



# Mastin Moor Evaluation Derbyshire

Written Scheme of Investigation for Archaeological Evaluation

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# Mastin Moor Evaluation Derbyshire

## Written Scheme of Investigation for Archaeological Evaluation

### 1 INTRODUCTION

#### 1.1 Project and planning background

1.1.1 Wessex Archaeology has been commissioned by Planning and Design Group, on behalf of Chatsworth Settlement Trustees ('the client'), to produce a written scheme of investigation (WSI) for a proposed archaeological evaluation of a 47.5 ha parcel of land located south of Worksop Road, Mastin Moor, Derbyshire, S43 3BQ. The evaluation area is centred on NGR 445507, 375284 (**Fig. 1**).

1.1.2 Proposals for the Site comprise a residential development of up to 650 dwellings, a residential care facility, a local centre (including retail, health facilities, leisure facilities, other local facilities and services, offices), open space, community garden extension, community building, parking and associated infrastructure and earthworks.

1.1.3 A planning application (CHE/17/00469/OUT) submitted to Chesterfield borough Council, was granted 28/09/2020, subject to conditions. The following conditions relate to archaeology:

*Condition 46. A) No development shall take place within any phase (or sub-phase as may be agreed in writing by the local planning authority under the terms of conditions 5 and 10 above), until a Written Scheme of Investigation for archaeological work for that phase has been submitted to and approved by the local planning authority in writing, and until the fieldwork elements of the scheme for that phase are complete to the written satisfaction of the local planning authority. The Written Scheme of Investigation for each phase will comprise a detailed statement of methodology in line with Land at Mastin Moor, Derbyshire. Overarching Written Scheme of Investigation for Archaeological Programme (Wessex Archaeology Document Ref: 104084.01, August 2019), and will include on a phased basis:*

1. an assessment of significance and research questions;
2. the programme and methodology for archaeological evaluation, to take place before the consideration of reserved matters with details of layout for that phase;
3. the programme and methodology for further archaeological work following evaluation, comprising preservation in situ or mitigation excavation as appropriate;
4. the programme of post-investigation assessment;
5. provision to be made for analysis of the site investigation and recording;
6. provision to be made for publication and dissemination of the analysis and records of the site investigation;
7. provision to be made for archive deposition of the analysis and records of the site investigation; and
8. nomination of a competent person or person/organisation to undertake the works set out within the Written Scheme of Investigation

*B) No development in any phase shall take place other than in accordance with the archaeological Written Scheme of Investigation approved for that phase under this condition*

part (a) and in accordance with Land at Mastin Moor, Derbyshire. Overarching Written Scheme of Investigation for Archaeological Programme (Wessex Archaeology Document Ref: 104084.01, August 2019).

*C) No phase of the development shall be occupied until the site investigation and post investigation assessment for that phase has been completed in accordance with the programme set out in the Written Scheme of Investigation approved for that phase under this condition part (a), and in accordance with Land at Mastin Moor, Derbyshire Overarching Written Scheme of Investigation for Archaeological Programme (Wessex Archaeology Document Ref: 104084.01, August 2019), and until the provision to be made for analysis, publication and dissemination of results and archive deposition has been secured.*

- 1.1.4 The evaluation will comprise the excavation, investigation and recording of 115 trial trenches (with a 1% contingency) each measuring 50 m by 2 m, equating to a 3% sample of the proposed development area.
- 1.1.5 This evaluation is part of staged approach in determining the archaeological potential of the site, and follows other non-intrusive archaeological work, including
- *Overarching Written Scheme of Investigation (Wessex Archaeology 2020)*
  - *Historic Environment Desk-based Assessment (Wessex Archaeology 2020)*
  - *Summary of Significance (Wessex Archaeology 2018)*
  - *Detailed Gradiometer Survey (Wessex Archaeology 2018)*
  - *Recorded Scanning Survey (Wessex Archaeology 2015) and*
  - *Archaeological Desk-based Assessment (Wessex Archaeology 2014)*

## **1.2 Scope of document**

- 1.2.1 This WSI sets out the aims of the evaluation, and the methods and standards that will be employed. In format and content, it conforms to current best practice, as well as to the guidance in *Management of Research Projects in the Historic Environment* (MoRPHE, Historic England 2015a) and the Chartered Institute for Archaeologists' (CIfA) *Standard and guidance for archaeological field evaluation* (CIfA 2014a).
- 1.2.2 This document will be submitted to Development Control Archaeologist for Derbyshire County Council, archaeological advisor to the Local Planning Authority (LPA), for approval, prior to the start of the evaluation.
- 1.2.3 Following this evaluation it is anticipated that mitigation works will be required by the Development Control Archaeologist. These may comprise strip-and-record or open area excavation. Remains could also be preserved in situ. An additional WSI will be required for any further works.

## **1.3 Location, topography and geology**

- 1.3.1 The proposed evaluation area is located on the southern edge of Mastin Moor, approximately 8 km north-east of Chesterfield.
- 1.3.2 The proposed development areas comprises two irregular parcels of land south of the A19/ Worksop Road, either side of the B6419. The parcel to the west of the B6419 is approximately 29.5 ha in size with the parcel to east approximately 18 ha.

- 1.3.3 The western section of the proposed development area (**Fig. 2**) lies at approximately 100 m above Ordnance Datum (aOD) in its north-eastern corner falling quite steeply to approximately 65 m aOD at 'Pump House Farm', before rising again to approximately 85 m aOD in the south-western corner. The north-western corner of the parcel lies at approximately 60 m aOD rising steadily to 90 m aOD in the south-eastern corner.
- 1.3.4 The eastern section of the proposed development area (**Fig. 3**) lies approximately 115 m aOD in its north-eastern corner falling steadily to 80 m aOD in its south-western corner. The north-western corner lies at approximately 100 m aOD rising steadily to 105 m aOD at its south-eastern corner.
- 1.3.5 The Site is predominantly used for arable farming, with a farmstead located within the western section (located outside of the application).
- 1.3.6 The underlying geology is mapped as Pennine Lower Coal Measures Formation (British Geological Survey 2021).

## **2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND**

### **2.1 Introduction**

- 2.1.1 The archaeological and historical background was assessed in a prior desk-based assessment (DBA: Wessex Archaeology 2014) and more recently in a Historic Environment Desk-based Assessment (HEDBA: Wessex Archaeology 2020), both of which considered the recorded historic environment resource within a 1 km study area of the proposed development area. A summary of the results is presented below, additional sources of information are referenced, as appropriate. Previous investigations related to the proposed development

### **2.2 Previous investigations**

*Land off Worksop Road, Mastin Moor, Derbyshire: Detailed Gradiometer Survey (2018)*

- 2.2.1 Wessex Archaeology carried out a detailed gradiometer survey across the proposed development area which identified a number of anomalies interpreted as potential archaeological features including:
- the probable route of a late 18th century railway, located within the western section (also identified within the DBA, see below);
  - an oval-shaped anomaly located within the eastern section which has been interpreted as a possible enclosure of unknown date;
  - the course of a 19th century tramway running from a pumping engine south to the former Seymour Colliery; and
  - an area of increased magnetic response which may be associated with the site of a number of former buildings along with a curving anomaly which may represent a former trackway associated with the buildings

### **2.3 Archaeological and historical context**

*Prehistoric, Romano-British, Anglo-Saxon and medieval (900,000 BC – AD 1539)*

- 2.3.1 There is sparse evidence for definitive activity within the assessed study area during these periods. Prehistoric evidence is limited to the findspot of a Bronze Age scraper/knife within the Site and a 'mound', which may be prehistoric in origin although there is no definitive evidence to corroborate this assertion. A scatter of artefacts, which included an unabraded



sherd of Romano-British greyware represents the only evidence within the study area from this period Aims and objectives.

2.3.2 Excavations carried out in 2018 identified part of a Romano-British period enclosed field system from which sherds of pottery dating to the late 2nd or early 3rd century AD were recovered (ASWYAS 2018). The field system is located approximately 450 m to the west of the Site in a relatively similar position topographically and geologically and confirms the presence of populations from the prehistoric/Romano-British period within the surrounding area.

2.3.3 There are no known finds or features from the Anglo-Saxon period, however, Woodthorpe Hall, approximately 60 m to the east of the proposed development area, was constructed in the early 15th century while historic mapping evidence indicates the presence of 'spital field', within the eastern section. The word 'spital' is suggestive of a place of quarantine for lepers or an institution sheltering the poor or infirm, although there is currently no substantive evidence to support the presence of such an institution within the proposed development area.

*Post-medieval, 19th century and modern (AD 1540 – present)*

2.3.4 There are no known finds or features from the Anglo-Saxon period, however, Woodthorpe Hall, approximately 60 m to the east of the proposed development area, was constructed in the early 15th century while historic mapping evidence indicates the presence of 'spital field', within the eastern section. The word 'spital' is suggestive of a place of quarantine for lepers or an institution sheltering the poor or infirm, although there is currently no substantive evidence to support the presence of such an institution within the proposed development area.

2.3.5 At the end of the 18th century, improvements to the country's infrastructure are evident within the study area from the turnpiking of the Chesterfield to Worksop Road which runs along the northern edge of the proposed development area to the construction of the Chesterfield Canal, opened in 1777. To the west of the proposed development area, the Norbriggs Cutting extension of the Chesterfield Canal provided a transport connection to a coal mine established within the proposed development area, later named as 'Norbriggs Colliery'. By 1789, the owners of the colliery constructed a horse-drawn tramway leading from the colliery to the cutting, which was the first of its kind in Derbyshire.

2.3.6 By 1840, the Norbriggs Colliery appears to have fallen out of use although coal mining continues in the study area throughout the 19th century. Seymour Colliery was located approximately 350 m to the south of the proposed development area, the workings for which required the sinking of a shaft at Norbriggs Cottages and the construction of a pumping engine linked to the main colliery by a 'tub track' surface tramway. In addition to the shaft at Norbriggs, cartographic evidence indicates a number of other mineshafts were located within the proposed development area, mainly clustered around its western edge, although a single shaft is noted within the centre of the eastern section.

2.3.7 Historic mapping evidence suggests that the proposed development area mainly remained as agricultural land throughout the 19th and 20th centuries, although a large portion of the western section was subject to open cast mining in the early part of the 20th century.

## **2.4 General aims**

2.4.1 The general aims (or purpose) of the evaluation, in compliance with the ClfA *Standard and guidance for archaeological field evaluation* (ClfA 2014a), are to:

- provide information about the archaeological potential of the site; and
- inform either the scope and nature of any further archaeological work that may be required; or the formation of a mitigation strategy (to offset the impact of the development on the archaeological resource); or a management strategy.

## 2.5 General objectives

2.5.1 In order to achieve the above aims, the general objectives of the evaluation are to:

- determine the presence or absence of archaeological features, deposits, structures, artefacts or ecofacts within the specified area;
- establish, within the constraints of the evaluation, the extent, character, date, condition and quality of any surviving archaeological remains;
- place any identified archaeological remains within a wider historical and archaeological context in order to assess their significance; and
- make available information about the archaeological resource within the site by reporting on the results of the evaluation.

## 2.6 Site-specific objectives

2.6.1 Based on the known archaeological resource within the Site, identified within the DBA, HEDBA and geophysical survey, the archaeological evaluation will be undertaken with a view to contributing to regional research objectives as set out below:

***Oval enclosure (relevant to research questions set out in Cooper 2006, 131-132):***

- *expand on the corpus of known Iron Age settlements with a particular focus on dating*
- *to establish the presence of those from the earlier portion of the period as these are particularly poorly represented regionally;*
- *investigate the meaning, causation and possible sequences of settlement enclosure;*
- *investigate the emergence of land divisions and the relationship of settlement change to agriculture;*
- *build a good resource for the study of rural settlements during the Romano-British period; investigate the role and inter-relationship of rural settlements through time*

***‘Spital’ field name (relevant research questions set out in Cooper 20016, 214):***

- *Carry out further investigation on sites of potential medieval hospitals to establish their potential for further research*

***Settlement within the southern section of the Site (relevant to research questions set out in Cooper 2006, 242):***

- *Investigate the natures of the transition from post-medieval and earlier settlement patterns to those active from 1750 onwards;*
- *Assess evidence for both the continuity and change in settlement patterns and urbanisation;*
- *Address settlement expansion beyond historic cores, and fringe locations of industries and associated housing;*

***Tramway and colliery (relevant to research questions set out in Cooper 2006, 245 & 250);***

- *Identify the extent of horse-drawn railways in the region;*
- *Establish the extent of transport as an inter-linked system characteristic of the region;*
- *Establish the nature and development of linear transport systems;*
- *Investigate coal mining and the impact of capitalist paternalism on the region's settlements; and*
- *Understand the markets, settlement, communities and transport infrastructure directly related to extractive industrial activity.*

### **3 FIELDWORK METHODS**

#### **3.1 Introduction**

- 3.1.1 Health and safety will override archaeological considerations in all works since, as stated in ClfA guidance, *Health and Safety regulations and requirements cannot be ignored no matter how imperative the need to record archaeological information; hence Health and Safety will take priority over archaeological matters* (ClfA 2014a, 11)
- 3.1.2 All works will be undertaken in accordance with the detailed methods set out within this WSI. Any significant variations to these methods will be agreed in writing with the Development Control Archaeologist for Derbyshire County Council and the client prior to being implemented.
- 3.1.3 The evaluation will comprise the excavation, investigation and recording of 115 trial trenches (each measuring 50 m by 2 m), equating to a 3% sample of the proposed development area.

#### **3.2 Setting out of the trenches**

- 3.2.1 All trenches will be set out using a Global Navigation Satellite System (GNSS) in the approximate positions shown in **Figures 2 and 3**. Minor adjustments to the layout may be required to take account of constraints such as vegetation or located services, and to allow for machine manoeuvring. The trench locations will be tied in to the Ordnance Survey (OS) National Grid and Ordnance Datum (OD) (Newlyn), as defined by OSTN15 and OSGM15.

#### **3.3 Service location and other constraints**

- 3.3.1 Wessex Archaeology have received information on all below/above-ground services from providers and these are shown in **Figures 2 and 3**. The client will inform Wessex of any ecological, environmental or other constraints within the site.
- 3.3.2 Before excavation begins, the evaluation area will be walked over and visually inspected to identify, where possible, the location of any below/above-ground services. All trial trench locations will be scanned before and during excavation with a Cable Avoidance Tool (CAT) to verify the absence of any live underground services.

#### **3.4 Excavation methods**

- 3.4.1 The trenches will be excavated using a 360° tracked excavator equipped with a toothless bucket. Machine excavation will be under the constant supervision and instruction of the monitoring archaeologist. Machine excavation will proceed in level spits of approximately

50–200 mm until either the archaeological horizon or the natural geology is exposed. Where necessary, the base of the trench/surface of archaeological deposits will be cleaned by hand.

- 3.4.2 A sample of the archaeological features and deposits identified will be hand-excavated, sufficient to address the aims of the evaluation. Spoil derived from machine stripping and hand-excavation will be visually scanned for the purposes of finds retrieval, and where appropriate will also be metal-detected by trained archaeologists. Artefacts and other finds will be collected and bagged by context.
- 3.4.3 If an exceptional number and/or complexity of archaeological deposits are identified, sample excavation will aim to be minimally intrusive, but sufficient to resolve the principal aims of the evaluation, to a level agreed with the Development Control Archaeologist for Derbyshire County Council and the client.
- 3.4.4 If human remains are uncovered, the specific methods outlined below (section 4.9.2) will be followed.
- 3.4.5 Where complex archaeological stratification is encountered, deposits will be left *in situ* and alternative measures taken to assess their depth, as agreed with the Development Control Archaeologist for Derbyshire County Council. Where modern features are seen to truncate the archaeological stratification, these may be removed, where practicable, in a manner that does not damage the surrounding deposits to enable the depth of stratification to be assessed.

### **3.5 Recording**

- 3.5.1 All exposed archaeological deposits and features will be recorded using Wessex Archaeology's pro forma recording system.
- 3.5.2 A complete record of excavated archaeological features and deposits will be made. This will include plans and sections, drawn to appropriate scales (generally 1:20 or 1:50 for plans, 1:10 for sections) and tied to the OS National Grid.
- 3.5.3 A full photographic record will be made using digital cameras equipped with an image sensor of not less than 16 megapixels. This will record both the detail and the general context of the principal features and the site. Digital images will be subject to managed quality control and curation processes, which will embed appropriate metadata within the image and ensure long term accessibility of the image set. Photographs will also be taken of all areas, including access routes, to provide a record of conditions prior to and on completion of the evaluation.

### **3.6 Survey**

- 3.6.1 The real time kinematic (RTK) survey of all trenches and features will be carried out using a Leica GNSS connected to Leica's SmartNet service. All survey data will be recorded in OS National Grid coordinates and heights above OD (Newlyn), as defined by OSTN15 and OSGM15, with a three-dimensional accuracy of at least 50 mm.

### **3.7 Monitoring**

- 3.7.1 The client will inform the Development Control Archaeologist for Derbyshire County Council of the start of the evaluation and its progress. Reasonable access will be arranged for the Development Control Archaeologist for Derbyshire County Council to make site visits to inspect and monitor the progress of the evaluation.

3.7.2 It is anticipated that a monitoring visit will be undertaken after half of the trenches have been opened (anticipated 12<sup>th</sup> October 2021) with a further visit once the remainder have been opened (anticipated 27<sup>th</sup> October 2021). This will be confirmed with the Development Control Archaeologist prior to works commencing. If monitoring meetings are not possible discussion will be held with the Development Control Archaeologist about signing off trenches via email.

3.7.3 Any variations to the WSI, if required to better address the project aims, will be agreed in advance with the client and the Development Control Archaeologist for Derbyshire County Council.

### 3.8 Reinstatement

3.8.1 Trenches completed to the satisfaction of the client and the Development Control Archaeologist for Derbyshire County Council will be backfilled using excavated materials in the order in which they were excavated, and left level on completion. No other reinstatement or surface treatment will be undertaken.

### 3.9 Finds

#### *General*

3.9.1 All archaeological finds will be retained, although those of clearly very recent origin with negligible potential to provide information relevant to the project aims and objectives may be recorded on site and not retained. Where appropriate, soil samples may be taken and sieved to aid in finds recovery. Any finds requiring conservation or specific storage conditions will be dealt with immediately in line with *First Aid for Finds* (Watkinson and Neal 1998).

#### *Human remains*

3.9.2 In the event of discovery of any human remains (articulated or disarticulated, cremated or unburnt), all excavation of the deposit(s) will cease pending Wessex Archaeology obtaining a Ministry of Justice licence (this includes cases where remains are to be left *in situ*).

3.9.3 Initially the remains will be left *in situ*, covered and protected, pending discussions between the client, Wessex Archaeology's osteoarchaeologist and the Development Control Archaeologist for Derbyshire County Council regarding the need for excavation/removal or sampling. Where this is deemed appropriate, the human remains will be fully recorded, excavated and removed from site in compliance with the Ministry of Justice licence.

3.9.4 Excavation and post-excavation processing of human remains will be in accordance with Wessex Archaeology protocols and in-line with current guidance documents (eg, McKinley 2013) and the standards set out in ClfA Technical Paper 13 *Excavation and post-excavation treatment of cremated and inhumed remains*. Appropriate specialist guidance/site visits will be undertaken if required.

3.9.5 The final deposition of human remains subsequent to the appropriate level of osteological analysis and other specialist sampling/examinations will follow the requirements set out in the Ministry of Justice licence.

#### *Treasure*

3.9.6 Wessex Archaeology will immediately notify the client and the Development Control Archaeologist for Derbyshire County Council on discovery of any material covered, or potentially covered, by the *Treasure Act 1996*. All information required by the *Treasure Act*

(ie, finder, location, material, date, associated items etc.) will be reported to the Coroner within 14 days.

### **3.10 Environmental sampling**

- 3.10.1 All sampling will be undertaken following Wessex Archaeology's in-house guidance, which adheres to the principles outlined in Historic England's guidance (English Heritage 2011 and Historic England 2015b).
- 3.10.2 Bulk environmental soil samples, for the recovery of plant macrofossils, wood charcoal, small animal bones and other small artefacts, will be taken as appropriate from well-sealed and dateable contexts. In general, features directly associated with particular activities (eg, pits, latrines, cesspits, hearths, ovens, kilns, and corn driers) should be prioritised for sampling over features, such as ditches or postholes, which are likely to contain reworked and residual material.
- 3.10.3 If waterlogged or mineralised deposits are encountered, an environmental sampling strategy will be devised and agreed with the Development Control Archaeologist for Derbyshire County Council as appropriate. Specialist guidance will be provided by a member of Wessex Archaeology's geoarchaeological and environmental team, with site visits undertaken if required.
- 3.10.4 Any samples will be of an appropriate size – typically 40 litres for the recovery of environmental evidence from dry contexts, and 10 litres from waterlogged deposits.
- 3.10.5 Following specialist advice, other sampling methods such as monolith, Kubiena or contiguous small bulk (column) samples may be employed to enable investigation of deposits with regard to microfossils (eg, pollen, diatoms) and macrofossils (eg, molluscs, insects), soil micromorphological or soil chemical analyses.

## **4 POST-EXCAVATION METHODS AND REPORTING**

### **4.1 Stratigraphic evidence**

- 4.1.1 All written and drawn records from the evaluation will be collated, checked for consistency and stratigraphic relationships. Key data will be transcribed into a database, which can be updated during any future analyses. The preliminary phasing of archaeological features and deposits will be undertaken using stratigraphic relationships and the spot dating from finds, particularly pottery.
- 4.1.2 A written description will be made of all archaeologically significant features and deposits that were exposed and excavated, ordered either by trench or by period as appropriate. Detail of all contexts will be provided in trench tables in the appendix of the report.

### **4.2 Finds evidence**

- 4.2.1 All retained finds will, as a minimum, be washed, weighed, counted and identified. They will then be recorded to a level appropriate to the aims and objectives of the evaluation. Recording and reporting will conform to the Type 2 (Appraisal) level according to ClfA's *Toolkit for Specialist Reporting*, to include appropriate quantification, characterisation and assessment of significance and potential. The report will include a table of finds by feature/context or trench.
- 4.2.2 Metalwork from stratified contexts will be X-rayed and, along with other fragile and delicate materials, stored in a stable environment. The X-raying of objects and other conservation



needs will be undertaken by Wessex Archaeology in-house conservation staff, or by another approved conservation centre.

- 4.2.3 Finds will be suitably bagged and boxed in accordance with the guidance given by the relevant museum and generally in accordance with the standards of the ClfA (2014b).

### **4.3 Environmental evidence**

- 4.3.1 Bulk environmental soil samples will be processed by standard flotation methods. The residues will be fractionated into 5.6/4 mm and 1/0.5 mm and dried if necessary. The coarse residue fraction (>5.6/4 mm), and the fine fraction when appropriate, will be sorted and discarded, with any finds recovered given to the appropriate specialist. The flot will be retained on a 0.25 mm mesh and scanned to assess the range of environmental remains present and their preservation. Unsorted fine residues will be retained until after any analyses and discarded following final reporting (in accordance with the Selection policy, below).
- 4.3.2 In the case of samples from cremation-related deposits the flots will be retained on a 0.25 mm mesh, with residues fractionated into 4 mm, 2 mm and 1 mm. In the case of samples from inhumation burial deposits, the sample will be wet-sieved through 9.5 mm and 1 mm mesh sizes. The coarse fractions (9.5 mm) will be sorted with any finds recovered given to the appropriate specialist together with the finer residues.
- 4.3.3 Any waterlogged samples will be processed by standard waterlogged flotation methods.
- 4.3.4 Recording and reporting will conform to the Type 2 (Appraisal) level according to ClfA's *Toolkit for Specialist Reporting*, to include appropriate quantification, characterisation and assessment of significance and potential.

### **4.4 Reporting**

#### *General*

- 4.4.1 Following completion of the fieldwork and the evaluation of the stratigraphic, artefactual and ecofactual evidence, a draft report will be submitted for approval to the client and the Development Control Archaeologist for Derbyshire County Council, for comment. Once approved, a final version will be submitted.
- 4.4.2 The report will include the following elements:
- Non-technical summary;
  - Project background;
  - Archaeological and historical context;
  - Aims and objectives;
  - Methods;
  - Results – stratigraphic, finds and environmental;
  - Conclusions in relation to the project aims and objectives, and discussion in relation to the wider local, regional or other archaeological contexts and research frameworks etc;
  - Archive preparation and deposition arrangements;
  - Appendices, including trench summary tables;

- Illustrations; and
- References.

4.4.3 A copy of the final report will be deposited with the HER, along with surveyed spatial digital data (.dxf or shapefile format) relating to evaluation.

#### *Publication*

4.4.4 If no further mitigation works are undertaken, a short report on the results of the evaluation will be prepared for publication in a suitable journal, if considered appropriate and agreed with the client and the Development Control Archaeologist for Derbyshire County Council.

#### *OASIS*

4.4.5 An OASIS (online access to the index of archaeological investigation) record (<http://oasis.ac.uk>) will be created, with key fields completed, and a .pdf version of the final report submitted. Subject to any contractual requirements on confidentiality, copies of the OASIS record will be integrated into the relevant local and national records and published through the Archaeology Data Service (ADS) ArchSearch catalogue.

## **5 ARCHIVE STORAGE AND CURATION**

### **5.1 Museum**

5.1.1 It is recommended that the project archive resulting from the evaluation be deposited with Chesterfield Museum and Art Gallery. Provision has been made for the cost of long-term storage in the post-fieldwork costs.

### **5.2 Transfer of title**

5.2.1 On completion of the evaluation (or extended fieldwork programme), every effort will be made to persuade the legal owner of any finds recovered (ie, the landowner), with the exception of human remains and any objects covered by the *Treasure Act 1996*, to transfer their ownership to the museum in a written agreement.

### **5.3 Preparation of archive**

#### *Physical archive*

5.3.1 The complete physical archive, which may include paper records, graphics, artefacts, and ecofacts, will be prepared following the standard conditions for the acceptance of excavated archaeological material by Chesterfield Museum and Art Gallery (Derbyshire Museums 2016), and in general following nationally recommended guidelines (SMA 1995; ClfA 2014c; Brown 2011). The archive will usually be deposited within one year of the completion of the project, with the agreement of the client.

#### *Digital archive*

5.3.2 The digital archive generated by the project will be deposited with a Trusted Digital Repository, in this instance the Archaeology Data Service (ADS), to ensure its long-term curation. Digital data will be prepared following ADS guidelines (ADS 2013 and online guidance) and accompanied by metadata.

### **5.4 Selection strategy**

5.4.1 It is widely accepted that not all the records and materials (artefacts and ecofacts) collected or created during the course of an archaeological project require preservation in perpetuity. These records and materials will be subject to selection in order to establish what will be



retained for long-term curation, with the aim of ensuring that all elements selected to be retained are appropriate to establish the significance of the project and support future research, outreach, engagement, display and learning activities, ie the retained archive should fulfil the requirements of both future researchers and the receiving Museum.

5.4.2 The selection strategy, which details the project-specific selection process, is underpinned by national guidelines on selection and retention (Brown 2011, section 4) and generic selection policies (SMA 1993; Wessex Archaeology's internal selection policy) and follows ClfA's *Toolkit for Selecting Archaeological Archives*. It should be agreed by all stakeholders (Wessex Archaeology's internal specialists, external specialists, local authority, museum) and fully documented in the project archive.

5.4.3 In this instance, given that the level of finds recovery is expected to be relatively low, decisions on selection will be deferred until after the fieldwork stage, and no detailed strategy is presented here. Any material not selected for retention may be used for teaching or reference collections by the museum, or by Wessex Archaeology.

## **5.5 Security copy**

5.5.1 In line with current best practice (eg, Brown 2011), on completion of the project a security copy of the written records will be prepared in the form of a digital PDF/A file. PDF/A is an ISO-standardised version of the Portable Document Format (PDF) designed for the digital preservation of electronic documents through omission of features ill-suited to long-term archiving.

## **6 COPYRIGHT**

### **6.1 Archive and report copyright**

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

6.1.2 Information relating to the project will be deposited with the Historic Environment Record (HER) where it can be freely copied without reference to Wessex Archaeology for the purposes of archaeological research, or development control within the planning process.

### **6.2 Third party data copyright**

6.2.1 This document, the evaluation report and the project archive may contain material that is non-Wessex Archaeology copyright (eg, Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which Wessex Archaeology are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferable by Wessex Archaeology. Users remain bound by the conditions of the *Copyright, Designs and Patents Act 1988* with regard to multiple copying and electronic dissemination of such material.

## **7 WESSEX ARCHAEOLOGY PROCEDURES**

### **7.1 External quality standards**

- 7.1.1 Wessex Archaeology is registered as an archaeological organisation with the Chartered Institute for Archaeologists (CIfA) and fully endorses its *Code of conduct* (CIfA 2014d) and *Regulations for professional conduct* (CIfA 2014e). All staff directly employed or subcontracted by Wessex Archaeology will be of a standard approved by Wessex Archaeology, and archaeological staff will be employed in line with the CIfA codes of practice and will normally be members of the CIfA.

### **7.2 Personnel**

- 7.2.1 The fieldwork will be directed and supervised by an experienced archaeologist from Wessex Archaeology's core staff. The overall responsibility for the conduct and management of the project will be held by one of Wessex Archaeology's project managers, who will visit the fieldwork as appropriate to monitor progress and to ensure that the scope of works is adhered to. Where required, monitoring visits may also be undertaken by Wessex Archaeology's Health and Safety manager. The appointed project manager will be involved in all phases of the investigation through to its completion.
- 7.2.2 The analysis of any finds and environmental data will be undertaken by Wessex Archaeology core staff or external specialists, using Wessex Archaeology's standard methods, under the supervision of the departmental managers and the overall direction of the project manager. A complete list of specialists is provided in Appendix 1.
- 7.2.3 The following key staff are proposed:
- Project Manager John Winfer
  - Fieldwork Director Luke Roberts
- 7.2.4 Wessex Archaeology reserves the right, where necessary due to unforeseen circumstances, to replace nominated personnel with alternative members of staff of comparable expertise and experience.

### **7.3 Internal quality standards**

- 7.3.1 Wessex Archaeology is an ISO 9001 accredited organisation (certificate number FS 606559), confirming the operation of a Quality Management System which complies with the requirements of ISO 9001:2015 – covering professional archaeological and heritage advice and services. The award of the ISO 9001 certificate, independently audited by the British Standards Institution (BSI), demonstrates Wessex Archaeology's commitment to providing quality heritage services to our clients. ISO (the International Organisation for Standardisation) is the most recognised standards body in the world, helping to drive excellence and continuous improvement within businesses.
- 7.3.2 Wessex Archaeology assigns responsibility to individual managers for the successful completion of all aspects of a project including reporting. This includes monitoring progress and quality; controlling the budget from inception to completion; and all aspects of health and safety for the project. At all stages, the project manager will carefully assess and monitor performance of staff and adherence to objectives, timetables and budgets, while the manager's own performance is monitored by the team leader or regional director. The technical managers in the Graphics, Research, GeoServices and IT sections provide additional assistance and advice.

- 7.3.3 All staff are responsible for following Wessex Archaeology's quality standards but the overall adherence to and setting of these standards is the responsibility of the senior management team who, in consultation with the team leaders/regional directors, also ensure projects are adequately programmed and resourced within Wessex Archaeology's portfolio of project commitments.

#### **7.4 Health and safety**

- 7.4.1 All works will be undertaken in accordance with the *Health and Safety at Work Act 1974*; the *Management of Health and Safety at Work Regulations 1999*; and all other applicable health and safety legislation.
- 7.4.2 Wessex Archaeology has a fully compliant health and safety management system that has year on year satisfied the criteria for SSIP certification (Safety Schemes in Procurement). SSIP itself is aligned with PAS91.
- 7.4.3 Wessex Archaeology will, for all projects, produce one or more task and site-specific risk assessments and method statements (RAMS), which will ensure our staff can work safely on the site. A copy of the RAMS and our Health and Safety Policy can be provided to the client. All staff on our sites will be made fully familiar with the RAMS before work commences.
- 7.4.4 We aim to work collaboratively on health and safety with clients and, where separately appointed, with principal contractors. We expect clients to provide in good time all the necessary risk information about a site that may affect the archaeological work, such as locations of utilities or any known ground contamination. We will comply with the project specific Personal Protective Equipment (PPE) requirements, and any other specific additional requirements of the Principal Contractor.
- 7.4.5 All fieldwork staff are certified through the Construction Skills Certification Scheme (CSCS) and have undergone UKATA Asbestos Awareness Training. Staff who carry out specific tasks are suitably trained and competent to do so through training accredited by the Construction Industry Training Board (CITB), Institution of Occupational Safety & Health (IOSH) and the National Plant Operators Recognitions Scheme (NPORS).

#### **7.5 Insurance**

- 7.5.1 Wessex Archaeology holds Employers Liability (£10,000,000), Public Liability (£5,000,000) and Professional Indemnity (£5,000,000) policies.

## REFERENCES

- ADS 2013 *Caring for Digital Data in Archaeology: a guide to good practice*. Archaeology Data Service & Digital Antiquity Guides to Good Practice
- British Geological Survey *Geology of Britain Viewer* <http://mapapps.bgs.ac.uk/geologyofbritain/home.html> (accessed 02/08/2021)
- Brown, D H 2011 *Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation* (revised edition). Archaeological Archives Forum
- Chartered Institute for Archaeologists [ClfA] 2014a *Standard and Guidance for Archaeological Field Evaluation* (revised edition June 2020). Reading, ClfA
- Cooper, N.J (ed.), 2006. *The Archaeology of the East Midlands: An Archaeological Resource Assessment and Research Agenda*. Available at <https://historicengland.org.uk/images-books/publications/archaeology-east-midlands/em-res-framework/> (Accessed: 02/08/2021)
- ClfA 2014b *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials* (revised edition October 2020). Reading, ClfA
- ClfA 2014c *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives* (revised edition June 2020). Reading, ClfA
- ClfA 2014d *Code of Conduct*. Reading, ClfA
- ClfA 2014e *Regulations for Professional Conduct*. Reading, ClfA
- ClfA *Toolkit for Selecting Archaeological Archives* <https://www.archaeologists.net/selection-toolkit> (accessed 2021)
- ClfA *Toolkit for Specialist Reporting* <https://www.archaeologists.net/reporting-toolkit> (accessed 2021)
- English Heritage 2011 *Environmental Archaeology: A Guide to the Theory, Practice of Methods, from Sampling and Recovery to Post-excavation* (second edition). Portsmouth, English Heritage
- Gillespies, 2017. *Design and Access Statement: Land at Mastin Moor, Derbyshire*
- Historic England 2015a *Management of Research Projects in the Historic Environment: the MoRPHE project managers' guide*. Swindon, Historic England
- Historic England 2015b *Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record*. Swindon, Historic England
- McKinley, J I 2013 Cremation: excavation, analysis and interpretation of material from cremation-related contexts, in S Tarlow and L Nilsson Stutz (eds) *The Oxford Handbook of the Archaeology of Death and Burial*. Oxford University Press 147–71
- McKinley, J I and Roberts, C 1993 ClfA Technical Paper 13 *Excavation and Post-excavation Treatment of Cremated and Inhumed Human Remains*



Derbyshire Museums 2016 *Procedures for the deposition of archaeological archives from Derbyshire at Chesterfield Museum and Art Gallery*

SMA 1993 *Selection, Retention and Dispersal of Archaeological Collections*. Society of Museum Archaeologists

SMA 1995 *Towards an Accessible Archaeological Archive*. Society of Museum Archaeologists

Watkinson, D and Neal, V 1998 *First Aid for Finds: practical guide for archaeologists*. United Kingdom Institute for Conservation of Historic & Artistic Works

Wessex Archaeology, 2014. *Land off Worksop Road, Mastin Moor, Chesterfield: Archaeological Desk-Based Assessment*. Unpublished Report

Wessex Archaeology, 2018. *Land off Worksop Road, Mastin Moor, Derbyshire: Detailed Gradiometer Survey*. Unpublished Report

Wessex Archaeology, 2020. *Land at Mastin Moor: Historic Environment Desk-based Assessment*. Unpublished Report

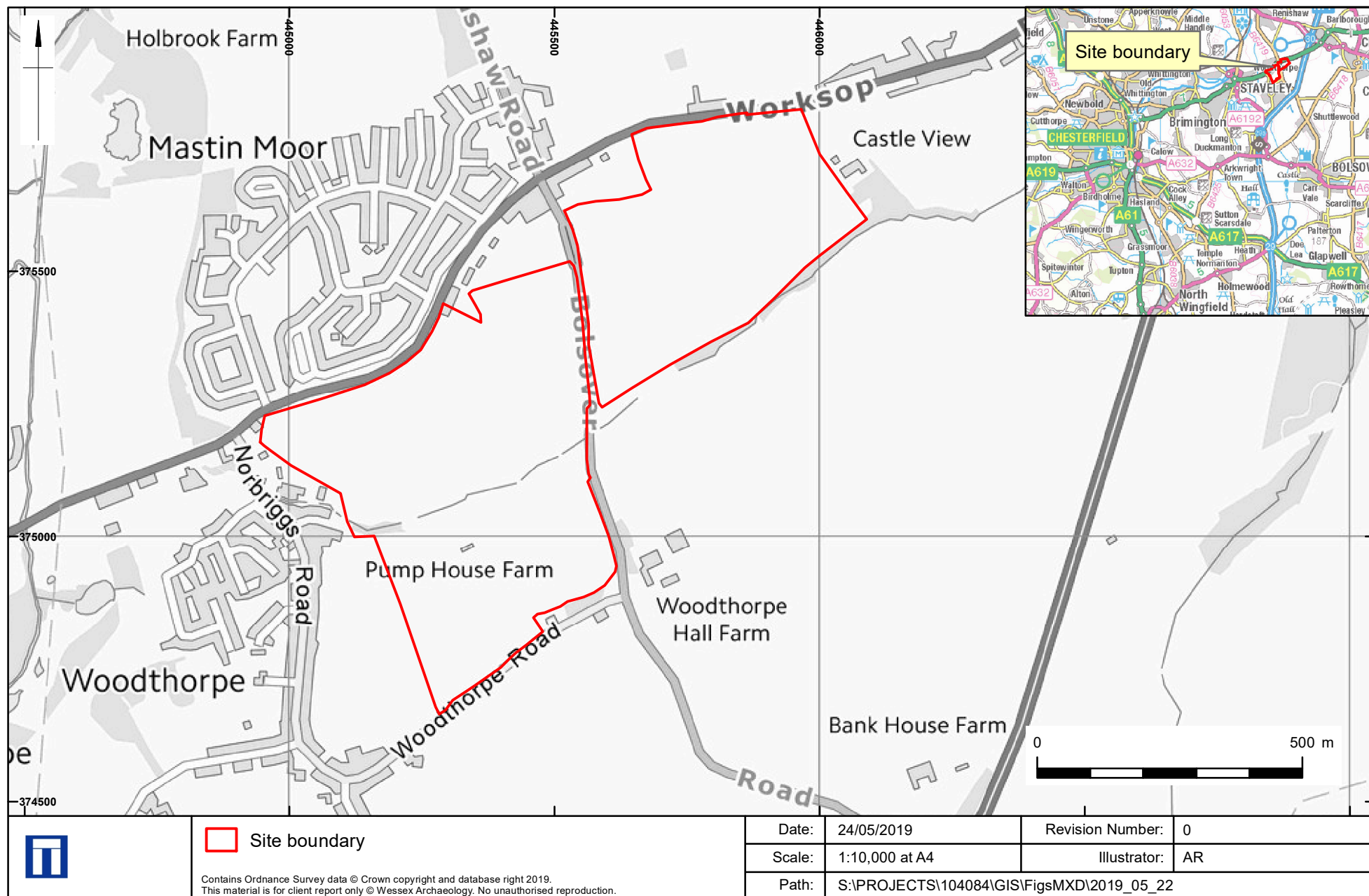
Wessex Archaeology, 2020. *Land at Mastin Moor: Overarching WSI for Archaeological Programme*. Unpublished Report

## APPENDICES

### Appendix 1 Finds and environmental specialists

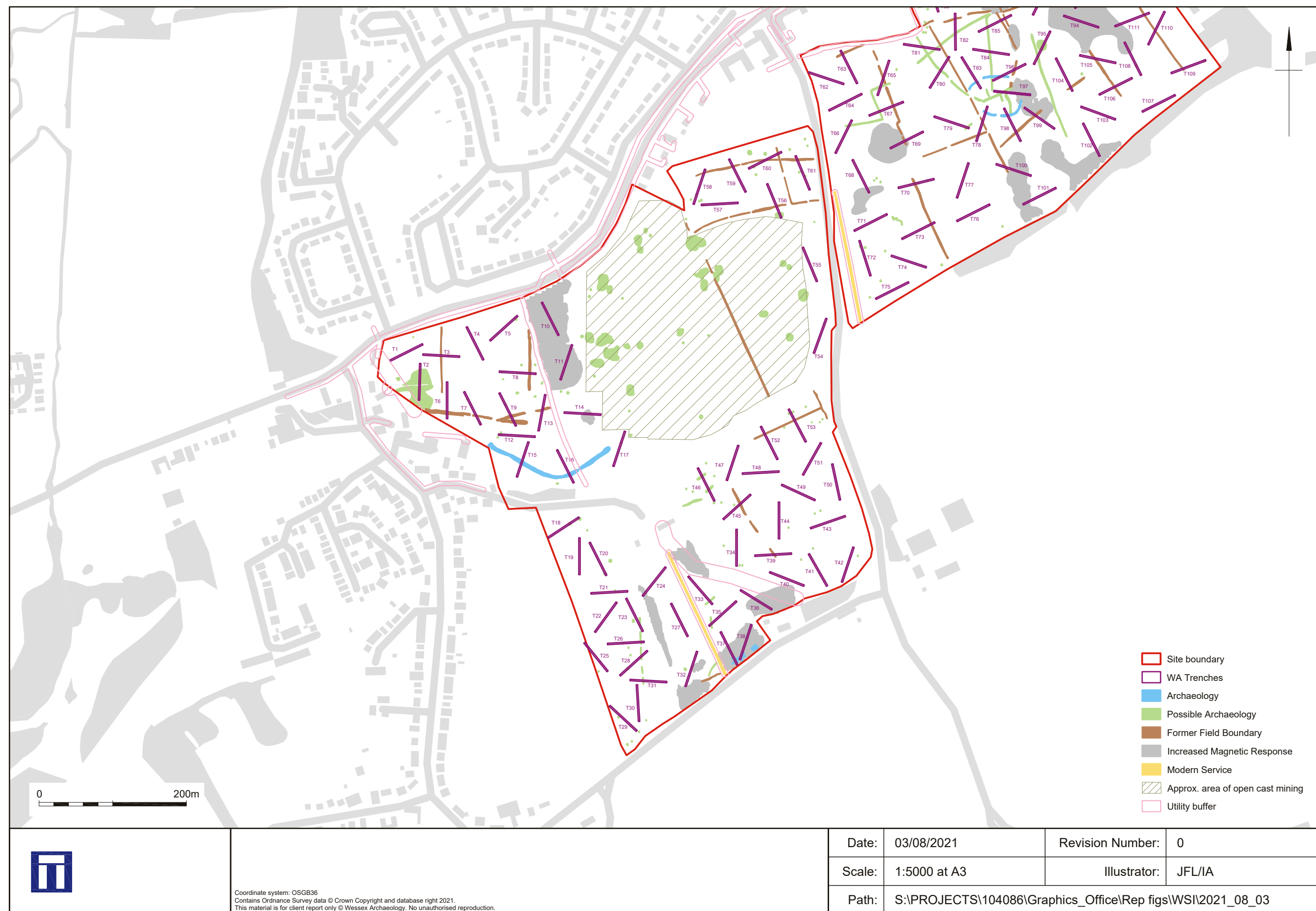
Name	Qualifications	Specialism
Phil Andrews	BSc; FSA; MCIfA	Slag and metal working debris
Ceridwen Boston	BSocSc; MA; MSc; DPhil	Osteoarchaeology; funerary archaeology
Pippa Bradley	BA; MPhil; Dip Post Ex; MCIfA	Prehistoric flint and worked stone, shale and jet
Elina Brook	BA; MA; PCIfA	Later prehistoric and Romano-British pottery, and small finds
Alex Brown	BA; MSc; PhD	Geoarchaeology, palynology
Kirsten Egging Dinwiddy	BA; MA; MCIfA	Human remains (inhumations)
Erica Gittins	BA; MA; PhD	Prehistoric flint
Phil Harding	PhD	Prehistoric flint, particularly Palaeolithic flint
Lorrain Higbee	BSc; MSc; MCIfA	Animal bone
Grace Jones	BA; MA; PhD; MCIfA	Prehistoric and Roman pottery, ceramic building material, fired clay, and small finds
Matt Leivers	BA; PhD; ACIfA	Prehistoric pottery and flint
Inés López-Dóriga	BA; MA; PhD	Archaeobotanical remains
Erica Macey-Bracken	BA; ACIfA	Post-medieval finds, ceramic building material and worked wood
Katie Marsden	BSc	Pottery from prehistoric to post-medieval/modern. Metalwork of all periods, including coins. Small and bulk finds including fired clay, ceramic building material, worked bone
Jacqueline McKinley	BTech; FSA	Human remains (inhumations and cremations)
Lorraine Mephram	BA; MCIfA	Pottery and other ceramic finds of all dates, concentrating on later prehistoric and post-Roman; ceramic building material; clay tobacco pipe; glass of Saxon or later date; small finds
Nicki Mulhall		Geoarchaeology and archaeobotanical remains
David Norcott	BA; MSc; MCIfA	Geoarchaeology
Richard Payne	BSc; MSc; MPhil	Geoarchaeology
Holly Rodgers	BA; MSc	Geoarchaeology
Emma Robertson	BA; MSc	Human remains (inhumations)
Rachael Seager Smith	BA; MCIfA	Pottery with particular emphasis on Roman ceramics; and metalwork, fired clay, ceramic building material, stone, worked bone, shale, glass, and wall plaster
Andrew Shaw	BA; MA; PhD	Palaeolithic lithic artefacts and Pleistocene geoarchaeology
Amy Thorp	BA; MA	Pottery with emphasis on Roman ceramics, small finds





Site location

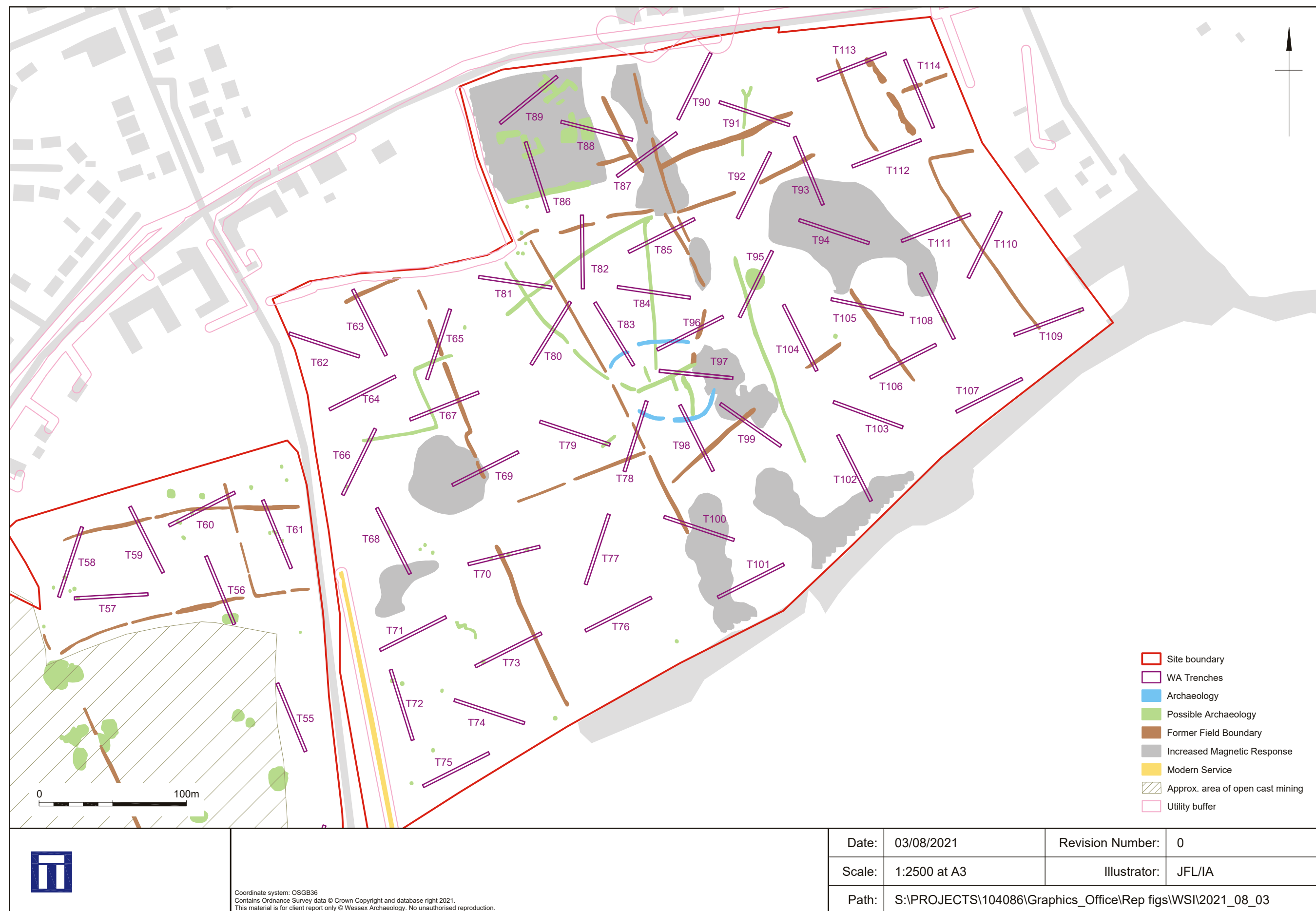
Figure 1



Trench locations – part 1

Figure 2





Trench locations – part 1

Figure 3



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