HPS

Professional Archaeological Services

Written Scheme of Investigation for a Programme of Archaeological Monitoring and Recording

Land at Chittoe Heath, Bromham, Chippenham, Wiltshire

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1. Introduction

Project Background

1.1. This document sets out the methodology for a programme of archaeological monitoring and recording in conjunction with the development of Land at Chittoe Heath, Bromham, Chippenham, Wiltshire (the Project Site).

1.2. Planning permission was granted on the 23rd October 2023 for the "Erection of Equestrian Stables, Agricultural Storage Building, New Access and associated Hardstanding" (Wiltshire Planning Reference Number: PL/2023/04781).

1.3. The location of the Project Site within an area of archaeological significance prompted the following comment from Wiltshire Council Archaeology Service (WCAS).

> "The Wiltshire Historic Environment Record (WHER) records a Late Prehistoric/Roman field system and trackway in the field immediately to the east of the site, with elements of this system extending into the southern end of the site itself. There is good potential for features such as former boundary ditches to be exposed in plan during any topsoil stripping or preparatory groundworks for the proposed stables, agricultural storage building, and new access road, and so I would advise that any such works are monitored by qualified archaeologists. This monitoring is to be secured via a condition to be attached to any planning permission that may be issued. Such a condition is to be worded thus: (Comment Ref WC-23-06-270738, Neil Adam, Assistant County Archaeologist 26/06/23).

1.3.1. The following (Condition 11) was applied to Planning Permission PL/2023/04781.

No development shall commence on site until:

a) A written programme of archaeological investigation, which should include on-site work and off-site work such as the analysis, publishing and archiving of the results, has been submitted to and approved in writing by the Local Planning Authority; and

b) The approved programme of archaeological work has been carried out in accordance with the approved details.

REASON: To enable the recording of any matters of archaeological interest.

Informative:
The monitoring is to be carried out following the standards and guidelines for such work as set out by the Chartered institute for Archaeologists (CIfA). The costs of the work are to be borne by the applicant.

1.4. It has been advised that the Programme of Archaeological Investigation and Recording will be undertaken by Avon Archaeology, who will inform Wiltshire Council Archaeology Service (WCAS) of the relevant site code in due course.

2. The Project Site

2.1. The Project Site is situated just 30m south of Chittoe Heath crossroads, on agricultural land north of Manor Farm.

2.2. Land to the northwest is characterised by modern equestrian buildings, comprising a stable and store and separate foaling stable, with hardstanding accessed east off the lane linking Chittoe Heath to the A3102.

2.3. The rural setting is characterised by an enclosed agricultural landscape with areas of historic plantation preserved, notably to the north (Chittoe Plantation) and northwest (Pond Moor).

2.4. Geologically the site is defined by Lower Greensand Group – Sandstone, a sedimentary bedrock formed between 126.3 and 100.5 million years ago during the Cretaceous period (BGS 2023).

2.5. The Project Site is set on a northwest – southeast slope, dropping from c. 115m to c. 110m.



Figure 1 Detailed Project Site location plan. The development area is outlined in red (centred on ST 96512 66656).

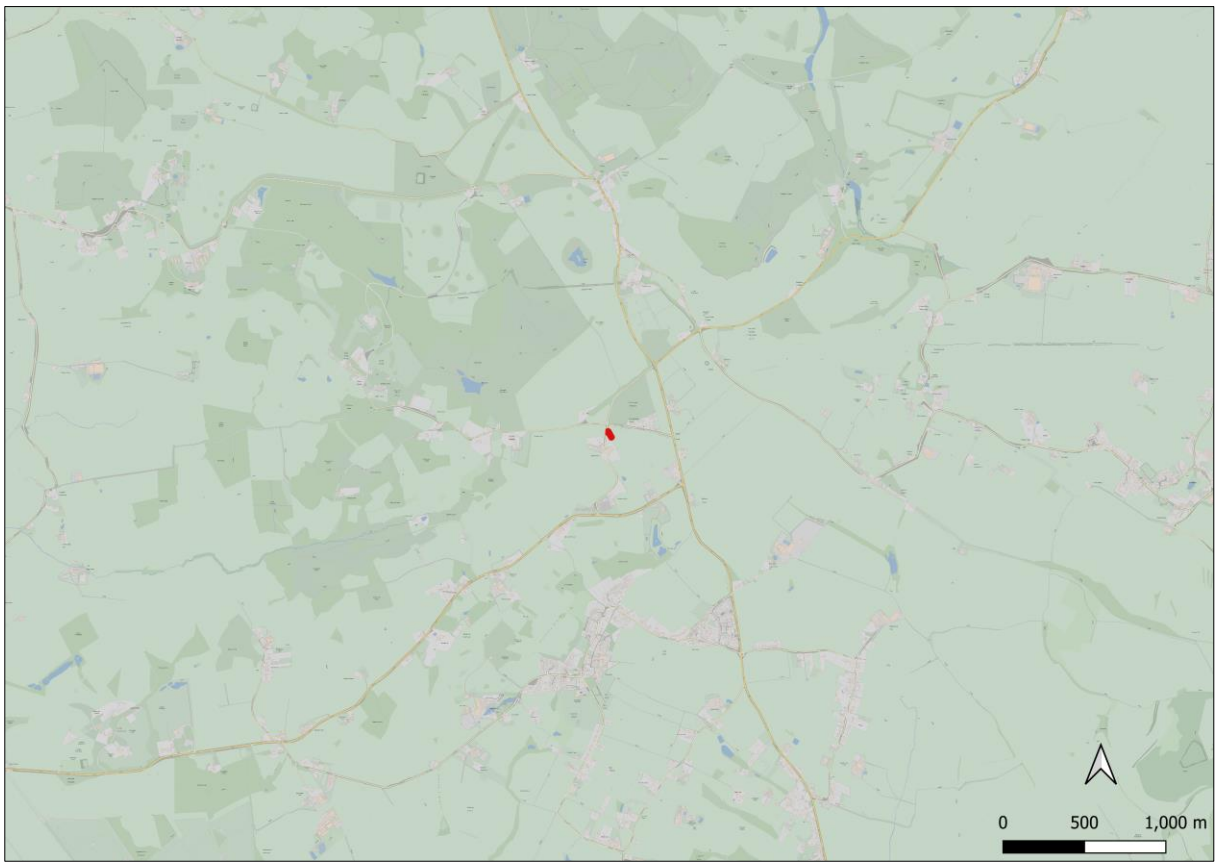

Figure 2 General Project Site location, outlined in red (ST 96512 66656).

3. Archaeological & Historic Background

3.1. The Project Site is set within an area of exploitation in the Iron Age – Roman Period. Aerial photographs have identified cropmarks on land between Manor Farm and Wyatts Farm, in the vicinity of the Project Site. The features have been interpreted as a possible Iron Age or Roman field system with associated trackway and pits (Monument UID MWI4729).

3.2. A large rectangular enclosure and associated features identified c. 320 m northwest of the Project Site has also been dated to the Late Prehistoric Period (Monument UID MWI4730).

3.3. Roman ceramic sherds and a glass bead have been identified on land now within Chittoe Planation (Monument UID MWI464 & MWI4609). The finds may be associated with a possible Roman Villa site also within Chittoe Plantation c. 180 m to the northeast of the Project Site.

3.4. Whilst Chittoe has formed the northern extent of Bromham Parish since 1934, the Domesday survey recoded the tithing of Chittoe as part of the detached Parish of Bishop's Cannings. There is no evidence for the occupation of the Project Site in the Medieval period, and it is likely to have formed a part of the wider agricultural landscape from this time.

3.5. In the latter half of the 19th century land belonging to the Project Site was located just north of the curtilage of Manor Farm. In 1860s the development area likely formed part of the large holding farmed by the Mitchell family who occupied Manor Farm until the early 20th century. A record from the 1860s named the then new owner of Spye Park House, Major Spicer as having instructed the sale of livestock from Manor Farm, suggesting that the land formed part of the wider Spye Park estate[1].

4. Aims and Objectives

4.1. The Project is situated within an area of activity dating from the Late Prehistoric to Roman period. Potential field systems, a trackway and pits have been identified to the east of the Project Site, with earthworks partially extending across the southern portion of the development area. Preparatory groundworks have the potential to expose archaeology relating to these features.

[1] Salisbury and Winchester Journal - Saturday 07 August 1869

4.2. The aims of the Monitoring and Recording, as defined in the CIfA' Standard and guidance for an archaeological Watching Brief (CIfA 2020) are:

- *To allow for the preservation by record of archaeological deposits, the presence and nature of which could not be ascertained in advance of the development;*
- *To provide the opportunity, if required, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief are not sufficient to support treatment to a satisfactory and proper standard; and*
- *To inform a mitigation strategy allowing for a programme of recording appropriate to the significance of such deposits.*

4.3. The objectives of the Monitoring and Recording are:

- *To determine the presence or absence of archaeological features, deposits, structures, artefacts or ecofacts within the Project Site.*
- *To establish and record the extent, character, date, condition and significance of any surviving archaeological remains, to an appropriate level and within the constraints of the Project Site.*
- *To place identified archaeological remains within the wider historical and archaeological context in order to establish their significance; and*
- *To prepare an archaeological report detailing the results of the programme of Monitoring and Recording.*

5. Methodology

5.1. The programme of work will monitor all significant groundwork, including geotechnical investigation, landscaping and service trenching associated with the permitted works.

5.2. All mechanical excavation will, where possible, be undertaken using a toothless ditching bucket, and will be constantly monitored by the watching archaeologist.

5.3. The watching archaeologist may ask for groundwork to be halted temporarily to allow for investigation to be carried out. Where necessary, the area of archaeological interest will be defined and protected in advance of further investigation.

5.4. Where necessary, the surface of archaeological deposits will be cleaned by hand. A sample of the archaeological features and deposits identified will be hand-excavated and recorded, sufficient to address the aims of the project.

5.5. All spoil will be visually examined and scanned with a metal detector for the purposes of finds retrieval. Artefacts and other finds will be collected and bagged by context. As commented below soil will be sieved for finds retrieval and any artefacts will be treated in accordance with *First Aid for Finds* (Watkinson and Neal 1998).

5.6. The following, minimal sampling levels are proposed:

- 50% of all discrete archaeological features (e.g., post holes, pits etc);
- 50% of all structural features (e.g., ditches, gullies, beam slots) including any terminals and feature intersections.
- 50 to 100% of features or deposits related to domestic and/or industrial activity (such as kilns, ovens etc) will be undertaken.
- Any deposits relating to funerary/ritual activity will be 100% sampled.
- Excavation of human remains is covered below.
- 10-20% of linear features (e.g., gullies, ditches etc);

5.7. In the event that significant, complex or well-preserved archaeological deposits are identified, for which the scope of the approved WSI is insufficient, the watching archaeologist will halt the groundwork and inform the contractor, the client and WCAS that a revised strategy may be required. The revised strategy and additional funds will be agreed with the client.

5.8. Any human remains (articulated or disarticulated, cremated or unburnt) discovered will be left in situ, covered and protected. They will be treated with respect and decency at all times.

5.9. A nominated osteologist will be informed immediately and no further work on human remains will take place until a strategy for their recording/excavation is agreed with the relevant parties. It is preferable that human remains are not removed or disturbed at all and if they are discovered, re-siting of the development proposal is preferable.

5.10. Where removal of human remains is deemed necessary and unavoidable, exhumation will only take place under an appropriate licence from the Ministry of Justice (MoJ) and environmental health regulations. Removal of human remains will be in compliance with the Disused Burial Grounds Amendment Act 1981.

5.11. Assessment of the human remains will be undertaken by the nominated osteologist in the field. in accordance with the guidance set out in *The Role of the Human Osteologist in an Archaeological Fieldwork Project* (Historic England 2018).

5.12. Where they are to be excavated, human remains shall be cleaned with minimal disturbance, prior to their recording and removal. Excavation of human remains will be undertaken by suitably qualified staff and in accordance with the *Updated Guidelines to the Standard for Recording Human Remains* (Mitchell and Brickley 2017), *The Role of the Human Osteologist in an Archaeological Fieldwork Project* (Historic England 2018) and *Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England* (Advisory Panel on the Archaeology of Burials in England 2017).

5.13. Excavation of inhumations, cremations and other ritual (or possible ritual) features or deposits will take priority to limit potential for erosion, destruction or deterioration.

5.14. Where excavation of inhumations, cremation burials and other funerary related deposits is to occur with will be 100% sampled. This should ensure adequate retrieval of small bones, calcified fragments (such as arterial plaques, bladder stones etc) and small artefacts.

5.15. Human remains will be fully recorded, excavated and removed from the site in compliance with the terms of the Ministry of Justice licence and the final deposition of human remains (following any osteological work needed) will comply with the terms of the MoJ licence.

Faunal Remains

5.16. Recovery of faunal remains will be undertaken in line with *Animal Bones and Archaeology – Recovery to archive* (Baker, Worley *et al.* 2019). Where appropriate, and in consultation with the nominated Faunal Specialist (see list of specialists below) this may involve:

- Hand collection for the recovery of bones, teeth and large specimens.

- Sampling to retrieve a representative range of animal bones, including those not often recovered by hand), from stratified and well-sealed deposits.

- Flotation and coarse-sieved sampling for the recovery of charred plant remains and bone assemblages (including tiny bones and teeth)

Treasure

5.17. The monitoring archaeologist will immediately notify the client, WCAS and the Portable Antiquities Scheme Finds Liaison Officer for Wiltshire on the discovery of any material covered, or potentially covered, by the Treasure Act 1996 (as amended by The Coroners and Justice Act 2009). All information required by the Treasure Act (i.e., finder, location, material, date, associated items etc.) will be reported to the Coroner within 14 days.

Recording

5.18. All archaeological deposits and features will be recorded using a pro forma recording system. A complete drawn record of excavated archaeological features and deposits will be made, including plans and sections, drawn to appropriate scales (generally 1:20 or 1:50 for plans, 1:10 for sections) and tied to the Ordnance Survey (OS) National Grid. The Ordnance Datum heights of all features will be calculated, and the levels added to the drawings.

5.19. A full photographic record will be made using digital cameras equipped with an image sensor of not less than 10 megapixels.

Survey

5.20. A survey of all archaeological features will be carried out using a TST. All survey data will be recorded in OS National Grid coordinates and heights above OD. In the event that it is not possible to use the survey equipment, archaeological features will be located to client plans or to features that appear on OS mapping. This will be achieved using hand-held measuring tapes and the basic principles of triangulation.

Finds

5.21. All Archaeological finds will be retained.

5.22. Where appropriate, soil samples may be taken and sieved to aid finds recovery. Any finds requiring conservation or specific storage conditions will be dealt with immediately in line with First Aid for Finds (Watkinson and Neal 1998).

5.23. A structured programme of environmental sampling appropriate to the aims of the excavation will be implemented. The primary aims will be to obtain information relating to the function of any buildings or structures (such as subsistence, craft etc) and to date them. The strategy and methodology for the sampling, recording, processing, assessment, analysis and reporting of deposits with environmental archaeology potential will be undertaken in line with principles outlined in Historic England's guidance (English Heritage 2011 and Historic England 2015).

5.24. For dry deposits, bulk samples for the recovery of charred plant remains, small bones and finds will be taken from sealed and datable features such as pits, ditches, hearths, floors and the foundations of clearly dateable walls (where possible). Each context will normally be sampled. The size of the sample is expected to be in the range of 40-60 litres per context or 100% of smaller contexts. Samples will not be taken from the intersection of features.

5.25. In general, features directly associated with particular activities (e.g. pits, latrines, cesspits, hearths, ovens, kilns, and corn driers) will be prioritised for sampling over features, such as ditches or postholes, which are likely to contain reworked and residual material.

5.26. Dry deposits will normally be processed by flotation following the fieldwork and the residues will be sorted to retrieve small bones, small finds and charcoal that has not floated.

5.27. The material will be scanned to assess the environmental potential of deposits. The flot will be retained on a 0.25 mm mesh, with residues fractionated into 5.6/4 mm, 2 mm, 1 mm and 0.5 mm and dried if necessary. Coarse fraction (>5.6/4 mm) will be sorted, weighed and discarded, with any finds recovered given to the appropriate specialist. Finer residues will be retained until after any analyses and discarded following final reporting.

5.28. Where there are good conditions for the preservation of bone and where agreement has been reached relating to their excavation, all large bones will be collected by hand and sieving of bulk samples up to 100 litres will be undertaken as appropriate. In the case of samples from cremation-related deposits the flots will be retained on a 0.25 mm mesh, with residues fractionated into 4 mm, 2 mm and 1 mm. In the case of samples from inhumation deposits, the sample will be artefact sieved through 9.5 mm and 1 mm mesh sizes. The coarse fractions (9.5 mm) will be sorted with any finds recovered given to the appropriate specialist together with the finer residues.

5.29. Wet deposits are not generally expected. Although the site is within 160m of the River Avon, the river is at a considerably lower level (c.28m aOD) than the Project Site (c.46m aOD) and alluvial deposits are unlikely. However, should wet deposits be encountered, monoliths will be taken along cleaned vertical surfaces for the retrieval of pollen, diatoms, ostracods and foraminifera. Here samples will be of 20 litres.

5.30. Environmental samples from wet deposits will normally be sent to specialists for processing in laboratory conditions.

5.31. Following specialist advice, other sampling methods such as monolith, Kubiena or contiguous small bulk (column) samples may be employed to enable investigation of deposits with regard to microfossils (e.g. pollen, diatoms) and macrofossils (eg, molluscs, insects), soil micromorphological or soil chemical analyses.

Scientific Dating

5.32. Provision will be made for the application of scientific dating techniques such as radiocarbon, dendrochronology, archaeomagnetic, OSL and thermoluminescence, where these are deemed necessary. The advice of the Historic England Regional Scientific Advisor will be sought in advance of the application of these techniques.

5.33. This will be undertaken in line with *Radiocarbon Dating and Chronological Modelling Guidelines and Best Practice* (Bayliss and Marshall 2022).

6. Post Excavation

6.1. All written and drawn records will be collated, checked for consistency and stratigraphic relationships. The results will be preliminary phased using stratigraphic relationships and the spot dating from finds. A written description will be made of all significant features and deposits. Results will be ordered by period and/or feature group as appropriate.

Finds

6.2. All finds will be washed, weighed, counted and identified as a minimum and recorded to an appropriate level. The report will include a table of finds by feature/context.

6.3. Metalwork from stratified contexts will be X-rayed and stored in a stable environment. The X-raying of objects and other needs will be undertaken by Wiltshire Conservation Service.

6.4. Finds will be suitably bagged and boxed in accordance with the guidance given by the relevant museum authority and generally in accordance with the standards of the CIfA (2014).

Environmental Samples

6.5. Bulk soil samples will be processed by a specialist using standard flotation methods as detailed below:

6.6. The material will be scanned to assess the environmental potential of deposits. The flot will be retained on a 0.25 mm mesh, with residues fractionated into 5.6/4 mm, 2 mm, 1 mm and 0.5 mm and dried if necessary. Coarse fraction (>5.6/4 mm) will be sorted, weighed and discarded, with any finds recovered given to the appropriate specialist. Finer residues will be retained until after any analyses and discarded following final reporting.

6.7. In the case of samples from cremation-related deposits the flots will be retained on a 0.25 mm mesh, with residues fractionated into 4 mm, 2 mm and 1 mm. In the case of samples from inhumation deposits, the sample will be artefact sieved through 9.5 mm and 1 mm mesh sizes. The coarse fractions (9.5 mm) will be sorted with any finds recovered given to the appropriate specialist together with the finer residues.

6.8. Any waterlogged or mineralised samples will be processed by standard waterlogged flotation methods.

7. Reporting

7.1. A draft post excavation assessment report will be submitted for approval to WCAS for comment, within three months of the completion of the archaeological fieldwork. If there are significant results requiring an extended programme of post excavation assessment, an extension will be requested.

7.2. The report shall contain the following as a minimum:

- A frontispiece detailing the site name, grid reference, report author(s), project dates, project title and reference number and planning application number.
- A non-technical summary.
- Historic Background.
- The dates of the programme of work.
- The aims and methodology.
- The results of the programme of work including Post Excavation assessment.
- Selected images from the photographic record.
- Interpretation of the historic materials.
- Supporting illustrations.
- Archive preparation and deposition arrangements.
- Updated Project Design in the event of significant results requiring full specialist assessment beyond the scope of the Monitoring and Recording.
- References.

7.3. A hardcopy and digital copy of the final report will be deposited with the WCAS, along with surveyed data in shapefile format.

7.4. In the event of low-level results, a note will be prepared for publication in a suitable journal.

8. Project Archive Storage and Curation

Museum

8.1. The complete archive will be prepared following the standard conditions for the acceptance of excavated archaeological material by Wiltshire Museum, and in general following nationally recommended guidelines (SMA 2012; CIfA 2020; Brown 2011; ADS 2013). The archive will usually be deposited within one year of the completion of the project.

8.2. Provision will be made for the long-term storage of any resulting archive in the post fieldwork costs under accession number (TBA).

8.3. Prior to deposition all material, digital and documentary archives will be held at the registered offices of Avon Archaeology, Unit 36, Avondale Business Centre, Woodland Way, Kingswood Bristol, BS16 5BB.

Transfer of Title

8.4. On completion of the programme of work every effort will be made to persuade the legal owner of any finds recovered to transfer their ownership to the museum, in line with a written agreement. This excludes human remains and any objects covered by the *Treasure Act 1996 (as amended by the Coroners and Justice Act 2009)*.

Oasis

8.5. An OASIS online record has been created with key fields completed. The record will be completed at the end of the project. Subject to any contractual requirements on confidentiality, copies of the OASIS record will be integrated into the relevant local and national records and published through the Archaeology Data Service ArchSearch catalogue.

9. Schedule & Personnel

9.1. A minimum of 2 weeks' notice will be given to WCAS prior to the commencement of fieldwork. Reasonable access will be afforded to WCAS for the purpose of monitoring progress on site.

9.2. The post excavation assessment and analysis will be undertaken by Avon Archaeology and a list of individual specialists should be agreed with WCAS prior to the commencement of the programme of monitoring and recording.

10. Health & Safety

10.1. Issues of *Health and Safety* come before any and all archaeological matters. Archaeological staff will not work in unsafe conditions, even where not doing so will result in the possible under-recording of the archaeological resource.

10.2. Archaeological staff will operate under Avon Archaeology's Health and Safety Policy and other additional requirements set out by the main contractor.

10.3. Avon Archaeology will conduct all works in accordance with the Health and Safety at Work Act 1974 and all subsequent Health and Safety legislation.

10.4. We reserve the right to carry out a Risk Assessment on the first day of the programme of work.

11. Copyright

Archive and Report Copyright

11.1. The full copyright of the written/illustrative/digital archive relating to the project will be retained by the relevant archaeological unit undertaking the works under the Copyright, Designs and Patents Act 1988 with all rights reserved. The client will be licenced to use each report for the purposes that it was produced in relation to the project as described in the specification. The museum, however, will be granted an exclusive licence for the use of the archive for educational purposes, including academic research, providing that such use conforms to the Copyright and Related Rights Regulations 2003.

11.2. Information relating to the project will be deposited with the Historic Environment Record (HER) where it can be freely copied for the purposes of archaeological research, or development control within the planning process.

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