

**Written Scheme of Investigation for
an archaeological trial trench evaluation
on Land off Hogshaw Road
Granborough
Buckinghamshire
September 2023**

Author: Peter Boyer

Illustrator: Hugh Gatt



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Event Number: TBC

Planning Reference: TBC

Project Manager: Peter Boyer

Quality control and sign off:

Issue No.	Date approved:	Checked by:	Verified by:	Approved by:	Reason for Issue:
1	31/08/2023	Rachel Clare	-	Peter Boyer	Draft for approval

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SITE NAME: Land Off Hogshaw Road, Granborough,
Buckinghamshire

EVENT NUMBER: TBC

NATIONAL GRID REF: SP 7555 2510

CLIENT: Statera Energy

DATE: September 2023

CONTRACTOR: MOLA Northampton
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30 Billing Road
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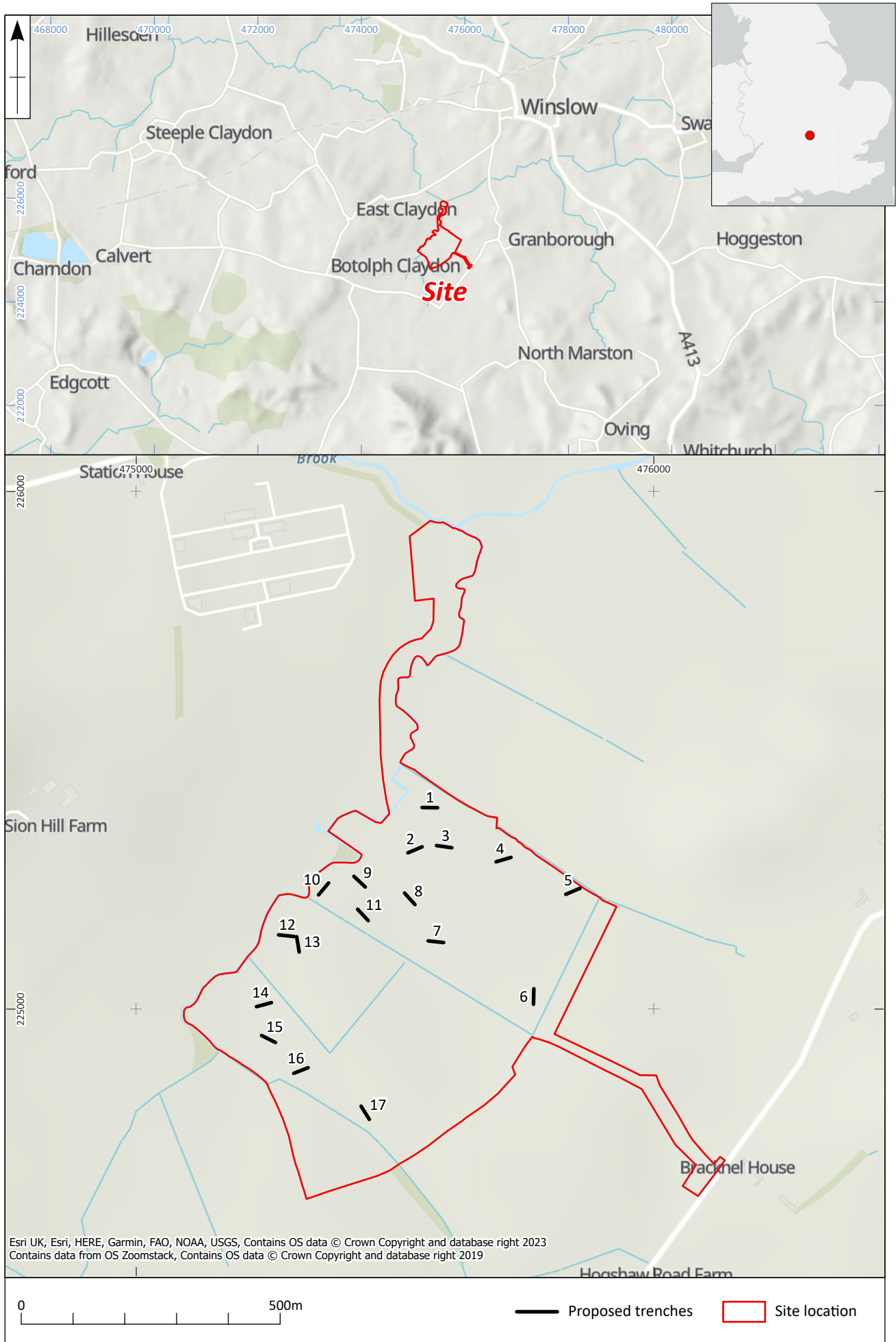
1 INTRODUCTION

- 1.1 Museum of London Archaeology (MOLA) has been commissioned by Statera Energy to undertake a preliminary programme of archaeological trial trench evaluation on land off Hogshaw Road, Granborough (Fig 1). The archaeological works are being carried out prior to the proposed development of a new substation and battery storage facility.
- 1.2 The works are taking place as part of wider programme of archaeological investigation agreed with Buckinghamshire County Archaeological Service (BCAS) in accordance with the National Planning Policy Framework (MHCLG 2019). The first stage of works comprised an archaeological desk-based heritage assessment carried out by MOLA in 2023 (Crothers 2023), followed by a geophysical survey of the site, also carried out by MOLA in 2023 (Manktelow). The current phase of works will be carried out in the central part of the site and it will only comprise a preliminary evaluation of geophysical anomalies and 'blank' areas. It is expected that a full evaluation of the site will be carried out according to a planning condition, once the proposed development has been approved.
- 1.3 This Written Scheme of Investigation (WSI) has been prepared by MOLA Northampton. It describes the proposed methodology to be undertaken for the evaluation. This document has been prepared in compliance with current best archaeological practice as defined in the Chartered Institute for Archaeologists' *Code of Conduct* (CIfA 2022) and *Standard and Guidance for archaeological field evaluation* (CIfA 2020a) as well as the Historic England procedural document *Management of Research Projects in the Historic Environment* (MoRPHE) (HE 2015).
- 1.4 An accession number has been requested and will be used as the site code: **TBC**.

2 BACKGROUND

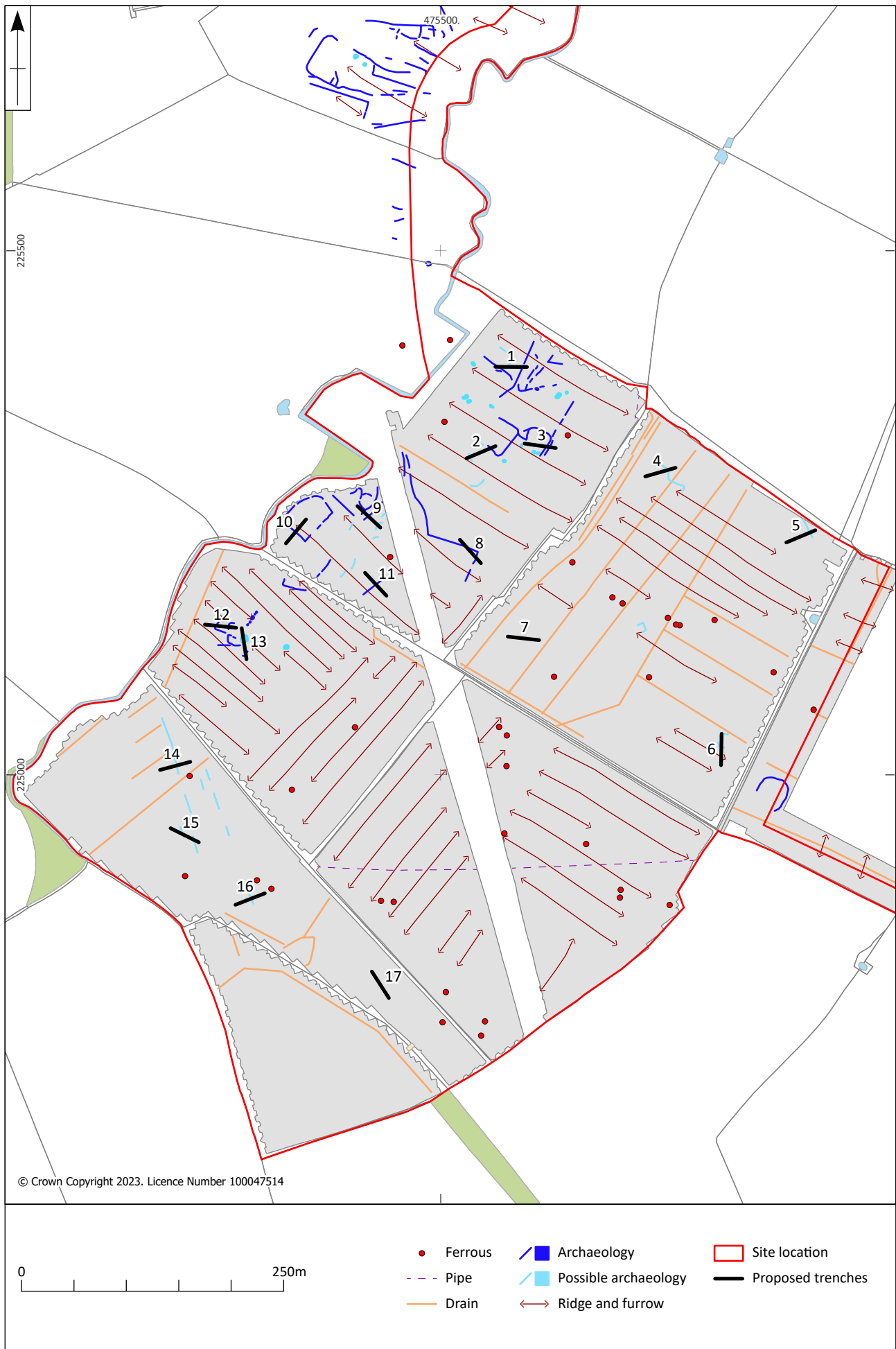
Location, topography and geology

- 2.1 The area of investigation lies to the south-east of East Claydon substation, approximately 1km west of the village of Granborough (Fig 1). The total proposed development area covers approximately 40ha of land located either side of the Claydon Brook (Manktelow 2023, fig 1; Fields 2 – 10), though the proposed preliminary evaluation will be focussed on four fields towards the centre of the proposed development (Fig 2; Manktelow 2023, fig 1; Fields 4, 6, 7 and 8), all lying to the south-east of Claydon Brook. All four fields are currently exploited for arable purposes. The site is bounded to the north-west by the Claydon Brook and on all other sides by further agricultural fields.
- 2.2 The solid geology of the survey area comprises sedimentary mudstone belonging to the Weymouth Member of the Oxford Clay Formation. This is overlain by alluvial deposits alongside the course of Claydon Brook (BGS 2023). The overlying soils are slowly permeable, seasonally wet, slightly acid but base-rich loams and clays (CSAI 2023).
- 2.3 The present surface topography slopes gently upwards from the north-west boundary along the Claydon Brook at approximately 88m above Ordnance Datum (aOD), towards the south-east, with the maximum elevation of the south-eastern boundary of site reaching approximately 95m aOD.



Scale 1:10,000

Site location Fig 1



Scale 1:5,000

Trench layout Fig 2

Archaeological and historical background

- 2.4 The archaeological and historical background to the site has been detailed in the archaeological desk-based assessment (Crothers 2023), which included a search of the Buckinghamshire Historic Environment Record (BHER) within 1km of the total proposed development. A geophysical survey has also been carried out across the total proposed development area (Manktelow 2023) and both phases of work have contributed to chapters in the Environment Statement (ES), produced in support of the proposed planning application. The findings of these earlier reports are summarised below:

Prehistoric

- 2.5 No evidence for prehistoric activity is recorded within 1km of the site on the BHER and no prehistoric finds have been recorded in the area by the Portable Antiquities Scheme (PAS).

Iron Age

- 2.6 No evidence for Iron Age activity is recorded within 1km of the site on the BHER and no Iron Age finds have been recorded in the area by the PAS. However, geophysical survey across the site has revealed a number of anomalies indicative of likely Late Iron Age/early Roman rural settlement and agricultural activity (Manktelow 2023). Six possible sites (Sites A – F) have been identified; and two of these (Sites A and B) lie to the north of the four fields currently under investigation, whilst Site F lies a short distance to the south-east of the current investigation area. Sites C, D and E, comprising possible enclosure ditches and other linear features, lie within the current investigation area and will be targeted by this preliminary evaluation.

Roman

- 2.7 The route of a Roman road (Margary route 162) is believed to cross the south-western edge of the site. A linear feature is visible on satellite imagery and historic aerial photographs of this area, whilst a slight linear depression is also apparent on LiDAR imagery. The geophysical survey carried out on the site revealed a number of linear anomalies on approximate north/north-west to south/south-east alignments, which may represent multiple cuts and recuts of roadside ditches.
- 2.8 In addition to possible evidence for the Roman road, the other sites identified by the geophysical survey (see above), may also be indicative of activity during the Roman period.
- 2.9 No further evidence of Roman activity is recorded on the BHER within the vicinity of the site, but the PAS records a Roman coin; a copper alloy *dupondius sestertius* that was found in the Granborough, though the precise location is not given.

Early medieval and medieval

- 2.10 No evidence of early medieval activity is recorded in the vicinity of the site by the BHER, though the PAS records a dagger with double-sided human face of Saxon date from the Granborough area. The precise location of the find is not given.

- 2.11 Both Granborough and East Claydon are recorded by the Domesday Survey of 1086 as being within the Waddesdon Hundred. Granborough was mostly occupied by arable farmland, whereas East Claydon also contained areas of woodland.
- 2.12 A shrunken medieval village lies to the east of the site, with historic aerial photographs and LiDAR imagery indicating much of the surrounding area was occupied by contemporary field systems; upstanding ridge and furrow features were still extant in the area until the early 21st century.
- 2.13 Two medieval finds from the Granborough area are listed by the PAS; a silver Portuguese coin of Alfonso V and a coin weight, but the exact locations of these finds are not recorded.

Post-medieval and modern

- 2.14 The site has remained within a wider agricultural landscape throughout the post-medieval period. Whilst a small number of structures of 16th- to 19th-century date survive as listed buildings within 1km of the site, the only major impacts on the surrounding landscape have been the construction of the Aylesbury to Buckingham railway to the west of the site in the mid-19th century, and the recent construction of the substation a short distance to the north.

Previous archaeological fieldwork

- 2.15 A geophysical survey was carried out across the entirety of the proposed area of development between March and May 2023 (Manktelow 2023). This identified six sites (A – F) across the area, along with linear features, possibly associated with the Roman road. Sites A and B lay to the north of the area of proposed development, beyond the current area of investigation. The most northerly of these (Site A) comprised a number of enclosures, including internal features, and one enclosure ditch had been truncated by an apparent furrow of medieval or early post-medieval date. Possible trackways were also identified. Site B comprised a multiple-phase complex of enclosures, though these were more fragmented than those in Site A.
- 2.16 Site C comprised a series of linear and curvilinear anomalies in the north of the current area of investigation and whilst no discernible enclosures could be identified, a number of possible pits were apparent. Site D comprised a number of linear and curvilinear anomalies that defined the corner of an enclosure, along with another enclosure, close to Claydon Brook at the north-west of the site, whilst Site E lay a short distance to the south-west and comprised elements of a possible smaller enclosure along with potential pits. Site F lay immediately south-east of the current area of investigation and comprised a U-shaped anomaly, probably representing part of a small enclosure. Sites A – F are thought to have been associated with small agricultural settlements of likely late prehistoric/early Roman date.
- 2.17 A series of broadly north/north-west to south/south-east aligned linear anomalies towards the south-west of the site lay in the vicinity of the conjectured Roman road and may have represented cuts and recuts of roadside ditches.

3 AIMS AND OBJECTIVES

- 3.1 The aim of the archaeological watching brief is to determine, record and enhance understanding of the location, extent, date, character, condition, significance and quantity of any surviving archaeological remains on the proposed development site. These works will be conducted under the appropriate methods and practices, and in compliance with the ClfA *Code of Conduct* (ClfA 2022) and other relevant ClfA standards and guidance (ClfA 2020a). The aims of the investigation are to:
- To identify the presence of any archaeological remains with the potential to be adversely impacted by intrusive aspects of the development;
 - Establish the date, nature and extent of the activity or occupation identified;
 - Recover artefacts to assist in the development of type series within the region;
 - Recover palaeo-environmental remains to determine past local environmental conditions.
- 3.2 The overall objectives for the site include:
- To inform the need for and extent of further mitigation works in order to ensure that archaeological remains are preserved either *in situ* or *in record* according to their significance.
- 3.3 Specific research objectives, as detailed in the national and regional research frameworks documents (Hey and Hind 2014), will be addressed as relevant depending upon the results of this programme of archaeological works. The most recent version of the *Research Framework for the Solent-Thames sub-region* (Oxford Archaeology 2023) can be accessed online at: <https://researchframeworks.org/solenth/>.
- 3.4 Given the known archaeological resource within the surrounding area, the following research objectives within the *Research Framework for the Solent-Thames sub-region* are likely to be of particular relevance to this site:

Later Bronze Age and Iron Age

10.2 Nature of the evidence

10.3 Chronology

10.4 Landscape and land use

10.5 Settlement

The Roman period

12.4 Landscape and land use

12.6 Settlement

12.12 Communications and trade

4 METHODOLOGY

- 4.1 The preliminary evaluation will comprise the excavation of 17 trenches measuring 30m in length and 1.8m in width (Fig 2). The rationale behind the placement of the trenches is to target anomalies and to investigate 'blank' areas identified by the geophysical survey (Manktelow 2023).
- 4.2 In line with MOLA's health and safety policies PAS128 compliant service plans will be requested from the Principal Contractor, landowner or client delete as appropriate prior to the commencement of works.
- 4.3 The trenches will be located using a Leica Survey Grade RTK GPS operating to an accuracy of +/-0.05m to Ordnance Survey National Grid and Datum.
- 4.4 The trenches will be machine excavated using a toothless ditching bucket under continuous archaeological supervision to the level of the first archaeological horizon or, where archaeological remains are absent, the upper interface of geological deposits. Topsoil and subsoil will be stored separately on either side of the trench, at least 1m from the trench edges. Excavation will not normally proceed beyond safe working depths. In the unlikely event that deep archaeological features or deposits are encountered, a methodology will be devised to enable the testing of the depth and nature of the stratigraphy or the safe recording of features, such as stepping of trenches, machine excavated sondages or auguring deep deposits.
- 4.5 The trenches will be cleaned sufficiently to enhance the definition of features, unless it is certain that there are no archaeological remains present. A sufficient selection of features will be sampled by hand to determine their date and character. If buried soils are encountered, they will be sufficiently sampled to characterise date and relationship with other features.
- 4.6 All up-cast from trenches will be scanned using a metal detector (not discriminating against iron). Periodically during excavation, the archaeological features will also be scanned. All finds recovered using this method will be included within the report.
- 4.7 All archaeological deposits and features encountered during the course of evaluation will be investigated and fully recorded. Investigation slots through all linear features will be minimum 1m in width. Discrete features will be half-sectioned or excavated in quadrants if large or deep.
- 4.8 Recording will follow standard MOLA procedures (MOLA 2014). All archaeological features will be given a separate context number. Deposits will be described on pro-forma context sheets to include details of the context, its relationships, interpretation and a checklist of associated finds. Finds will be collected from the individual deposits and appropriately packed and stored in stable conditions by context. Artefacts will be collected by hand and retained, receiving appropriate care prior to removal from site (ClfA 2020b; Watkinson and Neal 2001). Unstratified animal bones and modern material will not be collected. Material that comprises a large quantity of a standard product (e.g. brick or tile) will be retained as a sub-sample representing its typical composition.
- 4.9 The excavated area and spoil heaps will be scanned with a metal detector to ensure maximum finds retrieval. If necessary the requirements of the Treasure Act (2023) will be adhered to.
- 4.10 If any burials are encountered, they will be investigated sufficiently to confirm identification and then left *in situ*. The BCAS, H. M. Coroner and the client will be informed immediately upon discovery of human remains. If removal is required by the monitoring officer this will take place under the appropriate licence and according to the conditions set out therein.

- 4.11 Archaeological features will be plotted on an overall plan at a scale of 1:50. Buildings, other significant remains or areas of complex stratigraphy will be planned in greater detail at 1:20 or 1:10 scale as appropriate. Sections or profiles through features and areas of complex stratigraphy will be drawn at a scale of 1:10. All deposit heights will be established relative to Ordnance Datum.
- 4.12 A photographic record will be maintained by high resolution digital photographs exceeding 12 megapixels. Overall shots of the site will be taken prior to excavation and after backfilling. Detailed shots of individual features and feature groups will be taken as appropriate. All photographs, except general site shots or specific shots for publication will include a north arrow and suitable photographic scale. The photographic scale will be graduated metric of suitable length ensuring vertical scales are used against deep sections in combination with horizontal scales. Digital photographs will be used to augment the drawn record within the final report.
- 4.13 Samples will be taken for environmental analysis from all suitable contexts following the guidance for sampling as outlined by Historic England (Campbell *et al* 2011). Bulk environmental soil samples would normally be taken from securely dated, sealed archaeological features or deposits for plant macro fossils, small animal bones and small artefacts. The volume of such samples will be context and sediment specific and will be 40 litres or 100% of feature fills (whichever is less). If necessary, advice on sampling strategies will be sought from Historic England's Regional Scientific Advisor and specialist consultants (see below).
- 4.14 Historic England advice will be sought if waterlogged or delicate surviving organic remains are encountered during the project. All work will be carried out according to these Historic England Guidelines (HE 2015b). A revised programme, timetable and additional resources as a contingency may be required depending upon the scale of waterlogged material. A specialist in waterlogged wood and organic remains will be present on-site during excavation of waterlogged material, on-site conservation and removal. The minimum amount of wood will be exposed for the shortest possible time to characterise the deposit and give its extent if possible. The relevant receiving museum will be contacted as early as possible to ensure appropriate conservation and future curation. All paleo-environmental investigation, assessments, scientific analysis and specialist reports will be included within the final report and sent to the Historic England Science Advisor.
- 4.15 All samples will be processed at MOLA, using the flotation technique to retrieve seed, charcoal and mollusc remains. All the resultant residues will then be hand sorted to retrieve bones and other finds.
- 4.15 Following the approval of the BCAS, trenches will be backfilled with the up-cast, lightly compacted by the mechanical excavator, unless otherwise agreed. Subsoil and topsoil will be backfilled separately. The field data will be compiled into a site archive with appropriate cross-referencing.

5 POST-EXCAVATION, REPORTING AND ARCHIVE

- 5.1 The post-excavation aspect of the project will be undertaken following the methodology set out in MoRPHE (HE 2015a) and the ClfA (ClfA 2020c). All finds will be cleaned, catalogued and prepared for deposition in accordance recognised guidelines (Walker 1990; Brown 2011; MGC 1992; ClfA 2020b–c; ICON 1993, formerly UKIC), and those of the receiving county repository (Buckinghamshire County Museum 2013). The county repository is: Discover Bucks Museum, Church St, Aylesbury, HP20 2QP. Any material

- requiring special curation will be handled under the recognised guidelines (Watkinson and Neal 2001).
- 5.2 It is intended that initially, an interim report on the evaluation will be produced in order to inform the submission of the planning application proposal. Subsequently a full report on the trial trench evaluation will be prepared. This will include an introduction, the archaeological background to the project, the aims and objectives of the evaluation, a non-technical summary, the scope of the project, and the methodology used. The evidence will be presented with details of results. The report will consider results in terms of survival and potential. The text will be supported by illustrations and photographs and will include a tabulated list of contexts by trench and details of the contents of the project archive. The report will consider any archaeological remains in the context of the regional and national research frameworks.
 - 5.3 Specialist reports will be added as necessary, with acknowledgements, bibliography and contents included. The MPRG's *A Standard for Pottery Studies in Archaeology* will be adhered to (Barclay *et al* 2016). If human remains are encountered and excavated the post-excavation assessment will contain an analysis of the remains, address future research potential and options for reburial.
 - 5.4 Accompanying illustrations will include a location plan at national, regional and local levels. A location plan of all interventions on the site, based on Ordnance Survey, will show main archaeological features. Scaled site plans and sections will be reproduced.
 - 5.5 The report will assess the archaeological significance of the features and deposits encountered. It will specifically address the aims and objectives declared in this WSI.
 - 5.6 A copy of the report, clearly marked DRAFT, will be provided to the client and will be submitted to the BCAS. Following acceptance, a hardcopy and PDF version will be submitted to the BHER to act as a permanent record of the investigation.
 - 5.7 The physical site archive will be available for deposition within six months of completion of the fieldwork, under the Accession Number that will be confirmed prior to fieldwork commencement. The site archive will be accompanied by the research archive, which will comprise the text, tabulated data, the original drawings and all other records generated in the analysis of the site archive. Digital drawings and digital site records produced during the fieldwork will form part of the digital archive and will be submitted and curated by the Archaeological Data Services (ADS). The digital record formats will comply with archiving standards and guides. The archive will be fully catalogued and prepared for deposition in accordance with the regional standard (Buckinghamshire County Museum 2013) as well as with national guidelines by Walker (1990), Brown (2011), ClfA (2020c) and the MGC (1992). Any material requiring special curation will be handled under the recognised guidelines (Watkinson and Neal 2001).
 - 5.8 The resulting archaeological archive will be deposited with the Discover Bucks Museum in accordance with their procedures following no more than one year after completion of fieldwork and report production.
 - 5.9 Following completion of the fieldwork and reporting, born-digital data, such as reports, digital photographs, database and GIS data, with appropriate metadata, will be deposited with a CoreTrustSeal Repository, currently the Archaeology Data Service (ADS), making the archive publicly accessible. All projects conducted by MOLA contain an Online Access to the Index of Archaeological Investigations (OASIS V) registration form in the front pages of the report. This data is used to keep the online database up to date with the most recent projects conducted by MOLA.
 - 5.10 The archive of the investigations will be deposited with the landowner's agreement and

Transfer of Title will take place to ownership thereafter by the Discover Bucks Museum. A summary of the results will be sent to South Midlands Archaeology and Records of Buckinghamshire not later than three months after the end of the calendar year the fieldwork is completed in (Buckinghamshire County Museum 2013).

- 5.11 The results of the fieldwork, if considered of significant academic or public interest may be published in a suitable academic journal; and/or a popular news article discussed with the client for release through public circulation.

6 KEY PERSONNEL AND TIMETABLE

- 6.1 MOLA is a ClfA registered organisation, under the overall management of **Guy Hunt BA FSA MCIfA, Director**.
- 6.2 The project will be carried out under the management of **Peter Boyer BA MA PhD MCIfA**. The fieldwork will be supervised by one of MOLA's qualified and experienced supervisors supported by Project Assistants drawn from MOLA's team of permanent and temporary staff.
- 6.3 Other project staff will be appointed as appropriate and may include key staff from the table below:

Flint	Yvonne Wolfram-Murray (MOLA)
Prehistoric pottery	Lyn Blackmore (MOLA)
Roman and Iron Age pottery	Adam Sutton (MOLA)
	Anna Rebisz-Niziolek (MOLA)
	Lanah Hewson (MOLA)
Medieval and post-medieval pottery	Jennifer McNulty (MOLA)
	Nigel Jeffries (MOLA)
	Paul Blinkhorn (Freelance specialist)
Ceramic building materials, daub and fired clay	Rob Atkins (MOLA)
	Han Li (MOLA)
	Lanah Hewson (MOLA)
	Mary Ellen Crothers (MOLA)
Glass - all periods	Claire Finn (MOLA)
	Michael Marshall (MOLA)
Registered finds - all periods	Michael Marshall (MOLA)
	Owen Humphreys (MOLA)
	Chris Faine (MOLA)
	Tora Hylton (Freelance specialist)
Human bone analysis	Chris Chinnock (MOLA)

Archaeozoology	Chris Faine (MOLA) Adam Reid (MOLA)
Archaeobotany, molluscs	Dominika Kofel-Lubczynska (MOLA) Kate Roberts (MOLA) Wendy Smith (MOLA) Alan Pipe (MOLA)
Charcoal	Dominika Kofel-Lubczynska (MOLA) Marvin Demicoli (MOLA)
Metal working and industrial waste (Slag)	David Dungworth (Freelance specialist)
Conservation/x-ray photography	MOLA London

- 6.3 The fieldwork is due to commence in October 2023 and is planned to take five days. The BCAS require two weeks notice of works commencing and will be invited to attend for monitoring purposes. The BCAS will also be kept abreast of developments and progress.
- 6.4 It is the policy of BCAS that a commitment is made towards outreach and public engagement for archaeological projects. This may be in the form of open days, social media postings, webinars or public talks and will be dependant on and proportionate to the findings. The nature of the work on this project will negate the opportunities for open days but other methods of public engagement will be employed as appropriate.

7 HEALTH AND SAFETY

- 7.1 A site specific risk assessment and safety plan (RAMS) will be prepared before the start of the project and will be updated throughout the project if appropriate. All site staff are inducted in the site-specific risk assessment and made aware of potential hazards before they commence the works on site.
- 7.2 MOLA is a responsible employer and all work is conducted in accordance with MOLA's established Health and Safety Policy. This provides a practical framework for the implementation of the Health and Safety at Work Act 1974, the management of Health and Safety at Work regulations 1992 and other relevant legislation.

8 BIBLIOGRAPHY

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Campbell, G, Moffett, L, and Straker, V, 2011 *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation*, Historic England

ClfA 2020a *Standard and Guidance for archaeological field evaluation*, Chartered Institute for Archaeologists

ClfA 2020b *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*, Chartered Institute for Archaeologists

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MHCLG 2019 *National Planning Policy Framework*, Department of Communities and Local Government

MGC 1992 *Standards in the Museum Care of Archaeological Collections*, Museums and Galleries Commission

MOLA 2014 *Archaeological fieldwork manual*, MOLA Northampton

MOLA Forthcoming *Digital Preservation Policy*, DM01, MOLA Northampton

MOLA Forthcoming *Data Management Procedures for Projects*, DM02, MOLA Northampton

MOLA Forthcoming *Digital Data Selection, Appraisal and Discard Policy*, DM08, MOLA Northampton

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MOLA Northampton

September 2023

APPENDIX 1: DATA MANAGEMENT PLAN

Project details				
Project Manager	Peter Boyer			
Project Name	Land off Hogshaw Road, Granborough, Buckinghamshire			
Project Finance Code	P23-433			
Accession Code	TBC (Buckinghamshire)			
Project stages covered	Trial Trench Evaluation			
Related Policies	-			
Version control				
Version	Author(s)	Date:	Status	Summary of Changes
1	Peter Boyer	31/08/2023	Draft	-
Data Collection/Creation				
Data to be Collected/Created	<p>All file formats created will meet the standards set out in MOLA's Data Management Procedure and Fieldwork Manual.</p> <p>The recording of trenches, horizons, and all archaeological contexts encountered will be undertaken manually using pro-forma sheets and polyester film. They will during post excavation phase be scanned and digitally added to the archive. Sections and trench plans will also be hand drawn and added digitally during post excavation phase. The data will feed into the site's ORACLE CDE database.</p> <p>Overall photographic shots of the site and each trench will be taken prior to excavation and after backfilling, with detailed shots being made of individual features and groups as appropriate. The photographic record will consist of high-quality digital uninterpolated images of at least 12 megapixels. Digital photographs intended for archive purposes will comply with best practice i.e. high quality non-proprietary raw files (DNG) or TIFF images.</p> <p>The documentary archive for this phase of works will consist of:</p> <ul style="list-style-type: none">- Text: PDF/A documents comprising completed site report, WSI, Brief- Databases: ORACLE dataset- Survey data: GIS DXF files- Illustration files: AutoCAD DWG, PDF/A, MapInfo files			

	This will be submitted to ADS at the completion of the project as a single archive.
How Data will be Collected/Created	<p>The data will be created according to MOLA's <i>Fieldwork Manual</i>, MOLA's <i>Data Management Procedure</i>, and in accordance with project specific agreements with Buckinghamshire County Archaeological Service (BCAS).</p> <p>The Site will utilize the standard MOLA <i>Data Management Procedure</i> used to record features using context sheets.</p> <p>Site data will be captured using pro-forma context sheets and the MOLA <i>Fieldwork Recording Manual</i>.</p> <p>Sections and plans will be drawn on site then captured digitally during post excavation and added to the digital archive.</p> <p>Images will be taken using a camera with an APS-C or larger sensor with 12 megapixel camera.</p> <p>Survey data will be recorded accurately using Leica Viva Survey Grade RTK GNSS using SMARTNET real-time corrections, operating to a 3D tolerance of $\pm 0.05\text{m}$ to Ordnance Survey National Grid and Datum. These data will be stored as DWG or similar file types.</p> <p>File structure will be created automatically by Union Square Knowledge Management System, and is thus controlled.</p>
Relations	N/A
Documentation and Metadata	
Metadata	Metadata will be created to the standard set out in MOLA's <i>Data Management Procedure</i> . Metadata tables will be updated throughout the course of the project and will be archived along with the digital data at the end of the project.
Documentation	The data will be accompanied by the site report, site paper archive, polyester film sheets, databases, survey data and processed illustrations as PDFs.
Ethical and Legal Compliance	
Data Security Issues	The dataset may contain commercially sensitive data. MOLA will not make data available to any persons outside of the previously detailed project team without discussion with BCAS.
Intellectual Property Rights	<p>The copyright of any written, graphic or photographic records and reports will rest with MOLA. The data and reports created by any external specialists will be MOLA Copyright; this will be managed through their contracts. Other data not owned by MOLA, such as OS data, HER datasets or historic maps, will be used under license and any downloaded data will be deleted from MOLA systems at the end of the term of the license agreement.</p> <p>Once the results of the work are deemed to have entered the public domain, BCAS will have permission to use the report for the purposes of the Historic Environment Record which may include limited photocopying by third parties.</p>

Data Storage	
Storage and Backup	<p>All data collected digitally will be backed up at the end of each day on the MOLA server.</p> <p>Quality assurance processes will include records being checked in the office by Team Leaders prior to scanning. Any amendments will be made prior to scanning such as cross referencing.</p> <p>MOLA will retain a back-up of the digital data of the project for a minimum of five years following the deposition of the site archive, in accordance with MOLA's Digital Management Procedure.</p> <p>Paper archives and documentation will form one archive that will be deposited ultimately in the Discover Bucks Museum.</p>
Access and Security	<p>Data recording platforms used including tabletop computers and laptops will be password protected to prevent un-authorised access.</p> <p>Data will be made available to the project team through the Union Square knowledge management system and controlled via password access, maintained and managed by MOLA IT support.</p>
Selection and Preservation	
Preservation Plan	<p>The physical and digital archives will be constructed in accordance with local and national guidelines, and specifically with reference to MOLA's Physical and Digital Data Retention/Discard policies. Discarded data that has been identified for deletion will be recorded as such within the metadata and site records, as appropriate.</p> <p>The physical site archive will be stored at MOLA Office, 30 Billing Road, Northampton upon completion of the evaluation fieldwork. Upon completion of full analysis, the physical project archive and hard copy of the evaluation report, will be deposited in the Buckinghamshire County Museum. The digital site archive comprising the report, database, digital photographs and survey data will be archived with the ADS. Further archiving decisions will be made in discussion with the BCAS and ADS at project completion stage.</p>
Data Sharing	
Data Sharing Plan	<p>During the course of the project, site data will need to be shared with external persons for the acquisition of specialist reporting. External specialists will be given access to copies of data and not original documentation.</p> <p>The data generated from this project will be made publicly available through submission to the Archaeological Data Service (ADS) as a digital archive and the finished report will be submitted to the Online Access to the Index of archaeological investigations (OASIS).</p> <p>The file types submitted will comply with ADS digital archiving guidance in order to ensure maximum compatibility and access.</p> <p>Proposals for publication and dissemination of the archaeological remains are at this stage restricted to Grey Literature style report.</p>

Data Sharing Restrictions	There are no known restrictions on the use of this data after project completion although data will be kept confidential during the course of the project.
Responsibilities and Resources	
Responsibilities	In the absence of a dedicated Digital Data Officer, the Project Manager and the Senior Archaeological Archivist are responsible for ensuring the data management plan is followed.
Resources	<p>Guidance on digital data will be given throughout the project by Peter Rauxloh (Chief Digital Officer) and James Ladocha (Geomatics Manager), supported by MOLA IT staff.</p> <p>The costs of deposition of the digital archive will be an additional cost to the project budget.</p>
References	<p>Brown, D H, 2011 <i>Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation, Second edition</i>, Archaeological Archives Forum</p> <p>Buckinghamshire County Museum, 2013 <i>Procedures for Notifying and Transferring Archaeological Archives</i></p> <p>ClfA 2020c <i>Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives</i>, Chartered Institute for Archaeologists</p> <p>MGC 1992 <i>Standards in the museum care of archaeological collections</i>, Museums and Galleries Commission</p> <p>Walker, K, 1990 <i>Guidelines for the preparation of excavation archives for long term storage</i>, United Kingdom Chartered Institute for Conservation</p>



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