Archaeological Written Scheme of Investigation (Phase 1 Mitigation)

Lockwood Road, Goldthorpe

Gleeson

Prepared by:

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Acronyms and Abbreviations

HER	Historic Environment Record
WSI	Written Scheme of Investigation
DBA	Desk-Based Assessment
NMP	National Mapping Programme
CDM	Construction and Design Management
ADS	Archaeology Data Service
OSL	Optically Stimulated Luminescence Dating
SYAS	South Yorkshire Archaeology Service

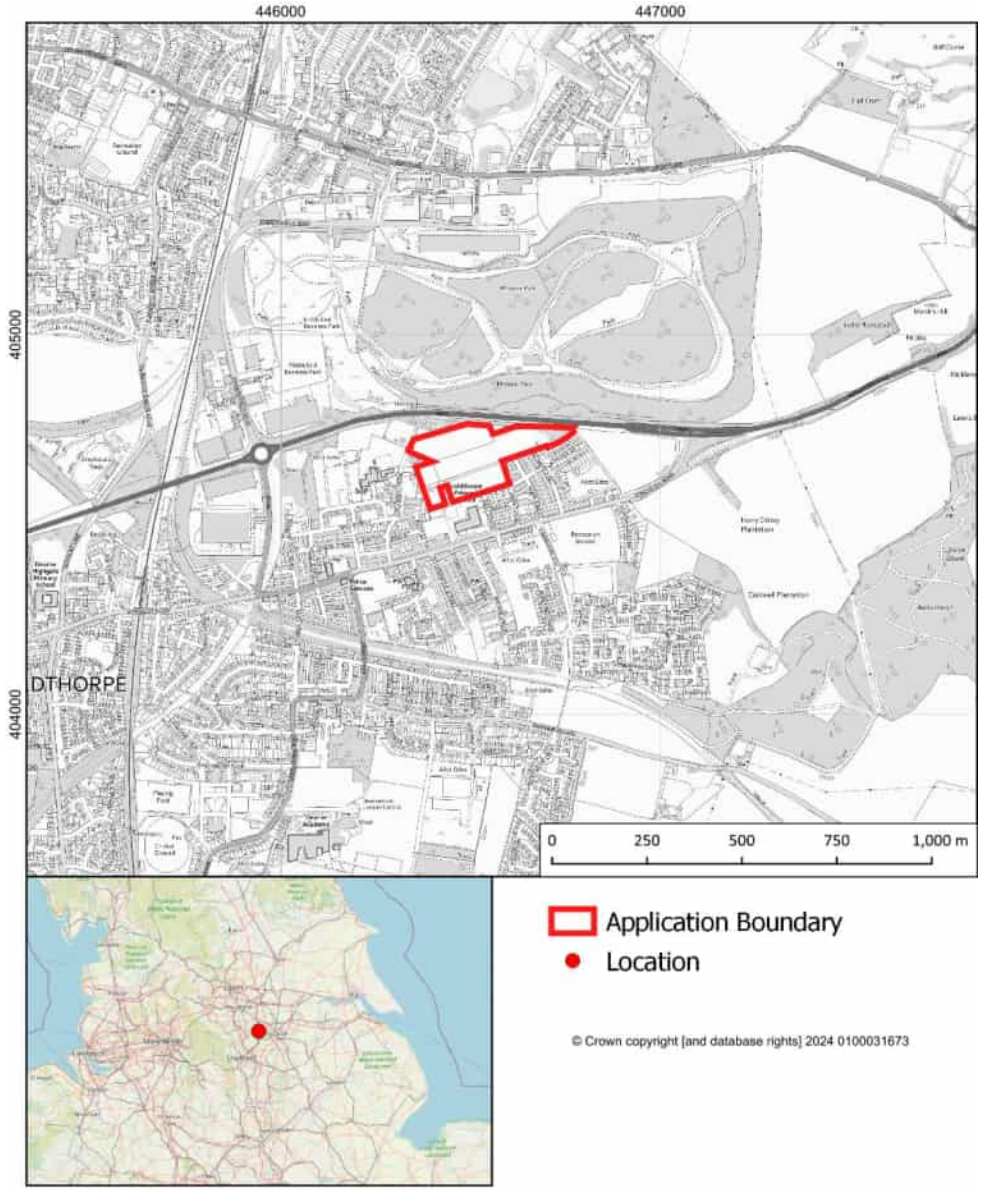
1.0 Introduction

This document is a Written Scheme of Investigation (WSI') for archaeological mitigation prepared by SLR Consulting on behalf of Gleeson to assist with the discharge of requirements for planning condition 06 for a residential development of land east of Lockwood Road, Goldthorpe, South Yorkshire (OS Grid Ref SE 46513 04677; Figure 1). The Site comprises an area of 4.9ha of grassland and former allotments south the A635 Dearne valley Parkway and north of Doncaster Road, Goldthorpe. The Site is roughly 11km east of Barnsley and an equal distance west of Doncaster.

This WSI will cover the archaeological mitigation via strip, map and sample of the Phase 1 Area.

The programme of archaeological mitigation will aim to more fully understand the extent, age and function of features identified by geophysical survey (Magnitude Surveys 2024, **Appendix B**), and the Phase 1 evaluation (**Appendix A**).

Figure 1 Site Location



1.1 Planning Background

Gleeson submitted a planning application for no.125 2-4 bed residential units on the Site in August 2021 (ref: **2021/1171**). Permission was granted by Barnsley Council's planning committee on 30th October 2023. Condition 6 imposed a requirement for a programme of archaeological work in accordance with an agreed WSI.

'No development, including any demolition and groundworks, shall take place until the applicant, or their agent or successor in title, has submitted a Written Scheme of Investigation (WSI) that sets out a strategy for archaeological investigation and this has been approved in writing by the Local Planning Authority. The WSI shall include:

- The programme and method of site investigation and recording.

- The requirement to seek preservation in situ of identified features of importance.

- The programme for post-investigation assessment.

- The provision to be made for analysis and reporting.

- The provision to be made for publication and dissemination of the results.

- The provision to be made for deposition of the archive created.

- Nomination of a competent person/persons or organisation to undertake the works.

- The timetable for completion of all site investigation and post-investigation works.

Thereafter the development shall only take place in accordance with the approved WSI and the development shall not be brought into use until the Local Planning Authority has confirmed in writing that the requirements of the WSI have been fulfilled or alternative timescales agreed.

Reason: To ensure that any archaeological remains present, whether buried or part of a standing building, are investigated and a proper understanding of their nature, date, extent and significance gained, before those remains are damaged or destroyed and that knowledge gained is then disseminated.'

1.2 Archaeological Context

A desk-based assessment (DBA) in support of the planning application was produced by Trent & Peak Archaeology in 2021[1]. However, given the intervening period, the South Yorkshire Historic Environment Record (HER) was consulted prior to the commencement of the evaluation WSI for any up to date records since 2021.

The bedrock geology of the Site is formed by the Ackworth Sandstone Formation, with Pennine Middle Coal Measures sandstone to the west and Upper Coal Measures sandstone immediately east with the Cadeby Dolostone Formation 1km east (also known as the Magnesian Limestone). No superficial deposits are present within the Site and trial pitting conducted in 2020[2] confirms a shallow topsoil depth (approx. 0.3m) onto weathered sandstone across most of the Site.

Late Roman corn dryers and ditches were identified at Goldthorpe Industrial Estate some 1.5km southwest of the Site, with some carbon dating of cereal remains indicating activity continued into the Early Saxon period.

Extensive cropmarks of linear features and possible enclosures of a probable Iron Age or Roman date (**HER Ref 04030/01, 04032/01**) were identified by aerial imagery some 750m northeast of the Site, just west of the village of Hickleton.

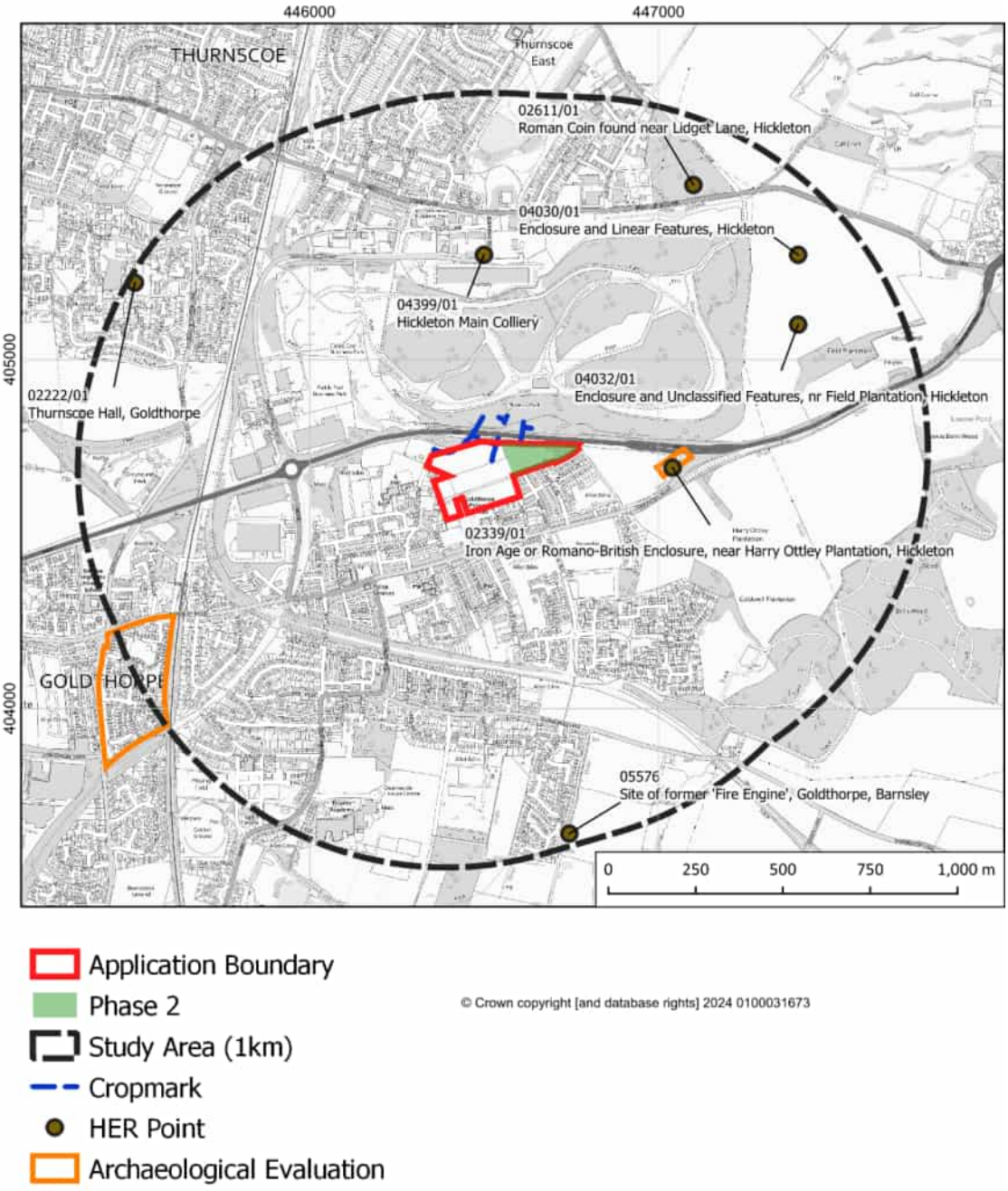
[1] Stenton, Malone 2021: *Land off Lockwood Road, Goldthorpe DBA*

[2] Eastwood and Partners 2021: *Geotechnical and Geoenvironmental Site Investigation, Lockwood Road Goldthorpe*

Further cropmarks have been mapped within the vicinity of the Site. The most substantial are those around the Harry Ottley Plantation c.200m west of the Site which appear to include enclosure boundaries and a droveway oriented northeast/southwest (**02339/01**). Field evaluation prior to the construction of the Dearne Towns Link Road (**ESY207**) did not confirm whether these extended to the road.

While there is no HER entry, cropmarks were also identified extending within the northern field of the Site. The geophysical survey conducted in advance of this programme of investigation by Magnitude Surveys identified anomalies in the north of the Site which aligned with cropmark features. Further anomalies of an undetermined nature were identified by the geophysical survey in the southwestern corner of the Site.

Figure 2 Historic Environment



The linear features identified in geophysical survey were confirmed by the Phase 1 evaluation (August 2024, York Archaeology. No dating evidence was recovered, however. The largest of the ditches, approx. 3m wide and greater than 1.2m deep, runs north/south across the northern mitigation area.

1.3 Purpose of this WSI

This WSI sets out the overarching scope and methodology to be adhered to in undertaking the proposed programme of archaeological mitigation.

1.4 Standards

This WSI has been prepared by Harry Towers BSc (Hons) ACIfA, SLR Consulting). The Project Manager and reviewer is Simon McCudden BA MSc MCIfA, also of SLR.

SLR Consulting is a member of the Federation of Archaeological Managers and Employers (FAME). In addition, SLR Consulting is ISO 9001 certified and operates a quality management system to help ensure all projects are managed in a professional and transparent manner.

2.0 Aims & Research

2.1 Aims

The programme of archaeological mitigation has been designed to:

- Facilitate discharge of planning condition 6 of the planning consent (see above);
- Confirm the presence and extent of archaeological remains;
- Mark out, excavate, and make a record of any such remains and survey their extents;
- To undertake post-excavation analysis of the records, artefacts and samples recovered during the work;
- To produce a report for submission to the local planning authority and, if merited, a formal publication;
- To confirm, if possible, the function and the date of features identified in the Phase 1 evaluation; and
- To deposit a permanent and publicly accessible archive of site records, reports and artefacts.

2.2 Research Potential

The archaeological context of the area suggests this programme has the potential to address to regional research objectives.

2.2.1 South Yorkshire Historic Environment Research Framework

The *South Yorkshire Historic Environment Research Framework*[3] outlines numerous objectives to further our understanding of archaeology of the region. Particular focus will be given to the Iron Age and Romano-British periods, due to the cropmark and archaeological evidence in the vicinity of the Site.

Specific questions in the Framework which might be addressed would include:

- QSY0022: How can we test the reliability of the assumed Iron Age and/or Romano-British settlement pattern?
    - When they are recognised during soil stripping, it is vital that adequate resources are directed towards the investigation of relatively unprepossessing features such as shallow ditches and gullies, as in some instances these might reflect late Bronze Age and earlier Iron Age unenclosed settlement, or the presence of relatively ephemeral timber structures such as fences or even timber sill beams
    - The excellent results of the Magnesian Limestone Project (Roberts, Deegan and Berg 2010) should be used to inform a project of more detailed geophysical survey of selected enclosures and enclosure groups, using the latest technologies
- QSY0026: Can we shed further light upon the development of field and boundary systems?
    - Aerial photographs and lidar, detailed analytical earthwork survey, and geophysical survey would prove useful in helping to establish the original course of very subtle and degraded earthworks

[3] https://researchframeworks.org/syrf

- QSY0034: What were the reasons for variations in the form, shape, and size of Iron Age and Romano-British field systems and fields?
    - Linear field and trackway ditches need to be more intensively sampled on excavation projects, both to retrieve more artefacts and 14C/OSL samples for dating purposes, but also for potential palaeo-environmental information through pollen and soil micromorphology analyses
- QSY0040: What were the economic, social or political roles of linear trackways?
    - It should not be assumed that trackway ditches or adjacent areas will produce little material culture. Structured deposits and human and animal burials are known from trackway ditches or within and beside trackways in other regions, including South Elmsall in West Yorkshire and Easington in East Yorkshire (Chadwick 2016b: 102-4; Grassam 2010; Richardson 2011). Two inhumation burials, one dated to the Iron Age, were associated with a trackway at Brodsworth in South Yorkshire.
- QSY0050: What was the purpose of small Iron Age / Romano-British subcircular and sub rectangular enclosures?
    - When identified, these features should be excavated as extensively as possible and intensively sampled, not only for potential palaeo-environmental evidence but also for any small artefacts, bone fragments and debitage.

Other research foci may be addressed as the programme of trenching progresses.

3.0 Project Administration

3.1 Roles and Responsibilities

3.1.1 Planning Archaeologist

The Planning Archaeologist responsible for regulating the works undertaken, on behalf of the Local Planning Authority, is:

Andrew Lines

South Yorkshire Archaeology Service,

Sheffield City Council,

Howden House,

1 Union Street

Sheffield,

S1 2SH

3.1.1.1 Monitoring

All archaeological work will be monitored by the Planning Archaeologist, directly on site and/or through summary reports and telephone/email with the client or their representatives, as appropriate.

The Planning Archaeologist will be updated as the work proceeds and will be invited to visit the site by prior arrangement during the course of the fieldwork in order to review progress and hold any necessary discussions. Monitoring by the Planning Archaeologist will potentially include:

- one or more site visits to confirm the fieldwork is being undertaken in accordance with the MS and to discuss the findings; and
- review and discussion of all reports and archives drafts before submission.

The Planning Archaeologist will be notified at least one week before the commencement of archaeological work, so that arrangements for monitoring may be made, The Planning Archaeologist will also be notified upon completion of any phase of archaeological work on site.

3.1.2 Archaeological Consultant

The Archaeological Consultant responsible for project oversight, stakeholder communication and archaeological strategy is:

Simon McCudden SLR Consulting Ltd

7 Park Row

Leeds

LS1 5HD

The Archaeological Consultant will maintain close liaison with the Planning Archaeologist, the Archaeological Contractor and other stakeholders throughout the course of the mitigation programme.

3.1.3 Archaeological Contractor

The nominated archaeological contractor is York Archaeology, a CIfA Registered Organisation (RO), subject to approval of Gleeson. The Planning Archaeologist will be consulted ahead of any formal appointment.

The appointed Archaeological Contractor will provide:

- a suitable risk assessment;
- a team of suitably qualified archaeologists;
- confirmation that they will adhere to the agreed WSI and a copy of their archive selection strategy and digital data management plan; and
- progress reports (verbal/email) to the Archaeological Consultant / Planning Archaeologist upon request.

All personnel deployed to work on the project will be suitably qualified to complete the tasks required. If required, details of the Project Officer, Site Supervisors and Finds Specialists can be supplied to the Planning Archaeologist and/or Local Planning Authority in writing, prior to the commencement of fieldwork.

The archaeological organisation carrying out the work will allow the site records to be inspected and examined at any reasonable time, during or after the excavation, by the Archaeological Consultant, the Client, the Planning Archaeologist, and/or any designated representative of the Local Planning Authority.

3.2 Health and Safety

Health and Safety will at all times take priority over work detail and archaeological issues. Prior to commencement of the programme of archaeological monitoring, the Archaeological Contractor will:

- Complete the online heath and safety induction as per the requirements from the Principal Contractor , East Coast Construction;
- provide the Archaeological Consultant and the Client with details of their public liability and professional indemnity insurance;
- submit a copy of their Health and Safety policy, compiled in accordance with national guidelines and all relevant Health and Safety legislation, to the Archaeological Consultant and the Client; and
- complete a Risk Assessment detailing any project-specific Health and Safety considerations, measures and requirements, and submit a copy to the Archaeological Consultant, the Client and, where necessary, the Principal Contractor.

Prior to preparation of the site-specific Risk Assessment by the Archaeological Contractor, either the Client or the Principal Contractor will provide the Archaeological Contractor with any and all information held in relation to existing services within the site and to known/anticipated hazardous on-site contaminants. This will include the most accurate information available on the nature and locations of those known services and contaminants.

During the course of the programme of archaeological monitoring, the Archaeological Contractor will ensure:

- the adherence of all on-site archaeological personnel engaged on the project to the relevant Health and Safety Standards and, if applicable, CDM Health and Safety rules;
- the implementation and management of the Archaeological Contractor's own Health and Safety policies;
- dissemination of the site-specific Risk Assessment to all on-site archaeological personnel engaged on the project, ensuring that it is reviewed and the content acknowledged, prior to the admission of any archaeological personnel to any working areas and prior to their undertaking any other work-related tasks;4
- that the identity of any on-site First Aiders is made known to all archaeological personnel engaged on the project;
- that the location(s) of First Aid boxes and fire extinguishers is made known to all archaeological personnel engaged on the project;
- that all archaeological personnel engaged on the project are in possession of, and wear at all times (as required), the necessary Personal Protective Equipment (PPE), which, as a minimum, should include a hard hat, a hi-vis vest, safety gloves and site-appropriate footwear;5 and
- that Covid 19 safe working practices are implemented and observed as necessary, consistent with the most up-to-date Government legislation and guidance.

All health and safety measures will be administered in accordance with the following:

- The Health and Safety Work Act (1974) and related legislation;
- Federation of Archaeological Managers and Employers Access to online advice provided by Quest;
- The Council for British Archaeology (1989). Handbook No. 6, Safety in Archaeological Fieldwork; and
- the SLR Health and Safety Handbook.

The Archaeological Contractor will leave the Site in a tidy and professional condition and will remove all materials that it has introduced onto the site, unless specifically agreed otherwise with the Client.

3.2.1 Contaminants

A Site Investigation (SI) Report issued in 2021 by Eastwood & Partners[6] identified potential contaminants and informed an Implementation Plan[7] which detailed steps to take in the event of contaminants being present during excavation:

[4] *If required, all archaeological personnel engaged on the project will attend a Health and Safety Induction coordinated by the Principal Contractor.*

[5] *Any additional PPE, such as safety glasses/goggles, ear defenders, dust-masks etc., should be issued and worn, as required.*

[6] Eastwood & Partners 2021: *Geotechnical and Geoenvironmental Site Investigation Lockwood Road Goldthorpe*

[7] Eastwood & Partners 2023: Remediation Implementation Plan Lockwood Road Goldthorpe

'1. All site works at the position of the suspected contamination should stop, and visual and olfactory observations of the condition of the ground and the extent of contamination should be made. Notification shall be given to an independent consultant and the Local Authority not later than 24 hours after discovery. Should the

contamination be likely to affect controlled waters the Environment Agency should also be informed.

2. During the presence of a suitably qualified Engineer, investigation works shall commence to recover samples for testing and, using visual and olfactory observations of the condition of the ground, accurately delineate the area over which contaminated materials are present.

3. Should the Consultant deem it appropriate, the affected material may be excavated and placed in a stockpile on a suitable impermeable surface. This should be suitably quarantined with no addition to or removal of the stockpile while chemical analysis is being undertaken. Alternatively, the material should remain in-situ until laboratory test results have been obtained.

4. The testing suite will be determined by the Consultant on the basis of visual and olfactory observations.

5. Test results will be compared against current assessment criteria suitable for the future use of the area of the site affected.

6. If after testing the ground is found to be contaminated, the Local Authority shall be informed. After consultation with the Local Authority, and if necessary, the Environment Agency, materials should either be removed for disposal to a licensed waste management facility or remediated to agreed clean-up criteria.'

3.3 Access Arrangements and Welfare

Site access is to be restricted at all times, with only authorised personnel admitted.

The Client will liaise with the Principal Contractor, Archaeological Consultant and Archaeological Contractor in order to agree site access and egress for the team, the location(s) of compound facilities and any relevant operational detail relating to those facilities.

Site welfare facilities will be of a suitable size and standard and will be maintained in good order throughout the course of the project.

3.4 Confidentiality and Publicity

All communications regarding the archaeological works will be directed to the Archaeological Consultant and the Client.

The Archaeological Contractor will not comment upon any aspect(s) of the project to members of the public or any other parties, unless specifically authorised to do so by the Archaeological Consultant or the Client.

The Archaeological Contractor will not disseminate images or information associated with the project, either for information or publicity purposes, without the prior written consent of the Archaeological Consultant or the Client.

4.0 Fieldwork Methodology

4.1 Scope of Works

The programme of mitigation has been designed to target archaeological remains informed by the Phase 1 Evaluation (Appendix A).

4.1.1 Anticipated Remains and Material Culture

As outlined in the Desk-based assessment of the Site (Stenton and Malone 2021), the Phae 1 evaluation report and summarised in section 1.2, the Site holds the potential for archaeological remains to be present.

Anticipated archaeological remains within the northern area comprise the remains of three linear ditches indicative of Iron Age/Romano-British activity. The features' morphology suggests they are potentially agricultural in origins and indicative of field boundaries, and linked to the wider Iron Age/Romano-British agricultural landscape as reflected in the HER. Two of these were identified by the Phase 1 evaluation while a third is indicated by a cropmark.

Other potentially anticipated features also relate to agriculture remains of a medieval/post-medieval date. These remains may comprise former low-level field boundaries or drainage features with the potential to contain small items deposited through casual loss.

The majority of the Site was known to have been utilised as allotment gardens throughout the through the 20th century. The majority of features have been removed although traced within the Site may remain. Features may include shallow cuts and features within the topsoil. Given the recent usage of the Site, there is a potential for associated allotment artefacts to be present within the top/sub soils.

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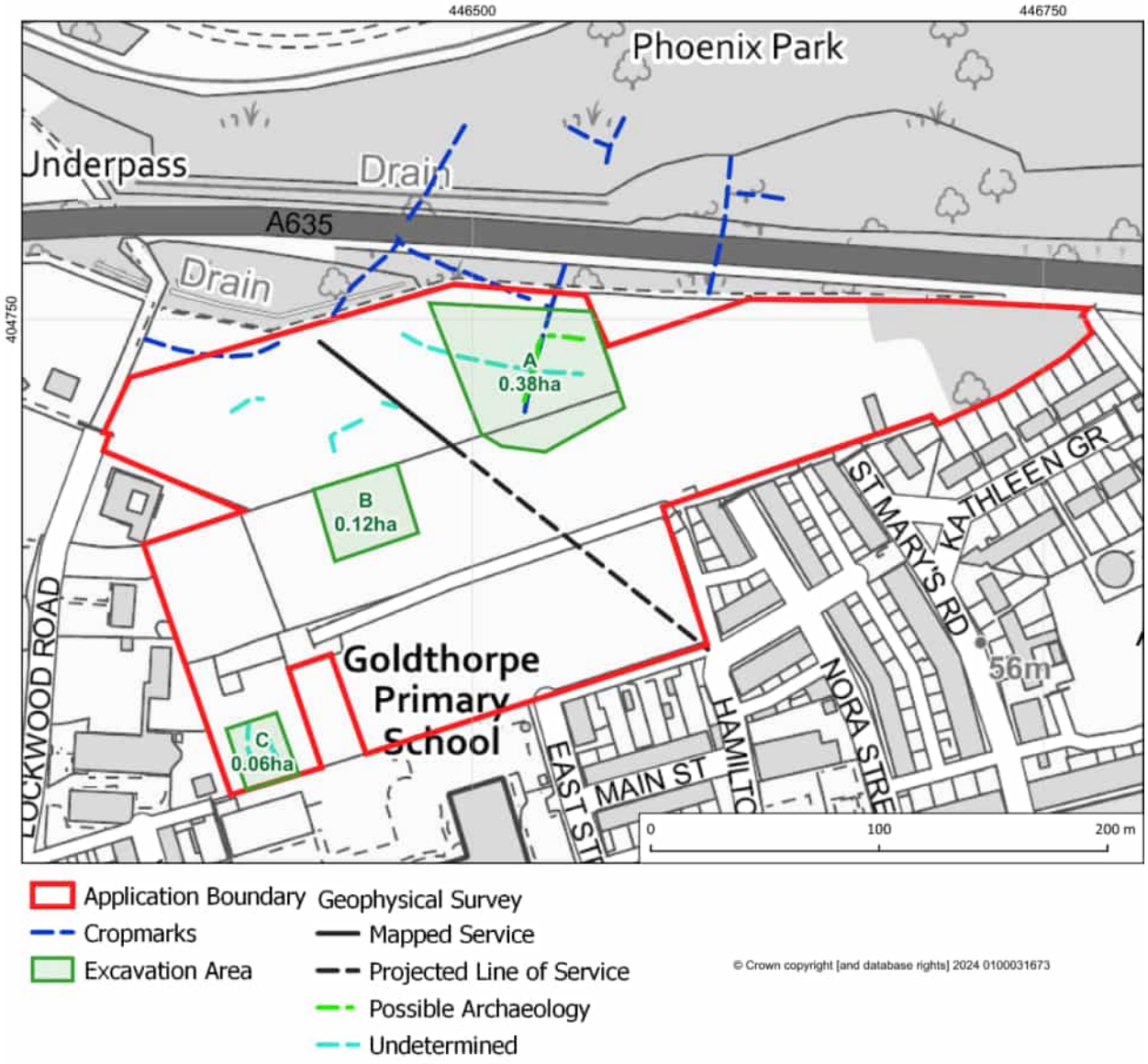
4.1.2 Site Works

The programme of the mitigation works is depicted on **Figure 3**.

The works generally target evaluation features and cropmark evidence, while avoiding known constraints and ensuring adequate testing of the area due to inconclusive geophysics. Nine trenches will be undertaken as part of the phase 1 evaluation, indicated in the table below:

Area	Rationale	Area
A	Targeting of features identified by Phase 1 evaluation including the substantial, as yet undated linear features.	0.38ha
B	Targeting a potential continuation of features identified in trench 8 as well as the geophysical survey	0.12ha
C	Targeting features identified in the geophysical survey and trench 9.	0.06ha

Figure 3 Phase 1 Mitigation Plan



SLR will conform to the Client's arrangements for notification of entering and leaving the site. The works shall not commence until access has been arranged with the Client.

It is the Client's responsibility to identify and mark the location of all services in the development area prior to commencement of fieldwork. There will be no excavation of live cables by or on behalf of archaeological staff.

Any variations to the archaeological programme will only be undertaken after consultation with, and the approval of both the Client and the LPA archaeologist (unless for safety reasons). Any variations will be fully recorded and circulated to all parties beforehand.

4.2 Mitigation Methodology

The methodology outlined below reflects the standards and guidance as set out in the relevant Charted Institute for Archaeologists (CIfA) and Historic England documentary guidance.

4.2.1 Regional Standards and Guidance

The archaeological fieldwork methodology will also comply with the South Yorkshire Archaeology Service (SYAS) Mitigation Standards (2024), included within **Appendix C**. The works to be undertaken comprise an archaeological excavation covered in section 5 of the standards and guidance.

For reference, the headings of mitigation strategy are outlined below:

- Excavation Strategy (5.6-5.7)
- Groundworks (5.8-5.22)
- Investigation of Archaeological Features (5.23-5.31)
- Recording (5.32-5.45)
- Finds and Samples (5.46-5.61).

4.2.2 Topsoil Strip

The excavation of the areas will be carried out under the control of an experienced archaeologist. The work will be executed using a mechanical excavator equipped with a back-acting toothless “ditching” bucket, standing on unstripped ground. If the topsoil stripping involves the use of more than one mechanical excavator at a time, an additional monitoring archaeologist will be deployed to watch each machine.

The initial strip of material will not be undertaken using a bulldozer or grading machine: these machines obscure and destroy archaeological remains without enabling them to be identified. Stockpiles and displaced material can be moved around by bulldozer in areas which have been cleared of any archaeological remains.

The monitoring archaeologist will ensure the overburden is removed, by horizon, through stripping the topsoil initially then removing subsoil to expose the natural or archaeological substrate.

4.3 Hand-Excavation Strategy

Archaeological/potential archaeological remains revealed will be investigated in accordance with the project aims and objectives set out within this Method Statement. Provisionally, the scope of investigation will be as follows:

- discrete features, e.g. pits, will have 50% of their fill removed;
- large discrete features may be subject to a lesser level of hand-excavation and/or to machine-excavation if, in agreement with the Planning Archaeologist, this would be proportionate while still satisfying the project aims and objectives;
- linear features, e.g. ditches, will have slots of 2m length[8] (or no less than 1m) of their fill removed accounting for 20% of overall length as a minimum, in addition to ‘dog leg’ slots targeting intersections with other linear features;
- where the terminus of a linear feature is revealed, this will be investigated;
- where intersections of two or more features (discrete and linear) are revealed, these will be investigated sufficient to determine the stratigraphic relationship between them;
- enclosure ditches may, after sufficient hand-excavation, be excavated by machine under archaeological supervision;

[8] In accordance with the recommendation of the South Yorkshire Research Framework

- arisings will be scanned with a metal detector by a suitably qualified operator; and
- where features extend beyond the Limit of Excavation, the overlying soils will be hand cleaned and recorded in section in order to contextualise the features' stratigraphic relationship(s) with the overlying soil profile.

Should the above provisional scope of excavation prove insufficient to allow the nature, extent, level of preservation and significance of archaeological/potential archaeological remains to be determined, additional excavation of such remains may be required, in liaison with the Planning Archaeologist.

4.3.1 Features of Unexpected Importance

Where significant remains are revealed, additional detailed recording, specialist environmental sampling, and/or scientific dating may be required. SYAS will be notified at the earliest opportunity and the scope of and methodology for any such detailed recording would be agreed in advance with the Planning Archaeologist.

4.3.2 Multiple similar features

Should a substantive number of similar features be revealed, e.g. fence-line stake-/post-holes, their excavation will be limited, with the agreement of the Planning Archaeologist, to a proportionate representative sample sufficient to inform an understanding of their nature, extent, level of preservation and significance as a group.

4.3.3 Non-archaeological remains

Where remains are found to derive from naturally occurring events e.g. tree throws, plant holes, animal burrows, solution holes etc., these will be half sectioned along the longest axis in the first instance in order to identify their true nature and may be sampled or sieved where appropriate.

4.3.4 Variations to the strategy

Any variations to the above strategy would be approved in advance by the Planning Archaeologist, following on-site discussion.

4.4 Archaeological Recording Strategy

All areas of the Site, including blank, will be photographed, with written descriptions of the stratigraphic sequence (including depths bpgl) and a photograph and drawing of a representative section of the baulk. Where areas are found to contain archaeological features, recording will then include:

- a *pro-forma* context record for each stratigraphic unit revealed[9];
- a record of any areas identified as being devoid of archaeological remains and of any features investigated and confirmed to be of natural origin;
- a 'Harris Matrix' diagram to elucidate any complex stratigraphic sequences;
- site plans produced by GNSS survey at a scale no greater than 1:2500, depicting:
  - the extent of the excavated area, tied into the Ordnance Survey National Grid and located on an appropriately scaled plan;
  - the extent of all stratigraphic units revealed; and
  - appropriate detail identified within stratigraphic units;

[9] *Typically, this would relate to any individual 'context' identified within a single archaeological intervention. However, there may be occasions where a context evidently recurs within multiple interventions, most commonly in relation to linear features. In such instances, it may optimise the intelligibility of the information derived, and aid in its interpretation, for a single context record to be compiled.*

- plans of stratigraphic units recorded by GPS unless a hand plan at a suitable scale would prove to be more informative;
- sections of stratigraphic units at an appropriate scale. Unless specific circumstances dictate an optimal scale, then this should be a minimum of 1:20. For areas of detailed, significant or complex stratigraphy the scale used should be a minimum of 1:10;[10]
- a photographic record comprising recognised industry-quality digital SLR photographs, with a minimum resolution of 10 mega-pixels and saved as high quality .raw files[11];
- numerical indices of all context records, drawings, photographs, samples and small finds, checked and cross-referenced as necessary; and
- a diary record of the progress of the archaeological work, including details of liaison and monitoring meetings, site visits, and a record of staff on site.

All of the above records will form part of the eventual project archive, to be deposited with a suitable repository upon completion of the project.

All archaeological recording will be undertaken in accordance with industry best practice, including the *Standard and guidance for archaeological excavation* (CIfA, 2023).

A site code would be obtained from the destination museum prior to commencement of the project, and this unique identifier would be clearly marked on all project documentation.

4.5 Artefact Recovery

Archaeological artefacts will be collected, stored and processed in accordance with accepted national and regional methodologies, guidelines and standards. This includes the UKIC (United Kingdom Institute for Conservation) guidelines and the CIfA 2014 'Standard and Guidance for the collection, documentation, conservation and research of archaeological materials and Archaeological Archives: A Guide to best practice in creation, compilation, transfer and curation' (2007).

'Bulk finds' will be collected and recorded by context. 'Small finds' will be recorded three-dimensionally using DGPS or equivalent survey equipment. Each artefact within any identified artefact scatters will also be recorded three-dimensionally.

All artefacts (apart from mid-20th century or later) will be collected and retained, unless otherwise agreed in advance with the Planning Archaeologist.

Where required, artefacts will be stabilised, conserved and stored in accordance with the guidance of the United Kingdom Institute of Conservators (UKIC). If necessary, a conservator will visit the site to undertake 'first aid' conservation treatment of finds prior to their removal from site.

4.6 Environmental Sampling Strategy

Significant waterlogged/deeply-stratified deposits would not be anticipated given the geological context. Should such remains be uncovered, however, then a detailed strategy for their sampling and recording will be devised by the project palaeo-environmental specialist, in consultation with the Planning Archaeologist and the Client.

Samples will be taken based on the following overall strategy:

- Bulk samples of 40l will be taken from:
    - Termini of ditches
    - alternating sections of these ditches;

[10] *All scale drawings will include spot heights relative to the Ordnance Datum in metres, correct to two decimal places.*

[11] *Alongside individual archaeological contexts / stratigraphic units, general site shots will also be taken to give an overview of the site and progress of the archaeological works programme.*

  - if 40l cannot be taken without risk of contamination, 20l from each fill may suffice;
  - discrete features as part of a group, or large discrete features, should be sampled to the extent that it is possible without contamination in order to determine their function;
  - singular discrete features with no clear environmental potential should not be sampled as they would not have potential to inform us of the wider site context;
- samples will be recovered from cleaned surfaces, using clean tools and placed in clean containers;
- samples will be appropriately recorded and labelled, and a register of all samples recovered will be maintained; and
- the samples will be stored safely in a sufficiently secure location prior to their delivery to the appropriate specialist.

Samples are to be taken for flotation and subsequent recovery of charred plant remains and associated small bones or industrial debris. Any samples considered to warrant further assessment will be fully processed.

Issues to be addressed through sampling would include chronological and spatial variation within the site sequence.

Scientific dating methods would be used to determine absolute dates for features containing significant remains or for features that would contribute to the overall sequencing of the Site, for example those with intersections with other prominent features. In the absence of organic material OSL (Optically Stimulated Luminescence) dating may be used if appropriate and following discussion with the Planning Archaeologist and the Client, dependent on the suitability of the feature.

Any sampling would be undertaken in accordance with Historic England's '*Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record*' (2015).

Should any palaeo-environmental deposits of particular interest be revealed, the Historic England Regional Science Advisor will be contacted, and their advice sought in respect of an appropriate further sampling strategy. The relevant RSA is:

Andy Hammon
Historic England (York)
37 Tanner Row
York
YO1 6WP
Andy.Hammon@HistoricEngland.org.uk
Tel: 07747 486255

4.7 Human Remains

Should human remains be encountered, they will initially be left *in situ*, suitably covered and secured, in compliance with industry best practice. The Archaeological Contractor will notify the Archaeological Consultant, who will then inform both the client and the Planning Archaeologist.

Following this initial consultation, the removal of human remains, if required, will only take place in accordance with a Ministry of Justice exhumation license, the appropriate Environmental Health regulations and the Burial Act 1857.

The Archaeological Contractor will be responsible for applying for an exhumation license from the Ministry of Justice, and, once in receipt, for ensuring that the provisions of that license are complied with, and comply with CIfA Technical Paper 14 "Excavation and Post-Excavation Treatment of Cremated and Inhumed Remains (Mckinley and Roberts 1994) and Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England (Advisory Panel on the Archaeology of Burials in England 2017).

4.8 Treasure

The 1996 Act sets out the precious metal content required for a find to qualify as treasure; and it extends the definition of treasure to include other objects found in archaeological association with finds of treasure. Six categories of object are now classed as treasure:

- any object other than a coin which is at least 10% silver or gold by weight and more than 300 years old.
- any coins that are at least 10% silver or gold by weight and come from a single find, provided the find contains at least two coins with a gold or silver content of at least 10%. The coins must be at least 300 years old at the time of discovery. Where finds consist of coins that are less than 10% gold or silver by weight, there must be at least 10 coins in the find and they must be at least 300 years old at the time of discovery for the find to be considered treasure.
- any object, of whatever, composition, that is found in the same place as, or that had previously been together with, another object that is treasure.
- any object (other than a coin), any part of which is base metal, which, when found is one of at least two base metal objects in the same find which are of prehistoric date;
- any object, (other than a coin) which is of prehistoric date, and any part of which is gold or silver.
- any object that would previously have been treasure trove but does not fall within the specific categories given above.

Intentional non-reporting can lead to imprisonment for up to three months, a fine of up to £5,000 (level 5), or both.

4.8.1 Protocol in the event of discovery

If any objects are recovered that are deemed to potentially qualify as treasure, the Archaeological Contractor will inform the Archaeological Consultant, who will then inform the client, and consult with the Yorkshire Council Finds Liaison Officer to determine the object's status.

Should any treasure be discovered, it will be removed, if possible, to a secure location; ideally, it will be deposited with the Finds Liaison Officer. Where removal from site is not practical on the same working day as the discovery, suitable security measures will be put in place to protect the find from damage, loss or theft.

Upon discovery of any treasure, the local coroner must be informed *within fourteen days of discovery*, in accordance with The Treasure Act 1996 Code of Practice and its amendment. In accordance with those provisions, the local coroner is: located at

South Yorkshire (west),

Medico Legal Centre,

Watery Street,

Sheffield,

S3 7ES

The Archaeological Contractor will ensure that the *Treasure Act* regulations are complied with and that all relevant parties are kept informed. A list of finds which have been collected and which fall under the *Treasure Act* will be included within the fieldwork report.

5.0 Post-Excavation Methodology

5.1 General

The methodology outlined below reflects the standards and guidance as set out in the relevant Charted Institute for Archaeologists (CIfA) and Historic England documentary guidance.

The works will also comply with the South Yorkshire Archaeology Service (SYAS) Mitigation Standards, included within Appendix C. Guidance on post excavation reporting and archive dissemination are also outlined within the standards and guidance, relevant sections are also outlined below:

- Post-Excavation Assessment Report (5.72-5.74)
- Archive Reporting (5.77)
- Public Engagement, Dissemination and Publication (6.1- 6.11)
- Archiving (7.1-7.19)

The post-excavation and reporting programme will be agreed with the Planning Archaeologist and undertaken in accordance with the procedures set out in Historic England's MORPHE guidelines.[12] The following sequence of post-excavation tasks will be undertaken:

- preparation of the site archive;
- preparation of a post-excavation assessment report;
- post-excavation analysis consistent with the assessment;
- production of a full archive report and any publication; and
- deposition of finds and archive in an appropriate museum.

Transfer of title for any finds will be arranged for prior to commencement of fieldwork, however formal transfer will take place following completion of the fieldwork programme.

5.2 Finds Processing and Material Archive

All finds will be processed promptly following completion of the fieldwork. Retained finds will be washed, marked, bagged and recorded within a database (e.g. MS Access or GIS DBASE), and will include the location from which they were recovered in National Grid and Ordnance Datum, accurate to two decimal places.

The finds assemblage will be treated, labelled and stored in accordance with the appropriate Historic England guidance documentation, all relevant local authority guidelines and the UKIC guidelines.

The Archaeological Contractor will ensure that the processing of all assemblages recovered is also undertaken in accordance with the requirements of the agreed repository.

Where appropriate, each category of find, or each material type, will be examined by a suitably qualified archaeologist or specialist, with the results of that analysis incorporated into the fieldwork report.

5.3 Paper Archive

Upon completion of the archaeological fieldwork, the archive of written, drawn and photographic records generated on site will be reviewed by a suitably experienced archaeologist. The archive will be ordered and checked to ensure that it is complete, and that the information recovered is of the required standard and is suitably intelligible ahead of its analysis. The unique site code will be included on all project documentation.

[12] *Historic England, 2015. Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide. Historic England (Swindon).*

5.4 Samples

The record of samples compiled on site will be reviewed and checked against the samples collected. Samples will then be sent to the relevant specialists for processing and analysis.

5.5 Specialist Analyses

If required, specialists would provide the following in respect of the material submitted for analysis:

- a statement on the presence or absence of material and an assessment of its preservation;
- an interpretation of the assemblage including spot-dating where relevant and reference to any unusual or important features of the assemblage; and
- an assessment of the research potential of the material and recommendations for further work.

5.6 Reporting

5.6.1 Assessment Report

In the first instance an Assessment Report will be completed. The report will include:

- A summary of the stratigraphic sequence of the Site, finds encountered and samples recovered;
- A brief summary of the phasing of the site; and
- A statement of potential for each component of data, including recommendations for further work.

This is compliant with sections 5-72-5.74 of the SYAS Archaeological Mitigation Standards & Guidance (Appendix C);

5.6.2 Archive Report

Following the assessment report, an Archive valuation will be compiled containing the below in accordance with SYAS Archaeological Mitigation Standards & Guidance, paragraph 5.77 (Appendix C):

- An introduction including background information (with planning application details, where appropriate);
- The original research aims and objectives and rationale for selected area of investigation;
- An archaeological and historical baseline;
- A description of results;
- The results of analysis of all find and sample categories, by appropriate specialists;
- The results of any scientific dating;
- A discussion of the results including a phased interpretation of the site and the extent to which the work has addressed the research aims and objectives;;
- An assessment of the effectiveness of the project, including earlier stages of work, and detailing any implemented strategy to secure preservation in situ;
- A summary of the results in their local, regional, and national context, and the extent to which the work has addressed the project aims and objectives;
- Supporting illustrations, including as a minimum:
    - (a) A detailed location map;

- (b) A detailed site plan showing all trenches or trial pits, as excavated;
- (c) Plans for all trenches where archaeological features were identified;
- (d) Detailed plans of archaeological features;
- (e) Detailed sections of archaeological features;
- (f) An overall (phased) site plan showing all archaeological features recorded;
- (g) Selection of photographs of work in progress;
- (h) Select artefact illustrations and/or photographs.
- (i) Supporting tables of data, including as a minimum:

- A detailed context index;
- An archive index;
- Acknowledgements identifying those involved in the project, including SYA..

Unless agreed otherwise with the Planning Archaeologist, the Archive Report will be compiled within sixteen weeks of completion of the fieldwork. Timescales depend on completion of specialist reporting and may be subject to change.

5.6.3 Research Frameworks

Provision will be made for updating the South Yorkshire Historic Environment Research Framework (SYHERF) where the results of a fieldwork project contribute towards agenda topics. This will be done using the interactive digital resource at https://researchframeworks.org/emherf/ and noted explicitly in the conclusions of the relevant report.

5.6.4 Report Review

Prior to general circulation, draft copies of each report generated will be provided to the Archaeological Consultant, the Client, the Planning Archaeologist and any relevant archaeological specialists.

The Archaeological Contractor will take into account any observations on the content of the draft report made by the Archaeological Consultant, the Client and/or the Planning Archaeologist before issuing the final version.

5.6.5 Report dissemination

A digital version of any report will be produced by the Archaeological Contractor within one week of the receipt of any comments issued on the draft. Digital text should be in Microsoft Word format, and illustrations should be in AutoCAD and/or PDF format.

On finalisation of the archive report, a digital copy in PDF/A format will be provided to SYAS. The HER will also be provided with any relevant geo-referencing data, in a compatible digital format (typically .shp or .dxf).

The Archaeological Contractor will complete an Online Access to the Index of Archaeological Investigations (OASIS) form in relation to the report, to include a digital version of the report itself. The full report will include the OASIS ID number.

5.6.6 Publication

A summary report of the excavation will be offered to *Archaeology in South Yorkshire*, including illustrations. If results merit; a journal article or monograph will be prepared in consultation with SYAS.

5.7 Archive

The archive and deposition of archaeological reporting and works should comply with the Standards for Archaeological Archives, outlined in paragraphs 7.1 to 7.19 of SYAS Archaeological Mitigation Standards & Guidance (Appendix C);

5.7.1 Title

Where artefacts or ecofacts have been recovered during the investigation the owner will be contacted to arrange legal transfer of title to the receiving repository. The transfer of title would be effected by a standard letter supplied to the Client for signature.

5.7.2 Composition

The compilation of an integrated and ordered project archive will be undertaken by the Archaeological Contractor in accordance with the provisions of the following:

- Historic England's MAP2 and MoRPHE guidance;
- United Kingdom Institute for Conservation (Archaeology Section) (UKIC) 1990 Guidelines for the Preparation of Excavation Archives for Long-Term Storage;
- Society of Museum Archaeologists (SMA) 1995 Towards An Accessible Archive;
- Archaeological Archives Forum (AAF) 2007 (revised 2011) Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation;
- Museum and Galleries Commission (MGC) 1992 Standards in the Museum Care of Archaeological Collections;
- the requirements of South Yorkshire HER;
- the requirements of Barnsley Museums; and
- this WSI.

The archive will include:

- recovered artefacts and significant samples (material archive);
- all written, drawn, photographic and other records generated during the fieldwork (site archive); and
- all digital data, including that which is digital in origin,13 and any digital copies made of the primary site records,14 including images.

In accordance with section 4 of *Creation of Archives*, and in consultation with the South Yorkshire HER, a rigorous process of selection and discard would be followed so that only those elements considered of significance for potential future study would be retained.

Bulk items such as ceramic building materials, stonework, large quantities of undiagnostic pottery, and material that is difficult/costly to conserve, such as worked wood, may be selected for discard once appropriate recording and analysis has been undertaken, either on site or in the laboratory at the post-excavation stage. Detailed discard proposals would be agreed by the PA prior to implementation.

Once prepared, the Archaeological Contractor will store the archive in a suitable and secure location prior to its deposition. The archive will be offered to a suitable repository for deposition within six months of the completion of the fieldwork, with the agreement of the client. Digital archive will be submitted with the ADS.

5.7.3 Deposition

The deposition of the final archaeological archive should comply with the Archiving will comply with section 7 of the SYAS Archaeological Mitigation Standards & Guidance (Appendix C)

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[13] *Including email correspondence, images, survey data and other site data collected through digital/electronic means.*

[14] *Including relevant drawn and written data created during fieldwork (context sheets, sample sheets, finds records, drawings/plans/sections/sketches, all indices, earthworks surveys, and any notes that contribute to the interpretation and understanding of the site and its recording) and relevant records/data produced as part of the post-excavation assessment or analysis etc.*

5.7.4 Deposition of Digital Archive

Currently, the only suitable repository for digital archives is the Archaeology Data Service (ADS). The digital archive will comprise, as a minimum, photographs, survey data and digitised hand drawings in accordance with ADS standards and requirements.[15]

5.7.5 Notification

The Archaeological Contractor shall promptly notify the Planning Archaeologist and museum notify the museum at project initiation, mid-point review and completion stages. Relevant forms from SYAS be completed at these stages and submitted to the museum and SYAS.

5.7.6 Copyright

The Archaeological Contractor will assign copyright in all reports, documentation and images generated during the project to the client. The Archaeological Contractor will retain the right to be identified as the author/originator of the material. It is the responsibility of the Archaeological Contractor to obtain such rights from any sub-contracted specialists.

The Archaeological Contractor may apply in writing to use or disseminate any part of the project archive, documentation or images, and such permission will not be unreasonably withheld.

The client will own all Intellectual Property Rights to photographs and documentation prepared for this project by or on behalf of the Archaeological Contractor. The Archaeological contractor reserves the right for fair use of the archive for research and addition to the HER …as specified in the Copyright, Designs and Patents Act 1988 (chapter IV, section 79).

5.7.7 OASIS

An OASIS entry for the project will be completed within 3 months of the completion of the archive. The OASIS entry will host PDF versions of the reports generated.

5.8 Public/Community Engagement

The Archaeological Contractor should include provision for public outreach and community engagement in their programme, where appropriate. This can include but is not limited to:

- Site notices explaining the works
- An article in a local newspaper
- An article within/on a local Goldthorpe Facebook or similar digital platform

Any of the above needs to be tied in with the requirements of our client, Gleeson, as part of their overall strategy for marketing the site.

We would like to issue a document in the public domain, following completion of all fieldwork stages.

[15] *http://archaeologydataservice.ac.uk/advice/guidelinesForDepositors.xhtml;http://archaeologydataservice.ac.uk/advice/selectionGuidance.xhtml*

6.0 Bibliography

6.1 Documentary Sources

British Geology Service (2021) *Geology of Britain viewer*: Available http://mapapps.bgs.ac.uk/geologyofbritain/home.html

CIfA (2024) *Standards and Guidance for Historic Environment Desk-Based Assessment*, Reading: Chartered Institute for Archaeologists

DCLG. (2014) *Planning Practice Guidance*

Eastwood & Partners 2021: Geotechnical and Geoenvironmental Site Investigation Lockwood Road Goldthorpe

Eastwood & Partners 2023: Remediation Implementation Plan Lockwood Road Goldthorpe

Historic England. (2023) *National Heritage List for England downloadable GIS data*

Ministry of Housing, Communities and Local Government. (2019) *National Planning Policy Framework*

National Mapping Programme (Historic England)

South Yorkshire HER

Stenton, Malone 2021: *Land off Lockwood Road, Goldthorpe DBA*

Appendix A Phase 1 Evaluation Report

York Archaeology 2024

Lockwood Road, Goldthorpe, South Yorkshire

Report on an archaeological evaluation

Report Number YA/2024/217

York Archaeology

Lockwood Road, Goldthorpe, South Yorkshire

Report on an Archaeological Evaluation

York Archaeology

York Archaeology – York Office

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York Archaeology

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York Archaeology is a Registered Organisation with the Chartered Institute for Archaeologists (CIfA), an audited status which ensures that all work is carried out in accordance with Industry good practice.

KEY DOCUMENT INFORMATION

Project name	Lockwood Road, Goldthorpe
Type of project	Evaluation
YA archaeological code | financial code	9754| 9754
National Grid Reference	SE 46513 04677
OASIS ID	yorkarch3- 527705
Planning Reference	2021/1171
Client	Gleeson
Report version no. and status	D1.5
Author | Illustrator | Editor	B. Savine and B. Rudd| B. Price | K. Allenby
Report approved by | date	06/09/2024
Report number | date	YA/2024/217| 30/08/2024
Filename	YA_9754_Lockwood_Road_Goldthorpe_Eval_Report_V1

ABBREVIATIONS

ADS	Archaeology Data Service
AOD	Above Ordnance Datum
BGS	British Geological Survey
BMBC	Barnsley Metropolitan Borough Council
CIfA	Chartered Institute for Archaeologists
HE	Historic England
MLSWY	Magnesian Limestone in South and West Yorkshire Aerial Photographic Mapping Programme
NGR	National Grid Reference
OS	Ordnance Survey
WSI	Written Scheme of Investigation
YA	York Archaeology

SUMMARY

York Archaeology was commissioned by SLR Consulting on behalf of Gleeson to undertake an archaeological evaluation at Lockwood Road, Goldthorpe, South Yorkshire (NGR SE 46513 04677). The work was undertaken to establish the presence of any archaeological remains, in accordance with a condition placed upon the work by Barnsley Metropolitan Borough Council (planning reference 2021/1171). The fieldwork took place on the 21st and 23rd August 2024.

The evaluation consisted of nine trenches, five of which produced evidence for former land management practices comprising eleven linear features. A single discrete feature was also uncovered. All of the features were found sealed below subsoil, however, no artefacts or other datable material were recovered.

CONTENTS

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1 INTRODUCTION

1.1 Project Background

1.1.1 Between 21st and 23rd August 2024 York Archaeology (YA) undertook an archaeological evaluation on land at Lockwood Road, Goldthorpe, South Yorkshire (NGR SE 46513 04677). The works were carried out in response to a condition imposed upon the work by Barnsley Metropolitan Borough Council (BMBC) (planning reference 2021/1171). The proposed development comprises the construction of 125 houses with associated access and landscaping. The evaluation was designed to investigate the potential presence of archaeological remains identified by geophysical survey (Stead 2024).

1.1.2 A total of nine trenches of various sizes (see Table 1) were excavated across the Site with the intention of characterising the extent, character and condition of any archaeological remains present, thereby enabling the scope of any further mitigation to be established.

1.1.3 Condition 6 of '*Grant of Planning Permission 2021/1171'* (BMBC 2024) stipulates that:

> *'No development, including any demolition or groundworks, shall take place until the applicant, or their agent or successor in title, has submitted a Written Scheme of Investigation (WSI) that sets out a strategy for archaeological investigation and this has been approved in writing by the Local Planning Authority. The WSI shall include:*
>
> - *The programme and method of site investigation and recording*
> - *The requirement to seek preservation in situ of identified features of importance*
> - *The programme for post-investigation assessment*
> - *The provision to be made for analysis and reporting*
> - *The provision to be made for publication and dissemination of the results*
> - *The provision to be made for the deposition of the archive created*
> - *Nomination of a competent person/persons or organisation to undertake the works*
> - *The timetable for completion of all site investigation and post-investigation works*
>
> *Thereafter the development shall only take place in accordance with the approved WSI and the development shall not be brought into use until the Local Planning Authority has confirmed in writing that the requirements of the WSI have been fulfilled or alternative timescales approved.*
>
> *Reason: To ensure that any archaeological remains present, whether buried of part of a standing building, are investigated and a proper understanding of their nature, date, extent and significance gained, before their remains are damaged or destroyed and that knowledge gained is the disseminated.*

2 LOCATION GEOLOGY AND TOPOGRAPHY

2.1.1 The following has been adapted from 'Archaeological Written Scheme of Investigation (Phase 1: Evaluation) Lockwood Road, Goldthorpe' (SLR 2024, 5).

2.2 Location

2.2.1 The Site is located on a 4.9ha parcel of land comprising grassland and former allotments east of Lockwood Road, Goldthorpe, South Yorkshire (NGR SE 46513 04677). The Site is bounded by the A6135 to the north, properties on the east side of Lockwood Road to the west and Goldthorpe Primary School and residential properties to the south and east. The Site is approximately 11km east of Barnsley and 11Km west of Doncaster.

2.3 Geology and Topography

2.3.1 The British Geological Survey does not record any superficial geological deposits for the Site. Bedrock across most of the site comprises Ackworth Rock Sandstone, a sedimentary bedrock formed between 315.2 and 309.5 million years ago during the Carboniferous period (BGS 2024). However, Pennine Upper Coal Measures Formation mudstone, siltstone and sandstone (a sedimentary bedrock formed between 315.2 and 308 million years ago during the Carboniferous period) are present at the far eastern corner of the site (BGS 2024).

2.3.2 The topography of the site is flat, mostly in the range of 55–56m AOD (MagicMap 2024).

3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1 Introduction

3.1.1 This section is adapted from 'Land off Lockwood Road, Goldthorpe, South Yorkshire: Archaeological Desk-Based Assessment' (Stenton and Malone 2023, 4–8).

3.2 Prehistoric and Roman

3.2.1 The Magnesian Limestone in South and West Yorkshire Aerial Photographic Mapping Programme (MLSWY) project recorded three linear cropmark features in the northern part of the Site. Although undated, these features appear, on morphological grounds, to be the remains of prehistoric and/or Roman field boundaries (Deegan 2006).

3.2.2 Other cropmarks have been recorded in the vicinity of the Site by the MLSWY, while an enclosure is known to be sited ear Henry Ottley Plantation, approximately 0.28km to the east of the Site. Archaeological investigation at this location also revealed the remains of a droveway at a shallow depth below the modern ground level (Sites and Monuments Record 02339).

3.2.3 The Desk Based Assessment (DBA) also highlights the presence of linear and enclosure type cropmarks approximately 0.81km to the north-east of the Site, while an enclosure and unclassified features are recorded near Field Plantation, approximately 0.71km to the north-east of the Site. The authors of the DBA go on to comment how '*various cropmark features demonstrate that the Site formed part of a wider agricultural landscape during the prehistoric and Roman periods'* (Stenton and Malone 2023, 5).

3.3 Early Medieval

3.3.1 The DBA notes an absence of any known continuity of early medieval settlement at Goldthorpe, although it may have formed part of the British kingdom of Elemet before being absorbed into the Anglo-Saxon kingdom of Deira in the early 7th century (ibid., 5).

3.3.2 Early medieval activity in the area is indicated by place-name evidence, with Goldthorpe deriving its name from the Old English personal name 'Golda' and either the Old English term 'thorp' or the Old Norse term 'torp', both of which refer to an outlying farmstead (Hey 2003, 37). This part of South Yorkshire was part of the kingdom of York in the 860s and the 'thorpe' element would therefore have been established during that period. The location of early medieval settlement at Goldthorpe is unknown and there is no evidence of land use within the Site itself during this period (Stenton and Malone 2023, 5–6).

3.4 Medieval

3.4.1 Goldthorpe was recorded as 'Goldetorp' in the 1086 Domesday survey. The location of the settlement core in this period is unclear. Post-medieval land enclosure suggests that the Site would probably have been in agricultural use during the medieval period (ibid., 6).

3.5 Post-medieval and modern

3.5.1 Agricultural activity appears to have continued at the Site in this period. It appears likely that common land in the vicinity of the Site was enclosed in the late 18th century, and three large fields are shown to occupy the Site on a tithe map of 1838 (ibid., 6–7).

3.5.2 Ordnance Survey mapping indicates that allotments occupied the southern part of the site from at least the early 20th century, and that these were extended northwards by 1930 (Stenton and Malone 2023, 8).

3.6 Previous Archaeological Work

3.6.1 Geotechnical investigations were conducted by Eastwood and Partners in December 2020 and March 2021 (E & P 2021). Twenty-eight trial pits and nine window-sample boreholes were excavated across the Site, to depths of between 1m and 2.2m. Topsoil was encountered to a depth of approximately 0.30m across the Site, with made ground encountered in three trial pits to a maximum depth of 0.8m (E & P 2021, 9). No archaeological deposits or remains were identified during these works (ibid., 1).

3.6.2 Magnitude surveys carried out a fluxgate gradiometer survey of the site in 2024. Anomalies of archaeological potential were detected in the north-east and south-west of the Site, and some correlation with known cropmarks in the north-eastern part of the Site was noted (Stead 2024, 11).

4 AIMS AND OBJECTIVES

4.1 General aims and objectives

4.1.1 The following is taken from *Archaeological Written Scheme of Investigation (Phase 1: Evaluation) Lockwood Road, Goldthorpe* (SLR 2024, 5).

4.1.2 The programme of archaeological evaluation was designed to:

- Facilitate discharge of planning condition 6 of planning consent 2021/1171
- Identify the presence and extent of archaeological remains
- Establish the scope and extent of any mitigation fieldwork (if relevant)
- Mark out, excavate, and make a record of any such remains and survey their extents
- To undertake post-excavation analysis of the record, artefacts and samples recovered during the work
- To produce a report for submission to the Local Planning Authority and, if merited, a formal publication; and
- To deposit a permanent and publicly accessible archive of the site record, reports and artefacts

5 METHODOLOGY

5.1 Excavation methodology:

5.1.1 A total of nine trenches were excavated as set out in the WSI (SLR 2024, 10; Figure 3). These were positioned to target geophysical anomalies and cropmark evidence.

Table 1: Trench overview				
Trench	**Dimensions (plan)**	**Dimensions (depth)**	**Trench alignment**	**Archaeology present**
Tr.1	15 x 1.8m	0.6m	NW–SE	No
Tr.2	15 x 1.8m	0.32m	N–S	No
Tr.3	20 x 1.8m	0.53m	N–S	Yes
Tr.4	30 x 3.6m	0.35m	NE–SW	Yes
Tr.5	20 x 1.8m	0.52m	E–W	Yes
Tr.6	15 x 1.8m	0.82m	NE–SW	No
Tr.7	15 x 1.8m	0.45m	N–S	No
Tr.8	15 x 1.8m	0.4m	E–W	Yes
Tr.9	20 x 1.8m	0.18m	E–W	Yes

5.1.2 The topsoil strip was carried out using a thirteen-tonne excavator fitted with a 1.8m wide flat bladed ditching bucket. All mechanical excavation was conducted under the supervision of a suitably qualified and experienced YA archaeologist.

5.1.3 Hand excavation followed the stipulations set out in the WSI (SLR 2024, 11):

- *Discrete features such as pits will have 50% of their fill removed;*
- *Large discrete features may be subject to a lesser level of hand-excavation and/or to machine-excavation if, in agreement with the Planning Archaeologist, this would be proportionate while still satisfying the project aims and objectives;*
- *Linear features, e.g. ditches, will have slots of 2m length of their fill removed accounting for 20% of overall length, in addition to 'dog leg' slots targeting intersections with other linear features;*
- *Where the terminus of a linear feature is revealed this will be investigated;*
- *Where intersections of two or more features (discrete and linear) are revealed, these will be investigated sufficiently to determine the stratigraphic relationship between them;*
- *Where features extend beyond the limit of excavation, the overlying soils will be hand cleaned and recorded in section in order to contextualise the features' stratigraphic relationship(s) with the overlying soil profile.*

5.2 Recording Methodology

5.2.1 All archaeological features were assigned unique context numbers and recorded on pro-forma YA recording sheets following procedures outlined in the YA recording manual (YA 2024), and the WSI (SLR 2024). The standard of recording complied with CIfA's *Standard and Guidance for an Archaeological Evaluation* (2023) and *Code of Conduct* (2021).

5.2.2 Each context was given a unique context number. Context numbers were designated according to the trench number, for example, 100+ for Trench 1, 200+ for Trench 2 and so on. Where multiple interventions associated with trenches were present, these used the same context numbers where continuing contexts were identified, to avoid unnecessary duplication of contexts within the record.

5.2.3 Pro-forma context record sheets were created for each context, and attributes including composition, shape, dimensions and relationships were recorded. Representative photographs of sections were taken and each section was sketched. Full drawing of the sections was deemed unnecessary due both to limitations on access in some trenches and the lack of archaeological features present.

5.2.4 Digital photographs were taken with a DSLR camera with a r/2.33" CMOS 12-megapixel sensor. General site views and photographs of individual contexts were captured in RAW format with site photography undertaken in accordance with Historic England (HE 2015) and ADS (2013) guidance.

5.2.5 Site survey was carried out with a Leica GNSS following standard YA survey methodology (YA 2023) and linked to the OS grid.

5.2.6 Site records were checked for consistency and coherency, then quantified and indexed. A copy of the site archive will be digitised and a backup copy of the records will be stored securely on internal YA servers.

5.2.7 Artefacts were handled, packaged and stored in accordance with guidance detailed in the RESCUE/UKIC publication *First Aid for Finds* (Leigh, Neal and Watkinson 1998).

5.3 Post-Excavation Methodology

5.3.1 All artefacts, digital and paper records are currently stored with YA under project code 9754.

5.3.2 The paper archive and artefacts will be retained by YA prior to transfer and deposition with Barnsley Museum, in accordance with the WSI (SLR 2024, 13-19). At this stage the accession code is pending.

5.3.3 Details of this fieldwork project and a copy of this report will be deposited with the Archaeology Data Service (ADS) via OASIS.

6 RESULTS

6.1.1 The results are presented on a trench by trench basis with a tabulated summary of individual contexts identified and recorded in each trench. A brief description of features (where present), their location, relationships (where identifiable) and presence of artefacts or other dateable material is provided for each trench.

6.2 Trench 1 (Figures 2 and 3; Plates 1 –2)

Table 2: Trench 1 summary					
Context number	**Category**	**Context name**	**Description**	**Thickness/ Depth**	**Period**
100	Layer	Topsoil	Friable, greyish brown, sandy silt	0.35m	Undated
101	Layer	Subsoil	Friable, orangey brown, sandy silt	0.25m	Undated
102	Layer	Natural	Soft, yellow, sand	n/a	Undated

6.2.1 Trench 1 was aligned north-west/south-east and measured 15 x 1.8m in plan. No archaeological deposits, features or structures were exposed within its extent.

6.3 Trench 2 (Figure 2; Plates 3–4)

Table 3: Trench 2 summary					
Context number	**Category**	**Context name**	**Description**	**Thickness/ Depth**	**Period**
200	Layer	Topsoil	Friable, light brown, sandy silt	0.15m	Undated
201	Layer	Subsoil	Friable, light brown, silty sand	0.24m	Undated
202	Layer	Natural	Compact, yellow brown, sand	0.14m+	Undated

6.3.1 Trench 2 was aligned north/south and measured 15 x 1.8m in plan. No archaeological deposits, features or structures were present.

6.4 Trench 3 (Figures 2 and 4; Plates 5–7)

Table 4: Trench 3 summary					
Context number	**Category**	**Context name**	**Description**	**Thickness/ Depth**	**Period**
300	Layer	Topsoil	Friable, light brown, sandy silt	0.15m	Undated
301	Layer	Subsoil	Friable, light brown, silty sand	0.24m	Undated
302	Layer	Natural	Compact, yellow brown, sand	0.14m+	Undated
303	Fill	Ditch fill	Crumbly, light brown, silty sand	0.06m	Undated
304	Cut	Ditch cut	Cut of shallow NW–SE aligned ditch with concave sides and flat base. 0.78m wide. Contains (303)	0.06m	Undated
305	Fill	Ditch fill	Friable, mid-orangey brown, silt	0.28m	Undated
306	Cut	Ditch cut	Cut of small E–W aligned ditch with u-shape profile. 0.79m wide. Contains (305)	0.28m	Undated

6.4.1 Trench 3 was aligned north/south and measured 20 x 1.8m in plan (Figures 4; Plate 5). Two ditches were exposed within its extent. The earliest was a north-west/south-east aligned shallow ditch or furrow [304] which contained a single fill (303) (Figure 4.2; Plate 6). This feature was cut by east/west aligned ditch [306] close to the western side of the trench (Figure 4.1; Plate 7). Ditch [306] contained a single fill (305) that was sealed below subsoil (301). No finds or dateable material was recovered from either ditch.

6.5 Trench 4 (Figures 2, 5 and 6; Plates 8–12)

Table 5: Trench 4 summary

Context number	Category	Context name	Description	Thickness/ Depth	Period
400	Layer	Topsoil	Friable, greyish brown, sandy silt	0.26m	Undated
401	Layer	Subsoil	Friable, orangey brown, sandy silt	0.09m	Undated
402	Layer	Natural	Soft, yellow, sand	n/a	Undated
403	Fill	Ditch fill	Soft, mid-orangey brown, silty sand	1.62m	Undated
404	Cut	Ditch cut	Cut of E–W aligned ditch with steep concave sides to north and south, which gradually broke to a flat step before gradually breaking to steep concave sides and a u-shaped base. 4.48m wide. Contains (403)	1.62m	Undated
405	Fill	Ditch fill	Friable, mid-brown, clayey sand	0.45m	Undated
406	Fill	Ditch fill	Friable, light yellow, silty sand	0.13m	Undated
407	Fill	Ditch fill	Compact, mid-brown, silty sand	0.27m	Undated
408	Cut	Ditch cut	Cut of N–S aligned ditch with steep concave sides and rounded base. 1.71m wide. Contains (405), (406) and (407)	0.75m	Undated
409	Fill	Furrow fill	Compact, greyish orangey brown, sand	0.14m	Undated
410	Cut	Furrow cut	Cut of NW–SE aligned furrow with shallow concave sides and base. 1.4m wide. Contains (409).	0.14m	Undated
411	Fill	Furrow fill	Loosely compacted, yellowish brown, sand	0.11m	Undated
412	Cut	Furrow cut	Cut of NE–SW aligned furrow with shallow concave sides and flat base. 0.58m wide. Contains (411).	0.11m	Undated

6.5.1 Trench 4 was aligned north-east/south-west and measured 30 x 3.6m in plan. Two ditches and two furrows were exposed within its extent (Figure 5; Plate 8).

6.5.2 Aligned north-west/south-east near the centre of the trench was furrow [410] which contained a single fill (409) (Figure 6.2; Plate 9). A second furrow [412] was situated immediately north-east of [410]. Furrow [412] was aligned north-east/south-west and contained a single fill (411) (Figure 6.1; Plate 10). No finds or dateable material were recovered from either furrow.

6.5.3 Approximately 4m from the south-western end of the trench was ditch [408]. This feature was aligned north/south and contained three fills, with (407) the basal deposit, (406) in the middle and (405) the uppermost respectively (Figures 5 and 6.3; Plate 11). No finds or dateable material were recovered from any fill.

6.5.4 Approximately 4.3m from the north-eastern end of the trench was east/west aligned ditch [404]. Initially a sondage measuring 1.95 x 0.76m was excavated to a depth of 0.4m from the south-western edge of the feature. Only a single fill was observed, however the base of the feature was not exposed. In order to expose a full profile through ditch [404] a machine-dug slot was excavated, exposing a 4.48m wide, 1.62m deep cut (Figures 5 and 6.4; Plate 12). No finds or dateable material were recovered.

6.5.5 No stratigraphic relationships were observed between any feature in Trench 4 and all were sealed below the subsoil (401).

6.6 Trench 5 (Figures 2 and 7; Plates 13–14)

Table 6: Trench 5 summary

Context number	Category	Context name	Description	Thickness/ Depth	Period
500	Layer	Topsoil	Friable, greyish brown, sandy silt	0.16m	Undated
501	Layer	Subsoil	Friable, orangey brown, sandy silt	0.36m	Undated
502	Layer	Natural	Soft, yellow, sand	n/a	Undated
503	Cut	Ditch cut	Cut of shallow E–W aligned ditch with steep concave sides and u-shaped base. 2.3m wide. Contains (504) and (505)	0.82m	Undated
504	Fill	Ditch fill	Firm, dark orangey brown, silty sand	0.6m	Undated
505	Fill	Ditch fill	Firm, mid-orangey brown, silty sand	0.22m	Undated

6.6.1 Trench 5 was aligned close to east/west and measured 20 x 1.8m in plan (Figures 2 and 7; Plate 13). A single ditch was encountered 11m from the eastern end of the trench. Ditch [503] was aligned north/south and possibly equated to ditch [408] found 34m to the north in Trench 4. The ditch contained two fills, (505) at its base and (504), which accounted for most of the silting within the ditch (Figure 7.1; Plate 14). No finds or other dateable material were recovered from this feature.

6.7 Trench 6 (Figure 2; Plates 15–16)

Table 7: Trench 6 summary					
Context number	**Category**	**Context name**	**Description**	**Thickness/ Depth**	**Period**
600	Layer	Topsoil	friable, greyish brown, silty sand	0.45m	Undated
601	Layer	Subsoil	Friable, orangey brown, sandy silt	0.37m	Undated
602	Layer	Natural	Soft, yellow, sand	n/a	Undated

6.7.1 Trench 6 was aligned north-east/south-west and measured 15 x 1.8m in plan (Figure 2; Plates 15–16). No archaeological deposits, features or structures were exposed within its extent.

6.8 Trench 7 (Figure 2; Plate 17)

Table 8: Trench 7 summary					
Context number	**Category**	**Context name**	**Description**	**Thickness/ Depth**	**Period**
600	Layer	Topsoil	mixed, dark brown contaminated clay silts	0.20m	Undated
601	Layer	Subsoil	friable, orangey brown, sandy silt	0.25m	Undated
602	Layer	Natural	soft, yellow brown sand	n/a	Undated

6.8.1 Trench 7 was aligned north/south and measured 15 x 1.8m in plan (Figures 2; Plate 17). No archaeological deposits, features or structures were exposed within its extent.

6.9 Trench 8 (Figures 2 and 8; Plates 18–21)

Table 9: Trench 8 summary					
Context number	**Category**	**Context name**	**Description**	**Thickness/ Depth**	**Period**
800	Layer	Topsoil	Friable, greyish brown, silty sand	0.25m	Undated
801	Layer	Subsoil	Friable, orangey brown, sandy silt	0.15m	Undated
802	Layer	Natural	Soft, yellow, sand	n/a	Undated
803	Fill	Pit fill	Loose, mid-blackish grey, sandy silt	0.28m	Undated
804	Cut	Pit cut	Sub-oval in plan, aligned NW-SE, steep concave sides and an uneven base. 1.06m long, 0.34m wide. Contains (803).	0.28m	Undated
805	Fill	Ditch fill	Compact, mid-reddish brown, clayey sand	0.18m	Undated
806	Cut	Ditch cut	Cut of a small E-W aligned ditch with moderately steep concave sides that break gradually to a flat base. 0.42m wide. Contains (805)	0.18m	Undated
807	Fill	Furrow fill	Compact, mid-reddish brown, clayey sand	0.07m	Undated
808	Cut	Furrow cut	Cut of a N-S aligned possible furrow with shallow irregular sides and base. 1.01m wide. Contains (807)	0.07m	Undated

6.9.1 Trench 8 was aligned east/west and measured 15 x 1.8m in plan. This trench contained two linear features: a small ditch and a possible furrow. A pit was also exposed.

6.9.2 Pit [804] was found approximately 1.7m from the western end of the trench (Figures 8 and 8.1; Plate 19). Fragments of coal and brick were present within its single fill (803).

6.9.3 Aligned north/south in the centre of the trench was a small ditch [806] which contained a single fill (805) (Figures 8 and 8.3; Plate 20).

6.9.4 A north/south aligned possible furrow [808] containing a single fill (807) was encountered at approximately 1.3m from the eastern end of the trench (Figures 8 and 8.2; Plate 21).

6.9.5 All features in Trench 8 were sealed by subsoil (801) and cut into naturally-occurring sands (802). No finds or other dateable material were recovered from any of the Trench 8 features.

6.10 Trench 9 (Figures 2 and 9; Plate 22–24)

Table 10: Trench 9 summary					
Context number	**Category**	**Context name**	**Description**	**Thickness/ Depth**	**Period**
900	Layer	Topsoil	Friable, greyish brown, silty sand	0.08m	Undated
901	Layer	Subsoil	Friable, orangey brown, sandy silt	0.1m	Undated
902	Layer	Natural	Hard, whitish yellow limestone	n/a	Undated
903	Fill	Ditch fill	Friable, dark brown, sandy silt	0.66m	Undated
904	Cut	Ditch cut	Cut of a N-S aligned ditch with steep concave sides that break gradually to u-shaped base. 1.42m wide. Contains (903)	0.66m	Undated
905	Fill	Ditch fill	Friable, light brown, silty sand	0.22m	Undated
906	Cut	Ditch cut	Cut of a NW-SE aligned ditch with shallow concave sides that break gradually to an uneven base. 0.98m wide. Contains (905)	0.22m	Undated

6.10.1 Trench 9 was situated in the far south-western corner of the site, approximately 82m south of Trench 8. It was aligned east/west, measured 15 x 1.8m in plan and contained two ditches (Figure 9; Plate 22).

6.10.2 Ditch [904] was aligned north/south and was situated approximately 3.9m from the western side of the trench (Figure 9.1; Plate 23). It contained a single fill (903) and was sealed below subsoil (901). No finds or dateable material were recovered from this feature.

6.10.3 Ditch [906] was aligned north-west/south-east and situated approximately 5.2m from the eastern side of the trench (Figure 9.2; Plate 24). It contained a single fill (905) and was sealed below subsoil (901). No finds or dateable material were recovered from this feature.

7 DISCUSSION AND CONCLUSION

7.1.1 A series of eleven linear features and a single discrete feature were recorded in five of the nine evaluation trenches opened at Lockwood Road, Goldthorpe.

7.1.2 At this stage it is possible to tentatively suggest the development of landscape management at the Site, probably linked to agricultural practice, which was defined by ditches and supplemented by what may have been furrows. There appear to be two zones in which features predominated: one in the north-eastern part of the Site where seven linear features were encountered across Trenches 3, 4 and 5, and one in the south-western part of the site where five features (four linear features and a pit), were found in Trenches 8 and 9. No archaeological features or deposits were found in Trenches 1, 2, 6 and 7, all broadly arranged across the central part of the Site.

7.1.3 The majority of linear features, seven in total, were arranged on or close to a north-south axis, but it is likely that two of these, ditches [408] and [503], were elements of the same feature that equate to one of the geophysical anomalies identified for targeting by Trench 4 (SLR 2024, 10; Figure 3). Two ditches, [306] and [404], were aligned on or close to east/west, but despite both being situated near the north-eastern corner of the Site, the disparity in their scale and slight differences in their trajectory indicates that contemporaneous creation, usage or common purpose between them is unlikely; one or both potentially relate to geophysical anomalies identified by Magnitude Surveys (SLR 2024, 10; Figure 3). However, ditch [306] is comparable in alignment and scale to furrow [412] which was situated 30m to its north-east, perhaps equating to an undetermined geophysical anomaly running across Trenches 3 and 4 (SLR 2024, 10; Figure 3). This raises the possibility that the linear features interpreted as furrows, largely due to their broad, shallow profiles, are perhaps the remains of ditches largely destroyed by later agricultural activity.

7.1.4 Unfortunately, no dateable material was present within any of the ditches, and the only occurrence of any intersection between them was that of ditches [304] and [306]. This prevents a detailed understanding of how and when landscape management evolved across the site.

7.1.5 The single discrete feature encountered, pit [804], is something of an anomaly with the presence of brick and coal fragments within its fill suggesting a post-medieval or modern date.

8 REFERENCES

ADS and Digital Antiquity 2013 *Caring for Digital Data in Archaeology: A Guide to Good Practice*. Oxbow Books

Barnsley Metropolitan Borough Council, 'Grant of Planning Permission, Application NO. 2021/1171', Barnsley Metropolitan Borough Council Planning Explorer [website], (30/10/23), https://planningexplorer.barnsley.gov.uk/Home/ApplicationDetails?planningApplicationNumber=2021%2F1171 , accessed 06/09/2024.

British Geological Survey, 'Geology Viewer', British Geological Survey [website], (nd), https://geologyviewer.bgs.ac.uk/?_ga=2.188625192.1614730497.1713534676-2052576325.1713534676, accessed 28/08/2024

Chartered Institute for Archaeologists (CIfA) 2021 *Code of Conduct*. Reading: Chartered Institute for Archaeologists

Chartered Institute for Archaeologists (CIfA) 2023 *Standard for archaeological field evaluation*. Reading: Chartered Institute for Archaeologists

Deegan, A 2006 *The Magnesian Limestone in South and West Yorkshire Archaeological Assessment Project. Air Photo Mapping Project.* Archaeological Services WYAS: Leeds.

Eastwood & Partners 2021 Phase 2 Geotechnical and Geo-environmental Site Investigations: Lockwood Road, Goldthorpe. Eastwood & Partners unpublished report

Hey, D 2003 *Medieval South Yorkshire*. Landmark Publishing: London

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

Leigh D, Neal V and Watkinson D (eds) 1998 *First Aid for Finds: Practical Guide for Archaeologists*. 2 edn. London: RESCUE/UKIC

MAGIC, 'MagicMap', Defra [website], (nd), https://magic.defra.gov.uk/MagicMap.aspx, accessed 28/08/2024

SLR Consulting 2024 *Archaeological Written Scheme of Investigation (Phase 1: Evaluation), Lockwood Road, Goldthorpe*. SLR unpublished document

Stead M 2024 *Geophysical Survey Report, Lockwood Road, Goldthorpe, Stage 1.* (report number MSSE1810A). Magnitude Surveys unpublished report

Stenton M and Malone S 2021 *Land off Lockwood Road, Goldthorpe, South Yorkshire:*

Archaeological Desk-Based Assessment. (report number 067/2021). YA unpublished report

York Archaeology 2024 *Recording Manual*. YA unpublished manual

York Archaeology 2022 *Survey Manual*. YA unpublished manual

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9.1.1 York Archaeology extends thanks to the client, Gleeson, and to SLR Consulting Ltd.

9.1.2 The following York Archaeology staff contributed to the project fieldwork: F. Birtles, C. Dahlke and M. King. The illustrations were compiled by B. Price. The Project Manager was J. Goodchild and post-excavation was managed by K. Allenby. Administration was undertaken by S. Hughes.

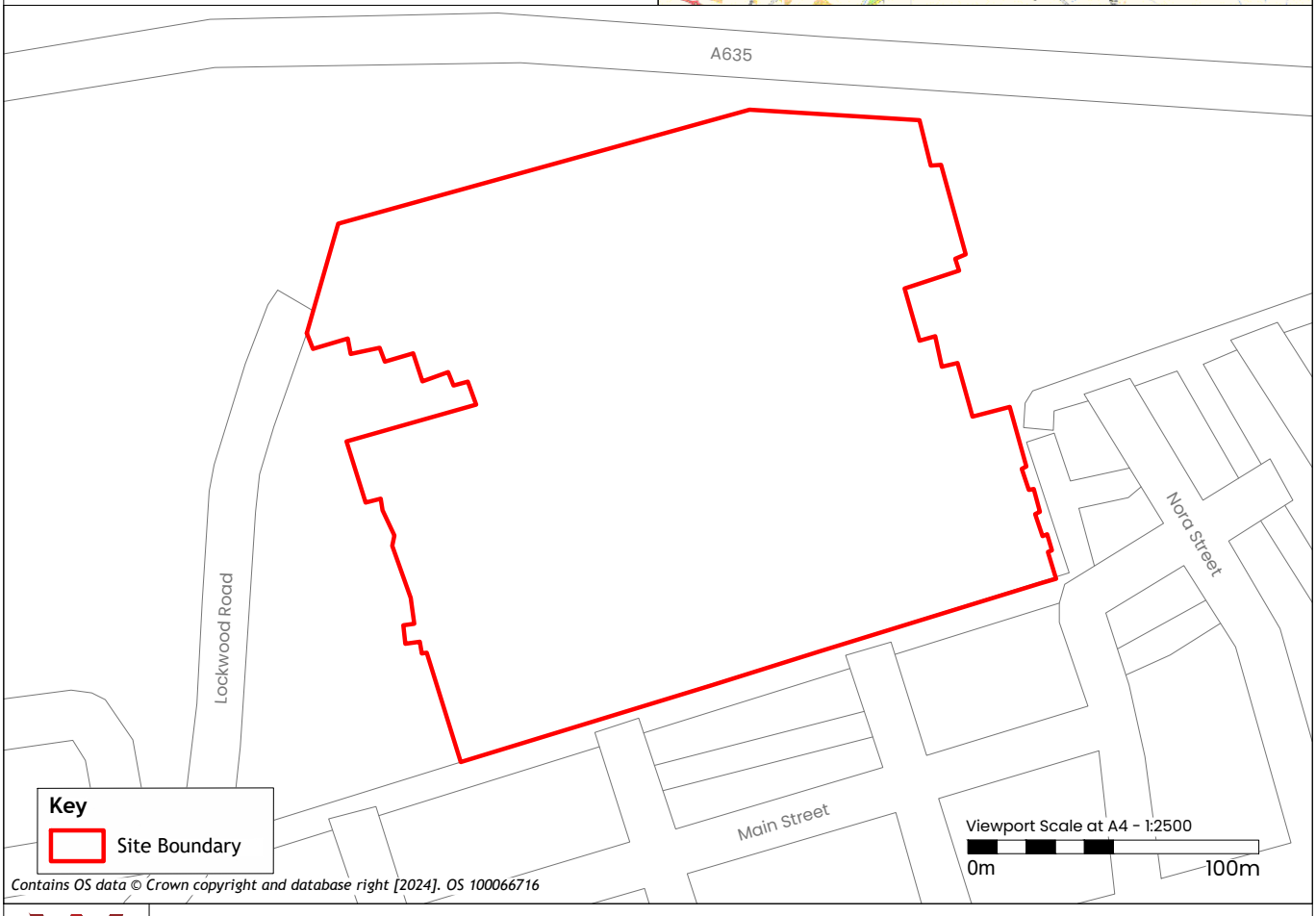

Figure 01 - Location Map
9754 - Lockwood Road, Goldthorpe, South Yorkshire

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Drawn by BP

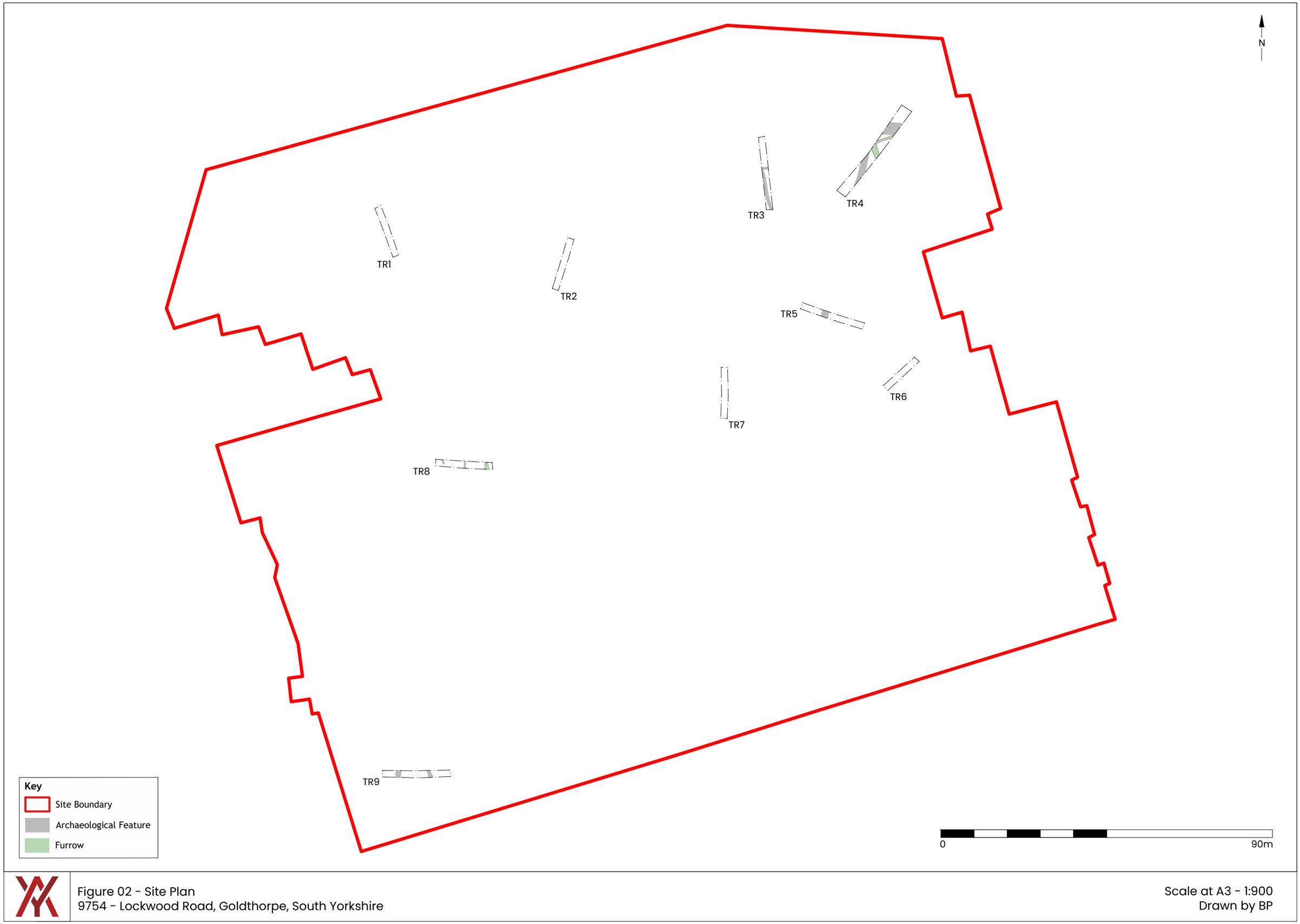

Figure 02 - Site Plan
9754 - Lockwood Road, Goldthorpe, South Yorkshire

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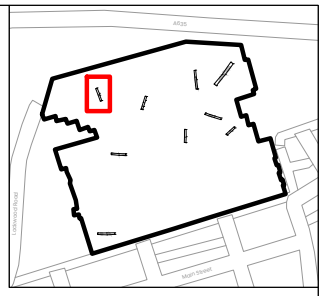


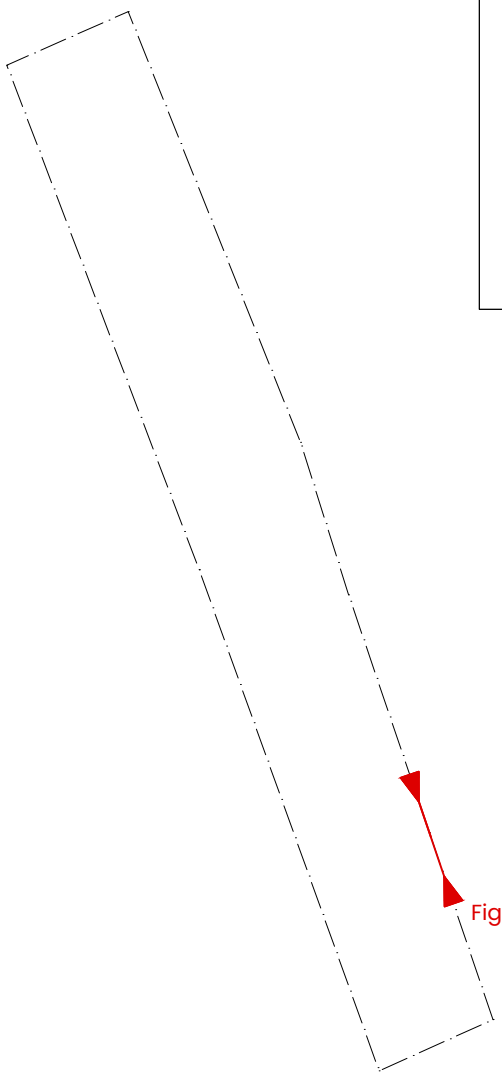
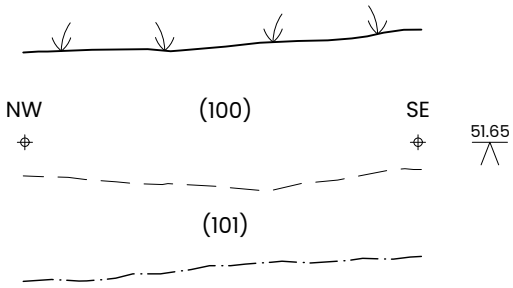


Fig.03.1
South West Facing Representative Section

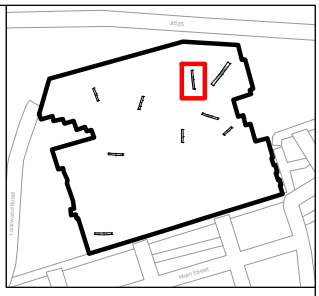


Scale at A4 - 1:20

0 10m

Figure 03 - Plan of Trench 1 & Section Figure 03.1
9754 - Lockwood Road, Goldthorpe, South Yorkshire

Scale at A4 - 1:100
Drawn by BP



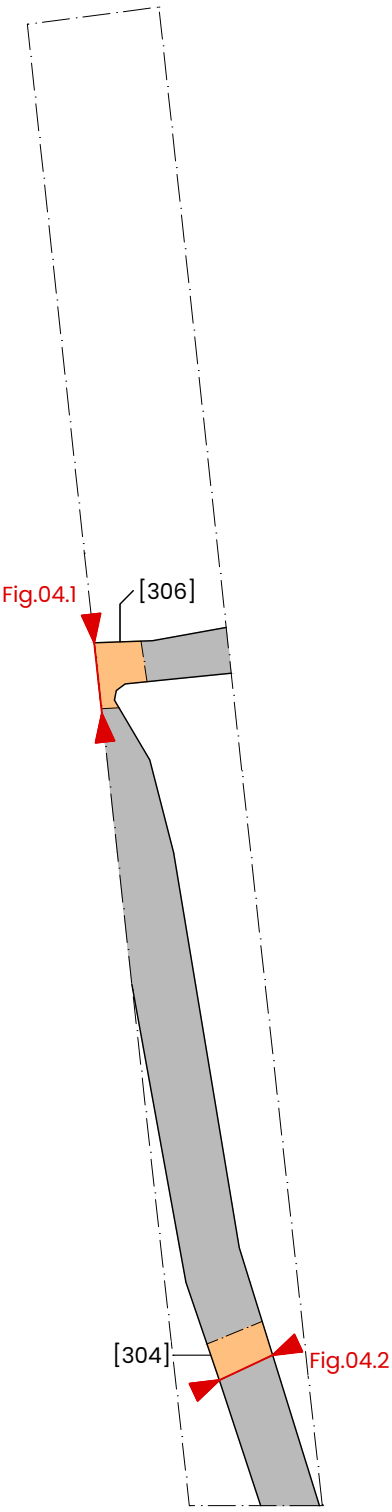


Fig.04.1
East Facing Section [306]

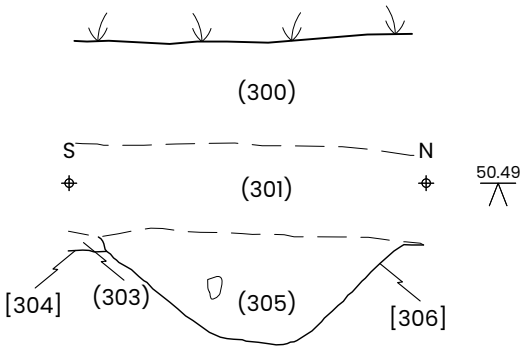


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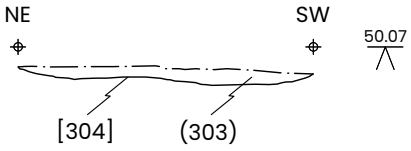
Fig.04.2
North West Facing Section [304]



Scale at A4 - 1:20

Key

- Archaeological Feature
- Intervention

0 — 10m

Figure 04 - Plan of Trench 3 & Section Figures 04.1 & 04.2
9754 - Lockwood Road, Goldthorpe, South Yorkshire

Scale at A4 - 1:100
Drawn by BP

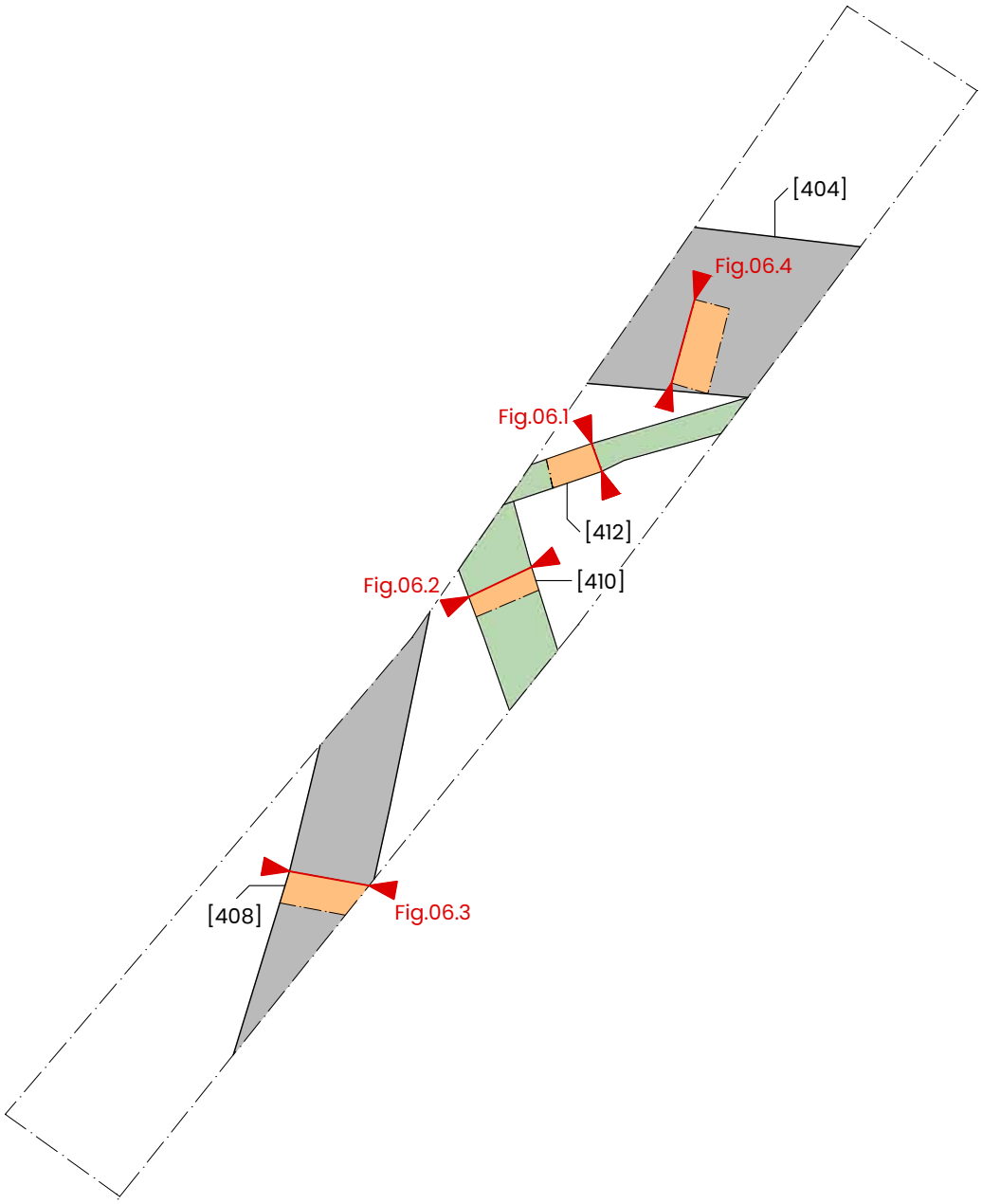


Figure 05 - Plan of Trench 4
9754 - Lockwood Road, Goldthorpe, South Yorkshire

Scale at A4 - 1:100
Drawn by BP

Fig.06.1
West Facing Section [412]

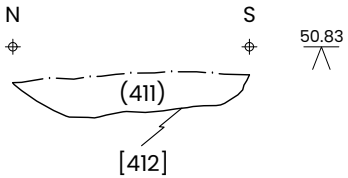


Fig.06.2
South East Facing Section [410]

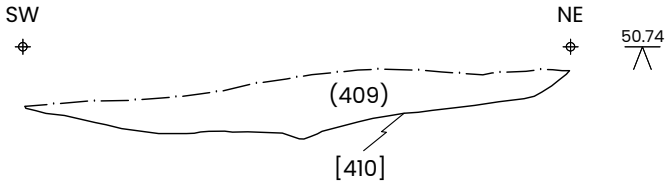


Fig.06.3
South Facing Section [408]

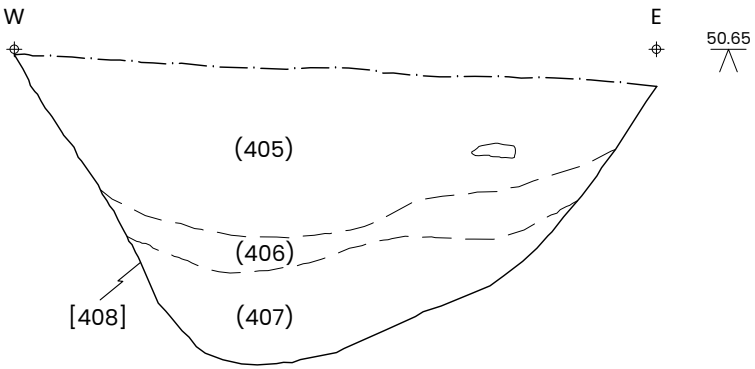


Fig.06.4
South East Facing Section [404]

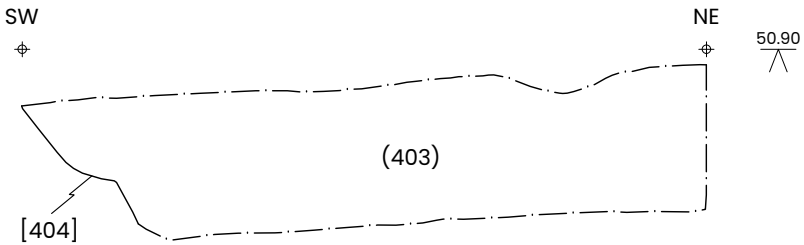


Figure 06 - Section Figures 06.1 - 06.4
9754 - Lockwood Road, Goldthorpe, South Yorkshire

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Drawn by BP

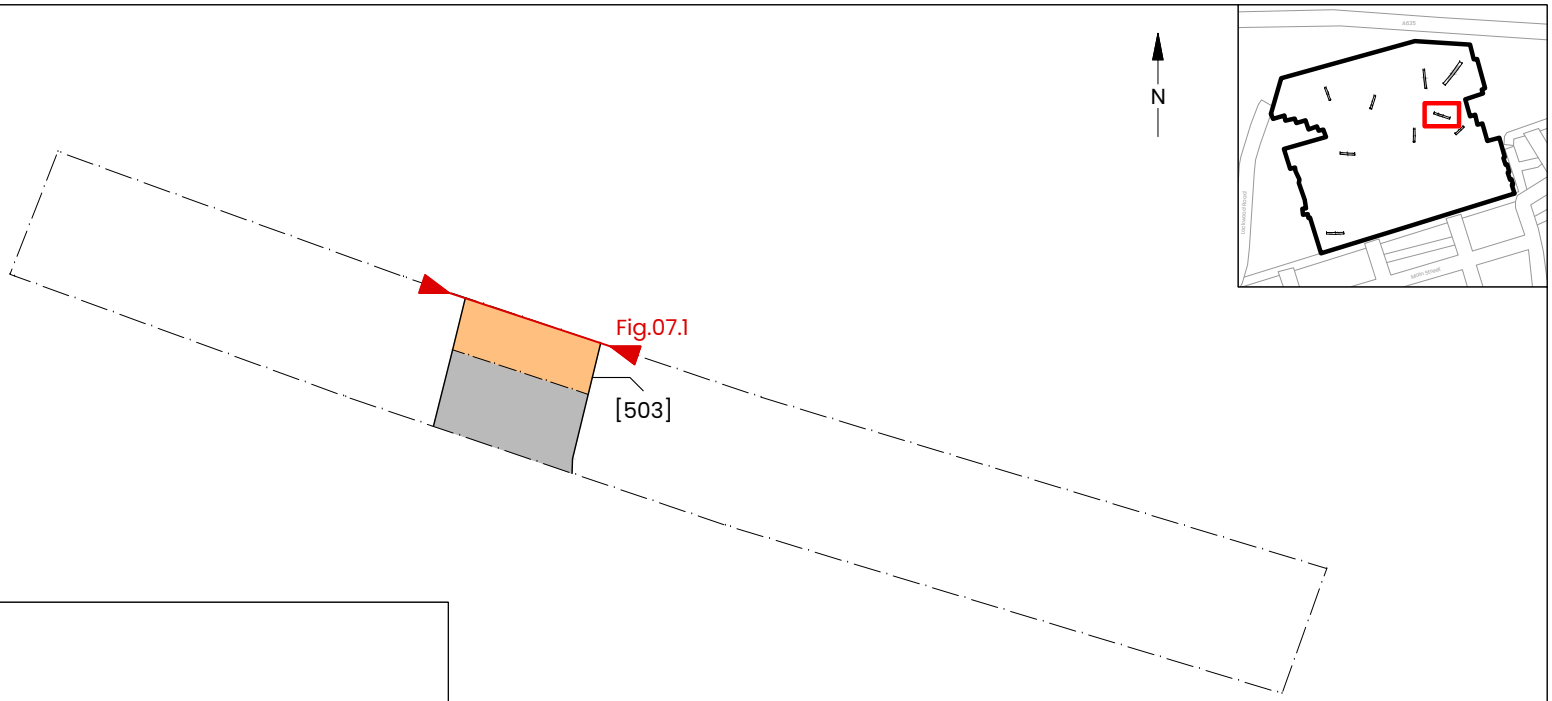
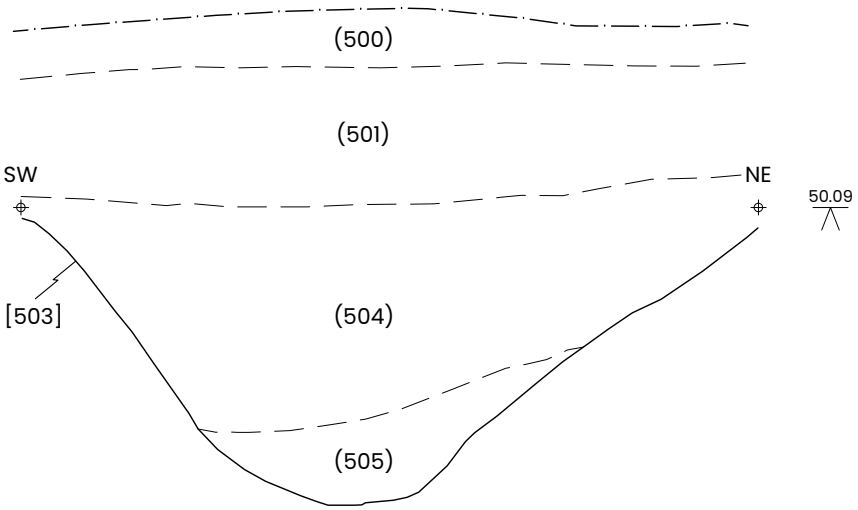


Fig.07.1
South East Facing Section [503]



Scale at A4 - 1:20

Key
Archaeological Feature
Intervention

0 10m

Figure 07 - Plan of Trench 5 & Section Figure 07.1
9754 - Lockwood Road, Goldthorpe, South Yorkshire

Scale at A4 - 1:100
Drawn by BP

Fig.08.1
South West Facing Section [804]

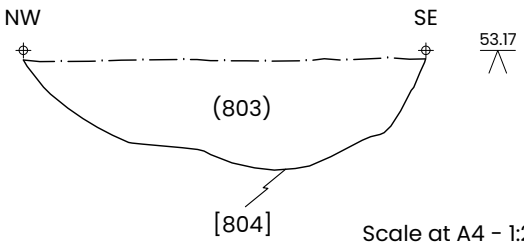


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Fig.08.2
North Facing Section [808]

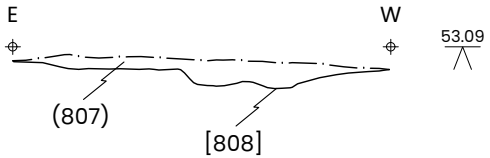

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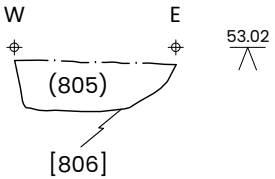
Fig.08.3
South Facing Section [806]



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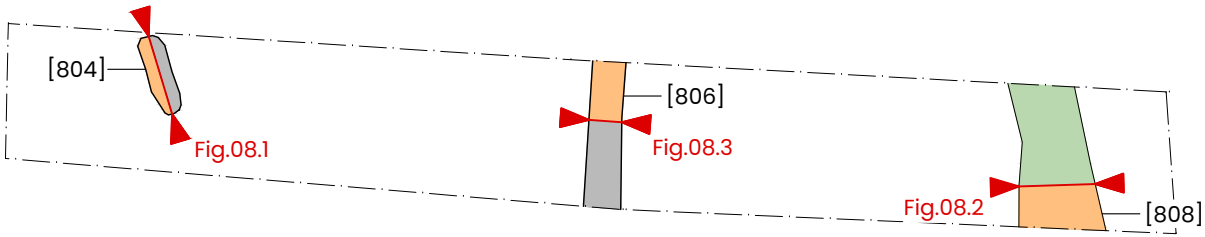


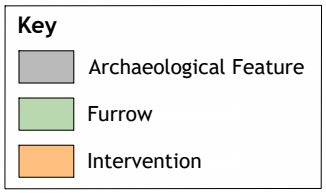
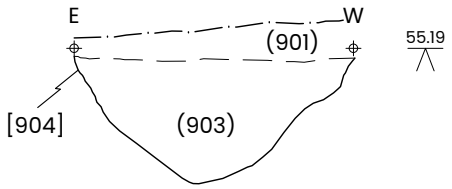


Figure 08 - Plan of Trench 8 & Section Figures 08.1 - 08.3
9754 - Lockwood Road, Goldthorpe, South Yorkshire

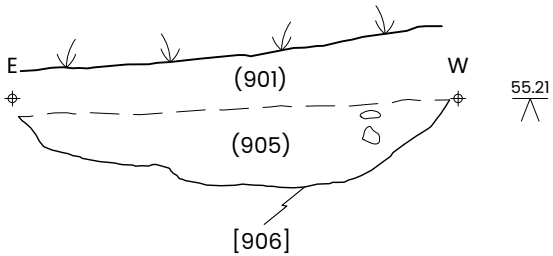
Scale at A4 - 1:100
Drawn by BP

Fig.09.1
North Facing Section [904]



Scale at A4 - 1:20

Fig.09.2
North Facing Section [906]



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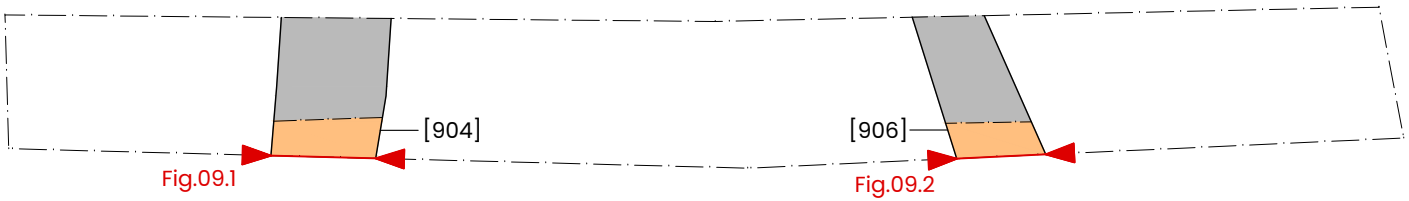

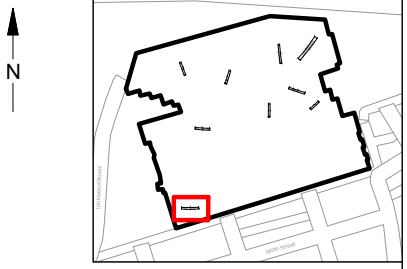

Key

- Archaeological Feature
- Intervention

0 10m

Figure 09 - Plan of Trench 9 & Section Figures 09.1 & 09.2
9754 - Lockwood Road, Goldthorpe, South Yorkshire

Scale at A4 - 1:100
Drawn by BP

PLATES

Plate 1: Trench 1, looking north-west. 0.5m scale units

Plate 2: Trench 1 section, looking north-east. 0.1m and 0.5m scale units

Plate 3: Trench 2, looking north. 0.5m scale units

Plate 4: Trench 2 section, looking east. 0.5m Scale units

Plate 5: Trench 3, looking north, 0.5m scale units

Plate 6: Trench 3, linear feature [304], looking south-east. 0.1m scale units

Plate 7: Trench 3, ditch [306], looking west. 0.1m scale units

Plate 8: Trench 4, looking north-east. 0.5m scale units

Plate 9: Trench 4, linear feature [412], looking east. 0.1m scale units

Plate 10: Trench 4, linear feature [410], looking north-west. 0.1m scale units

Plate 11: Trench 4, ditch [408], looking north. 0.5m scale units

Plate 12: Trench 4, ditch [404], looking north-west. 0.5m scale units

Plate 13: Trench 5, looking east. 0.5m scale units

Plate 14: Trench 5, ditch [503], looking north. 0.5m scale units

Plate 15: Trench 6, looking north-east. 0.5m scale units

Plate 16: Trench 6 section, looking south-east. 0.5m scale units

Plate 17: Trench 7, looking south. 0.5m scale units

Plate 18: Trench 8, looking east. 0.5m scale units

Plate 19: Trench 8, pit [804], looking north-east. 0.1m scale units

Plate 20: Trench 8, ditch [806], looking east. 0.1m scale units

Plate 21: Trench 8, linear feature [808], looking east. 0.1m scale units

Plate 22: Trench 9, looking west. 0.5m scale units

Plate 23: Trench 9, ditch [904], looking south. 0.5m scale units

Plate 24: Trench 9, ditch [906], looking south. 0.5m scale units

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Appendix B Geophysical Survey

Magnitude Surveys Ltd

2024

Geophysical Survey Report

Lockwood Road, Goldthorpe, Stage 1,

For

SLR Consulting

On Behalf Of

Gleeson

Magnitude Surveys Ref: MSSE1810A

June 2024

3 Captain Street

Bradford

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Report By:

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Report Approved By:

Finnegan Pope-Carter BSc (Hons) MSc FGS

Issue Date:

17 June 2024

Abstract

Magnitude Surveys was commissioned to assess the subsurface archaeological potential of a c. 3.8ha area of land at Lockwood Road, Goldthorpe, South Yorkshire. A gradiometer survey was undertaken across c. 3.04ha of land, with c. 0.76ha unable to be surveyed due to the presence of construction materials and earth banks from ongoing construction, and debris from former allotments in the southern part of the site. These features have potentially obscured any anomalies of a weaker enhancement, should they be present. Nevertheless, the survey detected anomalies of possible archaeological and undetermined origin. A rectilinear anomaly was detected in the northeast of the survey area. Further anomalies of undetermined origin were detected in the northeast and southwest of the survey area; whilst an agricultural origin is most likely, an archaeological one cannot be wholly precluded. Agricultural anomalies interpreted as drainage features were also identified in the north of the survey area.

Contents

List of Figures

1. Introduction

1.1. Magnitude Surveys Ltd (MS) was commissioned by RPS on behalf Gleeson to undertake a geophysical survey over a c. 3.8ha area of land at Lockwood Road, Goldthorpe, South Yorkshire (SE 46537 04708). C. 0.76ha were unable to be surveyed due to construction material and debris.

1.2. The geophysical survey comprised hand-carried GNSS-positioned fluxgate gradiometer survey. Magnetic survey is the standard primary geophysical method for archaeological applications in the UK due to its ability to detect a range of different features. The technique is particularly suited for detecting fired or magnetically enhanced features, such as ditches, pits, kilns, sunken featured buildings (SFBs) and industrial activity (David *et al*., 2008).

1.3. The survey was conducted in line with the current best practice guidelines produced by Historic England (David *et al*., 2008), the Chartered Institute for Archaeologists (CIfA, 2020) and the European Archaeological Council (Schmidt *et al.,* 2015).

1.4. It was conducted in line with a WSI produced by MS (Stead, 2024).

1.5. The survey commenced on 10-06-2024 and took one day to complete.

2. Quality Assurance

2.1. Magnitude Surveys is a Registered Organisation of the Chartered Institute for Archaeologists (CIfA), the chartered UK body for archaeologists, and a corporate member of ISAP (International Society for Archaeological Prospection).

2.2. The directors of MS are involved in cutting edge research and the development of guidance/policy. Specifically, Dr Chrys Harris has a PhD in archaeological geophysics from the University of Bradford, is a Member of CIfA and is the Vice-Chair of the International Society for Archaeological Prospection (ISAP); Finnegan Pope-Carter has an MSc in archaeological geophysics and is a Fellow of the London Geological Society, as well as a member of GeoSIG (CIfA Geophysics Special Interest Group); Dr Paul Johnson has a PhD in archaeology from the University of Southampton, is a Fellow of the Society of Antiquaries of London and a Member of CIfA, has been a member of the ISAP Management Committee since 2015, and is currently the nominated representative for the EAA Archaeological Prospection Community to the board of the European Archaeological Association.

2.3. All MS managers, field and office staff have degree qualifications relevant to archaeology or geophysics and/or field experience.

3. Objectives

3.1. The objective of this geophysical survey was to assess the subsurface archaeological potential of the survey area.

4. Geographic Background

4.1. The survey area was located in Goldthorpe, South Yorkshire (Figure 1). Gradiometer survey was undertaken across one field. The survey area was located to the south of the A635, with trees directly between the road and the survey area. To the south was Goldthorpe Primary School, and residential housing was present around the rest of the survey area (Figure 2). Due to construction material and debris, c. 0.76ha were unable to be surveyed.

4.2. Survey considerations:

Survey Area	Ground Conditions	Further Notes
1	Excavated building site with a gentle slope to the north	The survey area was bordered on all sides with metal fencing. There were trees also along the northern boundary. A fenced off parking area was present in the south of the survey area. There were construction materials, earth banks and piles of debris throughout.

4.3. The underlying geology comprises Ackworth Rock Sandstone. No superficial deposits are present in the survey area (British Geological Survey, 2024).

4.4. The soils of the survey area were unclassified (Soilscapes, 2024).

5. Archaeological Background

5.1. The following is a summary of a DBA produced Trent and Peak Archology and provided by SLR Consulting (Stenton, 2021).

5.2. There is evidence for probable Iron Age or Roman activity around the survey area. Several extensive cropmarks featuring linear and possible enclosures were recorded by aerial imagery c. 750 m northeast of the survey area. Further undated cropmarks which appear to include enclosure boundaries and a droveway oriented northeast to southwest were recorded c. 200m west of the survey area. Cropmarks were also identified extending into the northern part of the survey area.

6. Methodology

6.1. Data Collection

6.1.1. Magnetometer surveys are generally the most cost effective and suitable geophysical technique for the detection of archaeology in England. Therefore, a magnetometer survey should be the preferred geophysical technique unless its use is precluded by any specific survey objectives or the site environment. For this site, no factors precluded the recommendation of a standard magnetometer survey. Geophysical survey therefore comprised the magnetic method as described in the following section.

6.1.2. Geophysical prospection comprised the magnetic method as described in the following table.

6.1.3. Table of survey strategies:

Method	Instrument	Traverse Interval	Sample Interval
Magnetic	Bartington Instruments Grad-13 Digital Three-Axis Gradiometer	1m	200Hz reprojected to 0.125m

6.1.4. The magnetic data were collected using MS' bespoke hand-carried GNSS-positioned system.

6.1.4.1. MS' hand-carried system was comprised of Bartington Instruments Grad 13 Digital Three-Axis Gradiometers. Positional referencing was through a multi-channel, multi-constellation GNSS Smart Antenna RTK GPS outputting in NMEA mode to ensure high positional accuracy of collected measurements. The RTK GPS is accurate to 0.008m + 1ppm in the horizontal and 0.015m + 1ppm in the vertical.

6.1.4.2. Magnetic and GPS data were stored on an SD card within MS' bespoke datalogger. The datalogger was continuously synced, via an in-field Wi-Fi unit, to servers within MS' offices. This allowed for data collection, processing and visualisation to be monitored in real-time as fieldwork was ongoing.

6.1.4.3. A navigation system was integrated with the RTK GPS, which was used to guide the surveyor. Data were collected by traversing the survey area along the longest possible lines, ensuring efficient collection and processing.

6.2. Data Processing

6.2.1. Magnetic data were processed in bespoke in-house software produced by MS. Processing steps conform to the EAC and Historic England guidelines for 'minimally enhanced data' (see Section 3.8 in Schmidt *et al.*, 2015: 33 and Section IV.2 in David *et al.,* 2008: 11).

Sensor Calibration – The sensors were calibrated using a bespoke in-house algorithm, which conforms to Olsen *et al*. (2003).

Zero Median Traverse – The median of each sensor traverse is calculated within a specified range and subtracted from the collected data. This removes striping effects caused by small variations in sensor electronics.

Projection to a Regular Grid – Data collected using RTK GPS positioning requires a uniform grid projection to visualise data. Data are rotated to best fit an orthogonal grid projection and are resampled onto the grid using an inverse distance-weighting algorithm.

Interpolation to Square Pixels – Data are interpolated using a bicubic algorithm to increase the pixel density between sensor traverses. This produces images with square pixels for ease of visualisation.

6.3.Data Visualisation and Interpretation

6.3.1.This report presents the gradient of the sensors' total field data as greyscale images, as well as the total field data from the lower sensors. The gradient of the sensors minimises external interferences and reduces the blown-out responses from ferrous and other high contrast material. However, the contrast of weak or ephemeral anomalies can be reduced through the process of calculating the gradient. Consequently, some features can be clearer in the respective gradient or total field datasets. Multiple greyscale images of the gradient and total field at different plotting ranges have been used for data interpretation. Greyscale images should be viewed alongside the XY trace plot (Figure 6). XY trace plots visualise the magnitude and form of the geophysical response, aiding anomaly interpretation.

6.3.2.Geophysical results have been interpreted using greyscale images and XY traces in a layered environment, overlaid against open street maps, satellite imagery, historical maps, LiDAR data, and soil and geology maps. Google Earth (2024) was also consulted, to compare the results with recent land use.

6.3.3.Geodetic position of results – All vector and raster data have been projected into OSGB36 (ESPG27700) and can be provided upon request in ESRI Shapefile (.SHP) and Geotiff (.TIF) respectively. Figures are provided with raster and vector data projected against OS Open Data.

7. Results

7.1. Qualification

7.1.1. Geophysical results are not a map of the ground and are instead a direct measurement of subsurface properties. Detecting and mapping features requires that said features have properties that can be measured by the chosen technique(s) and that these properties have sufficient contrast with the background to be identifiable. The interpretation of any identified anomalies is inherently subjective. While the scrutiny of the results is undertaken by qualified, experienced individuals and rigorously checked for quality and consistency, it is often not possible to classify all anomaly sources. Where possible, an anomaly source will be identified along with the certainty of the interpretation. The only way to improve the interpretation of results is through a process of comparing excavated results with the geophysical reports. MS actively seek feedback on their reports, as well as reports from further work, in order to constantly improve our knowledge and service.

7.2. Discussion

7.2.1. The geophysical results are presented in combination with satellite imagery and historical maps (Figure 8).

7.2.2. The fluxgate gradiometer survey was undertaken across one area. An area c.0.76ha in total was unable to be surveyed owing to the presence of construction material, earthen banks and piles of debris. The previous use of the land as allotments, meant that high levels of debris and other strong magnetic sources were present across much of the survey area. This may have obscured any anomalies should they be present. Where there was little magnetic debris, the survey was able to detect anomalies of an archaeological origin. Further anomalies of agricultural and undetermined origins and services have also been detected.

7.2.3. A rectilinear anomaly was detected within the northeast of the survey area. As this anomaly is on a different alignment to the identified drainage regimes and correspond to cropmarks identified in the DBA (Stenton, 2021), it is possible that it is of archaeological origin.

7.3. Interpretation

7.3.1. General Statements

7.3.1.1. Geophysical anomalies will be discussed broadly as classification types across the survey area. Only anomalies that are distinctive or unusual will be discussed individually.

7.3.1.2. **Ferrous (Spike)** – Discrete dipolar anomalies are likely to be the result of isolated pieces of modern ferrous debris on or near the ground surface.

7.3.1.3. **Ferrous/Debris (Spread)** – A ferrous/debris spread refers to a concentration of multiple discrete, dipolar anomalies usually resulting from highly magnetic material such as rubble containing ceramic building materials and ferrous rubbish.

7.3.1.4. **Magnetic Disturbance** – The strong anomalies produced by extant metallic structures, typically including fencing, pylons, vehicles and service pipes, have been classified as 'Magnetic Disturbance'. These magnetic 'haloes' will obscure weaker anomalies relating to nearby features, should they be present, often over a greater footprint than the structure causing them.

7.3.1.5. **Undetermined** – Anomalies are classified as Undetermined when the origin of the geophysical anomaly is ambiguous and there is no supporting contextual evidence to justify a more certain classification. These anomalies are likely to be the result of geological, pedological or agricultural processes, although an archaeological origin cannot be entirely ruled out. Undetermined anomalies are generally distinct from those caused by ferrous sources.

7.3.2. Magnetic Results - Specific Anomalies

7.3.2.1. **Archaeology Possible (Weak)** – A rectilinear anomaly displaying weak positive enhancement was identified within the northeastern corner of the survey area (Figures 4 & 5). The anomaly does not correspond to any visible features on either historical mapping or satellite imagery, although it does correspond to cropmarks attested to in the archaeological background (see section 5.2).

7.3.2.2. **Ferrous Debris/ Spread** – Across most of the south of the survey area, large zones of ferrous debris were detected (Figures 4 & 5). This disturbance corresponds to areas marked on historical mapping and satellite imagery as the site of allotments in the area. This material is likely resultant from processes at the allotments.

7.3.2.3. **Drainage Features** – Across the north of the survey area and in the southwestern corner, linear anomalies displaying strong enhancement have been detected (Figures 4 & 5). These parallel anomalies which are evenly spaced have been interpreted as drainage systems.

7.3.2.4. **Undetermined (Weak & Strong)** – Multiple curvilinear anomalies of undetermined origin have been identified (Figures 4 & 5). These anomalies vary in strength across the site, with the anomaly in the northeast corner being weakly enhanced, while the anomalies in the southwest are more strongly enhanced. While these features may have an archaeological origin, they do not correspond to any features depicted in historical satellite imagery or historical mapping, and as such are most likely of an agricultural or natural origin.

7.3.2.5. **Service** – In the north of the service area, a strongly negative linear anomaly has been detected running northwest to southeast. This anomaly displays a different orientation and enhancement to the drains identified within the same section of the survey area. This anomaly is likely to be a former or current service within the area.

8. Conclusions

8.1. Magnitude Surveys successfully carried out a fluxgate gradiometer survey across c. 3.04ha of a c. 3.8ha area of land at Lockwood Road, Goldthorpe, South Yorkshire. An area c. 0.76ha in size was unable to be surveyed due to the presence of construction material, earthen banks and debris from former allotments. Due to the presence of ferrous debris and construction materials, magnetic disturbance is present throughout much of the southern section of the site.

8.2. An anomaly of potential archaeological origin was detected in the northeastern section of the survey area, as well as anomalies of undetermined origin in both the northeast and southwest.

8.3. A rectilinear anomaly was detected in the northeast of the survey area. This anomaly has been determined to be of an archaeological origin due to previously identified cropmarks in the same location.

8.4. Agricultural anomalies in the form of drainage systems were identified in the north of the survey area.

8.5. Anomalies of an undetermined origin were detected and whilst they may correspond to archaeological features, they likely have a natural or agricultural origin.

9. Archiving

9.1. MS maintains an in-house digital archive, which is based on Schmidt and Ernenwein (2013). This stores the collected measurements, minimally processed data, georeferenced and un-georeferenced images, XY traces and a copy of the final report.

9.2. MS contributes reports to the ADS Grey Literature Library upon permission from the client, subject to any dictated time embargoes.

10. Copyright

10.1. Copyright and intellectual property pertaining to all reports, figures and datasets produced by Magnitude Services Ltd is retained by MS. The client is given full licence to use such material for their own purposes. Permission must be sought by any third party wishing to use or reproduce any IP owned by MS.

11. References

British Geological Survey, 2024. Geology of Britain. Goldthorpe, South Yorkshire. [http://mapapps.bgs.ac.uk/geologyofbritain/home.html/]. Accessed 12/06/2024.

Chartered Institute for Archaeologists, 2020. Standards and guidance for archaeological geophysical survey. CIfA.

David, A., Linford, N., Linford, P. and Martin, L., 2008. Geophysical survey in archaeological field evaluation: research and professional services guidelines (2nd edition). Historic England.

Google Earth, 2024. Google Earth Pro V 7.1.7.2606.

Olsen, N., Toffner-Clausen, L., Sabaka, T.J., Brauer, P., Merayo, J.M.G., Jorgensen, J.L., Leger, J.M., Nielsen, O.V., Primdahl, F., and Risbo, T., 2003. Calibration of the Orsted vector magnetometer. Earth Planets Space 55: 11-18.

Schmidt, A. and Ernenwein, E., 2013. Guide to good practice: geophysical data in archaeology (2nd edition). Oxbow Books: Oxford.

Schmidt, A., Linford, P., Linford, N., David, A., Gaffney, C., Sarris, A. and Fassbinder, J., 2015. Guidelines for the use of geophysics in archaeology: questions to ask and points to consider. EAC Guidelines 2. European Archaeological Council: Belgium.

Stead, M. 2024. Written Scheme of Investigation for a Geophysical Survey of Lockwood Road, Goldthorpe, South Yorkshire. Magnitude Surveys.

Stenton, Malone 2021: Land off Lockwood Road, Goldthorpe DBA

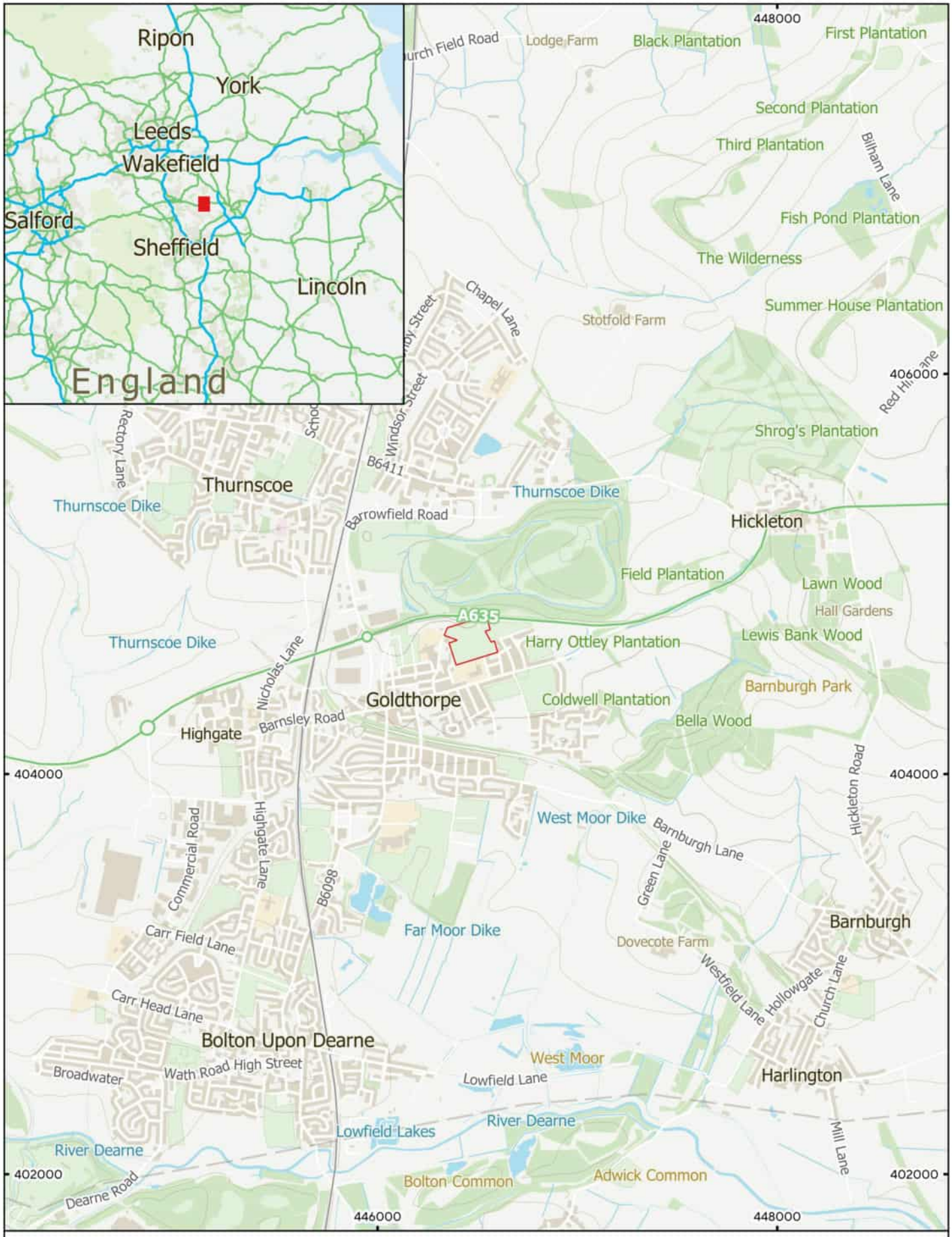
Soilscapes, 2024. Goldthorpe, South Yorkshire. Cranfield University, National Soil Resources Institute. [http://landis.org.uk]. Accessed 12/06/2024.

12. Project Metadata

MS Job Code	MSSE1810A
Project Name	Lockwood Road, Goldthorpe
Client	RPS
Grid Reference	SE 46537 04708
Survey Techniques	Magnetometry
Survey Size (ha)	3.8ha (Magnetometry)
Survey Dates	2024-06-10
Project Lead	Matthew Stead BA (Hons) MA
Project Officer	Matthew Stead BA (Hons) MA
HER Event No	TBC
OASIS No	TBC
S42 Licence No	N/A
Report Version	0.2

13. Document History

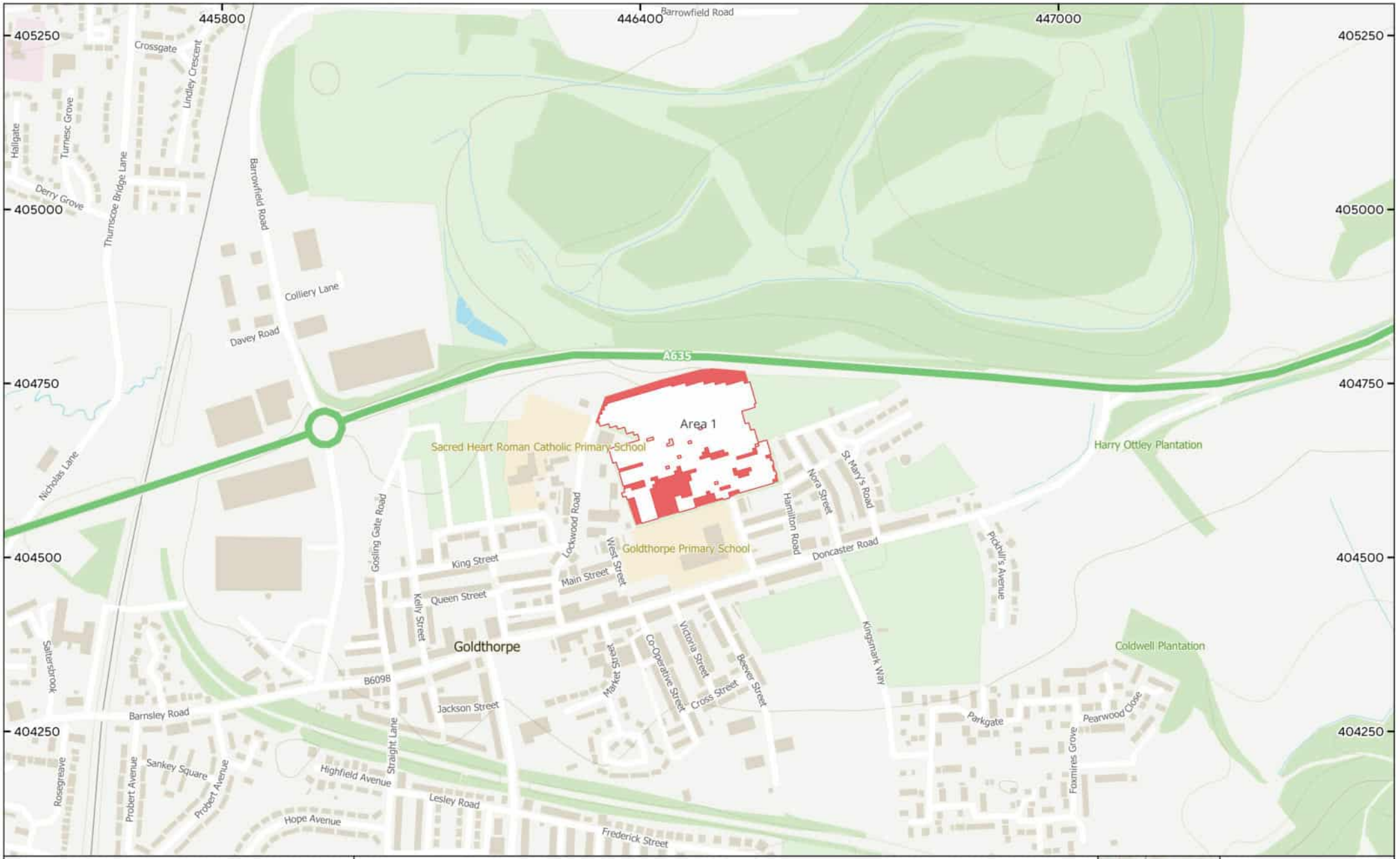
Version	Comments	Author	Checked By	Date
0.1	Initial draft for Project Lead to Review	MS HR	KD	14 June 2024
0.2	Draft following review	DDJ	MS	17 June 2024
0.2	Director Approval	MS	FPC	18 June 2024



MSSE1810 - Lockwood Road, Goldthorpe, Stage 1
Figure 1 - Geophysical Survey Location
1:25,000 @ A4

Site Boundary

0 0.5 1 km



MSSE1810 - Lockwood Road, Goldthorpe, Stage 1
Figure 2 - Location of Survey Area
1:5,000 @ A3

Survey Extent
Unable to be Surveyed

Magnitude Surveys

0 100 200 m

MSSE1810 - Lockwood Road, Goldthorpe, Stage 1
Figure 3 - Magnetic Total Field (Lower Sensor)
1:1,500 @ A3

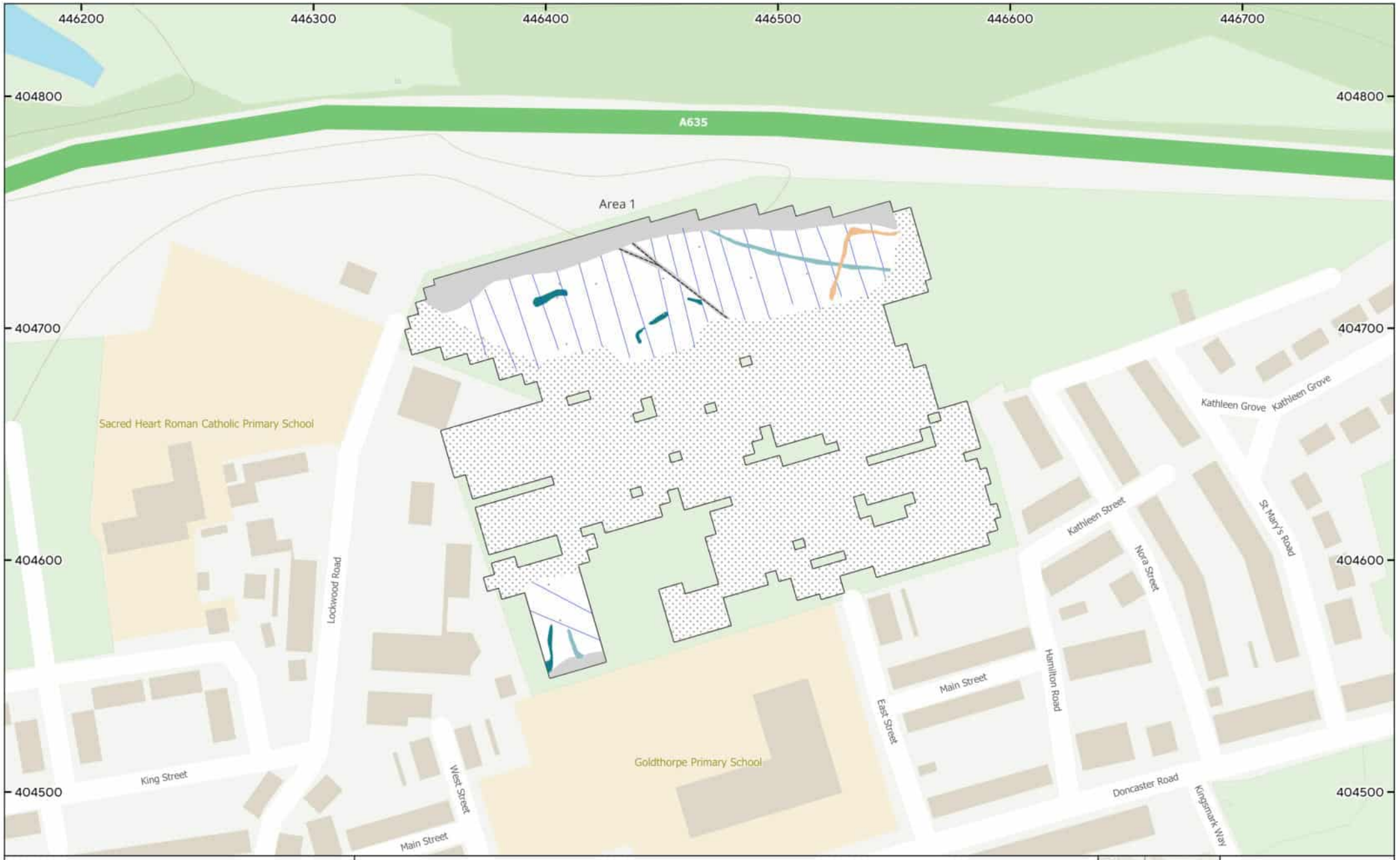
48990 nT 49020

Magnitude Surveys

0 30 60 m

MSSE1810 - Lockwood Road, Goldthorpe, Stage 1
Figure 4 - Magnetic Gradient
1:1,500 @ A3

Magnitude Surveys

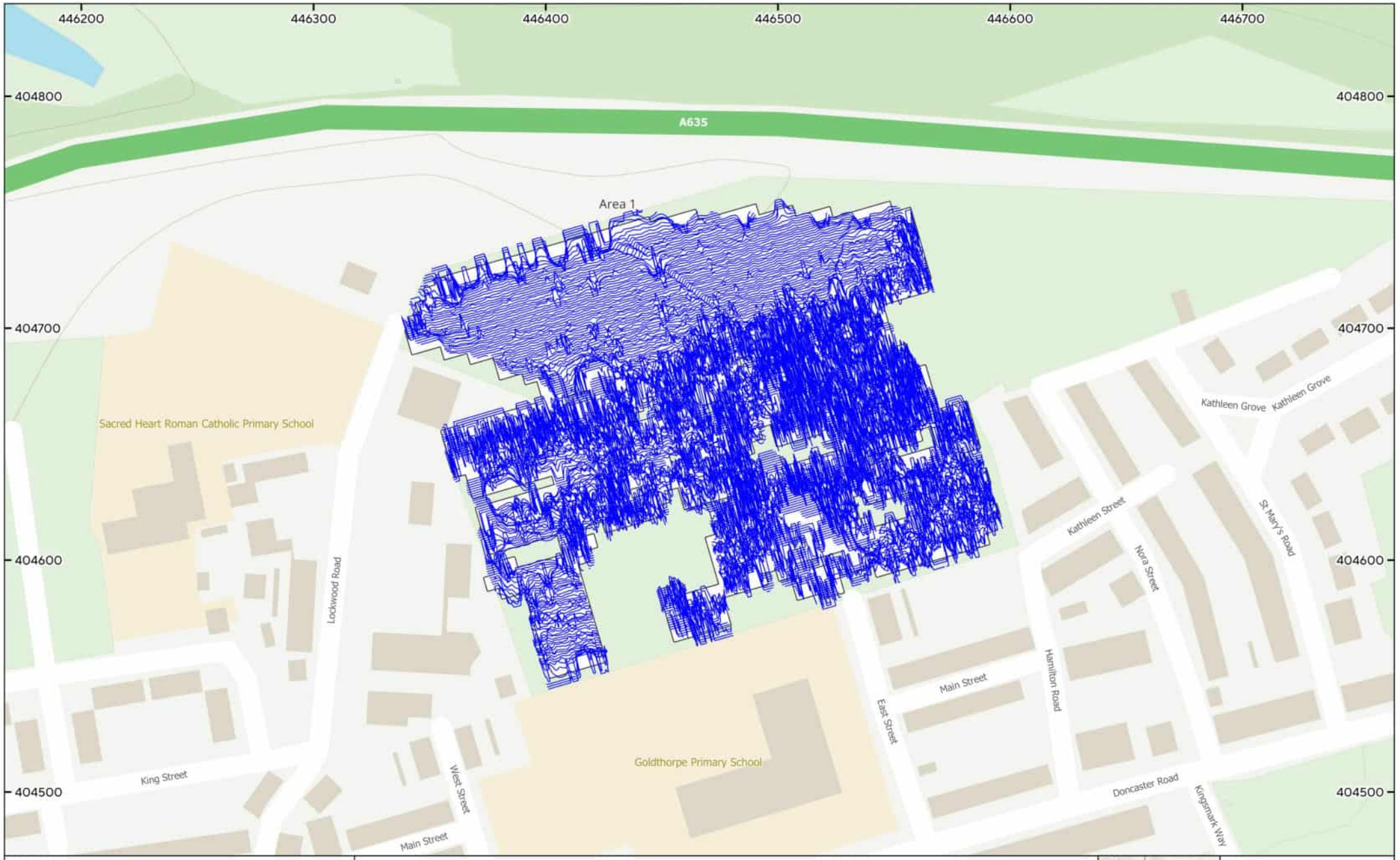


MSSE1810 - Lockwood Road, Goldthorpe
Figure 5 - Magnetic Interpretation
1:1,500 @ A3

- Archaeology Possible (Weak)
- Undetermined (Strong)
- Undetermined (Weak)
- Magnetic Disturbance
- Ferrous/Debris (Spread)
- Service
- Drainage Feature
- Ferrous (Spike)

Magnitude Surveys

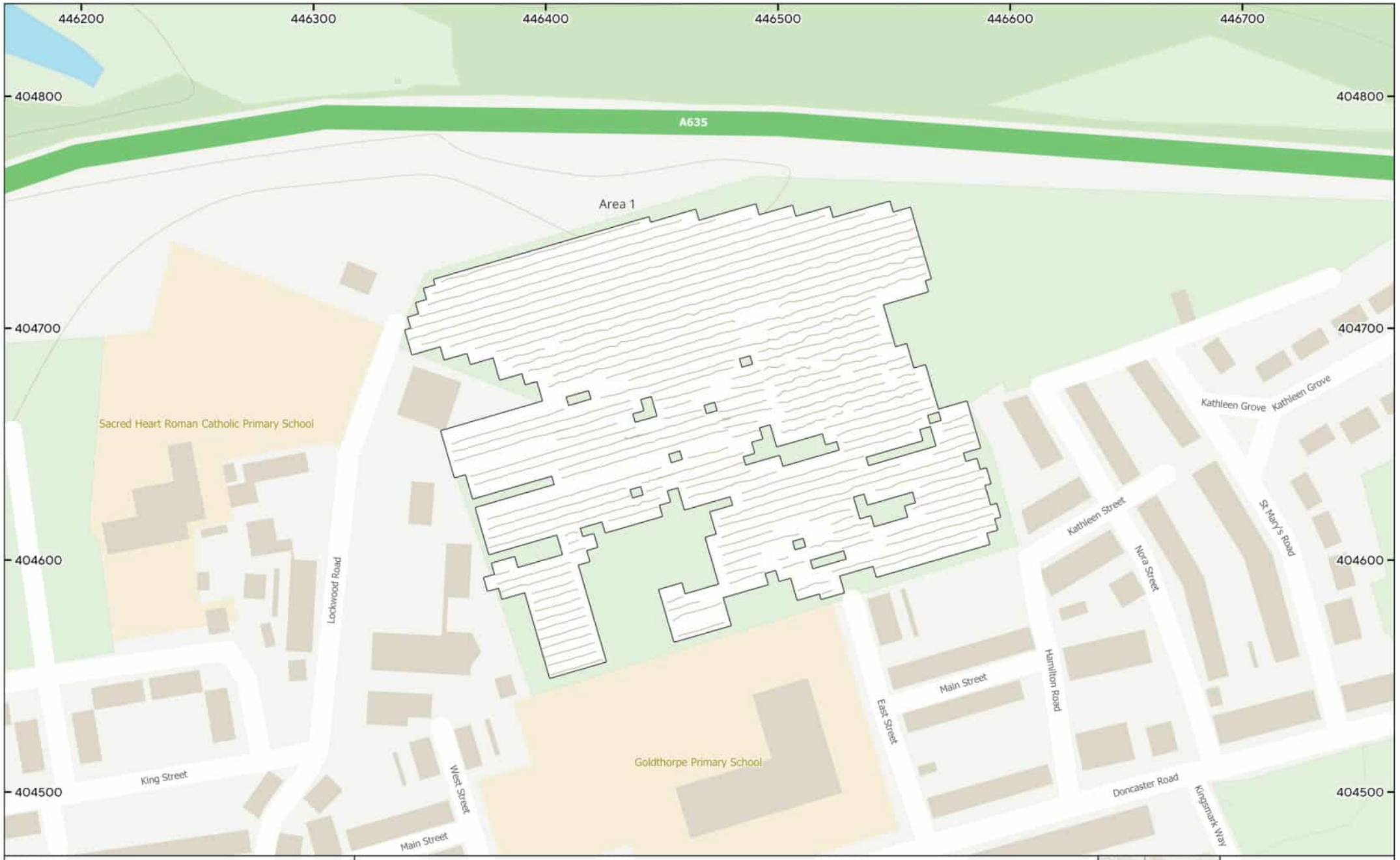
0 30 60 m



MSSE1810 - Lockwood Road, Goldthorpe
Figure 6 - XY Trace Plot
30nT/cm at 1:1,500 @ A3

Magnitude Surveys

0 30 60 m



MSSE1810 - Lockwood Road, Goldthorpe
Figure 7 - GNSS Lines
1:1,500 @ A3

GNSS Line

Magnitude Surveys

0 30 60 m

MSSE1810 - Lockwood Road, Goldthorpe
Figure 8 - Magnetic Interpretation over Combined Historical Maps and Satellite Imagery
1:2,500 @ A3

- Archaeology Possible (Weak)
- Undetermined (Strong)
- Undetermined (Weak)
- Magnetic Disturbance
- Ferrous/Debris (Spread)
- Service
- Drainage Feature
- Ferrous (Spike)

Magnitude Surveys

0 50 100 m

Appendix C Mitigation Standards

South Yorkshire Archaeology Service

2024

Archaeological Mitigation

Standards & Guidance

Contents

1 Requirement for Archaeological Mitigation

1.1 A programme of archaeological mitigation is undertaken when archaeological remains are known to exist on a site and their significance will be harmed by the implications of a planning or other proposal.

1.2 SYAS should be consulted in advance of any archaeological mitigation to agree a methodology.

1.3 Note: All references are correct at time of publication, and it is the responsibility of the undertaking body to review the guidance and ensure that they refer to the most current.

Professional Standards

1.4 Archaeological work should be carried out using appropriate expertise and the archaeologists undertaking the work should be adequately qualified. It is good practice to use professionally accredited experts such as a CIfA Registered Organisation[1]. SYAS also maintain an open list of archaeological contractors who operate in the region.[2]

1.5 All archaeological work needs to comply with:

1. the Regional Statement of Good Practice for Archaeology in the Development Process;[3]
2. the Chartered Institute for Archaeologist's (CIfA) standards and guidance;[4]
3. Historic England's guidance on managing archaeological projects (MoRPHE)[5]
4. Historic England's best practice guidance relevant to the project.[6]

Written Scheme of Investigation

1.6 The undertaking body will be required to provide a Written Scheme of Investigation (WSI) to set out a proposed scheme of archaeological investigation. This must provide sufficient detail to demonstrate the works will be appropriate and proportionate to the importance of the archaeological remains and expected level of impact.

1.7 The requirement and contents of a WSI on any given site should be confirmed with SYAS.

1.8 The WSI should be formed in reference to relevant standards, and as a minimum contain:

1. Site location (illustrated on OS MasterMap or similarly detailed survey showing National Grid Coordinates);
2. Context of the project (including planning background and consultations);
3. Project timetable/ work stages;
4. Monitoring arrangements;
5. A description of the site identifying its geology, topography, condition etc. and observations on the implications of those aspects;
6. Brief summary of the archaeological and historical background of the site and its environs including other fieldwork in the vicinity of the site;
7. A description of the varying archaeological significance across the site;

[1] A register of Registered Organisations is available online: https://www.archaeologists.net/lookingforanarchaeologist
[2] Available online: https://www.sheffield.gov.uk/home/planning-development/south-yorkshire-archaeology-service
[3] SYAS 2018
[4] CIfA 2023a & b
[5] Historic England 2015a
[6] Available online: https://historicengland.org.uk/advice/find/a-z-publications/

8. Details of the mitigation strategy, including open area excavation and/ or strip, map & sample, and identifying any areas excluded from further investigation including those subject to preservation *in situ*;
9. Aims and objectives with reference to the South Yorkshire Historic Environment Research Framework and other period specific or thematic research frameworks/strategies, as applicable;
10. A table listing the rationale behind each mitigation area and their dimensions (including a plan that clearly shows their location within the site);
11. The methodology for site investigation including a bespoke sampling strategy for environmental/ sediment deposits and scientific dating, assessment, analysis and reporting;
12. A summary of the specific outputs of the project (e.g. report, archives etc);
13. The strategy for the deposition of the project archive (including a selection strategy and data management plan produced in accordance with CIfA guidance);
14. The strategy for publication and dissemination of the results;
15. Details of the competent person/persons or organisation undertaking the works.

1.9 Appropriate specialists, including the Historic England Science Advisor, should be consulted in formulating preservation strategies, sampling strategies and methodologies specific to the site and project objectives. This should include a sediment sampling strategy informed by any previous phases of work at the site and any deposit model. Provision should be allowed to revise this strategy during the fieldwork, as appropriate, to account for initial results and unexpected discoveries.

1.10 A template Written Scheme of Investigation covering archaeological mitigation is available[7], providing additional guidance and allowing any deviations from these standards to be identified and justified.

Selection Strategy & Data Management Plan

1.11 A proposed archive selection strategy must be included with the WSI, detailing the project-specific selection process, agreed by all stakeholders, for all records and materials arising from the work in creating the Archaeological Archive.

1.12 Where digital data is anticipated as an output of the project, the selection strategy must include a data management plan, setting out the methodology for data management from acquisition to deposition.

1.13 This should be produced in accordance with CIfA guidance.[8]

Monitoring

1.14 SYAS will be responsible for monitoring the contractor's work. The contractor must give a minimum of one week's notice of the commencement of fieldwork in order that arrangements for monitoring can be made.

1.15 Minor changes to an agreed WSI must be submitted to SYAS for written approval. Major changes will require the preparation of an updated WSI for submission to the approving body (SYAS or planning authority as appropriate).

[7] See guidance for archaeological projects, available online: https://www.sheffield.gov.uk/syas
[8] Available online: https://www.archaeologists.net/selection-toolkit & https://www.archaeologists.net/digdigital

2 Aims

2.1 The purpose of a programme of archaeological mitigation is to ensure the recording, preservation, or management of the archaeological resource in order to mitigate a threat to that archaeological resource, advance understanding and deliver a public benefit.

2.2 The work will be undertaken in reference to general aims and specific objectives formulated with reference to the South Yorkshire Historic Environment Research Framework[9] and other period specific or thematic research frameworks/strategies, as applicable.

2.3 The level of detail included should be proportionate to the importance of any heritage assets affected, and no more than is sufficient to mitigate the impact of the scheme on archaeological significance.

3 Scope

3.1 The programme of archaeological mitigation should consider the whole of the site included in the scheme including those areas affected by temporary works such as construction compounds.

3.2 The most common forms of mitigation currently employed are:

1. Preservation *in situ;*
2. Open area excavation; and
3. Strip, map & sample.

3.3 A combination of strategies may be required dependent on the nature of the archaeological resource within the site and project aims. For example, part of the site may require to be preserved *in situ*, part subject to open area excavation, part subject to strip, map sample and the remainder excluded from further archaeological excavation or management.

3.4 On a case-by-case basis, other forms of investigation will be required such as field walking or metal detecting, to aid recovery of material from topsoil, and/or additional recording measures such as earthwork survey.

3.5 The Historic England Science Advisor can be consulted in regard to advice on appropriate approaches to fieldwork, sampling strategies and any archaeological science components.

Recommended Contingencies

3.6 Contingencies should identified in the WSI and be budgeted for, including, where relevant:

1. Additional stripping, up to 5% of the original area;
2. Allowance for 100% excavation of enclosure ditches, following sampling, in machine-dug spits under direct archaeological supervision.
3. Additional specialist sampling and scientific dating;
4. Additional specialist analysis;
5. Conservation of artefacts.

[9] Available online: https://researchframeworks.org/syrf/

4 Standards for Preservation *In Situ*

4.1 Preservation *in situ* refers to the conservation of an archaeological asset in its original location where the intention is to retain and protect it beneath or within the development scheme.

4.2 The survival of archaeological resources depends on the maintenance of stable below-ground conditions. A strategy for preservation *in situ* will be agreed between SYAS and the developer or their agent.

4.3 This strategy will draw upon the results of any preservation assessment undertaken during an evaluation stage, the characterisation of the environmental conditions of deposits, and relevant guidance.[10]

4.4 Waterlogged archaeological deposits are not common and the survival of organic materials in the archaeological record is quite rare. As such, information requirements for sites with these types of deposits are likely to higher, e.g. a Water Environment Tier Assessment may be required.[11]

4.5 Relevant information about the scheme's design, including layout, foundations, depths of formation and services, landscaping proposals, etc, will be considered.

4.6 The strategy will detail the methods of preservation to be employed and identify methods and measures to ensure accidental damage does not occur during the construction phase. For example, areas to be preserved should be properly demarcated or fenced, and their presence noted in any Construction Management Plans and engineering drawings, and key works in the area will be monitored by the archaeological contractor.

4.7 Ongoing management and maintenance of preserved remains, post-construction, will be set out in a separate supporting document, e.g. landscape management strategy.

4.8 The implemented strategy to secure preservation should be detailed within a report deposited with the Historic Environment Record, to assist with future management of the site.

5 Standards for Open Area Excavation and Strip, Map & Sample

5.1 Open Area Excavation is appropriate for those areas of greater significance and/or greater impact within a development, which are not to be preserved *in situ* and warrant the most detailed further investigation.

5.2 A Strip, Map & Sample (SMS) approach is appropriate for those areas where significance may not be of the highest order and/or where the location and level of detailed further investigation needs to be determined. Following the monitored stripping of an SMS area and preparation of a pre-excavation plan, a bespoke investigation strategy will be agreed.

5.3 Intrusive archaeological fieldwork will be undertaken in accordance with CIfA standards and guidance.[12]

[10] Historic England 2016
[11] Historic England 2016
[12] CIfA 2023a & b

5.4 Detailed procedures for excavation and recording will be undertaken in accordance with professional best practice, such as that established in Historic England's *Excavation Recording Manual*.[13]

5.5 All records, finds and samples generated during the programme of works should be safely stored as part of a Working Project Archive (see Section 7).

Excavation Strategy

5.6 The location of any open excavation area(s) and strip, map & sample area(s) required will be dependent upon the results of previous investigations and the strategy set for the site in the WSI (see 1.8).

5.7 The archaeological contractor will need to be fully conversant with the results of the earlier phases of archaeological investigation prior to starting on site.

Groundworks

Staking Out

5.8 Mitigation areas will be staked out using a real-time kinematic global navigation satellite system (RTK GNSS), or other suitably accurate survey method of equivalent accuracy, in accordance with the agreed locations set out in the WSI.

5.9 Minor adjustments may be undertaken to avoid previously unknown obstacles such as services, or to enable machine manoeuvring, so long as they do not affect the excavation strategy. Major adjustments should not be made without prior agreement of SYAS.

Machine Excavation

5.10 All machine excavation should be undertaken by adequately qualified and experienced operators, under the supervision and direction of an archaeologist, and cease at the first archaeological horizon or when the natural geology is exposed.

5.11 Breaking ground, whether topsoil or hardstanding, should be undertaken with care, mindful of the presence of archaeological deposits.

5.12 Machine excavation will be undertaken by backactor excavator, using a toothless bucket of appropriate width, to reduce ground levels in level spits of no more than 0.20m. Excavated areas should not be smoothed with the back of the bucket. Under no circumstances will the machine be used to cut arbitrary trenches down to natural deposits.

5.13 Toothed buckets are only to be used in exceptional circumstances, and where express permission has been given by the archaeologist.

5.14 Care should be taken when excavating onto suspected occupation sites, or entranceways, in order that subtle features or deposits are not machined off. After the depth of the archaeological horizon has been established, it may be appropriate to machine to just above it to enable hand excavation to establish potential before further machine stripping.

[13] Historic England 2018d. Available from Historic England's website: https://historicengland.org.uk/content/docs/research/historic-england-archaeological-recording-manual-2018/

Spoil

5.15 Spoil will be scanned for metal artefacts using a metal detector capable of discriminating between metals, and operated by an experienced user, to enhance recovery of artefacts.

Deep Excavations

5.16 Where necessary to execute the objectives of the project, mitigation areas may need to be stepped or shored to reach their final depth. The potential for deep excavation should be identified from geotechnical data and previous archaeological investigations, such as an evaluation phase. Appropriate measures should be included in the WSI.

5.17 The base of the excavation will reflect the size specified for the mitigation area.

Removal of Bulk Deposits and Obstructions

5.18 With the prior agreement of SYAS, bulk deposits of limited archaeological interest may be machine excavated in spits (such as homogenous deposits of made ground or demolition material).

5.19 Large obstructions, such as boulders or engineering structures, will be left *in situ* where it is safe to do so. Removal of such structures by machine will be undertaken where they are assessed to cover archaeological deposits, and only where a strategy has been agreed with SYAS on how disturbance of surrounding deposits or structures will be avoided.

Removal of Contaminated Deposits

5.20 The risk of contamination should be established prior to work commencing, and appropriate measures implemented to reduce or avoid risks in accordance with Historic England best practice guidance.[14]

5.21 If excavation needs to cease due to the discovery of contaminated deposits, then guidance should be sought from the appropriate specialist/agency to establish risks and design a forward strategy for safe excavation.

5.22 Where hand excavation is not possible, machine excavation should be undertaken under the direction of an archaeologist. An appropriate strategy for recording will be agreed on a case-by-case basis with SYAS.

Investigation of Archaeological Features

5.23 Archaeological deposits will be cleaned and excavated by hand, using appropriate tools, according to accepted principles of stratigraphic excavation. The stratigraphy of the area is to be recorded, even when no archaeological deposits have been identified.

5.24 All features will be investigated in order that they are sufficiently understood to meet the aims and objectives of the project. As a minimum:

1. discrete features will be half-sectioned in the first instance;
2. linear features will be sampled a minimum of 20% along their length (each sample section to be not less than 1m), or a minimum of a 1m sample section, if the feature is less than 5m, with corners and terminals targeted using 2–3m interventions;

[14] Historic England 2017a

3. the deposits at junctions or interruptions in linear features will be sufficiently excavated for the relationship between components to be established. All termini will be investigated.

5.25 Allowance will be made for the 100% excavation of enclosure ditches with machine-dug spits under archaeological control, following sufficient hand-excavation.

5.26 Archaeological features within a Strip, Map & Sample (SMS) area may be subject to a different investigation and sampling strategy to those in an Open Area Excavation. Following the monitored stripping of an SMS area and preparation of a pre-excavation plan, a bespoke investigation strategy will be agreed.

5.27 Section 5.24 applies by default to a Strip, Map & Sample area if no other strategy is detailed or agreed.

Weathering-out, Drying and Wetting

5.28 Depending on the conditions of the site and geology, particularly on Sherwood/Bunter Sandstone sands and gravels, it may be necessary to allow a minimum of one week following stripping to improve visibility of archaeological deposits.

5.29 In dry conditions or on clayey soils it may be necessary to spray the site to show up changes in the composition of soils and identify features.

5.30 Waterlogged and organic-rich deposits should initially be kept covered and damp. An appropriate strategy should be developed and implemented to prevent degradation.

Features of Unexpected Importance

5.31 Should features of unexpected importance or complexity be identified that would warrant special measures to record or protect them, then the supervising archaeologist should notify SYAS at the earliest opportunity to discuss an appropriate strategy for their management.

Recording

5.32 A standard single context recording system will be used to keep a documentary record of all archaeological remains that are encountered.[15] The individual contexts will be cross-referenced as appropriate to associated features that are exposed.

5.33 Stratigraphy will be recorded in all areas of monitoring, even where no archaeological deposits have been identified, and a Harris Matrix diagram compiled.

5.34 All records will be checked for consistency and stratigraphic relationships.

Drawn Record

5.35 A range of survey methods may be applied depending on the nature of the archaeology encountered, including survey by hand, by total station, real-time kinematic global navigation satellite system (RTK GNSS), or photogrammetry. All measured survey will be undertaken in accordance with relevant guidelines.[16]

[15] Historic England 2018d

[16] Including Andrews *et al* 2015 and Historic England 2017b.

5.36 Hand-drawn and digital surveys will be annotated in the field to produce interpretative drawings with relevant context numbers and boundaries between features.

5.37 A drawing register will be maintained, recording the scale, location, date, subject, levels, and surveyor.

5.38 The extent of the excavated areas and archaeological features will be recorded in plan at an appropriate scale (1:500, 1:1250 or at most 1:2500), including the position of section lines, and tied into the National Grid.

5.39 All archaeological features will be drawn in plan and section at an appropriate scale (no less detailed than 1:50 for plans and 1:20 for sections) with Ordnance Datum heights on each drawing. At least one representative section of each mitigation area, from ground surface, will be drawn. Detailed plans will be made of key features and section/ elevation drawings provided of cut features and upstanding structures as appropriate.

Photography

5.40 Photographic recording (film or digital) will be required showing the site in context, all excavated areas and individual archaeological features, and including shots of work in progress.

5.41 Film photography will be undertaken using panchromatic black and white film no faster than ISO400, supplemented with colour slide film.

5.42 Digital photography will be undertaken in accordance with standards set by Historic England and the recipient archive.[17] 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.

5.43 A tripod will be used to allow stable longer exposures in low light conditions.

5.44 Metric scales of appropriate size will be discreetly placed in photographs to preserve a sense scale. Where colour is an important factor, colour control patches will be used.

5.45 A register recording the details of each image will be maintained, including subject, location, date, and photographer.

Finds and Samples

5.46 In addition to having input into the WSI, provisions should be made for relevant specialists to visit the site where required to allow an iterative approach to recovery strategies.

5.47 The Historic England Science Advisor can be consulted for advice on appropriate approaches to sampling and other archaeological science components.

Artefact Recovery

5.48 All stratified archaeological finds will be collected, except from modern contexts (mid-20th century or later). Unstratified finds will be collected where they may be of archaeological interest. All collected finds will be bagged and labelled by context.

5.49 The use of sieves to enhance artefact recovery should be considered as part of the excavation strategy.

[17] Historic England 2015c. and Archaeological Data Service 2009

5.50 Removal, packaging, and labelling of finds will be undertaken in accordance with 'First Aid for Finds'[18] and specific Historic England guidance as required.

Environmental/Sediment Sampling and Scientific Dating

5.51 All sampling must be undertaken to a bespoke strategy to be set out in the project WSI. It is to be produced in consultation with specialist advice, and in accordance with best practice guidance (including specific guidance on industrial residues, geoarchaeology, animal remains and dating, where appropriate).[19]

5.52 If an evaluation phase has been undertaken, the results of that sampling programme should inform the design of the bespoke strategy in the project WSI.

5.53 The classes of material to be sampled, and the methodology for collection and assessment, will be dependent on:

1. The nature of past environments, landscape processes and human activities;
2. The types of material to be recovered to address the objectives of the project;
3. The types of material expected to survive given known ground conditions.

5.54 The sampling strategy should also identify a process for determining when scientific dating will be considered, and the most likely forms appropriate to the site (such as radiocarbon dating, luminescence dating, archaeomagnetic dating, or dendrochronology).

5.55 Provision should also be made in the WSI for the sampling strategy to be refined at suitable stages during the fieldwork programme, utilising appropriate specialists where necessary including the Historic England Science Advisor. Sample processing and assessment during fieldwork aids an iterative approach.

Human Remains

5.56 A licence for the removal of human remains will be requested from the Ministry of Justice, ahead of fieldwork commencing, where it is known/anticipated that such remains will be disturbed.

5.57 Should any unexpected inhumation or cremation burials be encountered, their extent, number and state of preservation will be established and SYAS will be notified to discuss an appropriate strategy for their management. Remains should not be removed or chased beyond the existing limits of excavation prior to agreement with SYAS and receipt of a relevant licence.

5.58 The treatment of human remains will be in accordance with the requirements of the licence, Civil Law and all relevant best practice guidance.[20] The remains will be recorded *in situ* before lifting in accordance with best practice guidance.[21]

Treasure

5.59 Artefacts defined as treasure under the Treasure Act 1996 (as supplemented by The Treasure (Designation) (Amendment) Order 2023) will be treated in accordance with the Treasure Act 1996 Code of Practice.[22] All finds of treasure must be reported to the local

[18] Watkinson and Neal 1998
[19] Historic England 2011, 2015d, 2018b, 2019 and 2022.
[20] APABE 2017
[21] Brickley, et al., 2004 and 2017 & Historic England 2018c
[22] DCMS 2008

coroner within 14 days of discovery. In the first instance, it is recommended that details of the find are provided to the local Portable Antiquities Scheme Finds Liaison Officer to confirm that it constitutes treasure; they will be able to apply for a Treasure Reference Number and declare the find to the coroner on your behalf. SYAS should also be notified.

5.60 A short Treasure Report will be compiled for submission to the coroner.[23]

5.61 Where recovery of treasure cannot be undertaken on the same working day as the discovery, suitable security measures will be taken to protect the finds from theft.

Post-Excavation

5.62 All finds are to be treated in accordance with current best practice guidance. Finds are to be cleaned and marked, according to accepted principles and in line with appropriate period/material guidelines.

5.63 For all categories of material recovered, including finds, palaeo-environmental, industrial and other specialist samples, an assessment by an appropriately experienced specialist will be undertaken in accordance with best practice guidance.[24]

5.64 Advice from appropriate specialists will be sought on selection of appropriate and submission of samples, including those collected on site and those recovered during processing, for scientific dating.

5.65 Basic stratigraphic information will be supplied to the project specialists.

5.66 All sediment samples collected in accordance with the project sampling strategy should be processed, sorted, and assessed (excluding samples from obviously mixed deposits, etc.); best practice is for this work to be undertaken during fieldwork (see 5.55).

5.67 Advice from appropriate specialists will be sought on the storage and conservation of unstable artefactual remains (e.g. metallic, wood or leather).

5.68 Ferrous objects, and a selection of non-ferrous objects (including all coins), will be x-radiographed in accordance with Historic England guidance.[25]

5.69 The specialists will provide assessment reports describing the material, proposing selection for the permanent archive, and identifying recommendations for further detailed analysis and illustration in consideration of the project research objectives and any unanticipated research potential.

5.70 For ceramic assemblages, recording shall be carried out in a manner compatible with existing typological series in local pottery reference collections, e.g. the South Yorkshire / North Derbyshire Medieval Ceramics Reference Collection.[26]

5.71 The guidelines for handling Post Roman Ceramics produced by the Medieval Pottery Research Group are also to be followed, for relevant material: MPRG, 2001 "Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics" Medieval Pottery Res Group Occ Paper 2.

[23] A template treasure report can be requested from the Finds Liaison Officer
[24] Watkinson and Neal 1998, Historic England 2011 & Barclay *et al.* 2016)
[25] Historic England 2006
[26] Available online: http://archaeologydataservice.ac.uk/archives/view/ceramics_eh_2003/

Reporting

Post-Excavation Assessment Report

5.72 A post-excavation assessment report should be prepared after the completion of fieldwork to provide an assessment of the potential of the data collected during that stage and to establish what post-excavation analysis is required to achieve the project aims.

5.73 If the data collected is not thought sufficient to warrant a formal post-excavation assessment report then, following written agreement with SYAS, the project should proceed to the archive reporting stage.

5.74 A post-excavation assessment report shall contain:

1. A summary of stratigraphy and finds and samples recovered (this should not be a detailed stratigraphic description of the entire site);
2. A brief description of identified phases, as known;
3. A statement of potential for each component of data, carried out by appropriate specialists, including recommendations on conservation and archive selection.

Updated Written Scheme of Investigation

5.75 Once the post-excavation assessment report has been finalised and agreed with SYAS, the WSI should be updated.

5.76 An Updated WSI should contain:

1. Any changes to the aims and objectives of the project;
2. Schemes of conservation or specialist analysis;
3. The requirement and content of the final analysis report;
4. Details for dissemination and publication;
5. Updated Data Management Plan;
6. Any updates to archiving requirements, including the Selection Strategy.

Archive Report

5.77 A final archive report shall contain:

1. An introduction including background information (with planning application details, where appropriate);
2. The original research aims and objectives and rationale for selected area of investigation, and any updated research aims and objectives identified;
3. An archaeological and historical baseline;
4. A description of results;
5. The results of analysis of all find and sample categories, by appropriate specialists;
6. The results of any scientific dating;
7. A discussion of the results including a phased interpretation of the site and the extent to which the work has addressed the research aims and objectives;
8. An assessment of the effectiveness of the project, including earlier stages of work, and detailing any implemented strategy to secure preservation *in situ*;
9. A conclusion summarising the results in their local, regional, and national context;
10. Supporting illustrations, including as a minimum:
    (a) a detailed location map;

(b) a detailed site plan showing any areas of preservation *in situ* with levels and NGR coordinates;
(c) a detailed site plan showing all areas as excavated, with NGR coordinates;
(d) detailed plans of features, as excavated, with levels, NGR coordinates and section locations;
(e) detailed sections of features, as excavated, with levels;
(f) an overall (phased) site plan showing all archaeological features recorded;
(g) selection of photographs of work in progress;
(h) select artefact illustrations and/or photographs.

11. Supporting tables of data, including as a minimum:
    (a) a detailed context index;
    (b) an archive index.
12. Acknowledgements identifying those involved in the project, including the support of SYAS.

6 Standards for Public Engagement, Dissemination & Publication

Public Engagement & Outreach

6.1 Archaeological work is undertaken for public benefit and SYAS encourage opportunities for public engagement to be integrated from the outset.

6.2 The WSI will set out the steps taken towards establishing an engagement and outreach strategy. Where no measures are proposed, then the reason why must be clearly stated.

6.3 Measures to be considered include:

1. Illustrated notices displayed during fieldwork around the site (with the client's agreement), explaining what work is in progress and why, to keep members of the public informed (minimum of A3 size, with font at a minimum size of 16 point);
2. Social media or newspaper updates;
3. Site tours and public talks (e.g. by presenting a paper at South Yorkshire Archaeology Day and talking to local societies);
4. Digital interpretation;
5. Popular publications;
6. Permanent public information board(s); and
7. Any other opportunities that might be relevant for a given site.

6.4 A bespoke strategy shall be produced for each site in consultation with relevant specialists.

Dissemination of Results

6.5 Digital and physical copies of the report must be supplied to SYAS for incorporation into the South Yorkshire Historic Environment Record. Copies of select digital data must also be provided including the extent of mitigation areas, e.g. areas of preservation in *situ,* areas of excavation, or of strip, map & sample (shapefiles of extents and features).

6.6 Printed copies of reports will be included with the physical archive to the recipient museum.

6.7 Copies of the report, or details on where it can be accessed, should be provided to all external specialists involved in the project. This is to assist in the design and implementation of future projects.

6.8 The archaeological contractor should initiate or update an online OASIS form[27] at commencement of the project. Details of the results and archive are to be added, along with a copy of all formal reports, upon completion of the project.

Formal Publication

6.9 A summary report of an appropriate length, accompanied by illustrations (at 300dpi resolution), must be prepared and submitted in digital format, for publication in *Archaeology in South Yorkshire* or an equivalent SYAS publication and/or regional or thematic roundups.

6.10 Where results warrant it, and following discussion with SYAS, formal publication in the form of a journal article, occasional paper or monograph should be produced.

[27] Via the OASIS online portal hosted by the Archaeological Data Service http://ads.ahds.ac.uk/project/oasis/

Furthering Research

6.11 Provision must be made for updating the South Yorkshire Historic Environment Research Framework where the results of a fieldwork project contribute towards agenda topics. This is to be achieved by adding 'comments' to relevant research questions briefly summarising the results and providing a bibliographic reference to the relevant report[28].

[28] The research framework is accessible online: https://researchframeworks.org/syrf/ - new users must register for a new account to add comments.

7 Standards for Archaeological Archives

General

7.1 In accordance with regional policy,[29] the archaeological contractor must notify the relevant museum at project initiation, mid-point review and completion stages to discuss archaeological archiving requirements. The relevant form (Project Initiation Form/ Mid-point Review Form/ Completion Form) will be filled out and sent to the museum with a copy provided to SYAS. Template forms are available for download from the SYAS website.[30]

7.2 Details of archiving arrangements should be confirmed with the client and landowner at the outset, and a budget allowed for to cover the museum's expected deposition charge.

7.3 Agreement in principle for full transfer of title of finds to the recipient museum needs to be obtained from the landowner at the outset of the project, including agreement to waive their right to treasure as defined under the Treasure Act 1996 (as supplemented by The Treasure (Designation) (Amendment) Order 2023).

Working Project Archive

7.4 All material (whether digital or physical) recovered or generated through the duration of the project will be appropriately and securely stored in a working project archive. This will be undertaken in accordance with the selection strategy and digital data management plan set out at the commencement of the project (see paragraphs 1.11-1.13).

Physical Records

7.5 Any physical documents or drawings will be indexed, collated, and stored in a secure location when not in use.

7.6 Film photography will be processed at regular intervals throughout the duration of a project.

7.7 Digital security copies will be made of physical records at appropriate intervals, to be stored and backed up in a secure location. Documents and drawings will be scanned at an appropriate resolution (no less than 300dpi for documents and drawings, 600dpi for photographic prints, and 4000dpi for negatives or slides) and to an appropriate format (e.g. a lossless format, such as TIF, for scale drawings), and scans checked for quality.[31] Standards adhered to should be included in the Data Management Plan. If digitised data is to form part of the final digital archive it should be treated as set out for Born Digital Records below.

Born Digital Records

7.8 All digital records will be treated in accordance with a project Data Management Plan.[32]

7.9 Digital records will be routinely downloaded, stored, and backed up in a secure location.

7.10 All digital records will be consistently labelled, files logically structured, and embedded with appropriate metadata (or have their metadata stored in an accompanying spreadsheet).[33]

[29] Turnpenny 2012
[30] See guidance for archaeological projects, available online: https://www.sheffield.gov.uk/syas
[31] For further guidance see: Digitisation at The National Archives
[32] CIfA guidance available online: https://www.archaeologists.net/digdigital
[33] Archaeological Data Service 2009

Final Archaeological Archive

Selection Strategy

7.11 On the completion of fieldwork, the relevant specialists and recipient museum will be consulted to update the selection strategy set out in the WSI in accordance with best practice guidance.[34]

7.12 This should consider all documents, finds, samples, and digital files generated during the project, including illustrations.

7.13 The aim of this process is to produce a project archive that allows a full re-examination and interpretation of all the results of the project whilst avoiding replication, repetition, or retention of materials not considered germane to future analysis.

Archive Deposition

7.14 The final archive will then be assembled in accordance with Archaeological Archives Forum, CIfA, and museum guidelines.[35]

7.15 Confirmation of transfer of title from the landowner and confirmation of assignment of copyright, along with a full archive inventory, will be submitted with a project completion form[36] to the recipient museum. SYAS will be provided with a copy of the completion form, including the assigned accession number.

7.16 The recipient archive will be licensed to use the deposited material, in perpetuity, without restrictions; this licence will allow the archive to reproduce material, including for use by third parties, with the copyright owner suitably acknowledged.

7.17 It is preferred practice for generated material to be archived in its original medium (i.e. physical or digital). Digitising of physical records will only be considered where it retains the same level of accessibility and information as the original medium.

7.18 The physical archive will be deposited with the appropriate museum. A copy of the archive receipt will be provided to SYAS.

7.19 The digital archive will be deposited with a Trusted Digital Repository (CoreTrustSeal certified). For archaeological archives this is presently limited to the Archaeology Data Service (ADS) at the University of York. A link to the final digital archive will be provided to SYAS and the recipient museum.

[34] AAF 2011, SMA 2020 & CIfA toolkit for selection archaeology: https://www.archaeologists.net/selection-toolkit
[35] AAF 2011, CIfA 2020 & Turnpenny 2012
[36] Utilising the proforma agreement available online: https://www.sheffield.gov.uk/home/planning-development/south-yorkshire-archaeology-service/guidance-for-archaeological-projects

8 References

Advisory Panel on the Archaeology of Burials in England (APABE) 2017. *Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England.*

Archaeological Archives Forum (AAF), 2011. *Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation.*

Archaeological Data Service (ADS), 2009. *Archaeology Data Service Guide to Good Practice* [online]. Available: https://guides.archaeologydataservice.ac.uk/g2gpwiki/

Andrews, D., Bedford, J. & Bryan, P. 2015. *Metric Survey Specifications for Cultural Heritage (3rd edn).* Historic England.

Barclay, A., Booth, P., Brown, D.H., Evans, J., Knight, K. and Wood, I. 2016. *A Standard for Pottery Studies in Archaeology*. Prehistoric Ceramics Research Group, Study Group for Roman Pottery and Medieval Pottery Research Group.

Brickley, M. & McKinley, J. (eds.) 2004. *Guidelines to the Standards for Recording Human Remains.* Institute of Field Archaeologists Paper no. 7. CIfA.

Brickley, M. & Mitchell, P.D., 2017. *Updated Guidelines to the Standards for Recording Human Remains.* CIfA.

Chartered Institute for Archaeologists (CIfA) 2021. *Code of Conduct: professional ethics in archaeology.*

Chartered Institute for Archaeologists (CIfA). 2020. *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives*.

Chartered Institute for Archaeologists (CIfA). 2023a. *Standard for Archaeological Excavation.*

Chartered Institute for Archaeologists (CIfA). 2023b. *Universal Guidance for Archaeological Excavation.*

Chartered Institute for Archaeologists (CIfA). n.d. *Dig Digital* [online]. Available: https://www.archaeologists.net/digdigital

Chartered Institute for Archaeologists (CIfA). n.d. *Toolkit for Selecting Archaeology* [online]. Available: https://www.archaeologists.net/selection-toolkit.

Department for Digital, Culture, Media & Sport (DCMS) 2008. *Treasure Act 1996 Code of Practice (2nd Revision) England and Wales.*

Historic England. 2006. *Guidelines on the X-radiography of Archaeological Metalwork*.

Historic England, 2011. *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (second edition).*

Historic England, 2012. *The Geophysical Survey Database.*

Historic England 2015a. *Management of Research Projects in the Historic Environment: The MoRPHE Project Manger's Guide.*

Historic England 2015b. *Managing Significance in Decision-Taking in the Historic Environment: Historic Environment Good Practice Advice in Planning 2.*

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

Historic England. 2015d. *Archaeometallurgy: Guidelines for Best Practice*.

Historic England. 2015e. *Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record*.

Historic England 2016. *Preserving Archaeological Remains: Decision-taking for Sites under Development.*

Historic England. 2017a. *Land Contamination and Archaeology: Good Practice Guidance*.

Historic England 2017b. *Photogrammetric Application for Cultural Heritage: Guidance for Good Practice.*

Historic England 2018a. *3D Laser Scanning for Heritage: Advice and Guidance on the use of Laser Scanning in Archaeology and Architecture.*

Historic England. 2018b. *Science for Historic Industries: Guidelines for the Investigation of 17th- to 19th-century Industries*.

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

Historic England 2018d. *Historic England Excavation Recording Manual.*

Historic England. 2019. *Animal Bones and Archaeology: Recovery to Archive*.

Historic England. 2020. *Deposit Modelling and Archaeology: Guidance for Mapping Buried Deposits*.

Historic England. 2022. *Radiocarbon Dating and Chronological Modelling: Guidelines and Best Practice*

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

South Yorkshire Archaeology Service (SYAS), 2018. *Yorkshire, The Humber & The North East: A Regional Statement of Good Practice for Archaeology in the Development Process*.

Turnpenny, M. 2012. *Renaissance Yorkshire: Archaeological archive deposition policy for museums in Yorkshire and the Humber*. MLA Renaissance Yorkshire.

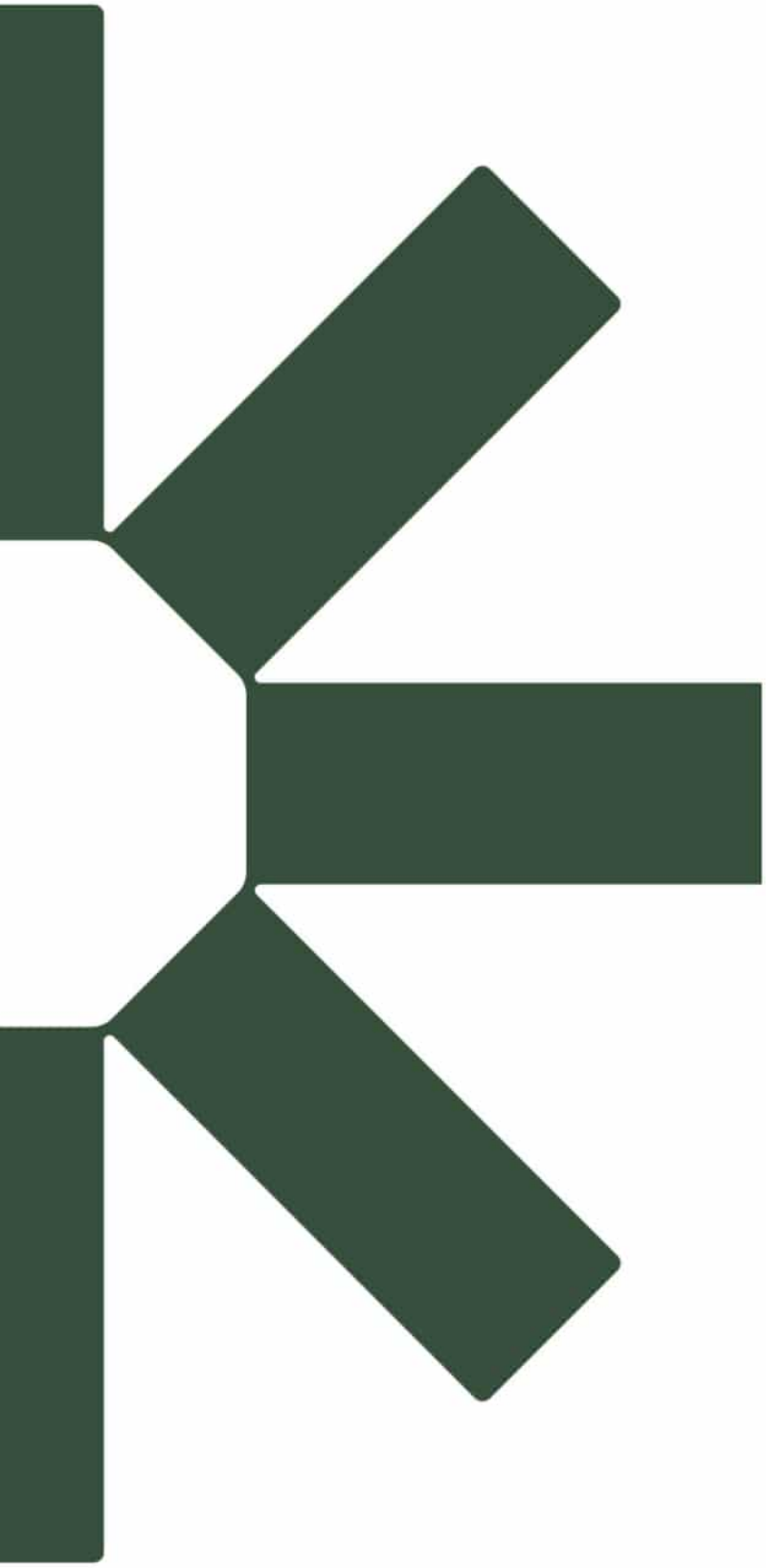
Watkinson, D. and Neal, V. (eds). 1998. *First Aid for Finds.* United Kingdom Institute for Conservation of Historic & Artistic Works, Archaeology Section.

Appendix D Contractor Selection Strategy and Data Management Plan

Section 1: Project Administration
The site is located on of land east of Lockwood Road, Goldthorpe, South Yorkshire (OS Grid Ref SE 46513 04677). The Archaeological Contractor undertaking the works is to be confirmed.
Section 2: Data Collection
The data from the Site will consist of digital data, drawings, photos and paperwork. It will be collected via GPS-surveying, paperwork and digital photos.
Section 3: Documentation and Metadata
Digital files and photos will be kept secured with backups on CDs and/or servers.
Section 4: Ethics and Legal Compliance
The data is the property of the Client. This will be clearly stated on all archiving material. Copies may however be sent to anybody with a special interest in the site.
Section 5: Storage and Backup
The data will be copied into a server and copies made on other forms of media, such as CDs.
Section 6: Selection and Preservation
The aim of the data collection from the Site is to create a long-term archive over the course archaeological project. The data repository is to be contacted prior to works beginning. The Client will be made aware of costs for all archiving
Section 7: Data Sharing and Accessibility
Copies of all files will be sent to the respiratory. Files and photos can also be sent to people and institutions with a special interest in the project on request. No restrictions of data sharing are normally required for a project like this.
Section 8: Responsibilities
Responsible for data management will be the Site manager and the GPS-surveyor specialist.

Project Administration

Project ID / OASIS ID
SLR Ref No: 425.064903.00001
Project Name
Lockwood Road, Goldthorpe
Project Description
Archaeological Evaluation.
Project Funder / Grant reference
The Developer
Project Manager
Simon McCudden
Principal Investigator / Researcher
TBD



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