KDK Archaeology Ltd

Written Scheme of Investigation for Archaeological Excavation

Church Gardens

Church Hill

Harefield

London

Ellen Shlasko PhD

May 2024

Site Data

KDK project code:	838/HCGKF		
OASIS ref:	kdkarcha1-524243	*Event/Accession no:*	TBA
County:	London		
Village/Town:	Harefield		
Civil Parish:	Hillingdon, unparished area		
NGR (to 8 figs):	TQ 0516 8982		
Present use:	Garden		
Planning proposal:	Erection of a single storey extension to rear of garage		
Local Planning Authority:	London Borough of Hillingdon		
Planning application ref/date:	50761/APP/2023/2677 and LBC 50761/APP/2023/2681		
Client:	Patrick and Kay McHugh Church Gardens Church Hill Harefield, Middlesex		

Quality Check

Author	Ellen Shlasko PhD	*Version*	838/HCGKF/1.1	*Date*	11.04.2024
Editor	Karin Kaye MA MCIfA	*Version*	838/HCGKF/1.1	*Date*	16.04.2024
Revision	Karin Kaye MA MCIfA	*Version*	838/HCGKF/1.2	*Date*	18.04.2024
Revision	Karin Kaye MA MCIfA	*Version*	838/HCGKF/1.3	*Date*	08.05.2024

Unit 3 Leighton Road Leighton Buzzard Bedfordshire LU7 1LA
Tel: 01525 385443
Email: office@kdkarchaeology.co.uk
Website: www.kdkarchaeology.co.uk

CONTENTS

Figures:

Appendices:

1 Introduction

1.1 This Written Scheme of Investigation has been prepared on behalf of Patrick and Kay McHugh as a specification for Archaeological Excavation at Church Gardens, Church Hill, Harefield, London. The work, which is part of a requirement of the National Planning Policy Frameworks (NPPF) (DLUHC 2023), Condition 5 of the Planning Consent and Condition 3 of the Listed Building Consent, has been requested by the Greater London Archaeological Advisory Service (GLAAS), on behalf of the local planning authority (LPA), London Borough of Hillingdon. The relevant planning application references are 50761/APP/2023/2677 and LBC 50761/APP/2023/2681.

1.2 This Written Scheme of Investigation incorporates the requirements set out by Historic England in *Management of Research Projects in the Historic Environment* (2015) and covers:

- The scope of the project
- The objectives and methodologies
- The archaeological & historical context
- Dissemination of the results
- Archive deposition
- Details of permanent and specialist staff
- The proposed programme of work
- Relevant additional information, e.g. insurance, copyright etc.
- Bibliography of professional and academic resources

1.3 *The Site*

The parish and village of Harefield is located within the administrative district of the London Borough of Hillingdon. The site lies within the southern end of the settlement to the east of Church Hill on National Grid Reference (NGR) TQ 05162 89822 (Fig. 1)

Description
Church Gardens is located at the end of a drive off Church Hill approximately 225m from the main road. Directly north east of the property is the ANZAC Cemetery and St Marys Church is situated just beyond the cemetery. The north, east and south of the site is bounded by open fields (Fig. 2).

The property is located within Harefield Village Conservation Area (DLO36734) and Archaeological Priority Area (DLO36183). Both the house and garden walls are Grade II listed. Historic England lists Church Gardens under the name Nursery Cottage (List Entry No. 1192887) and is described as follows:

1. 5018 CHURCH HILL (East Side) HAREFIELD Nursery Cottage, Church Gardens Nursery TQ 0589 6/61 II 2. Remnant of outbuilding to a larger house, now lost. Of C17 origin but with late C18 or early C19 west wall consisting of 4 bays of 2-storey blank arcading in pinkish brick with store impost blocks. 2 modern windows inserted. Hipped roof of modern tile. Behind the west wall C17 brickwork can be seen. On 2-bay east front brickwork appears to be late C18 or early C19. Horizontal sliding sashes above, double-hung sashes below, both with glazing bars. Carriage doors in weatherboarded right section.

Much of the 17th century garden wall still survives to the southeast of the Church Gardens (List Entry No. 1192887; MLO 85096). The list entry describes the walls as follows:

1. 5018 CHURCH HILL (East Side) HAREFIELD Garden walls to east and south of Church Gardens Nursery Cottage TQ 0589 6/62 II 2. C17 red brick walls extending from south-west of cottage enclosing 2 inner garden spaces and partly enclosing a further space to east. Breached and broken but very tall in places. On the south-west face of the north-eastern wall an arcade of fairly tall round-backed niches with half-hemispherical heads suggests an orangery or sculpture gallery.

Geology & Topography

The bedrock geology is the London Clay Formation, which is comprised of clay, silt and sand, formed approximately 48 to 56 million years ago in the Palaeogene Period; no superficial deposits have been recorded (http://geologyviewer.bgs.ac.uk/html). The site rises from elevation of *c*.48.37m in the southeast to *c*.52.81m AOD to the northwest.

Proposed Development

The proposed development calls for the erection of a single storey extension to rear of garage (Fig. 3).

Figure 1: General location (scale 1:25,000)

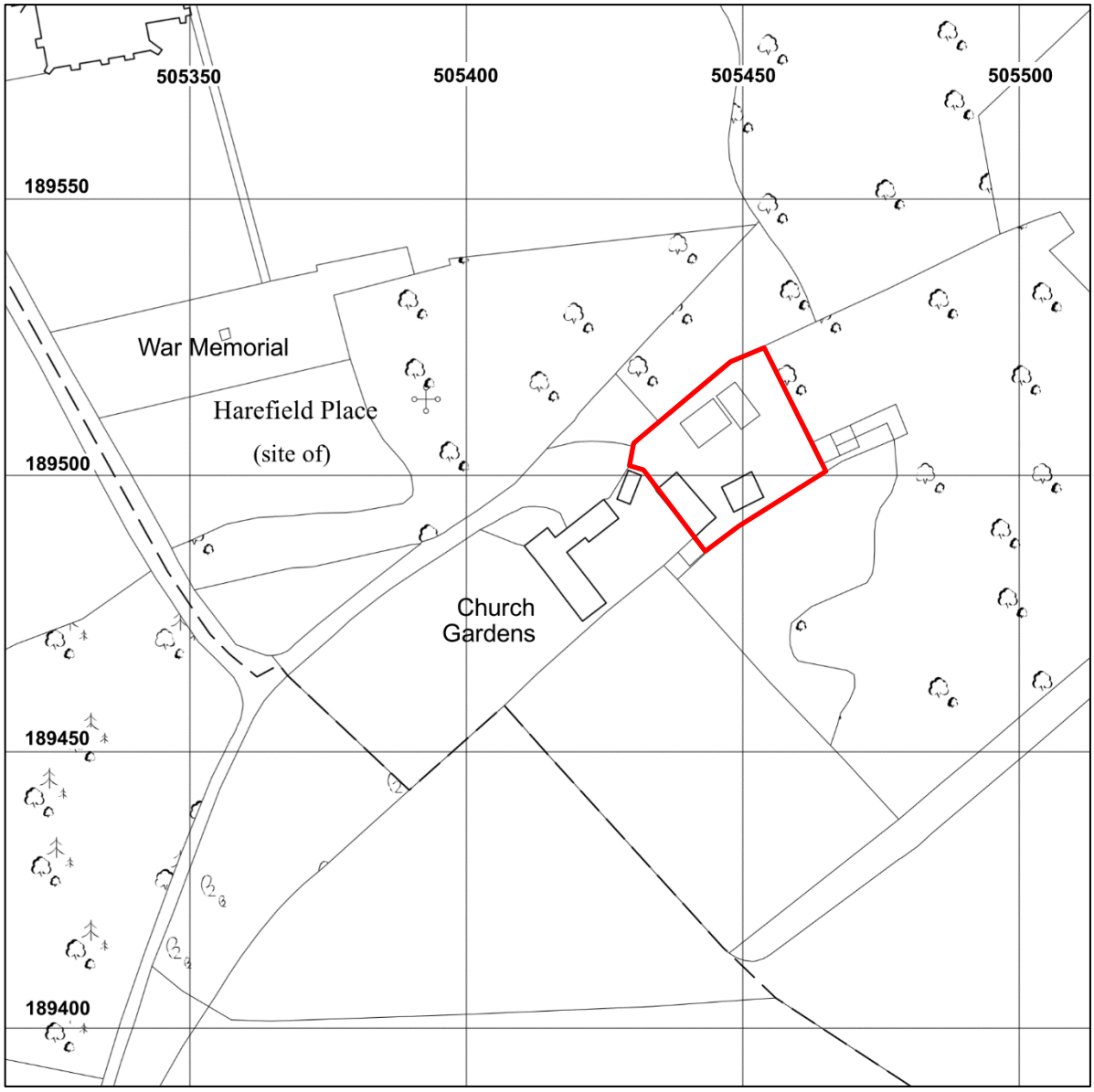

Figure 2: Site layout (scale 1:1250)

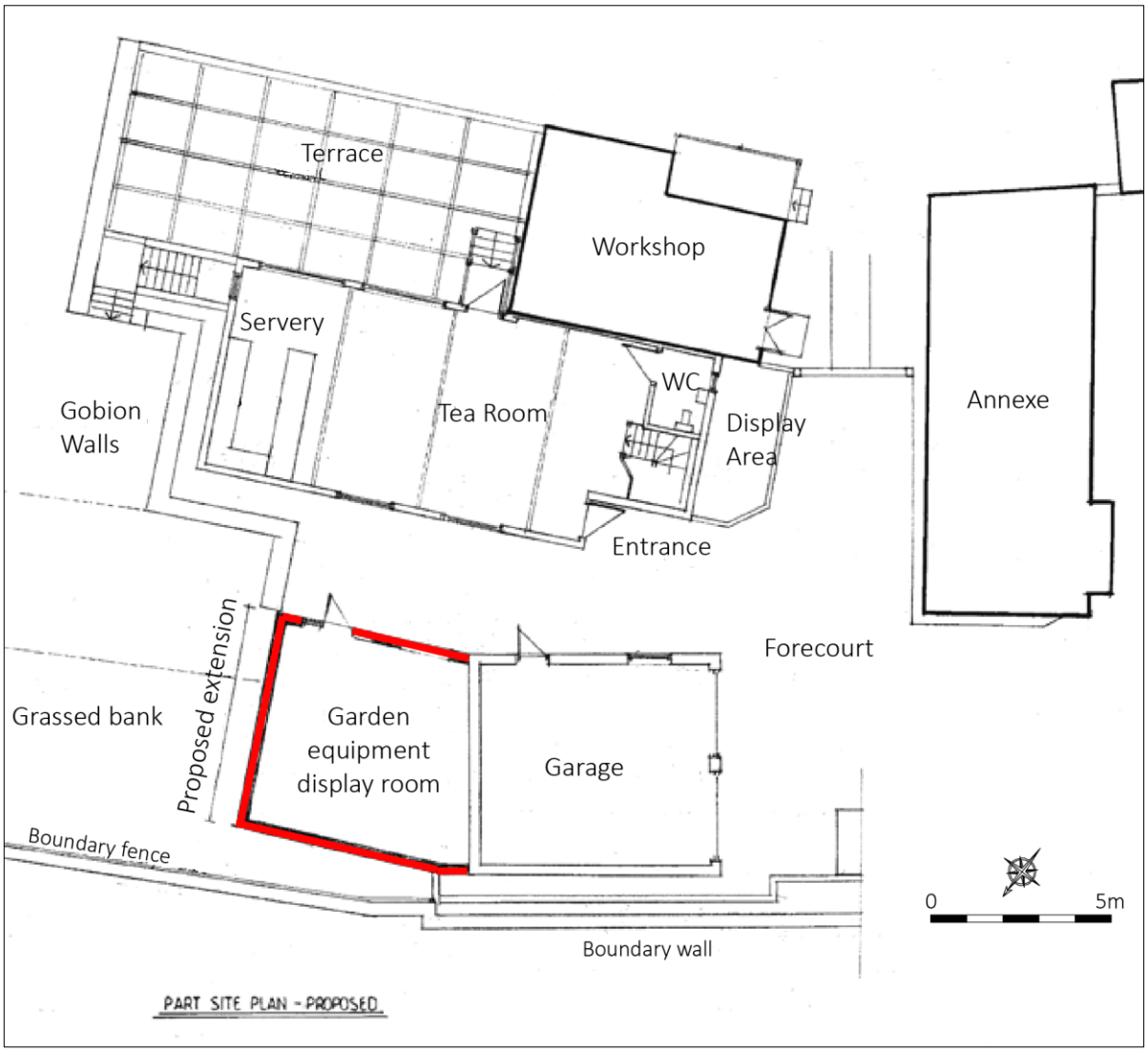

Figure 3: Proposed development plan (scale 1:200)

2 Aims & Methods

2.1 *Aims*

The general aims of the project are:

- To establish the date, nature and extent of activity or occupation within the development area
- To establish the relationship of any remains found to the surrounding contemporary landscape
- To recover palaeo-environmental remains to determine local environmental conditions.

In addition to the above, the following site-specific aims are:

- To establish the date and construction of the bank
- To establish whether there was a path along the top of the bank
- To further our understanding of the values of domestic, as well as public, gardens (Research Framework for London Archaeology; https://researchframeworks.org)

2.2 *Standards*

The work will conform to the following requirements:

- The relevant sections of the Chartered Institute for Archaeologists' *Standard and Guidance for Archaeological Excavation* (CI*f*A 2020a)
- The Chartered Institute for Archaeologists' *Code of Conduct* (CIfA 2022)
- Current Historic England guidelines (EH 2008, HE 2015)
- Greater London Archaeological Advisory Service Archaeological Guidelines (GLAAS 2015)
- Data Protection Act 2018

2.3 *Methods*

The methods used will be as follows:

- Hand de-turf a 1m wide section, c.5.5m long across the top of the bank to assess presence/absence of a path
- Excavate a 1m wide slot to a maximum depth of 1m to determine whether the bank was built up by an undifferentiated deposit. It will cut through the path, if present
- The path, and any other surface encountered, will be cleaned and recorded before continuing with the section
- If the bank is undifferentiated material, the bank will be carefully machined to the required level under constant supervision
- Once removed, the section will be cleaned, drawn and photographed to provide information of the construction of the bank
- The section will consist of 0.5m wide steps with each face being no more than 1.2m deep
- If there are layered deposits showing that a more complex construction methodology was deployed to create the bank, a site meeting will take place between the GLAAS, KDK and the client to formulate an archaeological investigation strategy.
- Test pits will be hand dug to check the depth and nature of deposits to be sealed beneath the raft.

2.4 *Methodology: Excavation*

Excavation

The machine will be fitted with a toothless ditching bucket unless a toothed bucket or breaker is required to remove more solid modern material.

On reaching invert level of the raft, the area will be hand cleaned, test pits excavated and a pre-excavation plan prepared. A meeting will take place between KDK, GLAAS and the client in order to agree a detailed site strategy.

Archaeological features and deposits will generally be excavated by hand. A mechanical excavator may be used for larger features or areas following agreement with GLAAS. The minimum sampling levels of archaeological features will be:

- Linear features: Sections will be excavated at the terminals and intersection of linears and at evenly spaced distances along the length. The sections will be at least 1m wide and will cover 20% of the linear.
- Structural features (inc. post holes, beam slots): 100%
- Structures with in-situ floors: 100% with detailed spatial recording of finds
- Kilns & hearths: 100%
- Pits & pit groups: At least 50% of each pit, to be increased if the pit(s) are found to be significant in function or content
- Quarry pits: Strategy to be defined at the initial monitoring meeting. A machine may be used for larger areas if appropriate and following agreement with the archaeological Advisor.
- Extensive archaeological deposits, buried soil horizons: The extent of the sampling will be determined by the nature and significance of the deposit taking into consideration the aims and objectives of the project. Defined features of significance will be systematically sampled, using a grid if appropriate, to ensure accurate spatial recording of finds. Systematic environmental sampling will be determined by the nature of the site/feature and will follow specialist advice from HE.
- Other archaeological deposits: The excavation and sampling strategy will be determined by the nature and significance of the deposit taking into consideration the aims and objectives of the project.
- A metal detector will be used on the excavated area and on the spoil heap. The location of any artefacts found using a metal detector will be recorded in 3D.

Surveying

Surveying will be undertaken using Global Positioning System technology (GPS) and the results presented in CAD format and converted to TIFF or PDF as required. All plans and section drawings will be annotated with relative heights and all plans will be related to the OS National Grid. Digital survey data will be presented in an appropriate CAD format and converted to TIFF or PDF as required.

Planning

Site plans will normally be drawn to a scale of 1:100 or 1:50. Where greater detail is required specific areas or features may be drawn to 1:20 or 1:10. Digital surveying equipment may also be used and the results presented in a CAD format. Sections will generally be drawn at 1:10,

unless the size of the section is more appropriately illustrated at 1:20. Plastic film will be used for manual site drawings.

Recording

Each context will be recorded in either electronic format or on KDK's Context Record Sheet, which details dimensions, shape, fill type and inclusions, artefact content, samples and interpretation. A register of contexts will be maintained, and context records will be cross-referenced to all other records.

Photography

The primary photographic record will be complied using a high specification digital SLR camera (minimum 20 mgp). Metric scales, a photo board and a north arrow will be used in all photographs where appropriate. A cross-referenced photographic register will be maintained on KDK's Photographic Record Sheet.

Finds

All stratified finds will be collected by context and, if of particular significance, individually recorded in 3 dimensions on KDK's Object Record Sheet. Un-stratified finds will only be collected where they contribute significantly to the project objectives or are of particular intrinsic interest.

Finds processing, which can take place during or after fieldwork, involves cleaning, marking, packaging, quantification and initial classification. In most cases the conservation of artefacts will take place after processing, but primary conservation of delicate artefacts may be required on site. First Aid for Finds by Watkinson and Neal (1998) is considered the standard reference for finds recovery, processing and packaging. Provision has been made for finds analysis and conservation in the project estimates.

Environmental

Environmental sampling strategies will be applied as appropriate and according to Historic England guidance (Campbell *et al.* 2011). See Appendix 1 for further details.

If appropriate, environmental samples will be taken from features to enable their date, nature, and condition to be described and analysed. Samples will be taken from the fills of features where organic materials may be preserved, such as pits, ditches and other deposits, especially if waterlogged.

Where there is evidence for industrial activity, macroscopic technological residues (or a sample of them) will be collected by hand. Separate samples (c. 10ml) will be collected for micro-slags (hammer-scale and spherical droplets).

Samples will be taken for scientific dating (such as radiocarbon dating) where, for example, dating by artefacts is insecure or absent and where dating is necessary for the specification for subsequent mitigation strategies (see section on scientific dating below for more information).

Geoarchaeological assessment of buried soils and sediment sequences may also be undertaken if appropriate. This will be done by field inspection by a specialist geo-archaeologist who, following discussion with the Archaeological Advisor, may take samples for laboratory assessment where appropriate,

Deposits will be sampled for the retrieval and assessment of the preservation conditions and potential for analysis of biological remains. The sampling strategy will be developed in collaboration with KDK's consultant specialist. Flotation samples and samples taken for coarse-mesh sieving from dry deposits will be processed at the time of the fieldwork if possible, in order to allow a variation of sampling strategies if necessary.

Sampling strategies for wooden structures will follow the methodologies presented in English Heritage's Waterlogged Wood: Guidelines on the recording, sampling, conservation and curation of waterlogged wood (2010).and guidance (Campbell *et al.* 2011).

All samples will be recorded on KDK's Sample Record Sheet, and a register of samples will be maintained. Provision has been made for sampling, analysis and reporting in the project estimates.

Collection and Selection Strategy

A collection and selection strategy, relating to all aspects of the projects created data and found material, will be agreed between the KDK, GLAAS and the Depositing Museum. This strategy is outlined in Appendix 2.

Scientific Dating

A number of scientific dating techniques are available. Radio-carbon or C14 dating is commonly used to date organic remains including human remains where no other means of dating is available. Archaeomagnetic or thermoluminescence dating may be applied to pottery or ceramic building materials, kiln linings etc. Dendrochronological dating may be possible on certain species of timber where sufficient growth rings have survived. Provision has been made for scientific dating in the project estimates.

Human Remains

An exhumation licence from the Ministry of Justice is necessary if human remains are encountered (Section 8.6, below). Under the Human Tissues Act 2004, the Environmental Health Officer must also be notified if the remains are less than 100 years old. Although human remains are generally left *in situ*, if possible, during any investigation or removal of remains will be agreed between KDK, the client, GLAAS and other appropriate authorities and will be undertaken in accordance with current guidelines (McKinley & Roberts 1993, Brickley & McKinley 2004). Any and all human remains will be treated with care and respect.

Security

The security of the archaeological remains, the archive and the site as a whole will be safeguarded as much as possible. The security of individuals on site, whether KDK staff or not, will perforce take precedence.

Outreach

In line with the requirements of the brief, and subject to agreement with the client, a public outreach programme will be formulated. This may include:

- Press releases
- Exhibitions
- Public talks/lectures
- Site open days (subject to access and/or Health & Safety considerations)
- Leaflets or brochures

Acknowledgement will be made to the role of the LPA and GLAAS in facilitating the work, and to the client for funding it.

2.5 *Requirements for the Building Contractor*

- Area to be pulled with a toothless ditching bucket
- Area to be taken down in spits under archaeological supervision
- Area not to be tracked or driven over
- Spoil to be stockpiled at least 1m from the area edge
- Area to be backfilled only when released by KDK

2.6 *Post-excavation work*

The archaeological fieldwork will be followed by a period of post-excavation processing and analysis, which will include the cataloguing and analysis of any finds and samples, and the preparation of the archive for the site report and its subsequent deposition.

Artefacts, biological samples and soils will be assessed for evidence of site and deposit formation processes and taphonomy, and especially for evidence of recent changes that may have been caused by alterations in the site environment. Assessment should include x-radiography of all iron objects, (after initial screening to exclude obviously recent debris), and a selection of non-ferrous artefacts (including all coins). Where necessary, active stabilisation or consolidation will be carried out, to ensure long-term survival of the material, but with due consideration to possible future investigations.

Assessment of any technological residues will be undertaken and where appropriate, samples will be submitted for scientific dating.

All soil samples collected for biological assessment, or sub-samples of them, will be processed in-house before being sent to the specialist(s) to assess the preservation state, density and significance of material retrieved. Special consideration will be given to any evidence for recent changes in preservation conditions that may have been caused by alterations in the site environment.

Samples collected for geoarchaeological assessment will be processed as deemed necessary by a recognised specialist, particularly where storage of unprocessed samples is thought likely to result in deterioration. Appropriate assessment will be undertaken. Where preservation in situ is a viable option, consideration should be given to the possible effects of compression on the physical integrity of the site and to any hydrological impacts of development.

Animal bone assemblages, or sub-samples of them, will be assessed by our in-house or consultant specialist as appropriate.

Assessment of human remains will have been based partly on in situ observation, but where skeletal remains have been lifted assessment will be undertaken by our in-house specialists.

Artefacts such as pottery, glass, small finds etc, will be assessed by the relevant specialist (see Section 6.2).

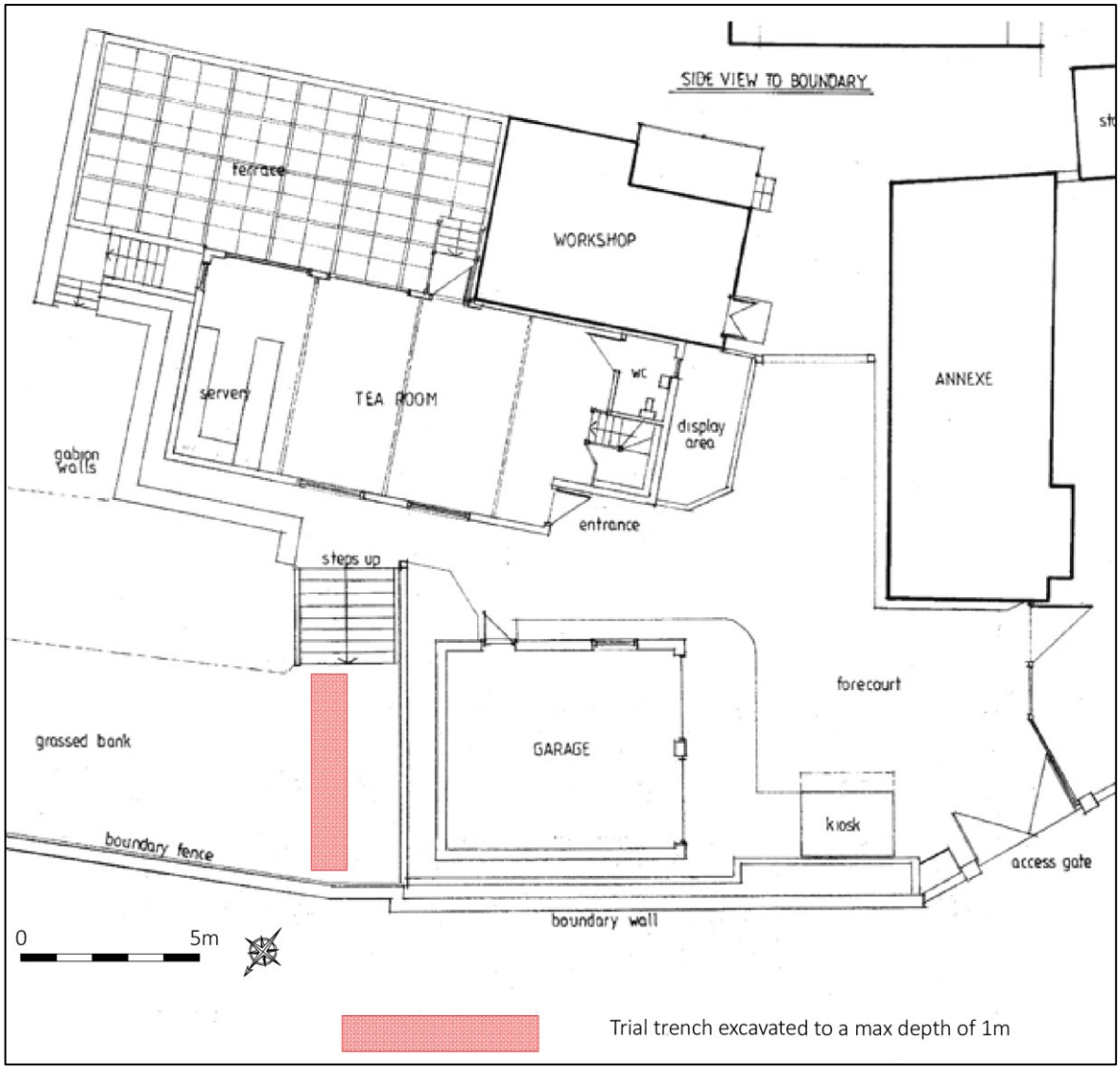

Figure 4: Trial trench location plan (scale 1: 200)

3 Archaeological & Historical Background

3.1 Church Gardens is located within Harefield Village Conservation Area (DLO36734) and Archaeological Priority Area (DLO36183). The house lies within the curtilage of a Grade II Registered Park and Garden of Harefield Place, a former manor house and estate established in the post-medieval period (MLO100831).

The following section is largely taken from previous work undertaken by KDK Archaeology on the site.

3.2 *Prehistoric (before 600BC)*

Evidence for prehistoric activity within close proximity to the site includes two palaeolithic hand axes being discovered to the north of the proposed development site (MLO 2915 & 2919) and Mesolithic flints that were found near St Mary the Virgin Church (MLO 2934) in the 1990s. Neolithic and Bronze Age activity has been discovered south of Church Gardens, at Dewes Pit (MLO 7230) and a possible Neolithic to Bronze Age settlement was found during the construction of the gas pipe line to the north-east of the proposed development site (MLO 101102; ELO 11460).

3.3 *Iron Age to Saxon (600BC – AD1066)*

There is very little evidence for the Iron Age and Roman periods. Nonetheless, a destroyed earthwork thought to be Iron Age (MLO 2661) has been recorded to the east of Church Gardens. In addition, a ditch revealed at St Mary's Vicarage to the north-west of Church Gardens has been dated to the Roman - early Saxon period (MLO 66092).

3.4 *Medieval (1066 - 1500)*

Following the Norman Conquest, Harefield was held by Richard, the son of Count Gilbert, and was assessed at five hides and had land for five ploughs. Based on Harefield's entry in the Domesday Survey, the Victoria County History of Middlesex suggests that much of the parish lay uncultivated at this time, and cites a large number of subsequent references in the 13th and 14th centuries to assarts (a piece of land converted from forest to arable use) to suggest that much of the land surrounding the village was scrub and woodland (Reynolds 1962).

The medieval Church of St Mary (MLO 81978) is located to the north of the proposed development site and was, no doubt, the focus for the medieval settlement.

3.5 *Post-medieval (1500 - 1900)*

The main settlement area moved in the post-medieval period and by 1754 was in its current location. Other than the church the main focal point in the former medieval settlement was estate of Breakspears House (MLO 104535). This estate, belonging to the Ashby family from the 16th century, contained pleasure grounds and parkland, with the house most likely being built in the 17th century.

3.6 *Modern (1900 - present)*

During World War I, Harefield Park to the north of the village was converted into a hospital for Australian troops. The churchyard of the Church of St Mary was extended to include parts of the former grounds of the Harefield Place (MLO 100831) and has a cemetery specifically for the Australian and New Zealand Army Corps.

3.7 *The Known Archaeology & History of the Site*

The Archaeological Priority Area (APA) for Harefield South is designated due to the important medieval remains related to the former Harefield Place (DLO 36170). Although it has been suggested that the original Harefield Place may have been located to the north-west of its later location, the remains of the medieval manor house was thought to be signified by a depression in the ground located *c.*20m north of the house at Church Gardens (MLO 442; MLO 100831). The area is now designated a Grade II Registered Park and Garden, and incorporates the proposed development site (MLO 100831; DLO 32929).

The mansion at Harefield is first mentioned in the mid-16th century and a survey of 1593 lists 'the site of the Manor of Herfelde Hall with all manner of edifice and buildings, courts, orchards, gardens and yards to the same belonging' (https://historicengland.org.uk/listing/the-list/list-entry/1001525; MLO442). This original manor burnt down in 1660 and was replaced by Harefield Place in 1675 (MLO6903). At this time the mansion was set within approximately 234 acres of land which included a deer park and further ornamental elements were present by at least the late 17th century including a walled garden and avenues.

Indeed, an estate map from the late 17th/early 18th century depicts avenues and several linear features possibly indicating hedge lines or fences (MLO 100831). There was an enclosed garden, which at this point was only walled on three sides, with the fourth bounded by a linear feature. The remains of these walls survive and are Grade II listed (MLO 85096), with evidence of 17th century terraces and an extensive brick garden arcade within the enclosure, which is now Grade II listed (MLO 100831). On the south-west face of the north-eastern wall an arcade of fairly tall round-backed niches with half-hemispherical heads suggests the presence of an orangery or sculpture gallery. The remains of a 17th century outhouse can still be seen today where the current house of Church Gardens stands, although it appears to have been altered in both the 18th and 19th centuries (MLO 85125).

By 1813 the mansion had been largely demolished with only the south-eastern end and part of the coach house remaining. The Coach House, which would later be known as Nursery Cottage is located directly south of the site of Harefield Place.

The Coach House is a Grade II listed, 17th century brick-built structure with 18th and 19th century additions and repairs (MLO85125). It is set within approximately three acres of land that also has a detached annexe, garage, walled kitchen garden and orchard. A tea room and workshop have been added as the gardens have been opened to the public since August 2018.

Several archaeological investigations and surveys have been completed around the house and garden, including a field survey of the earthworks, garden walls and standing structures on the site (ELO17643 and ELO17804) as well as a Watching Brief in 2002, when a small, possible 17th century, brick conduit and 18th/19th century brick lined well filled with modern detritus were exposed (ELO17779).

Trial trenching undertaken by KDK Archaeology in 2015 on the site of the current workshop failed to encounter any archaeological features or finds (Bertrand 2016). Later works on the site that included the creation of the present pond and the tea room necessitated the excavation of two evaluation trenches. A substantial deposit of late 19th-20th century domestic objects, including glass bottles, ceramics, bone and metal was found in the location of the proposed pond (Shlasko 2021a). A Watching Brief undertaken following the evaluation revealed a ditch that was aligned SSE to NNW that contained bone and CBM, including Roman tile, a single sherd of Roman pottery as well as late Saxon and medieval pottery (Shlasko 2021b).

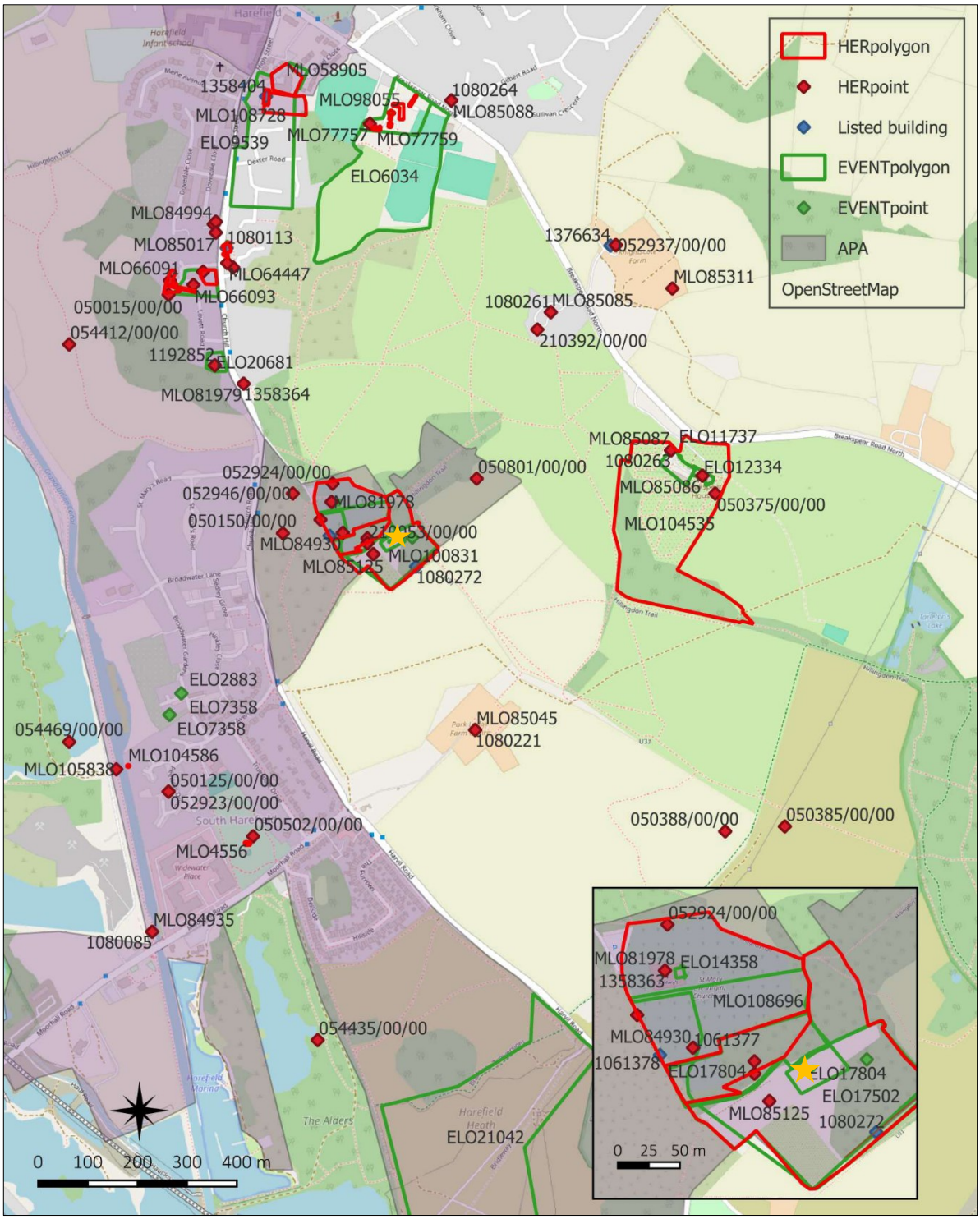

Figure 4: HER data plan, site marked with yellow star (scale 1:12500, inset scale 1:5000)

4 Reporting

4.1 A report will be compiled bringing together all the field-work and post-excavation results. The report will typically include:

- A concise non-technical summary of the results
- The objectives of the project
- The methodologies used
- The circumstances and date at which it was undertaken
- The identity of the organisation and individuals carrying out the work (in particular the names of the project director, site supervisor and any specialists), in line with GDPR requirements.
- A summary of the history and archaeology of the site and its context
- A written account of the results of the project with appropriate supporting illustrations.
- A conclusion, summarising the results and examining their significance
- Statement of confidence rating
- References
- An index to and the proposed location of the archive
- Appendices as appropriate

4.2 Electronic and/or paper copies of the report will be provided for the client, GLAAS and the HER as required.

4.3 Interim reports on the project will be submitted to any relevant regional and county journals (e.g. *London Archaeologist*), and to any relevant specialist journals (e.g. *Industrial Archaeology Review, Journal of the Historic Farm Buildings Group*), within one year of the project's completion.

4.4 The project has been registered with the Archaeology Data Service, which will allow an OASIS summary form and the report to be submitted once it has been approved.

4.5 Where the archaeological remains revealed require sufficient further analysis for a detailed academic report, a post-excavation strategy will be agreed between KDK and GLAAS. This additional programme of work will follow guidelines established by Historic England (2015), consisting of successive stages of archive assessment, analysis, research and report preparation.

5 Archive

5.1 The project archive consists of the electronic and paper records, photographs, artefacts and environmental samples. On occasion associated records, photographs or finds are also acquired. It is essential that this primary information is stored in a suitable environment to allow it to be studied by anyone with an interest to do so.

5.2 During the course of the project the client will be asked to sign a Transfer of Title form to allow any artefacts found during the excavation to be deposited as part of the full archive with the local museum.

5.3 The Museum of London will be contacted to make preliminary deposition arrangements once it is clear that this is not a sterile project. On completion of the project, the archive will be prepared for long term storage in accordance with guidelines prepared by the CIfA (2020c), the UK Institute of Conservation (Walker 1990) and the Museums & Galleries Commission (Paine 1992).

5.4 The digital archive for this project will be uploaded to the Archaeological Data Service in line with the ADS guidelines (https://archaeologydataservice.ac.uk/help-guidance/instructions-for-depositors/).

6 Staffing

6.1 *KDK Staff*

Karin Kaye MA MCIfA

Karin graduated from the Institute of Archaeology, UCL with an MA and first-class honours degree in medieval archaeology. Her archaeological career began at the Heritage Network, in Hertfordshire, where she was given a solid grounding in commercial archaeology. In subsequent posts she gained considerable experience in managing all types of archaeological projects as well as specialising in historic buildings and church archaeology. She co-founded KDK Archaeology Ltd with David Kaye, which began trading in early 2013.

David Kaye BA ACIfA

David graduated with an honours degree from the Institute of Archaeology, UCL in 2004 following a long career in photography, graphic design, and exhibitions. He joined Heritage Network, in Hertfordshire, whilst still a student and gained considerable experience in his seven years there. Since then he has led many excavations, including a large Roman field system at a quarry site, an Anglo Saxon cemetery at a school, and an ongoing Roman roadside settlement at an industrial complex. Apart from the day-to-day project management, David is responsible for all elements of Health and Safety.

Laura Dodd MSc MCIfA

Laura graduated from the University of Reading in 2013 with a BA in archaeology and continued her studies at Durham University where she achieved an MSc in Palaeopathology. She has a particular interest in the isotopic analysis of human remains and during her time at Durham assisted in a project to identify potential childhood origins of several individuals found in a mass grave. Laura has taken part several large-scale excavations such as the Roman field school at Silchester and the Amheida project in Egypt's Dakhla oasis. Since joining KDK in 2015 Laura has gained experience of running all types of fieldwork and is now the post-ex and archives manager. She is also the company osteo-archaeologist and is a member of BABAO.

Ellen Shlasko PhD

Ellen has been working as a reports officer for KDK since 2015. Previously, she was based in the US, where she specialised in the historical archaeology of the southeast. A graduate of Brandeis University, she holds a MA in historical archaeology from the College of William and Mary in Virginia and a PhD from Yale University. Ellen is also active in the Welwyn Archaeological Society and the Community Archaeology Geophysics Group, which has been mapping the Roman city of Verulamium since 2013.

Barney King PCIfA

Barney King began working in archaeology after a varied career as a projectionist, theatre technician and plumber's assistant, among other occupations. He started working on large scale Romano-British sites in Hertfordshire and Buckinghamshire, after enjoying a stint of archaeological volunteer work. He joined KDK as field technician and company quartermaster in 2017, and is now responsible for maintaining IT systems, surveying and processing environmental samples.

Chris Martin-Taylor BSc

Chris Martin-Taylor graduated from Bournemouth University in 2015 with a BSc in Archaeology. Prior to that, he studied for a foundation degree in Applied Architectural Stonework and Conservation in Dorchester and Weymouth, which included practical training in stonemasonry and historic building conservation. He has worked on numerous sites in the midlands and southeast England, as well as taking part in the experimental archaeology project at Guédelon Castle in France. Chris joined KDK in 2017 and has enjoyed developing his skills in many aspects of archaeological fieldwork. He has a keen interest in the history and archaeology of the post-Roman and medieval periods, particularly the study of the early medieval built environment.

Derek Watson PhD

Derek Watson graduated from the Institute of Archaeology, UCL in 2004 with a PhD in Archaeology. He also has a first-class honours degree in Environmental Archaeology from the Institute of Archaeology and an MSc from the University of Sheffield in archaeological environmental science and palaeoeconomics. He has worked on both commercial and academic archaeological projects in North America, Europe, North and West Africa, and has directed his own research projects in Ghana. Derek has been working as a zooarchaeologist and a reports officer for KDK since 2018.

Pat Reeves

Pat joined KDK as an administrative assistant in 2017 bringing with her a wealth of experience from a long and varied career. Apart from her administrative and financial skills, Pat also provides specialist knowledge in post-medieval porcelain and small finds. She has been the office manager since 2021.

6.2 *Specialists*

The following are KDK's preferred specialists:

Subject	Specialist	Organisation
Building materials: Roman	Rob Perrin	Freelance
Building materials: post-Roman	Karin Kaye	KDK Ltd
Ceramics: prehistoric	Sarah Percival	Freelance
Ceramics: Roman	Rob Perrin	Freelance
Ceramics: Post-Roman	Paul Blinkhorn	Freelance
Coins: Roman	Peter Guest	Vianova Archaeology
Coins: Saxon	Anna Gannon	Freelance
Coins: Post-Saxon	Murray Andrews	Freelance
Environmental: seeds	Lisa Gray	Freelance
Environmental: archaeobotanical	Lisa Gray	Freelance
Environmental: mollusca	Mike Allen	Freelance
Environmental: soils	Mike Allen	Freelance
Environmental: animal bone	Derek Watson	KDK Ltd
Environmental: animal bone	Matilda Holmes	Freelance
Environmental: human bone	Laura Dodd	KDK Ltd
Environmental: human teeth	Patrick Mahoney	KORA
Environmental: pollen	Rob Scaife	Freelance
Bone antler & ivory small finds	Ian Riddler	Freelance
Glass	Hilary Cool	Freelance
Lithics	Sarah Bates	Freelance
Lithics	Lyndon Cooper	Pre-Construct Archaeology
Metalwork	Quita Mould	Freelance
Quernstones	Chris Green	Freelance
Industrial waste	Lynne Keys	Freelance
Saxon & medieval small finds	Rosie Weetch	Freelance
Timber	Damian Goodburn	Freelance

7 Programme

7.1 A programme of monitoring will be agreed with GLAAS prior to the commencement of fieldwork and in full consultation with the client. KDK will keep GLAAS and the client informed of progress.

7.2 Once the Written Scheme of Investigation has been approved by GLAAS, a start date will be agreed with the client allowing GLAAS at least one week's notice in order to schedule monitoring visits. All monitoring visits by GLAAS will be agreed with the client.

7.3 The client will allow site access by GLAAS and archaeological specialists as required and provide detailed information regarding access requirements to ensure site protocols are not breached.

7.4 Unless significant archaeological remains are encountered requiring further analysis, the report will normally be available no later than four weeks after the fieldwork has been completed. The archive will normally be ready for deposition within six months of completion of the report.

7.5 *Proposed Programme*

A provisional outline of the timetable and staffing of the different phases of the projects are as follows:

Stage	Person-Days	Staff
Site stripping	1 day	Site Director
Cleaning & initial planning	1 day	Site Director
Excavation	As required	Site Director
Report	3 minimum	Site Director/Reports Officer
Specialist Reports	As required	Appropriate specialist
Archive	0.5 minimum	Archive Assistant

8 Other Requirements

8.1 *Health & Safety*

All work by KDK staff will be carried out according to the relevant Health and Safety legislation. This includes*, inter alia*, the following:

- Health and Safety at Work Act 1974
- Construction (Design and Management) Regulations 2015
- The Management of Health and Safety at Work Regulations 1999
- Personal Protective Equipment at Work Regulations 1992
- Work Equipment Regulations 1998
- Manual Handling Operations Regulations 1992
- Workplace (Health, Safety and Welfare) Regulations 1992

A copy of KDK's *Health and Safety Policy* will be supplied if requested by client or GLAAS. An Initial Risk Assessment (Appendix 3) has been completed prior to the commencement of the project, and will be checked and updated on site.

8.2 *Insurance*

KDK holds the following insurance cover (further details can be provided if required):

Employer's Liability	£10,000,000
Public Liability	£5,000,000
Professional Indemnity	£1,000,000

8.3 *Copyright*

Unless otherwise agreed, full copyright of any written, graphic, electronic or photographic records and reports rests with KDK, which will licence their use in relation to the specific project by the client or sponsoring body in all matters relating to the project, as described in this Written Scheme of Investigation.

KDK will assign joint copyright to the museum or repository undertaking curation of the archive, but retains the right to be identified as author of all project documentation and reports, as defined in the Copyright, Designs and Patents Act 1988 (Chapter IV, sec.79).

8.4 *Curatorial Requirements*

Monitoring is carried out by GLAAS to ensure that project is being carried out in accordance with the brief and approved Written Scheme of Investigation, to enable the need for modifications to the project to be independently considered and validated and to control and validate the use of available contingencies. GLAAS will be advised of the start date and the anticipated duration of the project at least one week before the commencement of the fieldwork. GLAAS will be allowed access to the site as required, as will other professionals as required to ensure compliance with project health and safety requirements and access controls.

8.5 '*Treasure*'

The 1996 *Treasure Act* and its 2003 amendment specifies that the finders of specific types of artefacts it defines as treasure must report them to the Coroner within fourteen days of discovery. Failure to do so could lead to a maximum penalty of three months in prison and a fine of £5000. Further details are available on the Portable Antiquities Scheme website at

www.finds.org.uk. The Portable Antiquities Scheme will be notified of any finds that could be considered treasure within 48 hours of discovery.

8.6 *Human Remains*

Under recent changes in legislation to Section 25 of the Burials Act 1857, an application for a licence should be made whether buried human remains are to be removed from the ground or intended to be left *in situ* (since excavation is likely to disturb them). A site-specific license will be procured from the Ministry of Justice in advance of the project if human remains are thought to be encountered during the fieldwork.

8.7 *General Data Protection Regulations*

As data controllers for personal information collected during the project, KDK will comply with the principles and letter of the GDPR regulations in the processing, management and archiving, where appropriate, of that data.

9 References

Standards & Specifications

Allen J. L. & Holt A. St J. 1986 (with later updates) *Health & Safety in Field Archaeology.* London: Federation of Archaeological Managers & Employers

Brickley M. & McKinley J. I. 2004 *Guidelines to the Standards for Recording Human Remains*. Chartered Institute for Archaeologists Technical Paper

Campbell G, Moffett L & Straker V 2011 *Environmental Archaeology: a guide to the theory and practice of methods from sampling and recovery to post-excavation.* Portsmouth: English Heritage

CIfA 2019 *Archaeological Archive Selection Toolkit.* Reading: Chartered Institute for Archaeologists

CIfA 2020a *Standard and Guidance for Archaeological Excavation* Reading: Chartered Institute for Archaeologists

CIfA 2020b *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials.* Reading: Chartered Institute for Archaeologists

CIfA 2020c *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives.* Reading: Chartered Institute for Archaeologists

CIfA 2022 *Code of Conduct.* Reading: Chartered Institute for Archaeologists

DLUHC 2023 National Planning Policy Framework. London: Department for Levelling Up, Housing and Communities. https://www.gov.uk/government/publications/national-planning-policy-framework--2

EH 2008 *The Management of Research Projects in the Historic Environment. PPN3: Archaeological Excavation.* London: English Heritage

EH 2010 *Waterlogged Wood: Guidelines on the Recovery, Sampling, Conservation and Curation of Waterlogged Wood*. London: English Heritage

Ferguson L. M. & Murray D. M. 1997 *Archaeological Documentary Archives: Preparation, Curation and Storage.* Chartered Institute for Archaeologists' Paper 1

HE 2015 *The Management of Research Projects in the Historic Environment: the MoRPHE Project Managers' Guide.* London: Historic England

McKinley J.I. & Roberts C. 1993 *Excavation and Post-excavation Treatment of Cremated and Inhumed Human Remains*. Chartered Institute for Archaeologists Technical Paper 13

Paine C. (ed) 1992 *Standards in the Museum Care of Archaeological Collections*. London: Museums & Galleries Commission

Walker K. 1990 *Guidelines for the Preparation of Excavation Archives for Long-Term Storage.* London: United Kingdom Institute for Conservation, Archaeology Section

Watkinson D. & Neal V. 1998 *First Aid for Finds.* Hertford & London: Rescue

Secondary Sources

Bertrand, J. 2015 Archaeological Evaluation Report: Church Gardens, Church Hill, Harefield, Middlesex KDK Archaeology Report 170/HCG/23.1

British Geological Survey (BGS): https://geologyviewer.bgs.ac.uk/

BHO 'Harefield: Introduction', in A History of the County of Middlesex: Volume 3, Shepperton, Staines, Stanwell, Sunbury, Teddington, Heston and Isleworth, Twickenham, Cowley, Cranford, West Drayton, Greenford, Hanwell, Harefield and Harlington, ed. Susan Reynolds (London, 1962), pp. 237-240. British History Online http://www.british-history.ac.uk/vch/middx/vol3/pp237-240 [accessed 5 April 2019]

Cuthbertson E. 1992 Gregory King's Harefield Hillingdon Borough Libraries

Dodd L. 2021 *Written Scheme of Investigation for an Archaeological Evaluation & Watching Brief*. KDK Archaeology 578/HCG/1.1. Leighton Buzzard: KDK Archaeology Ltd

Mills, A. D. 1991 *A Dictionary of English Place-names.* Oxford: Oxford University Press

Kaye K. 2015 *Heritage Asset Appraisal: The White House Church Hill Harefield Middlesex.* Unpublished report for KDK Archaeology 148/HWH/1.2

Research Framework for London Archaeology: https://researchframeworks.org [accessed 11 April 2024]

Reynolds S. (ed) 1962 'Harefield: Manors', in *A History of the County of Middlesex: Volume 3, Shepperton, Staines, Stanwell, Sunbury, Teddington, Heston and Isleworth, Twickenham, Cowley, Cranford, West Drayton, Greenford, Hanwell, Harefield and Harlington*. London, 1962. pp. 240-246. *British History Online* http://www.british-history.ac.uk/vch/middx/vol3/pp240-246 [accessed 18 February 2021].

Shlasko, E. 2021a Archaeological Evaluation Report: Church Gardens, Church Hill, Harefield, Middlesex KDK Archaeology Report 578/HCG/23.1

Shlasko, E. 2021b Archaeological Observation & Recording Report: Church Gardens, Church Hill, Harefield, Middlesex KDK Archaeology Report 578/HCG/4.1

Williams A. & Martin G.H. 2002 *Domesday Book: A Complete Translation.* London: Penguin

Appendix 1: Environmental Sampling Strategy

Stage I: Pre-excavation

KDK's general environmental sampling strategy is outlined in Section 2.3. Where appropriate a more detailed site specific strategy will be formulated at the start of a project based on the advice of KDK's Environmental Specialist and/or Historic England's Regional Science Advisor. The sampling strategy will:

- Take into account the research aims and objective of each individual project
- Identify the different categories of environmental remained expected to be encountered
- Outline the environmental analysis to be completed

The sampling strategy will be regularly reviewed throughout the excavation to ensure that it remains appropriate to the specific research aims.

Stage 2: Excavation

The sampling strategy outlined during Stage I will be readdressed after the site has been stripped. The updated strategy will be discussed with all on site personnel as well as GLAAS, the ES and HE where appropriate. The on-site collection and treatment of samples will be as follows:

- Sample sizes will normally comprise 40 litres of material; however, more or less than 40 Litres can be taken if deemed appropriate. <100% of smaller features such as postholes will be collected.
- Samples from wet or waterlogged contexts will be prioritized as these conditions are better suited for the preservation of organic material.
- When excavating human remains, multiple samples will be taken separately and clearly labelled with the areas they represent (e.g. head, pelvis)
- Samples will be placed into clean buckets which will then be labelled inside and out with the site code, context number, sample number and bucket number
- A register of all samples will be maintained and all samples will be recorded individually on KDK's Sample Records Sheet
- All samples will be removed from site and stored within a designated area at the KDK offices
- All unlabelled, duplicated or potentially contaminated samples will be discarded on site
- Modern and post-medieval samples, or those deemed unsuitable for sampling, will not be taken unless these features address specific research aims.

When dealing with waterlogged, insect and pollen, and deeply stratified sediments (e.g. peat) it may be necessary to seek advice from ES, HE and other environmental specialists (e.g. palynologists (pollen specialists) do discuss additional sampling methods.

Stage 3: Post-Excavation

Once excavation is complete, a final sampling strategy will be produced. This will highlight the samples most appropriate for processing and those which are to be deselected. This strategy will be discussed with and approved by GLAAS and the ES. Some of the samples may be selected for a preliminary assessment where a single bucket of material will be processed to analyse the potential value of the sample. At this time if the sample is deemed unsuitable for further processing, no further action will be taken.

All bulk samples will either be subjected to dry sieving, or be processed using a flotation tank. The remaining material from this process will be fully dried, sorted and bagged before being sent to the relevant specialists for analysis (i.e. archaeobotonist, zooarchaeologist etc.) All other aspects of the processing, along with unsuitable samples, are discarded after the report has been approved by the planning archaeologist.

Appendix 2: Archive Collection and Selection Strategy

Project Details:

Name Church Gardens, Harefield, Hillingdon **Site Code 838/HCGKF**

Accession number TBC **Project Type** Archaeological Excavation **Contact** David Kaye (Project Manager/Laura Dodd (Post-ex Manager/Archivist)

Introduction:

This strategy, which concerns all of the data that is created and the archaeological material recovered during the course of the project, will be agreed between KDK, GLAAS and the depositing Museum. It is consistent with the projects aims and objectives and local research framework.

An identical version of this Appendix will be created and kept up to date as the project progresses. Updates will be agreed with GLAAS and the museum.

Digital Data Management Plan

Data Collection *(what will be collected and how?)*: Data will be collected in line with the Project Brief and WSI standards and requirements. Data acquisition standards are in line with the ADS guide to Good Practice. Specific data will be: Excel Spreadsheets will be used on site to collect fieldwork data and registers Word documents will be used to produce draft reports which will be finalised in pdf format Digital images will be taken and saved as JPGs Digital survey data will be presented in an appropriate CAD format and converted to TIFF or PDF as required. A working project folder will be maintained of all project related data on the company server. Tablets will be used on site and downloaded to the folder on the company server on a daily basis.
Documentation and Metadata: A summary of all data sources and contributors will be provided as part of the final archive alongside a meta data summary. This will be prepared in line with ADS deposition guidelines.
Ethics and Legal Compliance *(how are any ethical, copyright and IPR issues being managed?)*: KDK have a GDPR compliant privacy policy which underpins the management of personal data. Personal data is not stored in the project related folders but separately on the company server. Any personal data will be removed from the project archive and permission to use individuals' names in any reporting is gained prior to use. Copyright of all data created by the team is owned by KDK and permission to include data from external sources is secured on the engagement of that source. Where formal permission or licence agreements are required for data sharing these will be included in the project documentation.
Storage and Back up *(how will data be stored, accessed and backed up during the project?)*:

Organisational IT is managed by an internal IT and data manager who is responsible for the management and verification of daily back-ups and who supports access to security copies as needed. The onsite company server is automatically backed up 5 times a day to a secure off site server through an encryption process. Sufficient data storage is available on the onsite company server, which includes single factor authentication and permissions-based access. The server is accessible by staff on and off site through a secure log-in. Off site access to the project files on the server is provided to support back up of raw data while fieldwork is ongoing. Where internet access is not possible, the raw data is backed up to a separate hard drive until direct access to the server can be established. Only KDK staff can access the server. External specialists and contractors are sent whatever documentation they need via email or WeTransfer, none of which contain sensitive information.
Selection and Preservation *(what will be retained, shared and/or preserved, what's the long-term plan for data preservation, are ADS informed and have costs been considered?)*: The collection and selection strategy, including the data management plan will be reviewed throughout the project and specifically at the end of fieldwork and/or before post excavation work starts and following full analysis. The updated plans will be included in all reporting stages. Prior to deposition the plans will be updated and finalised in agreement with the planning archaeologist, museum, client and ADS if appropriate. All versions of data will be retained until report approval. Final versions of digitally born data will be archived on ADS. Paper records will be archived at the museum in line with museum guidance. Duplicate documents will be deleted and the remaining data will be retained in the file structure on the company server. The full costs of archiving in line with museum guidelines have been included in the project costs.
Data Sharing and Accessibility (how will data be shared and made accessible and are there any restrictions): The project has been added to the OASIS Index of Archaeological Investigations (kdkarcha1-524243) and will be updated as the project progresses. A final version of the approved report will be added to OASIS along with details of the project archive location. The final version of the report will be supplied to the Historic Environment Record when approved by the planning archaeologists. Any further data which they request will be provided directly. No restrictions to data or data sharing are envisaged at this stage.
Responsibilities (who is responsible for data management): The project manager is responsible for implementing the data management plan and ensuring it is reviewed at each stage of the project. The data capture, metadata production and data quality is the responsibility of the project team, quality assured by the project manager. Storage and back up of data in the field is the responsibility of the field team and once data is on the organisational server it is the responsibility of the IT and data manager. Data archiving is undertaken by the project team in conjunction with the archive officer and the archive officer is responsible for the transfer of the archive to the final repository.

Paper data

All project related paper documentation, for example fieldwork sheets, drawings, black and white photographs, maps, as opposed to administration paperwork, will be archived as part of the document

archive with the museum. Duplicate documentation will be recycled and any administrative paperwork will be scanned and retained digitally by KDK.

Small and Blank Projects

Where archaeological work results in no finds or features of archaeological significance a single all in one report will be prepared and, if agreed with the CAO and museum, will be uploaded as the digital archive to the Archaeological Data service (ADS). Also, if agreed, no paper archive will be deposited with the museum.

Materials and Artefacts

The key finds groups and how these will be selected for retention or discard are outlined below:

Find Type	On site selection	Post Excavation selection
Pottery	All pottery sherds will be collected other than obviously post medieval sherds from unstratified contexts unless they appear archaeologically significant	The majority of pottery collected will be retained for archiving. Exceptions may be made for sherds recovered from unstratified contexts or repetitive and undiagnostic sherds. All pottery will be quantified and subject to specialist input. Deselection will be undertaken in discussion with the specialist, GLAAS and the museum
CBM	All CBM will be collected other than obviously post medieval CBM from unstratified contexts unless they appear archaeologically significant. However, where large quantities are found a further discussion between KDK, GLAAS and the museum may result in an amended approach ie sampling	All collected CBM will be retained, although unidentifiable fragments from poor or unstratified contexts may be discarded subsequent to full quantification, specialist advice and discussion with GLAAS and the museum
Worked Stone	All worked stone found will be collected	All worked stone will be retained for archiving, in discussion with the museum. All unworked stone will be discarded following quantification
Animal Bone (including worked bone, antler, horn and ivory)	All animal bone found will be collected	All animal bone will be retained. Disposal may be considered for very fragmented and poorly preserved objects or those which have been recovered from unstratified contexts and that have no further intrinsic interest
Ferrous and non-ferrous metals	All metal will be collected	All precious metals will be retained. Other ferrous or non-ferrous metals will be retained with the exception of unidentifiable fragments and those beyond conservation. Also common bulk finds such as nails may be subject to retention of a sample following discussion with the specialist and museum
Glass	All glass objects will be collected other than obviously post medieval glass from unstratified contexts unless they appear archaeologically significant	All items will be retained although post medieval and modern items may be sampled following discussion with GLAAS and the museum

Find Type	On site selection	Post Excavation selection
Clay Pipes	All clay pipes will be collected	All items will be retained unless fragments are plain or from poor or unstratified contexts
Worked Wood and other plant derived objects	All worked wood or other plant derived objects will be collected	All items will be retained unless items are deemed unsuitable for long term preservation. All items will be checked by a specialist for selection and any discard agreed with GLAAS and the museum
Leather and Textiles	All leather and textiles will be collected	All items will be retained unless items are deemed unsuitable for long term preservation. All items will be checked by a specialist for selection and any discard agreed with GLAAS and the museum
Other	All other items found will be collected	All medieval or older items will be retained. Post medieval items will be discussed with GLAAS and the museum to agree retention strategy
Environmental samples	40l samples will be taken from archaeologically significant features in line with the agreed sampling strategy, see Appendix 2 for details. This means that environmental samples will not be taken routinely from backfilled contexts unless there are archaeologically significant reasons to do so. Environmental sampling will focus on areas of naturally silted fills and where organic matter, charcoal and carbon are more likely to be found The Environmental Specialist will be engaged to discuss more detailed strategies in areas of specific interest if they arise Securely stratified deposits that contain dating evidence will be targeted, particularly corn driers, hearths, kilns, pits and cesspits, of all periods across the site Different parts or layers in kilns /ovens will be sampled to examine function 10 litre samples for insect analysis from waterlogged deposits if present, and additional samples for plant macrofossils may also be taken. Pollen samples will be taken from a representative selection of contexts of different potential time spans 20% of the pre-medieval quarry pits, if present, will be sampled to determine the presence of mineralised material	Tangible artefacts found through the environmental processing will be retained for archiving, this includes the flots from archaeobotanical analysis All other retention from the processing will be discarded

Appendix 3: Initial Health & Safety Risk Assessment

In accordance with current legislation and KDK's Health & Safety Policy, an Initial Health & Safety Risk Assessment has been prepared.

The Accident and Emergency Unit closest to the site is:	**Hillingdon Hospital** Pield Heath Road Uxbridge Middlesex, UB8 3NN

A risk assessment for tasks and hazards typical to this type of project appears on the following pages. An assessment of site-specific hazards appears below.

Site-Specific Hazards:	**Risks:**	**Mitigation:**
Cutting into steep bank	Ground collapse leading to injury/death	• No lone working to record the section(s) or excavate site until the bank has been made safe • Record bank section(s) in phases if appropriate
Deep ponds in the grounds	Injury through slipping on the muddy banks Falling in	• Ensure staff are aware of the ponds • Do not work within 2m of the edge • Erect safety fencing if appropriate
NB: Asbestos, contaminants etc	Serious health risks	The developer is to ensure that the site is free of hazardous materials. Where such material is discovered during fieldwork, the developer will remove it or make it safe before KDK continues with onsite work. KDK to be informed of the use of pesticides, insecticides, herbicides or similar substances on the site prior to the start of any fieldwork.
Project:	Archaeological Watching Brief, Church Gardens, Harefield, Hillingdon	
Project Code:	838/HCGKF	
Date of Assessment:	11.04.2024	
Assessed By:	Ellen Shlasko	
Signed by site staff:		

Archaeological Fieldwork: General Hazards								
Task	Hazard	Adverse Effect	People at Risk	Likelihood × Consequence = Risk Score			Actions to minimise risk	Residual Risk
Travel to and from workplace	Traffic accident	Major	Field staff, visitors, public	2	4	8	• Maintain vehicles in roadworthy condition. • Ensure suitable insurance is in place. • Only qualified staff to drive vehicles. • Staff to observe speed limits and other traffic regulations	4
Access/egress workplace	Moving vehicles and plant	Catastrophic	Field staff, visitors	2	5	10	• Observe site speed limits. • Park in designated area. • Transport by vehicle to excavation area if required.	5
Access/egress workplace	Reversing vehicles and plant	Catastrophic	Field staff, visitors	2	5	10	• Observe site speed limits. • Park in designated area. • No reversing without assistance/supervision.	5
General site work	Trips/slips	Minor	Field staff, visitors	3	2	6	• Ensure good housekeeping. • Cease work if site conditions are extremely poor. • Use vehicles to traverse uneven ground if possible. • Use appropriate footwear.	4
General site work	Manual handling	Moderate	Field staff	3	4	12	• Use equipment to transport heavy loads if possible. • Train staff to use equipment. • Instruct staff in correct lifting techniques. • Monitor staff compliance.	4
General site work	Adverse weather	Minor	Field staff, visitors	2	2	4	• Wear appropriate clothing. • Provide welfare facilities • Cease work in very adverse weather.	2
General site work	Presence of contaminants, pathogens and other hazardous substances	Major	Field staff	2	4	8	• Review results of available geotechnical assessments. • Conduct COSSH assessment if hazard identified.	4

Archaeological Fieldwork: General Hazards								
Task	Hazard	Adverse Effect	People at Risk	Likelihood × Consequence = Risk Score			Actions to minimise risk	Residual Risk
							• Inform staff of identified hazards. • Restrict working areas if necessary. • Provide welfare/hygiene facilities. • Monitor staff health. • Use appropriate PPE.	
General site work	Environmental pollution	Moderate	Field staff, visitors, public	2	4	8	• Dampen down dry surfaces. • Restrict hours of plant operation if noise is an issue. • Seek to minimise landfill.	2
General site work	Fire	Catastrophic	Field staff, visitors, public	2	5	10	• Compile fire risk assessment if required. • Maintain good housekeeping • Provide suitable firefighting equipment	5