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GLADMAN DEVELOPMENTS LTD

LAND AT HEMPSTED LANE, GLOUCESTER

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL TRIAL TRENCHING & PALAEOENVIRONMENTAL SAMPLING

APRIL 2022

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WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL TRIAL TRENCHING & PALAEOENVIRONMENTAL SAMPLING

APRIL 2022

PREPARED BY:

[redacted]

CONTENTS

APPENDICES

Appendix 1 Site Operating Procedures Construction Leadership Council

DRAWINGS	**TITLE**
Figure 1	Site location plan
Figure 2	Proposed trench and borehole plan
Figure 3	Proposed trench and borehole locations overlying geophysical survey results

1 INTRODUCTION AND CONTEXT HISTORY

1.1.1 Wardell Armstrong LLP (WA) have been commissioned by Gladman Developments Ltd (hereafter referred to as 'the Client') to prepare a Written Scheme of Investigation (WSI) for an Archaeological Evaluation by trial trenching and palaeoenvironmental sampling at land at Hempsted Lane, Gloucester (hereafter referred to as 'the Site'). The Site is centred on NGR: NGR: SO 81500 16549 (see Figure 1).

1.1.2 The evaluation is required to support a planning application for a residential led development.

1.1.3 An archaeological evaluation is defined as '*a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site. If such archaeological remains are present field evaluation defines their character, extent, quality and preservation, and enables an assessment of their worth in a local, regional, national and international context as appropriate*' (CIfA 2020a).

1.1.4 This document provides the methodology to be employed during the course of the archaeological evaluation by trial trenching. The WSI conforms to guidelines and standards laid down in the following document:

- *Standard and Guidance* for field evaluation, Chartered Institute for Archaeologists: Reading (CIFA 2020a);
- *Standard and Guidance for an Archaeological Excavation,* Chartered Institute for Archaeologists: Reading (CIFA 2020b);
- *Standards and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials,* Chartered Institute for Archaeologists: Reading (CIFA 2020c);
- *Geoarchaeology: using earth sciences to understand the archaeological record,* Historic England: London (HE 2015a); and
- *Management of Archaeological Research Projects in the Historic Environment (Morphe),* Historic England: London (HE 2015b).

2 BACKGROUND

2.1 Location and Geological Context

2.1.1 The Site comprises arable farmland. It is bounded to the north by housing and Hempsted Lane, to the east by Secunda Way, to the west by Rea Lane and the south by pasture farmland. The Site is located approximately 1.5km south-west of Gloucester. The area of investigation lies at a height of 20m aOD (above Ordnance Datum) with the ground sloping down gently to the south.

2.1.2 The Site is approximately 12.5 hectares in size and is comprised of three rectangular fields separated by a mix of hedgerows and concrete posts.

2.1.3 The bedrock of the Site comprises Blue Lias Formation and Charmouth Mudstone Formation (undifferentiated), formed during the Jurassic and Triassic Periods. Whilst overlying superficial deposits are not recorded across the majority of the Site, the far south of the Site, adjacent to the north of an unnamed watercourse, is recorded as being overlain by Tidal Flat Deposits comprising clay, silt and sand (BGS, 2022).

2.2 Historical and Archaeological Background

2.2.1 A desk-based Historic Environment Statement (HES) and geophysical survey has been undertaken by WA in support of the planning application (WA 2019; 2020). It is not intended to repeat that information here and what follows is a brief overview; for further details please refer to the original document.

2.2.2 There is no recorded evidence for prehistoric or Romano British activity within the Site or in the immediate vicinity. However, it would appear that the majority of the Site lay just beyond the inter-tidal marshland forming part of a higher, drier eyelet of land with the far southern part of the Site located within the alluvial floodplain. As such, it is possible that the Site would have been attractive for settlement during the later prehistoric period.

2.2.3 Whilst it is probable that the Site remained on the periphery of the foci of settlement at Hempsted during the medieval/ post-medieval period, evidence in the form of medieval/ post-medieval ridge and furrow cultivation recorded in the Site illustrates that it was utilised as part of the surrounding field systems to the village during these periods (HER Ref: 50563). Certainly, by the post-medieval period, the Site was used for agrarian purposes. A post-medieval linear ditch extended into the eastern part of the Site, which was recorded during a watching brief (HER Ref: 29777). In addition, the

route of the Government Pipelines and Storage System (GPSS) pipeline is recorded aligned north-east to south-west through the eastern part of the Site (HER Ref: 43288).

2.2.4 The earliest cartographic evidence studied was the Hempsted Parish Tithe map (1839) which shows the Site divided into seven parcels of land.

2.2.5 The field boundaries remain unchanged on the subsequent OS maps up to the 1974-94 OS map. This map showed the field boundaries had been removed and replaced by two field boundaries orientated north to south, dividing the Site into three rectangular fields.

2.3 Geophysical Survey (WA 2019)

2.3.1 The purpose of the geophysical survey was to identify the presence/absence nature and extent of potential archaeological features within the Site.

2.3.2 The geomagnetic anomalies with archaeological potential identified by the survey were concentrated in the central and eastern fields (Areas 2 and 3). The remains primarily comprised positive magnetic anomalies indicative of soil-filled ditches.

2.3.3 The majority of geophysical responses detected is indicative of drainage features and services. Strong magnetic responses detected traversing Area 1 and 2 align with former field boundaries on the 1839 Tithe Map suggesting that they were infilled partially by thermo-remnant material such as industrial waste and may also contain ceramic land drains.

2.3.4 Evidence of agricultural ploughing respecting previous field boundaries evident within NMP data was strong indicating the potential that this will have impacted upon any surviving archaeological remains.

2.3.5 Evidence of archaeological activity was sparse, therefore the archaeological potential within the Site is overall considered to be low.

3 AIMS AND OBJECTIVES

3.1 Trial Trench Evaluation

3.1.1 The purpose of the archaeological evaluation by trial trenching is to investigate the archaeological potential of the Site and, where present, to characterise and date the archaeological resource. This information will then be used to help Gloucester's Planning Archaeologist come to an informed decision on the requirement for any further archaeological work, should it be required, and the methodologies to be employed.

3.1.2 The general aims of the archaeological evaluation by trial trenching are to:

- determine the presence or absence of buried archaeological remains within the Site;
- determine the character, date, extent, and distribution of any archaeological deposits revealed as well as their potential significance;
- determine levels of disturbance to any archaeological deposits from agricultural practices;
- determine the likely impact on any archaeological deposits present from the proposed development; and
- disseminate the results of the fieldwork through an appropriate level of recording.

3.1.3 The specific aims of the archaeological evaluation are to:

- To test the geophysical anomalies and assets recorded by the HER;
- To contribute to research aims raised in the South West Archaeological Research Framework (SWARF), specifically with regards to rural settlement and farming, these may include:
    - Aim 28: Improve our understanding of Neolithic settlements and landscapes;
    - Aim 29: Improve our understanding of non-villa Roman rural settlement;
    - Aim 30: Develop and test methodologies to identify Early Medieval rural settlement;
    - Aim 33: Widen our understanding of the origins of villages; and
    - Aim 42: Improve our understanding of Medieval farming.

3.2 Palaeoenvironmental Sampling

3.2.1 The purpose of the palaeoenvironmental sampling will be the targeted retrieval in the southern part of the Site of deposits and sediments of potential archaeological and palaeoenvironmental significance for assessment.

3.2.2 The aims of the sampling will be to:

- determine, from the sequences and sub-samples recovered from them, the state of preservation, age, type, and quantity of palaeoenvironmental remains present;
- determine the preservation potential and concentration of palaeoenvironmental remains (pollen and macrofossils) within the deposits;
- assess the geoarchaeological and archaeological potential of the deposits; and
- make suitable proportionate recommendations for further work, if required.

3.2.3 The proposed palaeoenvironmental sampling will contribute to the SWARF research aims regarding palaeoenvironmental and environmental changes and landscape exploitation, specifically:

- Aim 18: Target specific soil and sediment contexts for environmental information; and
- Aim 25: Improve our understanding of Palaeolithic and Mesolithic landscapes.

4 TRIAL TRENCH METHOD STATEMENT

4.1 General Methodology

4.1.1 In accordance with discussions held between WA and Gloucester City's Planning Archaeologist, acting on behalf of the Local Planning Authority (LPA), a scheme for an archaeological evaluation by trial trenching has been designed in order to satisfy the stated objectives of the project as set out under Section 3 above.

4.1.2 All fieldwork will be carried out in accordance with codes and practices outlined by the Chartered Institute for Archaeologists regarding archaeological evaluations (CIfA 2020a, *Standards and Guidance: Archaeological Evaluation*).

4.1.3 The trial trenches have been located to target geophysical anomalies and to test 'blank' areas of the Site. The evaluation will comprise the excavation of 28 trenches, with measuring 50m long by 1.8m wide. This represents a 2% sample of the Site. Proposed trench locations are shown on Figures 2 & 3.

4.1.4 Notwithstanding any information on constraints already supplied, in advance of any fieldwork, the Archaeological Contractor must request that the Client has demonstrated that all reasonable measures have been taken to identify any constraints to ground disturbance and that the Archaeological Contractor has been provided with all reasonable information regarding the confirmation of the presence of services, any ecological constraints any areas of potentially contaminated land and/or any other known risks to health and safety. A CAT & genny will be used in advance of trial trenching to test for live services.

4.1.5 The location of each trench will be plotted on the ground using Trimble TSC3 GPS unit (or equivalent) to an accuracy of ± 100 mm to ensure that the position is transcribed accurately from the trench location plan. Trench areas will be subject to a rapid metal detector scan in advance of excavation to identify and recover metal artefacts.

4.1.6 The Archaeological Contractor will undertake the opening of all trenches using a mechanical excavator equipped with a toothless ditching bucket. Overburden will be excavated in spits under the direct control of a suitably experienced archaeologist.

4.1.7 Mechanical excavation will proceed until either the top of the first potentially significant archaeological horizon or undisturbed natural substrate, are encountered. Particular attention will be paid to achieving a clean and well-defined horizon with the machine.

4.1.8 Topsoil and subsoil excavated from each trench will be stored separately at a

minimum distance of 1m from the edge of the trench. Spoil arising from the trench will be rapidly investigated and scanned with a metal detector to recover any artefacts.

4.1.9 All trenches will be cleaned by hand, photographed, and planned as appropriate. Once cleaned all trenches will be inspected and potential features/deposits and structural remains selected for sample excavation to retrieve artefactual and ecofactual material, as well as determine their character, significance, and date. All trenches will be inspected again after sufficient weathering to ensure that no potential features or deposits are missed. All remains of a structural nature will be recorded.

4.1.10 Prior to backfilling, all deposits, including the trench sides will be again inspected for artefactual material to ensure that finds are recovered from as many contexts as possible, regardless of date.

4.2 Investigation and Sampling Strategy

4.2.1 If archaeological features or deposits are observed within the trench, these will be excavated using appropriate hand tools, such as a mattock, shovel, and hand trowel.

4.2.2 Archaeological features will be sampled sufficiently to characterise, date them, and determine their significance, according to the specification below.

4.2.3 A sample of each feature will be excavated in an archaeologically controlled manner to recover the maximum amount of information with emphasis on dating evidence, form, extent, level of preservation and function:

- Sample excavation of substantial linear features (ditches, etc) must be representative of the available length of the feature, with each section not less than 1m wide. Where features extend across the trench, one excavated face should be perpendicular to the alignment of the feature.
- A minimum of 50% of the fills of larger features will be excavated (in some instances 100% may be excavated to recover artefactual material) and must take into account any variations in the shape or fill of the feature and any concentrations of artefacts;
- Discrete features, such as post-holes and small pits must be examined in section and then fully excavated; and

- All features which are, or could be interpreted as, structural (e.g., wall footings and cellars) and fabricated surfaces (e.g., yards and floors) must be fully exposed, cleaned and recorded *in situ*.

4.2.4 Mechanical excavation may be permitted on deep archaeological deposits (e.g., quarry pits) where it has been determined, in consultation with the LPA that hand excavation is not a suitable method.

4.2.5 Key intersections, that may provide information on the stratigraphic relationship between features will not be investigated; they will be left in situ to allow detailed excavation and recording as part of subsequent excavation.

4.2.6 Measures will be taken to protect particularly significant, valuable, or sensitive archaeological remains from exposure, accidental damage and/or theft.

4.3 Recording

4.3.1 All features will be recorded using a Trimble TSC3 GPS unit (or equivalent). Each point will be recorded with sub-centimetre accuracy in relation to the OSGB36 geod model and coded to an internal database. The resulting dataset will record context number, feature type, associated drawing numbers and any other feature specific information that may be relevant.

4.3.2 Each trench will have a unique number, as indicated on the trench location plan (Figure 1) and will be recorded on an individual trench record sheet. A full written, drawn, and photographic record will be made of each trench even where no archaeological features are identified.

4.3.3 A measured long section should be hand-drawn, at a scale not less than 1:50, for each trench.

4.3.4 A full written, drawn, and photographic record will be made of all archaeological features and deposits (contexts) with each context given a unique number and described on a separate record sheet.

4.3.5 All written records will utilise the Archaeological Contractor's pro-forma record sheets. Digital context sheets are not proposed.

4.3.6 Plans and sections will be drawn on water resistant permatrace. Plans will be drawn to a scale of 1:20 and sections at 1:10. All plans and sections will be levelled in respect to Ordnance Datum.

4.3.7 Each drawing will be given a unique drawing number. A drawing register, with brief

details, will be maintained throughout the archaeological works.

4.3.8 A full digital photographic record of the work will be kept. Photographs will be taken of each trench and all excavated features.

4.3.9 In addition to records of archaeological features, general photographs recording the context of the site evaluation and "working shots" will also be taken.

4.3.10 All images will be taken using a suitable digital camera with a megapixel resolution of 24.1. The photographic record forms part of the site archive. Digital files will be labelled appropriately and cross-referenced in relation to a site-specific photography register.

4.3.11 The Archaeological Contractor will ensure that the complete site archive including finds and paleoenvironmental samples is to be kept in a secure place throughout the period of fieldwork and post-excavation process.

4.4 Human Remains

4.4.1 On the basis of the desk-based research above human remains are not expected at the Site. However, in the unlikely event that human remains, inhumations and/or cremations, are exposed during the course of the archaeological evaluation then all works are to cease immediately, and the local police and coroner informed.

4.4.2 The area will be screened from view and discussions will be held with the Client and the LPA on options for their appropriate preservation in situ or for their removal in accordance with professional standards and guidelines once the antiquity of the remains has been suitably proven.

4.4.3 A Ministry of Justice Licence will be required (in accordance with Section 25 of the Burial Act 1857) before the remains can be lifted. The need for a Ministry of Justice Licence applies to both inhumation and cremated remains. Application for a Licence will be made by the Archaeological Contractor.

4.4.4 The Archaeological Contractor will have an appropriately qualified and experienced osteoarchaeologist available to supervise the excavation and removal of any human remains (where this is necessary) from the Site.

4.5 Finds

4.5.1 All artefacts recovered are the property of the landowner who will be encouraged to donate them to the receiving museum. The receiving museum is expected to the be Gloucester City Museums, it is our understanding they are currently accepting

archives.

4.5.2 ***Recovery/Processing:*** Artefacts from the trenches will be collected and labelled with the unique site code and context number of the deposit from which it was recovered.

4.5.3 Each 'significant find' (e.g., coins, metalwork, etc) will be recorded three dimensionally using electronic survey equipment to an accuracy of ± 100 mm and assigned a 'Special Finds' number.

4.5.4 Similarly, concentrations of artefacts or artefact scatters should be recorded three dimensionally.

4.5.5 All artefacts revealed will be recovered regardless of date so that the provisional dating of as many contexts as possible can be ascertained. All ceramics from the industrial period will be collected and assessed. However, should excessive material be uncovered a specific Selection and Retention Strategy would be devised in discussion with the archaeological curator at the Gloucester City Museums. A useful reference in relation to the selective deposition of archival material has been produced by the CIfA[1].

4.5.6 Finds retrieved will be suitably bagged, boxed, and marked in accordance with the *Standards and Guidance for the Collection, Conservation and Research of Archaeological Materials* (CIFA 2014c), the *Standard and Guide to Best Practice for Archaeological Archiving in Europe* (Perrin et al. 2014).

4.5.7 The assessment of finds will be undertaken by suitably qualified specialists.

4.5.8 On completion of the project, specialists will assess each artefact for selection and retention. Modern material, unstratified remains and objects that have been assessed as having no obvious grounds for retention will be discarded after a period of six months, unless there is a specific request to retain them.

4.5.9 Once assessed, all retained material must be packed and stored in optimum conditions, as described in First Aid for Finds (Watkinson and Neal 1998).

4.5.10 The primary archive records will clearly state how all artefact assemblages have been recovered, sub-sampled and processed.

4.5.11 Any artefact assessment will be undertaken with appropriate reference to the regional type series and local specialists will undertake the finds assessment if the assemblage is believed to have potential significance. The finds assessment report must reference

[1] https://www.archaeologists.net/selection-toolkit

all ceramic to the county type fabric series. This will be discussed with the Client and the LPA in the first instance if required.

4.6 Treatment of treasure

4.6.1 Finds falling under the statutory definition of treasure (as defined by the Treasure Act of 1996 and its revision of 2002) will be reported immediately to the relevant Coroner's Office, the landowner/Client and the LPA.

4.6.2 A treasure receipt (obtainable from either the Finds Liaison Officer -FLO or the DCMS website) will be completed and a report submitted to the Coroner's Office and the FLO within 14 days of understanding that the find is treasure. Failure to report within 14 days of discovery is a criminal offence.

4.6.3 The treasure receipt and report will include the date and circumstances of the discovery in addition to the identity of the finder (the Archaeological Contractor) and the location of the find in relation to Ordnance Survey.

4.7 Paleoenvironmental Sampling

4.7.1 A structured programme of paleoenvironmental sampling appropriate to the specific aims of the project will be implemented. The strategy and methodology for the sampling of deposits will be in accordance with English Heritage (Now Historic England) Centre for Archaeology Guidelines "*Environmental Archaeology – A guide to the theory and practice of methods, from sampling and recovery to post-excavation"* (2011).

4.7.2 Where deposits are dry, bulk samples for the recovery of charred plant remains, small bones and finds, will be taken from sealed and datable features such as pits, ditches, hearths, and floors. Each context will be sampled in isolation. 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 or where context horizons are not fully defined.

4.7.3 Mollusc samples of two litres each will be taken vertically from any appropriate sections to investigate the changes of vegetation through time.

4.7.4 Where deposits are wet, waterlogged, or peaty, monoliths will be taken along cleaned vertical surfaces for the retrieval of pollen, diatoms, ostracods, and foraminifera. The numbers to be taken will be agreed with the Client and LPA. Where bulk samples are to be taken a minimum of 20 litres will be taken from visible layers or spits for the retrieval of plant macro-remains and insects.

4.7.5 Environmental samples from dry deposits will normally by processed by floatation following the fieldwork and the residues will be sorted to retrieve small bones, small finds and charcoal that has not floated. Environmental samples from wet deposits will normally be sent to specialists for processing in laboratory conditions.

4.7.6 Where guidance is relevant the appropriate Historic England papers will be followed (HE 2005; 2006; 2007 & 2011).

4.8 Backfilling of Trenches

4.8.1 Trial trenches will not be backfilled without the prior approval of the LPA. However, some backfilling would be permitted if health and safety or ground stability reasons warrant this.

4.8.2 Waterlogged trenches must be drained prior to backfilling.

4.8.3 Unless instructed otherwise, topsoil and subsoil must be replaced as separate horizons with the subsoil below the topsoil.

4.8.4 Backfilled trenches will be lightly compacted but not reinstated or reseeded.

5 PALAEOENVIRONMENTAL SAMPLING METHOD STATEMENT

5.1 General Methodology

5.1.1 In accordance with discussions held between WA and Gloucester City's Planning Archaeologist, a scheme for archaeological palaeoenvironmental sampling has been designed in order to satisfy the stated objectives of the project as set out under Section 3 above.

5.1.2 The Archaeological Contractor must request that the Client has demonstrated that all reasonable measures have been taken to identify any constraints to ground disturbance and that they have provided all reasonable information regarding the confirmation of the presence of services, any ecological constraints any areas of potentially contaminated land and/or any other known risks to health and safety.

5.1.3 Due to the palaeoenvironmental / geoarchaeological focus of the survey, a trained and experienced environmental specialist will monitor the recovery of the cores.

5.1.4 The following classes of environmental remains will be assessed where appropriate:

- Geoarchaeology;
- Pollen, parasite ova and fungal spores;
- Charred, waterlogged or mineralised plant macrofossils;
- Diatoms;
- Insects; and
- Molluscs.

5.1.5 The following techniques will be used to recover and assess each of the above class of palaeoenvironmental remains.

5.2 Stage 1 – Windowless Sampling

5.2.1 Three core samples taken with a windowless sampler (or similar) will be taken at regular intervals (c.25m) across one south/north transect to obtain a complete stratigraphic sequence to the lowest possible depth based upon the limitations (see Figure 2 & 3). The sequences will be captured in 1m plastic sleeves and will be taken off site for assessment.

5.2.2 Whilst it is the intention to adhere to these predetermined locations unforeseen circumstances, such as waterlogging, may prohibit the recovery. Therefore, the closest suitable location will be sought.

5.2.3 The location of the cores, including the above Ordnance Datum height, will be recorded using a Trimble TSC3 GPS unit with sub-centimetre accuracy, with each point recorded in relation to the OSGB36 geoid model.

5.3 Stage 2 – Geoarchaeological Recording and Sub-sampling

5.3.1 The plastic sleeves containing the cores will be slit open and the captured sediments cleaned to expose a fresh face, photographed and then described according to standard geological criteria (Tucker 1982, Jones et al 1999, Munsell Color 2000). The resultant lithological data will be input into a database of the geological utilities program Rockworks and / or Holebase SI. Sub-samples will be recovered during this element of work to be able to undertake an assessment of palaeo-potential. This assessment would be deferred until Stage 5 as part of the final fieldwork assemblage.

5.4 Stage 3 – Deposit Model

5.4.1 Using existing borehole data along with the results from this survey a peat deposit model will be produced using the aforementioned software.

6 REQUIREMENTS

6.1 Monitoring and Liaison

6.1.1 A minimum notice period of one week will be provided to the LPA prior to the commencement of fieldwork.

6.1.2 The Archaeological Contractor will allow the site records to be inspected and examined at any reasonable time during or after the archaeological fieldwork by the Client or any designated representative of the LPA.

6.1.3 The Archaeological Contractor will liaise closely with the LPA throughout the course of the project and will arrange for regular onsite monitoring meetings.

6.2 Health and Safety

6.2.1 In the event that the works would proceed under COVID-19 restrictions, health and safety requirements would need to have due regard to Appendix 1.

6.2.2 Unless instructed otherwise, the Archaeological Contractor will take no responsibility for Site security. The Client will be expected to be provide for this as required. No provision has been made for fencing individual trenches or securing the Site perimeter.

6.2.3 The Client will be asked to provide all information reasonably obtainable on contamination and confirm the location of services before the archaeological works commence.

6.2.4 Site staff will have an appropriate level of training to enable them to carry out fieldwork safely. Appropriate (Personal Protective equipment (PPE) as directed by the Client will be worn by field staff at all times.

6.2.5 The Client will be requested to provide details of their own risk assessment and specify PPE required before fieldwork commences.

6.2.6 The Archaeological Contractor will abide by the Client's health and safety methodology as well as producing their own internal risk assessment and method statement document. If there is conflict between the Client's risk assessment and that of the Archaeological Contractor's, then the Client's will take priority unless it is perceived to be placing the field team at greater risk.

6.2.7 All staff will assist the Client in maintaining the Site in a safe condition. Hazards will be appropriately identified and managed including identification of buried and above ground services/utilities.

6.2.8 In addition to the risk assessment and method statement, where appropriate a COSHH assessment will also be undertaken. Once onsite, these documents will be assessed, and any variations will be highlighted and added to the appropriate assessment. These will be re-evaluated periodically during the course of the fieldwork to make sure that they remain consistent to the Site-specific risks.

6.2.9 All staff and visitors will be required to be inducted and sign the Risk Assessment documents on first arrival to Site to show that they have read and understood the contents and any variations will be communicated as required.

6.3 Staffing

6.3.1 The project will be directly managed by a full a Member of the Chartered Institute for Archaeologists (MCIfA) or an archaeologist of equivalent standing.

6.3.2 The standards and codes of conduct of the Chartered Institute for Archaeologists will be adhered to at all times.

6.3.3 Details of the Archaeological Contractor's field team including specialists should be provided to the LPA on commission.

7 REPORTING

7.1 Types of Reporting

7.1.1 Reporting may be staged as follows:

- Minimum: Assessment Report(s).
- Further Reporting (as necessary):
  - Updated Project Design (to set out the scope and extent of further fieldwork or reporting requirements such as specialist analysis);
  - Specialist Analysis Reports (to analyse finds and or samples); and
  - Post Excavation/Archive Report (Grey Literature Report) (consolidating all of the above).
- Publication (for the purposes of public dissemination, for example a journal article).

7.1.2 The minimum level of reporting would be an Assessment Report for the trial trenching.

7.1.3 The necessity for further reporting/further fieldwork after the trial trenching Assessment Report stage would be determined by the significance of the archaeology revealed and the finds assemblage/samples. The LPA would determine the necessity for further fieldwork to mitigate the impact on any significant archaeology encountered following completion of the evaluation fieldwork within each phase. See Section 7.4.

7.2 Assessment Report

7.2.1 It is expected that the production and submission an Assessment Report could be undertaken in 4-6 weeks of completion of the evaluation works. The report will be produced in accordance with CIfA Standards and Guidance (CIfA, 2020).

7.2.2 As a minimum, the Assessment Report will include:

- A QA sheet detailing as a minimum title, author, version, date, checked by, approved by;
- A non-technical (executive) summary;
- Introduction: to include site codes, project number, planning reference number, dates, and grid references;
- Site location and description;

- Topography and geology;
- Archaeological and historical background;
- Aims and objectives;
- Methodology;
- Results including trench and feature descriptions, artefact, and environmental data;
- Interpretation of the archaeological features and their wider setting;
- Artefact and ecofact reports by named specialists;
- A statement of the significance of the results in their local, regional, and national context cross referenced to the regional research agendas, as appropriate;
- Conclusions;
- References;
- General and detailed plans showing the location of the areas investigated accurately positioned on an OS base map with at least four national grid co-ordinates per trench (to a standard scale);
- Long trench sections and sections of all excavated features at appropriate scales;
- Photographs of the site, the trenches, and archaeological features;
- A catalogue of finds;
- The finds assessment report must reference all ceramics to the county type fabric series; and
- A catalogue and location of the site archive.

7.2.3 A Preliminary (draft) report will be issued to the Client and the LPA for review prior to agreement and issue of the final report to the LPA.

7.2.4 Three bound copies, one unbound master-copy and a digital version of the report will be submitted within two weeks of the receipt of Client comments on the draft report.

7.3 **Further Fieldwork/Reporting**

7.3.1 The LPA will determine the necessity for further fieldwork and/or analysis of finds and samples (in addition to processing and assessment undertaken at the Assessment stage), following completion of the evaluation fieldwork. In this event, Updated

Project Designs (UPDs) would be prepared as necessary to set out the scope of further fieldwork and/or specialist reports. Multiple UPDs may be required depending on the archaeological findings and sequence of fieldwork. For Client information, all UPDs would incur an additional fee and each UPD would set out the scope and extent of specific required additional work, providing a document against which a subsequent cost estimate could be acquired.

7.3.2 Further fieldwork to mitigate the impact may take the form of extension to trenches or strip, map, and record of targeted areas.

7.3.3 Following this there would be the need for a detailed post-excavation assessment report with a contingency for post-excavation analysis and appropriate publication.

7.4 Dissemination

7.4.1 This project will be registered with the Online AccesS to the Index of archaeological investigationS (OASIS) and a digital copy of the archaeological report will be made available upon its completion.

7.4.2 Upon approval of the report, a digital .pdf copy of the report must be provided to the HER within 3 months of completion of fieldwork.

7.4.3 A summary of the project results will be provided to a relevant journal, as agreed with the LPA.

7.5 Archive Preparation and Deposition

7.5.1 The Archaeological Contractor will make arrangements for the deposition of the site archive with the **Gloucester City Museums** and all documents, artefacts and any other material associated with the project will be marked with a unique site code during fieldwork. The archive should be deposited in accordance with the Gloucestershire archaeological archive standards.

7.5.2 The site archive will include all project records and cultural material produced by the evaluation and will be prepared in accordance with a specific Selection and Retention Strategy (if necessary), the Guidelines for the Preparation of Excavation Archives for Long Term Storage (Brown 2011) and A Standard Guide to Best Practice for Archaeological Archiving in Europe (Perrin et al 2014). Gloucester City Museums' guidelines will also be adhered to.

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Appendix 1

Site Operating Procedures Construction Leadership Council

Site Operating Procedures – Protecting Your Workforce

Contents

Introduction

Construction sites operating during the Coronavirus Covid-19 pandemic need to ensure they are protecting their workforce and minimising the risk of spread of infection.

This guidance is intended to introduce consistent measures on sites of all sizes in line with the Government's recommendations on social distancing.

These are exceptional circumstances and the industry must comply with the latest Government advice on Coronavirus at all times.

The health and safety requirements of any construction activity must also not be compromised at this time. If an activity cannot be undertaken safely due to a lack of suitably qualified personnel being available or social distancing being implemented, it should not take place.

We are aware that emergency services are also under great pressure and may not be in a position to respond as quickly as usual.

Sites should remind the workforce at every opportunity of the Site Operating Procedures which are aimed at protecting them, their colleagues, their families and the UK population.

If a site is not consistently implementing the measures set out below, it may be required to shut down.

Self-Isolation

Anyone who meets one of the following criteria should not come to site:

- Has a high temperature or a new persistent cough - follow the guidance on self-isolation
- Is a vulnerable person (by virtue of their age, underlying health condition, clinical condition or are pregnant)
- Is living with someone in self-isolation or a vulnerable person.

Procedure if Someone Falls Ill

If a worker develops a high temperature or a persistent cough while at work, they should:

- Return home immediately
- Avoid touching anything
- Cough or sneeze into a tissue and put it in a bin, or if they do not have tissues, cough and sneeze into the crook of their elbow.

They must then follow the guidance on self-isolation and not return to work until their period of self-isolation has been completed.

Travel to Site

- Wherever possible workers should travel to site alone using their own transport and sites need to consider:
    - Parking arrangements for additional cars and bicycles
    - Other means of transport to avoid public transport e.g. cycling
    - Providing hand cleaning facilities at entrances and exits. This should be soap and water wherever possible or hand sanitiser if water is not available
    - How someone taken ill would get home.

Site Access Points

- Stop all non-essential visitors
- Introduce staggered start and finish times to reduce congestion and contact at all times
- Monitor site access points to enable social distancing – you may need to change the number of access points, either increase to reduce congestion or decrease to enable monitoring
- Remove or disable entry systems that require skin contact e.g. fingerprint scanners
- Require all workers to wash or clean their hands before entering or leaving the site
- Allow plenty of space (two metres) between people waiting to enter site
- Regularly clean common contact surfaces in reception, office, access control and delivery areas e.g. scanners, turnstiles, screens, telephone handsets, desks, particularly during peak flow times
- Reduce the number of people in attendance at site inductions and consider holding them outdoors wherever possible
- Drivers should remain in their vehicles if the load will allow it and must wash or clean their hands before unloading goods and materials.

Hand Washing

- Provide additional hand washing facilities to the usual welfare facilities if a large spread out site or significant numbers of personnel on site
- Ensure soap and fresh water is readily available and kept topped up at all times
- Provide hand sanitiser where hand washing facilities are unavailable
- Regularly clean the hand washing facilities and check soap and sanitiser levels
- Provide suitable and sufficient rubbish bins for hand towels with regular removal and disposal.

Sites will need extra supplies of soap, hand sanitiser and paper towels and these should be securely stored.

Toilet Facilities

- Restrict the number of people using toilet facilities at any one time e.g. use a welfare attendant
- Wash hands before and after using the facilities
- Enhance the cleaning regimes for toilet facilities particularly door handles, locks and the toilet flush
- Portable toilets should be avoided wherever possible, but where in use these should be cleaned and emptied more frequently
- Provide suitable and sufficient rubbish bins for hand towels with regular removal and disposal.

Canteens and Eating Arrangements

With cafés and restaurants having been closed across the UK, canteens cannot operate as normal.

Whilst there is a requirement for construction sites to provide a means of heating food and making hot drinks, these are exceptional circumstances and where it is not possible to introduce a means of keeping equipment clean between use, kettles, microwaves etc. must be removed from use.

The workforce should also be required to stay on site once they have entered it and not use local shops.

- Dedicated eating areas should be identified on site to reduce food waste and contamination
- Break times should be staggered to reduce congestion and contact at all times
- Hand cleaning facilities or hand sanitiser should be available at the entrance of any room where people eat and should be used by workers when entering and leaving the area
- The workforce should be asked to bring pre-prepared meals and refillable drinking bottles from home
- Workers should sit 2 metres apart from each other whilst eating and avoid all contact
- Where catering is provided on site, it should provide pre-prepared and wrapped food only
    - Payments should be taken by contactless card wherever possible
    - Crockery, eating utensils, cups etc. should not be used
- Drinking water should be provided with enhanced cleaning measures of the tap mechanism introduced
- Tables should be cleaned between each use
- All rubbish should be put straight in the bin and not left for someone else to clear up
- All areas used for eating must be thoroughly cleaned at the end of each break and shift, including chairs, door handles, vending machines and payment devices.

Changing Facilities, Showers and Drying Rooms

- Introduce staggered start and finish times to reduce congestion and contact at all times
- Introduce enhanced cleaning of all facilities throughout the day and at the end of each day
- Consider increasing the number or size of facilities available on site if possible
- Based on the size of each facility, determine how many people can use it at any one time to maintain a distance of two metres
- Provide suitable and sufficient rubbish bins in these areas with regular removal and disposal.

Avoiding Close Working

There will be situations where it is not possible or safe for workers to distance themselves from each other by 2 metres.

General Principles

- Non-essential physical work that requires close contact between workers should not be carried out
- Work requiring skin to skin contact should not be carried out
- Plan all other work to minimise contact between workers
- Re-usable PPE should be thoroughly cleaned after use and not shared between workers
- Single use PPE should be disposed of so that it cannot be reused
- Stairs should be used in preference to lifts or hoists
- Where lifts or hoists must be used:
    - Lower their capacity to reduce congestion and contact at all times

    - Regularly clean touchpoints, doors, buttons etc.
- Increase ventilation in enclosed spaces
- Regularly clean the inside of vehicle cabs and between use by different operators.

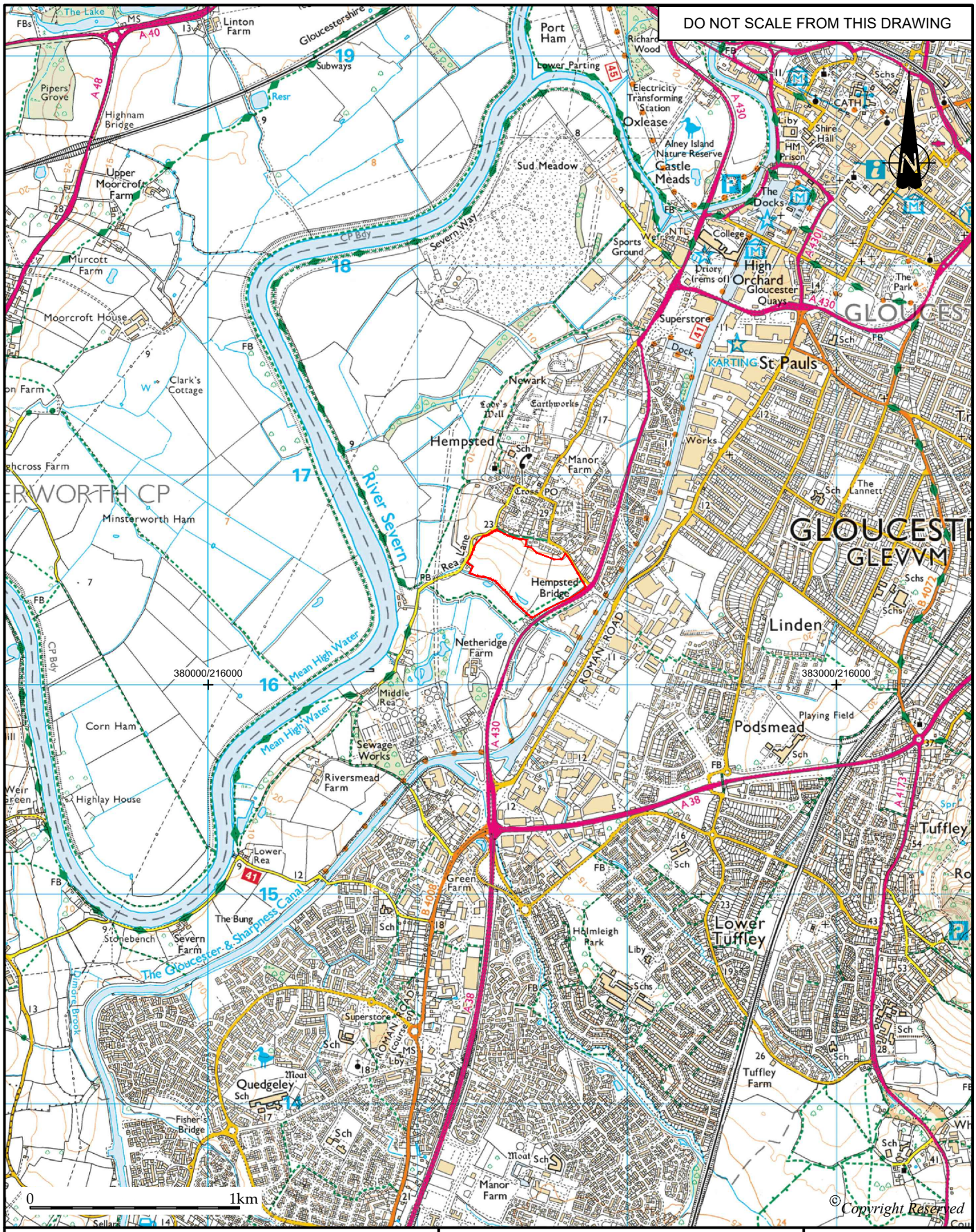
Site Meetings

- Only absolutely necessary meeting participants should attend
- Attendees should be two metres apart from each other
- Rooms should be well ventilated / windows opened to allow fresh air circulation
- Consider holding meetings in open areas where possible.

Cleaning

- Enhanced cleaning procedures should be in place across the site, particularly in communal areas and at touch points including:
    - Taps and washing facilities
    - Toilet flush and seats
    - Door handles and push plates
    - Hand rails on staircases and corridors
    - Lift and hoist controls
    - Machinery and equipment controls
    - Food preparation and eating surfaces
    - Telephone equipment
    - Key boards, photocopiers and other office equipment
- Rubbish collection and storage points should be increased and emptied regularly throughout and at the end of each day.

DRAWINGS



CLIENT: Gladman Developments Limited	DRG No.: GM10710_017_001		REV: 1
PROJECT: Land at Hempsted Lane, Gloucester, Gloucestershire	SIZE: A4	SCALE: 1:25,000	DATE: April 2022
	DRAWN BY: ACH	CHECKED BY: RJ	APPROVED BY: RJ
DRAWING TITLE: Figure 1 Site location			

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N:\GM\GM10710 - LAND AT HEMPSTED LANE\03 - DESIGN\AUTOCAD\GM10710-017 GEOPHYSICAL SURVEY - FINAL FIGURES.DWG


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BRIDGE CL
HEMPSTED LANE
A430

DO NOT SCALE FROM THIS DRAWING

KEY:

- Study Area boundary
- Geophysical survey areas
- Services
- Possible soil filled features
- Possible agricultural features
- Possible agricultural features/ land drains
- Trench
- Borehole

REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

CLIENT

Gladman Developments Limited

PROJECT

Land at Hempsted Lane,
Gloucester, Gloucestershire

DRAWING TITLE

Figure 3
Proposed Trench and Borehole Locations
Overlying Geophysical Survey Results

DRG No.	REV
GM10710_029	2

DRG SIZE	SCALE	DATE
A3	1:2,000	April 2022

DRAWN BY	CHECKED BY	APPROVED BY
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