

Appendix 13.1
Phase 1B (North) Site-specific Scheme of Archaeological
Investigation



Brent Cross Cricklewood Regeneration Area

Phase 1B North Site-specific Scheme of Archaeological Investigation

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This document has been prepared and checked in accordance with Waterman Group's IMS (BS EN ISO 9001: 2008, BS EN ISO 14001: 2004 and BS OHSAS 18001:2007)

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A handwritten signature in black ink that reads 'Mairead Rawal'.

Comments



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Contents

Brent Cross Cricklewood Regeneration Area

WIE11488-101

WIE11488-101_S_1_1_3_WSI

1. Introduction

- 1.1. This Site-specific Scheme of Archaeological Investigation (Condition 43.1) has been prepared by Waterman Infrastructure & Environment Ltd (WIE) on behalf of BXC Development Partners. BXC Development Partners (hereafter referred to as the 'Applicant') have obtained outline planning permission for the:
- 'Comprehensive mixed use redevelopment of the Brent Cross Cricklewood Regeneration Area comprising residential (Use Class C2, C3 and student / special needs / sheltered housing), a full range of town centre uses including Use Classes A1-A5, offices, industrial and other business uses within Use Classes B1-B8, leisure uses, rail based freight facilities, waste handling facility and treatment technology, petrol filling station, hotel and conference facilities, community, health and education facilities, private hospital, open space and public realm, landscaping and recreation facilities, new rail and bus stations, vehicular and pedestrian bridges, underground and multi-storey parking, works to the River Brent and Clitterhouse Stream and associated infrastructure, demolition and alterations of existing building structures, CHP / CCHP, relocated electricity substation, free standing or building mounted wind turbines, alterations to existing railway including Cricklewood railway track and station and Brent Cross London Underground station, creation of new strategic accesses and internal road layout, at grade or underground conveyor from waste handling facility to CHP / CCHP, infrastructure and associated facilities together with any required temporary works or structures and associated utilities / services required by the development (OUTLINE APPLICATION)'*
- 1.2. This parcel of land (hereafter referred to as the 'Site') covers an area of approximately 151 hectares (ha) and is located within the administrative boundary of the London Borough of Barnet (LBB).
- 1.3. The outline planning application was submitted in March 2008 (C/17559/08) and granted conditional consent in October 2010 ('the **2010 Permission**'). A Section 73 (s.73) application (Application Ref: F/04687/13) submitted in October 2013 sought a number of changes to planning conditions including drawings referred to for the previously approved scheme for the Site. The redevelopment proposals were subject to an Environmental Impact Assessment (EIA) process undertaken in line with *The Town and Country Planning (Environmental Impact Assessment) Regulations 2011*¹; (the '**EIA Regulations**') and were reported in a Section 73 Environmental Statement (ES) dated October 2013 ('**s.73 ES**'). The approved redevelopment proposals, as defined by the July 2014 planning permission is subsequently referred to as the '**2014 Permission**'.
- 1.4. The Brent Cross Cricklewood redevelopment already has the benefit of planning permission which now enables the project to progress to detailed design and the approval of Reserved Matter Applications (RMAs) for each Development Phase and Sub-Phase. The following RMAs have been submitted since the approval of the 2014 Permission:
- Submission of applications for RMAs of Plots 53 and 54 (Brent Terrace) (RMA reference 15/00720/RMA) and Clitterhouse Playing Fields and Claremont Park (RMA reference 15/00769/RMA) for Phase 1A (North) in January 2015;
 - Submission of Infrastructure and Central Brent Riverside Park RMAs for Phase 1A (North) (RMA references 15/03312/RMA and 15/03315/RMA respectively);

¹ HMSO (2011), The Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (S.I. 1824) HMSO, London.

- Reserved Matters Approval granted for Plots 53 and 54 in June 2015. Reserved Matters Approval granted for Clitterhouse Playing Fields and Claremont Park RMA in July 2015. Reserved Matters Approval granted for Infrastructure (15/03312/RMA) and Central Brent Riverside Park (15/03315/RMA) in January 2016.

1.5. Condition 43.1 attached to the 2014 Permission requires the following:

Condition 43.1

“Prior to the commencement of Development an over-arching Scheme of Archaeological Investigation will be submitted to the LPA setting out the process for assessing and mitigating the impact of development on archaeological interest, including appropriate post-excavation analysis, archiving and publication.

No part of the Development shall commence within any Phase or Sub Phase unless and until proposals have been submitted to and approved by the LPA for a site-specific Scheme of Archaeological Investigation to preserve or record any archaeological evidence within the Phase or Sub Phase.

Each Phase or Sub-Phase of the Development shall take place in accordance with the approved over-arching Scheme of Archaeological Investigation and the site-specific Scheme of Archaeological Investigation approved for that Phase or Sub-Phase.”

- 1.6. A BXC site-wide specification for archaeological mitigation (Over-arching Scheme of Archaeological Investigation - OSAI), which includes a review of baseline information, was submitted to and approved in writing by Greater London Archaeological Advisory Service (GLAAS), advisors to LBB, in September 2014.
- 1.7. This Site-specific Scheme of Archaeological Investigation (SSAI) has been prepared in response to a requirement for a ‘Site-specific Scheme of Archaeological Investigation’, and relates exclusively to Phase 1B North of the proposed development. More information of the elements of work comprising Phase 1B North is provided in Section 2 below. This specification has also been prepared in line with the approved ‘Over-arching Scheme of Archaeological Investigation’ which can be found at **Appendix B**.
- 1.8. The following sections provide an overall methodology for archaeological mitigation within Phase 1B North, and determine contractor requirements. **Appendix A** elaborates on additional contractor requirements.
- 1.9. An historic environment investigation by Place Archaeological Consultants Ltd, delivering an Archaeology and Cultural Heritage chapter on the Environmental Statement submitted with the original planning application (hereafter referred to as the ‘2010 Permission’), demonstrated potential for the presence of heritage assets within the BXC Site.² The potential relates to:
- 1) Archaeological remains at Clitterhouse Farm, which would have significant potential for elucidating the origins and development of the Site and, in parallel, the early medieval development of Hendon. Of particular interest would be the chance to establish the relationship of the Site to the Saxon estates that subsequently made up the manor of Hendon.
 - 2) The presence of a major Roman road and the River Brent will have been factors that may have attracted settlement during the prehistoric and Roman periods. It is also quite possible

² Place Archaeological Consultants Ltd. 2008. *Chapter 13 – Archaeology and Cultural Heritage* in Environmental Resources Management Ltd. 2008. *Brent Cross Cricklewood: BXC2: Environmental Statement Volume 1a*

that there is additional Saxon/Medieval settlement in the Study Area associated with the known manorial centres. The potential for these remains to be present within the Site boundary has not been confirmed.

- 3) Holocene alluvium and earlier Pleistocene gravels/silts are preserved beneath the former floodplain of the River Brent. Consequently, there is the potential for recovering data relevant to the study of the changing local environment and landscape, and its interaction with human settlement and exploitation through time.
- 1.10. This specification for archaeological mitigation presents an outline methodology for the required work, where applicable to Phase 1B North, and forms the basis for subsequent contractor specific method statements which will require the approval of LBB (advised by GLAAS) prior to implementation.
- 1.11. The results of any archaeological mitigation undertaken will need to be subject to suitable post-excavation assessment. The reports resulting from the fieldwork will present a digest of information on the character and significance of any below ground heritage assets located.

2. Site Location and Description

Brent Cross Cricklewood Regeneration Area

- 2.1. The 151-hectare Site is defined to the west by the Edgware Road (A5) and the Midland mainline railway line, to the east by the A41, and is bisected east to west by the A406 North Circular Road. The Site is adjacent to Junction 1 of the M1 and includes the existing Brent Cross Shopping Centre and Bus Station to the north of the North Circular as well as the existing Sturgess Park. To the south of the North Circular Road the area contains the Brent South Shopping Park, existing Tesco store and Toys 'R' Us store, the Whitefield estate, Whitefield Secondary School, Mapledown Special School and Claremont Primary School; Hendon Leisure Centre, Brent Cross London Underground Station to the east; Clarefield and Claremont Parks and Clitterhouse Playing Fields; the Hendon Waste Transfer Station, Claremont Way Industrial Estate and Cricklewood Railway Station to the far south. The Site includes parts of Cricklewood Lane, including the open space in front of the B&Q store.
- 2.2. The Templehof Bridge and the A41 flyover provide the only existing direct north-south link across the North Circular Road within the Site.
- 2.3. A section of the River Brent, contained within a concrete channel, flows east to west through the Site to the south of the Brent Cross Shopping Centre.
- 2.4. The London Borough of Brent is located to the immediate west of the Site, on the opposite side of the A5 Edgware Road. The London Borough of Camden adjoins the Site to the south at Cricklewood Town Centre.
- 2.5. The Site is dominated and constrained by the existing road network and rail infrastructure. It contains industrial land, former railway land, retail 'sheds' and large areas of surface car parking. In these parts of the Site's comprehensive redevelopment is required to enable the provision of a sustainable mixed use town centre and to create an acceptable residential environment.
- 2.6. To the north, east and south, the Site is surrounded by traditional low rise suburban development, predominantly two storey semi-detached houses. These areas of existing housing - with the exception of the Whitefield Estate - are not directly subject to the proposals as they are not contained within the 2014 planning application Site boundary.
- 2.7. The A5 / Edgware Road follows the line of the Roman road from *Londinium* to *Verulamium* (St Albans), which is known as Watling Street (a name of Saxon derivation). The Site is located approximately 2 km south of the historic core of Hendon.

Phase 1B (North) Proposals

- 2.8. Phase 1 is subdivided into a number of 'sub-phases', each relating to specific areas of the overall site, and specific works within them. The works proposed for this phase are illustrated in **Figure 1** and are summarised below. This specification relates exclusively to works proposed for Phase 1B North.
 - K20 – Transport interchange T2 (Replacement Brent Cross Bus Station);
 - K30 – All BXE Development Plots;

- K31 – Brent Cross Main Square;
- K32 – River Brent Nature Park;
- K33 – Eastern Brent Nature Park;
- K35 – Community Facilities (Brent Cross East);
- K36 – Sturgess Park Improvements;
- K37 – High Street North;
- K38 – Neighbourhood Police Unit (BXE);
- K41 – Western Brent Riverside Park; and
- K48 – Threshold spaces – Layfield Place, Fenwick Place and Templehof Circus.

Phase 1B North - Areas Identified for Further Archaeological Investigations

2.9. The following works would fall within areas agreed to be the subject of proposed archaeological investigations within the approved site-wide OSAI:

- K20 – Transport Interchange T2 (Replacement Brent Cross Bus Station);
- K30 –BXE Development Plots 101, 102, 103, 104, 106, 108, and 109;
- K31 – Brent Cross Main Square;
- K32 – River Brent Nature Park;
- K33 – Eastern Brent Nature Park;
- K37 – High Street North;
- K38 – Neighbourhood Police Unit (BXE);
- K41 – Western Brent Riverside Park; and
- K48 – Threshold spaces – Layfield Place, Fenwick Place and Templehof Circus.

Geology and Topography

- 2.10. The A406 North Circular Road is coincident with the former floodplain of the River Brent and consequently the wider application Site rises gently away from this low point on both sides, from approximately 40 m AOD to approximately 55 m AOD. There are no other significant landforms within the Site boundary.
- 2.11. Geological mapping of the area (BGS England & Wales Sheet 256, Solid and drift; published 1994) indicates that London Clay underlies the majority of the Site. Alluvium is mapped in the former floodplain of the River Brent, with a small pocket of Pleistocene terrace deposit (Taplow Gravel) recorded for the north-east corner of the wider Site.
- 2.12. A number of historic and recent geotechnical investigations have been carried out on behalf of the Applicants. Borehole and window sample logs from a ground investigation by Structural Soils in 2006 are included within the OSAI in **Appendix B**. Borehole and window sample logs from a second ground investigation by Structural Soils in 2014 are also included within the OSAI in **Appendix B**.
- 2.13. **Appendix C** contains a copy of the “Phase 1AN Ground Investigation Report” by AECOM (undertaken on their behalf by URS, formerly Scott Wilson), in February 2015. This report

includes preliminary analysis and interpretation of the historic ground investigation data depicting the surface of The London Clay Formation, thickness of Made Ground, location and thickness of Alluvium, location and thickness of River Terrace Deposits and the level of groundwater, site wide, in plan and section.

- 2.14. **Appendix D** contains a site plan and draft borehole logs for the geotechnical investigation carried out in August 2016 by Waterman (undertaken on their behalf by Soil Consultants).

3. Archaeological Background

- 3.1. The Overarching Written Scheme of Investigation reviews the baseline for the overall 2014 planning application area. This baseline is reviewed below exclusively in relation to proposals for Phase 1B North.
- 3.2. The only listed building within the wider BXC Site boundary is the Grade II listed Brent Cross Underground Station and parade of shops. There are no proposals for the building or within its setting for Phase 1B North. Other listed buildings within the 3 km radius study area include the Grade II listed The Crown Public House and the Three Lamp standards in front of it, the Grade II listed Milestone sited outside numbers 3 and 4 Gratton Terrace, the Grade II listed St Michael's Church, the Grade II listed Dollis Hill Synagogue and forecourt railings, the Grade II listed Dollis Hill House, and the Grade II* listed public house 'The Old Oxgate'. None of these listed buildings, or their settings, would be affected by Phase 1B North of the BXC Development.
- 3.3. The Cricklewood Railway Terraces Conservation Area is located outside the BXC Site boundary, between the south-west Site boundary and Edgware Road. The Phase 1B North of the Development is not expected to have any significant effects on this designated asset.
- 3.4. Two registered parks are located within the Study Area (as defined in 2014 Permission): Golders Green Crematorium to the north-east and Hampstead Cemetery to the south-east. Given their urban setting and lack of significant inter-visibility with the Site, they would not be affected by proposals for the Phase 1B North of the Development.
- 3.5. The site of the Battle of Barnet is located approximately 9 km to the north-east of the Site in the area of Monken Hadley. This is sufficiently distanced from the Site and would not be affected by proposals for the Phase 1B North of the Development.
- 3.6. Buildings of Local Architectural or Historical Interest were identified from the LBB's online GIS facility. None of the buildings were within 200 m of the Site and thus it was not considered necessary to collect further baseline data on them.
- 3.7. Neither the "Childs Hill (3a)" or "Cricklewood" Areas of Special Archaeological Significance (ASAS) will be directly or indirectly affected by the Phase 1B North Development proposals.
- 3.8. The course of the Roman road from *Londinium* (London) to *Verulamium* (St Albans) runs along the west side of the Site (A5 / Edgware Road) and remains of the actual road, or associated features, may therefore be present. Phase 1B North works will coincide with the areas agreed for archaeological mitigation along Edware Road (A5). The Phase 1B North of the Development is not expected to have any significant effects on this non-designated asset.
- 3.9. It has been established that Holocene alluvium and underlying Pleistocene terrace deposits are preserved within the historic course of the River Brent. It is possible that archaeological artefacts and other remains may be preserved within these deposits, which are in themselves of interest for palaeo-environmental studies.
- 3.10. The extent to which any potential archaeological remains survive will depend on the nature and extent of any subsequent impacts on the Site – namely later agricultural uses and the

subsequent development and redevelopment from the mid-nineteenth century onwards, within areas affected by the Phase 1B North Development.

- 3.11. In the first instance, ploughing will have damaged and possibly destroyed any above ground remains such as earthworks. Remnant floor levels and other shallow deposits and features may have been removed by these activities; however, deeper cut archaeological features would still be preserved.
- 3.12. Widespread industrial and commercial uses from the late nineteenth century onwards will have continued this process of resource denudation, with impacts now being generated to greater depths by basements, foundations, cuttings for the railway and widespread bulk excavation to change surface levels.
- 3.13. By the end of the twentieth century, preservation of archaeological remains would, for the most part, likely be restricted to more substantial cut features (e.g. deeper ditches, pits, wells) in small isolated areas that had escaped major development such as around the Brent Cross Shopping Centre, the railway lands, the industrial estates and construction of the M1 and other major roads and junctions. It should be noted, however, that any remains buried within or beneath superficial deposits such as alluvium or colluvium, might have been protected from the impacts identified here. Such deposits are also an important resource in themselves and are known to be preserved within the Site.
- 3.14. In accordance with the scoping document submitted to LBB in 24th June 2014, the purpose of this SSAI is to set out the process for assessing and mitigating the impact of development on archaeological interest, including appropriate post-excavation analysis, archiving and publication.
- 3.15. The SSAI includes mapping of the general areas and degrees of archaeological potential across the site, identifying levels of expected truncation to date, expressed as areas suitable to varying forms of mitigation (see **Figures 2 to 4**). This is informed through a site walkover, and review of historic mapping, as well as the original assessment.
- 3.16. The three figures illustrate general areas of potential, indicating areas of agreed mitigation where these overlap with development proposals for the Phase 1B North. **Figure 2** combines the known truncation, known archaeology, and areas of potential, indicating which form of mitigation has been agreed for each area (i.e. geo-environmental investigations and watching brief). **Figures 3 and 4** depict the two separate elements of applicable archaeological mitigation for Phase 1B North, namely palaeo-environmental sampling and watching brief.
- 3.17. This Site-specific SAI sets out the process and general principles to be employed in the investigations. This forms a set of strategies to be adopted during the Phase 1B North of the development.

4. Areas Identified for Further Archaeological Investigation

- 4.1. The OSAI (**Appendix B**) sets out the process for assessing and mitigating the impact of the Development on archaeological interest, including appropriate post-excavation analysis, archiving and publication.
- 4.2. The OSAI includes mapping of the general areas and degrees of archaeological potential across the site, identifying levels of expected truncation to date. **Figure 2** of this specification summarises the known truncation, known archaeology, and areas of potential, indicating generally which form of mitigation would be appropriate for each area within Phase 1B North (i.e. geo-environmental investigations and watching brief), as agreed with GLAAS during consultation.
- 4.3. This 'Site-specific SAI' sets out process and general principles to be employed such as watching brief, and paleo-environmental sampling within Phase 1B North and each sub-phase within it identified as requiring further archaeological investigation.
- 4.4. **Table 1** below determines which Development works (including sub-phase) fall wholly or partly within areas proposed for further archaeological investigation.

Table 1: Further archaeological investigations proposed for each sub-phase

Phase	Category of work	Sub-phase	Proposed Archaeological Mitigation
Phase 1B North	Infrastructure	K20 – Transport Interchange T2 (Replacement Brent Cross Bus Station)	Archaeological Watching Brief and Paleo-environmental Sampling
Phase 1B North	Buildings	K30 -BXE Development Plots 101, 102, 103, 104, 106, 108, and 109	Archaeological Watching Brief and Paleo-environmental Sampling
Phase 1B North	Buildings	K38 - Neighbourhood Police Unit (BXE)	Archaeological Watching Brief and Paleo-environmental Sampling
Phase 1B North	Public Realm	K31 - Brent Cross Main Square	Archaeological Watching Brief and Paleo-environmental Sampling
Phase 1B North	Public Realm	K37 - High Street North	Archaeological Watching Brief and Paleo-environmental Sampling
Phase 1B North	Public Realm	K48 - Threshold spaces - Layfield Place, Fenwick Place and Templehof Circus	Archaeological Watching Brief and Paleo-environmental Sampling
Phase 1B North	New/Improved Green Space	K32 - River Brent Nature Park	Archaeological Watching Brief and Paleo-environmental Sampling

Phase	Category of work	Sub-phase	Proposed Archaeological Mitigation
Phase 1B North	New/Improved Green Space	K33 – Eastern Brent Nature Park	Archaeological Watching Brief and Paleo-environmental Sampling
Phase 1B North	New/Improved Green Space	K41 - Western Brent Riverside Park	Archaeological Watching Brief and Paleo-environmental Sampling

Paleo-environmental Sampling and Watching Brief – River Brent

- 4.5. The potential for the presence of below ground heritage assets has been confirmed by a baseline assessment of the Site area, which is presented in **Appendix B**.
- 4.6. There are two main areas with paleo-environmental potential within the wider Site, the former course of the River Brent, and the course of the tributary stream (Clitterhouse Brook) which crosses the eastern half of the Childs Hill (3a) Area of Special Archaeological Significance. Clitterhouse Brook will not be affected by the proposed Phase 1B North Development.
- 4.7. The former course of the River Brent will be affected by Development associated with Phase 1B North. This area should be the subject of palaeo-environmental sampling, prior to any development. The strategy for palaeo-environmental sampling will be agreed in consultation with GLAAS (LBB advisors) and Historic England's Scientific Advisor. It will consist of modelling the site based on existing geotechnical site investigation data, and based on that model, designing a paleo-environmental sampling strategy, along a transect within the area identified in **Figure 3**. The number and location of the samples will be informed by information derived from historic and recent geotechnical investigations. The geo-archaeological investigation should be undertaken involving borehole samples in areas of possible preservation to establish the depositional sequence, with a contingency for full analysis of cores (including radiocarbon dating).
- 4.8. Provision should also be made for a watching brief during diversion of the River Brent and any other major groundworks in this area, subject to the results of the paleo-environmental sampling. This watching brief will apply to ground intrusive demolition and construction related works.
- 4.9. The watching brief and paleo-environmental sampling would aim to record the extent, condition, nature, character, quality and date of any archaeological remains encountered as dictated by current best practice.
- 4.10. There is the potential for the survival of below ground heritage assets, described above, within the Site and for the proposed Development's ground works to cause disturbance to any such assets that may be present. For this reason, an archaeological watching brief is appropriate to inform the risk of the Development having an impact on significant below ground heritage assets and to record any heritage assets within the Site boundary prior to development.

- 4.11. The information provided for the reserved matters application for this phase of works has been discussed with GLAAS, and during consultation it was agreed that the works listed in **Table 1** would be the subject of an archaeological watching brief. These areas of work are identified in **Figure 4**.
- 4.12. The following presents a methodology for the watching brief during the groundworks. The excavations and groundworks will be monitored across the areas that would be occupied by new built form, and will aim to characterise the significance of any below ground heritage assets revealed.

Fieldwork Aims for Watching Brief and Paleo-environmental Sampling

- 4.13. The general aims of the investigation are to:
- Record the nature of the main stratigraphic units encountered in terms of their physical composition (stone, sand, gravel, organic materials etc.) and their archaeological formation (primary deposits, secondary deposits etc.);
 - Assess the overall presence and survival of structural remains relating to the main periods of occupation revealed and the potential for the recovery of additional structural information given the nature of the deposits encountered (e.g. extent of later disturbance etc.);
 - Assess the overall presence and survival of the main kinds of artefactual evidence (including pottery, brick, tile, stone, glass, metal, bone, small finds, industrial residues etc.), its condition, given the nature of the deposits encountered; and
 - Assess the overall presence and survival of the main kinds of ecofactual and environmental evidence (including animal bone, human bone, plant remains, pollen, charcoal, molluscs, soils etc.), its condition and potential, given the nature of the deposits encountered.
- 4.14. The specific aims of the fieldwork described above are to determine the following:
- To record and characterise any evidence of Prehistoric occupation;
 - To record and characterise palaeo-environmental materials leading to a better understanding of past land use; and
 - To sample and analyse environmental remains to create a better understanding of past land use.
- 4.15. The fieldwork should be managed by a Member of the Chartered Institute for Archaeologists (CIfA) and the following guidelines and standards for archaeological fieldwork will be adhered to during the execution of the investigation, as applicable:
- CIfA - Code of Conduct (December 2014);
 - CIfA - Standard and guidance for archaeological field evaluation (December 2014);
 - CIfA - Standard and guidance for an archaeological watching brief (December 2014);
 - GLAAS – Guidelines for Archaeological Projects in Greater London (2015)
 - London Archaeological Archive and Research Centre - Standards for Deposition (2009);
 - Historic England - Management of Research Projects in the Historic Environment (2015); and
 - MoRPHE (applicable Technical Guides and Project Planning Notes)³.

³ Available from <https://www.historicengland.org.uk/images-books/publications/morphe-project-managers-guide/>

5. Recording Systems

- 5.1. The recording system will be compatible with Historic England and ClfA standards and guidance. The recording system will also be compliant with other systems used in LBB. The recording system will be based on single context planning as informed by the Museum of London 'red book'. Pro-forma context sheets should include all relevant stratigraphic relationships and for complex stratigraphy a separate matrix diagram should be employed. The following plans and sections are required:
- An overall Site plan of the excavated area will be prepared detailing archaeological deposits as well as the extent of the area relative to the National Grid on a 1:2,500 plan. An overall plan will be prepared at 1:100 scale;
 - Sections containing significant deposits, including half sections, should be drawn as appropriate. Section drawing should include heights Ordnance Datum (OD);
 - All archaeological plans and sections should be on drawing film and at a scale of 1:10 or 1:20 and should include context numbers and OD spot heights for all principal strata and features; and
 - An adequate photographic record of any significant archaeological remains is required, in both plan and section.

6. Finds and Samples

- 6.1. A high priority should be given to dating any remains and so all artefacts and finds are to be retained. Consideration should also be given to the recovery of specialist samples for scientific analysis, particularly samples for absolute dating, structural materials and cultural / environmental evidence. Environmental samples should be taken from suitable deposits and examined for carbonised remains, macroscopic plant remains, pollen, seeds, insect, molluscs etc.
- 6.2. All finds and samples are to be treated in a proper manner to prevent deterioration. This will involve cleaning and conservation where necessary and labelling, cataloguing and secure storage in appropriate containers.
- 6.3. The archaeological contractor will submit, as part of the method statement, a strategy for palaeo-environmental sampling on the Site and for processing and analysis of samples. This work should accord with the minimum standard guidance provided by Historic England and the ClfA. The archaeological contractor shall carry out an assessment of the palaeo-environmental potential of the Site and shall submit this assessment in concise form in writing within the full post-excavation assessment report. The archaeological contractor is expected to seek the advice of a palaeo-environmental specialist in this regard.
- 6.4. The archaeological contractor will need to demonstrate that arrangements are in hand to cover all necessary processing, conservation and specialist analysis of finds and samples, including if necessary the conservation or organic and composite materials and dendrochronological and environmental analysis of samples.
- 6.5. Every effort should be made to ensure that finds analysis is consistent with existing local systems.

7. Monitoring and Access

- 7.1. LBB's archaeological advisors (GLAAS) and WIE will inspect the archaeological works to ensure that they are being conducted to the proper professional standards and in accordance with the agreed method statement. To facilitate this, a projected timetable for Site work will be agreed between WIE, LBB's archaeological advisors (GLAAS), the Applicant, and the contracting archaeological organisation.
- 7.2. Access to the Site will be granted to WIE, the archaeological contractor, and LBB's archaeological advisors (GLAAS).
- 7.3. GLAAS will be notified of the start of the works giving at least one week's notice in writing.

8. Health and Safety

- 8.1. The archaeological contractor shall comply with all relevant Health and Safety legislation, including Regulation 3 of the Management of Health and Safety at Work Regulations (Risk Assessment) and the requirements of The Health and Safety at Work Act of 1974.
- 8.2. The archaeological contractor will prepare a Risk Assessment for the Site in accordance with that organisation's health and safety policy. Health and safety will take priority over archaeological matters. All archaeologists undertaking fieldwork must comply with all relevant Health and Safety Legislation. In particular, machinery should be kept away from unsupported trench / excavation edges and public access should be restricted. Barriers, hoardings and warning notices should be installed as appropriate. Safety helmets are to be used by all personnel as necessary.
- 8.3. Available reports and drawings pertaining to ground conditions and services will be provided to the archaeological contractor, however, any further information deemed necessary shall be obtained by the contractor prior to intrusive works commencing. In addition to written records it is expected as a minimum that trenches should be checked for services using a CAT scanner. The contractor is responsible for any damage and repairs to site services.
- 8.4. Spoil must be kept at a safe distance from the trench / excavation edge, however, the location of the spoil heap may be within the Site or spoil may be removed off-site immediately.
- 8.5. No existing rights of way or accesses should be blocked during the course of Site work. Adjacent public roads should be kept free of mud and spoil.
- 8.6. To ensure wildlife legislation is adhered to, this specification shall be read in conjunction with the method statement(s) for ecological mitigation, where they exist, and any areas of overlap shall need to be considered in terms of both ecological and archaeological works proposed, with a view of establishing a programme of works which complies with both methodologies.
- 8.7. If works are undertaken in the vicinity of any trees, trees shall be adequately protected as detailed in BS 5837-2012: 'Trees in relation to Design, Demolition and Construction'.
- 8.8. Prior to commencement of intrusive works led by an archaeological sub-contractor, the locations of any excavation, and the immediate vicinity, will be scanned by a specialist UXO (Unexploded Ordnance) officer using a magnetometer to check for buried ferrous objects that could possibly be UXO. The UXO officer will remain in attendance so that, if deemed necessary, additional scans will be carried out at regular intervals as each trial trench excavation progresses.
- 8.9. Prior to the commencement of ground intrusive works lead by archaeological sub-contractors (i.e. paleo-environmental sampling) reference will be made to the Code of Construction Practice developed for the scheme. Individual contractors will be required to prepare and implement individual Construction Environmental Management Plans (CEMPs), within the terms of the approved CoCP.

9. Post – Excavation and Reporting

- 9.1. The archive will be prepared and a post-excavation assessment undertaken immediately after the Site works have been completed, and will be finalised within 12 months of completion of site works. This shall be prepared in accordance with the specification given in *Management of Research Projects in the Historic Environment*⁴ and MoRPHE (applicable Technical Guides and Project Planning Notes)⁵.
- 9.2. Each category of finds will be assessed by specialist staff and recommendations prepared for a further study should this be required by GLAAS. All artefacts and ecofacts will be processed in accordance with standard practice. No artefacts, ecofacts or environmental samples will be discarded without written permission from GLAAS.
- 9.3. The draft post-excavation assessment report will be submitted to WIE for verification and approval. It will be the property of the Applicant and will represent a confidential document.
- 9.4. Once finalised, a hard copy of the report will be submitted by the contractor to the London Archaeological Archive and Resource Centre (LAARC). An e-copy, as a pdf, will be submitted to GLAAS for inclusion in the GLHER. In addition, the photographic record of the works will be made available to the National Monuments Record (NMR) prior to archiving in order to enable selection of suitable materials for copying for inclusion into the GLHER. Once submitted, the post-excavation assessment report will become a public document.
- 9.5. Provision will be made for an appropriate level of academic publication of the results of the fieldwork. A summary report will be prepared by the contractor and submitted for publication in the relevant local journal. Additional publication requirements will be agreed with the LBB's archaeological advisors (GLAAS).
- 9.6. The report should include:
 - A review of the aims and methods used in the paleo-environmental sampling and watching brief;
 - A table summarising the descriptive text showing the features, classes and numbers of artefacts and their interpretation;
 - Artefact analysis to include the production of a descriptive catalogue with finds critical for dating and interpretation illustrated;
 - Illustrations including Site and excavation area plans, sections (1:10), plans of any archaeological features (1:20) and general and detailed photographs;
 - The nature, extent, date, condition and significance of the archaeological and environmental material uncovered with specialist opinions and parallels from other sites in the area;
 - An interpretation of the results should be produced and attention should be given to the significance of the remains in local, regional and national terms, if appropriate; and
 - A reconsideration of the methodology used, including a confidence rating of the strategy and the results.
- 9.7. The archaeological contractor will also input details of the project to the online database maintained by the Online Access to the Index of Archaeological Investigations (OASIS) Project at the following internet site: <http://www.ads.ahds.ac.uk/project/oasis>.

⁴ Historic England, April 2015. *Management of Research Projects in the Historic Environment - The MoRPHE Project Managers' Guide*

⁵ Available from <https://www.historicengland.org.uk/images-books/publications/morphe-project-managers-guide/>

10. Archiving

- 10.1. The Site archive, which comprises records of the palaeo-environmental sampling and watching brief, and any materials recovered, including written elements, plans and drawings, photographic prints and transparencies (where appropriate) and other primary data recovered during the investigation, must be quantified, ordered, indexed and made internally consistent. It should also contain, as a minimum requirement, a Site matrix, Site summary (a short report giving a preliminary account of the discoveries) and brief written observations on the artefactual and environmental data.
- 10.2. Work on the Site archive shall be completed by the archaeological contractor within twelve calendar months of completion of the archaeological field investigation. Upon completion of the Site archive the archaeological contractor shall arrange a meeting with GLAAS to present the archive for inspection prior to its deposition in an appropriate museum.
- 10.3. All artefacts (e.g. pottery, metalwork, objects in worked flint and stone, wood, bone, horn and leather, slag) and ecofacts (organic finds such as bones, preserved ancient plant remains, seeds, pollen and charcoal, soil samples) recovered during the archaeological investigations will be made available to the archaeological contractor pending completion of the excavation report, to be stored during the course of the archaeological investigations at the contractor's secure offices or usual place of secure storage of archaeological finds.
- 10.4. All artefacts recovered during the archaeological investigations are to be suitably washed (where the condition of the artefacts allows) and marked by the contractor and all artefacts and ecofacts bagged and boxed by the contractor, in accordance with current United Kingdom Institute for Conservation (UKIC) / RESCUE publication First Aid for Finds (3rd. ed. 1998). All 'small finds' will be boxed together, separate from bulk finds.
- 10.5. In preparing cost estimates for the archaeological investigations, the contractor should include provision for at least a basic minimum level of conservation of finds liable to deterioration after excavation.
- 10.6. Subject to the legislation of the Treasure Act 1996, all artefacts and ecofacts unearthed from the investigation and all other elements of the Site archive (as defined in EH's The Management of Archaeological Projects (1991) should be deposited by the contractor in an appropriate public museum registered or provisionally registered by the Museums and Galleries Commission and acceptable to GLAAS (in this case the LAARC). No artefacts or ecofacts from the Site shall be deposited in the relevant depository without the prior written consent of the landowner. Should the land owner be unwilling to deposit the archive with LAARC, a full photographic and drawn survey will need to be made of all artefacts and elements being withheld.
- 10.7. In the absence of an appropriate archive, provision should be made by the archaeological contractor for retaining the project archive until such time as a suitable depository is available and arrangements have been made for the transfer of the archive.
- 10.8. The archaeological organisation will then ensure that the Collections Manager is notified and liaised with at an early stage. It is the responsibility of the archaeological contractor to meet the local museum's reasonable requirements with regard to the preparation of archives for deposition.

- 10.9. Provision should be made for the payment of a 'deposit grant' at the time of archive transfer towards the costs of archive curation in perpetuity. The rates and requirements currently employed by archive stores elsewhere in the country and by LAARC for its archive store should be used for guidance.
- 10.10. Prior to the deposition of finds in the recipient museum, the archaeological contractor should agree with that museum the sample or quantity of bulk finds (pottery, animal and (if appropriate) human bone, other ecofactual material, building material, burnt flint, worked flint and stone) to be deposited.
- 10.11. All excavated artefacts and ecofacts and all other elements of the Site archive should be delivered by the contractor to the recipient museum as one deposit, and written confirmation of this should be provided to LBB's advisor. Where this arrangement is not practicable lists will be submitted by the contractor to the recipient museum of objects not deposited, together with information as to the quantity involved and their current location, reasons why items have not been deposited and a timetable for their ultimate deposition.
- 10.12. The contractor should contact the recipient museum prior to preparing cost estimates for the work in order to discuss any special requirements for the deposition of finds.
- 10.13. Subject to the resources available and to discussion with the recipient museum all articles needing conservation will be properly stabilised by the contractor prior to their deposition at the recipient museum and records of their treatment lodged with the museum. Those items for which available resources do not permit stabilisation will be separately packed and listed by the contractor.
- 10.14. Prior to commencement of the archaeological investigations the contractor shall obtain from the recipient museum an accession number(s) for excavated artefacts and ecofacts from the project and any guidelines regarding deposition of such artefacts and ecofacts specific to the recipient museum.
- 10.15. All finds, save those specifically excluded by the recipient museum or excluded on grounds of size/material, must also be marked by the contractor with the recipient museum's accession number.
- 10.16. Artefacts and ecofacts deposited by the contractor in the recipient museum must be accompanied by the remainder of the original Site archive or by a complete duplicate record thereof. A microfiched security copy of the Site archive should also be supplied by the archaeological contractor to the recipient museum.
- 10.17. Subject to the agreement of the landowner, all artefacts and ecofacts recovered from the archaeological investigations should be deposited by the archaeological contractor within the recipient museum within five years from the date of completion of the investigation.
- 10.18. Copyright of the written, drawn and photographic elements of the Site Archive shall be vested jointly with the archaeological contractor and the recipient museum.
- 10.19. The following documents should be adhered to:
- Museum and Galleries Commission - Standards in the Museum Care of Archaeological Collections (1992);
 - London Archaeological Archive and Research Centre - Standards for Deposition (2009);

- Historic England - Management of Research Projects in the Historic Environment (2015); and
- MoRPHE (applicable Technical Guides and Project Planning Notes)⁶.

⁶ Available from <https://www.historicengland.org.uk/images-books/publications/morphe-project-managers-guide/>

11. Requirements of the Archaeological Contractor(s)

- 11.1. The archaeological contractor(s) will provide WIE with a method statement for undertaking any stage of mitigation, which will be compatible with the requirements of the LBB's archaeological advisors (GLAAS). This will include all fieldwork and post-excavation work including archiving.
- 11.2. It will include a brief method statement, resourcing levels and programme / schedule for the works. The archaeological contractor should also provide a brief career profile of the Site supervisor which demonstrates his / her suitability for undertaking the work.
- 11.3. A full cost estimate for the fieldwork, post-excavation and archiving should be provided to the Applicant or its agent.

FIGURES

Figure 1: Revised Phasing Plan - Phase 1B (North)