policy BE31 states that:

'Archaeological remains constitute the principal surviving evidence of the Borough's past but are a finite and fragile resource that is vulnerable to modern development and land use. The destruction of such remains should be avoided wherever possible and should never take place without prior archaeological assessment and record. Where development may affect land of archaeological importance, the Council expects a preliminary site evaluation to take place. This requirement applies both to 'Archaeological Priority Areas' which are known, or to likely sites of prehistoric settlement and to Sites of Archaeological Importance where there have been important or concentrated finds in the past'.

Appendix BE5 indicates that Sudbury is classed as an Archaeological Priority Area due to being an area of medieval settlement and Archbishop's Manor House. Watford Road is named in the Appendix (including nos. 27-135, 1-14, Cornerways, 149-165, 170-184, Garage, 206-218 Willow Way 1-9 consec.)

Brent Council is in the process of producing a new development plan for the Borough called a Local Development Framework, which will ultimately replace the UDP as the statutory plan for Brent when it is fully adopted. The Core Strategy (one of the development plan documents) was submitted 5th November to 17th December 2007. Policy CP SS9 refers to 'Protecting and Enhancing the Natural and Built Environment'. This states that:

'The distinctive character of Brent's built heritage, in particular, Statutory Listed Buildings will be protected from inappropriate development. New development,

extensions and refurbishments will be required to pay due regard to the character, design and scale of existing high quality neighbourhoods’.

1.6 Aims

The purpose of this assessment is to consider the cultural heritage implications of the proposed pipeline, to assist in the selection of an archaeologically least damaging location, and to provide a basis for further stages of investigation.

The specific objectives are:

- To identify and define the extent of known archaeological remains within and immediately outside the 1km-wide Study Corridor;
- To provide a preliminary assessment of their significance;
- To assess the overall impact of the proposed pipeline on the known and potential archaeological constraints;
- To assess the need for further evaluation and mitigation prior to and during construction; and
- To make recommendations for further evaluation and mitigation, where necessary.

1.7 Circulation of report

George Gray-Cheape of Dalcour Maclaren will receive a copy of this report.

Network Archaeology Ltd recommends sending copies of all archaeological reports to the relevant county archaeological curators for comment. For this project, this would include Kim Stabler of Greater London Archaeology Advisory Service.

1.8 Resourcing

This report was undertaken over a 4 week period in May 2008. Data collection by one researcher took place over one week and report writing was undertaken by one individual over a three week period. MapInfo GIS was used to manage and present the data.

1.9 Report structure

This desk-based assessment is divided into seven chapters followed by appendices, forming four main sections:

Chapters 1-2 serve to introduce the organisations involved, the proposed development, the context, method and standards of assessment, and the layout of this report. All headings up to and including circulation of report deal with aims. The remaining headings in the introduction deal with scope. The Method of Assessment is also part of the scope of the report, but is large enough to need its own section. It deals with the archaeological standards and methods used for the data collection, analysis

and reporting. Additionally, the chapter defines nomenclature used in this report, and states where the project archive will be deposited upon project completion.

Chapters 3-5 present the results of the assessment. Specifically, they describe the physical environment, present the known archaeology and discuss the overall archaeological potential of the Study Corridor.

Chapters 6-7 deal with the impact of the proposed pipeline on the archaeological sites within the Study Corridor and discuss the approaches which can be adopted for dealing with them.

Appendices: Four appendices (A – D) comprise an explanation of the phased approach to mitigation, explanation of statutory and non-statutory protection of archaeological sites, gazetteer of archaeological sites and constraints figures.

2 METHOD OF ASSESSMENT

2.1 Standards

This assessment has been conducted according to relevant standards and guidance documents by the Institute of Field Archaeologists' (IFA 2000, 2001i, 2001ii).

2.2 Study corridor

Data collection focused on a 1km-wide Study Corridor, centred on the proposed pipeline. Background archaeological and historical information for the localities within the area was also studied to provide a broader archaeological context.

2.3 Desk-based data collection

Data and views have been sought from statutory and non-statutory bodies during the assessment process, as summarised in Table 2.1.

Table 2.1 Summary of data sources and data collected during the assessment process

Source	Data type	Data in Study Area
British Museum (BM)	Portable Antiquities	No
Brent Archives	OS 1 st and 2 nd Ed. maps	Yes
	Grey Literature	Yes
Council for British Archaeology	Defence of Britain Project	No
English Heritage	List of Buildings of Special Architectural or Historic Interest held by the Department of Culture, Media and Sport	Yes
	National Monuments Register (NMR) Events database of archaeological works	Yes
	NMR Monarch database of registered archaeological sites	Yes
	NMR collection of vertical aerial photographs	Yes
	NMR collection of oblique aerial photographs	Yes
	Schedule of Ancient Monuments of England	No
	The National Mapping Programme (NMP)	No
	Register of Historic Battlefields	No
	Register of Parks and Gardens of Special Historic Interest in England	No
World Heritage Sites	No	
Greater London Archaeological Advisory Service	Sites and Monuments Record	Yes
Harrow Local History Collection	Enclosure and Rates Assessment maps	Yes
Natural England	Ancient woodland	No

2.4 Data management and presentation

2.4.1 Definition of a ‘site’

The term ‘site’ is used throughout this report to refer to ancient monuments, buildings of architectural and historical importance, parks, gardens, designed landscapes, battlefields, public spaces, historic landscapes, historic townscapes, findspots of artefacts and any other heritage asset. Unless otherwise stated the term ‘site’ refers to the location where a site was situated and not to extant remains (e.g. a windmill means the location of a former windmill, and a pond means the location of a former pond). The only exception is listed structures, which can be taken to be extant unless otherwise stated.

2.4.2 Reference conventions

The information gathered from the data sources listed in Table 2.1 is uniquely references throughout this report and on all the figures. Information retrieved from public databases is prefixed by a two, three or four letter code, followed by their original source number. Sites found during the course of this desk-based assessment that are not currently listed in a public database are referred to as a DBA sites, identified by a two-letter suffix (Table 2.2).

Table 2.2 Summary of site reference codes

Reference code	Terms of reference	Example site reference
DBA	Desk Based Assessment Site	DBA:AA
LS	Listed Structure	LS 438781
MON	English Heritage MONARCH Database and Events Database	MON 1418535
SMR	Greater London Sites and Monuments Record	SMR MLO58369

2.4.3 Archaeological constraint gazetteer

Known archaeological sites lying within the Study Area are summarised within a gazetteer in Appendix C. The gazetteer is structured in alphanumerical order. The gazetteer provides the source, cross-references, description, period and location of each site. The location is given as a 12 figure national grid reference to the centre of the point, area or linear. The gazetteer also gives a category of important (see Section 2.5.1), an assessment of impact (see Section 2.5.2) and an assessment of the significance of impact (Section 2.5.3).

2.4.4 Archaeological constraint figures

The archaeological sites listed in the gazetteer are presented on four A3 figures (Figure 2-5). Each site is represented by a star, shaded area or dashed/dotted line, depending on the type of data held. The symbols and corresponding labels are coloured according to the importance of the site (see Section 2.5.1).

2.4.5 Accuracy of displayed data

Site data originally may have been captured at a different scale to that which it is now displayed. This should be borne in mind when interpreting the exact location of constraint points and polygonal boundaries. Table 2.3 present estimated accuracy levels based upon visual comparison with plots.

Table 2.3 Summary of accuracy levels for displayed data

Source	Source type	Source scale	Positional accuracy in relation to current OS mapping	Accuracy in relation to position on the ground
DBA	OS map	1:10,000 1:10,560	1mm	± 10m
DBA	OS map	1:2,500	1mm	± 2.5m
DBA	Tithe/enclosure map	1:5,000 - 1:10,000	1-5mm	± 5 - 50m
LS	digital points	-	-	? ± 10m
MON	digital points	-	-	? ± 10m - 1000m
SMR	Annotated maps, digital points and text data	(1:10,000)	±1-200mm	? ± 10m - 2000m

2.5 Impact assessment process

Archaeological impact assessment is the process by which the impacts of a proposed development upon the archaeological resource are identified. Each site has been assessed in its wider heritage landscape, taking account of identity, place, and past and present perceptions of value.

A three stage process was adopted:

- Stage 1: assessment of importance (see 2.5.1)
- Stage 2: assessment of the impact of the proposed development (see 2.5.2)
- Stage 3: assessment of significance of impact (see 2.5.3)

2.5.1 Importance

The sites have been rated according to their perceived importance into categories A to D and U (as shown in Table 2.4). Where possible, each site has been assessed on the following characteristics:

- complexity (i.e. diversity of elements and relationships)
- condition (i.e. current stability and management)
- period
- physical form
- rarity
- setting
- survival (i.e. level of completeness)

The grade awarded to each site considered the scale at which the site may be judged significant (i.e. in terms of local, regional and national policies, commitments and objectives); representational value, diversity and potential; and existing local, regional and national designations (e.g. Scheduled Ancient Monuments). Some sites may benefit from statutory protection and other protection (see Appendix B).

The process of importance categorisation has been adopted as a tool in determining appropriate mitigation. The categories should not be taken as a statement of fact regarding the importance or value of a particular site. The use of examples of types of site is simply a guideline. The inclusion of a site in a particular category often involves a degree of subjective judgment and is based upon the current level of information. Categories are not fixed or finite, and there is every possibility that the classification of a site may change as a result of findings made during later stages of investigation.

Table 2.4 Site category definitions

Grade	Description	Examples	Investigation and mitigation
A	Statutory protected	Conservation Area, Listed Building, Scheduled Ancient Monument, World Heritage Site	To be avoided
B	Nationally important	Grade I and II* Registered Park and Garden, Registered Battlefield, Major settlements (e.g. villas, deserted medieval villages), Burial grounds, Standing historic buildings (non-listed)	To be avoided
C	Regionally important	Grade II Registered Park and Garden, Some settlements, finds scatters, Roman roads, sites of historic buildings	Avoidance desirable, otherwise investigation recommended
D	Locally important	Field systems, ridge and furrow, trackways, wells	Avoidance /investigation may or may not be envisaged at this stage
U	Ungraded	Non-archaeological site held by data source	N/a

2.5.2 Impact of the proposed development

The potential impact of the proposed scheme upon a site has been assessed at three levels:

- nature of impact (see Table 2.5)
- type of impact (see Table 2.6)
- magnitude of impact (see Table 2.7)

Table 2.5 Nature of impact definitions

Impact	Description
Positive	Beneficial contribution to the protection or enhancement of the archaeological and historical heritage
Negative	Detrimental to the protection of the archaeological and historical heritage
Neutral	Where positive and negative impacts are considered to balance out
None	No or negligible impact due to distance from proposed scheme, and/or construction technique which negates the impact

Table 2.6 Impact type definitions

Type	Description
Direct	Physical damage, including compaction and/or partial or total removal. Severance, in particular linear sites
Indirect	Visual intrusion affecting the aesthetic setting of a site. Disturbances caused by vibration, dewatering, or changes in hydrology etc.
Uncertain	Where the physical extent or survival of a site is uncertain, or where the visual impact of the proposed scheme on the setting of sites or the landscape has not been determined

Table 2.7 Magnitude of impact definitions

Magnitude	Description
Severe	Entire or almost entire destruction of the site
Major	A high ratio of damage or destruction to the site
Minor	A low ratio of damage to the site
Indeterminate	Where the data level does not allow any secure calculation (e.g. because the quality and extent of the site is unknown, or because construction techniques have not yet been decided)

Factors affecting the assessed magnitude of impact include:

- the proportion of the site affected
- the integrity of the site; impacts may be reduced if there is pre-existing damage or disturbance of a site
- the nature, potential and heritage value of a site

2.5.3 Significance of impact

The ‘significance’ of the impact has been assessed as the product of the importance of each site, and the impact of the proposed scheme upon each site. The levels of significance of impact are defined in Table 2.8. Significance of impact definitions are provided only for negative impacts, as these were the only type on this particular scheme. The significance of impact rating takes no account of potential mitigation.

Table 2.8 Significance of impact definitions

Stage 1	Stage 2a	Stage 2b	Stage 2c	Stage 3
Importance of site	Nature of impact	Type of impact	Magnitude of impact	Significance of impact
A	negative	direct	severe	high
			major	high
			minor	high
			indeterminate	high
		indirect	severe	high
			major	high
			minor	medium
			indeterminate	high or medium
		uncertain	n/a	unknown
		B	negative	direct
major	high			
minor	medium			
indeterminate	high or medium			
indirect	severe			high
	major			medium
	minor			medium
	indeterminate			high or medium
Uncertain	n/a			unknown
C	negative			direct
		major	medium	
		minor	low	
		indeterminate	low or medium	
		indirect	severe	medium
			major	low
			minor	low
			indeterminate	low or medium
		uncertain	n/a	unknown
		D	negative	direct
major	low			
minor	low			
indeterminate	low or medium			
indirect	severe			medium
	major			low
	minor			low
	indeterminate			low or medium
uncertain	n/a			unknown

2.6 Limitations of assessment

2.6.1 Reliability of the data

Information held by public data sources can normally be assumed to be reliable, but uncertainty can arise in a number of ways:

- The Sites and Monuments Record (SMR) can be limited because it depends on random opportunities for research, fieldwork and discovery.

- Documentary sources are rare before the medieval period, and the few that do exist must be considered carefully for their veracity.
- Primary map sources, especially older ones often fail to locate sites accurately to modern standards.
- There may be a lack of dating evidence for sites.
- The usefulness of aerial photographs depends upon the geology and land use of the areas being photographed and also the season and weather conditions when the photographs were taken. Many types of archaeological sites do not produce crop, soil or vegetation marks and the aerial photographs themselves necessarily involve some subjective interpretation of the nature of sites.

2.6.2 Potential limitations of an impact assessment

Limitations of impact assessment can include:

- Inaccuracies of map sources which make it difficult to provide a precise assessment of potential impact.
- Uncertainty regarding the survival and current condition of some sites. This means that the importance of some sites cannot be finalised until reconnaissance and/or evaluation has taken place on the ground.
- Uncertainty regarding the methodologies of the development proposals.
- The possibility that hitherto unknown archaeology will be encountered.

3 DESCRIPTION OF THE PROPOSED PIPELINE

3.1 Location and topography

The proposed pipeline is located within the Municipal Borough of Wembley, London Borough of Brent and situated in area which ranges from 40 to 50m AOD. The Proposed Pipeline Route is approximately 3.4km long and both Route Option A and B approximately 0.4km long (see Figures 1-5). The Proposed Pipeline Route begins at the junction between Harrow Road and Watford in Sudbury; a residential area to the west of Wembley. The Proposed Route continues north-west along Watford Road and Butlers Green before turning north-east towards the Vale Farm Sports Centre. At Vale Farm Sports Centre there are two Route Options. Route Option A continues in an easterly direction across the Vale Sports Ground before turning southwards and running parallel with Sudbury Avenue. Route Option B follows the boundary of the Vale Farm Sports Ground by taking a southerly route before turning eastwards near Eton Court and joining the Proposed Pipeline Route at Sudbury Avenue. A small branch of the Proposed Route leaves Sudbury Avenue at Marloes Close and Codling Way, whilst the main route continues along Sudbury Avenue before turning eastwards onto Sylvester Road and then southwards on to Harrowdene Road. The Proposed Route continues southwards before turning to the east along Crawford Avenue and Lantern Close. It follows St Anne’s Road before crossing Lancelot Road and the mainline railway line on to Acacia Avenue. The Proposed Route turns north-westwards along St John’s Road before taking a south-easterly direction and following the southerly edge of King Edward VII Park. The Proposed Route then crosses Park Lane before continuing along Lea Gardens and Linden Avenue and finally ending at the junction with Royal Route and Wembley Hill Road.

3.2 Solid geology

London Clay is mapped within the Study Corridor (Table 3.1) (BGS 2008).

Table 3.1 Description of solid geologies

Period	Epoch	Unit	Description
Palaeogene (65-24 my BP)	Lower Eocene	London Clay	Sequence of up to 150m thickness (in the London basin) of tenacious, bluish clay that becomes brown on weathering, occasionally it becomes distinctly sandy, sometimes glauconitic, especially towards the top; large calcareous septarian concretions and nodular lumps of pyrites and crystals of selenite are common. The base of the clay is very regularly indicated by a few inches of rounded flint pebbles with green and yellowish sand, parts of this layer being frequently cemented by carbonate of lime; the clay has been employed for making bricks, tiles and coarse pottery.

3.3 Drift geology

No drift geology is mapped within the Study Corridor.

A desk-based assessment carried out in advance of the construction of the new Wembley Stadium in 2003 by RPS. The solid and drift geology was described as the following:

'The underlying geology appears to comprise only London Clay. Patches of Thames terrace gravels are found in the Wembley area, notably a remnant of Dollis Hill Gravel (480,000 years BP to 420,000 years BP) on Wembley Hill to the west of the site, an area of Lynch Hill Gravels (300,000 years BP) c. 300m east of the Stadium. Taplow Gravels (260,000 years BP) are found in the floodplains of the Wealdstone Brook and the Brent. A ribbon of Holocene alluvial deposits masks these valley bottom gravels along the floodplains of the Wealdstone Brook and the Brent'.

3.4 Soils

The Study Corridor lies within a mainly urban and industrial area and therefore the soil remains unsurveyed (SSEW 1983).

3.5 Land use

The Study Corridor incorporates the areas of Wembley and a small part of Sudbury in the London borough of Brent. The south-western edge of the Study Corridor also crosses into the London Borough of Ealing, just to the south of the Piccadilly line at Sudbury.

3.6 Hydrogeology and hydrology

The River Brent flows in a south to south-westerly direction approximately 1km from the eastern edge of the Study Corridor and the Wealdstone Brook flows in a south-easterly direction approximately 700m north of Wembley Stadium, into the River Brent. The Study Corridor is predominately impermeable clay with localised deposits of gravel and alluvial deposits and chalk layers below.

4 ARCHAEOLOGY WITHIN THE STUDY CORRIDOR

4.1 Previous archaeological work within the Study Corridor

The Greater London Sites and Monuments Record (SMR), English Heritage's National Monuments Record (NMR) and the Brent Council website (www.brent.gov.uk) contains 12 records of archaeological investigations within the Study Corridor. These investigations are discussed below.

4.1.1 Desk-based Assessments

Three previous desk-based assessments have been carried out in the Study Corridor:

- An assessment was undertaken at Maybank Avenue in Sudbury for an area of proposed residential development (MON 1321979). Prehistoric activity was identified in the area and although the proposal site was known to have remained undeveloped until the 20th century, it was concluded that it retained only a low archaeological potential.
- A further assessment was also undertaken in 2003 by Wessex Archaeology at Copland Community School, High Road in Wembley (MON 1467085).
- A desk-based assessment was carried out by RPS in 2003 for construction of the new Wembley Stadium.

4.1.2 Evaluation

Four previous archaeological evaluations have been undertaken in the Study Corridor:

- An evaluation was carried out at South Way, Wembley in 1986 (MON 647605). The investigation identified medieval pottery as well as post-medieval kennels.
- During 1991 and 1992, an evaluation was undertaken at the former Unigate dairy at 100 Elms, Elms Lane, Sudbury (MON 911107). The project was funded by the Metropolitan Housing Trust and excavation revealed some stone foundations and cobbled surfaces for a medieval timber-framed building, which was superseded by the brick walls and pier bases of a Tudor building.
- An evaluation was carried out at the Green Man hotel, Wembley Hill in 1991 (MON 1060930). The investigations identified a post-medieval wall and drain.
- In 1998, an evaluation at Mahatma Gandhi House, 34 Wembley Hill Road recorded a sequence of undated alluvial deposits sealed by recent ground raising dumps (SMR ELO4915).

4.1.3 Watching Brief

Five watching briefs have been carried out in the Study Corridor:

- From 2000 to 2001, monitoring of groundworks for a residential development took place at the former Wasps rugby ground at Repton Avenue, Sudbury (SMR ELO69). No significant archaeological activity was noted, although two flint flakes were recovered from the topsoil.
- In 2005, the monitoring of groundworks at Wembley Stadium Plaza recorded no significant archaeological activity (SMR ELO6719). In the same year, a watching brief only recorded modern deposits during the redevelopment taking place at Wembley Stadium Station (MON 1455234).

- In 2007, watching briefs were carried out on geotechnical groundworks associated with the redevelopment of 85 acres of land around Wembley Stadium. The watching briefs were undertaken on land at W03 and W03; both residential development areas (MON 1456684, MON 1456712). No significant archaeological activity was noted in these two areas.

4.1.4 Excavation

One previous excavation is recorded in the Study Corridor:

- From 1952 to 1954, an excavation was carried out at Cooper's Cottages, Sudbury School (MON 647840). A number of post-medieval finds were recorded including a well, house and pottery.

4.2 Prehistoric Period (c. 4000 BC – AD 43)

4.2.1 Prehistoric Period: General Background

Unexcavated cropmarks are not easily datable and there are difficulties in differentiating late Mesolithic/early Neolithic and late Neolithic/early Bronze Age flintwork. This section deals with those 'prehistoric' sites that cannot be more closely dated.

4.2.2 Prehistoric Period Known Sites

Two flint flakes were recorded during a watching brief at the former Wasps Rugby Ground in Sudbury (MON 1367782). They were recovered from the topsoil.

4.2.3 Prehistoric Period: Additional Information

No additional information about sites of this period within the Study Corridor has been produced by researching secondary sources.

4.3 Palaeolithic (c. 500,000 – 8,300 BC)

4.3.1 The Palaeolithic Period: General Background

Palaeolithic culture flourished during the Pleistocene, a period of glaciation interspersed with long periods of slightly warmer climate known as interglacials.

Britain was still joined to continental Europe at this time, so in periods of intense cold, people retreated to warmer parts of the Continent. The last glaciation occurred c. 25,000 – 18,000 years ago. The River Thames seems to have changed its course several times and at one stage flowed around the foot of Horsenden Hill. This forced the River Brent to change its course too; at one period it flowed north into the Thames though later it made an about turn to flow south as it does today (Hewlett 1979: 1).

Tools from the Acheulian and Clactonian tool industries of the Lower Palaeolithic period (c. 700,000 – 150,000 years ago) include flint and quartzite hand axes, saws and awls. In the Middle Palaeolithic (c. 150,000 – 35,000 years ago), the Mousterian and Levalloisian stone-working industries broadened the assemblage to include

blades, disks, arrows and oval and bifacial flint tools. In the Upper Palaeolithic (*c.* 35,000 – 8,300 years ago) more sophisticated tools of flint and bone were produced, including needles and harpoons. Two flint tools have been found in Wembley (Hewlett 1979: 2). One was unearthed on allotments at Sudbury Court during the Second World War, but has since been lost. The other was found on allotments at Monks Park, Tokyngton. Since it was found near the River Brent it may have been brought into the area in more recent times when soil was imported to raise the level of the ground near the river to prevent flooding (Hewlett 1979: 2). During the construction of the Metropolitan Line Wembley Park Railway Station, the fossilised remains of an elephant and hippopotamus were apparently discovered on the site (Hewlett 1979: 170). Their age is unknown; they may possibly have been found in a deposit of Lynch Hill gravel.

4.3.2 The Palaeolithic Period: Known Sites

No sites are currently known for this period in the Study Corridor.

4.3.3 The Palaeolithic Period: Additional Information

No additional information about sites of this period within the Study Corridor has been produced by researching secondary sources.

4.4 Mesolithic (*c.* 8,300 – 4,000 BC)

4.4.1 The Mesolithic Period: General Background

Mesolithic culture appears to have been a response to dramatic environmental changes created by much warmer climatic conditions. The huge body of water freed by the melting of the ice sheets contributed to the enlargement of the oceans, and by *c.* 5800 BC, the increase in sea levels had permanently isolated Britain from mainland Europe. The insulating properties of the sea caused further rises in winter temperatures, encouraging the spread of coniferous forest. This provided habitats more suitable for small woodland game than herds of large herbivorous animals. By 6,500 BC the climate had become warmer and wetter still and the coniferous forest gave way to denser, deciduous woodland.

Mesolithic people responded to improved conditions in a number of ways. New tool types, tactics and skills were developed for the exploitation of resources. Tools were fashioned from stone wood or bone, but organic artefacts rarely survive. Flintwork of this era is distinctly different from earlier material and is generally more common. Greater reliance was placed on composite tools, particularly small flint blades (microliths) set in wooden shafts. Projectiles, to be thrown by hand or shot from a bow, are particularly prominent in the archaeological record. Other diagnostic flintwork includes tranchet axes (where the cutting edge is produced by a transverse blow), end scrapers and micro-burins. The manufacture of hafted flint axes and adzes indicates that some woodland clearance was being attempted and that timber working was possibly taking place. Towards the end of the Mesolithic, it is likely that fire was being used to clear trees and to create scrub and grassland.

During the 19th century it was reported that pottery and flint tools had been found on Horsenden Hill. Later, members of the Wembley History Society carried out exploratory excavations on Horsenden Hill to investigate these claims. A micro-burinoïd was found that is believed to date to the Mesolithic period. This find was a

piece of flint from which tiny regular pieces were struck and mounted together to form a primitive saw. Mesolithic material is frequently found within or under floodplain alluvium in the river valleys of the Thames basin and some material of this date could exist, as yet undated, in the Wealdstone and/or Brent valleys.

4.4.2 The Mesolithic Period: Known Sites

No sites are currently known for this period in the Study Corridor.

4.4.3 The Mesolithic Period: Additional Information

No additional information about sites of this period within the Study Corridor has been produced by researching secondary sources.

4.5 Neolithic (c. 4,000 – 2,500 BC)

4.5.1 The Neolithic Period: General Background

In the archaeological record, the shift from hunting and gathering to a settled agrarian society is manifested by the appearance of new artefact types – pottery, querns, sickles and polished stone axes. These began to replace the microliths and spears used throughout the Mesolithic period.

At the beginning of the Neolithic period, farming methods of crop cultivation and animal husbandry were adopted, and people began to live in more permanent and settlement communities. However, this was a gradual process and during the earlier part of the period (4,500 – 3,500 BC), the farmers were probably still semi-nomadic, mixing hunting with the cultivation of small plots of land and small-scale animal husbandry.

The quantity of Neolithic flints found on Horsenden Hill suggests that there was some form of settlement there during this period. The types of flints found varied from laurel-leaf blades to arrow-heads and a possible spearhead.

New types of site emerged in this period, including settlements and large ceremonial monuments. The early Neolithic period saw the introduction of long barrows (burial mounds) and long mortuary enclosures, causewayed camps (large enclosures with interrupted ditches), cursus monuments (parallel ditches sometimes stretching for several kilometres), ring ditches and round barrows. Cursus monuments often became a focus for later funerary activity.

During the late Neolithic a new style of ceramic, known as ‘Beaker’ pottery, appeared in Britain. Although commonly associated with the Bronze Age, these beakers, as well as other artefacts such as stone wrist-guards and barbed and tanged arrowheads, bridge the transition from the late Neolithic to the early Bronze Age.

4.5.2 The Neolithic Period: Known Sites

No sites are currently known for this period in the Study Corridor.

4.5.3 The Neolithic Period: Additional Information

No additional information about sites of this period within the Study Corridor has been produced by researching secondary sources.

4.6 Bronze Age (c. 2,500 – 800 BC)

4.6.1 The Bronze Age: General Background

Metalworking technology, along with new types of flint tool and pottery design, was introduced from continental Europe at the start of this period. Food vessels, Deverel-Rimbury urns and Collared urns were all forms current in the early Bronze Age, although Deverel-Rimbury urns became the characteristic middle Bronze Age pottery. Early metal objects appear to have been limited in their use and availability. In the middle Bronze Age new types of metal objects, including ‘palstave’ axes, spearheads and longer-bladed rapiers were introduced. With the transition to the late Bronze Age c. 1100 BC, socketed leaf-shaped spearheads, slashing swords and socketed axes began to be produced. These implements are often found in hoards.

Some of the flint tools found on Horsenden Hill date from the Bronze Age and there were also fragments of red and black pottery. There is also evidence dating to the Bronze Age is Kingsbury, where cremations urns were reported to have been found at the Brent Reservoir in the 1920s. They were identified as being Bronze Age pottery at that time, but have since been lost (Hewlett 1979: 3).

The Bronze Age is marked by the appearance of more permanent habitation sites and the first use of metal. The middle Bronze Age settlements appear to have been single-generation occupancy and by the late Bronze Age these settlements are more substantial and permanent. Bronze Age settlements often include timber roundhouses, fields and banks and ditches around farm areas.

Copper and bronze metalworking also makes its first appearance, although initially a ‘prestige’ material used only for weapons and ritual purposes. Deposits of metalwork are often found in rivers or on hill tops and these are usually linked to ritual offerings.

A wide variety of burial practices were employed in Britain during the Bronze Age: inhumation, cremation, simple pits, stone cists, wooden coffins, flat graves with no surface marker, and graves covered by a cairn or mound. The more prominent, above ground monuments, have made a greater impact on the archaeological record, and very few simple pit burials are known, although graves containing Beaker, or collared urn ceramics were relatively common in southern England. The construction of round barrows as funerary monuments reflects social change in the early Bronze Age. Burial evidence in the middle Bronze Age is dominated by cremations, either in urns or unaccompanied, and often focused on earlier or contemporary round barrows. There is a marked absence of large ceremonial monuments during the late Bronze Age, although barrows were still occasionally constructed. Nationally, burials are rare, but human remains are occasionally found on settlement sites.

4.6.2 The Bronze Age: Known Sites

No sites are currently known for this period in the Study Corridor.

4.6.3 The Bronze Age: Additional Information

No additional information about sites of this period within the Study Corridor has been produced by researching secondary sources.

4.7 Iron Age (c. 800 BC – AD 43)

4.7.1 The Iron Age: General Background

Iron-working, coinage and the potter's wheel were among the new technologies introduced to Britain from the Continent to this period. Iron was largely used for weapons and farming tools, the production of which would have increased during the period. Copper, bronze and gold continued to be used for utensils and decorative ware.

The late Iron Age saw a dramatic increase in population, probably due to advances in agricultural practice and technology which included the introduction of the ox-drawn iron plough. As the population grew, the increasing scarcity of land led to the cultivation of heavier and poorer soils. Pollen analysis has shown that most of the suitable land in lowland Britain had been brought under the plough before the Roman conquest. High agricultural yield led to the accumulation of wealth and the rise of social elite within the late Iron Age society.

Population growth also led to competition for land and the development of a more territorial society. Hillforts and defensive enclosures are manifestations of this social shift which first began in the late Bronze Age. Most enclosures are thought to have been built as a defence against stock-raiders and other aggressors.

In addition to hillforts, there were smaller earthworks with defences of comparable scale. Lowland settlement sites could also be 'open', or undefended. Settlement layouts varied in complexity and could include either an isolated farm, or a group of farms, often with banks, ditches, storage pits, trackways and rectangular plots.

Escalating demands for agricultural land and fuel for iron smelting meant that forest clearance continued apace. Many new fields were cut from the forest, whilst field systems established in the Bronze Age probably continued in use. Remnants of Iron Age field systems are often known as 'Celtic' fields.

Horsenden Hill was also occupied during the Iron Age, with fragments of wheel-turned being found as well as a linch-pin which would have held the wheel of a chariot to its axle.

An earthwork, known as Grim's Ditch, cuts across the north of Middlesex. It consists of a ditch and an earthen bank and terminates in the west at Cuckoo Hill and is visible in north Pinner and Harrow Weald. Partly because of its name, an epithet for Woden, the earthwork has usually been dated to the 5th or 6th century AD and variously described as a defensive barrier or a political or hunting boundary (Baker et al. 1971). Excavations in 1957, however, uncovered a large amount of Belgic pottery, dating Grim's Ditch to the late Iron Age.

By the time the Romans invaded Britain in 55 and 54 BC, the Middlesex area had become the territory of the Catuvellauni. Caesar described them in his 'Gallic Wars' and having fought his way across the Thames, he engaged in battle with the British troops grouped under Cassivellaunus, the leader of the Catuvellauni, in the wooded

hills of north Middlesex, finally capturing their base which was probably at Wheathampstead, near St Albans (Hewlett 1979: 3).

4.7.2 The Iron Age: Known Sites

No sites are currently known for this period in the Study Corridor.

4.7.3 The Iron Age: Additional Information

No additional information about sites of this period within the Study Corridor has been produced by researching secondary sources.

4.8 Roman (AD 43 – 410)

4.8.1 The Roman Period: General Background

Caesar's success in 54 BC did not lead to the conquest of the whole of Britain. It was not until AD 43 that the Romans began their permanent conquest. This involved the building of a network of straight well-paved roads along which they moved their troops and supplies. One of these, Watling Street, ran from London to St Albans and survives today as the Edgware Road and forms part of the boundary of the modern Borough of Brent (Hewlett 1979: 3). Further north, Sulloniacaе grew up on both sides of Watling Street and became an important posting station for travellers. Brockley Hill, Stanmore, was probably the site of this Roman station, which lay exactly half-way between London and St Albans. Sulloniacaе was also important for the manufacture of pottery since the remains of kilns have been discovered indicating intense activity from the late first century lasting perhaps into the third century AD when they fell into disuse (Hewlett 1979: 3-4).

Roman remains have been found in the parish of Kingsbury. Roman bricks were built into the walls of Old St Andrew's Church and excavations in the churchyard by Wembley History Society found a small fragment of Samian ware, a red burnished pottery imported from Gaul in the first and second centuries AD. There were also other fragments of pottery made in the third and fourth centuries AD, which are believed to have come from kilns in Oxfordshire (Hewlett 1979: 4). During restoration work in the 1960s the rim of a mortarium was found in the church wall. This is of a type made at Brockley Hill and known from excavations there in the 1950s. Pieces of amphorae were found at the junction of Buck Lane and Kingsbury Road in the 1950s. Twenty years earlier Roman bricks were purported to have been unearthed along Salmon Street during house-building operations and a small fragment of Roman pottery is believed to have been found during the demolition of Chalkhill House; neither of these has been preserved (Hewlett 1979: 4).

4.8.2 The Roman Period: Known Sites

No sites are currently known for this period in the Study Corridor.

4.8.3 The Roman Period: Additional Information

No additional information about sites of this period within the Study Corridor has been produced by researching secondary sources.

4.9 Anglo-Saxon Period (410 – 1066)

4.9.1 The Anglo-Saxon Period: General Background

Roman authority in Britain had begun to disintegrate long before the departure of the Roman military in AD 410. The large commercial potteries seem to have closed about AD 400, and the last consignment of bronze coins from Rome was sent to Britain in AD 402. By AD 411, all supply of coinage had ceased and Britain was no longer part of the Roman Empire. The effects of the breakdown were exacerbated by internecine fighting and Saxon raids from abroad. British leaders hired Saxon mercenaries to fight against other Saxons. By the mid-fifth century, the Saxon mercenaries had been joined by a large number of settlers and had become farmers. South and south-east Britain were brought under Anglo-Saxon control during the later fifth and sixth centuries.

The early Anglo-Saxon period saw the break-up of large Romano-British estates and reallocation of land. Habitation sites are thought to have been moved quite frequently. Place names may refer to old estates, rather than actual settlements, although a number of settlements were probably located within each estate. Some Roman field and estate boundaries may have remained in use, but Saxon settlement tended to be based around villages, whilst Roman towns and villas had been abandoned and largely destroyed. Nevertheless, some Saxon land divisions are preserved in present day parish boundaries. In the middle or late Saxon period, small fields were replaced by large 'open fields' divided into strips, in response to population growth and increasing arable land requirements.

By the beginning of the 8th century a number of Saxon kingdoms had been established. In the reign of King Offa (757-796) the Midlands kingdom of Mercia extended its influence south of the Thames. A document written in 767 records the exchange of Offa's lands in Wembley for lands held by Stidberht in Wycombe. This charter mentions Harrow and the Lidding Brook by name, describing the 30 hides of land as lying between the two. A map of 1597 identifies the Lidding as the Wembley or Wealdstone Brook. By the early 9th century Stidberht's land had returned to the Crown. This second document records another change in the ownership of the land and this time mentions Wembley by name. From this time the estates of Wembley and Harrow remained in the hands of the Archbishops of Canterbury almost continuously until the reign of Henry VIII (Hewlett 1979: 7-8).

During the later part of this period, there were an increasing number of Danish raids on the English coasts. The counter-offensive under Alfred finally forced the Danes to negotiate a treaty with him. By this treaty – the Treaty of Wedmore – in 878 the Danes were to become Christians and to keep to the north and east of Watling Street. This placed the inhabitants of Kingsbury Parish on the boundary line. In a second agreement, however, the boundary was pushed back even further to the River Lea, so that the whole of Middlesex then belonged to Alfred's kingdom.

Until the spread of Christianity, inhumation and cremation were both practised, often with weapons, personal ornaments and domestic utensils. Cemeteries are consequently often identified from concentrations of metalwork and discovered increasingly with the use of metal detectors. Pagan Saxon cemeteries often lie along natural ridges and are unlikely to be located close to their associated settlements.

4.9.2 The Anglo-Saxon Period: Known Sites

No sites are currently known for this period in the Study Corridor.

4.9.3 The Anglo-Saxon Period: Additional Information

The area of Wembley was originally located within the historic county of Middlesex. The name 'Middlesex' means territory of the middle Saxons and refers to the reputed ethnic origin of its inhabitants (Mills 2001). Its first recorded use was in 704 as Middleseaxan. The county lay within the London Basin, with the River Thames forming the southern boundary. The River Lee and the River Colne formed natural boundaries to the east and west.

Wembley is first found written in 825 as 'wemba lea', probably meaning 'Wemba's clearing'. This implies that this patch of land had originally been forest and had been cleared for farming and settlement (Hewlett 1979: 6).

4.10 Medieval (1066 – 1540)

4.10.1 The Medieval Period: General Background

The period between the Norman Conquest in 1066 and the first appearance of the plague or Black Death in 1349, was a time of rapid population growth. This brought about the expansion of permanent settlement and an increase in demand for agricultural land.

In 1087 construction commenced on a new parish church of St Mary on Harrow Hill. Although the parish was in the Diocese of the Bishop of London it was held by the Archbishop of Canterbury and remained so until 1845 when it became part of the London Diocese. The stone church built by the Normans has had many later additions and alterations and little of it survives today. Since Wembley formed a part of Harrow Parish this was the parish church for Wembley inhabitants until 1846 when the Church of St John was built for the new Parish of Wembley (Hewlett 1979: 9).

Little is known about early Sudbury. The name first appears in 1273-4 and means the 'southern manor'. Sudbury Common once stretched from Wembley to the foot of Harrow Hill. The Archbishop had demesne land in four places in Harrow manor: at Pinner Park, at Woodhall in North Pinner, at Headstone and in Sudbury. Sudbury was the principal demesne farm until Headstone replaced it as the Archbishop's main Middlesex residence in the 14th century. Sudbury manor in the Middle Ages comprised about 620 acres and a grange, which may have been the archbishop's original residence since it included a chapel. It was leased out from the late 14th century and afterwards divided into several farms, of which Sudbury Court Farm remained the most important. Although there were traces of an earlier building, the farmhouse which stood on the north side of Sudbury Court Road until its demolition in 1957 dated from the late 16th or early 17th century, with additions made in the 18th century, 1842 and 1888. In 1398 the demesne lands at Sudbury were described as having a grange, a chapel and a garden, 12 acres of meadow, 22 acres of unenclosed land and about 600 acres of ploughland and pasture.

The layout of the village and manor of Wembley during this period is little understood, but Roque's map of 1745 goes some way towards understanding the evidence of earlier documentation. This map shows the settlement to have been

focused around Wembley Hill in a roughly triangular layout, with the tip of the triangle facing north. The sides of this triangle are now formed by Harrow Road to the south, Wembley Hill road to the north-east and Wembley Park Lane to the north-west. The buildings of the village were strung out around the edges of this triangle with foci at the south-western corner (centred on TQ 1840 8525), facing onto the Harrow Road further east (centred on TQ 188 852), and at the northern apex (centred on TQ 188 858) (RPS 2003). The common fields of the medieval village were situated to the north-west of Wembley Green, along the south side of East Lane, west of Wembley Hill Road. The manor farm was probably at the north-western corner of the village, close to these fields, although there is some evidence to suggest that farm buildings may have stood on Botnall Lane, leading north-eastwards out of the village. Wembley House, the home, of the Page family who leased the estate from Kilburn Priory during the late medieval period and then were granted it after the dissolution, lay on the south side of Wembley Green. Some of the area later known as Wembley Park, is likely to have been under cultivation by the late medieval period, as it certainly was by the mid-seventeenth century.

The arrival of the Black Death in 1349 led to a dramatic fall in the population of England. It has been estimated that the population probably fell by between a third and a half from its 1349 level, and did not recover to this peak until over 200 years later. A result of this population decline was that many farms and villages were left abandoned, particularly in the areas of poorer farming. Deserted medieval villages (DMVs) have been recorded throughout England. The earthwork remains of street layouts, building platforms and drainage can still be seen at some site; others can be identified from documentary sources or from crop marks seen on aerial photographs.

4.10.2 The Medieval Period: Known Sites

A tiled hearth was reported to have been found in the 1950s in a field (now Vale Farm Sports Ground) just off East Lane (SMR MLO11300). There is no record to suggest that pottery was found. Excavations to the west of Vale Farm Sports Centre at Hundred Elms Farm (United Dairies Depot) revealed a medieval to post-medieval 12 foot long hearth and fireplace of a Tudor kitchen (SMR MLO4607).

Just to the north of Wembley Stadium Station and to the south of South Way is the presumed site of the Free Chapel of St Michael Tokyngton (SMR MLO14347). This medieval chapel was first mentioned in 1234-60 and seems to have continued in use until at least the early 17th century. It can probably be identified with buildings shown on the south side of the future South Way in Roque's map of 1745. However, excavations in 1986 did not find any trace of the building and it was concluded that it may have lain further north. Medieval pottery was found in addition to the remains of post-medieval building known as 'dog kennels' on 19th century maps (SMR MLO19161). Shallow scoops also dating to the medieval were also excavated as part of these trial excavations to identify the Free Chapel of Michael Tokyngton (SMR MLO67326).

In the western section of the Study Corridor is a Grade II* listed building (LS 198758). This is a 16th century outbuilding associated with Hundred Elms Farm, which is located on Elms Farm.

Near Copland Community School is the site of the chief home of the Pages. It was recorded in 1510 and assessed for 10 hearths in 1672 (SMR MLO19947). Just to the east is believed to be the location of the medieval settlement Wembley Green (SMR

MLO20379). It was recorded as a township in 1212 with four head tenements (see Section 4.10.1).

To the north-west of Wembley Arena, is the site of the Dairy Farm, part of the Wembley Manor (SMR MLO20941). In 1547, the farmhouse stood north of Wembley Green and south of the brook. In 1910 it was later rebuilt to the east of Wembley House. When it was offered for sale as building land it had become known as the Curtis Estate.

An excavation was carried out at Hundred Elms between 1990 and 1991. Late 13th century foundations were found resting on a cobbled surface, which could represent sleeper walls for a timber building. The foundations were subsequently superseded by red unfrosted brick walls and pier bases dating to the Tudor period (SMR MLO58369).

A considerable quantity of pottery sherds with speckled green glaze on white fabric were found during ploughing (SMR MLO8794). These finds were recorded in the area now just to the north of Perrin Road, west of Vale Farm Sports Centre. Three 13th century quartz gritted sherds were found during redevelopment in 1972, to the north-west of Vale Farm Sports Centre (SMR MLO8817).

Part of a stone cross, representing either a gravestone or a preacher's roadside cross, was found near the Swan Public House on the Harrow Road (SMR MLO8824).

4.10.3 The Medieval Period: Additional Information

Middlesex was recorded in the Domesday Book as being divided into the six hundreds of Edmonton, Elthorne, Gore, Hounslow (Isleworth), Ossulstone and Spelthorne. Wembley was within the Hundred of Gore; the name 'gore' being an Old English word referring to a wedge-shape.

Sudbury, meaning 'South Manor' is first recorded in 1282 and was once part of the Manor of Harrow (SMR MLO68359).

4.11 Post-Medieval and Early Modern (1540 – 1939)

4.11.1 Post-medieval and Early Modern Periods: General Background

Wembley manor originated in the estate in Wembley, Tokyngton, and Alperton which was acquired by the priory of Kilburn from the Huscarl and Tokyngton families. Kilburn Priory was dissolved in 1536 and in 1542 all its former lands in Wembley and Tokyngton were granted to Richard Andrews of Hailes (Gloucestershire) and Leonard Chamberlain of Woodstock (Oxon). They re-granted the property in the same year to Richard Page, whose family had leased it from before the Dissolution. The head of the Page family of Wembley seems to have lived in Wembley House, south of Wembley Green (now the site of Copland School), first mentioned in 1510. During the late 16th to early 18th century, the Pages were responsible for enclosing large areas of land, including portions of the former medieval open fields. Amongst the fields belonging to the Manor were Great Readings, Stone Readings, Woodfurlong and Three Seven Acres. It was these large fields that were brought together to form Wembley Park at the end of the 18th century. At the end of the 18th century Wembley House was superseded in preference to a large house with parkland, which stood on the slope of Wembley Hill. This involved, in c. 1787, blocking off the lane which formerly led

north-eastwards out of Wembley Green – Botnall Lane – on which the estate’s tenant farms stood. These buildings – known as Wellers and Botnalls – were then converted into a new manor house and home farm. In 1792, Page engaged landscape architect Humphrey Repton, to design a park in the area east of Wembley Hill, south of Wealdstone Brook and north of Tokyngton. Almost all the former field boundaries were removed. Repton’s scheme seems largely to have involved new planting, along with the creation of a small lake on Wealdstone Brook and a gothic tower on Barnhill, 3km to the north (Hewlett 1979: 160-162).

Following Richard Page’s death in 1803, the estate was sold to John Gray, a brandy merchant. In the period 1811-1814, Gray substantially upgraded the mansion into an elegant, three-storey building looking out eastwards across the park. This building would have stood on the western side of the existing Manor Drive, west of Empire Way. The estate sale map of 1834 shows an enclosure with buildings on its western side on the line of Empire Way, immediately north of its junction with Wembley Hill Road. This enclosure, which has many of the characteristics of a kitchen garden, is to be seen on OS maps until 1896. The house was used as a nunnery from 1905 until its demolition in 1908.

The estate passed to his son, the Revd. Edward Gray, who sold the northern part of the park to the Metropolitan Railway Co. in 1881. This led to relatively few changes in the main body of the park as the new line ran north of Wealdstone Brook. It did lead to the construction of Wembley Park Drive, connecting the new Wembley Park station with the existing Blind Lane (modern-day Park Lane). Revd. Edward Gray died in 1887 and two years later his executors sold the park to the chairman of the Metropolitan railway, Sir Edward Watkin. Watkin converted the park into a public pleasure garden within easy reach of the city’s masses, to travel on the company’s new railway line. The Metropolitan railway opened a station at Wembley Park on the line from Baker Street in 1894.

There were many elements to the new park: a cricket pitch and trotting ring overlooked by a grandstand, a bandstand, refreshment rooms and a Variety Theatre. The main attraction, however, inspired by the great success of the Eiffel Tower at the French Exhibition of 1889, was to be a bigger and better steel tower. When construction finally began, in 1893, it took two years to complete the first 50m stage of the tower. By the time this was completed, the money had run short and the foundations had started to shift. The incomplete structure, now known as Watkin’s Folly, stayed open until 1902. Eventually it was dismantled and the four foundations blown up with ‘rubarite’ on September 9, 1907 (Hewlett 1979: 171).

In October 1906, the Tower Company, which had been administering the park, became the Wembley Park Estate Company, the main concern of which was to turn the area into a residential suburb. These plans were interrupted in 1921, when the government decided to site the British Empire Exhibition on the site. Crucial to its realisation and success was the support of the Football Association for the construction of a national stadium within the Exhibition site. The main architects for the Exhibition were Maxwell Ayrton and Owen Williams, who were responsible for the larger buildings that were intended to have a life beyond the exhibition: the Palace of Arts, Engineering and Industry, the HM Government building and the Stadium itself. With the exception of the Stadium, which modelled itself primarily on Roman amphitheatres, these buildings were designed in a forbidding Edwardian neo-classical style.

At the end of the Great War in 1918, the government began planning a British Empire Exhibition with a stadium as a National Sports Ground as its centrepiece. The Wembley Park Leisure Ground, which by then had evolved into an 18-hole golf course, was selected as the ideal site. The Exhibition area covered 219 acres and the area on which Watkin's Folly had stood was chosen as the site for the new stadium. The Empire Stadium was built by architects Sir John Simpson and Maxwell Ayerton and the engineer Sir Owen Williams. The Empire Exhibition had fountains, lakes, gardens and many pavilions, each representing the architectural style of the countries exhibiting. It was opened by King George V on 23rd April 1924. Struggling to meet the needs of sports fans, the stadium finally closed in 2000.

Following the conclusion of the exhibition in 1925, a number of temporary buildings, or portions of them, were sold and moved to new sites: the Nigeria Pavilion became a Glasgow laundry, the Sierra Leone Pavilion a restaurant in County Waterford, the New Zealand Pavilion a dance hall, while the columns from the Canadian pavilion can be found in the Blackpool Tower Ballroom.

Originally known as the Empire Pool, Wembley Arena was designed by Owen Williams and was built for the Empire Games of 1934, on part of the site of the lakes which had been laid out for the British Empire Exhibition 10 years earlier.

In terms of transport, the Paddington branch of the Grand Junction Canal opened in 1801. It particularly affected Alperton where brick- and tile-making flourished, especially after the Brent Reservoir, which supplied the canal, was enlarged in 1851. The canal was also used to transport hay to London and bring back horse dung. It carried passenger traffic, mostly Londoners on pleasure trips. The London & Birmingham (later the London & North Western) Railway was opened in 1837 from Euston Square to Boxmoor (Herts), with stations opening at Sudbury (later Wembley Central) in 1845 and North Wembley in 1912. The second line to be opened was the Metropolitan, which crossed the parish from east to west. A branch of the Metropolitan Railway was opened in 1932 between Wembley Park and Stanmore and became part of the Bakerloo line in 1939. The Metropolitan District line opened an electric service between Park Royal and Roxeth. Stations were opened in 1906 at Alperton and at Sudbury Town, and in 1910 at Sudbury Hill. The London Electric Co. inaugurated a service (the Piccadilly line) over the line as far as South Harrow in 1932 and beyond it in 1933. The Metropolitan District Railway ceased operation after the Second World War and the line became confined to the Piccadilly line. The Great Central Railway (later part of the L.N.E.R.) opened a line from Greenford to Neasden in 1906. It crossed the southern part of the parish with stations at Sudbury and Harrow Road and at Wembley Hill. Another station, South Harrow (later Sudbury Hill) was opened in 1910. The line never became part of the underground system.

In 1894 Wembley Urban District was formed and in 1937 the Urban District was granted a charter of incorporation and became a municipal borough. Under the London Government Act of 1963, which took effect from 1965, the Municipal Boroughs of Wembley and Willesden were combined to become the London Borough of Brent.

The last area developed before the First World War was around Sudbury station, where the railway crossed the Harrow road just west of Wembley. The Copland sisters contributed by building a church, vicarage, and school on their estate, just to the west of the station. After the death of General Copland Crawford in 1895, the Copland estate was open to development and by 1897 many roads had been laid out on both sides of the Harrow road.

Between 1899 and 1901 Wembley Hill estate, the triangle enclosed by High Road, Wembley Hill Road, and Park Lane, was developed for houses and shops. The G.C.R. was built across it and a station opened at Wembley Hill in 1906, which encouraged building south of Wembley High Road. In 1909 the Wembley House estate was developed opposite Wembley Hill estate and in 1910 the Wembley Dairy Farm estate was divided into 505 lots and offered for sale. By 1920 there was a continuous built-up area from the canal, across Alperton station, up Ealing road and Wembley High Road from Wembley Central station to Wembley Hill station.

Building was continuous from 1925 until 1939. Industry was attracted not only to the Wembley Park area but to the Wembley part of East Lane, where the British Oxygen Co. opened a factory as early as 1918 and other firms followed in the 1920s. Most development, however, was residential, with local authorities building their own housing estates. Wembley built about 500 houses on the Christ Church estate and 200 houses on the Manor Farm estate in south-west Alperton in the late 1920s and early 1930s. At Wembley infilling produced 1,130 houses in 1933 alone. After the amalgamation of Wembley with Kingsbury in 1934 Forty Lane was chosen for a new town hall, which was opened in 1939. Wembley U.D.C. opened the King Edward VII Park in Wembley in 1914. Wembley's population of 203 in 1851 had reached 48,500 in 1931.

4.11.2 Post-medieval and Early Modern Periods: Known Sites

Listed Structures

Eleven listed structures are recorded for this period. St George's Church and Presbytery on Harrow Road is Grade II listed (LS 435855). It was constructed between 1925 and 1928 by Leonard Williams, but was had to be completed by Eustace Salisbury following Williams' death in 1927. The Church of St Andrew on Harrow Road is Grade II listed (LS 198799). It was built between 1925 and 1926 by WC Waymouth. Nearby, St Andrews Church Hall is also listed as Grade II (LS 198798). This former mission church and caretaker's house is now a church hall. It was built in 1904-5 by Arnold Mitchell in an Arts and Crafts style.

Within Barham Park on Harrow Road, the garden walls, gates, pergola and sundial at Barham Old Court are Grade II listed (LS 198763).

The Empire Pool (now Wembley Arena), designed by Sir Owen Williams and built in 1934, is Grade II listed (LS 198759). The pool was 200 feet long and 60 feet wide with a deck for ice skating and was used for the 1948 Olympic Games. Three K6 telephone kiosks on Empire Way at Wembley Arena are Grade II listed (LS 198795). They were designed by Sir Giles Gilbert Scott in 1935.

The Church of St John, located on the High Road, is Grade II listed (LS 198765) as is its front boundary wall and wooden lych-gate (LS 198766). The church was built in 1846 and designed by Sir George Gilbert Scott (grandfather of Sir Giles Gilbert Scott) and W B Moffat. The north aisle was added by Scott in 1859 and the south aisle in 1900 by M S Breakspear. It was built in flint with stone dressings in Early English style.

Wembley Park Lodge is Grade II listed and located at 114 Wembley Hill Road (LS 198789). It is an early 19th century cottage with a thatched roof.

A fire station on Harrow Road is Grade II listed (LS 486889). It was built 1937-9 for Wembley Urban District Council.

St Andrew's Presbyterian Church on Ealing Road is Grade II listed (LS 435824). It was built in 1904 to the designs of Thomas Collcutt and Stanley Hamp, who was also chief benefactor of the church. Its style was strongly influenced by the Arts and Crafts manner.

Non-Listed Structures

The Palace of Industry was formerly an exhibition hall at the Empire Exhibition (SMR MLO79268). It was designed by Sir Owen Williams in 1923-4. The Palace of Industry is the only surviving 'temporary' building in England from any major exhibition of the 19th and 20th century.

A vicarage, probably associated with St Andrew's Church, is located on Harrow Road (SMR MLO53600). Also recorded on Harrow Road is an Edwardian house (SMR MLO5553).

In 1991 an evaluation carried out at the Green Man Hotel revealed late 19th/early 20th century frogged brick walls, a brick-lined drain and a posthole (SMR MLO58359).

Communications

The North Wembley railway station opened as Wembley Central on the London and Birmingham Main Line in 1912. Underground services arrived here in 1917 when the Bakerloo line was extended from Willesden Junction to Watford Junction (MON 509502).

The Sudbury and Harrow Road station was opened in 1906 when the Great Central Railway opened a line between Neasden and Northolt Junction (South Ruislip) (MON 509443).

Wembley Central station opened in Sudbury in 1842 on the London to Birmingham Main line. When Underground services arrived here in 1917 in the form of the Bakerloo line extension, the station was known as 'Wembley For Sudbury'. It was renamed Wembley Central in 1948 (MON 509498).

Wembley Stadium station was opened as Wembley Hill in 1906 when the Great Central Railway opened a line between Neasden and Northolt Junction (MON 509501).

The London and Birmingham railway runs through the corridor northwest to southeast (MON 1363576). It was authorised in 1833 with Robert Stephenson as the engineer. The line was completed in 1838.

The Neasden and Northolt railway runs east-west through the Study Corridor (MON 1378287). It was opened in 1906.

The Bakerloo line was opened in 1906 and was the first London tube to cross the centre north-south (MON 1333875). Authorised in 1893, the project languished until it was taken up in 1897 by the London and Globe Finance Corporation of Whitaker Wright. Work began on the tunnel under the Thames in 1898, but it stopped after the London and Globe's failure in 1901. The powers were taken over by the CT Yerkes Underground Electric Railways group in 1902, and the line was opened from Baker

Street to Elephant and Castle in 1906. In 1913 the line reached Paddington; in 1915 it was linked at Queen's Park with the London and North Western Railway, over which its trains were projected to Watford in 1917.

The Piccadilly Line, formerly the Great Northern Piccadilly and Brompton Railway (MON 1309759), was the longest of the London tubes when it opened in 1906 from Finsbury Park to Hammersmith. It was a fusion of three separate projects: a deep-level scheme of the Metropolitan District, the Brompton and Piccadilly Circus, and the Great Northern and Strand Railways, merged in 1902. The GNPB company was renamed the London Electric Railway in 1910, when it absorbed the Bakerloo and Hampsted railways.

Former Structures

The site of a former lido, opened in 1932, is now the Vale Farm Sports Centre (MON 1442510). The lido featured an outdoor swimming pool and was equipped with diving boards. It was designed by C Chapman. There was a café at the lido. It closed after 1978 and the site was subsequently redeveloped to its present use. Vale Farm Sports Centre partially overlies the former lido site.

A number of former buildings have been identified on historic maps. Vale Farm and its outbuildings (DBA:AA) appears on the Parish Rates Assessment map of 1852 and the 1st Edition OS map.

Wembley Orchard (DBA:BK) and Wembley Farm (DBA:BL) were noted on the 1st Edition OS map. They are located to the north-east and east of the Copland School.

Wembley Park appears on both the 1852 Rates Assessment map and the 1st Edition OS map (DBA:BB). A number of features have been recorded from both the 1st and 2nd Edition OS maps, which are associated with the Wembley Park area. A building is noted on the 1st Edition map within the park (DBA:BJ) as well as an ice house (DBA:DE). The 2nd Edition OS map shows a number of features associated with the re-development of Wembley Park. These include Wembley Tower (Watkin's Folly) (DBA:CQ), the Variety Hall (DBA:CR), a fountain (DBA:CS) and pavilion (DBA:CT).

Wembley House is recorded to the west of Copland School on the 1st Edition OS map (DBA:DD) and the 2nd Edition OS map notes the presence of a Smithy to the east of Copland School (DBA:DF).

To the east of Barham Park, the 2nd Edition OS maps records the presence of two lodges (DBA:CX, DBA:CZ). A parsonage is recorded on the 1st Edition map near St John's Church just to the north of Harrow Road/High Road (DBA:CJ).

Within the Sudbury area (western section of the Study Corridor), Sudbury Brewery (DBA:BY) is noted on the 1st Edition OS map. Sudbury House, located to the east of Barham Park, has been identified on the 2nd Edition OS map (DBA:CW). Also near Barham Park is Sudbury Lodge (DBA:CD).

Former Field Boundaries

Thirty-two field boundaries have been recorded within the Study Corridor. Twenty-nine of these have been identified on 1852 Parish Rates Assessment map for Harrow and three from the 1st Edition OS map of 1862-1872. The Proposed Route is crossed by 21 field boundaries, Route Option A by three (DBA:AI, DBA:AK, DBA:CO) and Route Option B by four boundaries (DBA:AH, DBA:AI, DBA:AK, DBA:AJ).

Ponds and Lakes

Thirty two ponds are recorded within the Study Corridor. These were noted on the Rates Assessment map of 1852 and both the 1st and 2nd Edition OS maps. None appear to be crossed by either the Proposed Route or the two Route Options.

A former lake is noted on both the 1852 Rates Assessment map and the 1st Edition OS map. It is located in the eastern section of the Study Corridor, to the north of the proposed pipeline. A reservoir was also noted on the 2nd Edition OS map just to the north of the proposed pipeline near Linden Avenue (DBA: CU).

Field Names

The 1852 Rates Assessment Award refers to a field located within present-day Barham Park as 'The Park' (DBA:DI). This may refer to a park pre-dating Barham Park.

This 1852 Award also refers to a field, which is located to the north-west of Copland School, as 'The Hole' (DBA:DJ). This may suggest that there were possible pits in the field. To the east of Copland School, a field is named as 'Wembley Park Field' in the 1852 Rates Assessment (DBA:DK).

Other

Excavations undertaken to the south of South Way to establish the location of the Free Chapel of Michael Tokyngton identified post-medieval ground-raising deposits (SMR MLO73302).

The site of windmill is shown on a map of 1673 in an area now situated to the west of Empire Way (SMR MLO74468).

At the former Wasps Rugby Football ground, a watching brief recorded modern brick-built drains dating to the 20th century and represent three phases of drainage for the former rugby pitches (SMR MLO76151). A probable post-medieval plough soil covered the whole site reaching down to 0.28m in depth and contained 19th/20th century pottery.

Excavations at Coopers Cottages, near Sudbury Infant and Junior Schools, recovered a Westerwald stoneware tankard and a number of wells (SMR MLO4608).

4.11.3 Post-medieval and Early Modern Periods: Additional Information

In 1545 Henry VIII gave Sudbury Manor to the North family. In 1630 George Pitt bought it from the Norths. His family, the Rushouts, became Barons of Northwick in 1797. In 1912 the land passed to Captain E.G. Spencer-Churchill.

4.12 Modern (1939 to present)

4.12.1 The Modern Period: General Background

Of 35,000 houses in Wembley Borough, half were damaged in the Second World War. Temporary houses were erected by both Harrow and Wembley boroughs, and in 1951 the population reached a peak. Housing estates built by Wembley council since the war included Sudbury Farm (140 houses and old people's accommodation) in 1947, Gauntlett Court (about 100 flats) in the 1950s, and Sudbury Heights (65 flats) in 1964 in Sudbury, and King's Drive in 1952-3 near Wembley Town Hall.

The 1948 Summer Olympics were held in London, after a hiatus of 12 years caused by World War II. These were first Summer Olympics since the 1936 games in Berlin. The Empire Pool was closed at the outbreak of war in 1939 and was subsequently only used as a pool during the 1948 Olympic Games. Olympic Way was built for the opening of the 1948 Olympic Games. The possibility that the area might have returned to parkland was dispelled by these developments. By 1958, commercial buildings had been constructed to the west of Olympic way at the northern end of the former Exhibition sites. Since that time, a series of large commercial buildings – the Conference Hall, hotel, York House and the Exhibition Halls have been built to the north-west of the former Stadium.

The area remains an urban suburb of the City of London and continues to witness re-development and re-generation.

4.12.2 The Modern Period: Known Sites

The site of the former Majestic Cinema is located to the east of Park Lane (MON 527723). The cinema opened in January 1929 and was taken over by County in 1935 before becoming an Odeon. It was closed in 1961 and later demolished.

The Regal Cinema, located in the same area as the Majestic, was opened by ABC in 1937 and designed by WR Glen (MON 527722). The cinema was renamed ABC in 1962 and closed in 1976. It was subsequently taken over by an independent and reopened in 1978 as an Asian cinema called Milan. Following its closure, the cinema was demolished in 1987.

4.12.3 The Modern Period: Additional Information

A review of aerial photographs in the Study Corridor revealed that between the 1940s and the late 1990s, much of the open spaces had been used as allotments. The density of allotments gradually decreased over time with these spaces taking on their modern-day appearances.

4.13 Sites of Undetermined Date

4.13.1 Sites of Undetermined Date: Known Sites

Three sherds of pottery were recovered from a gas trench in 1973. They were found at Charterhouse Avenue, Sudbury (SMR MLO25139).

An evaluation undertaken at 34 Wembley Hill Road identified a sequence of undated alluvial deposits (SMR MLO73301).

In the Sports Ground associated with Vale Farm Sports Centre, possible land drains or ridge and furrow were observed on aerial photographs (DBA:DG).

5 ARCHAEOLOGICAL POTENTIAL OF THE LANDSCAPE WITHIN THE STUDY CORRIDOR

5.1 Archaeological Remains

5.1.1 Palaeolithic (c. 500,000 – 8,300 BC)

Palaeolithic finds are rare in Britain, partly because of their great age and partly due to the low level of population and the sporadic and transitory nature of settlement. The paucity of finds means that the Palaeolithic is the least understood period of human history and therefore a research priority.

Shallow excavations are unlikely to produce *in-situ* remains of Palaeolithic camps or activity areas, but unstratified flint or stone artefacts may occasionally be discovered. During glacial episodes, older bone or stone tools become incorporated in later gravels and boulder clays, and material of this date sometimes travelled some considerable distance from its original point of deposition and is occasionally picked up from the surface. Deep excavations are more likely to encounter material of this period.

The landscape in which the proposed pipeline is located is unlikely to preserve *in-situ* Palaeolithic remains. Overall, there is a low potential for Palaeolithic material within the Study Corridor.

5.1.2 Mesolithic (c. 8,300 – 4,000 BC)

Mesolithic hunter-gatherers normally favoured riverside locations. The potential for encountering settlement remains is very low because Mesolithic communities were largely nomadic. Concentrations of material are much more important than single finds, since they suggest focused activity and sometimes indicate where tool production was taking place.

There is a low potential of encountering any additional Mesolithic material in the Study Corridor.

5.1.3 Neolithic (c. 4,000 – 2,500 BC)

Riverside locations continued to attract settlement in the Neolithic period. The Study Corridor has no evidence for occupation or any isolated finds. Neolithic pottery is nationally rare (Brown and Murphy 1997), but flintwork of this period is not uncommon. Neolithic occupation sites are far more numerous than those of earlier eras, but nonetheless, late Neolithic settlements are rare in Britain and frequently lack the deep subsoil features that occur in earlier Neolithic (Healy 1988).

There is a low potential of recording any Neolithic material in the Study Corridor.

5.1.4 Bronze Age (c. 2,500 – 800 BC)

There is no evidence for the Bronze Age in the Study Corridor, therefore it is believed that there is a low potential of recording any Bronze Age material in the Study Corridor.

5.1.5 Iron Age (c. 800 BC – AD 43)

Areas around springs and watercourses will have a higher potential since these continued to act as foci for settlement and activity during the Iron Age. There is also an increased potential for encountering ritual sites of this period close to ancient boundaries. However, due to the lack of evidence for this period in the Study Corridor, there is a low potential for encountering any material dating to the Iron Age.

5.1.6 Roman (AD 43 – 410)

The Study Corridor has produced no evidence for Roman occupation and activity, despite the presence of Roman Watling Street (now Edgware Road) to the north-east of the Study Corridor and a number of finds in the Kingsbury area.

The recorded distribution of Roman finds indicates that there is low potential of finding evidence of Roman occupation within the Study Corridor.

5.1.7 Anglo-Saxon (AD 410 – 1066)

Place names indicate that the area of the Study Corridor was settled during or before the Anglo-Saxon period, so some modern parish boundaries may date back to this time, or may indeed be even older.

The apparent lack of Anglo-Saxon remains is unlikely to reflect the true situation. The archaeology of this era is often less easily detected than that of the Roman and medieval periods for a variety of reasons. Early Anglo-Saxon settlements are generally difficult to locate by field walking because the pottery was low-fired and so disintegrates in the plough soil. Later Anglo-Saxon settlements were often subsumed by medieval villages, so evidence of early occupation may have been destroyed, particularly since vernacular buildings were normally built of wood, so their below-ground remains can be easily overlooked.

There is a low potential for identifying further evidence of Anglo-Saxon activity within the Study Corridor.

5.1.8 Medieval (AD 1066 – 1540)

The abandonment of villages continued into this period. The potential for intact medieval remains to survive on the sites of deserted medieval villages is greatest where there is early abandonment and pastoral land use has protected the archaeological remains from truncation by ploughing or development. The medieval settlement of Sudbury is located within the western section of the Corridor although the location of the medieval village of Wembley is still poorly understood. However, given the nature and extent of development within the Study Corridor, it is possible that much of the medieval remains of these two settlements have since been destroyed.

Based on the recorded information, there is a low to moderate potential for identifying further evidence of medieval activity within the Study Corridor.

5.1.9 Post-medieval to Early Modern (AD 1540 – 1939)

The Study Corridor contains a number of former field boundaries, some of which may be of considerable antiquity. Much of the open farmland that characterised the early post-

medieval period of Wembley was turned over to development and the expansion of the town. This was linked in part to the arrival of the numerous railways and thus Wembley expanded to such an extent that the previous landscape is unrecognisable.

There is the potential for encountering landscape features associated with land ownership prior to urban expansion, e.g. field boundaries within the Study Corridor. In addition, there is potential of encountering buildings related to this urban development of Wembley.

5.1.10 Modern (1939 to present)

The Study Corridor has changed remarkably; gradually expanding its boundaries. The Study Corridor is dominated by commercial and residential development

5.2 Built Environment

There is a moderate to high potential for encountering and recording the built environment due to the urban context of the proposed pipeline. The Rates Assessment map of 1852 and the 1st and 2nd Edition OS maps (1862-1872 and 1896 respectively) show that the proposed pipeline route crosses through a low population density area during the late 19th century. These maps show that Harrow Road, Watford Road and Park Lane (formerly Blind Lane) are established as thoroughfares from at least 1852, but they display little residential development. Post-1896, the previously open land through which the proposed pipeline route crosses, becomes increasingly developed (see Section 4.11.1). Therefore, there is a moderate to high potential of encountering evidence of this increased development dating to the early 20th century.

5.3 Historic landscapes and boundaries

5.3.1 Parishes

The Study Corridor includes lands in the former parish of Harrow and the parish of Great Greenford. This parish boundary is marked on the 1st Edition OS map of 1862-1872 (DBA:DC). The proposed pipeline is located within the modern parish of Wembley.

5.3.2 Conservation areas

Two Conservations Areas are recorded within the Study Corridor. The Sudbury Court Conservation Area (DBA:DB) is located on the north-eastern edge of the Study Corridor, north of East Lane. The second area is Wembley High Street (DBA:DH), to the west of Wembley Stadium.

5.3.3 Ancient woodland

There are no areas of ancient woodland within the Study Corridor.

5.4 Palaeo-environmental and organic remains

Waterlogged soils that collect in hollows, pits and water channels may contain preserved organic material (such as wood, leaves, leather, fabrics and animal tissue)

and palaeo-environmental remains (such as seeds, beetles and pollen). Such material can shed light on past human activities not usually represented in the archaeological record. This type of evidence is nationally rare, and therefore of great significance. Organic and palaeo-environmental remains may be archaeologically important in their own right, or may have a raised value when found in close proximity to, or in an associated context with, archaeological remains.

There are no major watercourses within the Study Corridor. Former springs and watercourses may once have existed in other areas of the Study Corridor. 'Palaeochannels', if present within the Study Corridor, may contain important organic and/or palaeo-environmental remains.

Since the last ice age, the gravel deposits of floodplains of most rivers have been constantly shifted by the meandering, braiding and sudden changes in the course of the river. Tree parts are one variety of movable organic remains dislodged and transported by these fluvial actions and are then deposited and preserved in airless, waterlogged conditions.

There is a low potential for the preservation of ancient organic and/or palaeoenvironmental remains within the Study Corridor.

5.5 Previous groundwork and preservation

There has been significant re-development since the late 19th century in the Study Corridor and as a result, there is low potential for the survival of archaeological remains pre-dating the 19th century.

6 ASSESSMENT OF IMPACT

6.1 Impacts of the proposed scheme

Construction activities related to this particular scheme are likely to include:

- Pre-construction drainage
- Fencing
- Topsoil stripping
- Soil storage
- Movement of heavy machinery
- Excavation of the pipe trench
- Excavation of auger pits
- Working width reinstatement (e.g. subsoil ripping)
- Post-construction drainage

Archaeological remains could be subject to short-term, medium-term and/or long-term impacts.

- **Short-term impacts** (i.e. during construction): Direct impacts upon known and potential archaeological remains within the working width of the proposed pipeline.
- **Medium- and long-term impacts**: Indirect impacts upon known and potential archaeological remains within and immediately outside the working width, resulting from compaction damage.

6.2 Summary of known impacts

One hundred and thirty-nine sites have been identified by this assessment. Their impacts (both beneficial and adverse) upon the Proposed Pipeline Route and the two Route Options are detailed in Table 6.1.

Table 6.1 Summary of nature of impacts

Impact type	Beneficial impacts	Adverse impacts
Proposed Pipeline Route	0	27
Route Option A	0	4
Route Option B	0	5

Beneficial impacts and adverse impacts generated by the Proposed Pipeline Route and Route Options A and B are considered below.

6.3 Beneficial impacts

The Proposed Pipeline Route and Route Options A and B are unlikely to result in short, medium or long term beneficial impacts on the archaeological resource.

6.4 Proposed Pipeline Route: Adverse impacts

The assessment has identified 139 sites within the Study Corridor. The grade of each site and level of impact for the proposed pipeline are summarised below in Table 6.2

and the significance of impacts is summarised in Table 6.3. In some cases the Proposed Pipeline Route may impact upon a site more than once and therefore this may result in more impacts than number of sites.

Table 6.2 Proposed Pipeline Route: Summary of impacts of the scheme by grade

Grade	Description	Total no. sites collated	Number of impacts		
			Uncertain impacts	Indirect impacts	Direct impacts
A	Statutory protected	14	0	0	0
B	Nationally important	0	0	0	0
C	Regionally important	0	0	0	0
D	Locally important	124	20	0	6
U	Ungraded	1	1	0	0
TOTALS		139	21	0	6

Table 6.3 Proposed Pipeline Route: Summary of significance of impacts

Significance of impact	Count
N/A	114
Unknown	21
Low	5
Low or Medium	0
Medium	1
Medium or high	0
High	0
Total	141

The following sections deal in category order with sites that are directly, indirectly or possibly affected by the proposed pipeline.

6.4.1 Category A Sites

Fourteen sites benefiting from statutory protection are located within the Study Corridor. None are impacted upon or affected by the Proposed Pipeline Route.

6.4.2 Category B Sites

No nationally important sites are located within the Study Corridor.

6.4.3 Category C Sites

No regionally important sites are located within the Study Corridor.

6.4.4 Category D Sites

One hundred twenty-four locally important sites are located within the Study Corridor. The Proposed Pipeline Route has a direct impact upon six sites and an uncertain impact upon twenty sites. Of the six sites directly impacted upon, five have minor impacts. These include three post-medieval field boundaries (DBA:AE, DBA:AG, DBA:BO), possible land drains or ridge furrow identified from aerial photographs (DBA:DG), and the post-medieval Wembley Open Air Baths (MON 1442510).

One site is severely impacted upon and this is a post-medieval field boundary that was recorded on the 1852 Rates Assessment map (DBA:AF).

The impacts upon 18 sites are uncertain. These include 15 former post-medieval field boundaries that were recorded on the 1852 Rates Assessment map (DBA:AB, DBA:AC, DBA:AL, DBA:AM, DBA:AO-DBA:AW, DBA:AY, DBA:CP). Two of these (DBA:AC and DBA:AS) each have two uncertain impacts because the Proposed Pipeline Route crosses them in two different locations. All 15 field boundaries have uncertain impacts because it is not known whether or not they would be located during street works. This is due in part to the narrow trench that would be opened during street works as well as the map's level of accuracy from which they sites were recorded from (e.g. 1852 Rates Assessment map and 1st and 2nd Edition OS maps. The Proposed Route will also have an uncertain impact upon the area recorded as Wembley Park on the 1852 Rates Assessment map (DBA:BB). Due to changes in road layouts and their widening over time, the exact boundaries of the park cannot be established. Therefore, it is not known if the end of the Proposed Pipeline Route will impact upon Wembley Park. There are also uncertain impacts upon the Bakerloo Line (MON 1333875) and the London and Birmingham railway (MON 1363576). These features will be underpassed using an auger bore, but due to the nature of this construction technique it is not known whether or not the bore hole will impact upon embankments or any other railway furniture.

6.5 Route Option A: Adverse impacts

The assessment has identified 139 sites within the Study Corridor. The grade of each site and level of impact for the proposed pipeline are summarised below in Table 6.4 and the significance of impacts is summarised in Table 6.5.

Table 6.4 Route Option A: Summary of impacts of the scheme by grade

Grade	Description	Total no. sites collated	Number of impacts		
			Uncertain impacts	Indirect impacts	Direct impacts
A	Statutory protected	14	0	0	0
B	Nationally important	0	0	0	0
C	Regionally important	0	0	0	0
D	Locally important	124	3	0	1
U	Ungraded	1	0	0	0
TOTALS		139	3	0	1

Table 6.5 Route Option A: Summary of significance of impacts

Significance of impact	Count
N/A	135
Unknown	3
Low	1
Low or Medium	0
Medium	0
Medium or high	0
High	0
Total	139

The following sections deal in category order with sites that are directly, indirectly or possibly affected by the proposed pipeline.

6.5.1 Category A Sites

Fourteen sites benefiting from statutory protection are located within the Study Corridor. None are impacted upon or affected by Route Option A.

6.5.2 Category B Sites

No nationally important sites are located within the Study Corridor.

6.5.3 Category C Sites

No regionally important sites are located within the Study Corridor.

6.5.4 Category D Sites

One hundred and twenty-four locally important sites are located within the Study Corridor. Of these sites, one is directly impacted upon and the impacts upon three further sites are uncertain. A former post-medieval boundary (DBA:AI) is directly impacted upon. The impacts upon three additional former post-medieval field boundaries are uncertain (DBA:AK, DBA:CO, DBA:CP). These have been given uncertain impacts because it is not known whether or not they would be located during street works. This is due in part to the narrow trench that would be opened during street works as well as the map's level of accuracy from which they sites were recorded from (e.g. 1852 Rates Assessment map and 1st and 2nd Edition OS maps).

6.6 Route Option B: Adverse impacts

The assessment has identified 139 sites within the Study Corridor. The grade of each site and level of impact for the proposed pipeline are summarised below in Table 6.6 and the significance of impacts is summarised in Table 6.7.

Table 6.6 Route Option B: Summary of impacts of the scheme by grade

Grade	Description	Total no. sites collated	Number of impacts		
			Uncertain impacts	Indirect impacts	Direct impacts
A	Statutory protected	14	0	0	0
B	Nationally important	0	0	0	0
C	Regionally important	0	0	0	0
D	Locally important	124	4	0	1
U	Ungraded	1	0	0	0
TOTALS		139	4	0	1

Table 6.7 Route Option B: Summary of significance of impacts

Significance of impact	Count
N/A	134
Unknown	4
Low	1
Low or Medium	0
Medium	0
Medium or high	0
High	0
Total	139

The following sections deal in category order with sites that are directly, indirectly or possibly affected by the proposed pipeline.

6.6.1 Category A Sites

Fourteen sites benefiting from statutory protection are located within the Study Corridor. None are impacted upon or affected by Route Option B.

6.6.2 Category B Sites

No nationally important sites are located within the Study Corridor.

6.6.3 Category C Sites

No regionally important sites are located within the Study Corridor.

6.6.4 Category D Sites

One hundred and twenty-four locally important sites are located within the Study Corridor. Route Option B directly impacts upon one site and the impacts upon four sites are uncertain. A former post-medieval field boundary that is noted on the 1852 Rates Assessment map is directly impacted upon (DBA:AI). A further four former post-medieval field boundaries have uncertain impacts (DBA:AH, DBA:AJ, DBA:CM, DBA:CP). These have been given uncertain impacts because it is not known whether or not they would be located during street works. This is due in part to the narrow trench that would be opened during street works as well as the map's level of accuracy from which they sites were recorded from (e.g. 1852 Rates Assessment map and 1st and 2nd Edition OS maps).

6.7 New sites

An assessment will be made of the impact and significance of impact of the proposed pipeline upon any previously unknown sites found during subsequent archaeological investigations, and the results of such will determine mitigation.

7 RECOMMENDATIONS

7.1 Liaison with statutory consultees

Liaison should be maintained with Kim Stabler of Greater London Archaeological Advisory Service in order to agree future archaeological investigation, approve and monitor the implementation of any archaeological Written Scheme of Investigation (WSI), review reports, monitor fieldwork in progress, and also to visit the construction site.

7.2 Written Schemes of Investigation

An archaeological WSI should be produced for each stage of any future archaeological work (see 7.3).

7.3 Staged approach to investigation and mitigation

The most cost-effective means of managing archaeological risk is to implement a staged approach to investigation and mitigation, as laid out below in Table 7.1 and explained in greater detail in Appendix A. It is important, however, to avoid an overly mechanistic approach and to ensure a focus on gaining understanding and information relevant to key issues.

This report represents the conclusion of Stage 2

Table 7.1 Staged approach to investigation and mitigation

Archaeological Stages of Investigation		Phase of works
Stage 1	Route Corridor Investigation Study. An appraisal of archaeological potential	feasibility assessment
Stage 2	Desk-based assessment of route corridor. A thorough synthesis of available archaeological information	conceptual design
Stage 3	Field surveys of preferred pipeline route, including field reconnaissance survey, field walking survey, geophysical survey as appropriate	detailed design
Stage 4	Field evaluation of targeted areas along preferred pipeline route, including machine-excavated trenches, hand-dug test-pits, auger survey, as appropriate	
Stage 5	Open-area excavation e.g. detailed investigation of those sites which it is not possible to avoid or desirable to preserve (e.g. excavation, topographic survey)	
Stage 6	Watching brief. Permanent presence monitoring of all ground disturbing activities	construction
Stage 7	Archive and publication. Synthesis and dissemination of results, leading on from each of the stages outlined above	post-construction

7.4 Principle recommendations

The known archaeology and potential within the Study Corridor do not merit advance work (Stages 3-5). Further non-intrusive techniques of investigation, such as field

reconnaissance, field walking and geophysical survey, do not have application within the urban context of this scheme. Field reconnaissance is not considered to be valuable in the areas of open space due to the fact that these are recently modified landscapes. Field reconnaissance is also considered not to be necessary in the built-up areas because no listed or historic structures have been identified on or near the proposed pipeline route and none are suspected to exist.

There is a low potential for pre-early modern archaeology and a likelihood that any surviving archaeology would have been significantly truncated by previous development and land-use in the Study Corridor. We recommend that consideration be given to a targeted Watching Brief focused on:

- The area of the proposed pipeline route within the Sudbury Archaeological Priority Area at Watford Road as classed by the Brent Unitary Development Plan (Brent UDP 2004, Appendix BE5). This Priority Area is believed to be the location of Sudbury medieval settlement and the Archbishop's Manor House (see Section 1.5).
- Areas of the proposed pipeline route where the survival of archaeology would be greatest, e.g. open areas.

7.5 Eliminating areas of no archaeological potential

Watching Briefs should be directed away from areas of previous multiple-development and other major ground disturbance along the proposed pipeline route. A thorough review of any geotechnical data relating to this scheme should be undertaken with a view to determining the existence of made ground.

7.6 Development design

Design mitigation should be considered to avoid impacts upon nationally important sites and also regionally important sites that have a high significance of impact, should any come to light during subsequent archaeological investigations.

Where such sites are unavoidable, consideration should be given to minimising impacts.

8 ACKNOWLEDGMENTS

Network Archaeology Ltd would like to thank the following for their contribution to the project:

Table 8.1 Acknowledgements

Organisation	Name	Position
Greater London Archaeological Advisory Service	Advisory	Kim Stabler
	SMR Officer	Stuart Cakebread
Dalcour Maclaren	George Gray-Cheape	Company Director
Network Archaeology Ltd	David Bonner	Company Director
	Adam Holman	Project Manager
	Susan Freebrey	GIS Officer
	Sarah Ralph	Reports Officer

9 BIBLIOGRAPHY

9.1 Primary sources

Table 9.1 Pre-OS maps

Reference	Location	Document title	Document type	Year	Scale (inch)
-	Harrow Local History Collections	Harrow Parish Map	Enclosure Map	1817	7 ¾
-	Harrow Local History Collections	Harrow Parish Award	Enclosure Map	1817	-
ACC 590/3	Harrow Local History Collections	Harrow Parish Rates Assessment	Rates Assessment Map	1852	-
-	Harrow Local History Collections	Harrow Parish Rates Assessment	Rates Assessment Award	1852	-

Table 9.2 OS maps

County	Sheet	1st Ed.	2nd Ed.	Scale
Middlesex	X.16	1860s	1894-6	25"
	XI.13, XI.14	1860s	1894-6	25"
	XV.4	1860s	1894-6	25"
	XVI.1, XVI.2	1860s	1894-6	25"

Table 9.3 Oblique aerial photographs

Source	NGR Index Number	Accession Number	Frame	Film Type	Date Flown	Easting	Northing	Network AP Reference
NMR	TQ1885/1	NMR 729	153-154	Black& white	23-Jun-1974	518000	185100	
NMR	TQ1885/2	NMR 24392	2	Colour neg	29-Oct-2006	518200	185300	
NMR	TQ1885/3	NMR 24392	3	Colour neg	29-Oct-2006	518100	185200	
NMR	TQ1885/4	NMR 24392	4	Colour neg	29-Oct-2006	518200	185000	
NMR	TQ1985/1	NMR 311	251-253	Black& white	22-Jul-1971	519300	185400	
NMR	TQ1985/2	NMR 18315	1	Black& white	23-Mar-1999	519400	185600	
NMR	TQ1985/3	NMR 18315	2	Black& white	23-Mar-1999	519200	185400	
NMR	TQ1985/4	NMR 18315	3	Black& white	23-Mar-1999	519100	185400	
NMR	TQ1985/5	NMR 18315	4	Black& white	23-Mar-1999	519200	185500	
NMR	TQ1985/6	NMR 18315	5	Black& white	23-Mar-1999	519400	185500	
NMR	TQ1985/7	NMR 18315	6	Black& white	23-Mar-1999	519400	185400	
NMR	TQ1985/8	NMR 18315	7	Black& white	23-Mar-1999	519300	185400	
NMR	TQ1985/9	NMR 18315	8	Black& white	23-Mar-1999	519300	185400	
NMR	TQ1985/10	NMR 18308	1	Colour neg	23-Mar-1999	519300	185600	
NMR	TQ1985/11	NMR 18308	2	Colour neg	23-Mar-1999	519300	185500	
NMR	TQ1985/12	NMR 18308	3	Colour neg	23-Mar-1999	519300	185400	
NMR	TQ1985/13	NMR 18308	4	Colour neg	23-Mar-1999	519300	185400	
NMR	TQ1985/14	NMR 18308	5	Colour neg	23-Mar-1999	519300	185400	
NMR	TQ1985/15	NMR 18179	2	Colour neg	23-Mar-1999	519300	185500	
NMR	TQ1985/16	NMR 18179	3	Colour neg	23-Mar-1999	519300	185500	
NMR	TQ1985/17	NMR 18179	4	Colour neg	23-Mar-1999	519300	185500	
NMR	TQ1985/18	NMR 18287	27	Colour slide	23-Mar-1999	519200	185600	
NMR	TQ1985/19	NMR 18287	28	Colour slide	23-Mar-1999	519300	185500	
NMR	TQ1985/20	NMR 18287	29	Colour slide	23-Mar-1999	519200	185500	
NMR	TQ1985/21	NMR 18287	30	Colour slide	23-Mar-1999	519200	185600	
NMR	TQ1985/22	NMR 18287	31	Colour slide	23-Mar-1999	519200	185600	
NMR	TQ1985/23	NMR 18287	32	Colour slide	23-Mar-1999	519300	185500	
NMR	TQ1985/24	NMR 18287	33	Colour slide	23-Mar-1999	519100	185900	

Source	NGR Index Number	Accession Number	Frame	Film Type	Date Flown	Easting	Northing	Network AP Reference
NMR	TQ1985/25	NMR 18287	34	Colour slide	23-Mar-1999	519200	185500	
NMR	TQ1985/26	NMR 18287	35	Colour slide	23-Mar-1999	519300	185500	
NMR	TQ1985/27	NMR 18287	36	Colour slide	23-Mar-1999	519400	185500	
NMR	TQ1985/28	NMR 18793	1	Colour neg	27-Jun-2000	519200	185500	
NMR	TQ1985/29	NMR 18793	2	Colour neg	27-Jun-2000	519300	185600	
NMR	TQ1985/30	NMR 18793	3	Colour neg	27-Jun-2000	519300	185600	
NMR	TQ1985/31	NMR 18793	4	Colour neg	27-Jun-2000	519400	185500	
NMR	TQ1985/32	NMR 18793	5	Colour neg	27-Jun-2000	519300	185500	
NMR	TQ1985/33	NMR 18793	6	Colour neg	27-Jun-2000	519300	185500	
NMR	TQ1985/34	NMR 18793	7	Colour neg	27-Jun-2000	519400	185800	
NMR	TQ1985/35	NMR 18793	8	Colour neg	27-Jun-2000	519400	185800	
NMR	TQ1985/36	NMR 18796	10	Black& white	27-Jun-2000	519400	185500	
NMR	TQ1985/37	NMR 18796	11	Black& white	27-Jun-2000	519300	185500	
NMR	TQ1985/38	NMR 18796	12	Black& white	27-Jun-2000	519300	185500	
NMR	TQ1985/39	NMR 18729	4	Colour slide	27-Jun-2000	519300	185500	
NMR	TQ1985/40	NMR 18729	5	Colour slide	27-Jun-2000	519200	185600	
NMR	TQ1985/41	NMR 18729	6	Colour slide	27-Jun-2000	519300	185600	
NMR	TQ1985/42	NMR 18743	27	Colour neg	27-Jun-2000	519300	185400	
NMR	TQ1985/43	NMR 18743	28	Colour neg	27-Jun-2000	519300	185500	
NMR	TQ1985/44	NMR 18743	29	Colour neg	27-Jun-2000	519400	185600	
NMR	TQ1985/45	NMR 18743	30	Colour neg	27-Jun-2000	519400	185500	
NMR	TQ1985/46	NMR 18743	31	Colour neg	27-Jun-2000	519300	185400	
NMR	TQ1985/47	NMR 18743	32	Colour neg	27-Jun-2000	519300	185500	
NMR	TQ1985/48	NMR 21449	4	Colour neg	27-Aug-2001	519300	185600	
NMR	TQ1985/49	NMR 21449	5	Colour neg	27-Aug-2001	519300	185600	
NMR	TQ1985/50	NMR 21449	6	Colour neg	27-Aug-2001	519300	185500	
NMR	TQ1985/51	NMR 21449	7	Colour neg	27-Aug-2001	519300	185400	
NMR	TQ1985/52	NMR 21449	8	Colour neg	27-Aug-2001	519400	185400	
NMR	TQ1985/53	NMR 21449	9	Colour neg	27-Aug-2001	519400	185500	
NMR	TQ1985/54	NMR 21449	10	Colour neg	27-Aug-2001	519300	185700	

Source	NGR Index Number	Accession Number	Frame	Film Type	Date Flown	Easting	Northing	Network AP Reference
NMR	TQ1985/55	NMR 21449	11	Colour neg	27-Aug-2001	519300	185600	
NMR	TQ1985/56	NMR 21449	12	Colour neg	27-Aug-2001	519300	185600	
NMR	TQ1985/57	NMR 21387	0	Colour neg	27-Aug-2001	519000	185500	
NMR	TQ1985/59	NMR 21387	1	Colour neg	27-Aug-2001	519200	185500	
NMR	TQ1985/60	NMR 21387	2	Colour neg	27-Aug-2001	519400	185700	
NMR	TQ1985/61	NMR 21387	3	Colour neg	27-Aug-2001	519300	185800	
NMR	TQ1985/62	NMR 21387	4	Colour neg	27-Aug-2001	519300	185600	
NMR	TQ1985/63	NMR 21387	5	Colour neg	27-Aug-2001	519300	185500	
NMR	TQ1985/64	NMR 21387	6	Colour neg	27-Aug-2001	519300	185500	
NMR	TQ1985/65	NMR 21387	7	Colour neg	27-Aug-2001	519300	185500	
NMR	TQ1985/66	NMR 21387	8	Colour neg	27-Aug-2001	519300	185500	
NMR	TQ1985/67	NMR 21387	9	Colour neg	27-Aug-2001	519300	185500	
NMR	TQ1985/68	NMR 21342	5	Colour slide	27-Aug-2001	519200	185600	
NMR	TQ1985/69	NMR 21342	6	Colour slide	27-Aug-2001	519400	185500	
NMR	TQ1985/70	NMR 21342	7	Colour slide	27-Aug-2001	519300	185800	
NMR	TQ1985/71	NMR 21342	8	Colour slide	27-Aug-2001	519300	185500	
NMR	TQ1985/72	NMR 21342	9	Colour slide	27-Aug-2001	519300	185500	
NMR	TQ1985/73	NMR 21342	10	Colour slide	27-Aug-2001	519300	185500	
NMR	TQ1985/74	NMR 21342	11	Colour slide	27-Aug-2001	519300	185500	
NMR	TQ1985/75	NMR 21342	12	Colour slide	27-Aug-2001	519300	185500	
NMR	TQ1985/76	NMR 21342	13	Colour slide	27-Aug-2001	519300	185500	
NMR	TQ1985/77	NMR 21342	14	Colour slide	27-Aug-2001	519300	185500	
NMR	TQ1985/78	NMR 21433	23	Colour slide	27-Aug-2001	519300	185500	
NMR	TQ1985/79	NMR 21433	24	Colour slide	27-Aug-2001	519300	185500	
NMR	TQ1985/80	NMR 21433	25	Colour slide	27-Aug-2001	519200	185600	
NMR	TQ1985/81	NMR 21433	26	Colour slide	27-Aug-2001	519200	185600	
NMR	TQ1985/82	NMR 21433	27	Colour slide	27-Aug-2001	519300	185600	
NMR	TQ1985/84	NMR 23264	28	Colour slide	16-Sep-2003	519300	185400	
NMR	TQ1985/85	NMR 23264	29	Colour slide	16-Sep-2003	519300	185500	
NMR	TQ1985/88	NMR 23260	4	Colour neg	16-Sep-2003	519300	185400	

Source	NGR Index Number	Accession Number	Frame	Film Type	Date Flown	Easting	Northing	Network AP Reference
NMR	TQ1985/89	NMR 23260	5	Colour neg	16-Sep-2003	519300	185500	
NMR	TQ1985/90	NMR 23260	6	Colour neg	16-Sep-2003	519300	185500	
NMR	TQ1985/91	NMR 23260	7	Colour neg	16-Sep-2003	519300	185500	
NMR	TQ1985/92	NMR 23260	8	Colour neg	16-Sep-2003	519300	185500	
NMR	TQ1985/93	NMR 23260	9	Colour neg	16-Sep-2003	519200	185100	
NMR	TQ1985/97	NMR 23211	6	Colour neg	16-Sep-2003	519300	185600	
NMR	TQ1985/98	NMR 23211	7	Colour neg	16-Sep-2003	519300	185600	
NMR	TQ1985/99	NMR 23211	8	Colour neg	16-Sep-2003	519400	185600	
NMR	TQ1985/100	NMR 23211	9	Colour neg	16-Sep-2003	519300	185500	
NMR	TQ1985/101	NMR 23211	10	Colour neg	16-Sep-2003	519300	185600	
NMR	TQ1985/102	NMR 23211	11	Colour neg	16-Sep-2003	519300	185600	
NMR	TQ1985/103	NMR 23211	12	Colour neg	16-Sep-2003	519300	185500	
NMR	TQ1985/104	NMR 23211	13	Colour neg	16-Sep-2003	519300	185400	
NMR	TQ1985/105	NMR 24391	3	Colour neg	29-Oct-2006	519200	185900	
NMR	TQ1985/106	NMR 24391	4	Colour neg	29-Oct-2006	519300	185500	
NMR	TQ1985/107	NMR 24391	5	Colour neg	29-Oct-2006	519300	185500	
NMR	TQ1985/108	NMR 24391	6	Colour neg	29-Oct-2006	519400	185500	
NMR	TQ1985/109	NMR 24391	7	Colour neg	29-Oct-2006	519400	185500	
NMR	TQ1985/110	NMR 24391	8	Colour neg	29-Oct-2006	519400	185500	
NMR	TQ1985/111	NMR 24391	9	Colour neg	29-Oct-2006	519200	185400	
NMR	TQ1985/112	NMR 24391	10	Colour neg	29-Oct-2006	519300	185500	
NMR	TQ1985/113	NMR 24391	11	Colour neg	29-Oct-2006	519300	185500	
NMR	TQ1985/114	NMR 24391	12	Colour neg	29-Oct-2006	519300	185500	
NMR	TQ1985/115	NMR 24391	13	Colour neg	29-Oct-2006	519300	185500	
NMR	TQ1985/116	NMR 24391	14	Colour neg	29-Oct-2006	519300	185500	
NMR	TQ1985/117	NMR 24391	15	Colour neg	29-Oct-2006	519400	185500	
NMR	TQ1985/118	NMR 24391	16	Colour neg	29-Oct-2006	519400	185500	
NMR	TQ1985/119	NMR 24391	17	Colour neg	29-Oct-2006	519400	185500	
NMR	TQ1985/120	NMR 24391	18	Colour neg	29-Oct-2006	519300	185500	
NMR	TQ1985/121	NMR 24391	19	Colour neg	29-Oct-2006	519300	185500	

Source	NGR Index Number	Accession Number	Frame	Film Type	Date Flown	Easting	Northing	Network AP Reference
NMR	TQ1985/122	NMR 24391	20	Colour neg	29-Oct-2006	519300	185600	
NMR	TQ1985/123	NMR 24391	21	Colour neg	29-Oct-2006	519300	185500	
NMR	TQ1985/124	NMR 24391	22	Colour neg	29-Oct-2006	519300	185500	
NMR	TQ1985/125	NMR 24391	24	Colour neg	29-Oct-2006	519300	185500	
NMR	TQ1985/126	NMR 24391	25	Colour neg	29-Oct-2006	519300	185500	
NMR	TQ1985/127	NMR 24391	27	Colour neg	29-Oct-2006	519300	185900	
NMR	TQ1985/128	NMR 24391	28	Colour neg	29-Oct-2006	519400	185600	
NMR	TQ1985/129	NMR 24391	29	Colour neg	29-Oct-2006	519400	185600	
NMR	TQ1985/130	NMR 24391	30	Colour neg	29-Oct-2006	519400	185600	
NMR	TQ1985/131	NMR 24391	34	Colour neg	29-Oct-2006	519300	185500	
NMR	TQ1985/132	NMR 24391	35	Colour neg	29-Oct-2006	519200	185400	
NMR	TQ1985/133	NMR 24391	36	Colour neg	29-Oct-2006	519200	185500	
NMR	TQ1985/134	NMR 24391	37	Colour neg	29-Oct-2006	519400	185500	
NMR	TQ1985/135	NMR 24391	38	Colour neg	29-Oct-2006	519400	185700	
NMR	TQ1985/136	NMR 24391	39	Colour neg	29-Oct-2006	519400	185700	
NMR	TQ1985/138	NMR 24392	21	Colour neg	29-Oct-2006	519400	185500	
NMR	TQ1985/139	NMR 24392	22	Colour neg	29-Oct-2006	519400	185500	
NMR	TQ1985/140	NMR 24434	28	Colour neg	08-Aug-2006	519400	185500	

Table 9.4 Vertical aerial photographs

Source	Sortie Number	Library Number	Start Frame	End Frame	Date	Scale 1:	Start East	Start North	End East	End North	Network AP Reference
AF	FSL/6641/3	2273	3639	3642	23-Jul-66	10000	516500	185100	519300	185100	
NMR	OS/55T23	20152	7	10	16-Jul-55	3125	517900	186500	516900	186500	
NMR	OS/84188	12649	42	43	29-Jul-84	5300	518900	185200	519300	185200	
NMR	OS/86093	10750	106	114	15-Jun-86	5000	519500	185400	516100	185500	AP. 1
NMR	OS/86093	10750	87	96	15-Jun-86	5000	515700	186200	519400	186200	
NMR	OS/89444	11799	335	335	25-Sep-89	5000	519800	185300	519800	185300	
NMR	OS/92361B	14135	284	286	21-Jun-92	6000	517600	184100	518500	184100	

Source	Sortie Number	Library Number	Start Frame	End Frame	Date	Scale 1:	Start East	Start North	End East	End North	Network AP Reference
NMR	RAF/543/1059	2078	118	119	13-Sep-60	6000	518000	186500	517600	186500	
NMR	RAF/543/1059	2078	115	123	13-Sep-60	6000	519200	185100	516100	185200	
NMR	RAF/58/1213	1477	271	271	14-Aug-53	5000	516100	185200	516100	185200	
NMR	RAF/58/1213	1477	271	271	14-Aug-53	5000	516000	186000	516000	186000	
MOD	RAF/58/757	6217	5002	5009	22-Jul-51	2700	517900	186100	516500	186100	
MOD	RAF/58/757	6217	5127	5134	22-Jul-51	2700	518100	184800	516500	184700	
MOD	RAF/58/757	6217	5086	5094	22-Jul-51	2700	518200	184900	516400	185000	AP. 2
MOD	RAF/58/757	6217	5003	5012	22-Jul-51	2700	518200	185400	516100	185300	
MOD	RAF/58/757	6217	5045	5056	22-Jul-51	2700	518100	185900	515800	185900	
MOD	RAF/58/757	6217	5087	5098	22-Jul-51	2700	518100	185600	515800	185700	
MOD	RAF/CPE/UK/2155	678	6498	6505	13-Jun-47	5000	516100	184500	518200	184500	
MOD	RAF/CPE/UK/2155	678	6425	6433	13-Jun-47	5000	515600	185800	517900	185700	AP. 3
MOD	RAF/CPE/UK/2155	678	6453	6463	13-Jun-47	5000	515700	185300	518300	185100	

9.2 Secondary Sources

Table 9.5 Published and unpublished sources

Author	Year	Title	Journal/ Publishers
Baker, T.F.T., Cockburn, J.S., Pugh, R.B. (eds.)	1971	A History of the County of Middlesex: Volume 4	british- history.ac.uk
British Geological Survey	2008	www.bgs.ac.uk	
Hewlett, G.	1979	A History of Wembley	Brent Library Service
IFA (Institute of Field Archaeologists)	2001i (1994, revised 1999 and 2001)	Standard & Guidance documents (Desk-based Assessments, Watching Briefs, Evaluations, Excavations, Investigation and Recording of Standing Buildings, Finds, Waterlogged Wood)	IFA
IFA (Institute of Field Archaeologists)	2001ii (1985, revised 1997 and 2001)	Code of Conduct	IFA
Mills, A.	2001	Dictionary of London Place Names	
RPS Planning Transport and Environment	2003	Desk-Based Archaeological Assessment – Delivering a new Wembley (Appendix J)	RPS
SSEW	1983	Soil Survey of England and Wales	

APPENDIX A

Explanation of Phased Approach to Archaeological Investigation and Mitigation

EXPLANATION OF PHASED APPROACH TO ARCHAEOLOGICAL INVESTIGATION AND MITIGATION

Stage 1: Study Corridor Investigation Study

An appraisal of archaeological potential

Stage 2: Desk-based Assessment

A thorough desk based synthesis of available information

Aerial photographic study:

Identification and mapping of palaeochannels from aerial photographs should be undertaken as part of the desk-based assessment.

Stage 3: Field Surveys

Field reconnaissance survey

This is a visual inspection of the proposed pipeline route, in order to:

- locate and characterise archaeology represented by above ground remains (e.g. earthworks and structures); and
- record the nature and condition of existing field boundaries within the working width of the pipeline, to establish their potential antiquity.
- A walkover of the entire development area should normally take place.

Fieldwalking survey

The distribution of finds found by fieldwalking can indicate areas of archaeological activity, which are not represented by above ground remains.

A programme of structured fieldwalking should normally take place across all available arable land to recover archaeological artefacts. A minimum of five transects at 10m separation should normally be walked.

Geophysical survey

Geophysical survey methods are non-intrusive and can detect and precisely locate buried archaeological features.

Magnetometry is the most cost-effective technique for large scale surveys. *Recorded* magnetometer survey, supplemented by background magnetic susceptibility survey is normally recommended.

Unrecorded magnetometer scanning is not recommended because it requires spontaneous, subjective interpretation as the unrecorded scanning survey progresses. This method does not therefore provide a secure basis for eliminating areas that produce negative results from further consideration.

Auger survey

Geotechnical borehole survey supplemented by hand auger survey could:

- generate stratigraphic profiles and establish the depth of alluvium;
- look for 'islands' of solid geology which are elevated in comparison with their contemporary landscape;
- look for former river channels;
- look for evidence of buried land surfaces;
- assess the viability of using targeted magnetometer survey on the floodplain.

Ideally, an environmental archaeologist would consult with the geotechnical team in order to develop a strategy which would enable the opportunistic and immediate examination of the geotechnical team's soil cores, in conjunction with a *hand auger survey* tailored to meet archaeological objectives listed above.

Radiocarbon dating and palaeo-environmental assessment

Soil samples recovered may require radiocarbon dating and assessment of potential for preservation of palaeo-environmental important remains.

Stage 4: Evaluation

Field evaluation should normally take place at the sites of positive findings made during earlier stages of archaeological assessment and field survey, which it may not be possible or desirable to avoid. Evaluation might involve machine-excavated trenches, hand-dug test-pits and/or hand auguring. The objectives are to confirm the presence or absence of archaeological remains, to determine their character, extent, date and state of preservation, and to produce a report on the findings. The choice of technique(s) will depend upon site-specific factors.

Stage 5: Mitigation

Excavation

It may not be possible or desirable to avoid significant archaeological sites identified by previous survey work and/or evaluation. Ideally, *excavation* of such sites should take place in advance of construction. Excavation would involve machine-stripping of limited, open areas, followed by archaeological investigation. The objectives would be to obtain a full record of the archaeological remains prior to construction, and to produce a report on the findings.

Earthwork survey

This work is undertaken to produce a topographic record of extant earthworks. These sites might include known earthworks identified by the Desk based Assessment, or previously unknown earthworks found during the Field Reconnaissance Survey. The sites may include settlement earthworks or agricultural earthworks (such as, ridge and furrow and lynchets).

Two methods are commonly employed; plane table survey which obtains a hachure survey, or total-station theodolite survey which produces a close contour plot.

Stage 6: Watching Brief

A permanent-presence watching brief will be required during all ground disturbing activities of the construction phase of the project, to record unexpected discoveries, and known sites which did not merit investigation in advance of construction. The main phases of monitoring for the pipeline will be topsoil stripping, trench excavation and the opportunistic observation of the pre-construction drainage. The objectives are to obtain a thorough record of any archaeological remains found during construction, and to produce a report on the findings.

Contingencies should allow for salvage excavation of significant, unexpected archaeological sites found during construction.

Stage 7: Archive, Report and Publication

On completion of all archaeological fieldwork associated with the development scheme, a comprehensive programme of post-excavation assessment, analysis, reporting and publication will be implemented. The post-excavation programme will be subject to a written scheme of investigation to be agreed in advance with the Senior Planning Archaeologists and will be in line with 'The Management of Archaeological Projects', English Heritage 1991.

APPENDIX B

Statutory and Non-Statutory Protection of Archaeological Sites

STATUTORY AND NON-STATUTORY PROTECTION OF ARCHAEOLOGICAL SITES

Legislation

Ancient Monuments and Archaeological Areas Act 1979 (as amended by the National Heritage Act of 1983)

Under this Act, the Secretary of State, in consultation with English Heritage, maintains a schedule of monuments deemed to be of national importance. In practice, most Scheduled Monuments fall into the category of Scheduled Ancient Monuments (SAMs), defined as 'any Scheduled Monument and any other monument which in the opinion of the Secretary of State is of public interest by reason of the historic, architectural, traditional, artistic or archaeological interest attaching to it' (Section 61 [12]). Scheduled Monuments also includes Areas of Archaeological Importance (AAIs). Only portable items are beyond the protection of scheduling.

The present schedule of just over 13,000 sites has been compiled since the first statutory protection of monuments began in 1882. The criteria for scheduling have been published but there are many sites of schedulable quality, which have not yet received this status.

Any action which affects the physical nature of a monument requires Scheduled Monument Consent, which must be sought from the Secretary of State. Consent may be granted after a detailed application to the Secretary of State. Failure to obtain Scheduled Monument Consent for any works is an offence, the penalty for which may be a fine, which may be unlimited.

The National Heritage Act 2002

This enables English Heritage to assume responsibilities for maritime archaeology in English coastal waters, modifying the agency's functions to include securing the preservation of ancient monuments in, on, or under the seabed, and promoting the public's enjoyment of, and advancing their knowledge of ancient monuments, in, on, or under seabed. Initial duties will include those formerly undertaken by the Government's Department of Culture, Media and Sport (DCMS), in respect to the administration of The Protection of Wrecks Act 1973.

<http://accessibility.english-heritage.org.uk/default.asp?WCI=Node&WCE=8197>

Planning (Listed Buildings and Conservation Areas) Act, 1990

Listed Buildings and Conservation areas benefit from statutory protection under this Act.

Listed buildings

Under this Act, the Secretary of State, in consultation with English Heritage, is responsible for the compilation of the List of Buildings (and other structures) of Special Architectural or Historic Interest. Listing gives buildings important statutory protection.

Buildings are classified in grades to show their relative importance as follows:

- Grade I Buildings of exceptional interest
- Grade II* Particularly important buildings of more than special interest
- Grade II Buildings of special interest, which warrant every effort being made to preserve them

The grading of listed buildings is non-statutory; the awarding of grades is simply a tool to assist in the administration of grants and consents. The list is used by local planning authorities in conjunction with PPG 15 Planning and the Historic Environment as the basis upon which decisions on the impact of development are made on historically and architecturally significant buildings and their settings.

Any work that involves the demolition, alteration or extension of a listed building (or its curtilage) requires listed building consent, which must be sought from the Secretary of State, usually via the local planning authority. Consent may be granted after a detailed application to local planning authority or the Secretary of State. Carrying out work on a listed building (or its curtilage) without consent is an offence and can be punishable by an unlimited fine.

Conservation Areas

There are activities that may be considered inappropriate within or adjacent to Conservation Areas; for example by disrupting important views, or generating excess traffic. Development within a Conservation Area is likely to be resisted if considered inappropriate in terms of scale, setting, massing, siting, and detailed appearance in relation to surrounding buildings and the Conservation Area as a whole. High standards of design are expected in all Conservation Areas, whether for new or replacement buildings, extensions, alterations or small scale development. Planning permission is normally resisted for small scale development which could lead to a number of similar applications, the cumulative effect of which would be detrimental to the character and appearance of the area. Demolition of unlisted structures within Conservation Areas is usually only permitted where removal or replacement would preserve or enhance the character and appearance of the area, or where the structure is beyond economic repair. Development which would adversely affect the character or appearance of buildings of local interest is likely to be resisted. Demolition would almost certainly only be permitted in exceptional circumstances.

The Protection of Military Remains Act 1986

This Act makes it an offence to interfere with the wreckage of any crashed, sunken or stranded military aircraft or designated vessel without a licence. This is irrespective of loss of life or whether the loss occurred during peacetime or wartime. All crashed military aircraft receive automatic protection, but vessels must be individually designated. Currently, there are 21 vessels protected under this Act, both in UK waters and abroad, and it is likely that the Ministry of Defence will designate more vessels in the future.

There are two levels of protection offered by this Act, designation as a Protected Place or as a Controlled Site.

Protected Places include the remains of any aircraft which crashed while in military service or any vessel designated (by name, not location) which sank or stranded in military service after 4th August 1914. Although crashed military aircraft receive automatic status as a Protected Place, vessels need to be specifically designated by name. The location of the vessel does not need to be known for it to be designated as a Protected Place.

Diving is not prohibited on an aircraft or vessel designated as a Protected Place. However, it is an offence to conduct unlicensed diving or salvage operations to tamper with, damage, remove or unearth any remains or enter any hatch or other opening. Essentially, diving is permitted on a 'look but don't touch' basis only.

Controlled Sites are specifically designated areas which encompass the remains of a military aircraft or a vessel sunk or stranded in military service within the last two hundred years. Within the controlled site it is an offence to tamper with, damage, move or unearth any

remains, enter any hatch or opening or conduct diving, salvage or excavation operations for the purposes of investigating or recording the remains, unless authorised by licence. The effectively makes diving operations prohibited on these sites without a specific licence.

The Protection of Wrecks Act 1973

The Protection of Wrecks Act is in two sections. Section 1 provides protection for designated wrecks which are deemed to be important by virtue of their historical, archaeological or artistic value. Approximately 56 wrecks around the coast of the UK have been designated under this section of the Act. Each wreck has an exclusion zone around it and it is an offence to tamper with, damage or remove any objects or part of the vessel or to carry out any diving or salvage operation within this exclusion zone. Any activities within this exclusion zone can only be carried out under a licence granted by the Secretary of State, who receives advice from the Advisory Committee on Historic Wreck Sites (ACHWS). There are four levels of licences: a visitor licence, a survey licence, a surface recovery licence and an excavation licence.

Administration of this Act and associated licenses is the responsibility of English Heritage in England, Historic Scotland in Scotland, Cadw: Welsh Historic Monuments in Wales and the Environment and Heritage Service in Northern Ireland. Any of these organisations will be able to provide more in depth information (see useful addresses).

Section 2 of the Protection of Wrecks Act provides protection for wrecks that are designated as dangerous by virtue of their contents. Diving on these wrecks is strictly prohibited. This section of the Act is administered by the Maritime and Coastguard Agency through the Receiver of Wreck.

The Town and Country Planning Act 1990

Section 54a of the Act requires planning decisions to be taken in accordance with policies contained in the appropriate Local Development Plan. Material considerations, including national guidelines, should also be taken into account as they provide an overall context for the consideration of planning applications and set out Government policy.

Regulations

Hedgerow Regulations 1997 (Section 97 of the Environment Act 1995)

Under these Regulations, prior to work, which may damage or remove hedgerows, it is required to categorise the hedgerows according to a number of historical and ecological criteria which are laid out in the Regulations. District Councils are required to administer the Regulations and to maintain a map of hedgerows deemed to be ‘important’ under the criteria of the Regulations.

Under the regulations, a hedgerow is regarded as ‘important’ on archaeological or historical grounds if it:

- marks a pre-1850 parish or township boundary;
- incorporates an archaeological feature;
- is part of, or associated with, an archaeological site
- marks the boundary of, or is associated with, a pre-1600 estate or manor; or
- forms an integral part of a pre-Parliamentary enclosure field system (DOE, 1997).

An archaeological site is defined as a Scheduled Ancient Monument (SAM) or a site recorded in a County Sites and Monuments Record (SMR);

The Hedgerow Regulations define a pre-Parliamentary enclosure field system as any field boundary predating the *General Enclosure Act of 1845*.

The implication of this legislation is that virtually all hedgerows can be classified as being ‘important’ for historical purposes under the Hedgerows Regulations 1997.

The historical criteria, however, are presently under review.

Guidance Notes

Central government guidance on archaeological remains and the built historic environment include:

- Planning Policy Guidance Note 15 (PPG 15): Planning and the Historic Environment (1994)
- Planning Policy Guidance Note 16 (PPG 16): Archaeology and Planning (1990).

The key policy statements in PPG16 are that “where nationally important archaeological remains, whether Scheduled or not, and their settings, are affected by proposed development there should be a presumption in favour of their physical preservation”.

For less important sites, PPG16 states that, “the desirability of preserving a scheduled monument and its setting is a material consideration in determining planning applications whether that monument is scheduled or unscheduled”.

The County Sites and Monuments Record is used in conjunction with PPG 15 and PPG 16, as the basis upon which decisions on the archaeological impact of development are made. The basic premise of the Guidance is that archaeological deposits are a finite non-renewable resource that must be protected. It also points out the unknown nature of archaeological deposits and allows Planning Authorities to include within planning conditions, archaeological evaluation, to determine the full impact on the archaeological resource. The evaluation can be required prior to determination of the planning decision. This evaluation may detail any measures that can be implemented to mitigate the damage and help to decide whether excavation is required of the threatened archaeological remains.

Structure Plan and Local Plan Protection

Scheduled and non-scheduled sites of archaeological importance, listed buildings, and historic parks and gardens and their settings are also protected under policies contained within the relevant Structure Plan and Local Plans for the area:

- Brent Unitary Development Plan (adopted January 2004)

Guidance for sites having no statutory protection

The Register of Parks and Gardens of Special Historic Interest in England

This register was compiled by English Heritage between 1984 and 1988 and is maintained by them. Parks and gardens of special historic interest have no statutory protection.

Listed parks and gardens are classified in grades to show their relative importance as follows:

- Grade I –international historic interest
- Grade II* - exceptional historic interest
- Grade II –national historic interest

The listing and grading process is designed to draw attention to important historic parks and gardens as an essential part of the nation's heritage for use by planners, developers, statutory bodies and all those concerned with protecting the heritage. However, no new controls apply to parks and gardens in the register, nor are existing planning controls to listed building affected in any way. It follows that structures such as fountains, gates, grottos and follies within gardens can also be listed as 'Listed Buildings' and whole parks and gardens can also be scheduled as Ancient Monuments.

Any work that affects the physical nature of registered parks and gardens requires consultation with the Garden History Society. English Heritage should be consulted in the case of those designated as Grade I or Grade II*.

The Register of Historic Battlefields

This register is maintained by English Heritage and currently includes forty sites. Registered battlefields have no statutory protection. Planning Policy Guidance note 15, however, offers a degree of protection to many of the known battle sites within England.

APPENDIX C
Archaeological Gazetteer

ARCHAEOLOGICAL CONSTRAINTS GAZETTEER

Reference	Source	Cross reference	Description	Period	Importance	PR: Impact	PR: Significance	RO A: Impact	RO A: Significance	RO B: Impact	RO B: Significance	NGR	Figures
DBA:AA	P. 1852	OS 1862-72	Vale Farm and outbuildings	Post-medieval	D	none	n/a	none	n/a	none	n/a	516764 185771	2,3
DBA:AB	P. 1852		Field boundary	Post-medieval	D	-unc	unknown	none	n/a	none	n/a	516906 185554	2,3
DBA:AC	P. 1852		Field boundary	Post-medieval	D	-unc, -unc	unknown	none	n/a	none	n/a	516909 185792	2,3
DBA:AD	P. 1852		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	516853 185733	2,3
DBA:AE	P. 1852		Field boundary	Post-medieval	D	-d min	low	none	n/a	none	n/a	517026 185813	2,3,4
DBA:AF	P. 1852		Field boundary	Post-medieval	D	-d sev	medium	none	n/a	none	n/a	517075 185841	2,3
DBA:AG	P. 1852	OS 1862-72	Field boundary	Post-medieval	D	-d min	low	none	n/a	none	n/a	517141 185833	2,3,4
DBA:AH	P. 1852		Field boundary	Post-medieval	D	none	n/a	none	n/a	-unc	unknown	517249 185727	2,3,4
DBA:AI	P. 1852	OS 1862-72	Field boundary	Post-medieval	D	none	n/a	-d min	low	-d min	low	517306 185875	2,3,4
DBA:AJ	P. 1852		Field boundary	Post-medieval	D	none	n/a	none	n/a	-unc	unknown	517429 185745	3,4
DBA:AK	P. 1852		Field boundary	Post-medieval	D	none	n/a	-unc	unknown	none	n/a	517469 185913	3,4
DBA:AL	P. 1852		Field boundary	Post-medieval	D	-unc	unknown	none	n/a	none	n/a	517258 185401	2,4
DBA:AM	P. 1852		Field boundary	Post-medieval	D	-unc	unknown	none	n/a	none	n/a	517449 185513	4
DBA:AN	P. 1852		Field boundary	Post-medieval	D	none	n/a	none	n/a	none	n/a	517671 185410	4
DBA:AO	P. 1852		Field boundary	Post-medieval	D	-unc	unknown	none	n/a	none	n/a	517608 185247	4

Reference	Source	Cross reference	Description	Period	Importance	PR: Impact	PR: Significance	RO A: Impact	RO A: Significance	RO B: Impact	RO B: Significance	NGR	Figures
DBA:AP	P. 1852	OS 1862-72	Field boundary	Post-medieval	D	-unc	unknown	none	n/a	none	n/a	517773 185294	4
DBA:AQ	P. 1852	OS 1862-72	Field boundary	Post-medieval	D	-unc	unknown	none	n/a	none	n/a	517879 185161	4
DBA:AR	P. 1852	OS 1862-72	Field boundary	Post-medieval	D	-unc	unknown	none	n/a	none	n/a	517938 185226	4
DBA:AS	P. 1852	OS 1862-72	Field boundary	Post-medieval	D	-unc, unc	unknown	none	n/a	none	n/a	517984 185253	4
DBA:AT	P. 1852		Field boundary	Post-medieval	D	-unc	unknown	none	n/a	none	n/a	518082 185302	4,5
DBA:AU	P. 1852	OS 1862-72	Field boundary	Post-medieval	D	-unc	unknown	none	n/a	none	n/a	518125 185333	4,5
DBA:AV	P. 1852	OS 1862-72	Field boundary	Post-medieval	D	-unc	unknown	none	n/a	none	n/a	518050 185514	4,5
DBA:AW	P. 1852		Field boundary	Post-medieval	D	-unc	unknown	none	n/a	none	n/a	518653 185591	4,5
DBA:AX	P. 1852		Field boundary	Post-medieval	D	none	n/a	none	n/a	none	n/a	518774 185382	5
DBA:AY	P. 1852		Field boundary	Post-medieval	D	none	n/a	none	n/a	none	n/a	518544 185492	4,5
DBA:AZ	P. 1852		Field boundary	Post-medieval	D	none	n/a	none	n/a	none	n/a	518752 185582	5
DBA:BA	P. 1852		Field boundary	Post-medieval	D	none	n/a	none	n/a	none	n/a	518480 185504	4,5
DBA:BB	P. 1852	OS 1862-72	Wembley Park	Post-medieval	D	-unc	unknown	none	n/a	none	n/a	519169 185972	5
DBA:BC	P. 1852	OS 1862-72	Lake	Post-medieval	D	none	n/a	none	n/a	none	n/a	518742 185897	5
DBA:BD	P. 1852		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	517032 186360	3
DBA:BE	P. 1852	OS 1862-72	Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	518564 186041	5

Reference	Source	Cross reference	Description	Period	Importance	PR: Impact	PR: Significance	RO A: Impact	RO A: Significance	RO B: Impact	RO B: Significance	NGR	Figures
DBA:BF	P. 1852		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	516950 185297	2
DBA:BG	P. 1852		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	519011 185417	5
DBA:BH	P. 1852		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	519034 185574	5
DBA:BI	P. 1852		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	518948 185580	5
DBA:BJ	OS 1862-72		Building	Post-medieval	D	none	n/a	none	n/a	none	n/a	519352 185592	5
DBA:BK	OS 1862-72		Wembley Orchard	Post-medieval	D	none	n/a	none	n/a	none	n/a	518438 185191	4,5
DBA:BL	P. 1852	OS 1862-72	Wembley Farm	Post-medieval	D	none	n/a	none	n/a	none	n/a	518507 185302	4,5
DBA:BM	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	518595 185400	4,5
DBA:BN	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	518341 185707	4,5
DBA:BO	OS 1862-72		Field boundary	Post-medieval	D	-d min	low	none	n/a	none	n/a	518215 185553	4,5
DBA:BP	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	519034 185133	5
DBA:BQ	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	519065 185318	5
DBA:BR	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	516662 186130	2,3

Appendix C

Reference	Source	Cross reference	Description	Period	Importance	PR: Impact	PR: Significance	RO A: Impact	RO A: Significance	RO B: Impact	RO B: Significance	NGR	Figures
DBA:BS	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	516620 186223	2,3
DBA:BT	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	516357 185979	2
DBA:BU	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	516251 185878	2
DBA:BV	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	516913 185735	2,3
DBA:BW	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	516846 185716	2,3
DBA:BX	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	516912 186009	2,3
DBA:BY	OS 1862-72		Sudbury Brewery	Post-medieval	D	none	n/a	none	n/a	none	n/a	516452 185469	2
DBA:BZ	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	516352 185361	2
DBA:CA	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	516127 185389	2
DBA:CB	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	516364 185110	2
DBA:CC	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	516651 185144	2

Reference	Source	Cross reference	Description	Period	Importance	PR: Impact	PR: Significance	RO A: Impact	RO A: Significance	RO B: Impact	RO B: Significance	NGR	Figures
DBA:CD	OS 1862-72		Sudbury Lodge	Post-medieval	D	none	n/a	none	n/a	none	n/a	517333 185075	4
DBA:CE	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	517399 185046	4
DBA:CF	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	517211 185150	2,4
DBA:CG	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	517067 185283	2,4
DBA:CH	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	517176 185253	2,4
DBA:CI	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	517340 185389	4
DBA:CJ	OS 1862-72		Parsonage	Post-medieval	D	none	n/a	none	n/a	none	n/a	517809 185119	4
DBA:CK	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	517352 185508	4
DBA:CL	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	517551 185509	4
DBA:CM	OS 1862-72		Field boundary	Post-medieval	D	none	n/a	none	n/a	-unc	unknown	517312 185723	3,4
DBA:CN	P. 1852	OS 1862-72	Field boundary	Post-medieval	D	none	n/a	none	n/a	none	n/a	516851 185879	2,3

Reference	Source	Cross reference	Description	Period	Importance	PR: Impact	PR: Significance	RO A: Impact	RO A: Significance	RO B: Impact	RO B: Significance	NGR	Figures
DBA:CO	OS 1862-72		Field boundary	Post-medieval	D	none	n/a	-unc	unknown	none	n/a	517575 185818	3
DBA:CP	P. 1852	OS 1862-72	Field boundary	Post-medieval	D	-unc	unknown	-unc	unknown	-unc	unknown	517518 185691	3,4
DBA:CQ	OS 1896		Wembley Tower	Post-medieval	D	none	n/a	none	n/a	none	n/a	519343 185491	5
DBA:CR	OS 1896		Variety Hall	Post-medieval	D	none	n/a	none	n/a	none	n/a	519236 185753	5
DBA:CS	OS 1896		Fountain	Post-medieval	D	none	n/a	none	n/a	none	n/a	519320 185761	5
DBA:CT	OS 1896		Pavilion	Post-medieval	D	none	n/a	none	n/a	none	n/a	518825 184981	5
DBA:CU	OS 1896		Reservoir	Post-medieval	D	none	n/a	none	n/a	none	n/a	518611 185548	4,5
DBA:CV	OS 1896		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	518245 185966	5
DBA:CW	OS 1896		Sudbury House	Post-medieval	D	none	n/a	none	n/a	none	n/a	517562 184973	4
DBA:CX	OS 1896		Lodge	Post-medieval	D	none	n/a	none	n/a	none	n/a	517424 185021	4
DBA:CY	OS 1896		Lodge	Post-medieval	D	none	n/a	none	n/a	none	n/a	517615 185015	4
DBA:CZ	OS 1862-72		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	517520 184891	4
DBA:DA	OS 1896		Pond	Post-medieval	D	none	n/a	none	n/a	none	n/a	516540 185249	2
DBA:DB	BLB		Sudbury Court Conservation Area	Undetermined	A	none	n/a	none	n/a	none	n/a	516727 186649	2,3

Reference	Source	Cross reference	Description	Period	Importance	PR: Impact	PR: Significance	RO A: Impact	RO A: Significance	RO B: Impact	RO B: Significance	NGR	Figures
DBA:DC	OS 1862-72		Harrow and Greenford parish boundary	Post-medieval	D	none	n/a	none	n/a	none	n/a	516501 185135	2
DBA:DD	OS 1862-72		Wembley House	Post-medieval	D	none	n/a	none	n/a	none	n/a	518438 185191	4,5
DBA:DE	OS 1862-72		Ice House	Post-medieval	D	none	n/a	none	n/a	none	n/a	518788 185694	5
DBA:DF	OS 1896		Smithy	Post-medieval	D	none	n/a	none	n/a	none	n/a	518830 185213	5
DBA:DG	AP. 01	AP. 02, AP. 03	Possible land drains or ridge and furrow	Undetermined	D	-d min	low	none	n/a	none	n/a	517028 185852	2,3,4
DBA:DH	BLB		Wembley High Street Conservation Area	Undetermined	A	none	n/a	none	n/a	none	n/a	518720 185682	4,5
DBA:DI	P. 1852		The Park field name	Post-medieval	D	none	n/a	none	n/a	none	n/a	517297 185095	2,4
DBA:DJ	P. 1852		The Hole, field name	Post-medieval	D	none	n/a	none	n/a	none	n/a	518463 185289	4,5
DBA:DK	P. 1852		Wembley Park Field	Post-medieval	D	none	n/a	none	n/a	none	n/a	519257 185122	5
LS 198758	EH	SMR MLO78484, MON 398105, OS 1862-1872	Hundreds Elms Farm outbuilding, C16, grade II*	Medieval	A	none	n/a	none	n/a	none	n/a	516443 185882	2

Reference	Source	Cross reference	Description	Period	Importance	PR: Impact	PR: Significance	RO A: Impact	RO A: Significance	RO B: Impact	RO B: Significance	NGR	Figures
LS 198759	EH	SMR MLO78485	The Empire Pool, swimming pool, 1934, grade II, AKA Wembley Arena	Post-medieval	A	none	n/a	none	n/a	none	n/a	519142 185752	5
LS 198763	EH	SMR MLO79317	Garden walls, gates, Pergola, sundial, at Barham Old Court, circa C18, grade II	Post-medieval	A	none	n/a	none	n/a	none	n/a	517195 185091	2,4
LS 198765	EH	SMR MLO79329, P. 1852	St John's Church, 1846, grade II	Post-medieval	A	none	n/a	none	n/a	none	n/a	517850 185122	4
LS 198766	EH	SMR MLO79316	Front boundary wall and lych gate of St John's Church, c1846, grade II	Post-medieval	A	none	n/a	none	n/a	none	n/a	517871 185083	4
LS 198789	EH	SMR MLO79323	Wembley Park Lodge, cottage orne style, C19, grade II	Post-medieval	A	none	n/a	none	n/a	none	n/a	518586 185932	5

Reference	Source	Cross reference	Description	Period	Importance	PR: Impact	PR: Significance	RO A: Impact	RO A: Significance	RO B: Impact	RO B: Significance	NGR	Figures
LS 198795	EH	SMR MLO79310	3 K6 Telephone kiosks, designed 1935, grade II	Post-medieval	A	none	n/a	none	n/a	none	n/a	519000 185816	5
LS 198798	EH	SMR MLO79290	St Andrew's Church Hall, 1904-5, grade II	Post-medieval	A	none	n/a	none	n/a	none	n/a	516302 185764	2
LS 198799	EH	SMR MLO79271	St Andrew's Church, 1925-6, grade II	Post-medieval	A	none	n/a	none	n/a	none	n/a	516280 185730	2
LS 435824	EH	SMR MLO79320	St Andrew's Presbyterian Church, 1904, grade II	Post-medieval	A	none	n/a	none	n/a	none	n/a	518114 184865	4
LS 435855	EH	SMR MLO79291	St George's Church and presbytery, 1925-8, grade II	Post-medieval	A	none	n/a	none	n/a	none	n/a	516175 185780	2
LS 486889	EH		Fire Station, 1937-9, grade II	Post-medieval	A	none	n/a	none	n/a	none	n/a	517686 185008	4
MON 1309759	EH		Piccadilly Line	Post-medieval	D	none	n/a	none	n/a	none	n/a	520231 178752	2,4
MON 1333875	EH		Bakerloo Line	Post-medieval	D	-unc	unknown	none	n/a	none	n/a	518878 184526	3,4,5
MON 1363576	EH		London and Birmingham railway	Post-medieval	D	-unc	unknown	none	n/a	none	n/a	480654 243561	3,4,5

Reference	Source	Cross reference	Description	Period	Importance	PR: Impact	PR: Significance	RO A: Impact	RO A: Significance	RO B: Impact	RO B: Significance	NGR	Figures
MON 1367782	EH		Two flints from topsoil	Prehistoric	D	none	n/a	none	n/a	none	n/a	517100 185750	2,3,4
MON 1378287	EH		Neasden and Northolt railway	Post-medieval	D	none	n/a	none	n/a	none	n/a	516498 185341	2,4,5
MON 1442510	EH	AP. 02	Wembley Open Air Baths	Post-medieval	D	-d min	low	none	n/a	none	n/a	516830 185787	2,3
MON 509443	EH		Sudbury and Harrow Road Station	Post-medieval	D	none	n/a	none	n/a	none	n/a	516800 185300	2
MON 509498	EH		Wembley Central Station	Post-medieval	D	none	n/a	none	n/a	none	n/a	518193 185099	4,5
MON 509501	EH		Wembley Stadium Station	Post-medieval	D	none	n/a	none	n/a	none	n/a	518942 185333	5
MON 509502	EH		North Wembley Station	Post-medieval	D	none	n/a	none	n/a	none	n/a	517663 186201	3
MON 527722	EH		Regal Cinema	Modern	D	none	n/a	none	n/a	none	n/a	518500 185500	4,5
MON 527723	EH		Majestic Cinema	Modern	D	none	n/a	none	n/a	none	n/a	518500 185500	4,5
SMR MLO11300	GLSMR		Tiled hearth	Medieval	D	none	n/a	none	n/a	none	n/a	517105 185905	2,3
SMR MLO14347	GLSMR	SMR MLO68362	Possible site of Free Chapel of St Michael Tokyngton	Medieval	D	none	n/a	none	n/a	none	n/a	519095 185395	5

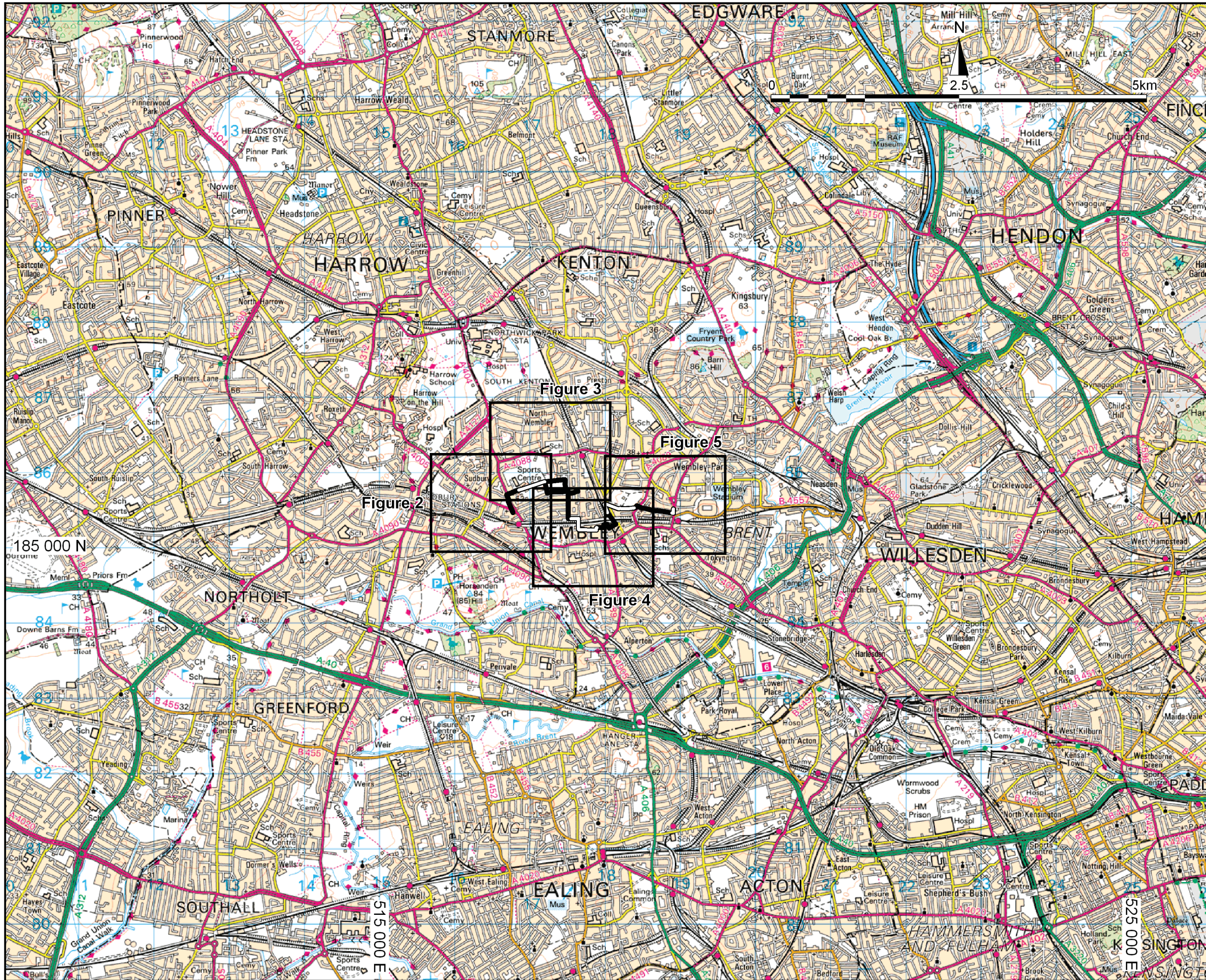
Reference	Source	Cross reference	Description	Period	Importance	PR: Impact	PR: Significance	RO A: Impact	RO A: Significance	RO B: Impact	RO B: Significance	NGR	Figures
SMR MLO19161	GLSMR	SMR MLO67327, MON 647605	Possible dog kennels, pottery	Medieval, Post-medieval	D	none	n/a	none	n/a	none	n/a	519095 185395	5
SMR MLO19947	GLSMR		Chief home of the Wembley Pages	Medieval	D	none	n/a	none	n/a	none	n/a	518705 185205	5
SMR MLO20379	GLSMR		Settlement of Wembley Green	Medieval	D	none	n/a	none	n/a	none	n/a	518805 185205	5
SMR MLO20941	GLSMR	OS 1862-72	Dairy Farm of Wembley Manor	Medieval, Post-medieval	D	none	n/a	none	n/a	none	n/a	518631 185196	4,5
SMR MLO25139	GLSMR		Pottery	Undetermined	D	none	n/a	none	n/a	none	n/a	517405 185505	4
SMR MLO4607	GLSMR		Hundred Elms Farm, hearth, fireplace and Tudor kitchen	Medieval, Post-medieval	D	none	n/a	none	n/a	none	n/a	516505 185905	2,3
SMR MLO4608	GLSMR	MON 647840	Westerwald tankard and a number of wells	Post-medieval	D	none	n/a	none	n/a	none	n/a	516605 185805	2,3
SMR MLO53600	GLSMR		Vicarage	Post-medieval	D	none	n/a	none	n/a	none	n/a	516275 185770	2
SMR MLO5553	GLSMR		House	Post-medieval	D	none	n/a	none	n/a	none	n/a	517225 185041	2,4
SMR MLO58359	GLSMR	MON 1060930	Walls, brick lined drain and a post hole	Post-medieval	D	none	n/a	none	n/a	none	n/a	518605 185605	4,5

Reference	Source	Cross reference	Description	Period	Importance	PR: Impact	PR: Significance	RO A: Impact	RO A: Significance	RO B: Impact	RO B: Significance	NGR	Figures
SMR MLO58369	GLSMR	SMR MLO58370, MON 911107	Building and cobbled surface	Medieval	D	none	n/a	none	n/a	none	n/a	516455 185855	2
SMR MLO67326	GLSMR		Shallow scoops	Medieval	D	none	n/a	none	n/a	none	n/a	519105 185405	5
SMR MLO68359	GLSMR		South Manor	Medieval	D	none	n/a	none	n/a	none	n/a	516505 185505	2
SMR MLO73301	GLSMR	MON 1196901	Alluvial deposits	Undetermined	U	-unc	unknown	none	n/a	none	n/a	518505 185505	4,5
SMR MLO73302	GLSMR	MON 1196901	Rubbish dump	Post-medieval	D	none	n/a	none	n/a	none	n/a	518505 185505	4,5
SMR MLO74468	GLSMR		Possible site of windmill	Post-medieval	D	none	n/a	none	n/a	none	n/a	518805 185605	5
SMR MLO76151	GLSMR		Former Wasps rugby football ground with drains, plough soil	Post-medieval, Modern	D	none	n/a	none	n/a	none	n/a	517100 185750	2,3,4
SMR MLO78493	EH	MON 1187011	Wembley Stadium, 1923 - 2003, now delisted	Modern	D	none	n/a	none	n/a	none	n/a	519355 185539	5
SMR MLO79268	GLSMR	MON 1164762	Palace of Industry, exhibition hall for British Empire Exhibition	Post-medieval	D	none	n/a	none	n/a	none	n/a	519239 185929	5

Reference	Source	Cross reference	Description	Period	Importance	PR: Impact	PR: Significance	RO A: Impact	RO A: Significance	RO B: Impact	RO B: Significance	NGR	Figures
SMR MLO8794	GLSMR		Considerable amount of pottery sherds	Medieval	D	none	n/a	none	n/a	none	n/a	516505 185905	2,3
SMR MLO8817	GLSMR		Pottery	Medieval	D	none	n/a	none	n/a	none	n/a	516450 186050	2
SMR MLO8824	GLSMR		Part of a stone cross	Medieval	D	none	n/a	none	n/a	none	n/a	516505 185605	2

APPENDIX D

Figures 1 - 5



Proposed pipeline

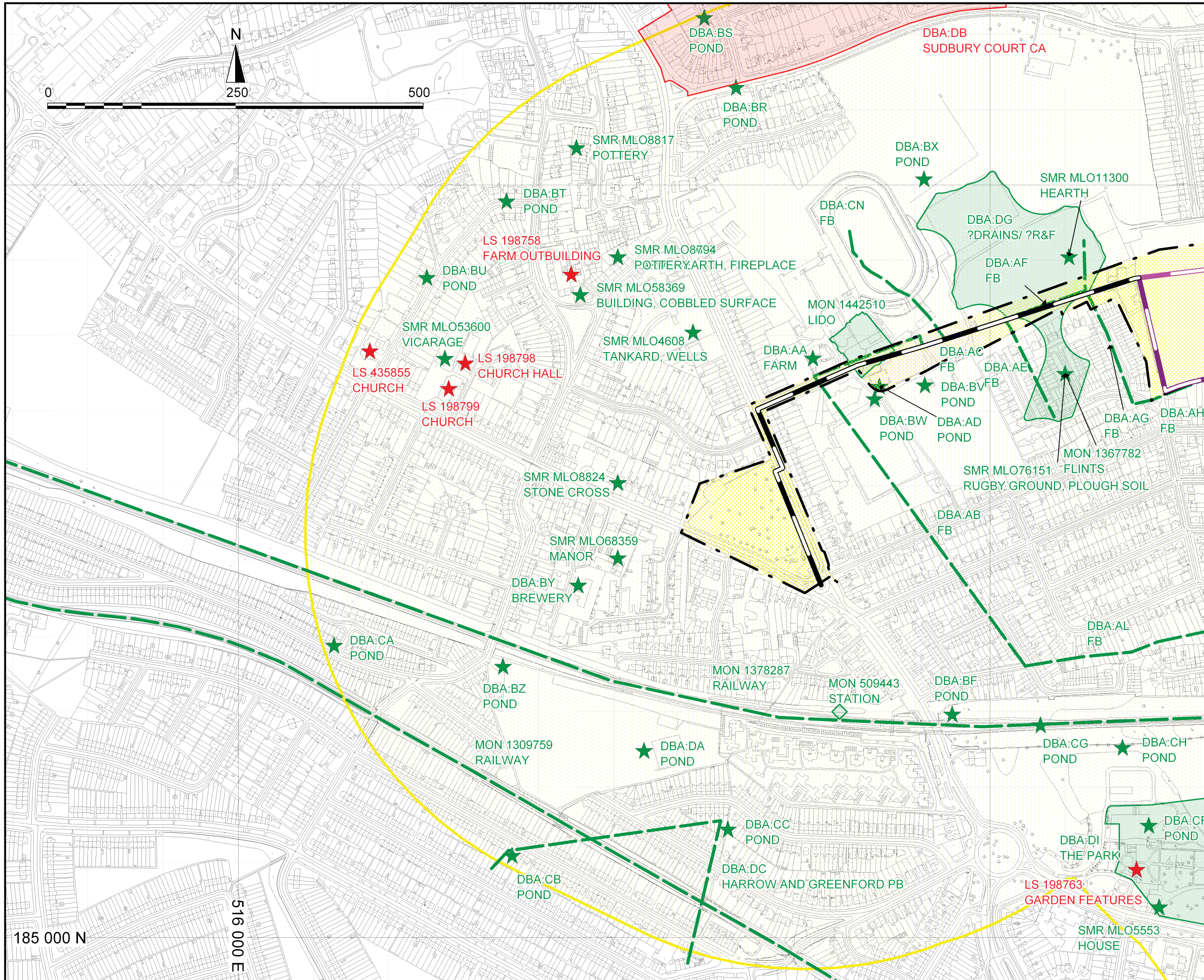


Ver	Date	Description	Drn	Chk	App
1.00	29/05/08	First issue	SAF	AH	DB



Wembley Trunk Main
 Figure 1
 Location of proposed pipeline

Scale: 1:50 000



- Proposed route
- Proposed route option a
- Proposed route option b
- Study area
- Alternative route areas under consideration

- Archaeological constraints**
- A grade
 - B grade
 - C grade
 - D grade
 - U grade

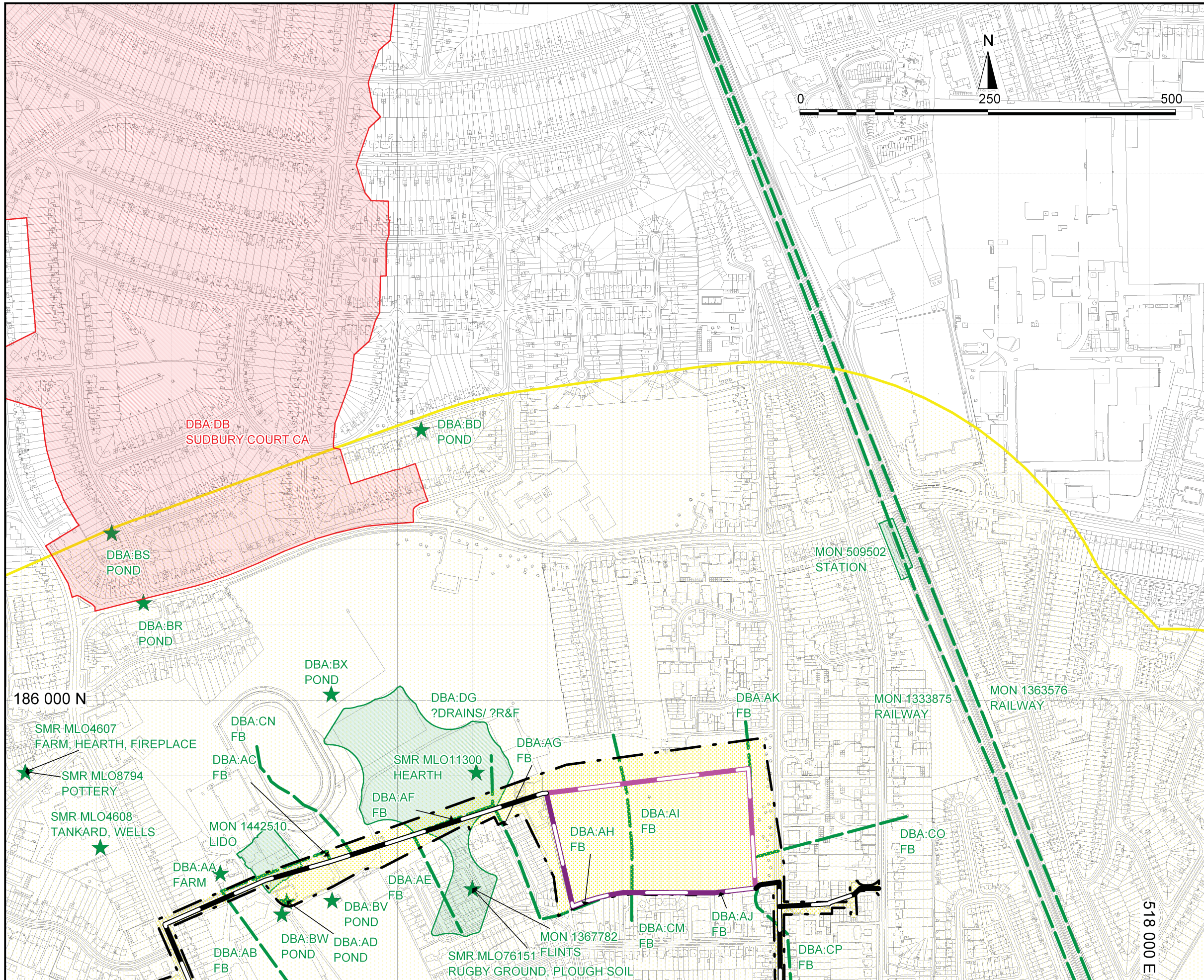
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Wembley Trunk Main
Figure 2
 Archaeological constraints

Scale: 1:5000



- Proposed route
 - Proposed route option a
 - Proposed route option b
 - Study area
 - Alternative route areas under consideration
- Archaeological constraints**
- A grade
 - B grade
 - C grade
 - D grade
 - U grade

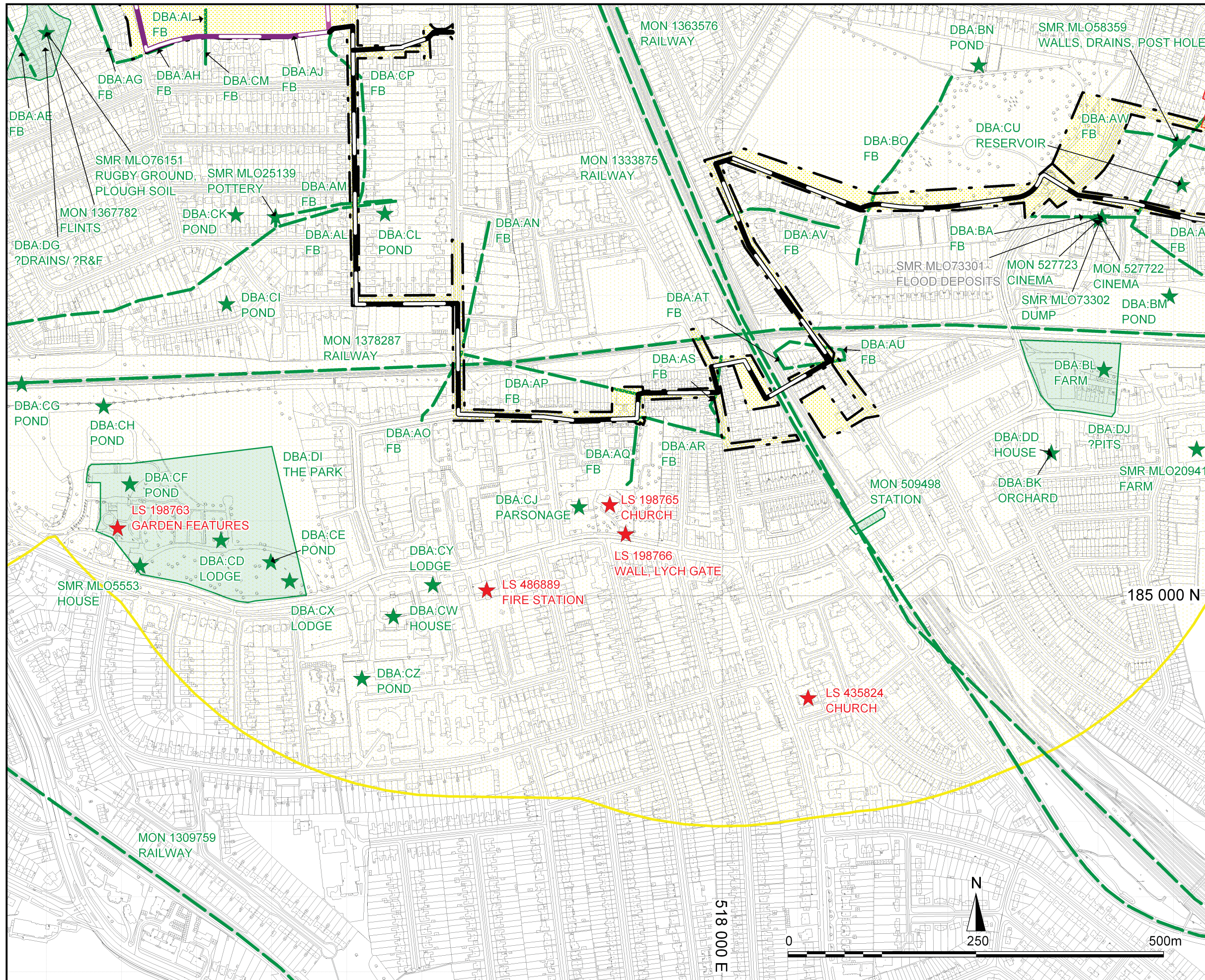
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Wembley Trunk Main
Figure 3
 Archaeological constraints

Scale: 1:5000



- Proposed route
- Proposed route option a
- Proposed route option b
- Study area
- Alternative route areas under consideration

- Archaeological constraints**
- A grade
 - B grade
 - C grade
 - D grade
 - U grade

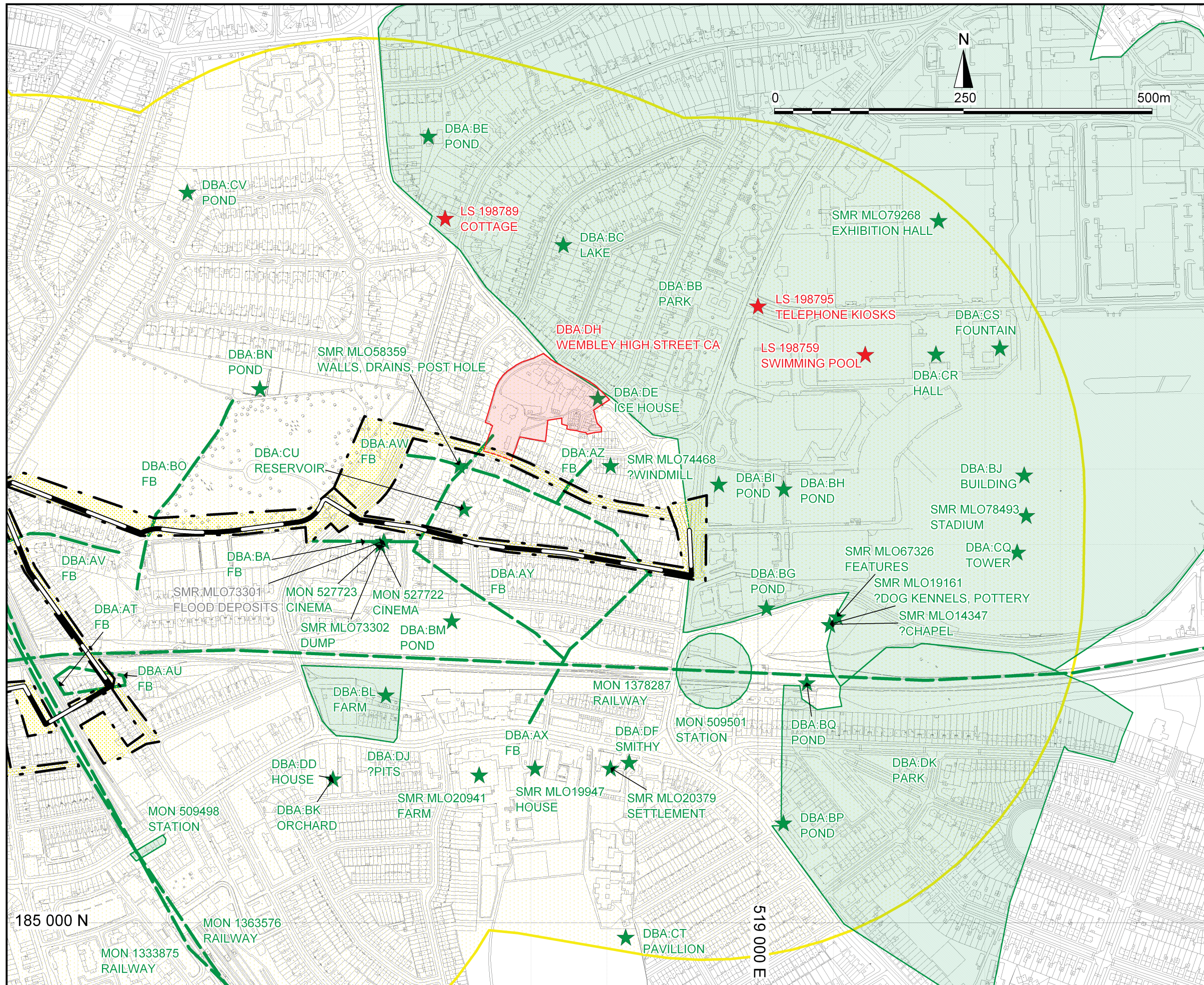
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Wembley Trunk Main
Figure 4
 Archaeological constraints

Scale: 1:5000



- Proposed route
- Proposed route option a
- Proposed route option b
- Study area
- Alternative route areas under consideration

- Archaeological constraints**
- A grade
 - B grade
 - C grade
 - D grade
 - U grade

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Wembley Trunk Main
Figure 5
 Archaeological constraints

Scale: 1:10 000