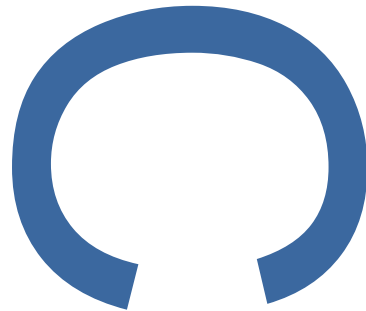
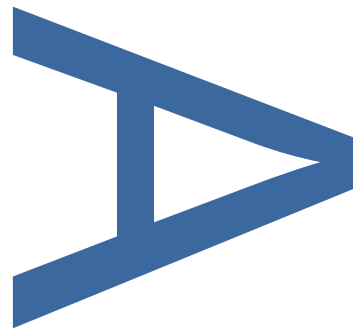


**66 Park Lane, Knebworth,
Hertfordshire SG3 6PW**



**Written Scheme of Investigation
for an Archaeological Evaluation**



Planning reference **25/01658/RM**

Local planning authority **North Herts District Council**

HER search reference **089.26** ***Proposed Site Code*** **HPLK26**

PCA project no **K11521** ***Date*** **September 2026**

PRE-CONSTRUCT ARCHAEOLOGY LIMITED

www.pre-construct.com

Project Information	
Site name	66 Park Lane, Knebworth, Hertfordshire SG3 6PW
Project type	Written Scheme of Investigation for an Archaeological Evaluation
Site address	66 Park Lane, Knebworth, Hertfordshire SG3 6PW
NGR	TL 24315 20278
Local planning authority	North Herts District Council
Planning reference	25/01658/RM
HER search reference	089.26
Commissioning client	Tetra Tech Consulting Ltd
Project dates	tbc
Archive site code	HPLK26

PCA Information			
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CONTENTS

CONTENTS	3
1 INTRODUCTION.....	4
2 BACKGROUND.....	7
2.1 Geology and Topography	7
2.2 Archaeological and Historical Background	7
3 RESEARCH DESIGN.....	10
4 SITE METHODOLOGY	11
4.1 General.....	11
4.2 Investigation and Recording Techniques.....	12
4.3 Access and Safety	12
5 RECORDING SYSTEMS	14
5.1 Site Code	14
5.2 Site Records.....	14
5.3 Stratigraphic Matrix	14
5.4 Survey	15
5.5 Photographic Record	15
6 TREATMENT OF FINDS AND SAMPLES.....	16
6.1 General.....	16
6.2 Environmental	16
6.3 Artefactual	17
7 ARCHIVES AND REPORTS	19
7.1 General.....	19
7.2 Report.....	19
8 SIZE AND STRUCTURE OF EXCAVATION TEAM	21
9 PROGRAMMING	23
10 PUBLIC BENEFIT	24
11 BIBLIOGRAPHY.....	25
APPENDIX 1: LANDOWNER FORM	30
APPENDIX 2: DETAILS OF PCA SITE STAFF	31
APPENDIX 3: DIGITAL DATA MANAGEMENT PLAN.....	33
APPENDIX 4: CARBON MITIGATION POLICY	35
FIGURE 1: SITE LOCATION	26
FIGURE 2: DETAILED SITE LOCATION	27
FIGURE 3: PROPOSED TRENCH LOCATIONS OVERLAIN ON THE PROPOSED DEVELOPMENT	28
FIGURE 4: PROPOSED TRENCH LOCATIONS OVERLAIN ON SATELLITE IMAGE	29

1 INTRODUCTION

- 1.1 Pre-Construct Archaeology Limited (PCA) has been commissioned by Tetra Tech to undertake an archaeological evaluation at 66 Park Lane, Knebworth, Hertfordshire SG3 6PW. The site is centred at National Grid Reference TL 24315 20278 (Figures 1 & 2). The local planning authority (LPA) is North Herts District Council.

- 1.2 A planning application (North Herts District Council Ref 25/01658/RM) has been approved for:

Reserved matters (appearance, landscaping, layout, scale and internal access) for the erection of 9 dwellings with associated landscaping, parking and amenity space pursuant of outline permission 23/02946/OP granted 19.06.2025.

- 1.3 The Senior Historic Environment Officer, Hertfordshire Landscape, Ecology, Archaeology, Design and Sustainability (LEADS) was consulted on the application and noted the following, with a recommendation for archaeological conditions (Ref P01/25/1658-1):

Several records on the Hertfordshire Historic Environment Record (HER) are present close to the proposed development area. Specifically, the field on the western boundary of the site was once part of a former medieval deer park known as 'The Great Park' which was probably founded in the late 13th century by Robert De Hoo (HER no. 30597). It is unclear whether any surviving elements of the park survive above ground, but it is considered unlikely due to its arable nature and construction works associated with the motorway. However, below ground features could survive, such as the remains of a park pale, which would be of archaeological significance.

To the east of the site is Dead's End Farm, a post medieval farmstead believed to have medieval origins. The name is associated with the family of John Dardes, documented in 1433 (HER no. 17772).

Roman pottery now held at Stevenage Museum is believed to have been found in a field to the south of the site (HER no. 409).

Further to the south, substantial quantities of prehistoric, worked flint were also found during archaeological fieldwalking in this area in the early 1990s (HER no. 6642), and to the west of this, there is a probable Bronze Age barrow (HER no. 9437) in Park Wood. A hoard of bronze items of that date was also found within the wood in the late 19th century (HER no. 327).

There is therefore potential for heritage assets from the medieval period and also possibly the prehistoric and Roman periods too. Coupled with this is much of the site's topographic prominence – its position in the landscape, high ground overlooking a valley, is a classic location for later prehistoric or Romano-British settlement in the region.

- 1.4 Relevant archaeological conditions (No 7, 8 and 9) were consequently attached to the planning decision, as follows:

7 No demolition/development shall take place/commence until an Archaeological Written Scheme of Investigation has been submitted to and approved by the local planning authority in writing. The scheme shall include an assessment of archaeological significance and research questions; and:

1. *The programme and methodology of site investigation and recording*
2. *The programme and methodology of site investigation and recording as required by the evaluation results*
3. *The programme for post investigation assessment*
4. *Provision to be made for analysis of the site investigation and recording*
5. *Provision to be made for publication and dissemination of the analysis and records of the site investigation*
6. *Provision to be made for archive deposition of the analysis and records of the site investigation*
7. *Nomination of a competent person or persons/organisation to undertake the works set out within the Archaeological Written Scheme of Investigation.*

8 *B The demolition/development shall take place/commence in accordance with the programme of archaeological works set out in the Written Scheme of Investigation approved under condition (A)*

9 *C The development shall not be occupied/used until the site investigation and post investigation assessment has been completed in accordance with the programme set out in the Written Scheme of Investigation approved under condition (A) and the provision made for analysis and publication where appropriate.*

- 1.5 This document forms the Written Scheme of Investigation (specification) for the project in accordance with Conditions 7, 8 and 9 and details the methodology by which the archaeological evaluation by means of trial trenching will be undertaken (Figures 2-4).
- 1.6 This WSI is not sufficient to discharge the above conditions, nor is the work described in this document. The planning condition will be discharged only if no further work is required by the Archaeological Advisors to the Local Planning Authority: the Hertfordshire Historic Environment Advisory Service of the Hertfordshire County Council (HCC). If further work is required then relevant addendum(s) to this WSI will be prepared and submitted to HCC, as well as reports on the results and provision for publication if necessary.
- 1.7 The works will be undertaken by a full-time archaeological supervisor and other archaeological staff working for PCA as necessary. The works will be monitored by the Archaeological Advisor to the Local Planning Authority.
- 1.8 All works will be undertaken in accordance with the following documents, as well as other relevant guidance published by professional bodies such as Historic England:
- This Written Scheme of Investigation (pending approval from the Archaeology Advisor to the Local Planning Authority)
 - *Standards for Field Archaeology in the East of England* (Gurney 2003)
 - *Standard and guidance for archaeological evaluation* (CIfA, Chartered Institute for Archaeologists 2023)
 - *Universal guidance for archaeological evaluation* (CIfA 2023)

- *Management of Research Projects in the Historic Environment* (Historic England 2015)
 - *Hertfordshire Archaeological Archive Standards – A countywide standard for the creation, completion and transfer of Archaeological Archives in Hertfordshire* (Hertfordshire Museums 2025)
- 1.9 PCA is a Registered Archaeological Organisation (number 23) with the Chartered Institute for Archaeologists and will operate within the Institute's 'Code of Conduct'
- 1.10 PCA has the following accreditations:
- ISO9001 and ISO14001 registrations
 - Construction Line registration
 - Achilles registration
 - SMAS SSIP registration

2 BACKGROUND

2.1 Geology and Topography

- 2.1.1 The British Geological Survey of England and Wales (BGS) records the natural bedrock geology for the site as belonging to the Seaford Chalk Formation – chalk, formed in the Cretaceous period. The superficial geology is recorded by the BGS as River Terrace Deposits (Undifferentiated) - clay, silt, sand and gravel, laid down by fluvial processes; however, a geo-environmental investigation and risk assessment for the site (Sheppard 2025) describes the superficial geology as Head deposits, also comprising clay, silt, sand and gravel but subaerial in origin, forming downslope layers.
- 2.1.2 The 2025 site investigation comprised 4 window sample boreholes drilled to a depth of between 2.00m to 4.45m and 8 hand dug pits to a depth of 0.5m. The investigations recorded topsoil to a depth of between 0.1m and 0.3m below ground level (bgl) with made ground present below that in some areas of the central and southern parts of the site to a depth of 0.4m to 0.5m bgl. Below these superficial layers, natural strata comprised horizons of firm to very stiff clay with flint cobbles, interbedded with horizons of clayey sand with flint cobbles. The chalk bedrock was not encountered.
- 2.1.3 The site is located south of the Hitchin Gap in the Chilterns, on the western outskirts of Knebworth and around 1.6km south of the southern outskirts of Stevenage. It lies on gently sloping ground, with a drop from around 121m OD in the north of the site to around 115m OD in the south. It comprises open land, formerly gardens to the rear of Martlets, a large 20th century house at 66 Park Lane. The site is surrounded by farmland to the west, north and east. Martlets lies to the south of the site, fronting onto Park Lane. Historic Ordnance Survey maps indicate an orchard was formerly located in the north of the site.
- 2.1.4 The nearest watercourse, the Stevenage Brook, flows south-eastwards past the site, around 1.5km to the northeast at its closest.

2.2 Archaeological and Historical Background

- 2.2.1 A search of the Hertfordshire Historic Environment Record (HER) (dated 28/7/2026; Ref. 089.26) was carried out for the site and surrounding area, from which the following background is summarised, together with additional references.

Previous Archaeological Investigations

- 2.2.2 No previous archaeological investigations are recorded on the site itself. The HER records a geophysical survey undertaken to the north of Park Lane (EHT8931) in relation to the Knebworth masterplan to develop the KB1 area to the north and east of the site (Countryside Partnerships 2024), but no results are recorded.
- 2.2.3 A watching brief by Heritage Network in 2008 on residential development near Station Hotel in Knebworth, around 480m east of the site, also recorded no archaeological features or deposits (Turner 2008).

Early Prehistoric

- 2.2.4 A findspot of a number of Palaeolithic implements is recorded around 650m to the northeast of the site near Deard's Bridge (MHT400) and another Palaeolithic findspot is recorded around 640m southeast of the site, just south of Knebworth railway station (MHT401). The area below the Hitchen Gap as far south as Tewin presents a landscape shaped by glacio-fluvial processes following the retreat of the Anglian icesheet and has been noted for the numbers of Palaeoliths recovered from gravel and brick pits (Wymer 1999: p.163).

Later Prehistoric / Undated

- 2.2.5 The HER records a scatter of prehistoric flints around 380m south of the site, recovered from fieldwalking in a field to the north of Gipsy Lane in 1993 ahead of works to widen the M1 (MHT6642). The total of 44 flint flakes recovered included a notched flake and possible notched tool.
- 2.2.6 A Neolithic jadeite axe near Knebworth railway station was found around 490m east of the site (MHT402), and a Neolithic axehead was found in St Martin's Lane, some 800m to the east of the site (MHT326).
- 2.2.7 A Bronze Age barrow is recorded around 480m southwest of the site in Park Wood (MHT9437) and to its west a Bronze Age hoard was found (MHT327).
- 2.2.8 An undated linear earthwork is recorded to the north of the barrow, around 500m west of the site (MHT9800). Another undated linear earthwork is recorded around 900m southeast of the site (MHT10299).

Romano-British

- 2.2.9 A Roman road has been suggested between present-day Woolmer Green in the south and Gravelly in the north passing through Knebworth, around 750m to the east of the site (MHT4639). It would have provided a connection between the east-west St Albans to Broughing road with the north-south Baldock to Godmanchester road (Margary 1955: p.175).
- 2.2.10 The HER records a find of Roman pottery around 150m to the south of the site (MHT409), as well as a coin in Gun meadow, around 600m southeast of the site (MHT410).

Early Medieval & Medieval

- 2.2.11 A large settlement at Knebworth is recorded in the Domesday Book, consisting of 33 households and resources including ploughland, meadow, woodland sufficient for 1000 pigs, and a mill (Open Domesday) suggesting a thriving pre-Conquest Saxon settlement. The lord in 1066 was recorded as Eskil of Ware, a thane of Earl Harold. The historic settlement lay to the west of present-day Knebworth, which grew up around the railway in the late 19th century (Judge 2003).
- 2.2.12 To the west of the site, The Great Park (MHT30597) was a medieval deer park, its boundary extending to the western edge of the site. The HER notes the earliest record of a park at Knebworth dates from 1334, but surname evidence strongly suggests that a park existed by at least the late 13th century.
- 2.2.13 A 16th century farmhouse, probably the successor of a medieval deer park lodge is recorded within

the park (MHT15242). The enclosed park is shown on a map of 1724 (Warburton et al 1724).

- 2.2.14 The site itself may have formed farmland associated with a medieval farmstead to its east, now the location of Deard's End Farm.

Post-Medieval & Modern

- 2.2.15 Deard's End Farm, around 160m east of the site, is a late 18th century farmstead with elements dating to the 17th century; as noted above it likely replaced an earlier medieval farmstead (MHT17772).
- 2.2.16 The site is shown as part of a large field forming part of Deard's End Farm in 19th century Ordnance Survey maps. By the time of the 1922 Ordnance Survey map the current boundaries of the site are shown, occupied by a house called Redcot and surrounding gardens. The same buildings remain by the time of the 1946 Ordnance Survey map, but the site is called Martlets; an area in the north of the site is shown as an orchard.

3 RESEARCH DESIGN

- 3.1 The archaeological evaluation is designed to determine the presence or absence of surviving deposits and features at the site and, if present, to investigate and record them, and to clarify the significance of surviving archaeological remains on site.
- 3.2 The investigations will also seek to clarify the nature and extent of existing disturbance and intrusions and hence assess the degree of archaeological survival.
- 3.3 The investigations will be undertaken within the general parameters of 'English Heritage Archaeology Division Research Agenda' (English Heritage 1997), 'Exploring Our Past' (English Heritage 1991) and the East of England Research Framework (Maria Medlycott (ed.) 2011. Research and Archaeology Revisited: A Revised Framework for the East of England. East Anglian Archaeology Occasional Papers 24).
- 3.4 The general aims of the archaeological evaluation are:
- To determine the presence or absence of archaeological deposits or remains.
 - To record the character, date location and preservation of any archaeological remains on site.
 - To record the nature and extent of any previous damage to archaeological deposits or remains on site.
- 3.5 Specific research objectives include the following:
- Is there evidence for prehistoric activity on the site reflecting the Neolithic and Bronze Age presence in the wider landscape?
 - Is there evidence for Roman activity on the site?
 - Is there evidence for early medieval / medieval activity on the site?
 - Is there any evidence to support the presence of a medieval farmstead to the east of the site?
 - Is there any evidence for earthworks associated with the boundary of the medieval deer park to the west of the site?
 - Is there evidence for post medieval activity on the site associated with Dead's End Farm?
 - What is the impact of current land use?

4 SITE METHODOLOGY

4.1 General

4.1.1 The evaluation will comprise the excavation of nine trenches measuring 20m x 1.8m each (Figures 2-4). The trenches are designed to reach maximum depth of 1.2m below ground level. Deeper sondages may be excavated within the trenches if natural deposits have not been reached. The trench locations and dimensions may be adjusted to accommodate site conditions, with the agreement of the Archaeological Advisor to the LPA. The trenches will only be backfilled upon their approval.

4.1.2 PCA will use these methods during the evaluation:

- A CAT scanner will be used by PCA prior to and during the opening of the trenches to identify and avoid live services.
- Excavation will be carried out by mechanical tracked excavator, fitted with a toothless ditching bucket. The excavation will be undertaken under a strict PCA's supervision. Spoil will be mounded at least 1m from the edges of the trenches.
- If required, any hardstanding will be removed from trenches footprints using a hydraulic breaker attached to the mechanical excavator.
- Machine excavation will continue in spits of 100mm at a time until either significant archaeological strata are found or natural ground exposed, whichever is encountered first. Each trench will be fully investigated and recorded, and features will be tested to ascertain their function, date and significance.
- The proposed trenches are designed to reach a maximum depth of approximately 1.20m below existing ground level depending on the stability of the trench edges. If the trenches need to be excavated further, then they will be stepped to provide safe access and secure the sides, and excavation will continue to allow recording of the structures. The steps will be 1.2m wide on each side of the trench and no more than 1.2m deep.
- Machine-cut sondages may be excavated within the trench deeper than 1.20m to locate the natural geology, if required. This will be immediately backfilled once the relevant levels are established.
- All arisings from each trench will be carefully inspected to ensure that any artefacts are recovered.
- The trenches and spoil heaps will be scanned with a metal-detector during the excavation to enable finds recovery.
- The trenches will be backfilled by PCA using the same type of machine as for opening the trenches, replacing the excavated arisings in the reverse order of excavation; however, PCA will undertake no post-backfilling attendance to the site to re-instate or maintain the surfaces. Excess arisings, if present, will be left on site at a place to be agreed.
- Tetra Tech will notify the Archaeological Advisor to the LPA of the commencement of fieldwork at

least one week in advance.

4.2 Investigation and Recording Techniques

- 4.2.1 Archaeological excavation may require work by 'pick and shovel'. Such techniques will be used only for the removal of homogeneous and 'low grade' layers where it can reasonably be argued that more detailed attention would not produce information of value. They will not be employed on complex stratigraphy, and the deposits to be removed must have been properly recorded first.
- 4.2.2 All archaeological features (stratigraphical layers, cuts, fills, structures) will be excavated by hand tools and recorded in plan at 1:20 or in section at 1:10 using standard single context recording methods. Photographs will also be taken as appropriate.
- 4.2.3 The strategy for sampling archaeological and environmental deposits and structures will be developed by PCA as necessary. If appropriate, the Historic England Regional Archaeological Science Advisor will be consulted.
- 4.2.4 All features will be investigated and recorded in order to properly understand the date and nature of the archaeological remains on the site and to recover sufficient finds assemblages to assess the chronological development and socio-economic character of the site over time.
- 4.2.5 If human remains are identified, the Archaeological Advisor will be notified immediately. If it is deemed that they can be left in situ, this will be the preferred option. The removal of human remains can only take place following the issuing of appropriate licenses from the Ministry of Justice. Should the removal of human remains not pose a risk to the completion of the work and should further archaeological mitigation be necessary at the site, then any remains will be left in situ, with the agreement of the Archaeological Advisor and the client. However, if to complete the project objectives exhumation is unavoidable, or if additional information is needed concerning dating/significance then agreement will be sought from all necessary parties to excavate/remove burials (cremations or inhumations). Assuming that this is agreed then PCA will apply on behalf of the overall client for a Burial Licence to the Ministry of Justice. If this is granted, human remains must be excavated in the manner specified in the licence and screened from public view. Burials will not be 'chased' beyond the edges or base of the excavation area, beyond construction impact depth. Excavation will be carried out in accordance with the Chartered Institute for Archaeologists' *Updated Guidelines to the Standards for Recording Human Remains* (2017). If remains are encountered in a known or former Christian burial ground, the *Guidance for best practice for treatment of human remains excavated from Christian burial grounds in England* (Church of England and English Heritage, Second Edition 2017) will apply. Burials will be excavated by hand and recorded using standard recording techniques. A rectified photograph of the excavated burial will be taken to assist in digitisation in post-excavation. Charnel will be collected by hand and its location noted.

4.3 Access and Safety

- 4.3.1 Site security is the responsibility of the client.
- 4.3.2 Reasonable access to the site will be granted to the Archaeological Advisor to the LPA and

representatives of the client, advisory bodies or local planning authority who wish to be satisfied, through site inspections, that the archaeological works are being conducted to proper professional standards and in accordance with the agreements made. Full access is also provided for the client and its agents.

- 4.3.3 All relevant health and safety legislation, CDM, COSHH regulations and codes of practice will be respected. PCAs H&S Policy Statement (2026) and Site Rules (2026) will be followed at all times.
- 4.3.4 A site-specific Risk Assessment will be prepared; this will be reviewed and updated daily by the site supervisor.
- 4.3.5 There is a duty of care for the overall client to provide all information reasonably obtainable on contamination and the location of live services before site works commence. Should services be encountered during excavation, it will be the assumption of PCA that they are live and will be avoided at all costs.
- 4.3.6 The area to be excavated will be scanned using a cable-avoidance tool (CAT) by PCA in advance of any breaking out or excavation. Scanning of the excavation area will be continuous at intervals of approximately 300mm until excavation is completed
- 4.3.7 The welfare/toilet facilities will be provided by PCA.
- 4.3.8 Minimum PPE for work on the site will comprise safety helmet, safety boots and high-visibility vest. Gloves shall be kept at the ready. Contamination-appropriate PPE (such as disposable suits, impermeable gloves, wellington safety boots and dust masks (P3 or half-filter)) will be available if suspected contaminants are encountered.
- 4.3.9 If asbestos material (suspected or confirmed) is encountered during the excavations its location will be marked, photographed and left in situ. The client will be informed as soon as possible. PCA will not remove any asbestos from site.
- 4.3.10 If during the course of the archaeological investigation items are observed or found which are considered to be potential UXO objects, all work in the vicinity of the excavation will cease and the client / Principal Contractor will be informed immediately. They will notify relevant bodies and arrange for appropriate attendance from specialists and/or emergency services.
- 4.3.11 Most of PCA staff are CSCS card holders; however, CSCS has now classed archaeology as a non-construction related occupation and as such archaeologists are not expected to carry a card. Furthermore, CSCS have stopped issuing cards for Archaeologists (both Professionally Qualified Person and Academically Qualified Person cards) from 1st of May 2024. PCA has been advised by CSCS that existing card holders can continue to use their card until expiry.

5 RECORDING SYSTEMS

5.1 Site Code

- 5.1.1 A unique site code HPLK26 has been assigned to serve to identify the site archive, including written, drawn, and electronic records, as well as artefacts. This code will be used to identify all stages of the project archive.

5.2 Site Records

- 5.2.1 The recording systems adopted during the investigations will be fully compatible with those most widely used elsewhere in Hertfordshire, which are those presented in PCAs Operations Manual 1 (Taylor and Brown 2009, updated 2018). No alternative recording system will be adopted without the prior agreement of the Archaeological Advisor.
- 5.2.2 The site archive will be so organised as to be compatible with the other archaeological archives produced in Hertfordshire. Individual descriptions of all archaeological strata and features excavated and exposed will be entered onto prepared pro-forma recording sheets which include the same fields of entry as are found on the recording sheets of the Museum of London. Sample recording sheets, sample registers, finds recording sheets, accession catalogues, and the photography record cards will follow the Museum of London equivalents. This requirement for archival compatibility extends to the use of computerised databases.
- 5.2.3 A 'site location plan' indicating the site north and based on the current Ordnance Survey 1:1250 map (reproduced with the permission of the Controller of HMSO) will be prepared, based upon the application site boundary. This will be supplemented by a trench plan at 1:20 (or 1:10), which will show the location of the areas investigated (indicated at Figure 1) and National Grid References. All sections should be located on plan with OS co-ordinates. The location of the OS benchmarks used and the site TBM will also be indicated.
- 5.2.4 A record of the full extent in plan of all archaeological deposits as revealed in the investigation will be made; these plans will be on polyester based drawing film, will be related to the site grid and at a scale of 1:10 or 1:20. 'Single context planning' will be used on site, and the information will be digitised for eventual CAD application.
- 5.2.5 At least one long section will be drawn or a representative part including a profile of the top of the natural deposits (extrapolated from cut features etc., if the trench has not been fully excavated). Other sections, including the half-sections of individual layers or features may be drawn as appropriate to 1:10 or 1:20.
- 5.2.6 The OD height of all principal strata and features will be calculated and indicated on the appropriate plans and sections.
- ### **5.3 Stratigraphic Matrix**
- 5.3.1 A 'Harris Matrix' stratification diagram will be used to record stratigraphic relationships. This record will

be compiled and fully checked during the course of the excavations. Spot dating should be incorporated where applicable during the course of the excavation.

5.4 Survey

- 5.4.1 A digital GPS, or appropriately scaled development plan, will be used to record trench positions, baselines, datums and discrete archaeological features. If complex or intercutting remains are found then hand-planning will be used, tied to baselines located by GPS.

5.5 Photographic Record

- 5.5.1 An adequate photographic record of the investigations will be prepared. This will consist of high quality, colour digital photographs taken in jpeg and RAW formats by an appropriately trained individual, illustrating in both detail and general context the principal features and finds discovered. North arrow and a board with site and shot details will be used. The photographic record will also include 'working shots' to illustrate more generally the nature of the archaeological operation mounted. The digital images will be preserved on a dedicated and backed up server. The RAW files will be converted to high-quality tiff images for eventual preservation by local depository and will comply with digital preservation standards set by the Archaeological Data Service (ADS).

6 TREATMENT OF FINDS AND SAMPLES

6.1 General

- 6.1.1 All processing will take place at PCA's Brockley premises, or, if appropriate, those of our environmental consultants.

6.2 Environmental

- 6.2.1 A structured programme of environmental sampling appropriate to the aims of the evaluation will be implemented. Close attention will be given to sampling for date, structure and environment. Sample size should take into account the frequency with which material is likely to occur. Bulk sieving may be employed for significant deposits for recovery of environmental evidence to ensure that complete samples of artefactual evidence are collected.
- 6.2.2 PCA will use an appropriately qualified and experienced geoarchaeologist to record any deposits of particular significance such as buried soils or advise on depositional processes.
- 6.2.3 Where necessary the advice of the Historic England Regional Scientific Advisor will be sought regarding specialist sampling requirements and any scientific applications relevant to the archaeological evaluation of this site.
- 6.2.4 Bulk samples will be taken from deposits, and column samples may be taken through sections of multiple deposits. A high priority will be given to sampling river and other anaerobic deposits, such as peat, where organic materials may be preserved.
- 6.2.5 Where deposits are dry, bulk samples for the recovery of charred plant remains, small bones and finds, will be taken from sealed and datable features such as pits, ditches, hearths and floors. Each context will normally be sampled. The size of the sample is expected to be in the range of 40-60 litres per context or 100% of smaller contexts. Samples will not be taken from the intersection of features.
- 6.2.6 Where good conditions for the preservation of bone are identified, all large bones will be collected by hand and sieving of bulk samples up to 40 litres will be undertaken as appropriate.
- 6.2.7 Where deposits are wet, waterlogged or peaty, monoliths will be taken along cleaned vertical surfaces for the retrieval of pollen, diatoms, ostracods and foraminifera. The numbers to be taken will be agreed with the Archaeological Advisor. For wet, waterlogged or peaty deposits, bulk samples of 20 litres will be taken from visible layers or spits for the retrieval of plant macro-remains and insects.
- 6.2.8 Environmental samples from dry deposits will normally be processed by flotation following the evaluation fieldwork and the residues will be sorted to retrieve small bones, small finds and charcoal that has not floated. Environmental samples from wet deposits will normally be sent to specialists for processing in laboratory conditions.
- 6.2.9 Bulk environmental soil samples will be processed by standard flotation methods. The residues will be sieved and dried if necessary. The residues will be sorted, and any finds recovered given to the appropriate specialist. The flot will be retained on a 0.25 mm mesh and scanned to assess the

environmental remains present and their preservation. Results of the scan will inform further analysis and discard.

- 6.2.10 Dry preservation levels confirmed during the evaluation indicate that the only environmental indicators that may be recovered will be charred plant remains (charcoal may be particularly useful) and bones from small mammals/amphibians. Molluscs, if present, should also be sampled for.
- 6.2.11 In the case of samples from cremation-related deposits the flots will be retained on a 0.25mm mesh, with residues sieved into 4mm, 2mm and 1mm sizes. In the case of samples from inhumation burial deposits, the sample will be wet sieved through 9.5mm and 1mm mesh sizes. The coarse fractions (9.5 mm) will be sorted with any finds recovered given to the appropriate specialist together with the finer residues.
- 6.2.12 Any waterlogged samples will be processed by standard waterlogged flotation methods.
- 6.2.13 More detailed strategy for sampling archaeological and environmental deposits and structures (which can include soils, timbers, pollen, diatoms, animal bone and human burials) will be developed in consultation with the Archaeological Advisor, and if necessary, the Historic England Regional Archaeological Science Advisor. Subsequent on-site work and analysis of the processed samples and remains will be undertaken by PCA own consultants and specialist sub-contractors.
- 6.2.14 Where appropriate the guidance in the following English Heritage (now Historic England) papers will be followed:
- “Guidelines on the recording, sampling, conservation, and curation of waterlogged wood” 1996;
 - “Dendrochronology – guidelines on producing and interpreting dendrochronological dates” 1997;
 - “Archaeometallurgy” 2001;
 - “Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation (second edition)” 2011;
 - “Human bones from Archaeological Sites: Guidelines for Producing Assessment Documents and Analytical Reports” 2004;
 - “Geoarchaeology” 2004;
 - “Wet Wood and Leather”;
 - “Archaeomagnetic Dating: Guidelines on producing and interpreting archaeomagnetic dates” 2006;
 - “Guidelines on the X-radiography of archaeological metalwork” 2006.

6.3 **Artefactual**

- 6.3.1 All finds retrieval policies of PCA will be adopted and all identified finds and artefacts will be retained according to the PCA retention and retrieval policy appropriate to the material type and date. No finds will be discarded without the prior approval of the report by the Archaeological Advisor.

- 6.3.2 All finds will be treated in a proper manner and to standards agreed in advance with the recipient museum. They will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the guidelines set out in the United Kingdom Institute for Conservation's '*Conservation Guidelines No.2*' and the London Museum's '*Standards for the Preparation of Finds to be Permanently Retained by the Museum of London*'. All metal objects will be x-rayed and then selected for conservation (except in those cases where the Archaeological Advisor agrees that this will not be necessary). All finds must also be cleaned, conserved, marked, bagged and boxed in accordance with the guidelines set out in *Hertfordshire Archaeological Archive Standards – A countrywide standards for the creation, completion and transfer of Archaeological Archives in Hertfordshire* (2025).
- 6.3.3 Ceramic (pottery, clay tobacco, building material fabric and brick form) reference collections, housed at the London should be referred to for descriptive and analytical purposes in order to ensure that terminology is consistent. The post-Roman pottery will be recorded using a system of mnemonic codes based on common name, following those set out in *Saxon and Medieval pottery fabric codes for Hertfordshire*.
- 6.3.4 All finds of gold and silver, and any artefacts that may qualify as Treasure, will be removed to a secure location and reported in accordance with the Treasure Act 1996 (as amended) and the Treasure Act 1996 Code of Practice (3rd Revision, 2023). Finds will be reported to the local Coroner within the required statutory timeframe, with notification also made to the local Finds Liaison Officer (FLO) in accordance with Portable Antiquities Scheme procedures. Where removal cannot be undertaken on the same working day as discovery, appropriate security measures will be implemented to protect the finds from theft.

7 ARCHIVES AND REPORTS

7.1 General

- 7.1.1 The integrity of the site archive will be maintained in accordance with the Hertfordshire Archaeological Archive Standards – A countywide standard for the creation, completion and transfer of Archaeological Archives in Hertfordshire (Hertfordshire Museums 2018). The finds and records will be available for public consultation and will be prepared in accordance with a guidance set out in the Museum and Galleries Commission's *Standards in the Museum Care of Archaeological Collections* (1992) and *Towards an Accessible Archaeological Archive. The Transfer of Archaeological Archives to Museums: Guidelines for Use in England, Northern Ireland Scotland and Wales* (SMA 1995). For deposition with local museum, the *Guidelines for the Preparation of Archaeological Archives* will be followed.
- 7.1.2 Agreement with North Herts Museums Service (NHMS) has been made for the deposition of the site archive.
- 7.1.3 If the finds are not to be donated to the local depository, arrangements will be made for a comprehensive record of all relevant materials (including detailed drawings, photographs and descriptions of individual finds), which can instead constitute the archaeological archive.
- 7.1.4 The minimum acceptable standard for the site archive is defined in the MoRPHE 2015. It will include all materials recovered, (or the comprehensive records of such materials as referred to above) and all written, drawn, and photographic records, including a copy of all reports relating to the investigations undertaken. It will be quantified, ordered, indexed, and internally consistent before transfer to local depository. It will also contain a site matrix, a site summary and brief written observations on the artefactual and environmental data.
- 7.1.5 United Kingdom Institute for Conservation guidelines for the preparation of excavation archives for long term storage (1990) will be followed.
- 7.1.6 A short summary of the results of the work, even if negative, will be bound into the client report for submission to the client and the Hertfordshire HER along with the OASIS report form as soon as possible after the completion of archaeological works.
- 7.1.7 Minimum requirements for public dissemination are for OASIS report forms to be submitted to the OASIS Project as soon as possible within 6 months of completion of fieldwork, and the provision of a short paragraph summary of the results for publication in the relevant journal. Such publications will meet the minimum requirements set out in *Management of Research Projects in the Historic* (MoRPHE 2015). There is a need to format reports so that the details of the proposed development impact can be separated from the information and enable all archaeological information to be made available to the Hertfordshire Historic Environment Record (HER) within 6 months of the completion of fieldwork.

7.2 Report

- 7.2.1 All fieldwork and results will be fully recorded, and a report prepared. Copies of the report will be forwarded to Tetra Tech for comment ahead of submission to the Archaeology Advisor to the Local

Planning Authority,

7.2.2 The report will include:

- Non-technical summary.
- Introduction.
- Planning background.
- Previous archaeological work relevant to the project.
- Topography of the site.
- Research objectives.
- Methodology.
- The results of the fieldwork and their significance.
- An assessment of the results against original expectations and a review of the effectiveness of the fieldwork strategy.
- Statement of potential of the archaeology.
- Conclusions and recommendations, if appropriate.
- Illustrations, drawn and photographic.
- Quantification of the archaeological archive.
- Bibliography.
- Acknowledgements.
- OASIS form.
- HER Summary sheet.

7.2.3 The project resource agreed between PCA, and the client allows for the production of an evaluation report to include CAD illustrations and artefact assessment as necessary. It is intended that PCA will provide a draft copy of the evaluation report for comment within three weeks of the completion of the fieldwork, to then be provided to the Local Planning Authority.

8 SIZE AND STRUCTURE OF EXCAVATION TEAM

- 8.1 The investigations will be supervised by a full-time member of PCA's staff who has considerable experience of working in archaeology and on rural sites and who has an understanding of the issues associated with this site. The CVs of the PCA staff to attend the site are included in this WSI as Appendix 2.
- 8.2 The supervisor will be assisted as necessary by full-time archaeologists in the employment of PCA in addition to other support staff, such as geoarchaeologist, archaeological photographers, surveyors, finds specialists and logistics.
- 8.3 The following specialists may be employed by PCA during the fieldwork and post-excavation stages of the project:

Name	Role
Peter Moore	Director
Zbigniew Pozorski	Senior Project Manager
Guy Thompson	Documentary Research
Dr Jon Cotton (ext)	Prehistoric Pottery
Eniko Hudak	Roman Pottery
Chris Jarrett	Post-Roman Pottery, Clay Tobacco Pipe, Saxon Loom weights and Glass
Berni Seddon	Post-Roman Pottery, Roman and Post-Roman CBM, Saxon Loom weights, Painted Wall Plaster, Fired Clay
Dr John Shepherd (ext)	Roman Glass and Small Finds
Dr Barry Bishop	Lithics and Geoarchaeology
Lynden Cooper	Lithics
Dr Jane Wheeler	Geoarchaeology
Damian Goodburn (ext)	Timber
Kevin Rielly	Animal Bone
Karen Deighton	Animal Bone
Philip Armitage (ext)	Fish Bone
James Langthorne	Human Bone
Kevin Hayward	Roman and Post-Roman CBM, Worked Stone, Stone identification
Charlotte Matthews	Building Recording (Head of department)
Adam Garwood	Building Recording
Amparo Valcarcel	Ceramic Building Material
Dr Märit Gaimster	Saxon specialist, Post-Roman small finds
Jane Walsh	Environmental Archaeology
Quita Mould (ext)	Leather

Lynne Keys	Iron slag
Cate Davies	Finds illustration, typesetting
Mark Roughley	CAD, GIS
Strephon Duckering (ext)	Photography

- 8.4 A standard working day is 08.00 – 16.15. A morning and afternoon tea break and 45-minute lunch break are included within this period. Any workings outside of these times are considered to be overtime.

9 PROGRAMMING

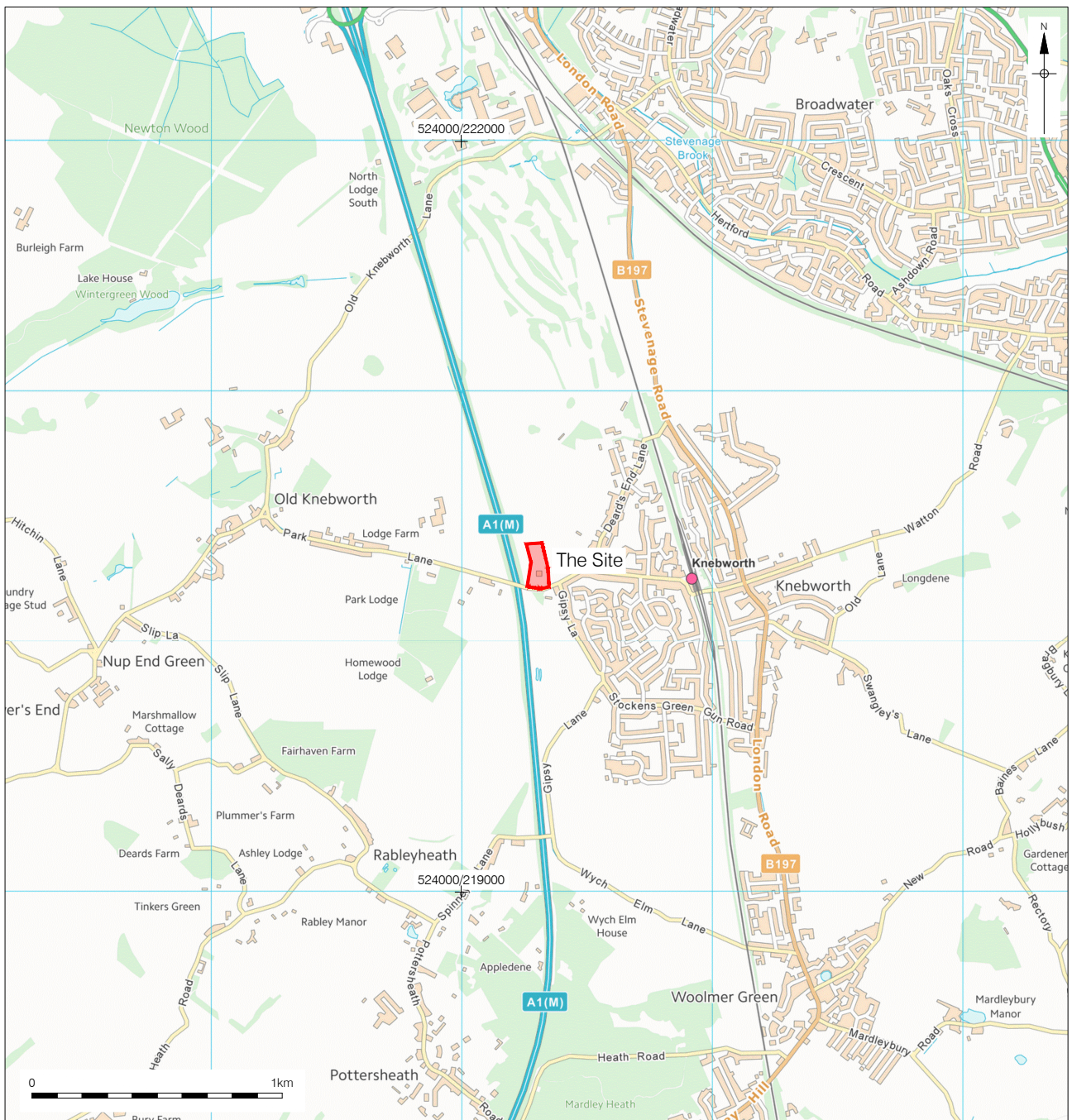
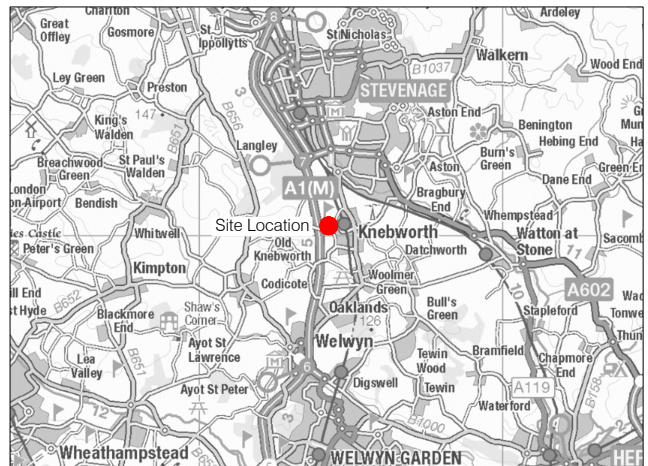
- 9.1 It is intended that the work can progress once this WSI is approved and once the client is able to grant access to the site. The precise date will be advised to the Archaeological Advisor to the LPA in advance by Tetra Tech.
- 9.2 The on-site fieldwork is programmed for three working days. A report will be produced within approximately 2-3 weeks of the completion of the fieldwork.
- 9.3 PCA will provide regular updates during the course of the fieldwork to the client.

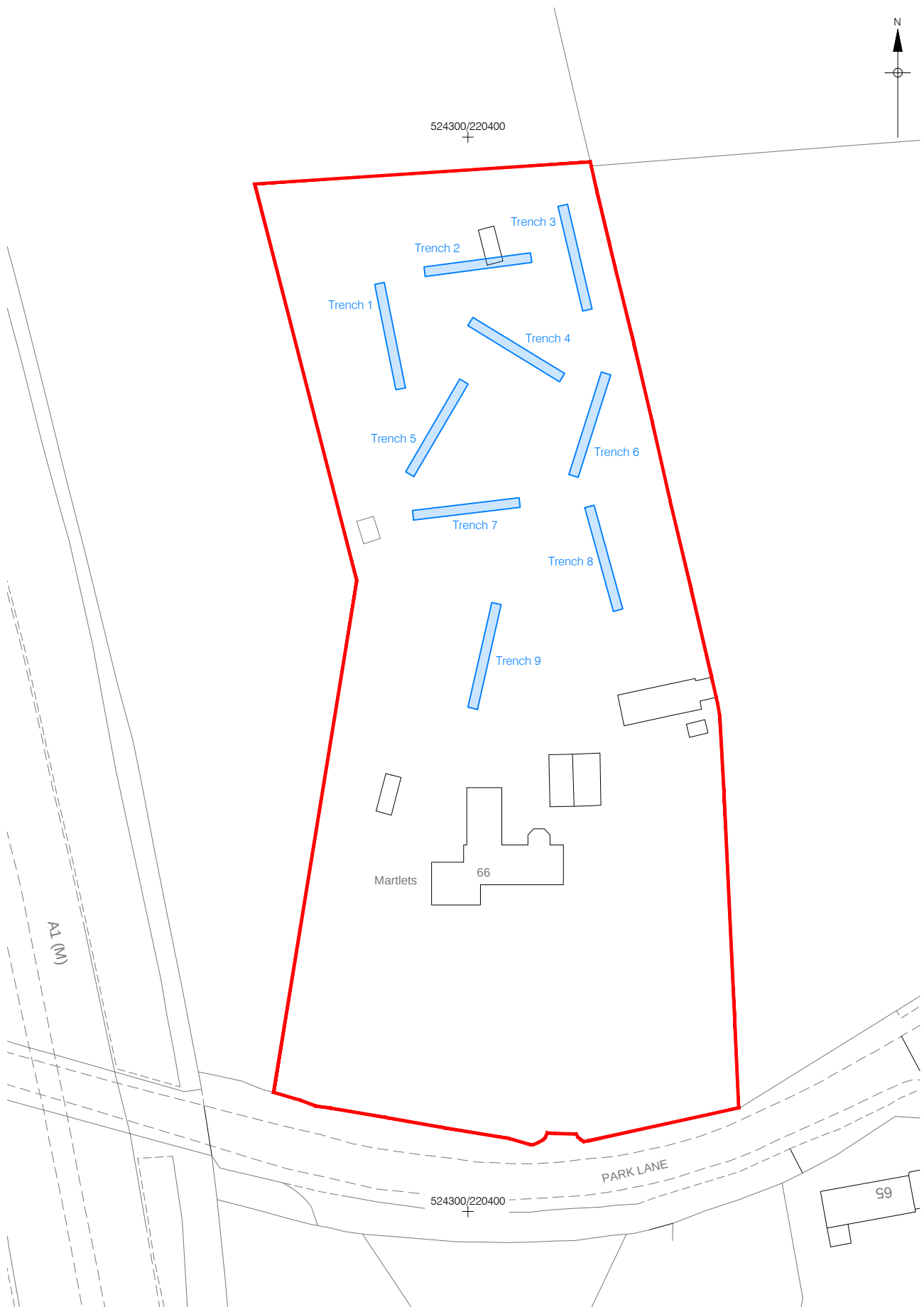
10 PUBLIC BENEFIT

- 10.1 A strategy of Public Outreach and Interpretation may be developed during the programme of archaeological works, which would enable the scope to secure wider social, economic and environmental benefits in line with the Public Services (Social Value) Act 2012. The final decision regarding the requirement for public outreach will be taken by the HCC.
- 10.2 If archaeological remains of notable significance and density are identified during the evaluation, further public benefit may be considered in discussion with the client, HCC and North Herts Council.

11 BIBLIOGRAPHY

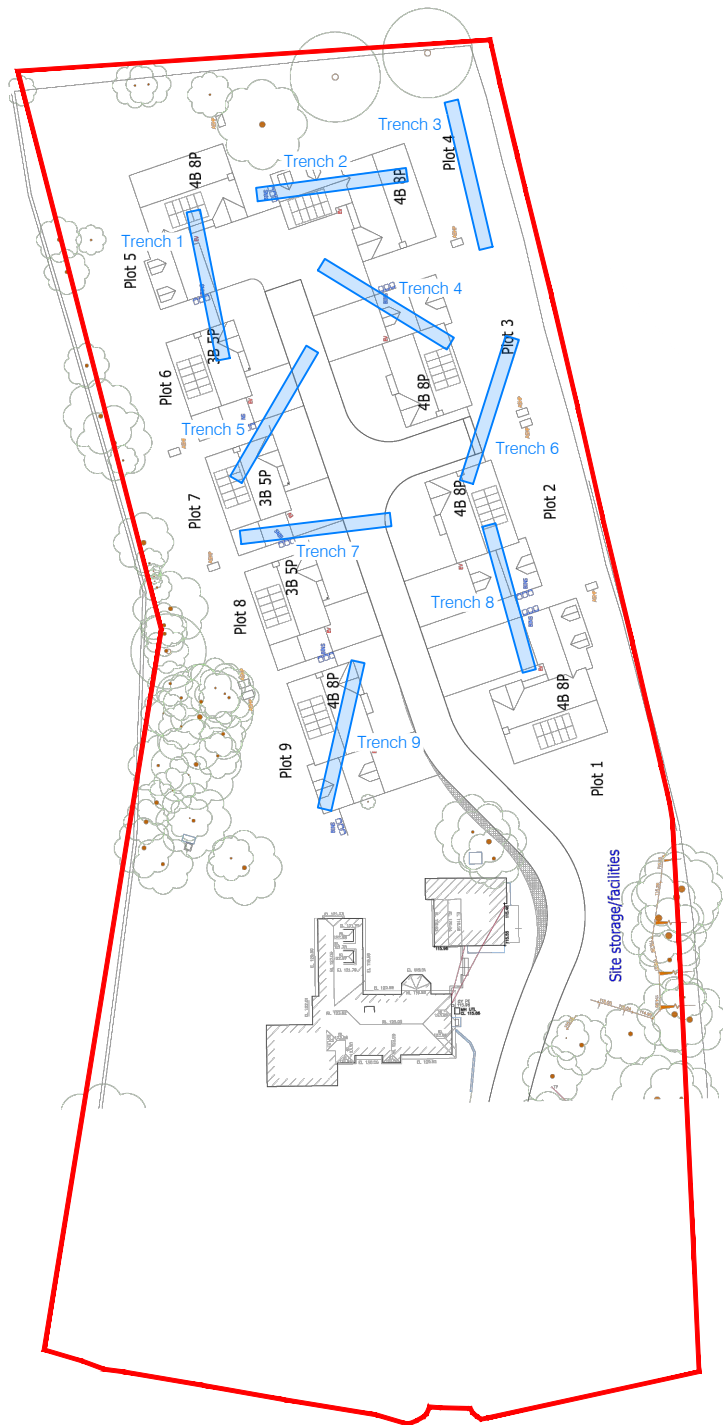
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0 50m

Figure 2
 Detailed Site Plan showing Proposed Trench Locations
 1:1,000 at A4



0 50m

Plan reproduced from a drawing by M Scott Architectural Designs Ltd. (September 2025)
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30/07/2026 MR

Figure 3
Proposed Trench Locations overlain
on The Proposed Development
1:1,000 at A4



0 50m

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 © 2026 TMAP Mobility Earthstar Geographics SIO © Mapbox
 © Pre-Construct Archaeology Ltd 2026
 30/07/2026 MR

Figure 4
 Proposed Trench Locations overlain on Satellite Image
 1:1,000 at A4

APPENDIX 1: LANDOWNER FORM

WRITTEN SCHEME OF INVESTIGATION: LANDOWNER IDENTIFICATION AND



PCA London Office

Unit 54 Brockley Cross Business Centre, 96 Endwell Road, Brockley, London, SE4 2PD



operations ~ 020 7732 3925

administration ~ 0207 358 2197

post-excavation services ~ 020 7639 9091



info@pre-construct.com



www.pre-construct.com

ACKNOWLEDGEMENT OF TRANSFER FORM

PCA Ltd is due to carry out an archaeological investigation on the site below:

Site Name: 66 Park Lane
Site Address: 66 Park Lane, Knebworth, Hertfordshire SG3 6PW
Site Code: HPLK26

Pre-Construct Archaeology Limited have been commissioned to undertake the archaeological investigation by Tetra Tech.

Following completion of the site, the full site archive including artefacts worthy of retention will be deposited by PCA with a museum or repository who are committed to curate this archive.

To action this, PCA requires the name and address of the Landowner and if they are a company their Company Registration Number, so that a Transfer of Title can be arranged for the deposition of the archive, by Deed of Transfer between the recipient museum or repository and the Landowner.

We have been informed by Historic England that without this information the Written Scheme of Investigation will NOT be approved and that the development will not be allowed to start.

Therefore, could you please complete the details below and return this letter by post or e-mail to the following:

Zbigniew Pozorski

zpozorski@pre-construct.com

Pre-Construct Archaeology Ltd

Unit 40, Brockley Cross Business Centre

96 Endwell Road, London SE4 2PD

NAME AND ADDRESS OF SITE OWNER / FREEHOLDER

Name: _____

Address: _____

COMPANY REGISTRATION NO. (Required for sites in Greater London) _____

APPENDIX 2: DETAILS OF PCA SITE STAFF

Tomasz Mazurkiewicz

Supervisory Archaeologist (MA in Archaeology)
 Pre-Construct Archaeology Limited (PCA)

Summary

Tomasz first joined PCA as an archaeologist in 2004, working on multiple projects, over a 5 year period.

He then left to develop a separate interest in aerial photography / drone flight, before returning to field archaeology and rejoining PCA in 2021.

Tomasz has worked as an archaeologist in the UK on a wide range of urban and rural projects, developing his skillset to become a full-time supervisor in 2023.

His key specialisations include the supervision of sites and writing of reports for Archaeological projects.

Major Projects Supervised for PCA

- SMS Mitigation at Gray's Lane, Foxholes, Hitchin. The site contained Iron Age to Roman evidence with several enclosures and remains of domestic and extensive agricultural use of the site
- Evaluation at South Way, Hatfield with evidence of Roman farmstead and on-site occupation including a flint-lined kiln
- Evaluation (127 trenches) and SMS Mitigation (5ha) across large site at Greenhill Road, Herne Bay. The site revealed significant archaeology from the Prehistoric to the late Roman period, with a pattern of enclosure field systems. LIA/ERB occupational was commonly found, continuing through to the mid/late 4th century AD.
- SMS Mitigation (2.5ha) across large site at Nash Road, Margate, revealing widespread prehistoric landscape including funerary remains; a sparse presence during the LIA/ERB period, and then a resurgence of activity in the medieval period, with domestic activity including sunken feature buildings.

Specialisms, Skills and Training

- Supervision of Evaluations and Excavations
- Post Excavation Analysis, including the compilation of Assessment Reports
- SSSTS qualified
- CSCS registered
- Asbestos Awareness
- Cable Avoidance Tool Training
- Driving Licence

Sally Smart

Archaeologist (BSc in Archaeology)
Pre-Construct Archaeology Limited (PCA)

Summary

Sally joined PCA as an archaeologist in 2026, having experience of six years working on the archaeological sites in the London area, Home Counties, East of England and the South East, working previously for L-P Archaeology and MOLA. Sally has also supervisory experience and feels comfortable on both rural and urban archaeological sites.

Major Projects for PCA

- Supervision of the evaluation at Gerrards Cross, Buckinghamshire with post-medieval horizon and relatively complex geoarchaeological context
- SMS Mitigation in Sittingbourne, Kent. The site with LIA and Roman extensive occupation, including remains of the Roman building and LIA and Roman burial ground
- SMS Mitigation in Billericay Essex with multi-period occupation of the Iron Age to medieval date
- Evaluation in Cobham, Surrey. The site with prehistoric and Saxon/medieval remains

Specialisms, Skills and Training

- Archaeological Excavation and Recording
- SSSTS qualified
- CSCS registered
- Asbestos Awareness
- Cable Avoidance Tool Training
- Driving Licence

APPENDIX 3: DIGITAL DATA MANAGEMENT PLAN

Section A: Project Information			
HER# (Site Code):	HPLK26	Other Site Codes	n/a
Site Full Location	66 Park Lane, Knebworth, Hertfordshire SG3 6PW		
OASIS ID:	tbc	K-Code:	K11521
Museum Acc. #	tbc	NGR #	TL 24315 20278
Planning Ref #:	25/01658/RM	Planning Authority	North Herts District Council
DMP Written	29/07/2026	DMP Last Updated	n/a
Project Manager/ Primary Contact:	Zbigniew Pozorski	Project Type:	Evaluation
Client:	HEA	Site Supervisor:	tbc
Data Sharing Agreement in Place?	no		
Data Management Responsibility	Pre-Construct Archaeology Limited	Who will take possession of the generated data at the end of the project	Archaeology Data Service (ADS)
Section B: Estimated Volume of Data			
File types generated as part of the project archive by PCA:			
Data Type	Format	Estimated Volume	Details/Comment
Spreadsheets	Excel (.xlsx), .csv	Tbc	
Database	Access (.accdb)	Tbc	
Text/Documents	.pdf, Word (.docx)	Tbc	
Images	.jpeg, .png, .DNG	Tbc	
Graphics	.dwg,	Tbc	
GIS	.shp	Tbc	
Will existing or external data be utilised?			YES
If yes, list type of data and source: External specialist reports, external images			
Data Type	Format	Estimated Volume	Source
Images	.jpeg, .png, .DNG	Tbc	
Graphics	.dwg,	Tbc	
GIS	.shp	Tbc	
Text/Documents	.pdf, Word (.docx)	Tbc	
Section C.: Data Acquisition, Processing, and Analysis			
What methods and data standards will be undertaken?			
Field data will be collected through digital and analogue means as set out within the project design. All data that will be collected will aim to work to best practice guidelines as outlined by CIFA and the ADS, as well as any specific London guidelines, whenever possible and will be updated as the project progresses, or as guidance is modified.			
What file naming/structure is in place and how will version control be maintained? Display example below.			
Example file name: PCA _ site code _ site name _ report type _ author _ version control The project archive will be stored in a project specific folder, with sub folders being utilised to further sub-classify data as appropriate (e.g. databases, photos, reports, etc.).			
What Quality Assurances of the data are in place?			
All digital instruments used to capture data on site and during post-ex (e.g. cameras, GPS/RTK units, etc.) will be appropriately calibrated and checked to be in full working order prior to fieldwork and subsequent analysis to ensure accurate data capture. Site records and data will be reviewed during project delivery to guarantee all digital data is both secure and correct.			
Section D: Documentation and Metadata:			
How can the data be read?			
Data collected during the course of the project will include standard formats as listed within section B.			

What documentation and metadata will be provided when the data is archived?		
A catalogue of the digital archive, material archive, paper archive, and the supporting metadata will be provided to the digital repository		
Section E: Ethics and Legal Compliance:		
How can the identity of individuals be protected if required		
Personal data will be removed from the digital archive prior to deposition, and permission to include personal data will be gained during the project if required.		
Is the data GDPR 2018 compliant?		
All digital archive data is compliant with GDPR as outlined within PCA's GDPR policy.		
Who owns the data generated during the course of this project?		
Copyright for all data generated or collected by the project team belongs to PCA. However, if external data is utilised, formal permission or licences will be obtained prior to use, and correct citation given during reporting and when archived. Any licences agreed with external parties will be included within the project archive.		
Section F: Storage and Backup:		
Is sufficient storage in place?		
All project data will be held on a server based at our London office. The server has sufficient space to hold all data generated during the project.		
What backups are in place?		
Project data will be stored on a companywide intranet and on servers located at our London office.		
What data security is in place?		
All project data is restricted by permission-based access and single factor authentication. The only exception to this is when external finds or data specialists are consulted, with only files pertinent to their role are shared directly.		
Section G: Selection and Preservation:		
Which data will be selected for inclusion within the project archive?		
Selection of data that will be included within the project archive will be informed by the WSI, Project Brief, research aims, and specialist recommendations. All data selected for preservation will be logically named, identified, and structured, and will adhere to the formats listed in section B. Any deselected data will be deleted after deposition with the ADS or relevant archival repository.		
What is the long-term preservation plan for the project dataset?		
The digital archive will be deposited with the ADS.		
If this is a larger project, has the ADS been contacted regarding accession of the project dataset?	NO	
Has the Museum or depository been contacted	NO	
Section H: Data Dissemination:		
How will the dataset or parts of it be shared?		
The final project report will be uploaded to the HER via OASIS and subsequently released onto ADS's report library. Additionally, the report will be published either through a full publication, or as a note in the regional archaeological journal. After deposition of the digital archive, the ADS and relevant depository are able to share the data under licence.		
Section I: Responsibilities:		
Who will manage the data?		
The project manager will be responsible for implementing the data management plan and its security.		
Roles and Responsibilities:		
Action	Responsible Person(s)	Details/Comment
Field Data	Field team	Including initial storage and backup
Data Analysis and Interpretation	Site Supervisor/Project Manager	
Data Archiving	Archives Officer	
Data Dissemination	Project Manager/Archives Officer	Archives officer will be responsible for uploading report onto OASIS.
GDPR Compliance	Project Manager/Archives Officer/IT Specialist	
General Data backup	IT Specialist/Archives Officer	

APPENDIX 4: CARBON MITIGATION POLICY



Carbon Mitigation Policy

Quality Control	
Policy Number:	15
Version Number:	2
Written by:	Christiane Meckseper
Approving Director:	Josephine Brown
Date Modified:	02/01/2025
Date Approved:	09/01/2025
Date of next review:	09/01/2026

Version History		
Version No	Author	Comments
0	Stuart Draper	Initial draft 2024
1	Various	Working copy for edits by 30/08/2024 JB - 11/12/2024MH - 12/12/2024 CFM

1 Purpose

- 1.1 Pre-Construct Archaeology's (PCA's) approach to reducing carbon emissions
- 1.2 Carbon emissions are a key cause of climate change, accounting for more than 80 per cent % of all greenhouse gas emissions in the UK. The UN Paris Agreement (2015) sets out a long term goal to keep the rise in global surface temperature to below 2° C. Energy generated from fossil fuel sources – oil, coal and gas – produces significant amounts of the carbon emissions that are largely responsible for global warming.
- 1.3 PCA recognizes the need to take a lifecycle perspective on our operations to reduce our impact on the environment. By using energy more efficiently across all our operations and by carefully considering our purchasing and waste disposal strategies, we strive to minimize any negative impacts on the environment and to move towards more sustainable, renewable work practices with minimal carbon emissions.
- 1.4 Every one of us has a part to play in managing our carbon emissions. However, it is important that the business sector acts as a responsible role model and leads by example. According to government, businesses account for almost half of the UK's total carbon emissions, with small and medium-sized enterprises (SMEs) accounting for almost a third of all business carbon emission.

2 Scope

- 2.1 This policy applies to all employees, sub-contractors, and stakeholders involved in the operations of PCA. It covers activities at all locations where the company operates and extends to our supply chain and service delivery.

3 Legislative Framework

- 3.1 PCA's policy aligns with the following key UK legislation and statutory guidance:
- 3.2 **The Environment Act 2021:** Focuses on enhancing environmental protection and sustainability in line with modern priorities, such as climate change and biodiversity.
- 3.3 **Environmental Protection Act 1990:** Establishes controls to prevent environmental harm, including waste management and pollution control.
- 3.4 **The Waste (England and Wales) Regulations 2011:** Imposes responsibilities for waste reduction, recycling, and proper disposal.

- 3.5 **Climate Change Act 2008:** Sets legally binding targets for reducing greenhouse gas emissions. The Climate Change Act 2008 commits the UK Government by law to reducing greenhouse gas emissions by at least 100% of 1990 levels (net Zero) by 2050. The Environment Act 2021 acts as the UK framework for environmental protection, filling the gaps for the rules on nature protection, water quality, clean air and other environmental protections that previously applied when the UK was within the EU.
- 3.6 **The Climate Change Levy (CCL):** This is a tax on gas, coal and fossil fuel generated electricity consumption that is added to non-domestic electricity bills. It, therefore, impacts all businesses. So, the less energy used, the smaller the levy. The levy has already encouraged numerous companies to assess their energy use and, consequently, reduce consumption. Others have opted for energy from fuel sources that are exempt from the levy altogether because they produce few or no carbon emissions, such as electricity generated from renewables or good quality combined heat and power.

4 PCA Environmental Policy Framework

- 4.1 This policy is supplementary to the main PCA environmental policy:
- PCA Policy 4 Environmental Policy
- 4.2 This policy works in conjunction with other PCA environmental policies:
- PCA Policy 16 Sustainability Policy
 - PCA Policy 17 Energy Management Policy
 - PCA Policy 18 Sediment Control Policy

5 Action Plan

In the Field:

Minimise car journeys and carry out fleet maintenance

- 5.1 Encourage car sharing and minimising journeys to and from site. Only use fuel efficient cars and vans. Keep fleet well maintained and serviced regularly. Opt for hire of electric/hybrid vehicles where practicable.

Only use optimum-sized machine plant

- 5.2 Use local contractors in minimising travel and appropriately sized machine plant for scope and scale of project.

Schedule project schedules for optimum use of machine plant and travel time

- 5.3 Maximise and optimize work packages that can be completed concurrently or consecutively in a seamless process.

Local Staffing

- 5.4 Preferred use of staff members who live close to fieldwork site.
- 5.5 Provide accommodation near to site for staff on projects beyond commuting range in order to reduce mileage.

Minimising disruption of others work activities

- 5.6 When working on sites with other contractors, we would minimise disruption to client's, main contractors' or third parties' work activities by close liaison, whereby our activities are integrating this theirs in the avoidance of wasted time, duplication of effort, lost resources and misplaced effort.

Public Transport

- 5.7 Public transport to be used where appropriate.

In the Office:

Energy Consumption

- 5.8 A regular check on electricity and gas consumption will be undertaken, ensuring that bills relate to actual usage, rather than estimates, and that energy consumption is monitored. Renewable energy sources are preferred over non-renewable sources.
- 5.9 Ensure boilers are thermostatically controlled.
- 5.10 Unused Space will not be heated. Where possible unused areas will not have the heating switched on.
- 5.11 Radiators to be kept clear. This should be checked on a regular basis to ensure maximum effectiveness
- 5.12 Turn off all equipment that is not needed in the evenings, and when the building is not in use.
- 5.13 **Switch off Lights in Empty Rooms:** It is a misconception that it is not worth switching off lights – and fluorescent lights, in particular – when leaving the room because they 'use so much electricity in the startup phase'. Even though fluorescent lights do use very slightly more power during start up, it is never cost-effective to leave them on. Also, use

just the amount of light needed; non-working areas do not usually need as much light as working areas. All staff to be vigilant about switching off lights.

5.14 **Fit Energy-Saving Light Bulbs:** While these are **more** expensive to buy, they last eight to ten times longer than standard bulbs and use 75 % less electricity to provide the same amount of light. Thus, we will replace blown bulbs with energy saving devices.

5.15 **Switch off PCs:** There is another myth, about not switching off a PC, say at lunchtime, because it shortens the screen's life and doesn't save much energy. Older cathode ray tube screens, in particular – as opposed to the more expensive flat screens – use anything between 30W and 200W while in operation which, even in a small or medium-sized office, adds up to sizeable energy consumption. They also use the same amount in screen saver mode and although they may power down to sleep mode typically after 20 minutes, they are still using some energy to no great effect. Thus, all PCs and screens will be switched off when not in use and at the end of the day.

5.16 Make sure all windows and doors are draught proofed.

Maintenance of Equipment.

5.17 Failing to maintain equipment properly can increase heating costs by up to 10 %. All equipment will be PAT tested and where necessary undergo annual service checks.

5.18 Vehicles will be serviced according to the service management schedule to minimise carbon emissions

Consult colleagues

5.19 Encourage all staff to think about ways of reducing carbon emissions. Set, and work towards, carbon reduction targets. Review regularly and improve practices.

6 Approval

Signed:



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