



Plate 5. South facing section of ditch 302



Plate 6. North facing section of ditch 402



Plate 7. North facing section of ditch 405



Plate 8. General view of ditch 502 and furrow 506, looking west



Plate 9. General view of ditch 510 and furrow 508, looking west



Plate 10. East facing section of ditch 902



Plate 11. North facing section of ditch 1203



Plate 12. West facing section of ditch 1303

Appendix 1: Specification

ENVIRONMENT

Homes by Honey Ltd

Barnburgh Lane, Goldthorpe

Specification for Trial Trenching

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Homes by Honey Ltd

Barnburgh Lane, Goldthorpe

Specification for Trial Trenching

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APPENDICES

- APPENDIX 1: Archaeological Standards and Guidelines
- APPENDIX 2: Geophysical Survey Report

1. INTRODUCTION

- 1.1 This Specification has been prepared by BWB the 'Consultant'. It describes the objectives and methodology for a programme of archaeological trial trenching.
- 1.2 BWB Consulting has been appointed by Homes by Honey Limited to devise a strategy for trial trenching within the site at Barnburgh Lane, Goldthorpe.
- 1.3 The results of the trial trenching and previous phases of evaluation will aid in the design of a mitigation strategy (if required) which will be discussed with South Yorkshire Archaeology Service (SYAS).
- 1.4 This Specification and accompanying drawing (**Figure 2**) detail the requirements for the trial trenching.
- 1.5 The Specification has been prepared in line with the written Code of Conduct of the Chartered Institute for Archaeologists (CIfA 2021) and other best practice guidelines (**Appendix 1**) including SYAS' standard brief for evaluation (2015).
- 1.6 This Specification has been written with references to a previous desk based assessment by MAP Archaeological Practice, 'Land North of Barnburgh Lane, Goldthorpe, South Yorkshire, Archaeology and Heritage Desk Based Assessment', written in January 2023. This Specification makes use of the desk based assessment's data on past archaeological excavations and Historic Environment Record (HER) Entries.
- 1.7 Approval for it will be sought from SYAS.
- 1.8 The archaeological works specified in this document will be undertaken by an experienced Archaeological Contractor ('the Contractor'), under the supervision of the Consultant.
- 1.9 All works, operations and visits are to be undertaken subject to the requirements of Principal Contractor's health and safety procedures.
- 1.10 The archaeological fieldwork, post-survey assessment, archiving, analysis and preparation of the fieldwork report text will be undertaken by the Contractor, unless otherwise specified in this Specification.

Site Location and Topography

- 1.11 The proposed development site is located to the south-west of the Goldthorpe, a village approximately 11km west of Doncaster and 11km east of Barnsley. The proposed development is approximately 1km to the east of Goldthorpe town centre. The Site is located within a regular-shaped plot of land bounded by Barnburgh Lane on the south, a narrow, unnamed lane to the west, and woodland along the north and north-east boundary. The Site is located approximately 0.5km east of Goldthorpe High Street.
- 1.12 The Site currently comprises an undeveloped plot of agricultural land.

- 1.13 The Site is centred approximately on National Grid Reference SE 4689 0397. The proposed site boundary is shown on **Figure 1**.
- 1.14 The plot of land is slightly sloped, lying at approximately 42m Above Ordnance Datum (AOD) in the north-west corner and 35m AOD at its easternmost corner.¹

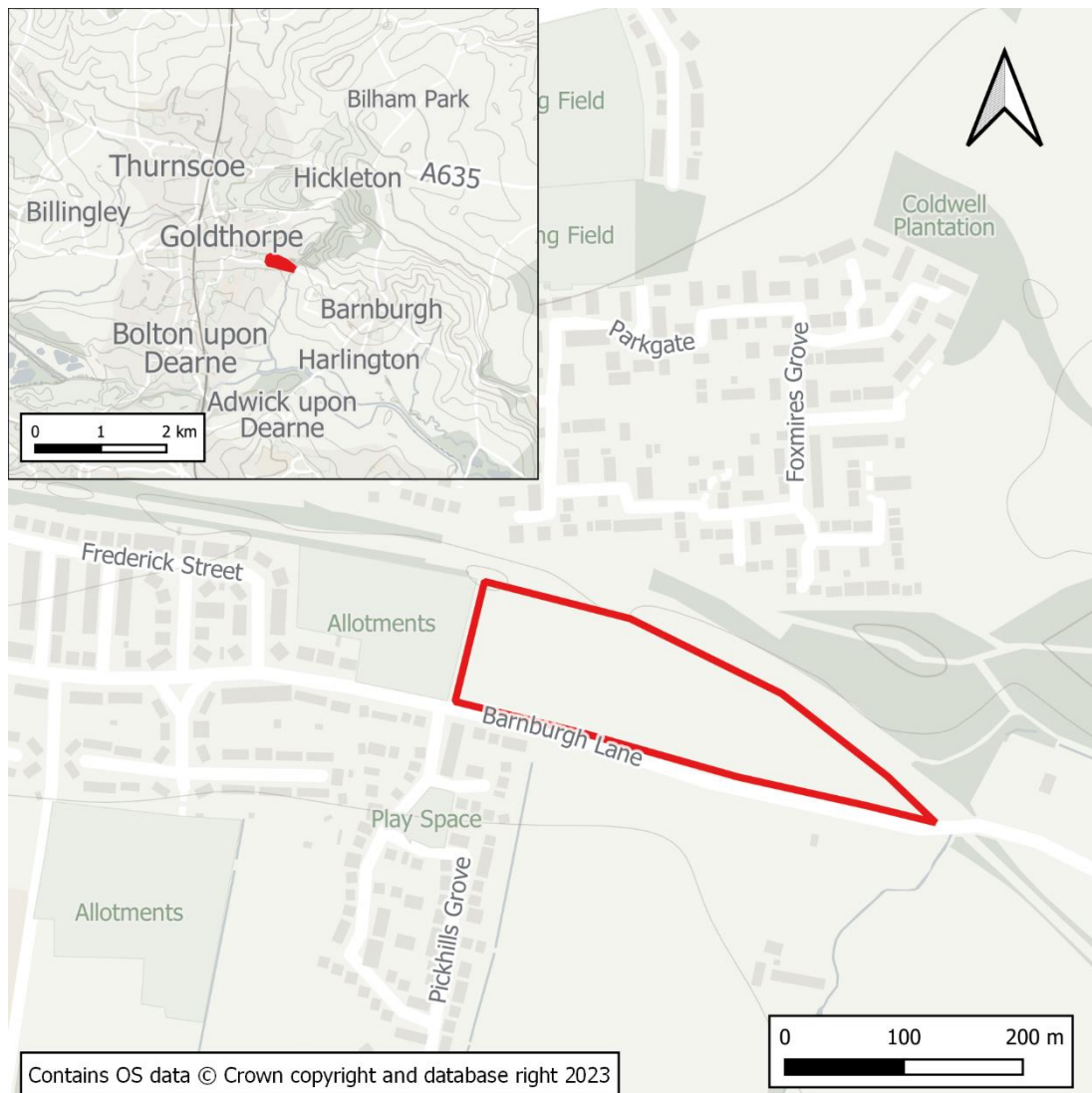


Figure 1 Site Location

Geology and Soils

- 1.15 Bedrock geology across the Site comprises Pennine Middle Coal Measures Formation – Mudstone, Pebbly, formed between 318 and 309.5 million years ago during the Carboniferous period. No superficial deposits are recorded for the Site.² The soil across the Site is seasonally wet, acidic, and loamy and clayey.³

¹ Elevation Finder, <https://www.freemaptools.com/elevation-finder.htm>.

² British Geological Survey, *Geology of Britain Viewer*, <https://mapapps.bgs.ac.uk/geologyofbritain/home.html>.

³ LandIS, *Soilscapes Viewer*, <https://www.landis.org.uk/soilscapes/>.

2. ARCHAEOLOGICAL BACKGROUND

- 2.1 An archaeological desktop assessment was completed by MAP Archaeological Practice in 2023 (**Appendix 2**). The following includes the relevant material from this which are pertinent to understanding the archaeological potential of the site.

Previous Archaeological Investigations

- 2.2 Five archaeological investigations have been undertaken within the study area.
- 2.3 Within the Site, cropmarks of ridge and furrow, presumed medieval and post-medieval in date, were identified by Historic England in 2021.
- 2.4 To the south of the Site, a geophysical survey and trial trenching was undertaken by SLR in 2012. This determined the presence of archaeological remains in the form of cropmarks, potentially Iron Age or Romano-British in date, and archaeological anomalies that were examined during trial trenching. Nine trenches were excavated, one of which showed a single, undated ditch which correlated to a geophysical anomaly.
- 2.5 A geophysical survey was undertaken by Phase Site Investigation in 2019 on a site to the north of the Site and identified features interpreted to be part of an enclosure system which had previously been identified by cropmark data identified in earlier work. Elsewhere on the site a ditch containing Roman pottery was identified.
- 2.6 1.8km to the south-west of the Site, extensive archaeological work was conducted in 2017 and found a shallow pit of Mesolithic date and a large rectangular enclosure containing pits and/or postholes dating to the middle Iron Age or Romano-British period. These contribute to the increasing knowledge of the wider landscape of prehistoric or Romano-British activity in the area.
- 2.7 An archaeological evaluation for the proposed Dearne Towns Link Road was carried out in 1997. Trenches were excavated where magnetic anomalies had been found. The excavations found ditches that correlated with the anomalies, some of which were natural, but found no other material to date them.⁴

Archaeological and Historical Background

Iron Age and Roman

- 2.8 The HER records four Iron Age/Roman entries. These comprise aerial photographic cropmarks of a trackway, enclosures, field boundaries and ditches (**MSY3715, MSY5452, 1431395, 1431432**).

⁴ Webb, A., (1997) Dearne Towns Link Road Stage 1. Upper Hoyland to Blacker Hill, South Yorkshire. Archaeological Evaluation, <https://archaeologydataservice.ac.uk/library/browse/issue.xhtml?recordId=1034310&recordType=GreyLit>

Early Medieval and Medieval

- 2.9 There are no entries in the HER relating to early medieval-medieval periods.

Post-Medieval and Modern

- 2.10 The HER records four Post-medieval and modern entries. These are a Dovecote, located at Dovecote Farm (**MSY6154**), the site of a fire engine in Goldthorpe (**MSY13147**), an aerial photographic cropmark of 20th century spoil heaps (**1431353**), and a sign at the Goldthorpe Public House (**1034884**).

Historic Landscape Characterisation

- 2.11 The HER records 35 entries within the study area for Historic Landscape Characterisation (**HSY4188-HSY7363**). One of these is within the Site, **HSY7123**, and relates to aerial photographic cropmarks of east-west aligned ridge and furrow from the medieval period.
- 2.12 Ten entries relate to terraced housing, social housing and detached housing. Eight entries relate to enclosures, agglomerated fields, and allotments. Two entries relate to private parkland and ancient woodland, two entries relate to deep shaft coal mining, five entries are spoil heaps and other industry, and seven entries relate to educational and religious institutions, public parks and commercial sites.

3. GEOPHYSICAL SURVEY

- 3.1 A geophysical survey was undertaken by Archaeological Services University of Durham in 2023 (**Appendix 2**). The survey found ditches, possibly representing pre-Ordnance Survey land boundaries, traces of former ridge and furrow cultivation, and an area of disturbed ground.

4. SCOPE OF WORKS

- 4.1 The trial trenching will be carried out in accordance with this specification. This design takes account of assessment guidance in the Standard and Guidance for field evaluation prepared by the Chartered Institute for Archaeologists (CIfA, 2020), the CIfA Code of Conduct (CIfA, 2022) and other current and relevant best practice and standards and guidance (refer to Appendix 1). These standards will be adhered to by the Contractor.
- 4.2 It is the responsibility of the Contractor to ensure that the works undertaken are carried out in accordance with the latest versions of the standards and guidelines. The works will also be undertaken with due regard to the relevant frameworks and strategies including updated Research Agendas.

Specific Works

- 4.3 The trial trench evaluation will comprise the excavation of 10 30x2m trenches as shown on **Figure 2**. The rationale for the positioning of each trench is detailed in the table below.

Trench No.	Reason for Position
1	To test the apparent blank area.
2	To characterise and date the possible enclosure and the positive anomaly.
3	To characterise and date the possible enclosure.
4	To characterise and date the possible enclosure including the conjoining enclosure immediately to the east
5	To characterise and date the possible enclosure including the relationship with the conjoining enclosure.
6	To test the apparent blank area.
7	To test the eastern most possible enclosure and the linear north of this.
8	To test the apparent blank area.
9	To test the eastern most possible enclosure.
10	To test the apparent blank area.

- 4.4 The trenches should be positioned using metric-survey equipment to an accuracy of $\pm$ 100mm of the specified trench location.
- 4.5 It may be necessary for the Contractor to undertake a preliminary assessment of ground conditions prior to the commencement of the fieldwork. The Contractor will notify the Consultant of any areas that in their opinion are unsuitable for evaluation.
- 4.6 All trenches are to be the stated dimensions at their base.

5. OBJECTIVES

- 5.1 The objective of the trenching is to gain an understanding of the archaeology revealed within the Site and its extent. The objectives are detailed below:
- to characterise and date the anomalies identified in the geophysical survey;
 - to assess the potential for other archaeological deposits and/or features to occur;
 - to determine the likely range, quality and quantity of artefactual and environmental evidence present;
 - to inform the scope of archaeological mitigation works, where necessary; and
 - to record all remains to an appropriate level.
- 5.2 The site has the potential to advance the understanding of late Prehistoric occupation and/ or agricultural activity. It will also contribute to the South Yorkshire Historic Environment Research Framework.

5.3 This site has the potential to advance the understanding of the following research questions detailed in the aforementioned framework:

- QSY0029: *Can we characterise different types of Iron Age and Romano-British field systems in different landscape zones and environments?*
- QSY0030: *What were the economic, social or political roles of Iron Age and Romano-British field systems?*
- QSY0031: *What may we deduce from studies of field boundaries with respect to changes in the agrarian landscape during the Iron Age and Romano-British periods?*
- QSY0034: *What were the reasons for variations in the form, shape, and size of Iron Age and Romano-British field systems and fields*
- QSY0036: *How can a study of field systems improve our understanding of Iron Age and Romano-British arable and pastoral practices.*
- QSY0037: *What was the nature of land tenure and/or ownership during the Iron Age and Romano-British periods?*
- QSY0038: *Can the dates of Iron Age and Romano-British field system inception, and disuse/abandonment, be established with any greater accuracy?*

6. CONTINGENCY

6.1 The 'Contractor' should make provision for a contingency for up to 10% of the area covered by the trenching outlined in Section 3. The use of the contingency will depend upon the results obtained during the works and will be implemented (if required) with the agreement of BWB and the SYAS. The decision to invoke all or part of the contingency will be issued in writing, in retrospect after site discussions if necessary.

7. WORKS SPECIFICATION

General Details

- 7.1 Prior to commencement of the trial trenching the contractor is required to complete a project initiation form (www.sheffield.gov.uk/home/planning-development/south-yorkshire-archaeology-service/guidance-for-archaeological-projects). This should be submitted to SYAS and Clifton Park Museum.
- 7.2 The on-site recording and recovery techniques will be in line with current industry best practice and should be fully understood by all.
- 7.3 All paper and digital records made during the course of the fieldwork, and the treatment of artefacts and environmental remains, will be reviewed continuously. Record checking and collation will be completed at regular intervals, as appropriate, and before an area is considered complete, abandoned, backfilled or the site closed. Errors or omissions in recording discovered during post-excavation cannot be recovered. The Contractor must make suitable allowance for this task.

Specific Works

Access

- 7.4 Access will be in accordance with the approved Access Plans provided by the Consultant as part of the Works information bundle.

Trial Trenches

- 7.5 Trial trenches will be excavated at the locations indicated by the Consultant (Figure 2). The trenches should be positioned to an accuracy of $\pm 100\text{mm}$ of the specified trench location using survey-grade GPS (Historic England 2015) or equivalent metric-survey equipment. All trenches should be the stated dimensions at their base.
- 7.6 An estimate of the precision of survey control is to be included in the Method Statement. If appropriate the Contractor must ensure that any survey stations are tied-in to permanent landscape features recorded on the latest Ordnance Survey edition maps to enable accurate re-location of the trenches.
- 7.7 The arisings from the archaeological works will be stored adjacent to the trench (within a safe working distance but not less than 1m) and will be separated according to material, so that topsoil will be separated from subsoil and made ground separated from topsoil.
- 7.8 The arisings from the trenches shall be subject to a rapid metal detector scan, in order to recover metal artefacts not recovered during mechanical excavation of the trench. Details of the instrument used should be included in the method statement.
- 7.9 The excavation will proceed under direct archaeological supervision, in level spits, until either the top of the first archaeological horizon or undisturbed natural deposits are encountered.
- 7.10 Particular attention should be paid to achieving a clean and well-defined horizon with the machine.
- 7.11 Care should be taken when excavating within suspected occupation sites or entrances in order that subtle features or deposits are not inadvertently machined off.
- 7.12 Trench faces will be cleaned by hand to aid in the identification of archaeological features and/ or deposits within the trench. In addition to this an allowance will be made for appropriate weathering of the trenches to allow for full interpretation of any archaeological remains.
- 7.13 Under no circumstances should the machine be used to cut arbitrary sondage trenches down to natural deposits. If the Contractor deems that this is necessary to ensure that the correct surface is reached they must contact the consultant to agree this. This will then be agreed with SYAS. The surface achieved through machine excavation will be inspected for archaeological remains. The mechanical excavator will not traverse any machined areas.

- 7.14 If important concentrations of artefacts are uncovered during machining, suggestive of significant activity, these should be left in situ in the first instance. The treatment of these will be agreed with the consultant and SYAS.
- 7.15 The machined surface will be cleaned by hand, for the acceptable definition of archaeological remains. Following cleaning, all archaeological remains will be planned, to enable the selection of features and deposits for sample excavation by the Contractor.
- 7.16 The trial trenches will be clearly demarcated with netlon fencing (or similar), supplied by the Contractor, to ensure that persons or plant cannot inadvertently traverse across the area of investigation whilst archaeological works are in progress. The netlon fencing will be regularly inspected and maintained until works in the area have been completed, inspected and approved by the Consultant and the trenches have been backfilled.
- 7.17 The trial trenches shall only be backfilled by machine under appropriate conditions and with direct archaeological supervision. Arisings will be returned strictly in the correct order.
- 7.18 Any land drains encountered during the trial trenching will be left in situ and photographed. Upon completion of the works they will be carefully backfilled and covered over to avoid damage. A buffer of 0.5m will be left either side of a land drain and excavation will proceed either side of it. Any damage to land drains must be rectified immediately. The consultant must be informed if any damage occurs. Any repairs undertaken should be photographed.
- 7.19 In some circumstances it may be necessary to remove land drains to adequately investigate archaeological remains. Allowances should be made for this.

Hand Excavation

- 7.20 All man-made features will be investigated. Apparent natural features (such as tree throws) will be sampled sufficiently to establish their origin and to characterise any related human activity given that Mesolithic and Neolithic artefacts have been recovered from apparently 'Natural' Features on numerous investigations in South Yorkshire. Hand excavation and feature sampling will be sufficient to establish date and character, and to allow appropriate levels of recording.
- 7.21 Sample excavation shall be restricted to that required to meet the key objectives of the evaluation.
- 7.22 Archaeological deposits and layers (including buried soils) will be sampled sufficiently to enable a confident interpretation of their character, date and relationships with other features. Hand excavation will be undertaken in an archaeologically controlled and stratigraphic manner in order to meet the objectives of the evaluation. Care must be taken to excavate stratigraphically and allocate all recovered artefacts to their correct deposit. Machine-assisted excavation including visual scanning for artefacts may be permissible if large homogeneous deposits are encountered but only after consultation with the consultant and SYAS. A sufficient number of deposits/ features will be

investigated through sample excavation in each trench to record the horizontal and vertical extent of the stratigraphic sequence down to the level of undisturbed natural deposits. No archaeological deposit should be entirely removed unless this is unavoidable or necessary to meet the aims and objectives of the evaluation. Excavation must be undertaken with a view to avoiding damage to any features or deposits which would be better understood during future stages of work and those which appear to be worthy of preservation in situ. Priorities should be discussed with the consultant and SYAS.

The following sampling strategies will be employed:

- 7.23 At least 20% (or a percentage sufficient to achieve information on the character, function and dating) of linear and/or very large and deep features not associated with structural remains will be hand excavated. Investigation slots through all linear features will be at least 1m in width. Particular attention will be given to terminals and intersections to ascertain stratigraphic and physical relationships.
- 7.24 At least 20% of linear features (ditches and gullies) associated with structural remains will be hand excavated. Investigation slots through all linear features will be at least 1m in width. Particular attention will be given to terminals and intersections to ascertain stratigraphic and physical relationships. Excavated sections/ segments should be placed against the trench edge where possible and sections drawn perpendicular to the features alignment. Overly oblique sections should be avoided.
- 7.25 A representative sample of significant discrete man-made features, including pits and wells (excavated in half sections or in quadrants where large) will normally be subject to a minimum of 50% excavation to characterise them.
- 7.26 Structures: Each structure will be sampled sufficiently to define the extent, form, stratigraphic complexity and depth of the component features and its associated deposits to achieve the objectives of the evaluation. All intersections will be investigated to determine the relationship(s) between the component features.
- 7.27 Discrete features relating to industrial activity (e.g. kilns, ovens, hearths, etc.) will be sufficiently excavated to understand the structure. At this stage features should not be removed through excavation.
- 7.28 All human remains (inhumations and cremations) will be excavated fully (100%).
- 7.29 All intersections will be investigated to determine the relationship(s) between the component features.
- 7.30 The evaluation will provide a representative sample of the site's archaeology at no significant cost to the value or integrity of archaeological remains therein. Judgement regarding the removal of human remains, structural remains (in situ wood or masonry), or other special remains or deposits, will be led by this consideration, and will be made in consultation with SYAS and relevant specialists.
- 7.31 Should remains or features of possible national archaeological importance, and possibly schedulable quality be observed, fieldwork will cease on the relevant part of the site

until these remains have been inspected by SYAS (as advisors to the local planning authority) and the appropriate historic England Inspector of Ancient Monuments.

- 7.32 No archaeological deposit will be entirely removed unless this is unavoidable to meet the aims of the trial trenching.

Recording

- 7.33 The perimeter of each trench and all archaeological remains within the trenches will be recorded in plan using metric survey-grade equipment (or its equivalent) (English Heritage, 2003).
- 7.34 Where no archaeological remains are recorded a representative section of each trench, showing the soil profile should be drawn and included in the report.
- 7.35 A full written, drawn and photographic record will be made of each trench even where no archaeological features are identified. Hand drawn plans and sections of features will be produced at an appropriate scale (normally 1:20 for plans and 1:10 for sections). Where archaeological features are present one long section of each trench will be drawn at a scale of not less than 1:50. All plans and sections will include spot heights relative to Ordnance Datum in metres, correct to two decimal places.

Photographs

- 7.36 The digital cameras used will have a minimum resolution of 12 megapixels. Digital images will only be acceptable if each image is supplied in three file formats (as a RAW data file, a DNG file and as a JPEG file). The Contractor must include metadata embedded in the DNG file. The metadata must include the following: the commonly used name for the site being photographed, the relevant centred Ordnance Survey grid coordinates for the site to at least six figures, the relevant township name, the date of photograph, the subject of the photograph, the direction of shot and the name of the organisation taking the photograph.
- 7.37 Digital photography can be used in accordance with the following guidance: Digital photography will be undertaken in accordance with standards set by Historic England and the recipient archive. All digital photography will be undertaken using a high-quality camera recommended to have no less than an APS-C or DX size sensor of 10 megapixels and to be capable of generating images in TIF (v6) or unprocessed RAW format. All digital records will be treated in accordance with a project data management plan. Digital records will be routinely downloaded, stored, and backed up in a secure location. All digital records will be consistently labelled, files logically structured, and embedded with appropriate metadata (or have their metadata stored in an accompanying spreadsheet).

Artefact Recovery

- 7.38 All artefacts will be collected, stored and processed in accordance with standard methodologies and national guidelines (refer to **Appendix 1**). Except for modern artefacts all finds will be collected and retained. Each 'significant find' will be recorded

three dimensionally. Similarly, if artefact scatters such as evidence of flint working are encountered these should be also recorded three dimensionally. Bulk finds will be collected and recorded by context.

- 7.39 Where necessary the artefacts will be stabilised, conserved and stored in accordance with the current conservation guidelines and standards (see **Appendix 1**). Artefacts will be properly conserved after excavation and will be stabilised for storage. If necessary, a conservator will visit the site to undertake 'first aid' conservation treatment.
- 7.40 As a guiding principle, only artefacts of a 'displayable' quality would warrant full conservation, but all metalwork from stratified contexts would be expected to be x-rayed.
- 7.41 Artefacts will be stored in appropriate materials and conditions and monitored to minimise further deterioration.

Environmental Sampling

- 7.42 The Method Statement will outline an appropriate environmental/ industrial sampling strategy. The Historic England Regional Advisor for Archaeological Science, Dr Andy Hammon (Andy.Hammon@historicengland.org.uk, Tel 07747 486255), will be notified of the commencement of the project and will be consulted regarding the sampling strategy proposed by the Contractor.
- 7.43 Bulk samples (40 Litres or more) must be taken from all securely stratified deposits using a strategy which combines systematic and judgement sampling, but which also follows the methodologies outlined in the English Heritage (2011) 'Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (Second Edition)' guidance.
- 7.44 Samples for specialist environmental analysis and scientific dating (soil profiles, archaeomagnetic dating, dendrochronology and stimulated thermo luminescence etc., should be taken if suitable material is encountered during the excavation. The Historic England Science Advisor should be consulted and provision should be made for an appropriate specialist(s) to visit the site, take samples and discuss the sampling strategy, if necessary. Any samples taken must come from appropriately cleaned surfaces, be collected with clean tools and be placed in clean containers. They will be adequately recorded and labelled and a register of all samples will be kept. Once the samples have been obtained they should be stored appropriately in a secure location prior to being sent to the appropriate specialist.

Human Remains

- 7.45 Any human remains that are discovered must initially be left in-situ, covered and protected. SYAS will be notified at the earliest opportunity. If removal is necessary the remains must be excavated archaeologically in accordance with the ClfA Technical Paper 14 "Excavation and Post-Excavation Treatment of Cremated and Inhumed Remains (Mckinley and Roberts 1994). The treatment of human remains will be in accordance with Guidance for Best Practice for Treatment of Human Remains

Excavated from Christian Burial Grounds in England (Advisory Panel on the Archaeology of Burials in England 2017).

- 7.46 In the event of the discovery of human remains the Contractor will notify the Consultant and SYAS and the Ministry of Justice.

Treasure Trove

- 7.47 Any artefacts which are recovered that fall within the scope of the Treasure Act 1996 and the Treasure (Designation) order 2002 will be reported to the Consultant, the Senior Archaeological Officer and to H. M. Coroner by the Contractor. Any finds must be removed to a safe place and reported to the local coroner as required by the procedures as laid down in the 'Code of Practice' as detailed in the Treasure (Designation) Order (HMSO 2002). Where removal cannot be effected on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft.

Unexpected or Complex Archaeological Remains

- 7.48 Should there be unexpectedly significant or complex discoveries made that warrant, in the professional judgement of the archaeologist on site, more detailed recording than is appropriate within the terms of this specification, then the Contractor should contact the Consultant and the Senior Archaeological Officer with the relevant information to enable them to resolve the matter. No works should be undertaken until a strategy is formulated.

Site Notices

- 7.49 Subject to the agreement of the client and the Principal Contractor (if applicable) the Contractor will display site notices detailing what work is being undertaken. The notice will be a minimum of A3 size, with font at a minimum size of 16 point.

8. OUTREACH

- 8.1 A range of outreach and engagement activities will be devised for the duration of the works.
- 8.2 Wherever possible, attempts should be made to seek opportunities to disseminate the results of the evaluation to the wider public. This could be in the form of open days, social media or press releases.
- 8.3 Any opportunities for engaging the local community in any archaeological findings should be sought, for example a guided site tour and/or dissemination of information via WYAS website, social media and local media.
- 8.4 A strategy of Public Outreach and Interpretation is to be developed during the programme of archaeological works, which will enable The Scheme to secure wider social, economic and environmental benefits in line with the Social Value Act 2013. The strategy will be developed in liaison with key stakeholders, the project team and the

Riverlinx CJV Community Construction Liaison team, in line with The Scheme's Community Engagement Plan¹⁶, with the aim of making the heritage work that is undertaken throughout the Scheme available for the public to view and be educated by. This will enhance the public's understanding and enjoyment of the local history, as a result of the Scheme going ahead.

9. REPORTING

- 9.1 An Interim Statement of the results of the evaluation will be prepared and submitted to the Consultant within 1 week of the completion of the fieldwork. It will include:
- a brief summary of the results;
 - a plan showing all the trenches and the features excavated at an appropriate scale;
 - a plan of each trench at an appropriate scale, showing the mapped features; and
 - a quantification of the primary archive including contexts, finds, samples and copies of specialist assessment reports (where available).
- 9.2 The finds and samples will be processed (cleaned and marked) as appropriate.
- 9.3 Artefact analysis is to include the production of a descriptive catalogue, quantification by context and discussion/interpretation if warranted, with finds critical for dating and interpretation illustrated.
- 9.4 Reporting on ceramic artefacts and pottery should follow the guidance given in 'A Standard for Pottery Studies in Archaeology' (2016) and endorsed by the Prehistoric Ceramics Research Group; the Study Group for Roman Pottery & the Medieval Pottery Research Group.
- 9.5 Once the Interim Statement had been completed and submitted, a meeting with SYAS will be arranged by the Consultant, either at the SYAS offices or on site, to discuss the results and agree what, if any, additional work may be warranted. The meeting may take the form of a telephone discussion at SYAS' discretion. Following the meeting the archaeological contractor will either produce a report (if no further archaeological work is warranted), or an updated specification (if further work is required) will be prepared by the Consultant and will be submitted to SYAS for written approval prior to the commencement of any further work.
- 9.6 If further fieldwork is required, the results of the evaluation will be integrated into an overall report encompassing all stages of work. However, if a different contractor is employed by the developer to undertake subsequent works, then a full, formal evaluation report (see below) should be prepared and accepted by SYAS before further fieldwork commences.
- 9.7 If a fieldwork report is required a fieldwork report will be submitted in draft within 4 weeks of the completion of fieldwork. The preparation of the site archive will be undertaken in accordance with this Specification and will follow relevant archaeological standards and national guidelines (**Appendix 1**). The report will include the following:

- a QA sheet detailing as a minimum - title, author, version, date, checked by, approved by;
- the dates of the fieldwork;
- a non-technical summary;
- a site location drawing;
- the archaeological and historical background;
- the methodology employed for the evaluation;
- the aims and objectives of the investigations;
- the results of the evaluation (to include full description, assessment of condition, quality and significance of the remains, specialist artefact and environmental reports; and phased interpretation);
- a stratigraphic matrix for each trench (as appropriate);
- assessment /conclusion and a statement of potential with recommendations for further work and analysis. The Environmental analysis is to include identification of the remains, quantification by context, discussion/interpretation if warranted, and a description of the processing methodology. Radiocarbon results must be presented in full (laboratory sample number, conventional radiocarbon age, delta C13 value, calibration programme). Copies of the laboratory-issued dating certificates must be included as an appendix to the report;
- details of the projects selection and retention policy should be given with reference to each category of evidence accessed;
- a statement of the significance of the results in their local, regional and national context cross referenced to the current research agendas;
- publication proposals if warranted;
- the current and proposed arrangements for archive storage (including recipient museum details). As a minimum this should include details of the location of the (intended) repository;
- general and detailed plans showing the location of the survey accurately positioned on an Ordnance Survey base map (at an appropriate and recognised scale). This should include levels on features and at the base of the trial trench;
- detailed plans and sections illustrating archaeological features (at an appropriate and recognised scale);
- colour photographic plates illustrating the site setting, work in progress and archaeological discoveries; and
- a cross-referenced index of the project archive d detailed context index.

9.8 In order to inform a mitigation strategy for the project, the fieldwork report will include a statement of potential and recommendations for further excavation and assessment.

9.9 The fieldwork report will specifically comment on the level of preservation and will comment on the character of the overlying deposits and on the potential for extrapolating the results into adjacent areas.

- 9.10 A digital pdf copy (complete with illustrations and plates) of the completed report will be submitted to the Consultant as a draft for comment. In finalising the report the comments of the Consultant will be taken into account.
- 9.11 One bound copy of the report will be submitted to SYAS within one week of the receipt of comments on the draft report. A PDF which is ISO19005-1 PDF-A compliant will also be submitted to the Historic Environment Record and the Planning Authority via weTransfer. A PDF copy should also be sent to Historic England's Science Advisor.
- 9.12 Shapefiles of the excavated trenches will be submitted to SYAS on completion of the reporting.

10. MONITORING, PROGRESS REPORTS & MEETINGS

- 10.1 The fieldwork will be subject to suitable monitoring visits by the Consultant and SYAS who will have unrestricted access to the site, site records or any other information. The work will be inspected to ensure that it is being carried out to the required standards and that it will achieve the stated objectives.
- 10.2 During fieldwork monitoring visits SYAS officers will take digital photographs which may be published on the Advisory Service's social media feeds as part of an ongoing strategy to enable public access to information about current fieldwork in the county.
- 10.3 Weekly written progress reports will be provided to the Consultant by the Contractor during the fieldwork.
- 10.4 Progress meetings between the Consultant, SYAS and the Contractor will be held on site during the course of the fieldwork. These meetings will be arranged by the Consultant.
- 10.5 The Contractor will only accept instruction from the Consultant and SYAS.

11. ARCHIVE PREPARATION & DEPOSITION

- 11.1 Before commencing any fieldwork, the archaeological contractor must contact the Clifton Park Museum to determine the museum's requirements for the deposition of the excavation archive. Deposition should be confirmed in writing by the Contractor; with correspondence copied to SYAS.
- 11.2 The Contractor will be required to submit the Project Initiation Form, Mid Project Agreement and Completion Form (<https://www.sheffield.gov.uk/home/planning-development/south-yorkshire-archaeology-service/guidance-for-archaeological-projects>) to Clifton Park Museum at appropriate stages of the project.
- 11.3 The Contractor is encouraged to use the ClfA 'Toolkit for selecting Archaeological Archives' (<http://archaeologists.net/selection-toolkit>).
- 11.4 The recipient Museum will be contacted to obtain an accession number. The Contractor will liaise with the Museum regarding the timescale for deposition of the

physical archive and resources for box storage and other matter relevant to the long term curation of the archive.

- 11.5 It is the responsibility of the Contractor to endeavour to obtain consent of the landowner, in writing, to the deposition of finds with the Clifton Park Museum. It is the responsibility of the Contractor to meet the Museums' requirements with regard to the preparation of excavation archives for deposition. The archive of finds and records generated during the fieldwork will be kept secure at all stages of the project. All records and materials produced will be quantified, ordered, indexed and internally consistent. The archive will be produced to the standards outlined by Historic England on the Management of Research Projects in the Historic Environment; The MoRPHE Project Managers Guide (2015) and the Society for Museum and Archaeology (2020) Standards and Guidance in the Care of Archaeological Collections.
- 11.6 Archaeological material recovered from fieldwork is irreplaceable and data recorded in the course of fieldwork can and should be copied and additionally held securely in a separate location in line with current best practice until it can be deposited in the recipient repository (English Heritage 2011).
- 11.7 The artefacts discovered are the property of the Landowner. The Landowner will be contacted on completion of the fieldwork to agree for the artefacts to be deposited with the recipient museum as part of the site archive.
- 11.8 The deposition of the archive forms the final stage of each phase of fieldwork at the site. The 'Contractor' shall provide the Consultant with copies of communication with the accredited repository and written confirmation of the deposition of the archive. The Consultant will deal with the transfer of ownership and copyright issues.
- 11.9 The Contractor should commence an OASIS fieldwork summary form at the beginning of a project. Within 3 months of the completion of the report, the Contractor will also prepare and submit the online OASIS form (<http://ads.ahds.ac.uk/project/oasis>). When completing the form the Contractor must make reference to the Regional Research Framework. The Contractor is advised to ensure that adequate time and costings are built into their budget to allow sufficient time to complete the form.

12. PUBLICATION

- 12.1 If significant results are obtained and it is likely that further stages of archaeological work will be required, publication shall be deferred until such time as the project works are substantially complete.
- 12.2 The format of any publication shall be commensurate with the importance of the results and be agreed in advance with the Consultant and SYAS.
- 12.3 Where appropriate a note on the fieldwork should be prepared for inclusion in the Council for British Archaeology's Yorkshire Forum publication (please contact the editor or CBA's website for more information forum-editor@cba-yorkshire.org.uk).

13. CONFIDENTIALITY & PUBLICITY

- 13.1 All communication regarding this project is to be directed through the Consultant. The Contractor will refer all inquiries to the Consultant without making any unauthorised statements or comments.
- 13.2 The Contractor will not disseminate information or images associated with the project for publicity or information purposes without the prior written consent of the Consultant.

14. COPYRIGHT

- 14.1 The Contractor shall retain full copyright of any commissioned reports, tender documents or other project documents, under the Copyright, Designs and Patents Act 1988 with all rights reserved; excepting that it will provide an exclusive licence to the client for the use of such documents by the client in all matters directly relating to the project as described in the Specification subject to due acknowledgement. The Contractor should agree to assign copyright to the client upon written request but retains the right to be identified as the author of all project documentation and reports as defined in the Copyright, Designs and Patents Act 1988 (Chapter IV, s.79).
- 14.2 Please note that by depositing this report, the contractor gives permission for the material presented within the document to be used by the SYAS, in perpetuity, although The Contractor retains the right to be identified as the author of all project documentation and reports as specified in the Copyright, Designs and Patents Act 1988 (chapter IV, section 79). The permission will allow the SYAS to reproduce material, including for commercial use by third parties, with the copyright owner suitably acknowledged.

15. RESOURCES AND TIMETABLE

- 15.1 All personnel involved in the project should be suitably qualified and experienced professionals.
- 15.2 The trial trenching will commence within two weeks from written instruction.
- 15.3 A brief summary/ interim report will be made available to BWB and SYAS one week after the completion of the fieldwork. This will include an overview of the works and will provide a preliminary interpretation of the archaeology encountered.
- 15.4 The full report will be sent to the Consultant and SYAS within two weeks of completion of the fieldwork.

16. ADHERENCE TO SPECIFICATION

- 16.1 Prior to the commencement of the work, the Contractor must confirm adherence to this specification in writing via email to the Consultant.

- 16.2 If, on first visiting the site or at any time during the course of the recording exercise, it appears in the Contractors professional judgement that:
- i. a part or the whole of the site is not amenable to recording as detailed above, and/or;
 - ii. an alternative approach may be more appropriate or likely to produce more informative results;
- 16.3 then it is expected that the Contractor will contact SYAS and the Consultant as a matter of urgency in order that the matter can be resolved in liaison with the developer and the Local Planning Authority.
- 16.4 It is the Contractor's responsibility to ensure that they have obtained SYAS' consent in writing to any variation of the specification prior to the commencement of on-site work or (where applicable) prior to the finalisation of the tender. Unauthorised variations may result in SYAS being unable to recommend determination of the planning application to the Local Planning Authority based on the archaeological information available and are therefore made solely at the risk of the Contractor.

17. ACCESS ARRANGEMENTS AND WELFARE

- 17.1 Access to the site is restricted to authorised personnel only.
- 17.2 The Consultant will organise access to the site.

18. INSURANCES & HEALTH AND SAFETY

- 18.1 The Contractor will provide the Consultant with details of public and professional indemnity insurance.
- 18.2 The Contractor will have their own Health & Safety policies compiled using national guidelines and which conform to all relevant Health & Safety legislation.
- 18.3 The Contractor will undertake a risk assessment detailing project specific Health & Safety requirements. The risk assessment shall be submitted to the Consultant for approval prior to the commencement of site work. Health & Safety will take priority over archaeological issues.
- 18.4 The supervisor will keep a record of staff site attendance.
- 18.5 All site personnel will familiarise themselves with the following:
- site emergency and evacuation procedures;
 - the first aider; and
 - the location of the nearest hospital and doctors surgery.
- 18.6 All site personnel will wear full P.P.E consisting of hard hat, steel toe-capped boots and high-visibility vest or jacket at all times. Additional P.P.E will be issued by the Contractor

as required, i.e. goggles, ear defenders, masks, gloves etc. In addition, site personnel will ensure that any visitors to the site are equipped with suitable P.P.E prior to entry. The Contractor has the right to prevent access on to the site if visitors do not have the proper P.P.E.

- 18.7 The Contractor will make a record of all parties attending the site including time attended and time left. The Contractor will also inform the visitors of the Health and Safety procedures, emergency evacuation procedures, the location of the nearest doctor's surgery and hospital and who the site first aider is.
- 18.8 The site will be left in a tidy and workman-like condition and the Contractor will ensure they remove all materials brought onto the site.

19. GENERAL PROVISIONS

- 19.1 Any technical queries arising from this document will be addressed to the Consultant without delay.
- 19.2 All communications on archaeological matters will be directed through the Consultant.
- 19.3 This specification is valid for a period of 6 months from date of issue. After that time it may need to be revised to take account of new discoveries, changes in policy, standards and guidelines or the introduction of new working practices or techniques.

20. BIBLIOGRAPHY

ASDU, 2023 Barnburgh Lane, Goldthorpe South Yorkshire – Geophysical Survey

British Geological Survey, 2021, *Geology of Britain Viewer*, <https://mapapps.bgs.ac.uk/geologyofbritain/home.html>, viewed May 2023

CIfA, 2020, Standards and Guidance for archaeological field evaluation CIfA, 2021, Code of Conduct

Elevation Finder, <https://www.freemaptools.com/elevation-finder.htm>, viewed May 2023

LandIS, *Soilscapes Viewer*, <https://www.landis.org.uk/soilscapes/>.

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FIGURES

APPENDICES

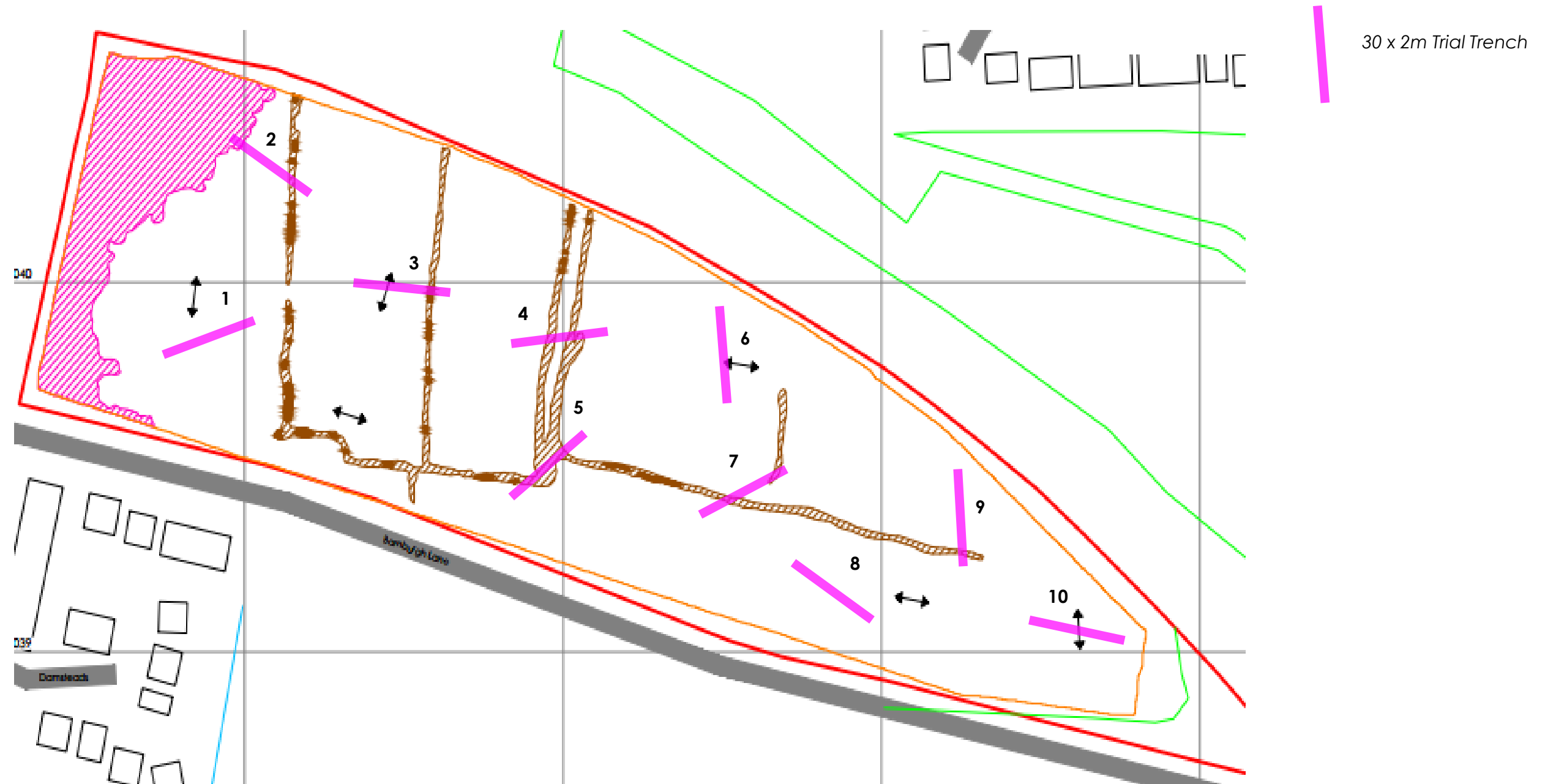


Figure 2 Location of Trial Trenches overlaid on to Geophysical Survey Interpretation

APPENDIX 1
Archaeological Standards and Guidelines

ARCHAEOLOGICAL STANDARDS AND GUIDELINES

Advisory Panel on the Archaeology of Burials in England (APABE) 2013. Science and the Dead: A guideline for the destructive sampling of archaeological human remains for scientific analysis

AAF, 2007, Archaeological Archives. A guide to best practice in creation, compilation, transfer and curation. Archaeological Archives Forum

Advisory Panel on the Archaeology of Burials in England (APABE) 2015. Large Burial Grounds Guidance on sampling in archaeological fieldwork projects

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ALGAO: England 2015. Advice note for post-excavation assessment

CIfA 2017, Updated Guidelines to the Standards for Recording Human Remains.

CIfA, 2021, Code of Conduct. Institute for Archaeologists (Reading)

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Historic England, 2015. Management of Research Projects in the Historic Environment. The MoRPHE Project Manager's Guide.

Historic England, 2015. Digital Image Capture and File Storage: Guidelines for Best Practice.

Historic England 2017, Christian Burial Grounds in England.

Historic England 2018, The Role of the Human Osteologist in an Archaeological Fieldwork Project.

Historic England's 2018, guidance on Science for Historic Industries

Society for Museum and Archaeology 2020, Standards and Guidance in the Care of Archaeological Collections.

APPENDIX 2
Geophysical Survey Report

ARCHAEOLOGICAL
SERVICES
DURHAM UNIVERSITY

on behalf of
BWB Consulting Ltd

Barnburgh Lane
Goldthorpe
South Yorkshire

geophysical survey

report 5934
March 2023

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1. Summary

The project

- 1.1 This report presents the results of a geophysical survey conducted in advance of proposed development of land at Barnburgh Lane, Goldthorpe, South Yorkshire. The works comprised approximately 2.9ha of magnetometer survey.
- 1.2 The works were commissioned by BWB Consulting Ltd and conducted by Archaeological Services Durham University.

Results

- 1.3 Probable ditches, possibly representing land boundaries pre-dating the OS, have been identified.
- 1.4 Traces of former ridge and furrow cultivation have been detected.
- 1.5 An area of disturbed ground has been detected.

2. Project background

Location (Figure 1)

- 2.1 The survey area was located on land at Barnburgh Lane, Goldthorpe, South Yorkshire (NGR centre: SE 4689 0397). To the north were trees along a dismantled railway line and a housing development on a former colliery site; to the east was farmland; to the south was Barnburgh Lane with farmland beyond; to the west and south-west were residential estates.
- 2.2 One survey of approximately 2.9ha was conducted in a single land parcel, covering over 90% of the 3.1ha proposed development area (PDA).

Development proposal

- 2.3 A residential development is proposed.

Objective

- 2.4 The aim of the survey was to assess the nature and extent of any sub-surface features of potential archaeological significance within the survey area, so that an informed decision may be made regarding the nature and scope of any further scheme of archaeological works that may be required in relation to the development.
- 2.5 The regional research framework *South Yorkshire Historic Environment Research Framework* (<https://researchframeworks.org/syrf/> accessed 17-03-2023) contains an agenda for archaeological research in the region, which is incorporated into regional planning policy implementation. In this instance, the scheme of works was designed to address research questions relating to the Iron Age and Romano-British, Later Medieval, Post Medieval, and Industrial periods.

Methods statement

- 2.6 The surveys have been undertaken in accordance with instructions from the client, a method statement provided by Archaeological Services Durham University and national standards and guidance (see para. 5.1 below).

Dates

- 2.7 Fieldwork was undertaken on 6th March 2023. This report was prepared for March 2023.

Personnel

- 2.8 Fieldwork was conducted by Mark Woolston-Houshold. Geophysical data processing and report preparation was by Richie Villis, with illustrations by David Graham. The project manager was Richie Villis.

Archive/OASIS

- 2.9 The site code is **GBL23**, for **Goldthorpe Barnburgh Lane 2023**. The survey archive will be retained at Archaeological Services Durham University and a copy supplied on CD to the client for deposition with the project archive in due course. Archaeological Services Durham University is registered with the **Online Access to the Index of archaeological investigations project (OASIS)**. The OASIS ID number for this project is **archaeol3-514063**.

3. Historical and archaeological background

- 3.1 The South Yorkshire SMR (accessed via www.heritagegateway.org.uk) lists four records within 1km of the centre of the PDA. These include the cropmark of a possible Iron Age or Romano-British enclosure at Hickleton, to the north of the PDA, and cropmarks of a possible Iron Age or Romano-British track and field boundary to the south of the PDA. The other two entries are for a dovecote approximately 800m south-east of the PDA and the site of a former 'Fire Engine' marked on a 1772 map 300m south of the PDA.
- 3.2 Although there is no direct evidence of prehistoric or Romano-British activity in the PDA, evidence that the surrounding area was exploited in prehistory does exist; a resource relating to this exploitation may therefore survive within the PDA.
- 3.3 There is no direct evidence of medieval or post-medieval activity within the PDA. The site lies beyond the historic cores of the medieval villages of Goldthorpe, to the west, and Barnburgh, to the east. Historic maps show the PDA was probably in agricultural use throughout the medieval and post-medieval periods.
- 3.4 By far the biggest changes in the landscape took place during the early parts of the 20th century when the industrial revolution saw the construction of the Dearne Valley Railway along the northern edge of the PDA and later the opening of Goldthorpe Colliery to the north.

4. Landuse, topography and geology

- 4.1 At the time of survey the proposed development area comprised a single arable field that had been rolled and seeded. To the north were trees and bushes, to the south was Barnburgh Lane, to the west was a tarmacked public footpath. Three steel streetlights were alongside Barnburgh Lane. Steel security fencing was in the north-west corner.
- 4.2 The area undulated gently with elevations of between 40m OD and 32m OD.
- 4.3 The underlying solid geology of the area comprises Carboniferous mudstone, siltstone and sandstone of the Pennine Middle Coal Measures Formation. No overlying superficial deposits are recorded. An area of artificial made-ground is recorded to the north of the PDA along the line of the former railway and across the former Goldthorpe Colliery site.

5. Geophysical survey Standards

- 5.1 The survey and reporting were conducted in accordance with the Chartered Institute for Archaeologists (CIfA) *Standard and Guidance for archaeological geophysical survey* (2020); the *EAC Guidelines for the Use of Geophysics in Archaeology* (Schmidt *et al.* 2015); and the Archaeology Data Service & Digital Antiquity *Geophysical Data in Archaeology: A Guide to Good Practice* (Schmidt 2013).

Technique selection

- 5.2 Geophysical survey enables the relatively rapid and non-invasive identification of sub-surface features of potential archaeological significance and can involve a suite of complementary techniques such as magnetometry, earth electrical resistance, ground-penetrating radar, electromagnetic survey and topsoil magnetic susceptibility survey. Some techniques are more suitable than others in particular situations, depending on site-specific factors including the nature of likely targets; depth of likely targets; ground conditions; proximity of buildings, fences or services and the local geology and drift.
- 5.3 In this instance it was considered likely that cut features such as ditches and pits might be present on the site, and that other types of feature such as trackways, wall foundations and fired structures (for example kilns and hearths) could also be present.
- 5.4 Given the anticipated nature and depth of targets, and the non-igneous geological environment of the study area, a magnetic technique, fluxgate gradiometry, was considered appropriate for detecting the types of feature mentioned above. This technique involves the use of magnetometers to detect and record anomalies in the vertical component of the Earth's magnetic field caused by variations in soil magnetic susceptibility or permanent magnetisation; such anomalies can reflect archaeological features.

Field methods

- 5.5 Magnetic gradient measurements were determined using a Sensys Magneto MX V3 multi-sensor magnetometer survey system towed by a quad-bike. Eight FGM650/3 fluxgate gradiometer sensors were mounted at 0.5m intervals, logging data at less than 0.08m intervals along traverses, providing high density data collection.
- 5.6 Data collection point locations were recorded using an integrated global navigation satellite system (GNSS) with real-time kinematic (RTK) correction typically providing 5-10mm accuracy and subsequently converted to the Ordnance Survey (OS) National Grid using the OSTN15 transformation.
- 5.7 Data were downloaded on site into a laptop computer for initial processing and storage and subsequently transferred to a desktop computer for processing, interpretation and archiving.

Data processing

- 5.8 Sensys MonMX, DLMGPS and MagnetoARCH software were used to record and display gradient and positional data, to create a matrix of gridded values at 0.2m by 0.2m intervals and to produce a continuous tone greyscale image of the raw data. TerraSurveyor software was then used to produce a continuous tone greyscale image of filtered data. Trace plots of the data were examined but are not presented in this report. The greyscale images are presented in Figures 2-3; geophysical and archaeological interpretations are presented in Figures 4-5. In the greyscale images, positive magnetic anomalies are displayed as dark grey and negative magnetic anomalies as light grey. Palette bars relate the greyscale intensities to anomaly values in nanoTesla.
- 5.9 The following basic processing functions have been applied to the magnetic data:

<i>clip</i>	clips data to specified maximum or minimum values; to eliminate large noise spikes; also generally makes statistical calculations more realistic
<i>de-spike</i>	locates and suppresses iron spikes in gradiometer data
<i>interpolate</i>	increases the number of data points in a survey to match sample and traverse intervals; in this instance the data have been interpolated to 0.1m x 0.1m intervals

5.10 The following filter has been applied to the magnetic data (Figure 3):

<i>low pass filter</i>	(applied with Gaussian weighting) to remove high frequency, small-scale spatial detail; for enhancing larger weak features and smoothing data
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Interpretation: anomaly types

5.11 A colour-coded geophysical interpretation plan is provided. Three types of magnetic anomaly have been distinguished in the data:

<i>positive magnetic</i>	regions of anomalously high or positive magnetic field gradient, which may be associated with high magnetic susceptibility soil-filled structures such as pits and ditches
<i>negative magnetic</i>	regions of anomalously low or negative magnetic field gradient, which may correspond to features of low magnetic susceptibility such as wall footings and other concentrations of sedimentary rock or voids
<i>dipolar magnetic</i>	paired positive-negative magnetic anomalies, which typically reflect ferrous or fired materials (including fences and utilities) and/or fired structures such as kilns or hearths

Interpretation: features

5.12 A colour-coded archaeological interpretation plan is provided.

5.13 Several series of parallel, broad, alternate positive and negative magnetic anomalies have been detected across the survey area on at least four different orientations. These almost certainly reflect traces of former ridge and furrow cultivation. Former field boundaries are shown on historic OS editions that broadly correspond to changes in the orientation of these remnant cultivation features.

5.14 Relatively well-defined rectilinear positive magnetic anomalies have been detected on a slightly differing alignment to the former cultivation. These anomalies reflect relatively high magnetic susceptibility materials, almost certainly representing sediment in former ditches. The varying strength of these anomalies reflects a variation in the sediment, perhaps representing differing fills including possibly burnt material or more richly organic material. It is possible that these features represent land boundaries pre-dating the early OS editions and the construction of the adjacent railway to the north.

- 5.15 Small, discrete dipolar magnetic anomalies have been detected across the survey area. These almost certainly reflect items of near-surface ferrous and/or fired debris, such as horseshoes and brick fragments, and in most cases have little or no archaeological significance. A sample of these is shown on the geophysical interpretation plan, however, they have been omitted from the archaeological interpretation plan.
- 5.16 A concentration of these anomalies has been detected along the western boundary of the area; these almost certainly reflect ground disturbance or other imported material, possibly associated with the construction of the adjacent track sometime between the 1930 and 1962 OS editions.
- 5.17 Larger dipolar magnetic anomalies detected along the southern boundary correspond to streetlights along Barnburgh Lane.

6. Conclusions

- 6.1 Approximately 2.9ha of magnetometer survey was undertaken on land at Barnburgh Lane, Goldthorpe, South Yorkshire, prior to proposed residential development.
- 6.2 Probable ditches, possibly representing land boundaries pre-dating the OS, have been identified.
- 6.3 Traces of former ridge and furrow cultivation have been detected.
- 6.4 An area of disturbed ground has been detected.

7. Sources

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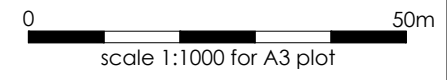
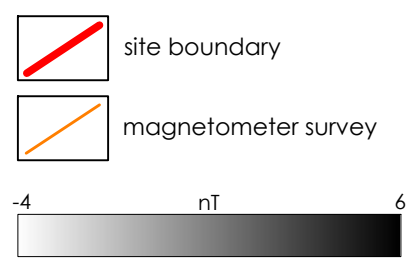
Figure 1: Site location

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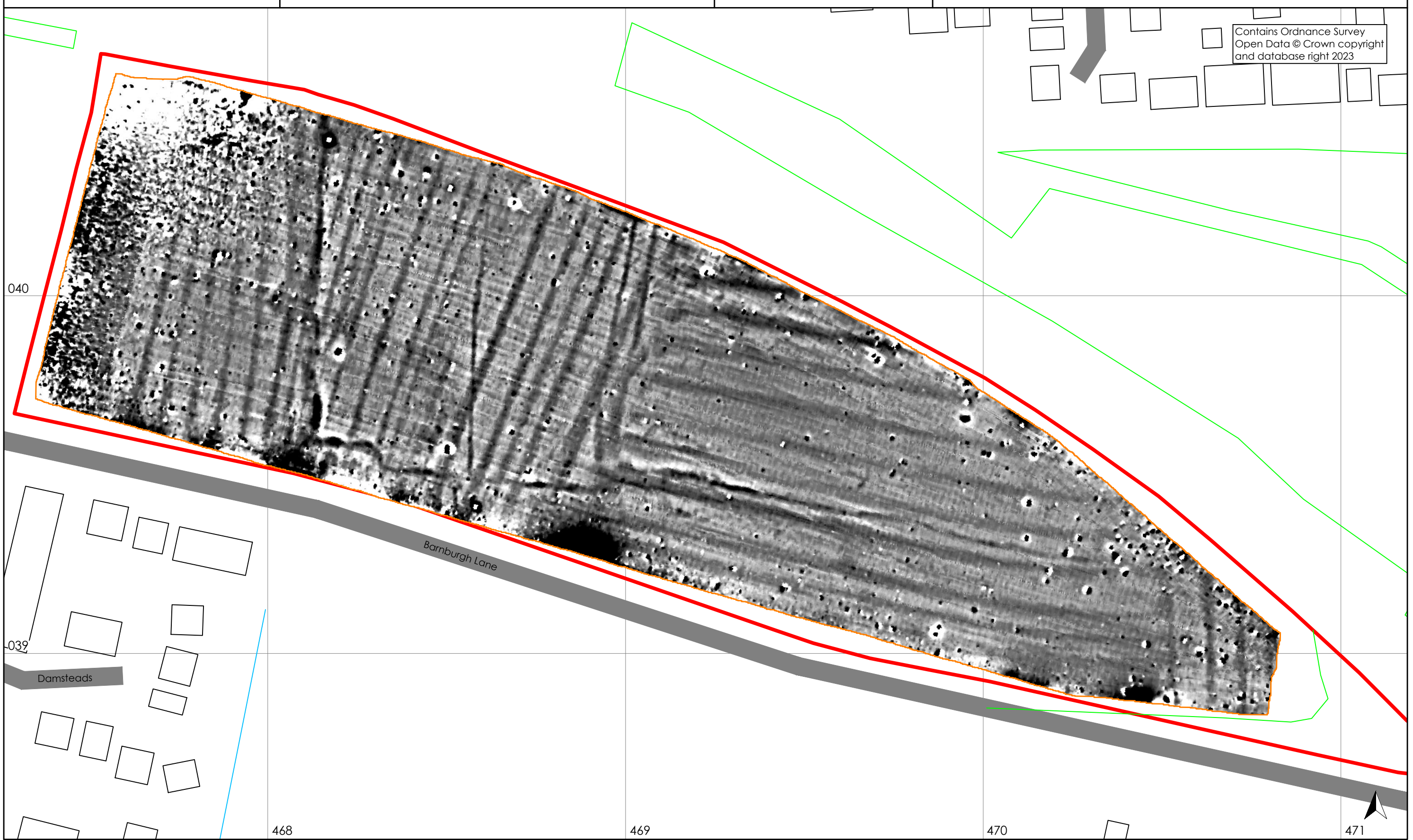
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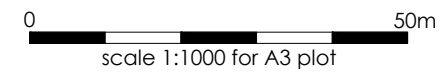
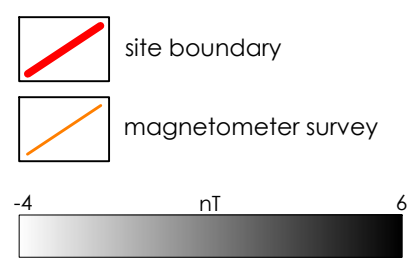
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Figure 2: Magnetometer survey

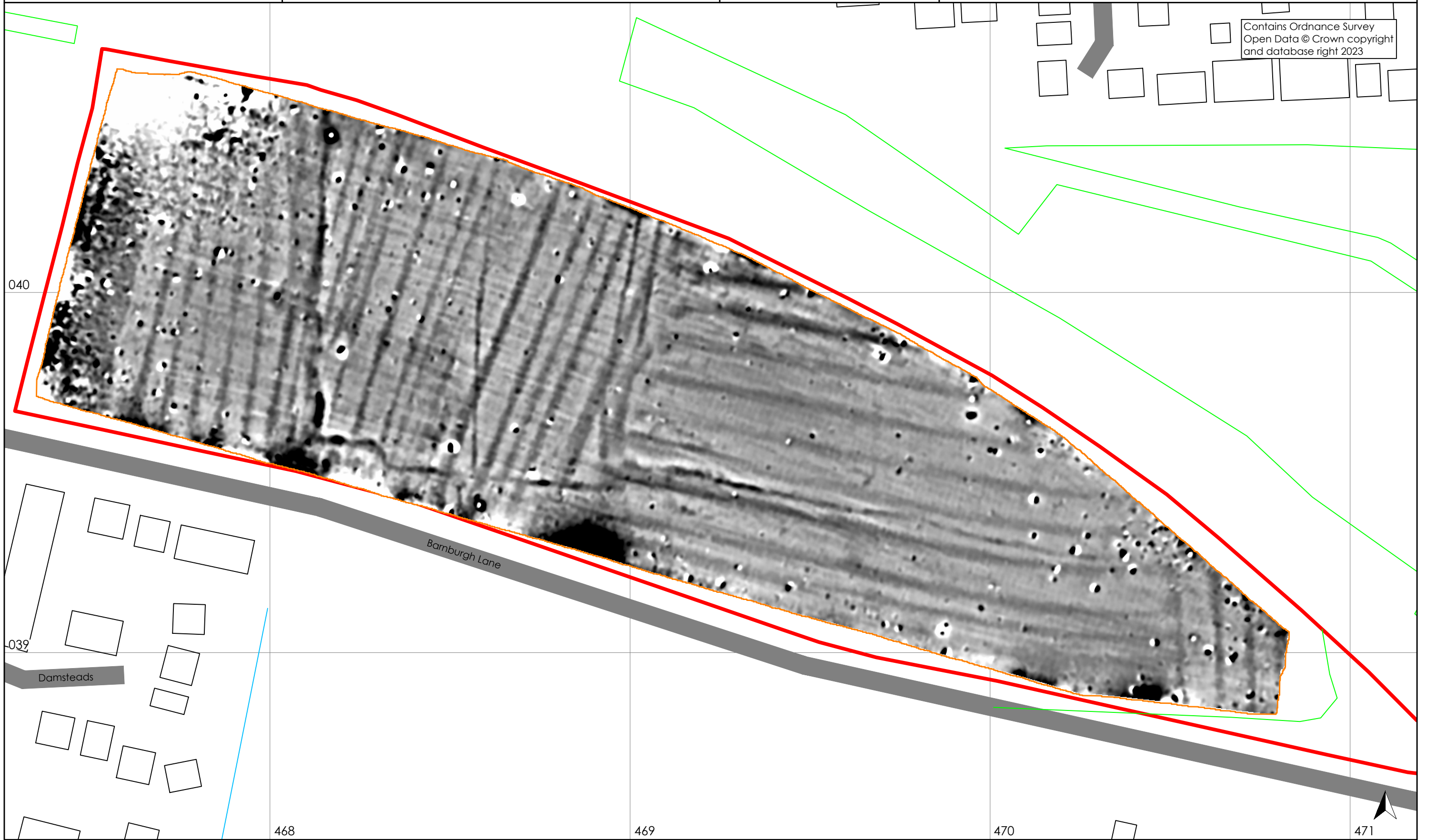


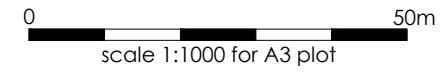
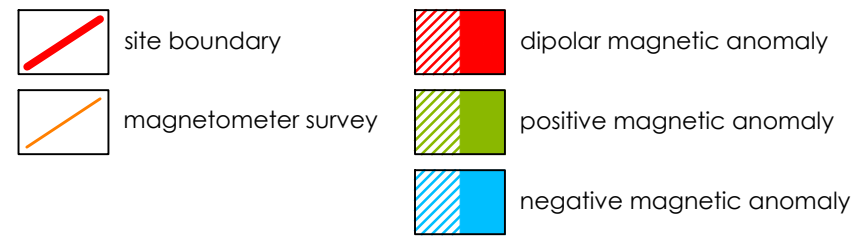


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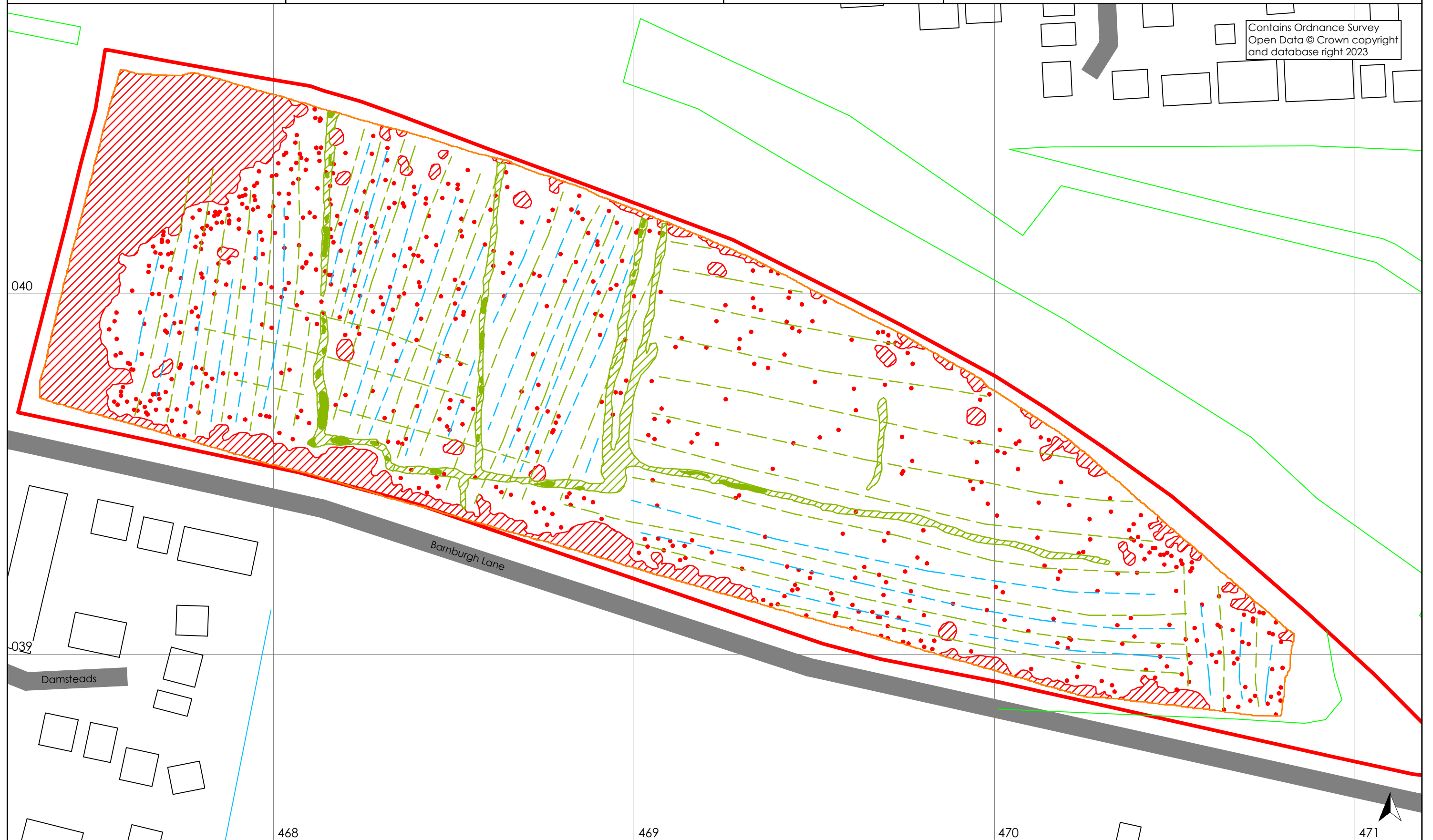
Figure 3: Magnetometer survey (filtered data)

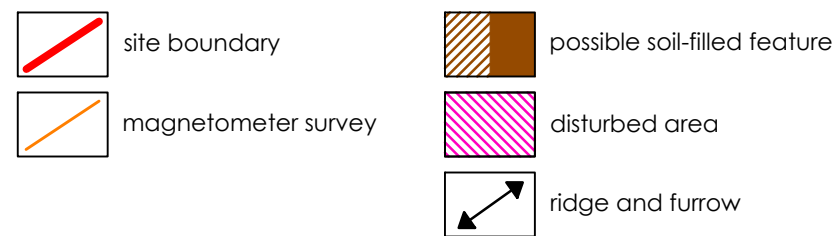




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Figure 4: Geophysical interpretation

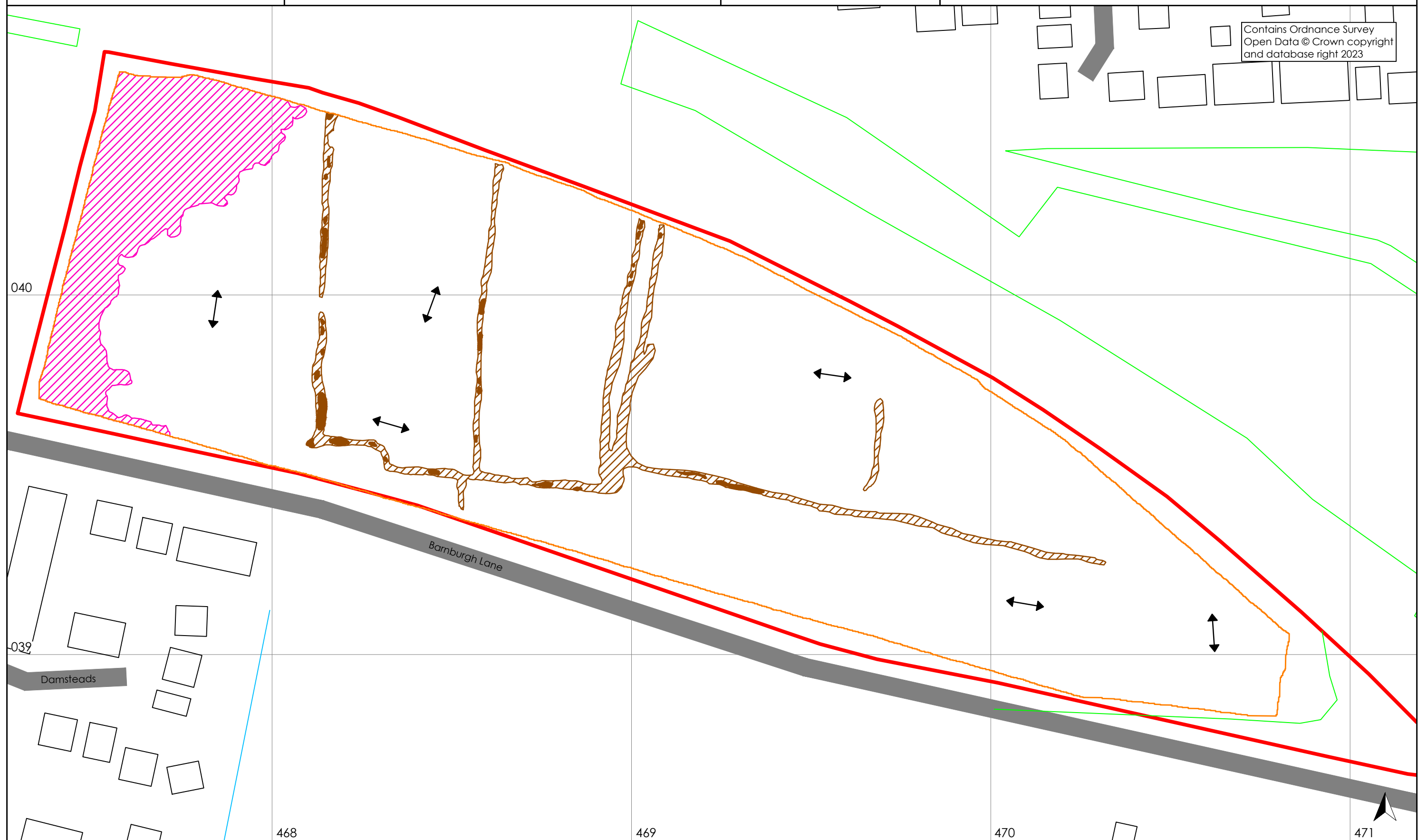




0 50m
scale 1:1000 for A3 plot

Barnburgh Lane
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Figure 5: Archaeological interpretation



Appendix 2: Inventory of primary archive

Phase	File/Box No	Description	Quantity
Evaluation	File no.1	Context registers	13
		Context sheets	31
		Digital photograph registers	2
		Drawing register	1
		Drawing sheet register	1
		Permatrace sheets	9
		Photograph registers	1
		Sample register sheets	1
		Trench record sheets	13

Appendix 3: Trench summary tables

Trench 1					
General Description				Orientation	E-W
Trench contained four land drains and one ditch.				Average Depth (m)	0.40
				Width (m)	2.00
				Length (m)	30.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
100	Layer	-	-	0.28	Topsoil – mid-brown clayey silt with stone inclusions
101	Layer	-	-	0.20	Subsoil – firm mid-greyish brown silty clay
102	Layer	-	-	-	Natural – firm mid-orangey brown sandy clay
103	Cut	0.90	1.28	0.38	Cut of ditch – V-shaped profile with rounded base, north-south oriented, part of enclosure ditch identified by geophysical survey
104	Fill	0.90	1.28	0.38	Fill of 103 – firm light brownish grey silty clay with no inclusions, no finds

Trench 2					
General Description				Orientation	SE-NW
Trench contained three land drains, one furrow and one ditch.				Average Depth (m)	0.58
				Width (m)	2.00
				Length (m)	30.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
200	Layer	-	-	0.36	Topsoil – mid-brown clayey silt with stone inclusions
201	Layer	-	-	0.14	Subsoil – firm mid-greyish brown silty clay

202	Layer	-	-	-	Natural – compacted mid-orangey brown sandy clay
203	Cut	1.10	2.08	0.54	Cut of ditch – V-shaped profile with a flat base, north-south oriented, continuation of ditch 103 observed in Trench 1
204	Fill	0.90	1.28	0.38	Fill of 204 – firm dark orangey grey silty clay, no finds

Trench 3					
General Description				Orientation	E-W
Trench contained one ditch, four furrows and four land drains.				Average Depth (m)	0.37
				Width (m)	2.00
				Length (m)	30.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
300	Layer	-	-	0.28	Topsoil – mid-brown clayey silt with stone inclusions
301	Layer	-	-	-	Natural – firm mid-orangey brown sandy clay
302	Cut	1.00	1.00	0.45	Cut of ditch – V-shaped profile, north-south oriented
303	Fill	1.00	1.00	0.45	Fill of 302 – firm mid-orangey grey clay, no finds

Trench 4						
General Description				Orientation		SE-NW
Trench contained two ditches, two furrows and three land drains.				Average Depth (m)		0.38
				Width (m)		2.00
				Length (m)		30.00
Contexts						
Context	Type	Length (m)	Width (m)	Depth (m)	Description	
400	Layer	-	-	0.29	Topsoil – mid-brown clayey silt with stone inclusions	
401	Layer	-	-	-	Natural – firm mid-orangey brown sandy clay	
402	Cut	1.10	1.24	0.73	Cut of ditch – V-shaped profile, contains two fills 403 and 404, north-south oriented	
403	Fill	1.10	0.66	0.43	Primary fill of 402 – firm mid-brownish grey sandy clay, alluvially formed	
404	Fill	1.10	1.24	0.34	Upper fill of 402 – firm mid-dark brown clayey silt with occasional sandstone inclusions, no finds	
405	Cut	1.10	1.40	0.72	Cut of ditch – V-shaped profile with three fills 406, 408 and 410, north-south oriented	
406	Fill	1.10	0.97	0.50	Lower fill of ditch 405 – firm mid-dark grey sandy clay with rare small sandstone inclusions, no finds	
407	Fill	1.10	0.70	0.08	Middle fill of ditch 405 – friable light greyish brown sandy clay, no finds	
408	Fill	1.10	1.40	0.30	Upper fill of ditch 405 – firm mid-greyish brown silty clay with some small sandstone inclusions	
409	Cut	2.80	1.80	0.29	Cut of furrow – V-shaped profile, north-south oriented with single fill 410	
410	Fill	2.80	1.80	0.29	Fill of furrow 409 – friable mid-brown clayey silt with rare sandstone inclusions, no finds	

Trench 5					
General Description				Orientation	E-W
Trench contained one ditch, one furrow and two land drains.				Average Depth (m)	0.50
				Width (m)	2.00
				Length (m)	30.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
500	Layer	-	-	0.30	Topsoil – mid-brown clayey silt with stone inclusions
501	Layer	-	-	-	Natural – firm mid-orangey brown sandy clay
502	Cut	2.00	1.22	0.40	Cut of ditch – V-shaped profile, north-south oriented, contains singular fill 503, continuation of ditch observed in Trench 4
503	Fill	2.00	1.22	0.40	Fill of 502 – firm mid-reddish yellow silty clay with frequent small iron stone and charcoal inclusions, no finds
504	Cut	1.00	0.42	0.12	Recut of ditch – V-shaped profile, filled by topsoil 505
505	Fill	1.00	0.42	0.12	Fill of 504 – friable dark brownish grey silty clay, same as topsoil, no finds
506	Cut	2.00	0.90	0.06	Cut of furrow – wide, U-shaped profile, oriented east-west, filled by 507, continuation observed in Trench 12
507	Fill	2.00	0.90	0.06	Fill of furrow 506 – friable mid-brownish yellow silty clay with frequent small sandstone inclusions
508	Cut	1.00	6.70	0.52	Cut of furrow - wide, U-shaped profile, oriented east-west, filled by 509, continuation observed in Trench 4
509	Fill	1.00	6.70	0.52	Fill of furrow 508 – firm dark brownish grey silty clay with moderate small-medium sandstone

510	Cut	1.00	0.70	0.31	Cut of ditch – shallow V-shaped profile, oriented north-south, filled by 511, cut by furrow 508
511	Fill	1.00	0.70	0.31	Fill of ditch 510 – firm mid-orangey brown silty clay, no finds

Trench 6					
General Description				Orientation	SE-NW
Trench contained no archaeological remains.				Average Depth (m)	0.44
				Width (m)	2.00
				Length (m)	30.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
600	Layer	-	-	0.29	Topsoil – mid-brown clayey silt with stone inclusions
601	Layer	-	-	-	Natural – compact mid-dark orangey yellow mudstone and sandstone

Trench 7					
General Description				Orientation	E-W
Trench contained one field drain and no archaeological remains.				Average Depth (m)	0.42
				Width (m)	2.00
				Length (m)	30.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
700	Layer	-	-	0.28	Topsoil – mid-brown clayey silt with stone inclusions
701	Layer	-	-	-	Natural – compact mid-dark orangey yellow mudstone and sandstone

Trench 8						
General Description				Orientation		SE-NW
Trench contained two land drains and no archaeological remains.				Average Depth (m)		0.57
				Width (m)		2.00
				Length (m)		30.00
Contexts						
Context	Type	Length (m)	Width (m)	Depth (m)	Description	
800	Layer	-	-	0.31	Topsoil – mid-brown clayey silt with stone inclusions	
801	Layer	-	-	0.14	Subsoil – firm mid-greyish brown silty clay	
802	Layer	-	-	-	Natural – compact mid-dark orangey yellow mudstone and sandstone	

Trench 9						
General Description				Orientation		N-S
Trench contained one ditch and two furrows.				Average Depth (m)		0.30
				Width (m)		2.00
				Length (m)		30.00
Contexts						
Context	Type	Length (m)	Width (m)	Depth (m)	Description	
900	Layer	-	-	0.23	Topsoil – mid-brown clayey silt with stone inclusions	
901	Layer	-	-	-	Natural – compact mid-dark orangey yellow mudstone and sandstone	
902	Cut	2.00	0.52	0.20	Cut of ditch – V-shaped profile, north-south oriented, contains singular fill 903	
903	Fill	2.00	0.52	0.20	Fill of ditch 902 – friable light yellowish grey silty clay with moderate small sandstone inclusions, no finds	

Trench 10					
General Description				Orientation	E-W
Trench contained one field drain and two furrows. No archaeological remains were present.				Average Depth (m)	0.45
				Width (m)	2.00
				Length (m)	30.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
1000	Layer	-	-	0.23	Topsoil – mid-brown clayey silt with stone inclusions
1001	Layer	-	-	-	Natural – compact mid-dark orangey yellow mudstone and sandstone

Trench 11					
General Description				Orientation	N-S
Trench contained three land drains and two furrows. No archaeological remains were present.				Average Depth (m)	0.36
				Width (m)	2.00
				Length (m)	30.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
1100	Layer	-	-	0.23	Topsoil – mid-brown clayey silt with stone inclusions
1101	Layer	-	-	-	Natural – compact mid-dark orangey yellow mudstone and sandstone

Trench 12						
General Description				Orientation		E-W
Trench contained one ditch, three land drains, a geotechnical pit and two furrows.				Average Depth (m)		0.60
				Width (m)		2.00
				Length (m)		30.00
Contexts						
Context	Type	Length (m)	Width (m)	Depth (m)	Description	
1200	Layer	-	-	0.28	Topsoil – mid-brown clayey silt with stone inclusions	
1201	Layer	-	-	0.20	Subsoil – firm mid-greyish brown silty clay	
1202	Layer	-	-	-	Natural – mid-dark orangey brown sandy clay	
1203	Cut	1.00	1.18	0.40	Cut of enclosure ditch – V-shaped profile, north-south oriented, contains singular fill 1204	
1204	Fill	1.00	1.18	0.40	Fill of ditch 1203 – compact mid-yellowish grey clay with occasional sandstone inclusions, no finds	

Trench 13					
General Description				Orientation	N-S
Trench contained one ditch and four land drains.				Average Depth (m)	0.48
				Width (m)	2.00
				Length (m)	30.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
1300	Layer	-	-	0.26	Topsoil – mid-brown clayey silt with stone inclusions
1301	Layer	-	-	0.15	Subsoil – firm mid-greyish brown silty clay

1302	Layer	-	-	-	Natural – mid-dark orangey brown sandy clay
1303	Cut	1.10	1.35	0.70	Cut of ditch – V-shaped ditch, east-west oriented, visible on geophysical survey, contains three fills 1304, 1305, 1306
1304	Fill	1.10	0.53	0.22	Primary fill of ditch 1303 – firm mid-greyish brown clay with occasional small sandstone and charcoal inclusions, no finds
1305	Fill	1.10	0.92	0.34	Secondary fill of ditch 1303 – firm light-mid-grey silty clay with occasional small sandstone included, no finds
1306	Fill	1.10	1.35	0.32	Upper fill of ditch 1303 – firm mid-greyish brown silty clay with occasional small sandstone inclusions

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