



Archaeological Investigations at Long Meg Stone Circle

Project Design and Written Scheme of Investigation
for a Community Archaeology Excavation

Nat Jackson, Paul Frodsham and Jodie Hannis

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Project Design and Written Scheme of Investigation

Prepared on behalf of:
Fellfoot Forward Landscape Partnership Scheme

Compiled by:
Nat Jackson, Paul Frodsham, and Jodie Hannis

DigVentures

Witham Studios #5
Hall Street
Barnard Castle
County Durham
DL12 8JB

hello@digventures.com
0333 011 3990
@thedigventurers



Purpose of document

This document has been prepared as a Project Design for the community excavation project at Long Meg Stone Circle on behalf of the Fellfoot Forward Landscape Partnership Scheme. The purpose of this document is to provide an outline of planned fieldwork, aims and objectives of the work, and methodology to be employed.

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Project summary

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Approval:	Brendon Wilkins MCIfA FSA

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Acknowledgements

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Executive summary

This document is submitted in support of a research project at Long Meg Stone Circle, carried out by DigVentures. The project fieldwork will take place between 22nd and 31st October 2022 and will comprise a community-based archaeological investigation at Long Meg Stone Circle (List Entry no. 1007866; Monument no. 23663; Cumbria HER no. 6154). The proposed work is funded by the North Pennines AONB Partnership's Fellfoot Forward landscape partnership scheme, through Cumbria County Council and the National Lottery Heritage Fund and will take place as outlined in this document and as agreed with scheduled monument consent. On this basis a MORPHE/PRINCE2 compliant document has been produced outlining key archaeological research questions, roles, procedures, stages and outputs.

The overarching aim of this fieldwork is to provide baseline information to contribute to the future management, research and presentation of the site, creating multiple educational and participatory learning experiences for community participants. This will be achieved through a community-based archaeological research project designed to understand:

- The nature of past activity within the stone circle
- The relationship between the stone circle and the possibility of a bank within which the stones appear to be set in places, and also an outer ring ditch to determine whether the site has hengiform characteristics.
- The possibility of an empty stone socket which may yield artefacts or material to date the origin of the site.

The results of topographical and geophysical surveys, and previous small-scale excavations carried out by Altogether Archaeology in partnership with Archaeological Services Durham University between 2013 and 2015 have been utilised to inform this project design (ASDU 2013, 2016). That work has recently been presented and discussed in a wide-ranging paper about Long Meg by Paul Frodsham (2021).

This Project Design provides an outline of methodology and planned intervention to complete:

Targeted excavation Two trenches will be opened to investigate potential features which may give answers to the aims specified above. Trench 1 (3m x 6m) will be located in the centre of the stone circle to investigate linear features identified by geophysical survey that may be related to structures or activity within Long Meg. Trench 2 (4m x 12m with a 2m x 10m extension) will be 'T' shaped and investigate two fallen stones and an area where there is a potentially missing stone; it will also extend outside the circle to explore the possibility of an outer ring ditch and bank.

Public engagement The project is supported by a comprehensive learning, engagement and activity plan. An innovative digital recording system will be used to enable volunteers to record and publish on smartphones or tablets in the field; specifically developed learning materials will be used to deliver schools sessions, with a dedicated project website, underpinned by a digital and audience building strategy, aiming to triple the engagement and participation numbers outlined in the project brief.

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Part 1: Description of the project

1 INTRODUCTION

1.1 The project

1.1.1 DigVentures was invited by Fellfoot Forward Landscape Partnership Scheme to organise and lead an archaeological community project at Long Meg Stone Circle (NGR: NY 53245 51947; Figure 1). The principle aim of the proposed project will be to assess the nature of the stone circle, investigate a possible stone socket with the hope to find material to date the site, investigate an area just outside of the circle to determine whether there was ever an external ditch and bank present (as suggested by geophysics), and to investigate a number of linear anomalies within the stone circle to determine whether or not these represent internal structures. The project sits within the Fellfoot Forward project *Uncovering the Past* which has involved building three community-researched Village Atlases, an ongoing oral history project, geophysical survey and a community excavation at Carlatton Cairn.

1.1.2 Nine days of community-focused archaeological investigations focussed at the Long Meg stone circle are planned as part of this project and will be delivered in October 2022. This Project Design sets out the strategy and methodology by which DigVentures will implement the archaeological investigation at Long Meg stone circle between 21st and 31st October 2022, consisting of archaeological excavation. In format and content, it conforms with current best practice and to the guidance outlined by the Chartered Institute for Archaeologists' Standards and Guidance for Archaeological Field Evaluation (2014).

1.2 Fellfoot Forward Landscape Partnership Scheme

1.2.1 The Fellfoot Forward Landscape Partnership Scheme developed with local communities and organisations led by the North Pennines AONB Partnership, is a major scheme to conserve, enhance and celebrate the natural and cultural heritage of a special part of the North West of England. In 2020 the scheme was awarded funding from the National Lottery Heritage Fund.

1.2.2 The work is intended to forge creative connections between people and the landscape, conserve habitats and key species and celebrate this beautiful area with its communities. The projects will involve citizen science; community archaeology; woodland creation and management; protecting grassland and meadows; restoring peat; conserving historic buildings; new and revitalised walking, cycling and riding routes; enhanced interpretation and information for the local community and visitors; opportunities for local schools and youth groups to engage with their local heritage; and a host of public events and learning.

1.2.3 It is intended that the scheme will provide a huge boost for the area, allowing greater access to restored heritage sites and promoting a deep understanding of the Fellfoot landscape's special cultural history. Working with partners and local communities, the ultimate aim is to strengthen the visitor economy, providing a better future for residents and businesses.

2 LONG MEG STONE CIRCLE: BACKGROUND

2.1 Site location and geology

- 2.1.1 Long Meg stone circle is located at Little Salkeld, Hunsonby, approximately 9km northeast of Penrith, Cumbria (NGR: NY 57110 37210; Figure 1). A road cuts through the site, splitting it into a larger western side and smaller eastern side, and both the stone circle field and adjacent field to the north are pasture. The stone circle is part of a scheduled monument: 'Long Meg and Her Daughters stone circle, associated cursus and prehistoric enclosure' (List Entry no. 1007866; Monument no. 23663; Cumbria HER no. 6154). The stone circle occupies a very gentle north-east-facing slope at the head of a small valley that heads north-west to join the River Eden near Lacy's Caves. The ditched enclosure immediately north of the circle encloses the head of this valley. The northern field is predominantly level in the east but steepens in the west, down to the springs and the farm buildings.
- 2.1.2 The site geology consists of Devensian glaciofluvial superficial deposits of sands and gravels formed during the Quaternary period (116 – 11.8 thousand years ago). The sedimentary bedrock on site is St Bees sandstone formed during the Triassic period (252.2 to 247.1 million years ago) (British Geological Survey, 2022).

2.2 Historic background

- 2.2.1 A description of the Long Meg complex in the light of recent fieldwork, and a history of past work here, are presented in a recent paper by Paul Frodsham (2021). The huge stone circle, the third largest in England and fifth largest in the British Isles, measures c.110 by 93 metres. The original number of stones is not known, and it is hard to be sure about the current number given that some are broken and partly buried, but recent analysis suggests a total of 68 surviving stones in the circle, of which 26 are still standing, plus Long Meg herself standing some 20 metres outside the circle's possible south-west entrance. The entrance is framed by two outlying 'portal stones'. Long Meg is of local red sandstone, presumably quarried from the nearby river cliffs.
- 2.2.2 Within the circle, some of the extremely large stones may mark significant points around the circumference, for example perhaps in relation to sunrise or sunset at particular times of year. The largest stone is a huge block in the south-south-west, about 3.3 metres wide and weighing some 28 tons; it has been estimated that it would have taken 120 people to set it up. Two similarly massive boulders are located at opposite each other in the circle's east and west arcs.
- 2.2.3 In some places, notably on the western side, it appears that the stones are set within a low bank. If original, this is an interesting architectural feature that may suggest links with henge monuments elsewhere, but it may be a result of ploughing in more recent times.
- 2.2.4 Long Meg stands 3.8 metres above the turf, and weighs c.9 tonnes. She has incised spirals and concentric circles on her east face, and may have been quarried from an already decorated river cliff. Other motifs have been recorded on some of the circle stones, but given the rough, eroded nature of the volcanic rock surface, it is not known for certain whether these are artificial or natural.

- 2.2.5 The stones of the circle appear to be rhyolite (a form of granite) and are usually assumed to have been deposited in the general area when the glaciers melted at the end of the Ice Age. There appears to be some variation in the geological structure of the boulders, for example some contain much more quartz than others. Those with large amounts of quartz may be located at significant places around the circle.
- 2.2.6 The great enclosure, of which there appears virtually no sign on the ground, lies immediately north of the circle and measures 210 metres north-south by 200 metres east-west. Much of the interior is now taken up by Long Meg Farm, and no ancient features are visible within it. The 2015 excavation results suggest the enclosure to be substantially earlier (perhaps by a thousand years) than the stone circle, though the two may have been use simultaneously for a while as there appears to be a 'passageway' between them in the north-west of the circle/south-west of the enclosure. A possible cursus has been recorded from air photographs running 600 metres from the entrance of the stone circle westwards towards the cliffs above the east bank of the Eden. This is certainly not a cursus but could be a linear ditch of Neolithic date (Frodsham 2018).
- 2.2.7 The whole complex sits on a wide sandstone terrace above the east bank of the Eden. The general location is probably of significance, and may have been so before the monument was constructed. Some of this significance may relate to the nearby red sandstone river cliffs and rapids, possibly marking the highest navigable point on the Eden. The possible local exploitation of gypsum (apparently used to great effect within the great henges at Thornborough in North Yorkshire) may also be significant.
- 2.2.8 Topographic and geophysical surveys (Archaeological Services 2013) recorded features of potential significance, including confirmation of presence of the enclosure ditch which appears better preserved in some places than in others. Unsurprisingly, the survey was not able to establish the relationship between the stone circle and enclosure. The topographic and resistance surveys support the observation that the stones of the circle may have been set within a bank; if so then this is a feature with a range of implications regarding the original design and links with other sites elsewhere.
- 2.2.9 The geophysical surveys have suggested the possible presence of features within the stone circle and enclosure, and elsewhere within the complex, but the nature, condition and chronology of these cannot be determined without excavation. A key question remains the extent to which the Neolithic ground surface remains undisturbed throughout the complex; this has major implications for future site management, including possible future research.

2.3 Previous archaeological excavations

- 2.3.1 Small-scale excavations at Long Meg were carried out in 2015 by a partnership between Altogether Archaeology and Archaeological Services Durham University (ASDU 2015; Frodsham 2021). These investigated the relationship between the stone circle and the enclosure to the north. They consisted of three trenches located in and around the north of the stone circle and the enclosure ditch, and were followed by comprehensive post-excavation analysis of the pottery, lithics and palaeoenvironmental remains. The excavations revealed the enclosure ditch in all three trenches, along with various pits, post holes and stake holes. Dating was carried

out on a number of features, as a result of which it was suggested that the enclosure dates originally to about 4,000 cal BC and the stone circle to about 3000 cal BC. The results demonstrate beyond doubt the great potential value of well-planned, carefully-targeted, small-scale excavation projects undertaken by volunteers at sites such as Long Meg.

- 2.3.2 A site visit was undertaken by DigVentures in June 2022 to evaluate the potential of the site and support the development of this project design. In addition, an area of magnetometry survey was undertaken to provide more detailed geophysical data in the eastern part of the site. The results of this work will be forthcoming and included in the reporting of this project.

3 RESEARCH AIMS AND OBJECTIVES

3.1 Research frameworks

- 3.1.1 The proposed work has been planned to address priorities set out in the North-West Regional Research Framework, and in a document produced for Historic England in 2017 outlining specific research priorities for Long Meg (Frodsham 2017).

- 3.1.2 The prehistory section of the original North-West Research Framework (Hodgson and Brennand 2007, 43-44) notes that:

The complete lack of modern excavation on the larger stone circle sites leaves open questions of chronology, constructional techniques, function and re-use. Although many of the major megalithic monuments in the region have been partly excavated by antiquarian or later researchers, new information could still be derived using modern excavation techniques.

- 3.1.3 And that:

....past excavation at the larger 'open' stone circle sites has not always proved productive. Targeted small-scale excavation may elucidate chronological aspects of activity but, short of excavating beneath the circle stones, absolute construction dates are unlikely to be forthcoming. This said, the sequence of activity within stone circle sites may span a considerable length of time, and excavation of internal features may identify activity from the Middle Neolithic into the Bronze Age, and shed considerable light on prehistoric monument use and reuse.

- 3.1.4 It includes the following research initiative, that is repeated within the revised (online) Research Framework, under Research Question PH42:

The closer characterisation and clarification of sequences of individual sites and wider monumental complexes is imperative in order to bring understanding of such features in line with other areas of the British Isles. Such programmes should be undertaken using detailed archival research and air photo transcription alongside targeted field survey, geophysical survey and small-scale excavation.

- 3.1.5 With specific regard to Long Meg's Daughters, the draft Long Meg research document (Frodsham 2017, 5) notes that:

We know that some stones of the circle are now missing – Stukeley notes that some were blown up, which may account for Camden having recorded 77 stones whereas there are now 69. Attempts should be made, perhaps using high resolution geophysical survey, to locate the sockets of these lost stones, which could then be excavated in the attempt to obtain further dates to go with the one from the socket stone excavated in 2015. The sockets of some fallen stones could similarly be excavated, possibly followed by re-erection of the stones. The 2015 excavations (trench 1) recorded a well-preserved post-hole along with a second post-hole or pit within the stone circle. This suggests that many more features, possibly representing a large number of upright posts, could survive throughout the site. The only way to find these will probably be through excavation.

3.2 Project model

- 3.2.1 The overarching aim of the archaeological excavation is to build on the results of the 2015 excavations by defining and characterising several identified features through a programme of intrusive excavations, obtaining data which will enable improved characterisation and understanding of the site. The work will include examination of a short section of the stone circle's perimeter almost directly opposite the main 2015 trench, enabling comparisons to be made between the two areas that may suggest important conclusions regarding the entire perimeter. This will be a structured community volunteer assisted project, providing a range of physical and digital opportunities to participate and/or watch findings. The project model is framed as overarching aims and key questions/objectives that provide a framework for the methods, stages, products and tasks set out in Section 5 and Appendices 1 and 2.

3.3 Aim 1 – Investigate the nature of activity that may have been happening within the stone circle

- 3.3.1 A series of linear anomalies have been identified through previous magnetometry and resistivity surveys carried out by Archaeological Services Durham University. Additional remote sensing and targeted trenching will address the following questions:

- Q1: What is the landscape setting of the stone circle and its environs?
- Q2: Can the nature of the linear features be established?
- Q3: Can a chronological sequence and stratigraphic phasing for activity within the stone circle be identified?
- Q4: Is there any evidence for multi-period activity within the site?

3.4 Aim 2 – Investigate the relationship between the stone circle, and a possible ring-bank and outer ring ditch.

- 3.4.1 It is currently unknown whether Long Meg stone circle had a surrounding ditch. Through intrusive investigation, examine the relationship of the stone circle with associated features, including a possible ring ditch and bank into which the stones seem to have been set in several places. In addition, the fieldwork will explore the possibility of an outer ring ditch (and possible bank) in order to determine whether the site's morphology has hengiform characteristics. This aim is hoping to gain a resolution through the following questions;

- Q5: Is the suggested interpretation of the geophysics correct when identifying an anomaly outside the stone circle as a surrounding ditch; if so, how does this feature relate to the stone circle and does it have an associated bank.
- Q6: Can dating evidence be gained through excavation?

3.5 Aim 3 – Investigate the possibility of stone sockets or other features yielding material relating to the chronology of the site

- Q7: Are there any empty stone sockets present in the gap between the stones along the southern side of the circle, and/or are the sockets of fallen stones 60 and 61 accessible for excavation?
- Q8: If there are no empty stone sockets, was this an original 'gap' in the stone circle? If so, what might this tell us about the structure of the site?

3.6 Aim 4 - Understand the site's archaeological and palaeoenvironmental conditions

3.6.1 This aim will be achieved with the assessment and analysis of archaeological samples as defined and recovered in Aim 2, using appropriate palaeoenvironmental, geoarchaeological and archaeological techniques to establish preservation and significance.

- Q9: What is the current state of the archaeological and palaeoenvironmental material across the site?
- Q10: How well do deposits and artefacts survive, and how deeply are they buried?
- Q11: Can the palaeoenvironmental data recovered from sampling in the trenches inform us about cultural activities that may have taken place at the site?
- Q12: What is the range and spatial patterning of artefacts recovered from the archaeological features?
- Q13: Can we increase our understanding of the local environment during the effective lifetime of the site?
- Q14: Can we establish a scientifically dated sequence for the site, including both cultural activities and landscape development?

3.7 Aim 5 - Making recommendations, analysis and publication

3.7.1 This aim will require all data from Aims 1 and 2 to be collated, with an integrated analysis of the archaeological and palaeoenvironmental resource at the site, making recommendations to conserve, enhance and interpret the heritage significance of the site.

- Q15: What can an integrated synthesis of the results of this work with previous studies of Long Meg and other contemporary regional sites tell us about the site and its setting?

- Q16: Considering evidence recovered from this and previous work, can we articulate the multi-phased use of the site and its immediate environs?
- Q17: Can we formulate recommendations for further archaeological and palaeoenvironmental analysis at the Site based on Aims 1-4, and implement a programme to publish and disseminate the results or continue fieldwork into additional seasons?

3.8 Aim 6 – Public engagement and communication

3.8.1 This aim is integral to the success of the project and sits with equal importance alongside our research aims. The excavation will involve participation from volunteers, who will be trained and mentored in the techniques of archaeological excavation. Our site team will deliver an in-person programme at a ratio of 1:3 throughout the dig, with online social media updates to engage and inform the public about the archaeological discoveries. In summary, the project will offer a range of opportunities for local community members and visitors to the area to get involved and learn more about the archaeology of Long Meg stone circle and the Fellfoot landscape.

3.8.2 Over the course of the excavation, our targets for engagement would be to:

- train a minimum of 20 community volunteers in excavation and post excavation tasks
- broadcast online content across multiple social media channels
- host an online site tour and Q&A session with the project team, to be released after the dig has closed, reaching an expected 120 individuals and a global online community.

4 PEOPLE AND COMMUNICATIONS

4.1 Project Team

4.1.1 The following section details specific staff responsibilities, drawing on terminology devised by Historic England for the MoRPHE project management framework (see Section 8.1). The project will be overseen by the Fellfoot Forward Project Team.

4.1.2 Project Assurance will be undertaken by the Project Executive (Lisa Westcott Wilkins, DigVentures) who will monitor compliance against the deliverables detailed in this document.

4.1.3 The project team have all worked closely together over a number of research projects, including Leiston Abbey (2013-2016), Lindisfarne (a joint project with the University of Durham, 2016 - ongoing) and Barrowed Time (community investigation of a Bronze Age hoard site, 2016). There will be four core DigVentures archaeological and community archaeology fieldwork staff on site throughout the fieldwork. Jodie Hannis (Programme Officer - North) will undertake off-site day-to-day management of the project, with Nat Jackson (Project Officer) as Site Director for the excavations, as well as from Harriet Tatton and Maggie Eno, our Community Archaeologists. Maiya Pina-Dacier (Head of Community) will liaise with and coordinate volunteers and visitors to

the site alongside help from Ginny Cole. Core staff will remain consistent and retained throughout the post-excavation phase of the project. All core staff are employed in line with ClfA guidelines, and are practicing field archaeologists at PCIfA level or above. Senior project staff are both Members of ClfA in good standing.

- 4.1.4 Paul Frodsham has been brought into the Project Team on a consultancy basis to provide specialist advice regarding Long Meg. His experience designing and directing the Altogether Archaeology/Durham University survey (2013) and excavation (2015) projects is of particular value. He has also directed numerous other fieldwork projects, most of which have involved volunteers.

4.2 Project management

- 4.2.1 The Project Manager will regular reports for the Fellfoot Forward Project Team throughout the community excavation up to the review of the Assessment Report/UPD. This will present an overview of progress, list tasks completed or part completed, including any on-going work and issues affecting progress. The Project Manager will also be responsible for ensuring that the project runs to schedule, keeping track of key resources. The Project Team will have a project meeting at each milestone described to ensure that all major tasks are briefed/debriefed as necessary. Provision will be made for the project in 'Basecamp', which is a web-based project communication package used by DigVentures, enabling project participants to generate and record notes, tasks, milestones, and other project-related communication.
- 4.2.2 Projects are undertaken under the direction of Brendon Wilkins (Co CEO, DigVentures) who is responsible for the successful completion of all aspects of the project. All work is monitored and checked whilst in progress on a regular basis, and the Chief Operating Officer reviews all reports and other documents before being issued. A series of guideline documents or manuals form the basis for all work.
- 4.2.3 The senior management team are accredited members of the Chartered Institute for Archaeologists. DigVentures is an ClfA Registered Organisation (No. 102), and fully endorses the Code of Conduct and the Standards and of the Institute. All DigVentures staff are employed in line with the Institute's codes and will usually be members of the Institute.

4.3 Outreach and engagement

- 4.3.1 Running alongside the community excavation, DigVentures will include a dedicated educational and events programme designed to increase local awareness of the Fellfoot Forward landscape's archaeology and heritage, and amplify this with a coordinated digital and social media strategy. Our engagement strategy is flexible and adaptive; should we need to pivot our engagement to virtual only audience, we are able to do so. Our proposed activity programme will include:
 - **Skills training for volunteers**, to support project participants in the co-production of the archaeological archive. This includes our robust field school curriculum, with structured training for volunteers to join the team and get hands-on with the archaeology, looking at the materials recovered alongside expert archaeologists.

- **Public engagement activities** will be framed by online posts which tell the tale of the site and the project. During the excavation, the site team will provide real time updates on the dig, with a video diary which will be collated and released as part of the site tour after the excavation has closed.
- 4.3.2 The impact of this outreach work will be measured with a quantitative and qualitative evaluation of all participants to establish baseline audience awareness data and assist with future management strategies and promotion.
- 4.4 **Dissemination and reporting**
- 4.4.1 Rapid dissemination of the results will take place through multiple channels, addressing a multitude of established and new audiences. Dissemination outlined below will all be undertaken during 2022, and will include, but not be limited to:
- Daily news updates and all major DigVentures and Fellfoot Forward social media channels (Facebook, Twitter and Instagram) amplified through third-party coverage by the networked blogging community (being mindful of the sensitive location of the excavation).
 - Dedicated digital archive of the excavation data.
 - Wide circulation of the project assessment and the final report, and links to the OASIS record.
 - Site publication in an appropriate local/national journal commensurate with the final results.
 - Wide circulation of Assessment and Final Report, Updated Project Design and links to the OASIS record: Oasis ID: digventu1-507237.
 - Final site publication in an appropriate local/national journal commensurate with the final results.
- 4.4.2 In addition to the evaluation of the project, several products will underpin the longer-term impact of the excavation. Our technical report will provide detailed analysis of the archaeological site and finds, with specialist reporting, scientific analysis and interpretation linking directly to the evidence presented online (such as 3D models, context descriptions and finds profiles). The online archive, including both the microsite and Digital Dig Team will be maintained for five years beyond the close of the excavation, and a stable and comprehensive archive will be prepared and deposited with the appropriate body.
- **Technical report** – a post excavation assessment will be produced in line with the ClfA Standards and guidance, to include an illustrated and detailed assessment of the archaeology recorded and recommendations for further work. The archive report will be submitted to the HER and the final version made available via the DigVentures website, and will be attached to the OASIS record of the site.
 - **Research archive** – the project will result in the co-production of an accessible and usable research archive. In addition to the online report, a stable and comprehensive archive will be prepared and deposited with the appropriate

bodies, including the Cumbria County Council and Cumbria HER and, where appropriate, a digital archive deposited with ADS.

- **Evaluation data** – included within the technical reporting, our ongoing evaluation of participants and visitors will provide the data for feedback around of what was delivered, who took part and how they benefitted. The report will present qualitative and quantitative data collected from dig participants and public visitors to the site, linked to our Theory of Change.

4.5 Project archive

- 4.5.1 The project archive will be prepared in accordance with the Tullie House Museum Archaeological Archive Deposition Policy and in line with DigVentures guidelines for Archive Preparation, following Appendix 1, P1 of MoRPHE PPN 3 (English Heritage 2011), fulfilling the Guidelines for the preparation of excavation archives for long term storage (UKIC 1990). All reports produced by the project will be openly and freely disseminated through the regional HER and attached to the OASIS record of the site. Copyright on all reports submitted will reside with DigVentures, although a third party in-perpetuity license will automatically be given for reproduction of the works by the originator, subject to agreement in writing with Historic England.

5 PROJECT REVIEW

- 5.1.1 The project will be continually reviewed by the Project Executive and Project Manager, with a formal review undertaken at the end of each Stage as follows:

Stage	Description	Review Point	Completion Date
Initiation	Consideration of Project Proposal (submitted for competitive tender)	RV1 – Assemble Project Team and liaise with stakeholders	Completed
Stage 1	Project Start-up, finalising Project Design and Method Statement and definition of scope, RAMS	RV2 – Sign-off on MoRPHE Project Design, and liaison with stakeholders and landowners	End September 2022
Stage 2	Archaeological Excavation / Field School	RV3 – assemble site archive and distribute pertinent data to specialists	October 2022
Stage 3	Other public engagement & talks	RV4 – Post-Ex blog, Virtual talk	Autumn 2022
Stage 4	Assessment, analysis, reporting and archive	RV5 – critically review findings, making recommendations for further work or closure, final publication sign off, archive deposition	Spring 2023

Table 1: Project review stages

6 HEALTH AND SAFETY



- 6.1.1 DigVentures will undertake the works in accordance with Health and Safety requirements and a Health and Safety Plan. This document will take account of any design information pertaining to above and below ground hazards. DigVentures will ensure that all work is carried out in accordance with its company Health and Safety Policy, to standards defined in *The Health and Safety at Work etc. Act 1974*, and *The Management of Health and Safety Regulations 1992*, and in accordance with the SCAUM (Standing Conference of Archaeological Unit Managers) health and safety manual *Health and Safety in Field Archaeology* (1996).

Part 2: Resources and programming

7 PROJECT TEAM STRUCTURE

7.1 Team and responsibilities

Name	Initials	Project Role	Key Responsibility
Lisa Westcott-Wilkins	LWW	Project Executive	Overall project responsibility, assistance with the below activities
Brendon Wilkins	BW	Projects Director	Project oversight and assurance.
Manda Forster	MF	Operations	Operations and budget responsibility, project assurance
Kimberley Teale	KT	Programme Manager	Archaeological co-direction (off-site), coordinating and carrying out geophysical survey
Jodie Hannis	JH	Programme Officer	Liaison with project team, partners and Stakeholders
Nat Jackson	NJ	Site Director	Archaeological co-direction (on and off-site), liaison with project team
Harriet Tatton	HT	Community Archaeologist	On-site field-work, and responsible for field school
Maggie Eno	ME	Community Archaeologist	On-site field-work, and responsible for field school, videography
Maiya Pina-Dacier	MPD	Community Manager	Community engagement and programme management
Paul Frodsham	PF	Project expert	Specialist input re Long Meg, on-site support, and lead on public talks and tours

Table 2: Team and responsibilities

8 METHODOLOGY

8.1 Introduction

- 8.1.1 The methods reflect the project Stages set out in Section 7 and a task list, with allocation of staff time and team members, along with a GANTT chart setting out a provisional programme. Detailed method statements relating the specific techniques or approaches included below can be found in Appendix 1 at the end of this document.

8.2 Stage 1 – Project Start-Up and Design

- 8.2.1 A site visit was conducted with the FFF project team in June 2022 to discuss logistics and project specific details. Following this, the Project Design and Method Statement has been designed and written and put through critical review.

- 8.2.2 A RAMS has also been produced following the site visit, taking into account the hazards observed on site at the time of the visit and those perceived to be a potential issue during the excavations.

8.3 Stage 2 – Archaeological Excavation / Field School

- 8.3.1 The fieldwork – scheduled from 21st to 31st October 2022 will comprise the first fieldwork stage required to meet Aims 1 to 4 and will entail targeted trenching across the site, with a total of six trenches laid out, comprising of four main and two contingencies (see [Figure 2](#)). It will aim to answer the following research questions:

- Q1: What is the landscape setting of the stone circle and its environs?
- Q2: Can the nature of the linear features be established?
- Q3: Can a chronological sequence and stratigraphic phasing for activity within the stone circle be identified?
- Q4: Is there any evidence for multi-period activity within the site?
- Q5: Is the suggested interpretation of the geophysics correct when identifying an anomaly outside the stone circle as a surrounding ditch; if so, how does this feature relate to the stone circle and does it have an associated bank.
- Q6: Can dating evidence be gained through excavation?
- Q7: Are there any empty stone sockets present in the gap between the stones along the southern side of the circle, and/or are the sockets of fallen stones 60 and 61 accessible for excavation?
- Q8: If there are no empty stone sockets, was this an original 'gap' in the stone circle? If so, what might this tell us about the structure of the site?
- Q9: What is the current state of the archaeological and palaeoenvironmental material across the site?
- Q10: How well do deposits and artefacts survive, and how deeply are they buried?
- Q11: Can the palaeoenvironmental data recovered from sampling in the trenches inform us about cultural activities that may have taken place at the site?
- Q12: What is the range and spatial patterning of artefacts recovered from the archaeological features?
- Q13: Can we increase our understanding of the local environment during the effective lifetime of the site?
- Q14: Can we establish a scientifically dated sequence for the site, including both cultural activities and landscape development?

- 8.3.2 For the targeted excavation, two trenches will be opened to investigate areas which may give answers to the aims specified above.

- Trench 1 (3m x 6m) will be located to the south of the centre of the stone circle. It will investigate a series of linear anomalies identified through previous geophysical work carried out by Archaeological Services Durham University. These anomalies may be associated with structures internal to the stone circle and could help characterise the nature of activities which may have taken place on the site.
- Trench 2 (4m x 12m, with 2m x 10m extension) will be T shaped and located at the south of the stone circle, encompassing two stones, 60 and 61, and extending away from the stones. It will investigate an area where there is two fallen stones and an area where there is a potential missing stone, with the aim to identify if stone sockets are present, and if so, if there is any material which may be suitable

to date the construction of the monument. The 2m x 10m arm of the trench will extend to the southwest and will target an area where an outer ringditch and bank may be present, this could further our interpretation of the site as a stone circle and potential henge monument.

8.3.3 A Project Design (this document) has been prepared (Review Point 2).

8.4 Stage 3 - Public engagement & talks

8.4.1 Over the course of the excavation, our targets for engagement would be to:

- train a minimum of 20 community volunteers in excavation and post excavation tasks
- broadcast online content across multiple social media channels
- host an online site tour and Q&A session with the project team, to be released after the dig has closed, reaching an expected 120 individuals and a global online community.

8.5 Stage 4 – Assessment, analysis, reporting and archive

8.5.1 This Stage will address Aim 5, culminating in Review Point 4, and focusing on answering the following research questions:

- Q15: What can an integrated synthesis of the results of this work with previous studies of contemporary regional sites tell us about the site and its setting?
- Q16: Considering evidence recovered from this and previous work, can we articulate the multi-phased use of the site and its immediate environs?
- Q17: Can we formulate recommendations for further archaeological and palaeoenvironmental analysis at the Site based on Aims 1-4, and implement a programme to publish and disseminate the results or continue fieldwork?

9 STAGES, PRODUCTS AND TASKS

9.1 Methodological Linkages

9.1.1 Following an assessment of the scope of works (as detailed in Section 7 of the Project Brief), it is anticipated that the project will be undertaken in four stages. These are set out in the table below and are set against the project aims and questions that will be met at each stage, the products that will be produced and the tasks undertaken.

Stage	Description	Project Aims/ Questions	Products	Task & ID Number
Stage 1	Project Start-up and Design	Aim 1-6 Q1-16	1. Permissions	1. Consult with wider project team and stakeholders to define milestones and delivery timetable.

Stage	Description	Project Aims/ Questions	Products	Task & ID Number
			2. Finalised PD & Risk Log 3. Educational Plan 4. Digital Communication Plan 5. Risk Assessment	
Stage 2	Archaeological Fieldwork	Aim 1 Q1-4 Aim 2 Q5-6 Aim 3 Q7-8 Aim 4 Q9-14	6. Field Archive 7. Survey Archive 8. 3D Survey Archive	2. Site Preparation 3. Fieldwork (excavation) 4. RV3 – assemble site archive & distribute to specialists
Stage 3	Public engagement and communication	Aim 6	9. Blog posts 10. Online talks	5. Publish on social media 6. RV4 - Host online event
Stage 4	Assessment Report & Recommendations	Aim 5 Q15-17	11. Stratigraphic & Assessment Report	7. Specialist finds and palaeoenvironmental assessments 8. Integrated assessment report 9. RV5 – recommendations for further work

10 OWNERSHIP

10.1.1 The Copyright on all reports submitted will reside with DigVentures and NYMNPA, although a third party in-perpetuity licence will automatically be given for

reproduction of all products, subject to agreement with the NYMNPA. The original copyright holder will retain copyright in pre-existing data.

11 RISK LOG

Risk number	1	2	3	4
Description	Inclement weather - prolonged periods of rain	Exceptional weather (drying exposed archaeology)	Absence of core team member	Absence of specialist team member
Probability	Medium	Medium-low	Low	Low
Impact	Delay programme of work	Slow progress	Delay programme of work	Delay programme of work
Countermeasures	Provision of site hut, and planned indoor archiving tasks with flexible programme	Provision of water bowser + spray	Reallocate responsibilities or appointment of alternative	Reallocate responsibilities or appointment of alternative
Estimated time/cost	3 Days	None	Minimal if done by adjustment	Minimal if done by adjustment
Owner	MF/NJ	MF/NJ	MF/KT/NJ	MF/KT/NJ
Risk number	5	6	7	
Description	Equipment theft/breakages	Serious site injury	Risk of COVID	
Probability	Medium	Medium	Medium	
Impact	Delay programme of work	Delay programme of work	Delay programme of work	
Countermeasures	Removal of finds material and digital equipment from site	Detailed H&S Risk Assessment + daily safety briefing	Detailed H&S Risk Assessment + daily safety briefing	
Estimated time/cost	3 days	3 days	Minimal if done by adjustment	
Owner	JH/NJ	JH/NJ	JH/NJ	

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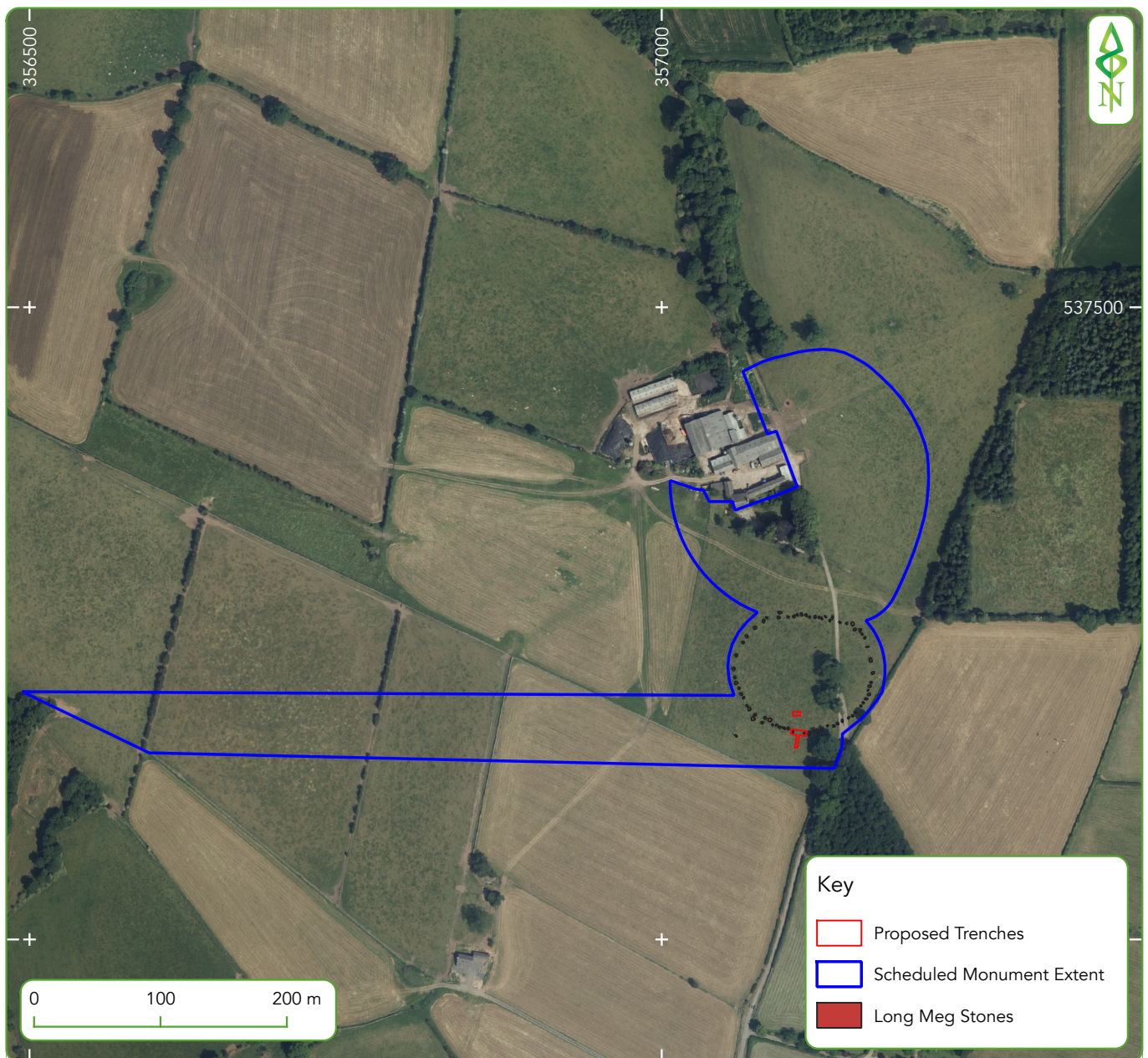
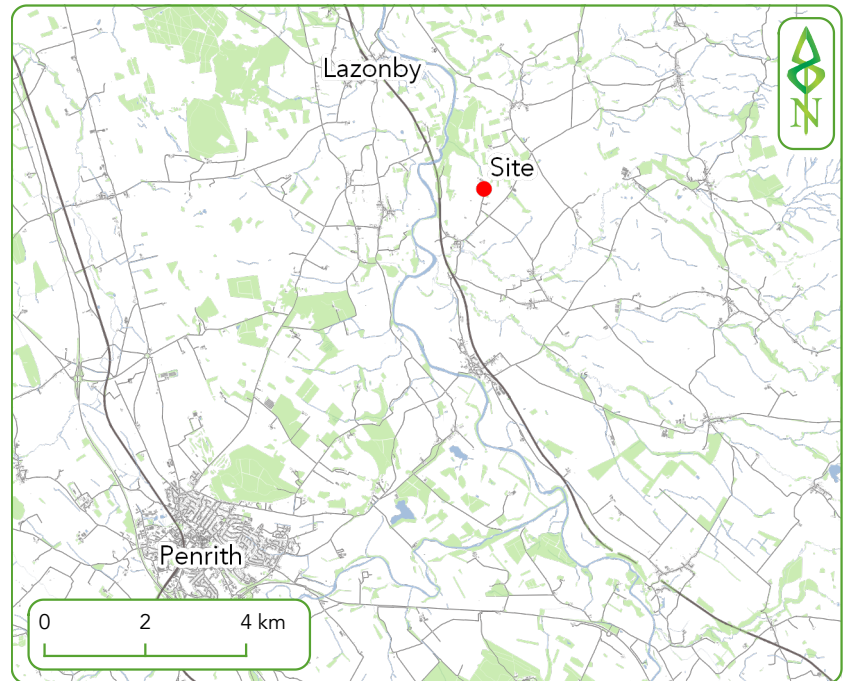


Figure 1. Site location



MEG22 - Proposed Trenches

APPENDIX 1 – METHOD STATEMENT

Excavation

The overarching aim of the fieldwork will be to provide information to contribute to the future management, research and presentation of the site, creating multiple educational and participatory learning experiences for community participants, with particular focus on the inclusion of children through a series of 'Dig Club' sessions. This will be achieved through a community-based archaeological research project designed to understand:

- The nature of past activity within the stone circle
- The relationship between the stone circle and the possibility of a bank within which the stones appear to be set in places, and also an outer ring ditch to determine whether the site has hengiform characteristics.
- The possibility of an empty stone socket which may yield artefacts or material to date the origin of the site.

For the targeted excavations it is proposed that two trenches will be opened to investigate areas which may give answers to the aims specified above.

- Trench 1 (3m x 6m) will be located to the south of the centre of the stone circle. It will investigate a series of linear anomalies identified through previous geophysical work carried out by Archaeological Services Durham University. These anomalies may be associated with structures internal to the stone circle and could help characterise the nature of activities which may have taken place on the site.
- Trench 2 (4m x 12m, with 2m x 10m extension) will be T shaped and located at the south of the stone circle between two stones and extending away from the stones. It will investigate an area where there is potentially a missing stone, with the aim to identify if a stone socket is present, and if so, if there is any material which may be suitable to date the construction of the monument. The 2m x 10m arm of the trench will extend to the southwest and will target an area where an outer ringditch and bank may be present, this could further our interpretation of the site as a stone circle and potential henge monument.

Topsoil will be removed by hand, then cleaned, planned and photographed prior to any further excavation. A representative section, not less than 1m in width, of the entire deposit sequence encountered will be recorded. If complex stratigraphy and/or significant remains (e.g. structural remains, artefact scatters, remains clearly of a funerary nature etc.) are encountered, these may only be excavated to the minimum requirement in order to satisfy the project objective, to avoid compromising the integrity of remains that may be either (a) preserved in situ, or (b) excavated in detail during any next phase of research excavation. Interventions will focus on feature intersections to establish relative chronologies, and 'clean' sections to maximise retrieval of stratigraphically secure dating evidence and environmental samples.

Written, drawn and photographic records will be made of each trench and test pit, even where no archaeological remains are identified. A plan at an appropriate scale (1:50 or 1:100) will be prepared, showing the areas investigated and their relation to more permanent topographical features, and the location of contexts observed and recorded during the investigation. Plans, sections and elevations of archaeological features and deposits will be drawn as necessary at

an appropriate scale (normally 1:20, or 1:10 for complex features). Drawings will be made in pencil on permanent drafting film.

Each trench or test pit, will be recorded using a digital first format created for Digital Dig Team, following the DigVentures single context recording system. Digital photography will be used for all photography of significant features, finds, deposits and general site working. The photographic record will illustrate both the detail and the general context of the principal features and finds excavated, and the Site as a whole.

Backfilling and reinstatement

Where turf is removed it will be stacked away from the trench edge, maintaining their integrity by ensuring that the turves are placed in a correct position (turf side up) and are watered frequently and monitored daily. Topsoil and subsoil will be removed and retained separately for reinstatement.

Palaeoenvironmental sampling

All deposits with good palaeoenvironmental potential will be sampled; bulk samples shall be taken from the section as appropriate, under advisement from the project specialist. Context specific samples will be taken by the most appropriate means (kubiena tins, contiguous columns, incremental block, bulk etc.) for multi-disciplinary analysis. All aspects of the collection, selection, processing, assessment and reporting on the environmental archaeology component of the evaluation shall be undertaken in accordance with the principles set out in *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation* (English Heritage 2011) and with reference to the *Association for Environmental Archaeology's Working Paper No. 2, Environmental Archaeology and Archaeological Evaluations* (1995).

Bulk sampling strategy

Bulk samples will usually be 40-60 litres in size, depending on the likely density of macrofossils. Ten litre samples will only be used for the recovery of plant macrofossils from waterlogged contexts. Samples will be stored in ten litre plastic buckets with lids and handles. A waterproof label will be fixed to the bucket and will record site code, context number and sample number and number of buckets in comprising the sample. A duplicate label will be retained inside the bucket. Samples will be protected from temperatures below 5° and above 25° Celsius and will be prevented from either wetting or drying out.

- Bulk samples selected for processing shall be wet sieved/floated and washed over a mesh size of 250 microns for the recovery of palaeobotanical and other organic remains, and refloated to maximise recovery;
- Non-organic residues shall be washed through a nest of sieves of 10mm, 5mm, 2mm, 1mm and 250-micron mesh to maximise finds recovery;
- Both organic and non-organic residues shall be dried under controlled conditions.
- The dried inorganic fractions shall be sorted for small finds or any non- buoyant palaeoenvironmental remains, and scanned with a magnet to pick up ferrous debris such as hammerscale.
- The dried organic fractions shall be sorted under a light microscope to identify the range of species or other material on a presence/absence basis, the degree of

preservation of the bio-archaeological material and the rough proportions of different categories of material present.

- In the event that waterlogged deposits are identified and sampled, further processing shall be undertaken as appropriate and agreed, including paraffin flotation to recover insect remains. Any such remains shall be scanned to identify and assess their potential.
- Selection of other types of sample for processing and the methods to be used for processing and assessment shall be undertaken on the advice of the relevant specialist and shall be agreed with the Consultant before implementation.

Contexts that are well stratified and potentially datable are all of value, so a systematic approach to selecting samples for processing and assessment will be taken. These will be divided into three categories:

- Category A (always sampled): contexts where the composition of the sediments are likely to inform us of the use of a particular structure or feature or if the deposits are waterlogged. These will include: *in situ* occupation deposits and fills/layers associated with particular activities; hearths; destruction deposits; basal pit/slot trench fills; waterlogged deposits, cesspits or latrines.
- Category B (always sampled, though discretion should be exercised): deposits identified as containing material that could yield information regarding their origin or the process that produced them. These will include: dumps, middens, upper pit fills with evidence for charred material, shell, bone and industrial waste.
- Category C: deposits containing material which is not necessarily related to the function of the feature to which they are related, but which can characterise deposits from different areas of the site. These will include: secondary and tertiary fills, postholes, levelling deposits, spreads etc.

Category A and B deposits should always be sampled, and Category C deposits sampled on a random basis (such as 1 in 5). These samples can help to characterise the background noise of a site, so as to highlight spatial or temporal trends and provide material that can be directly compared with those from Category A and B. All samples will be taken in large white 10 litre tubs, with labels placed inside with the deposit and attached to the bucket. All samples will be processed on site in a dedicated floatation and wet sieving area.

Zooarchaeology

If large deposits of bone or marine shell are encountered advice of the project zooarchaeologist (Hannah Russ) will be sought as regards further sampling. If large deposits of bone or marine shell are encountered the project zooarchaeologist advice will be sought as regards further sampling. If articulated groups of bones are encountered, they will be surveyed, recorded *in situ*, (including digital photography and planning), and then excavated to retain the group's integrity. Bones from each articulated limb will be bagged separately. If inhumations or cremation burials are encountered and excavated the surrounding soil will be sampled to retrieve any loose teeth or bone fragments.

All hand collected animal bones and bones from processed samples will be assessed, following English Heritage Environmental Archaeology guidelines (2002). If warranted by the size of the recovered assemblage, it will be assessed using two different quantification methods to determine the most suitable for full analysis, taking into account methods used in comparative assemblages. The assessment will not distinguish between certain taxonomic groups, for

example equids (horse and donkey); full speciation should be carried out as part of any recommended analysis, using a vertebrate comparative collection. In addition to quantification of domestic species and occurrence of wild species, the assessment will consider the number of articulated bone groups, and the prevalence of aging, sexing and osteometric data available for full analysis, following standard published conventions. The assessment report will comment on the potential of the assemblage, particularly in the context of the excavation's research questions and current understanding of comparative assemblages. It will also provide recommendations for any necessary future analysis.

Human osteoarchaeology

In the event of the discovery of human remains (inhumations, cremations and disarticulated fragments) they should be left in situ, covered and protected, until the English Heritage Inspector of Ancient Monuments has been informed. If a decision is taken to remove them, they will be fully recorded and excavated in compliance with the relevant Ministry of Justice Licence. The excavation of human remains will be carried out in accordance with the procedures detailed in the document Excavation and post-excavation treatment of cremated and inhumed human remains (McKinley and Roberts 1993, IFA Technical Paper 13). Significant assemblages of human remains will be subject to an assessment of DNA preservation to establish potential familial relationships.

Inhumations will be scanned with a metal detector prior to excavation, and the position of possible metallic grave goods will be noted. Wherever possible, each burial will be excavated within a single working day, particularly with regard to visible grave goods. To minimise unauthorised disturbance of human remains, partially exposed remains will be covered overnight, though in such a way as to not draw undue attention, using loose excavated spoil. Excavation of inhumations will be undertaken using a trowel, plasterer's leaf, plastic spoon and paintbrush as appropriate depending on the condition of the bones. When lifted the bones will be bagged by skeletal area (skull, axial, upper and lower limbs) with separate bags for the left and right side. A standard series of samples will be taken from each inhumation burial to ensure full recovery of any remaining osseous tissues or small artefacts. Once human remains are removed from inhumation graves, any soil residue remaining at the base of the grave will be retrieved for bulk processing.

Inhumations and cremations will be drawn at a scale of 1:10 and photographed prior to lifting. They will be recorded on Skeleton Record Sheets that form an integral part of the site pro forma recording system. The recording will include condition, completeness, articulation, orientation and posture. Fragile objects found within graves will be lifted with appropriate care and handling to minimise breakage. This may include subsequent controlled excavation under laboratory conditions. A trained conservator will be employed on the site if necessary.

All cremation burials and cremation-related contexts will be excavated and sampled in quadrants to ascertain the distribution of any archaeological components within the fills, with division into spit also if appropriate. Cremation-related features other than burials may be subject to more detailed sub-divisions, the appropriate strategy being developed by a specialist as the size and nature of the remains becomes clear. Undisturbed and slightly disturbed, but largely intact, urned cremation burials will be lifted *en masse* for excavation under laboratory conditions. The urns will be wrapped in crepe bandages and securely boxed for transportation. Where a vessel has been crushed, thereby disrupting any original internal deposition of the cremated remains, it will be lifted *en masse* after separate recovery of displaced sherds. All cremation-related contexts will be subject to whole-earth recovery from

the point at which any cremated bone or other pyre debris is observed. If deposits of placed human bone are encountered in features, these may be excavated in spits if appropriate. The soils from these features will be bulk sampled.

Finds

Finds will be treated in accordance with the relevant guidance given in the *Chartered Institute for Archaeologist's Standard and Guidance for Archaeological Evaluation* (2008), excepting where statements made below supersede them. All artefacts will be retained from excavated contexts, except features or deposits undoubtedly of modern date. In these circumstances sufficient artefacts will only be retained to elucidate the date and function of the feature or deposit. All artefacts from the evaluation works will, as a minimum, be washed, marked, counted, weighed and identified.

Conservation

Artefacts will be recovered as a matter of routine during the excavation. When retrieved from the ground finds will be kept in a finds tray or appropriate bags in accordance with *First Aid for Finds* (Walker 1990). Where necessary, a conservator may be required to recover fragile finds from the ground depending upon circumstances.

After the completion of the fieldwork stage, a conservation assessment will be undertaken which will include the X-radiography of all the ironwork (after initial screening to separate obviously modern debris), and a selection of the non-ferrous finds (including all coins). A sample of slag may also be X-rayed to assist with identification and interpretation. Wet-packed material, including glass, bone and leather will be stabilised and consolidated to ensure their long-term preservation. All finds will be stored in optimum conditions in accordance with *First Aid for Finds and Guidelines for the Preparation of Excavation Archives for Long-Term Storage* (Walker, 1990).

The conservation assessment report will include statements on condition, stability and potential for further investigation (with conservation costs) for all material groups. The conservation report will be included in the updated project design prepared for the analysis stage of the project.

Scientific dating

Where uncontaminated deposits are recorded which are able to inform understanding of the research aims (in particular, relating to the construction of the banks and ditches), appropriate samples will be taken. Radiocarbon dating will be appropriate for clarifying and linking aspects of archaeological and environmental chronologies, and a strategy for this will be agreed following discussion with HE Science Advisor and the relevant specialists.