

Land south of Milksey Lane, Graveley
Archaeological Mitigation Written Scheme of Investigation
August 2025

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Report

Archaeological Mitigation
Written Scheme of Investigation

Site

Land south of Milksey Lane, Graveley

Planning Authority

North Hertfordshire Council

Grid Reference

NGR 523009, 228036

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Approved By

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1.0 Introduction

Background

- 1.1 This document is a Written Scheme of Investigation (WSI) for undertaking a programme of archaeological mitigation at Land south of Milksey Lane, Graveley (hereinafter referred to as the 'Site'). The site is centred on NGR 523009, 228036 (Figure 1). It has been researched and prepared by Harry Twining (Archaeological Consultant, Orion Heritage Ltd) on behalf the client. An application (reference 21/O2260/PRE) for a residential led development has been submitted for the site.
- 1.2 An archaeological desktop assessment (Orion Heritage 2021) concluded a moderate to high potential for Iron Age and Roman remains, with the postulated route of a Roman road running in a north/south orientation through the western extent of the study site. Archaeological evaluation trenching (Cotswold Archaeology 2022) identified this road within four of the trenches opened, along with a Modern field boundary and a possible paleochannel. No archaeological remains were identified within those trenches opened within the east of the study site.
- 1.3 Following this programme of archaeological evaluation trenching, a programme of archaeological mitigation works was designed, this being outlined within this Written Scheme of Investigation (WSI). Although this WSI has not been formally consulted with the Hertfordshire County Archaeologist (CA), a scope of works was agreed in concept during a site visit with the CA during the archaeological evaluation cited above in 2022.
- 1.4 The county's Natural, Historic and Built Environment Advisory Team was consulted in March 2023. The team concurred with Orion Heritage's conclusion within the latter's Archaeological Statement (Orion 2023), that *'the archaeological remains recorded on site do not represent a constraint to development. In accordance with national and local planning policy, a requirement for mitigation excavation of the Roman road and its associated features, to be followed by post-excavation assessment, analysis, publication and archiving, could be secured by means of a condition on planning permission, should this be granted.'*
- 1.5 The team then went on to recommend the following;
- *The archaeological open area excavation of the western part of the development site, i.e. that part containing the remains of the Roman road, on which the construction of the proposed housing, garages and access will have an impact, prior to any development commencing;*

- *A programme of archaeological outreach; to include an open event for the local community and schools, and via a blog and by more traditional press releases;*
- *The analysis of the results of the archaeological work with provision for the subsequent production of a report and an archive, and the publication of the results; and*
- *Such other provisions as may be necessary to protect the archaeological interests of the site;*

1.6 Furthermore, the Natural, Historic and Built Environment Advisory Team also recommended the following wording for a planning condition relevant to archaeology:

- *(A) 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 for post investigation assessment*
 - 3. Provision to be made for analysis of the site investigation and recording*
 - 4. Provision to be made for publication and dissemination of the analysis and records of the site investigation*
 - 5. Provision to be made for archive deposition of the analysis and records of the site investigation*
 - 6. Nomination of a competent person or persons/organisation to undertake the works set out within the Archaeological Written Scheme of Investigation.*
- *(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)*
- *(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.*

- 1.7 This document (WSI) will be supported by a detailed method statement prepared by the appointed archaeological contractor. The method statement will include staff CVs and details of specialist staff to demonstrate their suitability to deliver and input to this mitigation excavation.
- 1.8 This document (WSI) conforms to the requirements of current national and local planning policy (including *National Planning Policy Framework* 2024). It has been designed in accordance with current best archaeological practice, and the appropriate national and local standards and guidelines, including:
- *Management of Recording Projects in the Historic Environment: MORPHE* (English Heritage 2006);
 - *Code of Conduct* (Chartered Institute for Archaeologists (CIfA) 2022);
 - *Standard for Archaeological Excavation* (CIfA 2023); and
 - Universal guidance for archaeological excavation (CIfA 2023).

Site Description, Geology and Topography

- 1.9 The study site is located on the south side of Milksey Lane and west of the High Street, in Graveley, Hertfordshire, and comprises rough land with considerable (yet sporadic) tree coverage. Turf Lane is a footpath running along the western study site boundary. The study site slopes slightly to the east and has an average height above ordnance datum 105m in the west and 101m (aOD) in the east. The site measures approximately 1.6 hectares.
- 1.10 The solid geology of the study site comprises chalk of the Holywell Nodular Chalk Formation and New Pit Chalk Formation (undifferentiated). Superficial deposits consist of Glaciofluvial Deposits of Sand and Gravel in the west of the study site and Diamicton of the Lowestoft Formation in the east of the study site (BGS Geology of Britain Viewer 2021).

2.0 Aims and Objectives

2.1 The principal aim of the archaeological works will be to determine the character, extent, date, integrity, state of preservation and quality of any identified archaeological deposits; therefore, ensuring their preservation by record.

2.2 To address the main aim, the general objectives are to:

- Undertake an archaeological open area excavation of the mitigation area of the site, following the plan on Figure 2. The area subject to excavation has been discussed with the Hertfordshire Senior Historic Environment Advisor, comprising the route of the Roman road within the site and the area immediately either side;
- Ensure the recording of any archaeological assets discovered during the archaeological works;
- Ensure the recording of all archaeological remains, to place this record in its local context and to make this record available;
- Undertake a programme of post-investigation assessment;
- Produce a report and disseminate the results;
- Make provision for archive deposition; and
- Make provision for the publication of the results of the archaeological mitigation as appropriate.

2.3 The general objectives are to ensure:

- The protection and recording of archaeological assets discovered during the archaeological works;
- That any below-ground archaeological deposits exposed are promptly identified; and
- The recording of archaeological remains, to place this record in its local and regional context and to make this record available.

2.4 The focussed aims of the archaeological mitigation work are:

- To capture and record any further surviving stretches of the Roman road identified during the DBA (2021) and the archaeological evaluation (2022);
- To determine the presence and absence of any activity either side of the route of the Roman road and associated with its use, noting the ceramic building material (CBM) and metal work recovered during the archaeological evaluation (2022); and
- To determine the presence or absence of earlier activity within this region of the study site, particularly relating to later Iron age settlement as a precursor to any Roman settlement and the Roman road.

2.5 All aspects of the archaeological works will be placed in the public domain by depositing the results within the HER and through publication as appropriate.

2.6 Further the archaeological mitigation work has the potential to contribute to the following objective of the East of England Regional Research Framework, including:

- Pal-Meso 23: What do we know about the scale, distribution and character of occupation in the region?
- LIA-Rom 05: How can we better understand the Late Iron Age to Roman transition?
- LIA-Rom 10: Can we map the development of Late Iron Age and Roman roads?
- LIA-Rom 13: How can we increase our understanding of Late Iron Age and Roman farmsteads?
- LIA-Rom 16: Can we better distinguish between Late Iron Age and Early Roman features and sites?
- LIA-Rom 20: How can we improve the recovery of Late Iron Age and Roman buildings?

3.0 Archaeological Background

- 3.1** As cited above in Section 1.2, an archaeological desktop assessment (including LiDAR analysis) and a programme of archaeological evaluation trenching have been carried out for the site (Orion 2021 and Cotswold Archaeology 2022 respectively). The archaeological background outlined below has been taken from that found within the archaeological evaluation report (along with the results of said report), this background having been taken from the outline background of the DBA.
- 3.2** Prehistoric activity surrounding the study site includes *ex situ* prehistoric flints, a potentially ploughed out a Neolithic Bronze age barrow, and numerous cropmarks suggestive of later occupation (Iron age enclosures etc.). There was considered to be a low to moderate potential for Prehistoric finds or features within the study site.
- 3.3** Approximately 1km to the north of the study site five bell-shaped pits were discovered in 1930, containing rubbish which included late Bronze Age or early Iron Age pottery, a small iron needle or pin two weights and animal and human bone. Contemporary occupation features, a ditch and pit, have also been detected just to the north of this, along with early Iron Age pottery suggestive of an unenclosed Iron Age settlement in the area.
- 3.4** The route of a Roman road (Viatores 221) runs through the west extent of the study site in a north/south orientation. The archaeological evaluation cited above (Cotswold Archaeology 2022) recorded the route of the road along the western boundary in trenches 1, 2, 7, and 12, whilst also recording at least roadside ditches (possible associated with road considering their matching orientation) in trench 1.
- 3.5** Evidence for a possible Late Iron Age/Roman-British farmstead was found during construction of a pipeline in 1975 c.220m to the north west of the study site, comprising a scatter of Iron Age pottery sherds, with 22 sherds of Late Iron Age, Roman and medieval pottery also recovered from fieldwalking nearby.
- 3.6** A rural enclosure and other features of a possible late Iron Age/Roman farmstead (dated by 2nd century pottery sherds) was also found during excavation c.910m to the south of the study site.
- 3.7** Towards the edge of the study area in the south west road scheme excavation, evaluation and watching brief on a broad ridge of chalky boulder clay south of Little Wymondley, revealed a substantial Romano-British farmstead thought to spread over 2-4ha. A well-appointed multi-room masonry footed building,

which could be interpreted as a 'cottage style' villa was also excavated (Burleigh, G., Went, D. and Colley, C. (1990); Went, D and Burleigh, G. (1992); Hunn, J. (2001) – Rural Settlement of Roman Britain, ADS).

- 3.8** Finds retrieved c.220m to the north west of the study site are considered likely to be associated with a late Iron Age or Roman farmstead in the area, possibly destroyed by the construction of the M1. The postulated line of a Roman Road, which has potential Iron Age antecedents, runs from Baldock to Rush Green through the west of the study site and occupation features of this date are often found associated with the Roman transport network. The current available evidence therefore indicates a moderate to high potential for Iron Age or Roman period remains based on proximity to known sites.
- 3.9** Although there are no historic environment records of Saxon or early medieval date of relevance to the study site (including from the archaeological evaluation), the nearby manor of Graveley is recorded in Domesday as 'Gravelai'. It has been suggested that the medieval village originated by the church and migrated at a later date to the highway, although there is no physical evidence for this. It is likely that original settlement in the area grew from occupation around the church of St Mary in Graveley to the east of the study site, or around the later Augustinian Priory at Wymondley to the west of the study site. The proximity of these areas of settlement indicates a low to moderate potential for Saxon and early medieval archaeological remains within the study site.
- 3.10** A large quantity of later medieval pottery, tiles, building stone and animal bones were noted during topsoil stripping for a water pipeline c.180m to the west of the study site, including the remains of rubbish pits which produced stratified 12th to 13th century pottery, thought to be evidence for a farmstead.
- 3.11** The 12th century church of St Mary at Graveley lies c.420m to the east of the study site, whilst the earthwork remains of the possible medieval manorial site of Gravelly can be seen on aerial photographs just to the west of the church. There are two surviving ditched and banked enclosures containing probable building platforms with hollow ways to the north and south. Earthworks of house platforms, an enclosure and a linear bank (perhaps an earlier route of the High Street) have also been identified in this area, approximately 320m to the south of the study site.
- 3.12** Features associated with the Scheduled Ancient Monument of Wymondley Augustinian Priory lie at least c.750m to the west of the study site. The priory was originally established as a hospital in 1203-7 and dedicated to St Mary by Richard de Argentien. It was converted into a house by James Needham when granted to him following the dissolution. The west end of the un-aisled nave of the priory church survives. Part of the cloister may have remained until c.1700

but the eastern parts were destroyed by fire in the 18th century. The post-dissolution great barn stands within a moated enclosure which may or may not be medieval. Further earthworks and a conduit well-head lie beyond the enclosure to the north and north east.

- 3.13** Elements of a medieval farmstead have been excavated a short distance to the west of the study site and settlement of this date is confirmed at Graveley to the east and at Wymondley Priory to the west. Although there is currently no evidence of occupation features of this period within the study site a low to moderate potential for medieval remains is indicated.

4.0 General Instructions

Health and Safety

- 4.1** The archaeological team on site will operate with due regard for Health and Safety regulations. This work will require the preparation of a Risk Assessment of the site, in accordance with the Health and Safety at Work Regulations.

Location of Services

- 4.2** The archaeological contractor will be responsible for locating any drainage pipes, services pipes, cables, etc. which may cross any of the archaeological areas, and for taking the necessary measures to avoid disturbing such services.

Confirmation and Adherence to Specification

- 4.3** Any variations to this Written Scheme of Investigation will be agreed in writing with the Hertfordshire Senior Historic Environment Advisor before work commences.

Confirmation of Timetable and Contractor's Qualifications

- 4.4** The archaeological works will be undertaken under the overall supervision of Orion Heritage, which is a Registered Archaeological Organisation with ClfA. The archaeological contracting organisation appointed to implement the works detailed in this Written Scheme of Investigation will be a Registered Archaeological Organisation with ClfA.
- 4.5** Prior to the commencement of any work, the archaeological contractor must provide the Hertfordshire Senior Historic Environment Advisor, with a detailed method statement which will include:

- A projected timetable for the site work;
- Details of the staff structure and numbers; and
- Names and CVs of key project members (e.g. the project manager, site supervisor, any proposed specialists, sub-contractors, etc.)

4.6 All project staff provided by the archaeological contractor must be suitably qualified and experienced for their roles.

4.7 The fieldwork will be undertaken by a fully qualified and accredited archaeological contractor and take c. 20 working days on site, with a post-excavation report to be completed within six months of the completion of the fieldwork and the full archive and any resulting publication completed within a year of the completion of the fieldwork.

Notification

4.8 The Hertfordshire Senior Historic Environment Advisor will be provided with as much notice as possible in writing, no less than one week, of the intention to start work. The local museum and the Historic England Science Adviser will also be notified of the date of commencement of the fieldwork.

5.0 Methodology

General Method of Excavation

- 5.1** The area subject to open area excavation may be opened, and the topsoil and recent overburden removed down to the first significant archaeological horizon in successive level spits of a maximum of 0.2m thickness by the use of an appropriate machine using a wide toothless ditching bucket. Under no circumstances should the machine be used to cut arbitrary trenches down to natural deposits. Any machine work must be carried out under direct archaeological supervision and the machine halted if significant archaeological deposits are encountered. The top of the first significant archaeological horizon may be exposed by the machine but must then be cleaned by hand and inspected for features and then dug by hand. There will be no machine movements across the stripped areas unless otherwise agreed with the Hertfordshire Senior Historic Environment Advisor.
- 5.2** There will be a contingency for extension to the mitigation areas as appropriate if archaeological remains of interest are identified and are likely to extend beyond the agreed areas as shown on Figure 2. Any extension will be agreed with the Hertfordshire Senior Historic Environment Advisor.
- 5.3** All archaeological remains will be hand excavated in an archaeologically controlled and stratigraphic manner sufficient to meet the aims and objectives of the project. The complete stratigraphic sequence, down to naturally occurring deposits will be excavated and the work will investigate and record all inter-relationships between features. The contractor should make provision for the use of shoring/stepping to accomplish this if necessary.
- 5.4** If deep features, such as shafts or wells, are encountered, hand-excavation will not proceed below a safe working depth of c. 1.2-1.5m from the machined surface. An appropriate methodology for achieving full excavation below this depth will be agreed with Hertfordshire Senior Historic Environment Advisor, with a separate method statement prepared if necessary. Machine-assisted excavation may be permissible if large/deep deposits or homogenous and non-archaeological layers are encountered, but only after consultation with the Hertfordshire Senior Historic Environment Advisor. Where possible, a complete section will be excavated across the feature to recover its full profile.
- 5.5** No archaeological deposits should be entirely removed unless specifically set out in the WSI.

- 5.6 All artefacts are to be retained for processing and analysis except for unstratified 20th century material, which may be noted and discarded. Finds will be stored in secure, appropriate conditions following the guidelines in *First Aid for Finds* (3rd edition).

Open Area Excavation Methodology

- 5.7 Open area excavation will be undertaken in advance of construction. It is targets on the Roman road previously identified by evaluation trial trenching (Cotswold Archaeology 2022) and measures 0.42ha (Figure 2).
- 5.8 Archaeological deposits and features identified within the archaeological excavation area will be cleaned with hand tools in order to define them. Once machining is complete, pre-excavation planning of archaeological features will be undertaken and used as the basis for the detailed excavation sampling strategy. The features will be mapping by instrument survey using GPS, or similar, and the plan tied into the OS grid with a differential GPS/GNSS with millimetre accuracy. A pre-excavation plan will be produced prior to the excavation and presented to the Hertfordshire Senior Historic Environment Advisor for discussion, following which sampling of the features will be completed. A minimum of all the complex areas will be hand planned, with such areas being agreed with the Hertfordshire Senior Historic Environment Advisor on site.
- 5.9 The following strategy will be employed:
- Linear boundary features: a minimum sample of 10% of each linear boundary features such as ditches and trackways. Each section should be at least 1m wide and, where possible, sections will be located and recorded adjacent to the mitigation area edge where possible. All intersections will be investigated to determine the relationship(s) between the component features. All termini will be investigated. If upon excavation of the sample section no dateable artefacts are recovered then the remainder of the feature should be excavated up to 100%. Linear features associated with structural remains will be sampled to a minimum of 25%, with all terminuses and all relationships investigated. This sample strategy of 25% shall also be employed for the excavation and recording of the Roman road which runs through the open excavation area. Linear features not associated with structural remains will be sampled to a minimum of 10% of their fill. Linear features which form field boundaries will be partially excavated along a minimum of 10% of their length, A mechanical excavator may be employed to remove the upper fills but the primary fills should be quickly hand excavated to maximise retrieval of artefacts, avoiding intersections with other features or deposits in order to ensure that any material obtained has not been contaminated.

- All stake-holes, post-holes, pits, ring ditches, kilns and other structural/funerary/industrial features will be 50% excavated in the first instance, recorded in section, and then fully excavated. All intersections will be investigated to determine the relationship(s) between the component features. Discrete features (e.g. post-holes and pits) less than 2m in diameter will be half sectioned, except where they contain deposits of particular values (e.g. structured deposits, deposits relating to domestic or industrial activity), in which case 100% of the feature will be excavated. Stake-holes will be 100% excavated. For very large pits (more than 2m), a minimum of 50% will be excavated unless otherwise agreed with the Hertfordshire Senior Historic Environment Advisor. For all pit alignments, every pit will be half sectioned as a minimum.
- Built structures: walls, floors, etc. will be excavated sufficient to establish their form, phasing and construction techniques. All intersections will be investigated to determine the relationship(s) between the component features.

Method of Recording

- 5.10** The areas subject to excavation are to be recorded according to the normal principles of stratigraphic excavation. The stratigraphy of each area is to be recorded, even when no archaeological deposits have been identified. In areas where no archaeology is revealed, a representative section should be drawn to indicate the soil profile. Sections of all areas should be included in the report. Levels must be included on area plans and plans of features.
- 5.11** Section drawings (at a minimum scale of 1:20) must include heights AOD. Plans (at a minimum scale of 1:50) must include OD spot heights for all principal strata and any features. At least one sections of each area edge, showing a representative and complete sequence of deposits from the modern ground surface to the natural geology, will be drawn.
- 5.12** The actual areas of excavation and all archaeological, and possible archaeological, features should be accurately located on a site plan and recorded by photographs, scale drawings (as appropriate and to minimum of 1:50) and written descriptions sufficient to permit the preparation of a detailed archive and report on the material. The use of hachures will also be employed when hand planning complex areas. There will also be the provision for drone and/or pole camera shots, along with photogrammetry. The area locations, as excavated, will be accurately surveyed, tied into the Ordnance Survey (OS) National Grid and located on an up-to-date 1:1,250 OS map base.

- 5.13** Good quality digital photography, using cameras with a minimum resolution of 10 megapixels, should be undertaken, as well as black and white photographs, with appropriate scales and identification. All imagery should include scales, information boards and north arrows. Digital photography should follow the guidance given by Historic England in *Digital Image Capture and File Storage: Guidelines for Best Practice* (2015). A photographic register will list accompany the photographs.

Use of Metal Detectors

- 5.14** Spoil heaps and the mitigation areas are to be scanned operated by an experienced metal detector user (operating under the supervision of the contracting archaeologist). Modern artefacts are to be noted but not retained (19th century material and earlier should be retained). Although using a metal detector capable of making this discrimination between ferrous and non-ferrous items is preferred, it should be noted that using a detector that will also identify ferrous items can be helpful for identifying initial artefacts as well as the effective scanning of spoil heaps.

Environmental Sampling Strategy

- 5.15** Bulk samples must be taken from all securely stratified deposits using a strategy which combines systematic and judgment sampling, to a minimum of 40 litres, but which also follows the methodologies outlined in the English Heritage *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-Excavation* (2011) guidance.
- 5.16** Samples for specialist environmental analysis and scientific dating (soil profiles, archaeomagnetic dating, dendrochronology, etc.,) should be taken if suitable material is encountered during the excavation. The Historic England Science Advisor should be consulted and provision should be made for an appropriate specialist(s) to visit the site, take samples and discuss the sampling strategy, if necessary.

Conservation Strategy

- 5.17** A conservation strategy must be developed in collaboration with a recognised laboratory. All finds must be assessed in order to recover information that will contribute to an understanding of their deterioration and hence preservation potential, as well as identifying potential for further investigation. Furthermore, all finds must be stabilised and packaged in accordance with the requirements of the receiving museum. As a guiding principle, only artefacts of a “displayable” quality would warrant full conservation, but metalwork and coinage from stratified contexts would be expected to be x-rayed if necessary, and conservation costs should also be included as a contingency.

Human Remains

- 5.18** Any human remains that are discovered must initially be left in-situ, covered and protected and the Hertfordshire Senior Historic Environment Advisor notified at the earliest opportunity. Cremations will be block lifted. Human burials, cremations and other deposits relating to funerary activity will be fully excavated archaeologically in accordance with the *Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England* (APABE 2017) a valid Ministry of Justice licence and any local environmental health regulations.

Treasure Act

- 5.19** The terms of the Treasure Act 1996, as amended, must be followed with regard to any finds that might fall within its purview. Any finds must be removed to a safe place and reported to the local coroner as required by the procedures as laid down in the "Code of Practice". Where removal cannot be effected on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft.

Unexpectedly Significant or Complex Discoveries

- 5.20** Should there be unexpectedly significant or complex discoveries that warrant, in the professional judgement of the archaeologist on site, more detailed recording than is appropriate within the terms of this specification, then the archaeological contractor should urgently contact the Hertfordshire Senior Historic Environment Advisor with the relevant information to enable them to resolve the matter with the developer.

Access and Monitoring Arrangements

- 5.21** The Hertfordshire Senior Historic Environment Advisor will be afforded access to the site at any reasonable time. It is usual practice that the visit is arranged in advance, but this is not always feasible. The Hertfordshire Senior Historic Environment Advisor will be provided with a site tour and an overview by the senior archaeologist present and should be afforded the opportunity to view all excavation areas, any finds that are still on site, and any records not in immediate use. Any observed deficiencies during the site visit are to be made good to the satisfaction of the Hertfordshire Senior Historic Environment Advisor by the next agreed site meeting. Access is also be afforded at any reasonable time to Historic England's Science Advisor.

Excavation Archives Deposition

- 5.1 Before commencing any fieldwork, the archaeological contractor must contract the receiving museum to determine the museum's requirements for receiving the excavation archive.
- 5.2 Agreement for deposition should be confirmed in writing by the archaeological contractor and be copied to the Hertfordshire Senior Historic Environment Advisor.
- 5.3 It is the responsibility of the archaeological contractor to endeavour to obtain consent of the landowner, in writing, to the deposition of finds with the relevant museum.
- 5.4 It is the responsibility of the archaeological contractor to meet the relevant museum's requirements and the Hertfordshire *Archaeological Archive Standards* (2017) with regard to the preparation of excavation archives for deposition.

6.0 Post-Excavation Analysis and Reporting

Finds and Samples

- 6.1 On completion of the fieldwork, any samples shall be processed and any finds shall be cleaned, identified, assessed/analysed, dated (if possible), marked (if appropriate) and properly packed and stored in accordance with the requirements of national guidelines.
- 6.2 Samples should be proceeded for the recovery of artefactual material, animal/fish/human bones, industrial residues (such as fuel and fuel waste), shell, molluscs, charcoal and mineralised plant remains, as a minimum. 'Specialist' samples (e.g. monoliths, cores, plant/invertebrate macrofossils, etc.) should be processed separately as appropriate.
- 6.3 Material suitable for scientific dating (e.g. charcoal) should be identified to species and assessed for suitability by an environmental specialist prior to submission to a dating laboratory. Any human remains submitted for C14 dating should also have carbon (delta 13C) and nitrogen isotope analysis carried out by the radiocarbon laboratory.
- 6.4 All finds and biological material must be analysed by a qualified and experienced specialist.
- 6.5 Following identification, finds of 20th century date should be noted, quantified and summarily described, but can then be discarded if appropriate. All finds which are of 19th century or earlier date, should be retained and archived.

Field Archive

- 6.6 A fully indexed field archive shall be compiled, consisting of all primary written documents, plans, sections and a complete set of labelled photographic prints/slides. Standards for archive compilation and transfer should conform to those outlined in *Archaeological Archives – a guide to best practice in creation, compilation, transfer and curation* (Archaeological Archives Forum 2007) and the *Hertfordshire Archaeological Archives Standards* (2017). The contractor should also take account of any additional requirements imposed by the recipient museum.
- 6.7 The original archive is to accompany the deposition of any finds, providing the landowner agrees to the deposition of finds in a publicly accessible archive. In the absence of this agreement, the field archive (less finds) is to be deposited with the Hertfordshire Museum.

- 6.8** On completion of fieldwork the contractor will discuss and agree post-excavation analysis and publication with the Hertfordshire Senior Historic Environment Advisor. If the results of the investigation warrant it, a post-excavation assessment and updated project design will be submitted to the Hertfordshire Senior Historic Environment Advisor for approval. The approved programme of post-excavation analysis and publication will be undertaken.
- 6.9** A draft of the full report, including the full analysis, will be submitted to the Hertfordshire Senior Historic Environment Advisor within 18 months of the completion of the fieldwork as a .pdf document. Following the actioning of any amendments made by the Hertfordshire Senior Historic Environment Advisor, Orion Heritage and client, a final version of the report will be submitted as well as being included as part of the site archive.
- 6.10** Should the archaeological mitigation work identify remains of significance that merit further analysis and/or publication, a report or article will be prepared for publication in a suitable archaeological journal (anticipated to be the Hertfordshire Archaeology and History journal) as agreed with the Hertfordshire Senior Historic Environment Advisor. The timetable for further analysis and publication will be set out in the post-excavation report or Updated Project Design. Otherwise, as appropriate, and with the agreement of the Hertfordshire Senior Historic Environment Advisor, the contractor may proceed straight to post-excavation analysis and the preparation of a grey literature report.
- 6.11** Location plans should be produced at a scale which enables easy site identification and which depicts the full extent of the site investigated. Site plans should be at an appropriate scale showing area layout (as dug), features located and, where possible, predicted archaeological deposits. Upon completion of the excavation area, all sections containing archaeological features will be drawn. Section drawings (at a minimum scale of 1:20) must include OD heights. Plans (at a minimum scale of 1:50) must include OD spot heights for all principal strata and any features. Where no archaeological deposits are encountered, at least one representative section showing the complete soil profile should be drawn and included in the report.
- 6.12** Artefact analysis is to include the production of a descriptive catalogue, quantification by context and discussion/interpretation if warranted, with finds critical for dating and interpretation illustrated.
- 6.13** Environmental analysis is to include identification of the remains, quantification by context, discussion/interpretation if warranted, and a description of the processing methodology. Radiocarbon results must be
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presented in full (laboratory sample number, conventional radiocarbon age, delta C13 value and calibration programme). Copies of the laboratory-issued dating certificates must be included as an appendix to the report.

- 6.14** Details of the style and format of the report are to be determined by the archaeological contractor, but should include the following:
- Summary;
 - Site location and background;
 - Aims and Objectives;
 - Methodology;
 - Historical and Archaeological Background;
 - Description of results;
 - Interpretation of the results in the appropriate context;
 - Consideration of the significance of the findings on a local, regional and national basis;
 - A post excavation project design for further analysis of the site archive;
 - Details of the archive and its proposed location;
 - Preliminary Publication Synopsis; • References;
 - Site location plan (no smaller than 1:10,000);
 - Detailed plan(s) (no smaller than 1:100);
 - Appropriate photographs in colour;
 - Photographic print registers included as an Appendix;
 - OASIS record form;
 - A full bibliography,
 - A quantified index to the site archive, and
 - As an appendix, a copy of this specification.

Outreach and Publicity

- 6.15** As cited above in Section 1.5, there will be provision for a programme of archaeological outreach. This will include an open event and talks for the local community and schools, communication via a blog available online and by more traditional press releases. Any outreach work will be agreed in advance with the client and with Hertfordshire's Senior Historic Environment Advisor.
- 6.16** If the project is to be publicised in any way (including media releases, publications, etc.), then it is expected that the Hertfordshire Senior Historic Environment Advisor will be given the opportunity to consider whether it wishes their collaborative role to be acknowledged, and if so, the form of words to be used will be at their discretion.

7.0 Report Submission and Deposition with the HER

- 7.1** A hard and digital (.pdf) copy of the report is to be supplied directly to the Hertfordshire Senior Historic Environment Advisor in a timely manner, and within a period of six months, following completion of the fieldwork. Any comments made by the Hertfordshire Senior Historic Environment Advisor in response to the submission of an unsatisfactory report will be taken into account and will result in the reissue of a suitably edited report to all parties, within a timescale which has been agreed with the Hertfordshire Senior Historic Environment Advisor.
- 7.2** The report will be supplied on the understanding that it will be added to the HER where it will be publicly accessible once deposited, unless confidentiality is explicitly requested, in which case it will become publicly accessible six months after deposition.
- 7.3** In terms of copyright, please note that by depositing the report, the contractor gives permission for the material presented within the document to be used by the HER, in perpetuity, although the contractor retains the right to be identified as the author of all project documentation and reports specified in the Copyright, Designs and Patents Act 1988 (Chapter IV, section 79). The permission will allow the HER to reproduce material, including for commercial use by third parties, with the copyright owner suitably acknowledged.
- 7.4** A copy of the final report (in .pdf format) shall also be supplied to Historic England's Science Advisor.
- 7.5** The HER supports the Online Access to Index of Archaeological Investigations (OASIS) project. The overall aim of the OASIS project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large-scale developer funded fieldwork. The archaeological contractor must therefore complete the online OASIS form. Contractors are advised to contact the HER prior to completing the form. Once a report has become a public document by submission to or incorporation into the HER, the HER may place the information on a website.

8.0 General Considerations

- 8.1 All works will be in compliance with the *Health and Safety at Work Act* (1974), applicable regulations and codes of practice, and recommendations of the Standing Conference of Archaeological Unit Managers (SCAUM) *Health and Safety in Field Archaeology* (1986).

Authorised Alterations to Specification by Contractor

- 8.2 It should be noted that this specification is based upon records available in the HER and previous archaeological evaluation. If, on first visiting the site or at any time during the course of the recording exercise, it appears in the archaeological contractor's professional judgement that:

- A part or the whole of the site is not amenable to recording as detailed above, and/or
- An alternative approach may be more appropriate or likely to produce more informative results; and

Then it is expected that the archaeologist will contact the Hertfordshire Senior Historic Environment Advisor as a matter of urgency.

Unauthorised Alterations to Specification by Contractor

- 8.3 It is the archaeological contractor's responsibility to ensure that they have obtained the Hertfordshire Senior Historic Environment Advisor's consent in writing to any variation of the specification prior to the commencement of on site work or (where applicable).

Technical Queries

- 8.4 Similarly, any technical queries arising from the specification detailed above, should be addressed to the Hertfordshire Senior Historic Environment Advisor without delay.

Valid Period of Specification

- 8.5 This specification is valid for a period of one year from date of issue. After that time, it may need to be revised to take into account new discoveries, changes in policy or the introduction of new working practices or techniques.

Sources

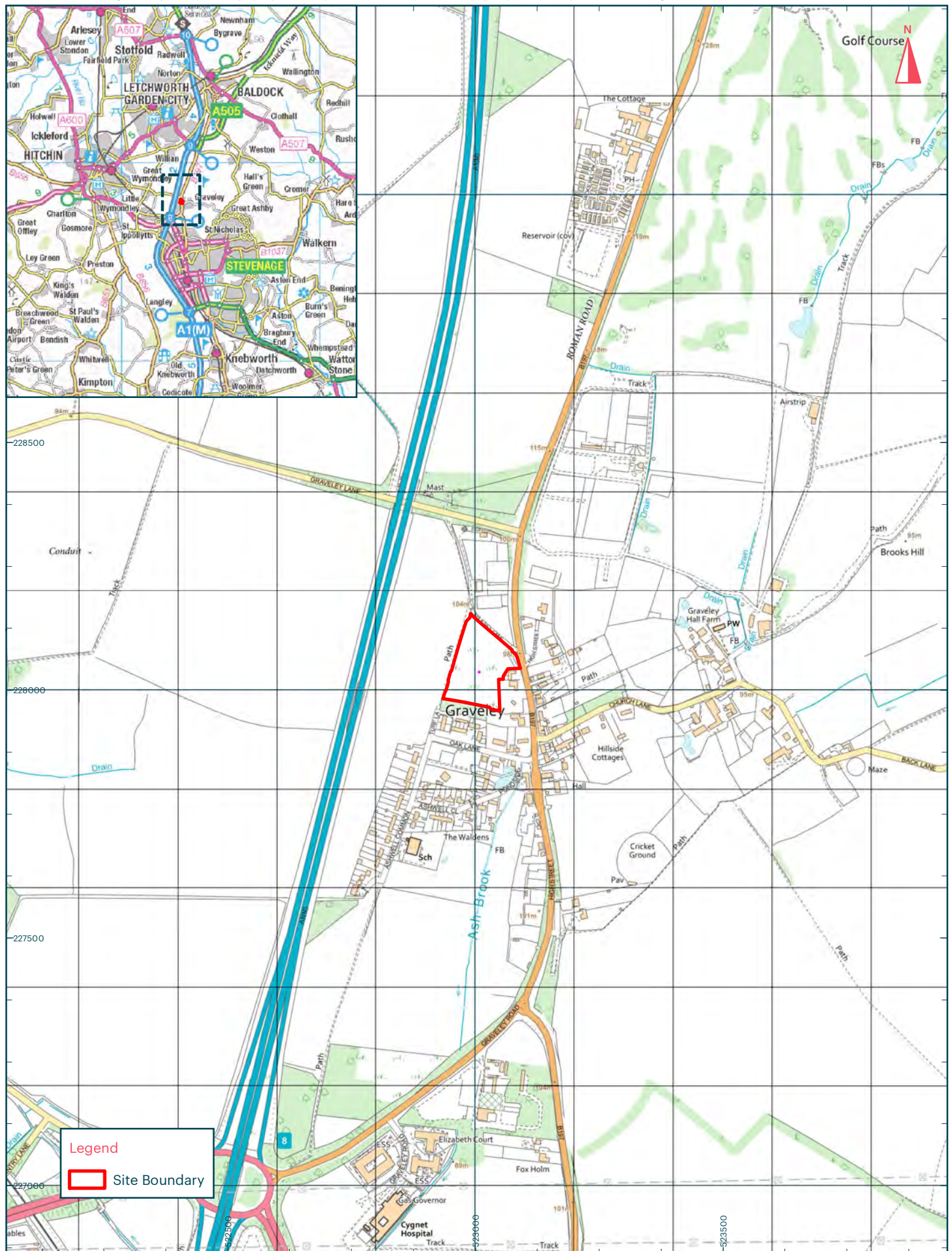
Websites

British Geological Society Geology Viewer - <https://geologyviewer.bgs.ac.uk/>

East of England Regional Research Framework - <https://researchframeworks.org/eeo>

Bibliographic

- APABE 2017 Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England
- Archaeological Archives – a guide to best practice in creation, compilation, transfer and curation (Archaeological Archives Forum 2007)
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- CIfA 2020c Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives
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- Society of Museum Archaeologists (1993). Selection, Retention and Dispersal of Archaeological Collections.
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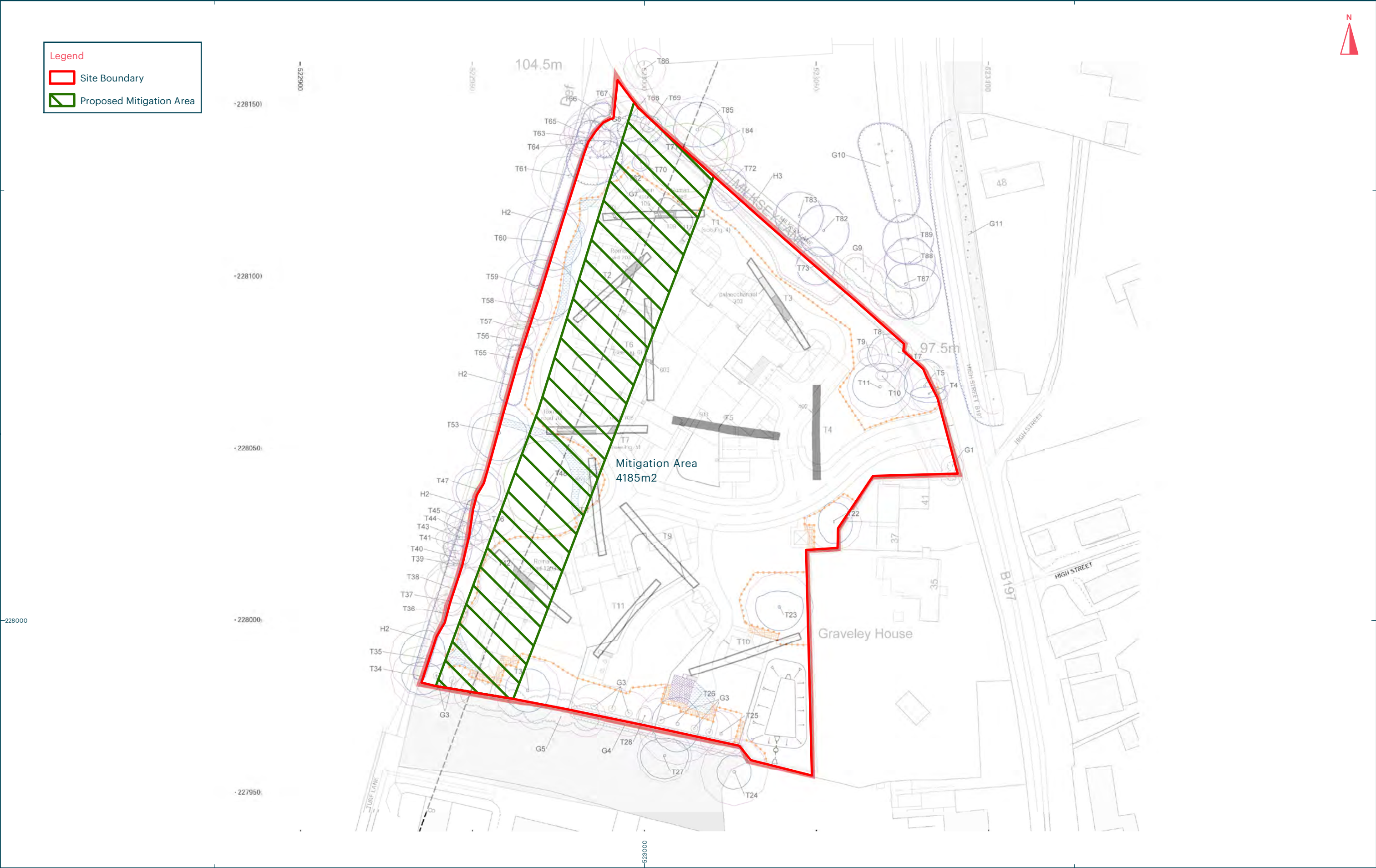
Title:
Figure 1: Site Location

Address:
Land at Milksey Lane, Graveley, Hertfordshire

Scale at A4: 1:10,000

0 300m

orion.



Title:
Proposed Archaeological Mitigation Plan

Address:
Land at Milksey Lane, Graveley, Hertfordshire

Scale at A3: 1:1,000

0 25m

