



Minerva Archaeology Ltd

Historic Environment Services

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WRITTEN SCHEME OF INVESTIGATION



PIRTON SPORTS AND SOCIAL CLUB
Walnut Tree Road, Pirton,
Hertfordshire.

**Written Scheme of Investigation
for
Archaeological Evaluation**

Ref: MA 446
Planning ref: 24/00207/FP

VERSION 2.0

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MINERVA ARCHAEOLOGY LTD.

Historic Environment Services

Managing Director: Mark Sycamore, BA ACIfA

PIRTON SPORTS AND SOCIAL CLUB Walnut Tree Road, Pirton, Hertfordshire

Project ref: MA 450
Planning ref: 24/00207/FP
HER enquiry ref: 58.23
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Archaeological Written Scheme of Investigation For Evaluation

Prepared at the request of Pirton Parish Council

by

Lisa Waldock BA MA ACIfA

Version 2

June 2024

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Introduction

1.1 This Written Scheme of Investigation (WSI) has been prepared at the request of *Pirton Parish Council*, to cover a programme of archaeological work to be carried out as a process of investigation and mitigation as a condition of planning consent for the development at Pirton Sports and Social Club, Walnut Tree Road, Pirton, Hertfordshire, SG5 3PX.

1.2 The present site is located within the historic core of Pirton, with access from the eastern side of Walnut Tree Road, centred at NGR TL 15009 31499. The site is located in the north western corner, and forms part of a larger trapezoidal shaped field, lined by mature trees and hedgerows, which currently functions as Pirton Recreation Ground and Sports and Social Club. The site is occupied by the social club and a larger shed structure and a children's play area to the west, and a set of tennis courts to the south-east, the rest consists of well-kept grassed field. It is bounded to the north by a rectangular strip of grassed field, to the east and south by large agricultural fields and to the west by properties fronting Walnut Tree Road (Figure 1).

1.3 The present development proposes the construction of a new pavilion to the north of the existing pavilion building and includes access and parking with associated services and landscaping. The existing pavilion will be demolished following the construction of the new building.

Planning

1.4 Planning permission for the development (ref. 24/00207/FP) has been granted by North Hertfordshire District Council (NHDC) subject to historic environment conditions in line with Paragraph 189 of the *National Planning Policy Framework* (NPPF 2021). Condition 8 states that:

8. (A) No below ground 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.**

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 future 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.

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.

Reason: To protect archaeological remains

1.5 The advice indicates that an archaeological evaluation of the site by trial trenching is required.

Proposed Scheme

1.6 It is considered that the best strategy to characterise the archaeological potential of the site, and assess the survival of any archaeological deposits, will be to monitor any below ground demolition followed by the excavation of trial trenching in the area affected by the new development. The strategy is intended to establish the nature of the stratigraphic sequence while minimising unnecessary destruction of the archaeological resource.

1.7 A sample of the proposed development site will be evaluated by archaeological trial trenching. The sample will total up to 40m² and will consist of 2 trenches measuring 2m in width. Trench 1 measures 15m in length and Trench 2, 5m in length. Together these trenches represent a sample of over 10% of the proposed new footprint, which covers c.366m² (Figure 1).

1.8 Below ground demolition of existing structures will also be monitored.

1.9 The present scheme will form an incremental process that may involve more stages of field investigation, together with analysis and report preparation, leading to the publication of the findings and the deposition of the project archive with an approved repository. The present document represents the archaeological Written Scheme of Investigation (WSI) required by local planning authority and includes a research design, an outline of the investigative process that is to be followed, and a method statement for the first stage of investigation. Further method statements may be prepared for subsequent stages of work.

Monitoring

1.10 The Historic Environment Team (HET) of Hertfordshire County Council, as the lead curatorial authority for the area, will be kept informed of the progress of fieldwork to enable the timetabling of monitoring visits at appropriate intervals.

Research Design

Study Area

2.1 In order to establish the archaeological and historical context for the site, the overview set out below has been drawn under licence from the Hertfordshire *Historic Environment Record* (HER), Minerva Archaeology's own records and other sources. The study area extends to a 500m radius around the centre of the site.

Topography

2.2 The present site is located on the eastern side of Walnut Tree Road, on the southern side of Pirton village. The present site is formed of relatively flat ground, approximately 65mAOD which is situated in a wider area of gently undulating ground that rises gently towards the south and south west of the village towards the Chiltern Hills.

2.3 The village itself is situated within the Pirton Lowlands Landscape Character Area (LCA218), which is described as a large scale open flat farming landscape, mostly for arable production (NHDC 2004).

2.4 The historic field pattern survives in patches in the local area, with some 18th century and later enclosure to the north east of Pirton and earlier enclosure and informal medieval parkland to the south of Shillington. Much of the agricultural landscape comprises prairie fields, created by post-1950's boundary loss. There is little woodland cover across the Landscape Character Area, however, the Pirton Village Character Assessment notes a number of trees within and surrounding the village (PNPSG, 2016).

2.5 The settlement pattern is described as consisting of nucleated villages, farms and estates. Pirton is particularly noted for its surviving traditional buildings.

Geology

2.6 Locally the soils belong to the Wantage 2 Association (342d), described as: Shallow well drained calcareous silty soils over argillaceous chalk associated with similar soils affected by groundwater. Deeper well drained coarse loamy soils in places. Complex soil patterns locally (SSEW 1983).

2.7 The underlying geology consists of West Melbury Marly Chalk Formation - Chalk. Sedimentary Bedrock formed approximately 94 to 101 million years ago in the Cretaceous Period. Local environment previously dominated by warm chalk seas. (British Geological Survey, 2023). No superficial deposits are recorded.

Previous Stages of archaeological work

2.8 No previous stages of archaeological work have been conducted on the site prior to the present stage of works.

Archaeological Areas (Alert, Areas of significance etc)

2.9 The site lies within a busy archaeological landscape, however, lies just outside of the area designated in the North Hertfordshire District Local Plan as Area of Archaeological Significance no.75 (AAS75).

Conservation Areas

2.10 The site lies on the outside of the eastern edge of Pirton Conservation Area (LCA218), which is described as a large scale open flat farming landscape, mostly for arable production (NHDC, 2004).

2.11 In the wider area lies The Chiltern Hills, to the south west, which have been designated an Area of Outstanding Natural Beauty (AONB).

Scheduled Monuments

2.12 The village of Pirton contains several Scheduled Monuments, the closest lies immediately to the west on the other side of Walnut Tree Road and covers the area of Toot Hill motte and bailey castle and earthworks (SM 1012325). The castle, which relates to a shrunken medieval village, was built in the early 12th century, alongside St Mary's Church. It has a ditched bailey which contains earthworks of tracks and building footprints.

2.13 In the wider area, approximately 620m to the north-west of the proposed development lies an Anglo-Saxon settlement, including probable ring ditches (NHLE 1434415) and 750m to the north-west lies the scheduled medieval moated enclosure at Rectory Farm (NHLE1009451) (MAGIC, 2023; Historic England, 2023).

Listed Buildings

2.14 Forty-eight listed buildings are located within Pirton, of which five are Grade II*, one is Grade I and the remainder are Grade II. The buildings range in date between the late medieval and modern periods.

2.15 The higher-grade buildings represent the surviving medieval buildings within the area. The Grade I parish church of St Mary (NHLE 1347110), which originally dates to the early 12th century and was rebuilt in the 14th century, is located approximately 250m to the north-west of the proposed development.

2.16 In the immediate vicinity of the proposed development are a small collection of listed buildings.

2.17 The nearest listed buildings are all located along the length of Walnut Tree Road and further extending broadly north and westwards to Priors Hill, High Street and Royal Oak Lane. Four Grade II listed buildings are located along Walnut Tree Road, in close proximity to the present site. To the south-west of the site lie the 17th Century buildings fronting the road at Walnut Tree Farm (NHLE1175626) and 23-25 Walnut Tree Road (NHLE1308247). To the north of the site is no.7 Walnut Tree Road (NHLE1175604) with 16th Century origins and early 18th Century dwellings at nos.4-6 Walnut Tree Road (NHLE1347097).

Ancient Woodland

2.18 No Ancient Woodlands lie within the 500m study area.

2.19 In the wider area, Tingley wood, which lies approximately 1.5km to the south west, is an Ancient and Semi-Natural Woodland located on the Chiltern escarpment (MAGIC, 2023).

Historic Parks and Gardens

2.20 No Registered Parks and Gardens lie within the site or within the 500m study area and none are within a 3km radius of the site (MAGIC, 2023).

Registered Battlefields

2.21 No Registered Battlefields are located within or in the immediate vicinity of the study area (MAGIC, 2023).

Significant Heritage Assets and Historic Narrative

- There is significant evidence for prehistoric activity in the village, which has been found during recent archaeological investigations to the east and west of the modern core of Pirton. Fieldwork conducted by Headland Archaeology at Holwell Road (EHT8416), approximately 400m to the east of the site, revealed evidence for late Bronze Age to early Iron Age settlement activity, including two shallow pits containing cremated human bone and part of a probable roundhouse.
- Further contemporary settlement activity was located to the west of the village at Pollards Way, approximately 450m to the south-west of the present site, including postholes, pits and linear features of late Bronze Age and early Iron Age date (Phillips and Ashworth, 2016).
- Two ring ditches, interpreted as the remains of possible ploughed out Bronze Age burial mounds, were identified during archaeological trial trenching at an adjacent site between Pollards Way and Priors Hill (EHT8220), approximately 400m from the present site (Ashworth, 2018).
- An extensive settlement (HHER 6978), which started in the late Iron Age and continued into the sub-Roman period, was identified during archaeological investigations ahead of the construction of the Humberside to Buncefield pipeline towards the northern end of Dane Field, approximately 1km south west of the present site (Ashworth 2018).
- Further evidence for Roman activity in Pirton includes a pit containing late Roman pottery at Pirton Primary School (HHER1475), approximately 350m south west of the present site. Other features including ditches and pits have been identified at the school, dated from the Saxon to medieval periods (HHER 31388).
- Archaeological test pitting across the area of the present village (HHER 16620) appears to tell an interesting story. There seems to have been continuity of occupation from the Roman period into the post-Roman period on the eastern side of the village. This was apparently subsequently abandoned until the later Saxon period, when settlement became widespread, focussed in particular around Burge End Farm (to the north-east of Rectory Farm), the land to the south of West Lane (to the east of Rectory Farm) and the area to the north of Walnut Tree Farm (to the south-east of Rectory Farm). The land between these sites appears to be unoccupied, suggesting polyfocal settlement. The centre of settlement gradually became focussed around the church and the castle between the 12th and 14th centuries. The village contracted after the 14th century, presumably as the result of plagues and poor harvests, and may have been reduced to no more than 5 tiny hamlets, probably clustered around farms such as Rectory Farm, Hammonds Farm (HHER 4513) and Burge End Farm (HHER 15902) with deserted land between. Recovery was slow, not occurring until the 17th or even 18th centuries (Collins, 2018).
- The accumulated evidence from the test pitting programme within and close to the present site indicates the possibility of low-level prehistoric activity in the area. Finds of Roman pottery, and the uncovering of a possible road or yard surface,

suggest occupation of this period on or adjacent to the present site possibly a small farmstead close to the main settlement (Collins, 2018).

- Recent investigations to the rear of 17 Walnut Tree Road, adjacent to the development site have revealed occupation evidence including structures, surfaces, post-holes, pits and ditches dating from the Prehistoric period onwards with significant dating evidence from the mid-Saxon period through the medieval period.
- An archaeological evaluation to the rear of The Fox Public House (HHER 9676), approximately 290m to the north-west of the site, encountered features and finds dating to the Saxon and medieval periods. A subsequent open area excavation exposed the remains of a series of middle Saxon timber buildings and human inhumations (Turner, 2003).
- By the time of the Norman Conquest, Pirton was a thriving manorial estate (Ashworth, 2018). Pirton is recorded as *Peritone*, in the Domesday Survey of 1086 and answered for 10 hides (approximately 1,200 acres) and contained 79 households, giving an estimated total population of 300 to 400 (Morris, 1976).
- The de Limesy family held the manor of Pirton for four generations. During this time, they may have erected the motte and bailey castle Toot Hill (HHER 32), approximately 200m to the west of the present site, as a defensive structure during the civil wars between Stephen and Matilda in the mid to 12th century.
- The post-medieval settlement in Pirton was focussed on two greens, Great Green and Little Green.
- From the late medieval period and into the early post-medieval period, settlement at Pirton appears to have been scattered, consisting of farms and groups of cottages separated by fields, paddocks and orchards, and linked by small lanes and tracks. It appears that the population only gradually recovered during the 17th and 18th centuries, before expanding rapidly in the 19th century. Terraces of houses were built around the village, including along High Street and Walnut Tree Road, to provide accommodation for the growing population.
- Two programmes of archaeological monitoring at 6 Walnut Tree Road conducted by Heritage Network in 2012 and 2013 revealed no evidence of archaeological activity (EHT7816; EHT7102).
- The earliest map consulted for the present project is a copy of a plan, made in c.1800, by surveyors prior to the enclosure of the common fields (Pirton Local History Group 2018 – not illustrated). This shows that the site lay within a larger agricultural field, outside of the main focus of Pirton village.
- The site exists as an open area of agricultural land into the 19th Century. The OS map of 1884 shows the present site as relatively unchanged, however a rectangular strip of land in the north of the field is defined as 'Allotment Gardens' with a footpath following the northern boundary of the present-day field (NLS, 2023).
- By 1899 the Allotment Gardens are not recorded, and there appears to be no further changes to the shape and size of the land parcel occur, which is sustained until the development of the Social Club after 1950 when the field is identified as a recreational ground (Ibid.).

- LiDAR data for the area shows the site within the land parcel identified in the cartographic records. Some disturbance is located along the northern part of the site which appears to align with the 1884 record of Allotment Gardens. Some possible earlier land divisions are also visible truncating the site. However, it is unclear if features are related to modern activity and vegetation. The footpath recorded in cartographic evidence is visible, passing along the northern field boundary (Archi UK, 2023).

Aims and Objectives

2.22 The aims of the present investigation shall be:

- to establish the location, depth, extent, date, character and condition of any remains that are liable to be threatened by the development;
- to consider the local and regional archaeological and historical context of such remains, and their significance and quality, in relation to current published regional research; and,
- to provide sufficient information to advise the planning application for the development of the site and ensure that an appropriate strategy for the mitigation of damage or destruction of any such remains is adopted should it get consent.

2.23 Considering the HET advice and the background of the site and study area, it is possible that this investigation has the potential to contribute to an understanding of the origins and development of Pirton from the prehistoric period onwards, particularly:

- The origins and development of Pirton from the prehistoric period onwards;
- The nature and extent of settlement and field pattern in the Anglo-Saxon and medieval periods
- The extent of changes to the village layout between the 14th and 18th centuries.

2.24 In particular, the East of England Regional Research Framework highlights several areas of further study that may be considered as specific objectives for the present investigation, including, but not restricted to:

- LIA-Rom 06: How can we increase our understanding of the Iron Age and Roman environment?
- MSax-LSax 22: When and how did Anglo-Saxon field-scapes develop?
- Med (Rural) 01: How best can we synthesise what we already know about rural areas during the medieval period?
- Med (Rural) 03: How can we improve our understanding of medieval agricultural practices?
- Med (Rural) 09: How can we characterise medieval rural settlement morphology and relationships?

Company Structure

Introduction

3.1 Minerva Archaeology is an independent practice specialising in archaeology and the historic environment. The company undertakes a wide variety of commercial archaeological projects for clients involved in housing and industrial development, pipeline and road construction, agriculture and landscaping.

Project Management

3.2 The Project will be administered and co-ordinated by Mark Sycamore BA ACIfA, Minerva Archaeology's *Managing Director*. He holds an honours degree in archaeology from the University of Lampeter and has over fifteen years' experience of the management of archaeological projects, and of fieldwork in both urban and rural contexts.

3.3 Fieldwork will be managed by Chris Turner BSc MCIfA, the Minerva Archaeology's *Operations Manager*. Chris holds an honours degree in Archaeological Science from the University of Bradford and has over twenty years of practical archaeological experience in the commercial sector. Chris is a Member of the Chartered Institute for Archaeologists.

Staffing

3.4 Minerva Archaeology employs technical and specialist staff with a broad range of complementary experience covering all aspects of research, recording and analysis of archaeological and historical structures, features, and deposits, together with the artefacts and ecofacts associated with them.

3.5 Field staff on the project will normally be expected to have the following qualifications:

- a) All Project Officers will have had at least four years' experience in the field, with at least one of those at supervisory grade. They will also be corporate members of the Chartered Institute for Archaeologists.
- (b) All Assistant Project Officers will have had at least three years' experience in the field. They will also be corporate members of the Chartered Institute for Archaeologists.
- (c) All other members of the team will have had a minimum of two years' experience in the field. Corporate or affiliate membership of the Chartered Institute for Archaeologists will be considered desirable.

Specialist Support

3.6 While members of the project team have the necessary local, academic and professional knowledge to examine a broad range of artefacts and ecofacts, and to undertake the majority of tasks required in archaeological practice, provision will be made for academic advice and technical services to be sought from appropriate recognised specialists if required. The current list of relevant specialists is given below:

Historic buildings	David Hillelson, Heritage Network
Ceramics: Prehistoric	Andy Fawcett, Bury St Edmunds
Ceramics: LPRIA/Romano-British	Helen Ashworth, Heritage Network
Ceramics: Medieval/post-medieval	Paul Blinkhorn, Northampton
Ceramics: Saxon	<i>Ditto</i>
Church Archaeology	David Hillelson, Heritage Network
Conservation	Julia Park-Newman, Conservation Services
Decorative metalwork: IA/Roman	Angela Wardle, Stevenage
Dendrochronology	Dr K. Lucas, Reading University
Environmental analysis	Andy Peachey, Wardell Armstrong
Faunal remains	<i>Ditto</i>
Flints	Keith Fitzpatrick-Matthews, N Herts Museum Service
Geophysical surveying	SUMO Services, Worcestershire
Human remains	Malin Holst, York Osteoarchaeology
Industrial residue analysis	Jane Cowgill, Lincolnshire
Numismatics	M.Curteis, BA AMA, Chelmsford Museum
Palynology	Rob Scaife, Palaeopol
Petrology	D. Williams, Southampton University
Radio carbon dating	SUERC, Glasgow

Standards

3.7 Minerva Archaeology's general operational procedures for archaeology are documented in a series of manuals which are available for consultation on site and in our offices.

3.8 Minerva Archaeology currently undergoing the process to become a registered organisation with the Chartered Institute for Archaeologists (CIfA). The company aims to maintain high standards of work and undertakes to follow the Code of Conduct of the CIfA, the Standards for Field Archaeology in the East of England published by the Association of Local Government Officers (ALGAO), and the relevant sections of the professional standards and guidelines set by the CIfA, the Historic Buildings and Monuments Commission for England (Historic England), the United Kingdom Institute of Conservation (UKIC), and such others as may be appropriate to the effective execution of the project.

3.9 Health and Safety is priority for Minerva Archaeology. The company undertakes to follow all relevant Health and Safety regulations, and all staff hold *Construction Skills Certification Scheme* (CSCS) cards covering Health and Safety. A risk assessment for the project has been prepared.

3.10 Minerva Archaeology maintains full Employers' and Public Liability insurances and full Professional Indemnity insurance. Policy details are available on request.

Project Stages

Introduction

4.1 A programme of archaeological works is proposed to satisfy the local planning authority requirements, and the identified aims and objectives of the project, as described in the *Research Design*, above. It is intended to be an incremental process, the nature and extent of each new phase being dependent on the results of the foregoing stage(s). Each stage is subject to the approval of the local authority before it can proceed, and additional method statements may need to be prepared.

4.2 The planning condition requires mitigation via archaeological investigation by monitoring of the demolition of the existing building followed by *evaluation* of the site. Additional stages of work may be necessary, including assessment of the material prior to publication.

4.3 Overall, most projects will consist of at least one stage of evaluation, followed by mitigation if required. If significant, complex, extensive or unusual archaeological remains are encountered during either evaluation or mitigation, additional stages of work may include assessment of the material prior to publication.

Stage 1 – Evaluation

4.4 Two trenches will be excavated over the footprint of the new build, measuring 5m and 15m in length and 2m in width. This work will contribute to evaluating the archaeological potential of the site. This approach is intended to characterise the complete stratigraphic sequence while minimising unnecessary destruction of the archaeological resource.

4.5 The existing pavilion building and outbuilding will be demolished, and the removal of any concrete foundations/hardstanding will be monitored.

4.6 Following the evaluation fieldwork, the findings will be reviewed in consultation with the local authority's archaeological advisors. If no remains of archaeological significance have been identified, and it is agreed that no further work on site is warranted, the trenches will be reinstated and a report on the results of the evaluation will be prepared in an appropriate form. The project records and material assemblage will be prepared as an archive and deposited at a suitable museum/repository.

Stage 2 - Mitigation

4.7 If remains of archaeological significance are identified, a report on the findings will be prepared to help inform the local authority and aid their decision on the best approach to mitigate the effects of the development on the identified remains.

4.8 In agreement with the local authority's archaeological advisors, an acceptable strategy, which may include further stage of works, will be developed. Further method statements may need to be prepared and approved.

4.9 There are many forms of mitigation and depending on the nature of remains encountered, some areas may require different approaches across a site. Mitigation may include:

- Alteration of the development layout and/ or construction methodology to minimise the impact on archaeological remains.
- the appropriate recording and protection of the identified remains and their preservation in situ beneath the development;
- the open area investigation of all or part of the footprint of the development to allow for the appropriate recording of all identified archaeological features and deposits that meet the research criteria of the project;
- the monitoring of groundworks to ensure that an appropriate record is made of any archaeological features and deposits that are directly impacted by the development groundworks and that meet the research criteria of the project.

4.10 On completion of the mitigation fieldwork, the findings will be reviewed in consultation with the local authority's archaeological advisors. If no new data has been recorded, as a result of the mitigation strategy that was adopted, the previously prepared report will be updated, finalised and submitted for the approval of the local planning authority as the definitive report on the results of the project, and, subsequently, published in an appropriate form. The documentary and material archives for the project will also be finalised and deposited with the agreed suitable museum/ repository.

Post-excavation and Results

Introduction

5.1 Upon completion of the fieldwork and data gathering, a report will be prepared, which draws together the results obtained so as to meet the aims and objectives of the project, as described in Section 2, above.

5.2 The report will be produced in the standard Minerva Archaeology house style. Copies of the report will be provided to the curatorial authority, and additional copies will be lodged with the planning authority and deposited with the relevant museum/repository.

5.3 It is anticipated that the results of the present project would be combined with subsequent stages of work, if appropriate, and published in the local archaeological journal, or in an appropriate specialist academic journal, depending on the nature and complexity of the information recovered. The results of the present stage of work will be uploaded to the Archaeology Data Service's OASIS database together with any unpublished archive reports.

Artefact Collection/ Retention

5.4 In all projects, the decision to discard material will be taken on a case by case basis, in consultation with the appropriate materials specialists, and the HET, and in line with the ClfA's Toolkit for Selecting Archaeological Archives, published collecting policy of the receiving museum or repository.

5.5 It is the intention that all significant archaeological material will be collected on site. The Regional Research Agenda, Specialist guidance and site-specific research aims will always drive the collection retention policy. However, the table below indicates the criteria for decisions about artefactual collection/ retention based on significance.

5.6 Matching any criteria of a higher level of significance will increase the likelihood of retention.

Significance	Criteria	Retained?
High	Stratified; datable; diagnostic; informs projects aims and objectives; unusual	Yes
Medium	Stratified; dateable; undiagnostic; informs projects aims and objectives; cannot be identified in the field	Yes
Low	Unstratified; undateable; undiagnostic; does not inform projects aims and objectives; identifiable	Unlikely
Insignificant	Unstratified; modern; undiagnostic; likely imported material; does not inform projects aims and objectives; common	No

5.7 Any material identified as potentially not for collection will be put aside on site, until the need to retain/ discard discussion with the curator can take place before the end of the fieldwork. Any uncollected material will be adequately recorded.

5.8 Where large deposits of artefacts are encountered, a representative sample may be collected in agreement with the HET.

5.9 In the case of multiple stages, the retention and disposal of the individual components of the material archive will normally be assessed in detail, in line with the Toolkit for Selecting Archaeological Archives, prior to each stage.

Copyright

5.10 Minerva Archaeology shall retain full copyright of any commissioned reports, tender documents or other project documents, under the Copyright, Designs and Patents Act 1988, with all rights reserved; excepting that it hereby provides an non-exclusive licence to the client for the use of such documents by the client in all matters directly relating to the project as described in the Project Brief and the Written Scheme of Investigation.

5.11 Minerva Archaeology will assign copyright on completion of the project to the museum or repository undertaking the ultimate curation of the archive, but will retain the right to be identified as the author of all project documentation and reports as defined in the Copyright, Designs and Patents Act 1988 (Chapter IV, s.79).

Archive Deposition

5.12 On completion of all stages of the present project, it is intended that the full archive, including the documentary records owned by Minerva Archaeology, and the material records owned by the client and held in the care of Minerva Archaeology, will be deposited with North Hertfordshire Museum Service, Hitchin.

5.13 The archive will be prepared for deposition in accordance with the current Hertfordshire Archaeological Archive Standards (2018), published by the Hertfordshire Association of Museums.

Archive and Report Preparation

5.14 A summary of the results of the present stage of investigation can be made available within one week of the completion of the fieldwork, if requested, and will include an assessment of the archaeological importance of the remains.

5.15 The report will conform to industry standards and guidance, and typically include the following:

- Table of contents and summary
- Introduction with planning background and outline of scheme
- Historical and archaeological background to the site
- Site topography and geology
- Aims and objectives of the investigation
- Methodology employed in the field and during post excavation
- Location of archive deposition
- Objective descriptions of trenches, areas, and features investigated and recorded over the duration of the project
- Artefacts and ecofacts concordance and assessment

- Discussion of the results in accordance with the projects aims and objectives and, relative to regional/ national research frameworks
- Conclusions and confidence rating
- List of sources consulted
- List of illustrations
- Scaled plans and sections of the site and features
- Plates of trenches, areas, features and significant finds encountered

5.16 Supplementary documents may also be included, as appropriate (Appendices);

- Trench information table
- Table of recorded contexts
- Specialist Reports
- OASIS summary

5.17 The archive and complete report will normally be available within six weeks of the completion of the entire fieldwork programme.

DIGITAL MANAGEMENT PLAN

5.15 Minerva Archaeology is committed to following best practice and guidance to safely store and safeguard all digital data collected or created as part of the current project.

5.16 Mark Sycamore, as the designated officer, has overall responsibility for the company digital data.

5.17 Standard methods of data collection will be applied throughout the project. Methods of collection will meet the requirements of the HET.

5.18 Currently, Minerva Archaeology field data records are primarily recorded on a range of card pro-forma and where appropriate in permatrace drawings. Information in digital format is also used including digital photographs, drawings and survey data if appropriate. However, data created during a project may be supplemented by third party information, primary records may also be digitised. Digital data will be produced during the course of producing reports and disseminating results.

5.19 In the course of the project, due to the nature of the work, certain data will be collected. This may include data provided by the land owner and or developer, any other contractors related to the project and the Local Planning authorities. This data may contain information relevant to the project such as architectural plans, topographical surveys, etc or professional or personal contact details.

File Formats

Category	Format	Stored	Backup
Digital Mapping	CAD (DXF, TCW)	NAS drive	External drive
Digital Mapping	GEOTIFF	NAS drive	External drive
Digital Drawings	GIS (QGIS)	NAS drive	External drive
Digital Drawings	Scans (TIFF, PNG, JPEG)	NAS drive	External drive
Project Tracking	Excel (XLS)	NAS drive	External drive
WSI	Word (doc, docx)	NAS drive	External drive
Finds Concordance	Excel (XLS)		External drive
Report	Word (doc, docx)	NAS drive	External drive
Pro-forma	Word (doc, docx)	NAS drive	External drive
Digital Pro-forma	Excel (XLS)	NAS drive	External drive
email	webmail	Cloud	Cloud
Digital Photographs	(RAW, TIFF)	NAS drive	External drive
Digital Survey data (GPS)	CAD (DXF)	NAS drive	External drive
Third party documentation and reports	Word (doc, docx) and pdf	NAS drive	External drive

Project File Structure

5.20 All digital project data is stored on a central network drive. This network drive is incrementally backed up at the end of each day onto a separate drive.

5.21 Each project has a unique project number consisting of the letters MA (for Minerva Archaeology) followed by a number.

5.22 A folder structure is standardised across every project, each subdivided for the separate storage of files for General information, Tender, WSI, Post excavation, Important emails, Drawings, Archiving, Digital Photographs

5.23 Digital photographs are uploaded into folders named by date. During the preparation of the report, shots that are to be used are copied into a specific report folder.

5.24 Filenames of documents and files have version numbers or may contain a 'Final' designation. For example, *MA_123_Report_text_V2* or *MA_123_Report_text_Final*.

Metadata

5.25 A metadata summary will be included in the report. A working copy will be on Minerva Archaeology's network server.

5.26 Metadata tables for each data type will be populated during the life cycle of the project and will use standard format for each data type as recommended by ADS, who are the intended repository for the digital data archive.

5.27 Data documentation will meet the requirements of the project brief, museum deposition guidelines and digital repository guidelines and the methodology laid out in the *Written Scheme of Investigation* (WSI).

5.28 An archive catalogue documenting both physical and digital archive records will be maintained

Security

5.29 All devices that have access to digital project data have suitable antivirus installed and are kept up to date (either f-secure or win 10 windows defender). Systems are also maintained with available, regular security updates. Access to sensitive files is restricted as they are stored in drives invisible to most of the network and password protected. Access to the network is protected by firewall, and remote access is allowed through limited secure machines, with secure web application installed (Splashtop).

Live Storage

5.30 With the exception of emails, which are cloud stored, all company and project-based data is stored on a Raid 5 network drive (NAS). An incremental backup of all files on the network drive is made at the end of every 24 hour period. Further copies of project sensitive data are also held at remote locations.

5.31 Sufficient data storage space is available on Minerva Archaeology's server. The server is accessible by staff on and offsite via a secure log-in.

Long-term Storage

5.32 It is anticipated that digital project files will be stored on the network drive for at least a year after the completion of the project. Files may be archived onto secure storage within five years of the project completion.

Archiving Data

5.33 Deposition of digital data will be in accordance with current guidelines (ClfA/ ADS/ AAF/ Historic England), and the requirements of the appropriate museum or repository. The site's digital data will be deposited with the *Archaeological Data Service*.

5.34 Deselection of project data from the project archive will be reviewed over the duration of the project. Deselection of data will be in accordance with ClfA's Selection Toolkit for Archaeological Archives

5.35 In the normal course of a project, some files will not be included in the archive, such as:

- Commercially sensitive emails
- Records for administration purposes, such as timesheets and mileage forms
- Draft versions of reports and digital drawings
- Intermediate scans used for preparation of drawings, or already imbedded into other documents included in the archive.
- Redundant digital photographs (copies or working shots)
- Third party data that have a time-limited licence, such as HER data
- Third party documents not produced or commissioned by Minerva Archaeology Ltd.

GDPR

5.36 Minerva Archaeology recognises its responsibilities towards the way it collects, stores and uses personal or sensitive information. It will comply with current guidance under General Data Protection Regulations (GDPR), and Minerva Archaeology's

Data Policy. All data covered by the regulations will be stored securely, with access restricted. The Information Commissioner's Office (ICO) will be notified if a breach occurs, defined as a security incident that has affected the confidentiality, integrity or availability of personal data held by the company.

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Method Statements

Archaeological Evaluation Method Statement

Fieldwork Methodology

6.1 The location of the trenches will be surveyed in relation to Ordnance Survey national grid by triangulation from known points. The final location of the trenches will be adjusted according to circumstances encountered on site.

6.2 Within each trial trench, overburden will be removed down to the first significant archaeological horizon using a mechanical excavator fitted with a toothless ditching bucket. Spoil will be scanned visually and using a metal detector in order to assess the presence and survival of artefactual material in the overburden.

6.3 All exposed archaeological features and deposits will be cleaned by hand and sampled as appropriate according to their accessibility, so as to ascertain their nature, depth, date and quality of preservation, while ensuring that unnecessary destruction of discrete features is minimised. As a general rule, 50% of discrete features will be sampled and 20% of stratified archaeological deposits, but these proportions may vary in discussion with HET according to circumstances encountered on site.

6.4 Pre-excavation plans of each open trench (where potential features and deposits have been identified) will be drawn at a scale of 1:50 on polyester draughting film together with a longitudinal section or profile of the trench. Post-excavation plans of all exposed archaeological features will be drawn, at a scale of 1:20 on polyester draughting film. Sections of excavated features will be drawn at a scale of 1:10. Intermediate contexts will be drawn in the space provided on pro-forma record forms, or on polyester draughting film as appropriate.

6.5 A detailed context record will be maintained on individual pro-forma record cards, designed to meet current professional standards. Each layer, fill, cut etc., will be individually numbered and described in terms of soil detail, stratigraphic position, dimensions, artefact content, samples and interpretation.

6.6 A photographic record of each trial trench, and each archaeological feature or deposit, will be maintained in digital format using high quality DSLR equipment. Lenses and film types will be chosen to suit the prevailing conditions. Photographs of archaeological features will include an appropriate scale (including vertical scales used in combination with horizontal scales for deep sections), north arrow and a photo board (which will contain a site code and context number). A complete register of all photographs will be included in the archive.

6.7 All finds relating to the archaeological record of the site will be collected with reference to context and location. Finds processing will take place alongside the site work and will entail cleaning, marking, appropriate storage, quantification and initial classification. Primary conservation of artefacts will take place on site and be supplemented by appropriate storage prior to selection for specialist attention. All registered finds will be recorded three-dimensionally in situ, either by offset measurement or by extrapolation from polar coordinates. A metal detector will be available where appropriate.

6.8 Provision will be made for sampling and analysis of environmental data by appropriate specialists. All sampling will be carried out in accordance with the guidelines set out Environmental Archaeology (English Heritage 2011) and with reference to Environmental Archaeology and Archaeological Evaluations (Dobney et al. 1995). If a context is suitable, contains datable material and demonstrates a potential for environmental information, a standard 40 litre sample will be taken.

6.9 Should human remains be encountered, their location will be marked, and they will be left in situ. Any decision on further investigation or removal of human remains will be the subject of a separate agreement between Minerva Archaeology, their clients, and the appropriate authorities including the HET.

6.10 Should remains falling within the terms of the Treasure Act (1996), or collections of artefacts or ecofacts which are considered to be of particular significance be uncovered during the fieldwork, the HET, the Coroner's office, and the Portable Antiquities Scheme officer will be contacted (as appropriate) and their advice sought.

6.11 The physical security of all archaeological deposits, features and artefacts, both on and off the site, will be a central concern and all reasonable measures will be taken to ensure their protection before, during and after excavation.

6.12 Subject to any requirement for a further work, and with the agreement of the HET and of the client, the trenches will be backfilled on completion of the evaluation, but no further reinstatement will take place.

NOTE: No geotechnical or contamination report has been provided for the present site. The archaeological fieldwork will go ahead, but all on-site staff will wear appropriate PPE, including gloves, with other PPE, such as masks, being available if required. Nevertheless, should a readily identifiable contaminant, such as asbestos, be encountered during the archaeological investigations, the excavation team will withdraw from the affected area until it has been appropriately cleared. Responsibility for this will remain with the client.

RESOURCES AND PROGRAMMING

Fieldwork

Duration: 2 to 5 days
Staff: 1 x project officer
1 x assistant project officer

Public Engagement

6.13 It is unlikely that there will be any scope for public engagement during the current project. However, if significant remains are discovered in the course of the project, with approval of HET, Minerva Archaeology may attempt to promote and disseminate information to local interested parties, and if appropriate, and safe, arrange public visits to site.

Timetable

6.14 The evaluation fieldwork has not been provisionally timetabled.

Archaeological Monitoring & Recording Method Statement

6.1 When monitoring, sufficient cleaning by hand will be undertaken to define and clarify any exposed archaeological features and deposits.

6.2 The location and outline of all defined archaeological contexts will be recorded in relation to existing features by offset measurement, and a site plan produced at 1:50.

6.3 Spoil will be scanned visually and using a metal detector, and all finds not of modern origin will be collected and recorded as unstratified.

6.4 The results of the preliminary recording and an assessment of the significance of the identified features and deposits will be provided to the HET, together with recommendations for the most appropriate strategy to be adopted to mitigate the effects of the development on those remains.

6.5 Where preservation in situ is not practical or can only be partially achieved, appropriate mitigation is likely to involve a full record being made of those features and deposits that will inevitably be destroyed, in written, drawn and photographic forms, supported by appropriate sampling of associated artefacts and ecofacts. Construction may have to pause in the vicinity of any such feature/ deposits, to allow adequate time and space while they are safely investigated. These areas may also be fenced to provide such remains protection.

Preservation in Situ

6.6 Where identified features or deposits are considered to be of archaeological significance but will remain unaffected by the groundworks, they will be protected by a layer of geotextile membrane fixed in place by a layer of sand, ballast or similar granular make-up material.

6.7 Where structural elements are encountered, these will be left in situ wherever possible, and bridged. Where partial removal is inevitable, care will be taken to ensure that such removal does not damage or otherwise impact the integrity of the surviving elements.

6.8 Where identified features or deposits are considered to be of archaeological significance but will require partial removal, the surviving elements will be protected using a patch of geotextile membrane, cut so as to overlap the feature by a minimum of 500mm, and weighted down with 100mm depth of granular material laid by hand. Where, for structural reasons, features or deposits would normally be required to be dug out, these will be bridged and left in situ.

6.9 If human remains, artefacts falling within the terms of the Treasure Act (1996), or collections of artefacts or ecofacts which are considered to be of particular significance are uncovered in these groundworks, provision will be made for their complete recording and recovery.

Preservation by Record

6.10 All features and deposits that will be inevitably damaged or destroyed by the development groundworks, will be fully investigated and recorded within the limits of the impact of those groundworks.

6.11 The sampling level of the archaeological remains to be excavated will be determined as the project proceeds, in accordance with considerations of accessibility and the potential for preservation in situ. It will, however, take into account the principles set out below:

- *Structures and specific features of specialised activity* (e.g. industrial or agricultural processing; ceremonial; funerary): will be fully excavated or sufficiently sampled to fully understand their character, and all relationships recorded.
- *Ditches and gullies and other linear features*: all significant relationships will be defined and investigated. All terminals will be excavated. Sufficient of the ditch lengths will be excavated to determine the character of each individual ditch over its entire course with consideration given to possible re-cutting of ditches which may not have taken place over the entire length. This will aim to achieve an approximate average sample of 20% of each ditch length including excavation of intersections. Should specialised deposits (e.g. localised refuse dumping, industrial wastes) be discovered, then more extensive excavation may be carried out with the advice of the appropriate material specialist. Consideration will be given to the recovery of sufficient artefact assemblages to assist in dating stratigraphic sequences and for obtaining sufficient ceramic assemblages for comparison with other sites.
- *Pits*: all will be investigated in half section, or in the case of complex intercutting, in quadrant. Where sufficient artefactual and ecofactual evidence can be recovered in the excavated half of each feature, no further excavation will be undertaken.
- *Post and stake holes*: where practical, all will be investigated in half-section, or else will be totally excavated. Where sufficient artefactual and ecofactual evidence can be recovered in the excavated half of each feature, no further excavation will be undertaken.
- *Extensive archaeological deposits, buried soil horizons*: where such deposits are of limited extent and are intrinsically of clear archaeological significance (e.g. middens) a 50% sample will be systematically excavated employing a sampling grid and in appropriate spits to ensure spatial control of finds, and palaeo-environmental samples (see below). Where they are of a less specific nature (e.g. of topographical interest) a control area representing up to 20% of the whole will be investigated in appropriate spits or in stratigraphic layers if identifiable in order to establish the nature, depth and date of the deposit, and to achieve the aims and objectives of the project. The remaining material may be removed, by machine if appropriate, to investigate the underlying material.
- *Working hollows, quarry pits, ponds etc.*: all relationships will be ascertained and one or more hand dug sections cut of suitable width (e.g. 1.5-2.0m) to establish the character of the fill, the base of the feature, any evidence of the method of excavation, and in order to obtain dating evidence. Further investigation will be a matter for on-site judgement. The scale and method of excavation will be determined by the need to define their extent, date and function. The potentially long time span and likely character of the backfilling of such features gives a high probability of artefacts in secondary contexts being re-deposited. Unless there are specific reasons to expect special deposits or

stabilised horizons with evidence of occupation activity in their backfill, a combination of machine excavation following the basic stratigraphy and hand sampling may be used for further excavation with the agreement of the HET

6.12 Other archaeological deposits: excavation and sampling strategies for other types of deposit will be decided according to their nature and significance with regard to achieving the aims and objectives of the project.

6.13 Should remains falling within the terms of the Treasure Act (1996), or collections of artefacts or ecofacts which are considered to be of particular significance be uncovered during the fieldwork, the HET, the Coroner's office, and the Portable Antiquities Scheme officer will be contacted (as appropriate) and their advice sought.

6.14 The physical security of all archaeological deposits, features and artefacts, both on and off the site, will be a central concern and all reasonable measures will be taken to ensure their protection before, during and after excavation.

Recording Procedures

6.15 In order to facilitate the production of an overall project archive of consistent standard the following recording procedures will be applied as far as possible.

- The site will be assigned a unique alphanumeric code that will be used to identify all records, finds and samples relating to the project.
- A continuous unique numbering system will be operated. Context records will be compiled on individual pro-forma record cards. Each layer, fill, cut etc will be described in terms of soil detail, stratigraphic position, dimensions, artefact content, samples and interpretation. The context system will be cross-referenced to all other records including plans and sections and may be stored in the form of a computer database. A separate set of registers will be maintained for samples, registered finds, levels and context sequence.
- Where stratified deposits are encountered a Harris Matrix may be compiled during the course of the investigation to aid interpretation and dating of features and deposits.
- Soil descriptions will be standardised, as far as possible, to conform to the use of sorting charts, roundness index, percentage of area, grain size, texture, consistency and colour.
- All plans of excavated features will be drawn on polyester film at a scale of 1:20 (or 1:10 if necessary in order to show detail). Plans of intermediate contexts may be drawn in the spaces provided on the pro-forma record cards or on polyester film, as appropriate. Any burials will be drawn at 1:10. A register of plans will be kept.
- Sections through features will normally be drawn at 1:10. If required, long sections, to demonstrate stratigraphy or sedimentary sequences, will normally be drawn at 1:50 or 1:20. A register of sections will be kept.
- All plans and section drawings will be annotated with absolute heights derived from an established TBM.

- A full photographic record in digital format will be maintained illustrating in both detail and general context the principal features and finds discovered. The photographic record will also include working shots to illustrate more generally the nature of the archaeological work. The record will be in digital format using high quality DSLR equipment with an APS-C sensor and a maximum resolution of 24.2 megapixels. Lenses and film types will be chosen to suit the prevailing conditions. A complete register of all photographs will be included in the archive. Photographs will include an appropriate scale, north arrow and a photo board.

Artefact Recovery

6.16 Artefact evidence will be collected and treated according to the following general strategy.

- All artefacts will be retained from hand excavated contexts unless they are of recent origin. In these cases sufficient of the material will usually be retained where it is important to validate the date and establish the function of the feature.
- Some categories of finds of limited intrinsic interest may be sampled and recorded on site where their retention is not considered essential to the archaeological aims and objectives of the project and they would constitute an excessive storage burden. For example, burnt stone or undifferentiated post-medieval tile fragments.
- Unstratified objects from topsoil or other modern deposits will not normally be retained except where they are of intrinsic interest either in their own right or in contributing to an understanding of the site. However, their presence would always be noted.
- Metal detecting equipment, where its use is considered appropriate, will be operated by, or under the supervision of, archaeological staff.
- Bulk samples of industrial residues will be taken under the advice of the relevant specialists for laboratory processing and identification.
- Recovery of artefacts will normally be by hand, except where bulk samples are taken for other purposes or for special recovery of small items.
- Should human remains be encountered and removal be required, Minerva Archaeology will obtain a Ministry of Justice licence, and will ensure that the conditions of its issue are maintained.
- All registered finds (excluding bulk finds) will be recorded in relation to the site grid and their height above OD. The register of these finds will form part of the archive.
- In certain circumstances where unusual or extremely fragile and delicate objects are found, their recovery will be undertaken by appropriate specialists.
- All finds and samples will be exposed, lifted, cleaned, stabilised, marked, bagged and boxed in accordance with the guidelines set out in UKIC's Conservation Guidelines no. 2.

- All excavated objects will be deemed to form an integral part of the site archive (that is, they will not be separated, except for display or research purposes, or for reasons of security, from the archive itself).

Ecofact Recovery

6.17 Ecofact evidence will be collected and treated in accordance with the guidelines set out in Environmental Archaeology (English Heritage 2011). In general, the following strategy will be followed.

- All macroscopic evidence will be collected and treated in the same manner as described for artefacts.
- Where a deposit appears to be rich in faunal remains it will be dry-sieved (using a 5mm mesh size) in order to maximise the range of animal species present in the context. However, this should only be undertaken where the deposit has obvious potential and can be reliably phased.
- A standard 40 litre sample will be taken from as many single, datable contexts as possible for the recovery of small animal bones, carbonised remains, molluscs etc.
- Linear features will generally be sampled at intervals commensurate with their length in order to recover a general spread of material. In the case of house gullies (eaves-drips/construction slots) at least four points should be sampled (assuming that the gully is at least 80-90% complete). All ditch terminals should be sampled.
- Undisturbed kubiena tin or column samples of sediments will be taken for micromorphology of buried soils where these are likely to shed important light on the environmental development of the area.

RESOURCES AND PROGRAMMING

6.18 One member of staff will be detailed to take responsibility for the co-ordination of the fieldwork element of the present project, and will normally be available for all intervention and recording.

6.19 Where necessary, alternative or additional staff will be made available to ensure the adequate recording of any archaeological remains, and to minimise any delays to the client's programme arising from unforeseen circumstances including delays resulting from adverse weather, the presence of a higher than predicted density of features requiring to be investigated, the discovery of human remains, the discovery of unusually large, deep or complicated features, or the discovery of unusually large or complicated assemblages of artefacts or environmental deposits.

Public Engagement

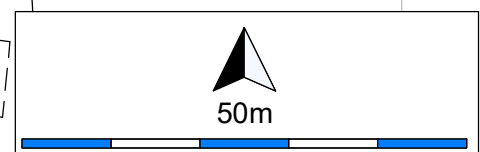
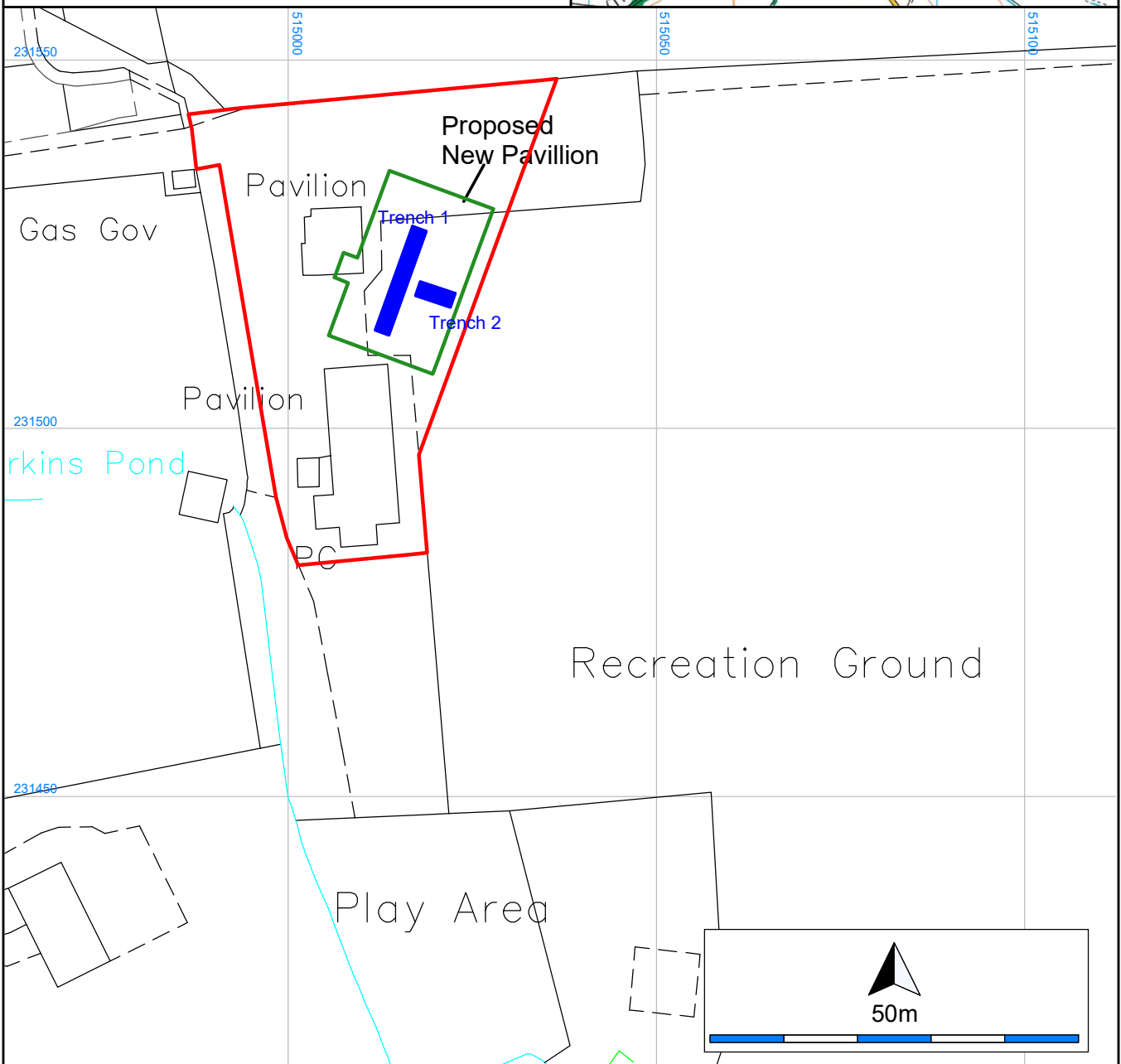
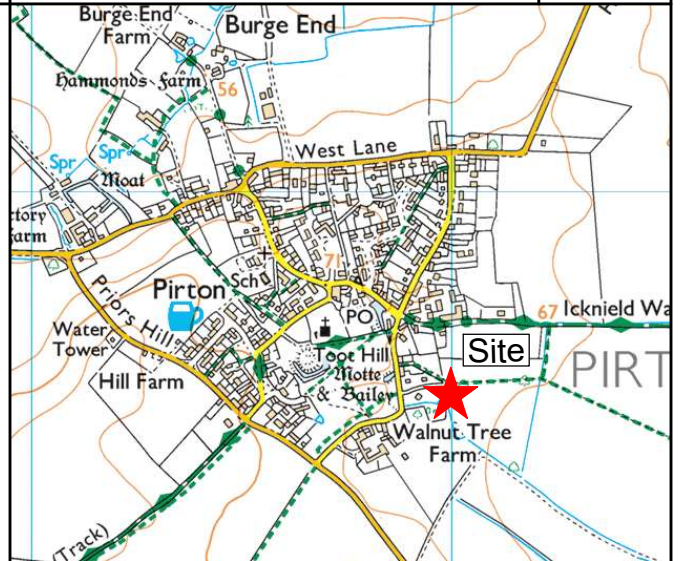
6.20 It is unlikely that there will be any scope for public engagement during the current project. However, if significant remains are discovered in the course of the project, with approval of HET, Minerva Archaeology may attempt to promote and disseminate information to local interested parties, and if appropriate, and safe, arrange public visits to site.

Timetable

6.21 The monitoring fieldwork has not yet been provisionally timetabled.



HERTFORDSHIRE



Site location and layout

Ordnance Survey (c) Crown Copyright. All rights reserved. Licence number 100061774

Scale 1:850

Figure 1

Appendix 1

Fieldwork Risk Assessment			
Site Name:	Pirton Sports and Social Club, Walnut Tree Road, Pirton, Herts.	Ref:	MA 446
Project Type:	Archaeological Evaluation	Date:	03/04/ 2024
Signed:	CT	Approved:	MS
Overall Risk BEFORE Mitigation (Low, Low-Moderate, Moderate, High-Moderate, High)			
Moderate			
Overall Risk AFTER Mitigation (Negligible, Low, Low-Moderate, Moderate, High-Moderate, High)			
Low - Moderate			

Remember mitigation measures **MUST** be put in place for hazards with a PR score of 4 or above

Abnormal Risks (Site Specific)

Hazard		At Risk	Potential injury	Appropriate Action (Mitigation)	Calculated Risk			
Process	Type				LO	PS	PR	MR
Buried services	Striking electric cables; breaking foul water drainage	All in vicinity	Serious injury or death; stomach illness	Wear PPE; Check developer's plans; use a cat scan; consult with on site foremen/ surveyor; assume all services are live; avoid contact with foul water.	2	3	6	4
Visitors	Trips, falls; run down or struck by heavy vehicles	All visitors	Serious Injury or death	Restrict access to site using adequate fencing; wear PPE; Visitors must be accompanied at all times; On larger sites visitors should be undergo an on-site health & safety induction	2	3	6	3

All hazards need to be monitored during a project and reassessed if methodologies change significantly.

Key: Likelihood of hazard occurrence (LO) 1=Rare; 2=occasional; 3= very likely

Potential Severity of injury (PS) 1=negligible; 2=minor injury; 3=serious injury/ fatal

Perceived Risk (PR) Calculated using (LO x PS)

Mitigated Risk (MR)

1=V.Low;

2=Low;

3=Normal;

4=Proceed with Caution;

5=Unacceptable

IF MITIGATED RISKS (MR) IS 5 OR HIGHER THAN THE RISK IS UNACCEPTABLE WITHOUT FURTHER ACTION TAKEN

Hazard		At Risk	Potential injury	Appropriate Action (Mitigation)	Calculated Risk			
Process	Type				LO	PS	PR	MR
Arriving and Departing								
Loading/ unloading vehicle	Carrying too much equipment; dropping equipment	All users	Back injury; foot injury; minor cuts	Follow the manual handling procedures; training in safe lifting; caution while loading tools	2	2	4	3
Transport to and from site	Traffic accident; vehicle fire	All users	Serious injury or death	Vehicles kept in good order; all drivers have company vehicle test; properly maintained fire extinguisher in vehicle	1	3	3	2
Parking vehicles	Run down or traffic accident	All drivers	Serious injury or death	Park in designated areas on site or find a safe place to park; do not park on pavements or obstruct highways.	1	3	3	2
Site Conditions								
On site	Adverse hot weather conditions, hot/cold/ rain/ snow	All on site	Dehydration; heat-stroke; sunburn of varying degrees of severity. Increased likelihood of falling ill; exposure	Use high factor sun creams/ sunblock; drink at least 1.5-2 litres of water; take regular breaks in shade. Wear suitable warm/ waterproof clothing; take shelter from extreme weather	2	2	4	3
On site	Extreme noise	All in vicinity	Serious damage to hearing	Wear approved ear defenders; limit the time of exposure to sound.	2	3	6	4
On site	Contamination; hazardous waste	All in vicinity	Irritant of varying degrees of severity; Serious disease or death	Wear suitable protective suits; gloves and appropriate breathing apparatus; Avoid contact, direct or close proximity with harmful substances.	2	3	6	4
On site	Lone working	Worker	Injury without help or support.	Inform colleagues of whereabouts. Maintain communications with office. Carry mobile phone on your person – switched on, charged & in credit.	3	2	6	4
Ground conditions	Tripping, or falls on uneven ground	All on site	Serious injury; muscle strains	Wear PPE; clearance if possible; Caution when walking across site, particularly when carrying equipment. Look where you are going.	2	3	6	4

Hazard		At Risk	Potential injury	Appropriate Action (Mitigation)	Calculated Risk			
Process	Type				LO	PS	PR	MR
Vegetation, Plants, bushes and trees	Trips and falls, unsafe or low tree branches	All in vicinity	Serious injury; minor cuts; muscle sprains; tetanus; stomach illness; allergic reaction varying degrees of severity; poisoned	Wear PPE; If possible clear area of vegetation. Avoid direct contact with vegetation likely to cause allergic reaction; do not eat any unknown berries or fruit.	1	3	3	2
Animals	Bitten, chased or stood on by large animals (e.g. cows/ horses) Contact with animal excrement or urine.	All in vicinity	Serious injury; cuts; disease	Wear PPE; If possible, request the removal of farm animals from site prior to start of work; adequate washing facilities on site. Know the symptoms of animal borne diseases.	1	3	3	2
Biting/stinging insects	Bites, stings, infection.	All in vicinity	Irritation; minor injury; disease	Wear PPE; apply suitable repellent where necessary; avoid known nests; if necessary, have nests removed.	2	2	4	2
Fieldwork								
Vicinity of heavy machinery	Run down or struck by mechanical arm.	All in vicinity	Serious injury or death	Wear high visibility PPE; keep out of operating radius of machines; work with a banksman; keep within driver's field of vision.	2	3	6	4
Overhead Services	Striking overhead cables; machine arcing to power cables	All in vicinity	Serious injury or death	Never machine close to overhead services; when moving beneath overhead services the machine arm must be as low as possible and supervised; Wear PPE; Check developers plans; use a cat scan; consult with on site foremen/ surveyor; assume all services are live	2	3	6	4
Buried services	Striking electric cables; breaking foul water drainage	All in vicinity	Serious injury or death; stomach illness	Wear PPE; Check developer's plans; use a cat scan; consult with on site foremen/ surveyor; assume all services are live; avoid contact with foul water.	2	3	6	4
Buried services	Gas pipelines	All in vicinity	Serious injury or death	Check service maps, do not mechanically excavate near pipes, call 0800 111 999 in an emergency and evacuate site.	2	3	6	4
Open excavations	Falls into excavations	All in vicinity	Serious injury or death	Adequate fencing; safety notices; hazard tape around trenches and other excavations. Look where you are going.	2	3	6	4

Hazard		At Risk	Potential injury	Appropriate Action (Mitigation)	Calculated Risk			
Process	Type				LO	PS	PR	MR
Deep excavations	Collapse of excavations	All in vicinity	Serious injury or death	Excavations should be fenced off; adequate gap between stockpiled spoil and excavation edge; professional shoring and/ or stepping or battering the sides; wear PPE; Secured ladders for access; do not enter unsafe excavations.	2	3	6	4
Buried features	Sudden voids, ground collapsing	All in vicinity	Serious injury or death	Care should be taken when walking or standing on known buried features, particularly cellars and suspected wells. Access to any identified void should be restricted using fencing, appropriate safety equipment should be used	1	3	3	2
Human remains	Contact with decayed human matter	All in vicinity	Infection and disease of varying severity	Human remains to be handled in accordance with ClfA guidelines and the terms of the Home Office licence; gloves, masks & protective overalls should be worn as necessary.	1	3	3	2
Portable electrical devices	Lights and generators	Operative	Serious injury or death.	Ensure all electrical devices, cables and fittings are in good condition. Do not use any damaged equipment. Do not use generators in confined space. Where appropriate use 110volt equipment.	1	3	3	2
Excavation tools	Hitting self or others nearby	All in vicinity	Serious injury; minor cuts	Wear PPE; training in the safe use of tools; don't work too closely together.	2	3	6	3
Wheelbarrows	Tipping over; collapsing excavation sides	All in vicinity	Serious injury; back injury; muscle strains	Barrows should be properly maintained; don't overload barrows; don't use barrows in wet slippery conditions; ensure barrow runs are adequately far away from excavation sections and are not too steep	1	3	3	2
Survey equipment	Eye strain; looking into the sun	User	Serious injury to eyesight	Adequate training; never look at the sun through any optical device.	1	2	2	1
Site pegs/ markers	Tripping over; falling or walking into them	All in vicinity	Serious injury	Use protective footwear; All pegs/ markers should be sprayed and have protective caps.	2	3	6	3

Hazard		At Risk	Potential injury	Appropriate Action (Mitigation)	Calculated Risk			
Process	Type				LO	PS	PR	MR
Working on ladders/ raised platforms	Fall; dropping equipment	All in vicinity	Serious injury or death	Wear PPE; Working at height should be avoided. Excavations should be stepped to allow access. all ladders should be properly maintained and properly secured at the top and base; access to the area beneath ladder/ platform should be restricted; only access scaffolding that has been erected by an approved certified contractor; mechanical platforms should be operated by trained professionals only	2	3	6	4
Vicinity of overhead work	Struck on the head by falling objects	All in vicinity	Serious injury or death	Avoid working beneath others working overhead; wear PPE; Make sure that everyone working overhead is aware of your presence below; work with a banksman	2	3	6	4
Structures	Struck by falling debris; buried under collapsing walls/ buildings	All in vicinity	Serious injury or death	Wear PPE; do not undermine walls; do not enter unsafe structures	1	3	3	2
Structures	Dust; air pollution; confined spaces	All inside structure	Breathing difficulties; loss of consciousness	Adequate fresh air supply; wear appropriate face masks; take regular breaks; only those with professional training should enter a confined space	1	2	2	1
Structures	Debris, broken glass, bird/animal droppings	All inside structure	Trips or falls; minor cuts; disease	Wear PPE; area should be cleared; wear gloves and avoid contact with animal droppings; adequate washing facilities	2	2	4	3
Unexploded ordnance	Unearthing of unexploded ordnance	All in vicinity	Serious Injury or death.	Evacuate site (at least 100m) and contact police.	1	3	3	2
Site facilities								
Toilets	Contact with human waste	All users	Sickness; disease	Provide adequate hygienic facilities for the size of work force. Site toilets to be clean, regularly emptied & maintained, and washing facilities provided	1	2	2	1

Hazard		At Risk	Potential injury	Appropriate Action (Mitigation)	Calculated Risk			
Process	Type				LO	PS	PR	MR
Site office	Trips, falls; fire; electrical shock	All users	Serious Injury or death	Furniture, heaters, cookers, lights and fixtures are to be in good condition and properly maintained. Fire fighting appliances need to be in good working order; Passageways need to be kept open. Look where you are going when moving around office. Fire escapes to be well marked.	2	3	6	3
Site Visitors								
Visitors	Trips, falls; run down or struck by heavy vehicles	All visitors	Serious Injury or death	Restrict access to site using adequate fencing; wear PPE; Visitors must be accompanied at all times; On larger sites visitors should be undergo an on-site health & safety induction	2	3	6	3
Vicinity of hostile clients/ landowners	Assault, Harassment	Individuals	Serious physical or verbal assault	Do not put yourself in danger. Make written appointments; if overtly hostile take colleague or police officer. If there is a clear danger leave site.	1	2	2	1