



JOHN MOORE HERITAGE SERVICES

**ARCHAEOLOGICAL MONITORING & RECORDING**

**AT**

**BAT BARN, GRAVEN HILL, BICESTER**

**NGR SP 59475 19574**

**FEBRUARY 2024**

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<b>FIELDWORK DATE</b>	22 <sup>nd</sup> & 25 <sup>th</sup> January 2024
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<b>ENQUIRIES TO</b>	John Moore Heritage Services Unit 10, Wheatley Business Centre, Old London Road, Wheatley OX33 1XW  Tel: 01865 358300 Email: <a href="mailto:info@jmheritageservices.co.uk">info@jmheritageservices.co.uk</a>
<b>JMHS Project No:</b>	5035
<b>OASIS No:</b>	johnmoor1-522438
<b>Site Code:</b>	AMGH 24
<b>Archive Location:</b>	The documentary archive currently is maintained by John Moore Heritage Services and will be transferred to the Oxfordshire County Museum Service with the accession number OXCMS:2021.117. The digital archive will be deposited with the Archaeology Data Service in due course.



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## **Summary**

*John Moore Heritage Services carried out archaeological monitoring and recording at Site D1, Graven Hill, Bicester, Oxfordshire (NGR SP 59475 19574) for the construction of a bat barn. No archaeological features, deposits or artefactual finds were observed during the monitored works.*

## **1 INTRODUCTION**

### **1.1 Site Location (Figure 1)**

The development site is located to the south of Bicester, Oxfordshire and immediately to the south of Graven Hill (NGR SP 59475 19574). The site lies at approximately 61.8m AOD. The underlying geology is bedrock of Peterborough Member Mudstone, a fissile organic-rich (shells) mudstone. Superficial deposits consist of alluvium fanning across the fields and woodlands from minor watercourses to the west of the Site.

### **1.2 Planning Background**

Cherwell District Council granted planning permission (Planning App No: 22/00835/F) for Demolition of existing buildings and structures at the site and provision of a bat barn at D1 Site, Graven Hill. Due to the archaeological and historical importance of the surrounding area a condition was attached to the permission requiring a watching brief to be maintained during the course of building operations or construction works on the site.

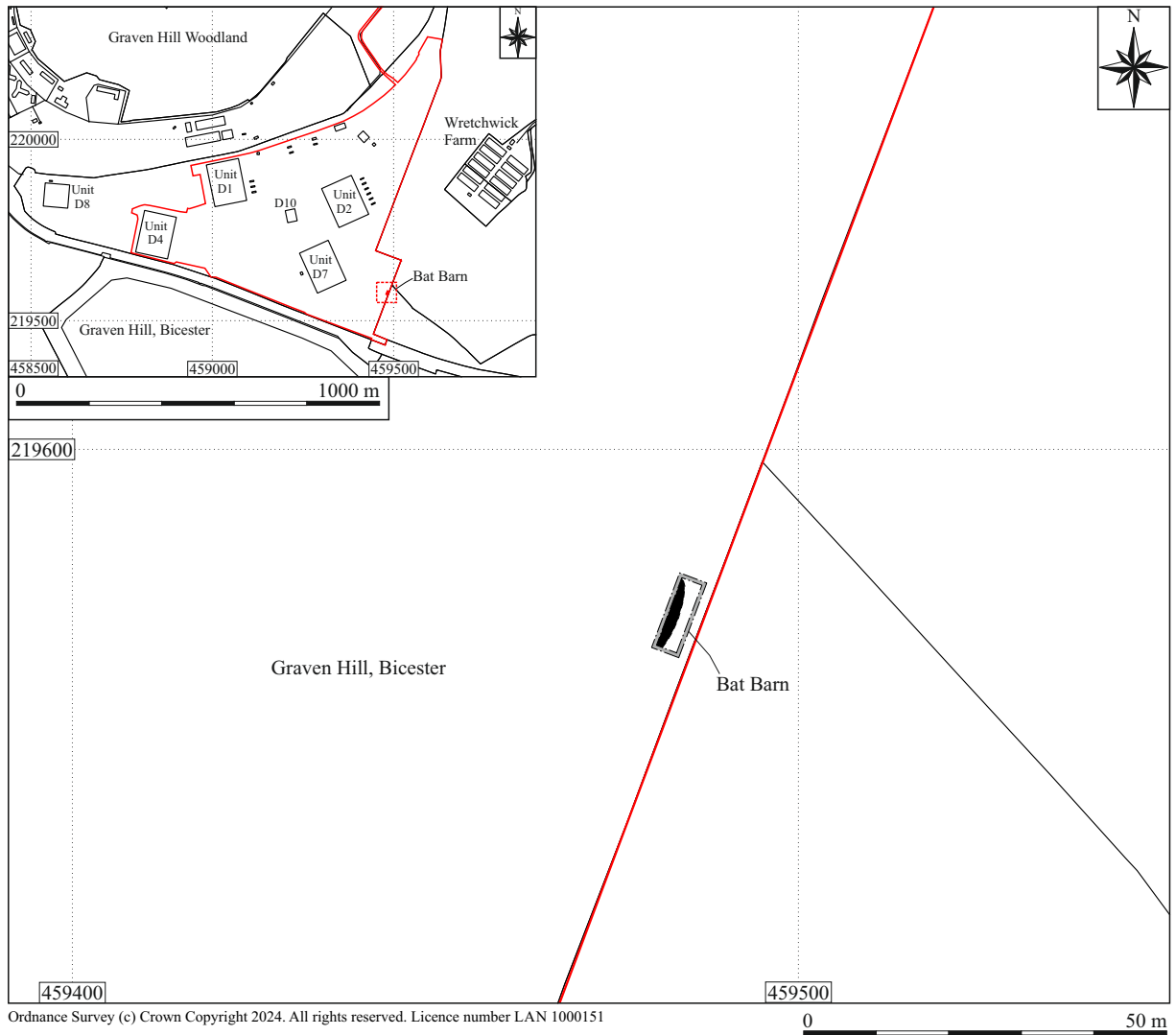
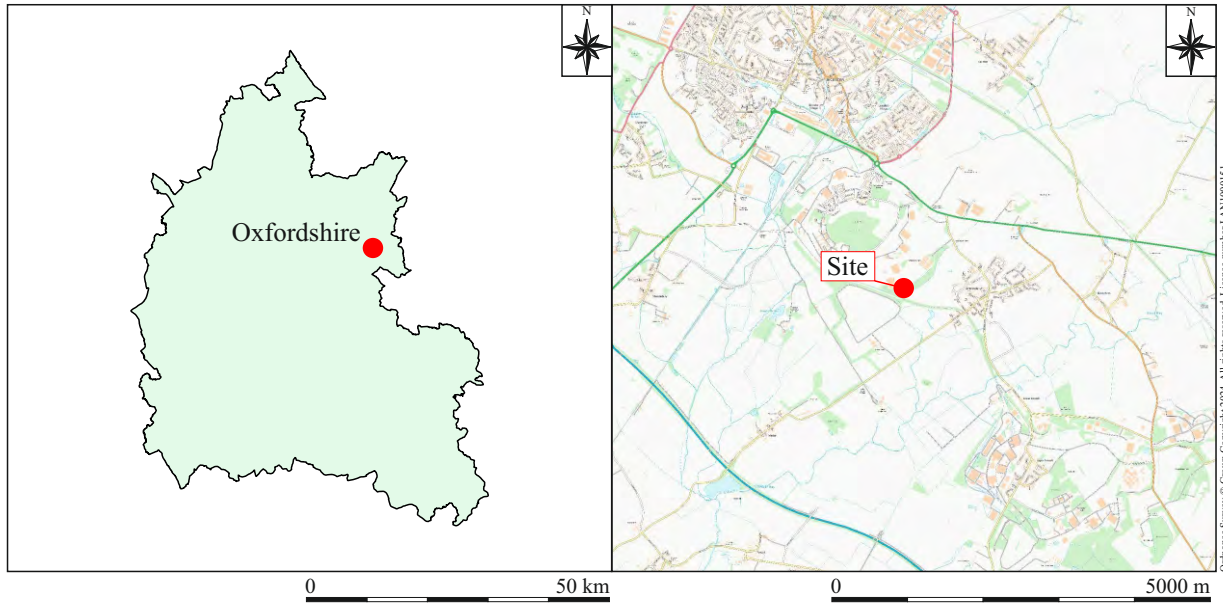
### **1.3 Archaeological Background**

The following archaeological background has been taken from the WSI (Waterman 2024).

The Site does not lie within any Conservation Areas or Archaeological Priority Zones. Within the 1km Study Area associated with the wider D1 Site there are 3 Scheduled Monuments. These are;

- Alchester Roman parade ground, access road and marching camp [1443650], located c. 500m southeast of the Roman settlement of Alchester and c. 792m west of the D1 Site respectively;
- Ambrosden Churchyard Cross [1015166], which stands at the main approach to the church of St. Mary the Virgin in Ambrosden. It is located c. 855m southeast of the D1 Site; and
- Wretchwick deserted Medieval settlement [1015549], located c. 948m northeast of the D1 Site.

Further to this, there is one Grade II\* Listed Building and 12 Grade II Listed Buildings within the initial 1km Study Area, primarily associated with the village of Ambrosden to the south-east, and Wretchwick Cottages to the north-east.



**Key**  Site boundary  Excavated Areas  
 Archaeological features

Figure 1: Site location

The below baseline is informed by the June 2022 HEDBA previously noted. It outlines the broad archaeological and historical background as relevant to the area surrounding the site of the proposed works, with some notice to the context of the broader landscape. As part of the Monitoring and Recording report, a similar archaeological and historical background for the Site shall again be produced.

There is no evidence of Prehistoric activity predating the Bronze Age (Palaeolithic, Mesolithic, Neolithic etc.) noted within the site of the proposed barn, or within 1km of this point. Evidence for Bronze age activity is very minor, being limited to a sherd of pottery discovered during archaeological evaluations on the slope of Graven Hill to the north of the proposed barn. Further to this, possible Bronze age earth works [29400] have been noted c.500m to the south-east of the Site, associated with the former Ambrosden Park. This evidence alludes to scattered settlement surrounding the Site and Graven Hill during this period.

Evidence for Iron age (800BC – AD43) activity is recorded in the form of ditches containing late Iron age pottery [27985], situated c.700m to the south-west of the Site of proposed works, suggesting settlement and potential agricultural activity in this area. Further afield, the remains of roundhouse settlements [28666] have been identified c.1.4 km to the north-west of the site, dating to the late Iron age into early Romano-British periods, and associated with contemporary field systems to the east of this. Further evidence of late Iron age settlement [29006] is recorded c.1.8km to the north-west of the site of the proposed works, reflecting the widespread nature of settlement during this period across the wider Graven Hill Landscape.

This latter activity was situated in close association with Romano-British settlement, which developed alongside the Roman road of Akeman Street [8920] recorded passing east/west c.1km to the north of the site of proposed works. Evidence for Romano-British within the wider Graven Hill landscape is abundant. Particularly of note is the Scheduled Monument of the Roman marching camp [1443650] immediately to the south of the aforementioned Late Iron Age settlement [29006] in association with the Roman town of Alchester, c.2.1km to the west of the Site. More immediate to Graven Hill, Roman field systems with drainage ditches have been dated and recorded on every side of the hill, highlighting the intensity of activity and occupation during this period. The preservation of some organic remains on these agricultural sites points to a use of the fields as vineyards. Potential Romano-British farmsteads have also been recorded across the landscape, the closest to the Site being in close proximity to the late Iron age settlement situated c.700m south-west of the Site. Numerous isolated findspots (including pottery and Roman coins) have also been recorded in the landscape, with a particular concentration to the south of the scheduled marching ground. This points further to a focus of Romano-British activity on the west side of Graven Hill, with seemingly less focus (and so potential) to the south and east, associated with the site of the proposed barn.

There is only sporadic evidence for Early Medieval activity in proximity to the site of the proposed works. This is limited to a single sherd of Early Medieval pottery found during archaeological work in a field c.700m south-west of the Site (in close proximity to previously recorded Romano-British activity), and a small assemblage of metalwork and amber beads recorded in a small pit excavated c.1km to the north-west of the Site. Further to this, historical evidence of place names is recorded in the

Domesday Book of the later 11th century, suggesting a continuation of small-scale settlement in the landscape into this period (largely associated with modern-day Bicester to the north of the Site).

Into the later Medieval period, evidence for activity largely points to continued use of field systems and enclosures surrounding Graven Hill. Further afield, extant evidence for the medieval village of Ambrosden may be found in the form of the 12th-century church of St Mary the Virgin [1046525], as well as its associated scheduled stone cross [1015166] and Medieval inhumations. These are situated c.800m to the south-east of the Site. Although there is documentary evidence for a Medieval manor house near this location, no archaeological evidence has been produced to support this. The deserted Medieval village of Wretchwick (where archaeological trenching have uncovered structures dating between the 13th and early 15th centuries) is situated c. 1.8km to the north of the Site. A former parish boundary ditch may be evidenced running north/south c.800m to the west of the Site, demonstrating the change of such boundaries in the later Medieval/Post Medieval periods.

Into the Post-medieval period, land use of the Site and immediately surrounding continued to be agricultural, employing field enclosures. Nearby settlements expanded with the introduction of the Oxford and Bletchley railway in 1850, yet the landscape directly surrounding the Site maintained a rural character with dispersed farmsteads.

During the Modern period (into the 20th century), little change is evidenced prior to the outbreak of World War II (WWII) and the 1940s. At this time, the Graven Hill landscape underwent major change, due to the widespread construction a MoD Ordnance Depot, including store sheds, POW camps, roads, railways and fencing. Despite this major development, the site of the proposed barn did not undergo any truncation as a part of this.

Post-WWII, much of the depot was maintained and adapted to support the regular army, resulting in further development.

## **2 AIMS OF THE INVESTIGATION**

The aims of the investigation as laid out in the Written Scheme of Investigation were as follows:

- To determine the presence and / or absence of archaeological remains, and if remains are present, to make a full record to current standards;
- Record all buried archaeological remains within the defined area of archaeological excavation;
- Make full record of archaeological features and deposits to current CIfA standards;
- Determine the approximate extent, condition and state of preservation of any remains;
- Confirm the approximate date or range of dates of the remains; and
- Prepare a Monitoring and Reporting report detailing the results.
- Assess the potential and significance of the data for analysis and publication;

- Ensure adequate provision for archival deposition of the archaeological record.

### **3 STRATEGY**

#### **3.1 Research Design**

John Moore Heritage Services carried out the work to a Method Statement (JMHS 2024) agreed with Oxfordshire County Archaeological Services, the archaeological advisor to the Cherwell District Council.

The recording was carried out in accordance with the standards specified by the Chartered Institute for Archaeologists (2023a, 2023b).

#### **3.2 Methodology**

The footings for the bat barn were excavated with a 360° excavator and a toothless ditching bucket under the supervision of an archaeologist. Where archaeological horizons were encountered, they were cleaned by hand and excavated appropriately. Standard John Moore Heritage Services techniques were employed throughout, involving the completion of a written record for each deposit encountered, with scale plans and section drawings compiled where appropriate. A photographic record was also produced.

The resultant spoil from the works was visually scanned, especially for finds relating to the Roman period.

### **4 RESULTS (Figure 2)**

All deposits and features were assigned individual context numbers. Context numbers without brackets indicate features i.e. pit cuts, numbers in ( ) show feature fills or deposits of material, while numbers in bold indicate structural features.

The earliest deposit encountered was a firm mid greyish-orange with yellow variations clay natural (2103) with a thickness greater than 1.20m (Plate 1). Overlaying natural clay (2103) was a soft mid reddish-brown grey silty clay subsoil (2102) with frequent sub-rounded stones up to 10mm in size, and a thickness ranging from 0.35m to 0.45m. Cut in to subsoil (2102) was irregular shaped modern rubbish pit 2104. The full extent of modern rubbish pit 2104 was not observed but had a depth of 0.30m Modern rubbish pit cut 2014 was filled with a soft mid yellowish-brown silty clay (2101) with frequent stone inclusions up to 100mm in size. Fill (2101) had a high amount of construction aggregate, stone and ceramic building material fragments. Stratigraphically over modern rubbish pit fill (2101) and subsoil (2101) was a soft dark greyish-brown silty clay topsoil (2100) with occasional stone inclusions up to 200mm in size, frequent tree roots, and a thickness of 0.15m.



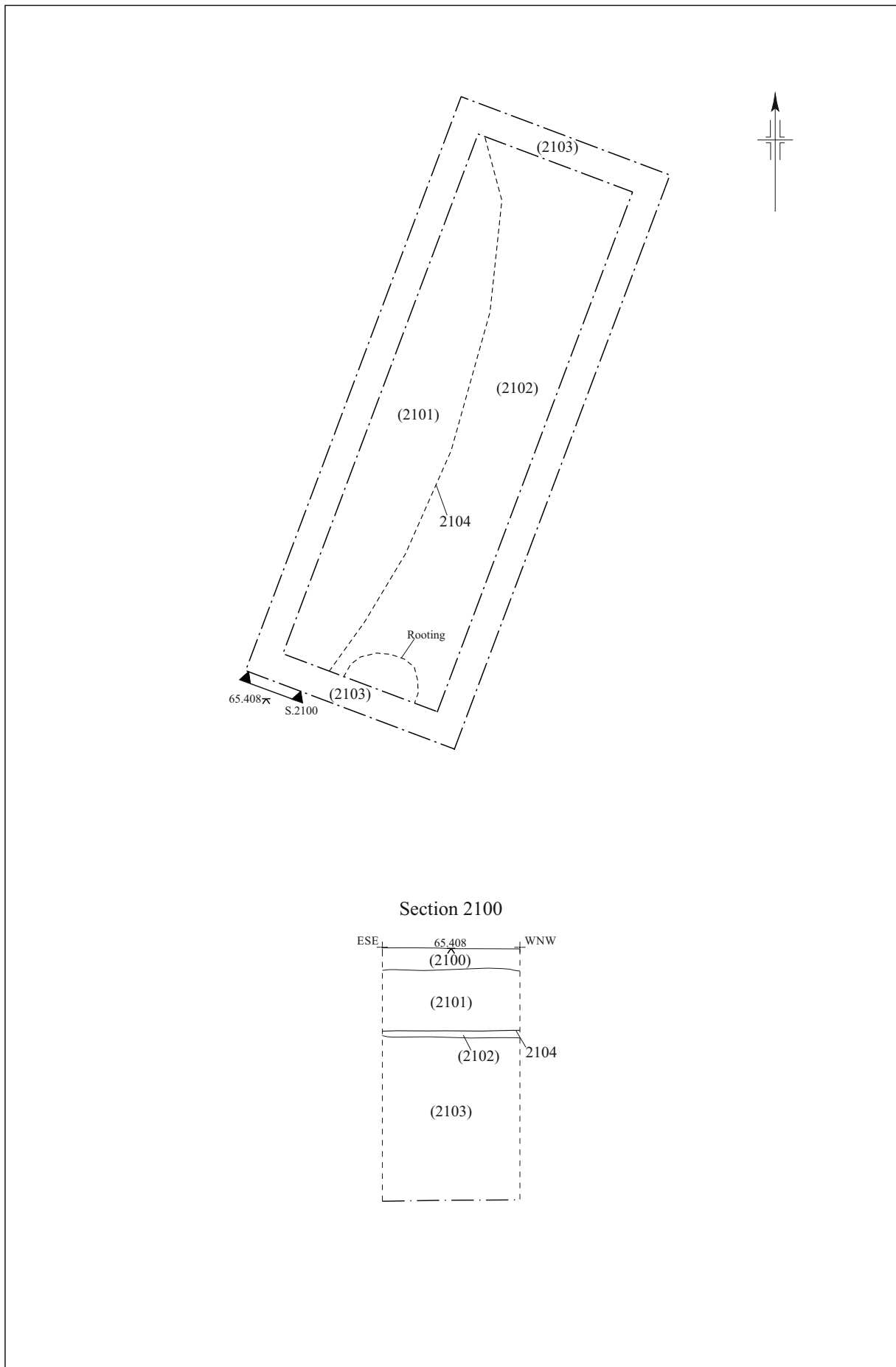


Figure 2: Plan of excavated area and Section

Plan 0 5 m  
Section 0 2 m



**Plate 1: Representative Section 2100**

## **5 DISCUSSION**

The development site was located in an area of known archaeological interest and as part of the aims of the investigation to be aware of Roman remains. Despite this no archaeological features, deposits or artefactual finds were observed during the monitored works.

## **6 ARCHIVE**

### **Archive Contents**

The archive consists of the following:

#### Paper record

Written Scheme of Investigation  
Project Report  
Primary Site Records

#### Digital record

Digitised primary records  
Digitised drawings  
Synthesised registers  
QGIS files  
Digital photographs  
Report text files

The documentary archive currently is maintained by John Moore Heritage Services and will be transferred to the Oxfordshire County Museum Service with accession number OXCMS:2021.117. The digital archive will be transferred to the Archaeology Data Service in due course.

## **7 BIBLIOGRAPHY**

Chartered Institute for Archaeologists 2023a *Standard for Archaeological Monitoring and Recording*

*Chartered Institute for Archaeologists 2023b Universal Guidance for Archaeological Monitoring and Recording*

JMHS 2024; 22/00835/F – *Bat Barn, Graven Hill, Bicester Method Statement For Archaeological Monitoring & Recording*. Unpublished

Waterman 2024: *Bat Barn, Graven Hill D1, Bicester Written Scheme of Investigation for Archaeological Monitoring and Recording*. Unpublished

**Appendix 1. Data Management Plan and Selection Strategy**

**Appendix 2. OASIS Summary**



BAT BARN, GRAVEN HILL,

BICESTER

ARCHAEOLOGICAL MONITORING & RECORDING

DATA MANAGEMENT PLAN AND SELECTION STRATEGY

JANUARY 2024

<b>Document Information</b>	
<b>Title</b>	Data Management Plan and Selection Strategy
<b>Author</b>	Simona Denis
<b>Description</b>	This document describes the type of data that was acquired and generated during the archaeological project, the way the data will be selected, managed and stored, and the mechanisms to preserve and share the data; it also describes the criteria for the selection of the data, documents and materials to be included in the final project archive

<b>Document History</b>				
<b>Version</b>	<b>Status</b>	<b>Date</b>	<b>Author</b>	<b>Changes from the previous version</b>
1	Final	23/08/2023	Simona Denis	Not applicable
2	Draft	19/01/2024	Aimée Skillen-Thompson	Project-specific edits

<b>Document Control Grid</b>					
<b>Revision</b>	<b>Status</b>	<b>Date</b>	<b>Author</b>	<b>Checked by</b>	<b>Reason for revision</b>
1.1	Final	30/08/2023	Simona Denis		Edits to table formatting
2.1	Final	03/01/2024	Simona Denis		Data acquisition standards update Selection criteria revision Bibliography
2.1	Draft	01/02/2024	Aimée Skillen-Thompson		Edits to reflect fieldwork results
2.2	Draft	09/02/2024	Simona Denis		Edits to the Selection Strategy

Section 1 – Administrative Data		
<b>Data Set ID</b>	Site Code	AMGH 24
	JMHS Project No.	5038
	OASIS ID	johnmoor1-522438
	ADS ID	TBC
	Accession No.	OXCMS:2021.117
<b>Project Name</b>	Bat Barn, Graven Hill, Bicester	
<b>Data Set Description</b>	Nature of Project	Archaeological Monitoring & Recording
	Aims of Investigation	Determine the presence and/or absence of archaeological remains, in particular Romans remains
	Investigation Techniques	The footings for the bat barn were excavated with a 360° excavator and a toothless ditching bucket under the supervision of an archaeologist.
	Purpose	Construction of a bat barn
<b>Project Funder</b>	Waterman Infrastructure & Environment Ltd	
<b>Project Manager</b>	Gavin Davis	Project Manager, John Moore Heritage Services
<b>Principal Investigator</b>	Aimée Skillen-Thompson	Project Officer, John Moore Heritage Services
<b>Data Contact Person</b>	Simona Denis	Archive Manager, John Moore Heritage Services
<b>Data Management Policies and Guidance</b>	<p>Archaeology Data Service, 2022 <i>Instructions for Depositors</i>            Australian Research Data Commons, 2022 <i>Data Management Plans</i>            Chartered Institute for Archaeologists, Historic England, 2019 <i>Toolkit for Selecting Archaeological Archives</i>            Digital Curation Centre, 2013 <i>Checklist for Data Management Plan v.4.0</i> Edinburgh            Digital Preservation Coalition, 2015 <i>Digital Preservation Handbook</i>, 2<sup>nd</sup> Edition. Technical Solutions and Tools            Duranti, L., Suderman, J. and Todd, M., 2005 <i>A Framework of Principles for the Development of Policies, Strategies and Standards for the Long-term Preservation of Digital Records</i>. The InterPARES 2 Project            Foster, M., 2019 <i>Work digital/think archive. A guide to managing digital data generated from archaeological investigations</i>. DigVentures            Historic England, 2018 <i>Historic England Excavation Recording Manual</i>            Historic England, 2019 <i>ADAPT: The Archaeological Digital Archiving Protocol Toolkit</i>            International Standards Organization, 2003 standards: <i>Reference Model (ISO 14721:2003)</i>            John Moore Heritage Services, 2023 <i>POL0006: Quality Control Policy Statement</i>            John Moore Heritage Services, 2023 <i>POL0010: Digital Archives Preservation Policy Statement</i>            John Moore Heritage Services, 2023 <i>POL0014: Data Protection Policy Statement</i>            John Moore Heritage Services, 2023 <i>Archive Guidelines. Draft</i>            John Moore Heritage Services, 2024 22/00835/F – <i>Bat Barn, Graven Hill, Bicester Method Statement For Archaeological Monitoring &amp; Recording</i>            The National Archives, 2011 <i>Digital Preservation Policies: Guidance for archives</i>            Oxfordshire County Museum Service, 2023 <i>Requirements for Transferring Archaeological Archives 2023-2024</i>            Thomas, S., 2009 <i>A Guide to Archival and Related Standards</i>. Society of Archivists Data Standard Group            Waterman, 2024 <i>Bat Barn, Graven Hill D1, Bicester Written Scheme of Investigation for Archaeological Monitoring and Recording</i>            Whyte, A., Wilson, A., 2010 <i>How to Appraise and Select Research Data for Curation</i>. DCC How-to Guides. Edinburgh: Digital Curation Centre</p>	

Section 2 – Data Collection		
<b>Assessment of Existing Data</b>	Existing quantitative and qualitative data provided by third parties as well as non-proprietary data were accessed, re-used and re-evaluated, and the generated information supplemented the data collected during the project. Selected generated data were incorporated in the final report text and will be included in the project archive	
<b>Data Collection Standards and Methodologies</b>	Analogue data sets acquisition standards	Chartered Institute for Archaeologists, 2014 <i>Standards and Guidance for the collection, documentation, conservation and research of archaeological materials</i> Historic England, 2018 <i>Excavation Recording Manual</i> John Moore Heritage Services, 2022 <i>Field Handbook. Draft</i> Museum of London Archaeology Service, 1994 <i>Archaeological Site Manual</i> . Third Edition
	Digitised data sets acquisition standards	Historic England, 2019 <i>File-naming Conventions</i> . Archaeological Digital Archiving Protocol (ADAPT) The National Archives, 2016 <i>Digitisation at The National Archives</i> Thomas, S., 2009 <i>A Guide to Archival and Related Standards</i> . Society of Archivists Data Standard Group
	Born-Digital data creation standards	Archaeology Data Service/Digital Antiquity, 2011 <i>Guides to Good Practice</i> Cole, S., 2015 <i>Digital Image Capture and File Storage. Guidelines for Best Practice</i> .

	English Heritage, 2015 <i>Digital Image Capture and File Storage</i> Historic England, 2019 <i>Guidance for Databases and Spreadsheets</i> . Archaeological Digital Archiving Protocol (ADAPt) Historic England, 2019 <i>Image Capture Standards</i> . Archaeological Digital Archiving Protocol (ADAPt)																																																		
<b>Created Data</b>	<p>This table summarises the data types, formats and estimated archive volume for this project</p> <table border="1"> <thead> <tr> <th>File</th> <th colspan="3">Data Archive Estimated Volume</th> </tr> <tr> <th>Type</th> <th>Format</th> <th>No. of Files</th> <th>No. of Bytes</th> </tr> </thead> <tbody> <tr> <td rowspan="4"><b>Text</b></td> <td>.odt</td> <td>1</td> <td>97,000</td> </tr> <tr> <td>.doc</td> <td>2</td> <td>3,400,000</td> </tr> <tr> <td>.docx</td> <td>1</td> <td>2,000,000</td> </tr> <tr> <td>.pdf</td> <td>2</td> <td>2,000,000</td> </tr> <tr> <td rowspan="2"><b>Spreadsheet</b></td> <td>.xlsx</td> <td>None</td> <td></td> </tr> <tr> <td>.ods</td> <td>1</td> <td>100,000</td> </tr> <tr> <td><b>Raster Image</b></td> <td>.jpg</td> <td>41</td> <td>168,743,986</td> </tr> <tr> <td rowspan="2"><b>Vector Graphic</b></td> <td>.svg</td> <td>3</td> <td>380,000</td> </tr> <tr> <td>.dxf</td> <td>None</td> <td></td> </tr> <tr> <td><b>Photogrammetry</b></td> <td>.obj/.mtl/.jpg</td> <td>None</td> <td></td> </tr> <tr> <td rowspan="2"><b>Geospatial Vector Data</b></td> <td>shp/.shx/.dbf</td> <td>6</td> <td>86,000</td> </tr> <tr> <td>.qgz</td> <td>1</td> <td>405,000</td> </tr> </tbody> </table>	File	Data Archive Estimated Volume			Type	Format	No. of Files	No. of Bytes	<b>Text</b>	.odt	1	97,000	.doc	2	3,400,000	.docx	1	2,000,000	.pdf	2	2,000,000	<b>Spreadsheet</b>	.xlsx	None		.ods	1	100,000	<b>Raster Image</b>	.jpg	41	168,743,986	<b>Vector Graphic</b>	.svg	3	380,000	.dxf	None		<b>Photogrammetry</b>	.obj/.mtl/.jpg	None		<b>Geospatial Vector Data</b>	shp/.shx/.dbf	6	86,000	.qgz	1	405,000
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<b>Data Storage and File Naming System</b>	<p>The working project archive is stored in a dedicated project folder in the 'Projects' partition of JMHS's server. All files will be:</p> <ul style="list-style-type: none"> <li>renamed following JMHS's file naming format, based on ADS standard and including version control, as laid out in JMHS' <i>Archive Guidelines</i></li> <li>organised following JMHS's project folder structure laid out in JMHS' <i>Archive Guidelines</i></li> </ul> <p>All files included in the final project archive will indicate:</p> <ul style="list-style-type: none"> <li>Company's project identifier</li> <li>Repository accession number</li> <li>Site code</li> <li>File descriptor</li> <li>Version number</li> </ul>																																																		
<b>Quality Control</b>	<ul style="list-style-type: none"> <li>All mechanical and electronic equipment used in the collection of data was calibrated prior to use</li> <li>All collected data was checked during project delivery</li> </ul>																																																		

### Section 3 – Documentation and Metadata

<b>Data Documentation</b>	<p>Data documentation will be compliant with the Written Scheme of Investigation and Method Statement For Archaeological Monitoring &amp; Recording, Oxfordshire County Museum Service and ADS requirements and will be provided via:</p> <ul style="list-style-type: none"> <li>Collection-level metadata providing a detailed overview of the collection</li> <li>File-level metadata providing details of each data group and individual files</li> </ul> <p>All data included in the final project archive will be migrated to:</p> <ul style="list-style-type: none"> <li>widely supported international standards</li> <li>most recent format version</li> </ul>	
<b>Metadata</b>	All metadata will be created in compliance with relevant ADS standards	
	Metadata for all files include	File name File format Language Creation/conversion software and version
	Text Metadata for text files include	Title Abstract Name of creator Page count Publishing details
	Metadata for spreadsheet files include	Title Description Name of the creators Copyright holder

		Period of creation Worksheet name Worksheet description Number of rows in each worksheet Field name Description of field contents
	Metadata for raster image files include	Caption Subject keywords Period Terms Period Dates Name of creator Copyright holder details Location Date of the capture of the image
	Metadata for vector graphic files include	Caption Description Conventions used in the illustration Name of the illustrators Copyright holder Period of creation Location
	Metadata for geospatial vector data files include	Description Name of the creator Copyright holder Period of creation Location Scale of data capture Scale of data storage Assessment of data quality Method of data capture Purpose of data creation Coordinate system used Data type Source Hardware Supporting documentation

#### Section 4 – Ethics and Intellectual Property

<b>Legal and Regulatory Framework</b>	Copyright, Designs and Patents Act 1988 Data Protection Act (DPA) 1998 General Data Protection Regulation (UK GDPR) 2019 The Privacy and Electronic Communications (EC Directive) Regulations 2003 Current best practice
<b>Collected Personal Data</b>	Project Team Members <ul style="list-style-type: none"> <li>• Name</li> </ul>
<b>Personal Data Management</b>	Management of personal data will be carried out in compliance with JMHS' Data Protection Policy Statement (available upon request). Written consent to process and share with the repository personal data will be secured for the use specified below: <ul style="list-style-type: none"> <li>• Project Team Members: Names will be included in the project archive</li> </ul> Files containing personal data will be: <ul style="list-style-type: none"> <li>• Securely stored on a server partition with restricted access</li> <li>• Kept only as long as necessary for the relevant, valid purposes</li> </ul>
<b>Intellectual Property Rights (IPR)</b>	<ul style="list-style-type: none"> <li>• Copyright Holder: JMHS is the copyright holder of any collected and created data included in the project archive in all forms of records and media</li> <li>• Permission to Reuse Third-Party Data: formal consent to include, reuse and share data generated by external specialists will be secured</li> <li>• Licence of Copyright: JMHS will grant to the Oxfordshire County Museum Service and ADS perpetual and royalty-free licence throughout the world to:             <ul style="list-style-type: none"> <li>○ reproduce all or any part of the project archive for the purposes of research, study, conservation or publicity relating to the Oxfordshire County Museum Service and ADS</li> <li>○ display copies of all or part of the project archive in any medium</li> <li>○ publish any part of the project archive in any form or medium</li> <li>○ permit third parties to do any of the above</li> </ul> </li> </ul>

#### Section 5 – Storage and Backup

<b>Storage System Details</b>	Long-term preservation of electronic records is ensured by storage on magnetic media on a Synology NAS server
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	<p>device with a storage capacity of 5.4TB</p> <ul style="list-style-type: none"> <li>The device is part of a network based on the client-server model with servers situated in separate geographical locations (JMHS's main office in Wheatley and the Director's office in Launton, Bicester)</li> <li>The system is managed via Lightweight Directory Access Protocol (LDAP)</li> <li>The system is set as a Redundant Array of Independent Disks (RAID) and failover</li> </ul>
<b>Security Copies</b>	<ul style="list-style-type: none"> <li>Back-up of raw digital data generated during fieldwork was provided by secure remote access to JMHS's server</li> <li>Digital copies of the primary records were made immediately on completion of fieldwork and stored on JMHS's server</li> <li>Security copies of all archive records and born-digital files were made in digital format and stored on JMHS's server</li> </ul>
<b>Data Storage and Access</b>	<p>Data storage</p> <ul style="list-style-type: none"> <li>Main and secondary servers are set up to constantly synchronise, effectively creating two copies of each file at any time</li> <li>Two additional copies of all files are created via backups: <ul style="list-style-type: none"> <li>The main server backs up to the Synology C2 Cloud Backup Server daily, starting at 17:30</li> <li>The secondary server backs up to a local drive daily, starting at 17:30</li> </ul> </li> <li>Versioning of files and backups is available for 30 days</li> <li>Multiple recovery methods are used, depending on the nature of the failure</li> </ul> <p>Data access</p> <ul style="list-style-type: none"> <li>JMH's server is accessible through a secure log-in by authorised staff on and off-site, via any web browser</li> <li>Secure access to the server is granted by a two-factor authentication method. Access to server's partitions containing sensitive data is restricted to authorised users through role-based access control</li> </ul>

### Section 6 – Selection and Preservation

<b>Appraisal and Selection of Data</b>	<p>All data generated by all stages of the project is stored on JMHS's server. An appraisal of the digital data will be carried out prior to the completion of the project, in order to select data for long-term curation. The assessment of each dataset's value will be carried out by the Post-Excavation Project Team and will be based on the following criteria:</p> <ul style="list-style-type: none"> <li>Relevance</li> <li>Scientific/Historic value</li> <li>Uniqueness</li> <li>Non-Replicability</li> <li>Potential for redistribution</li> </ul> <p>The selection of data will be agreed with all relevant stakeholders (Project Team Members, Repository, Local Authority,)</p>
<b>Data Reuse</b>	<p>The project did not yield any new research data regarding Roman activity within the area.</p>
<b>Selection Review Points</b>	<p>Data Management Plan and Selection Strategy will be revised in consultation with the relevant stakeholders and updated at the following stages:</p> <ul style="list-style-type: none"> <li>Project Design</li> <li>Project Reporting</li> <li>Archive Preparation</li> </ul> <p>Prior to the transfer, Data Management Plan and Selection Strategy will be finalised in agreement with all stakeholders</p>
<b>Selected Data Preparation</b>	<p>Selected data will be normalised and organised in standardised folders, to guarantee consistency and retrievability, and to prevent data loss.</p> <p>Normalisation will include:</p> <ul style="list-style-type: none"> <li>Format migration to widely supported international standards</li> <li>Version migration to most recent format version</li> <li>File naming normalisation to ADS standards</li> <li>Organisation in the predefined file structure</li> </ul> <p>Metadata compliant with ADS standards will be generated for all selected data</p>
<b>Long-Term Preservation of Selected Data</b>	<ul style="list-style-type: none"> <li>Physical archive: the documentary project archives will be transferred to the Oxfordshire County Museum Service</li> <li>Digital data: selected data will be prepared for long-term curation and transferred to the CoreTrustSeal certified ADS, via ADS-Easy. A further copy of the full digital archive will be maintained on JMHS's servers; additionally, selected digital archives will be made publicly available upon direct request</li> </ul> <p>Contact was made with the Oxfordshire County Museum Service regarding the deposition of the project archive</p>
<b>Long-Term Preservation of Deselected Data</b>	<ul style="list-style-type: none"> <li>Long-term preservation of electronic records will be ensured by storage on magnetic media on a server device. The device is part of a network based on the client-server model, available online and securely accessible remotely via any web browser</li> <li>The digital archives preservation strategy ensures that two copies of all born-digital items as well as digital surrogates of primary records are made available on two different server devices (server and backup) situated in separate locations (JMHS's main office in Wheatley and the Director's office in Launton, Bicester)</li> </ul>

### Section 7 – Data Sharing

<b>Data Accessibility</b>	Final Results will be made available within 12 months from the completion of fieldwork <ul style="list-style-type: none"> <li>Project final results will be made publicly available in digital format via the OASIS Index of Archaeological Investigations</li> </ul> Primary and Digital Data will be made available after the completion of the documentation process <ul style="list-style-type: none"> <li>All selected data will be made available upon direct request for reuse, re-analysis, re-interpretation, and re-publication by secondary researchers</li> </ul>
<b>Intellectual Property</b>	JMHS holds the copyright of any collected and created data included in the project archive in all forms of records and media <ul style="list-style-type: none"> <li>Digital elements of the project archive disseminated via ADS will be licenced under a creative commons licence</li> <li>A data sharing agreement will regulate the access and use of data by secondary researchers as appropriate</li> </ul>
<b>Long-Term Access</b>	Long-term access to data will be granted via deposition with the Oxfordshire County Museum Service and ADS; additionally, selected digital data will be made accessible to the public via JMHS's website or upon direct request

### Section 8 – Responsibilities and Resources

<b>Responsibilities</b>	Fieldwork Team Members	Collection and storage of analogue data sets
	Post-Excavation Team Members	Storage and backup of analogue data sets, creation of digitised and born-digital data sets, data quality, data archiving and metadata production for all data sets
	Oxford Mac Solutions Ltd	Data storage and backup management
	Post-Excavation Manager	Implementation of relevant policies, implementation, review and revision of the DMP, supervision of collection, production, storage, backup and management of all data sets, management of data selection, archiving and metadata production for all data sets, data sharing, project archive transfer
<b>Stakeholders</b>	Project Manager	Gavin Davis, John Moore Heritage Services
	Archive Manager	Simona Denis, John Moore Heritage Services
	Collecting Institutions	Oxfordshire County Museum Service Archaeology Data Service
	County Archaeological Services	Oxfordshire County Archaeological Services
	Project Funder	Waterman Infrastructure & Environment Ltd
	Specialist	N/A
<b>Resources</b>	Resources required to prepare selected data and implement the DMP were covered by standard John Moore Heritage Services resources and project budget; No unusual resources were required in addition to JMHS normal operating equipment and staff. <ul style="list-style-type: none"> <li>Repository charges were estimated using the Oxfordshire County Museum Service charges list and included in the project budget.</li> <li>Digital Repository charges were estimated using the ADS Costing Calculator and included in the project budget</li> </ul>	

### Section 9 – Digital Data Selection Strategy

<b>Data Management Plan</b>	The procedure is outlined in Sections 2, 3 and 6 and in the JMHS POL0010 Digital Archives (available upon request)			
<b>Selected Digital Data</b>	Digital files will be reviewed following the approval of the final report by the Oxfordshire County Archaeological Services and only the most recent versions will be retained. Files will be made available to the public upon request (to admin@jmheritageservices.co.uk) and via deposition with Archaeology Data Service. Security copies of all primary records were made in digital format and stored on the Company's server, together with final versions of all born-digital files. The procedure is outlined in the DMP (in attachment) Section 6 and JMHS POL0010 Digital Archives (available upon request)			
<b>De-Selected Digital Data</b>	The procedure is outlined in Section 6 and in the JMHS POL0010 Digital Archives (available upon request)			
<b>Amendments</b>	Date	Amendment	Rationale	Stakeholders
	01/02/2024	Retention strategy revision	Revision following the completion of the final report	JMHS Archaeology Data Service
	09/02/2024	Retention strategy revision	Revision following the final edit of the final report	JMHS Archaeology Data Service

### Section 10 – Documents Selection Strategy

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<b>Selected Documents</b>	All primary records were selected for inclusion in the final Archaeological Archive			
<b>De-Selected Documents</b>	None			
<b>Amendments</b>	<b>Date</b>	<b>Amendment</b>	<b>Rationale</b>	<b>Stakeholders</b>
	01/02/2024	Retention strategy revision	Revision following the completion of the final report	JMHS Oxfordshire County Museum Service
	09/02/2024	Retention strategy revision	Revision following the final edit of the final report	JMHS Oxfordshire County Museum Service

#### Section 11 – Bulk Finds Selection Strategy

No materials were collected				
<b>Uncollected Materials</b>	Modern fragments of construction aggregate ceramic building material fragments were observed and noted on records, but not collected			
<b>Selected Materials</b>	N/A			
<b>De-Selected Materials</b>	N/A			
<b>Amendments</b>	<b>Date</b>	<b>Amendment</b>	<b>Rationale</b>	<b>Stakeholders</b>
	01/02/2024	Retention strategy revision	Revision following the completion of the final report	JMHS Oxfordshire County Museum Service Oxfordshire County Archaeological Services
	09/02/2024	Retention strategy revision	Revision following the final edit of the final report	JMHS Oxfordshire County Museum Service Oxfordshire County Archaeological Services

#### Section 12 – Environmental Remains Selection Strategy

<b>Selected Materials</b>	No environmental samples were collected			
<b>De-Selected Materials</b>	N/A			
<b>Amendments</b>	<b>Date</b>	<b>Amendment</b>	<b>Rationale</b>	<b>Stakeholders</b>
	01/02/2024	Retention strategy revision	Revision following the completion of the final report	JMHS Oxfordshire County Museum Service Oxfordshire County Archaeological Services

# OASIS Summary for johnmoor1-522438

OASIS ID (UID)	johnmoor1-522438
Project Name	Bat Barn, Graven Hill, Bicester
Sitename	Bat Barn, Graven Hill, Bicester
Sitecode	AMGH 24
Project Identifier(s)	AMGH 24, 5038, OXCMS:2021.117
Activity type	Watching Brief
Planning Id	22/00835/F
Reason For Investigation	Planning requirement
Organisation Responsible for work	John Moore Heritage Services
Project Dates	22-Jan-2024 - 25-Jan-2024
Location	Bat Barn, Graven Hill, Bicester NGR : SP 59475 19574 LL : 51.8715772177667, -1.137548997085146 12 Fig : 459475,219574
Administrative Areas	Country : England County/Local Authority : Oxfordshire Local Authority District : Cherwell Parish : Ambrosden
Project Methodology	<p>The footings for the bat barn were excavated with a 360° excavator and a toothless ditching bucket under the supervision of an archaeologist. Where archaeological horizons were encountered they were cleaned by hand and excavated appropriately. Standard John Moore Heritage Services techniques were employed throughout, involving the completion of a written record for each deposit encountered, with scale plans and section drawings compiled where appropriate. A photographic record was also produced.</p> <p>The resultant spoil from the works was visually scanned, especially for finds relating to the Roman period.</p>
Project Results	The development site was located in an area of known archaeological interest and as part of the aims of the investigation to be aware of Roman remains. Despite this no archaeological features, deposits or artefactual finds were observed during the monitored works.
Keywords	
Funder	Utilities and infrastructure Waterman Infrastructure & Environment Ltd
HER	Oxfordshire HER - unRev - STANDARD
Person Responsible for work	J Moore
HER Identifiers	
Archives	Documentary Archive - to be deposited with Oxfordshire Museums Service; Digital Archive - to be deposited with Archaeology Data Service Archive;