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MAP Archaeological Practice

Land north of Hemingfield Road
Hemingfield
South Yorkshire

MAP 05-39-23
Planning Reference-2024/0122
August 2025

Written Scheme of Investigation
Archaeological Strip, Map & Record

MAP Archaeological Practice

Client	Hargreaves Land Limited
Work Type	Archaeological Strip, Map and Record
Address	Land north of Hemingfield Road, Hemingfield
LPA Archaeologist	Andy Lines - South Yorkshire Archaeology Service
Central NGR	SE 39255 01856
What3Words	/// snips.trainers.trombone
Planning Ref	LPA: 2024/0122 PINS: APP/R4408/W/25/3359917
OASIS Ref	maparcha1-526721
Site Code	05-39-23
Project Manager	Charlie Puntorno
Project Team	TBA

Version History	Edited/QA by	Notes
A150825	Max Stubbings	

Land north of Hemingfield Road

Hemingfield

South Yorkshire

05-39-23

Archaeological Strip, Map and Record

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1. Background

1.1 A programme of Archaeological Strip, Map and Record is required at the site which is located to the north and west of Hemingfield Road and south of the Dearne Valley Parkway (centred at SE 39255 01856).

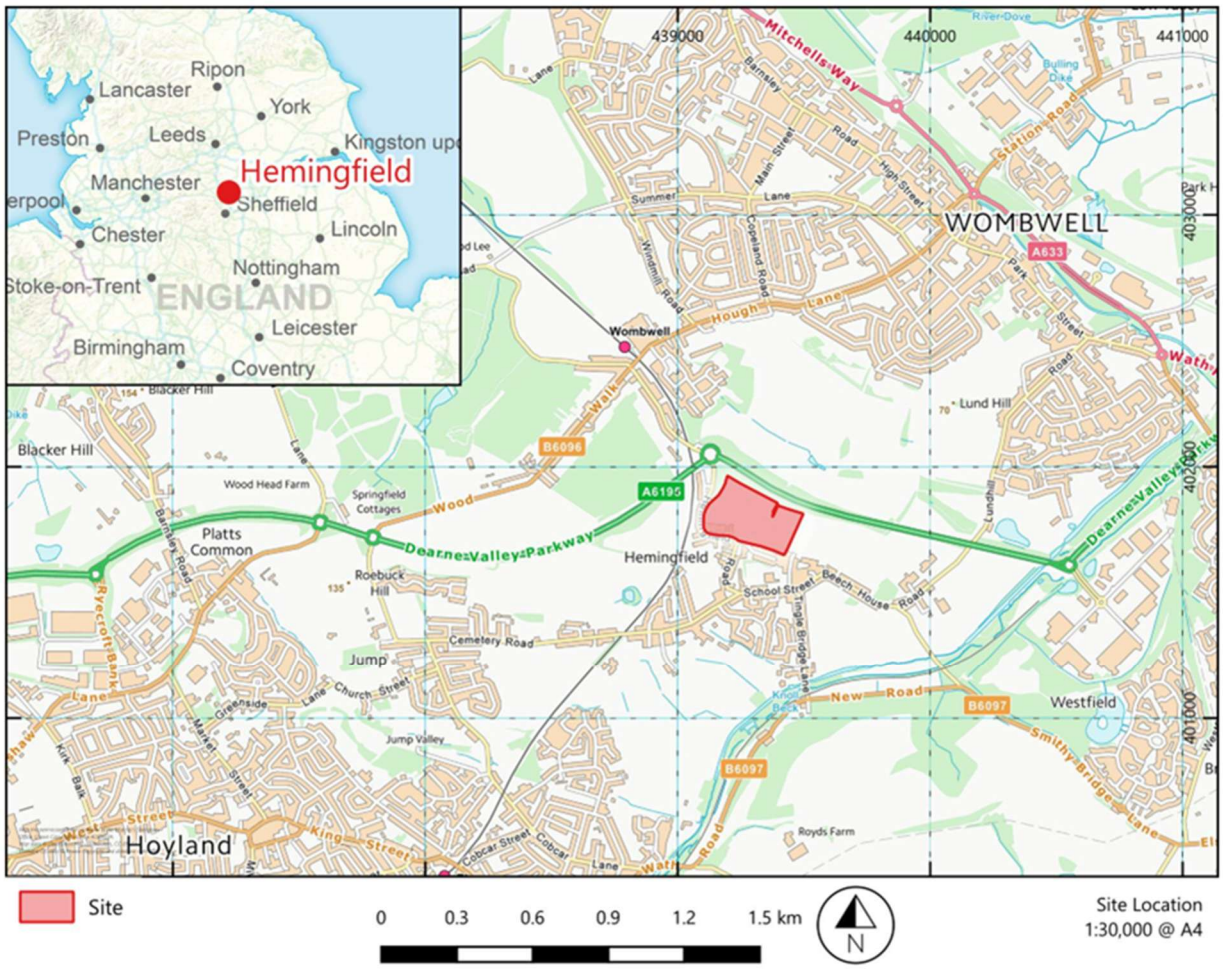

Figure 1: Site Location

1.2 Outline planning application has been granted at an appeal for the '*demolition of existing structures and erection of residential dwellings with associated infrastructure and open space. All matters reserved apart from access into the site*'. Condition 11 of the permission states that:

Prior to the commencement of development:

i. an archaeological evaluation of the site will be undertaken in accordance with the Written Scheme of Investigation – Archaeological Evaluation by Trial Trenching report prepared by MAP Archaeological Practice (Version C-181124);

ii. a report detailing the outcome of the archaeological evaluation and proposed mitigation measures (if necessary) will be submitted to and approved by the local planning authority; and

iii. any mitigation measures required will be implemented in full.

1.3 To date all work concerned with part (i) of the condition have been carried out. This Written Scheme of Investigation outlines work required in respect of parts (ii) and (iii).

1.4 The Archaeological Strip, Map & Record will be monitored under the auspices of the Archaeologist at SYAS who will be consulted before the commencement of site works. Where necessary the regional Science Advisor at Historic England may also be contacted about the work.

1.5 MAP will adhere to the principles of the CIfA Code of Conduct (CIfA. 2022) throughout the project and to the CIfA 'Universal Guidance for Archaeological Excavations' (CIfA. 2023). All work will be carried out in line with South Yorkshire Archaeology Services Archaeological Mitigation Standards & Guidance (2024).

1.6 Prior to the commencement of site work, a site briefing will be given by the Attending Archaeologist (site lead) to appraise all archaeologists and other contractors of the scope of the mitigation and to outline the associated obligations and matters relating to health and safety. Once the site is established updates will be given to appropriate personnel. The site briefings will not remove the need for all staff and appropriate visitors to sign up to this Written Scheme of Investigation and site specific RAMS.

1.7 The project will be continuously reviewed in order to monitor the projects progress towards meeting its aims and objectives. As a minimum the results of the excavation will be assessed whilst the fieldwork is taking place, to allow for any necessary changes to the agreed methodology. Any deviance from the methodology outlined in this document must be agreed by SYAS and an updated document will be produced. At the reporting stage of the project discussions will be held with the SYAS regarding the need for additional post-excavation analysis.

2. Site Information

2.1 *Land Use and Geology*

2.1.1 The site currently consists of two parcels of agricultural land bisected by a hedgerow and public footpath. The site is bounded to the east by further arable land, to the south and west by Hemingfield Road and residential properties on Briery Meadows, and to the north by the Dearne Valley Parkway (A6195).

2.2 The bedrock geology within the site boundary consists of Woolley Edge Rock (BGS. 2025). No superficial geology is recorded by BGS although Soilscapes (2025) records '*slowly permeable seasonally wet acid loamy and clayey soils*'.

2.3 *Archaeological Potential*

2.3.1 Prehistoric activity is well recognised within the vicinity of the site, particularly at Wombwell Woods to the north-west of the site. Flints of Mesolithic date were recovered from land to the west of the woodland (Historic England Monument Number 52441), while implements have also been recovered from an outcrop within the woods (Historic England Monument Number 52441).

2.3.2 Iron Age and Romano-British activity is well recognised within Wombwell Woods, part of which is designated as a Scheduled Monument (NHLE 1004796). The complex, which comprises settlement features, enclosures, a trackway and field systems, is visible as earthworks (Historic England; 2023) and can clearly be discerned in LiDAR data

2.3.3 Archaeological features, including pits, gullies and a ditch, of potential late prehistoric or Romano-British date have also been identified at School Street, which is located approximately 250m to the south of the site. Although no datable material was recovered from the features, their stratigraphic relationships and the nature of their fills was suggestive of potential late prehistoric or Romano-British origin (ASWYAS; 2007).

2.4 A Geophysical Survey carried out across the site identified anomalies which are likely to be of archaeological origin, with former field boundaries and agricultural anomalies also noted (Magnitude; 2024). Features thought to be of archaeological origin include a ditch flanked trackway, ring ditches and possible enclosures.

2.5 Trial Trenching was subsequently carried out in order to assess anomalies highlighted in the results of the Geophysical Survey and also to cover areas which the Geophysical Survey suggested would

be devoid of archaeological activity (MAP; 2024). Twenty-two trenches were excavated, of which eleven contained features which warranted hand-excavation. The excavated features largely correlated to the results of the Geophysical Survey across the site, although some anomalies were deemed to be of a natural or agricultural origin.

2.6 The majority of excavated features relate to a possible trackway or droveway which is flanked on both sides by ditching that continues beyond the site boundary. No evidence (e.g. metalling) was observed to suggest any surface between these ditches. An alternative interpretation of the features is that they may relate to an attempt to enclose the higher land within the northern portion of the site.

3. Project Details

3.1 *Aims and Objectives*

3.1.1 The aims of the Archaeological Strip, Map and Record are to:

- Examine the archaeological resource within a given area or site within a framework of defined research objectives;
- To seek a better understanding of the resource;
- To compile a lasting record of the resource; and
- To analyse and interpret the results of the excavation and disseminate them.

3.1.2 Based on known archaeological activity within the vicinity of the site, and the results of the Geophysical Survey, the evaluation has the potential to inform the following research questions outlined in the South Yorkshire Historic Environment Research Framework;

- QSY0029: Can we characterise different types of Iron Age and Romano-British field systems in different landscape zones and environments?
- QSY0030: What were the economic, social or political roles of Iron Age and Romano-British field systems?
- QSY0034: What were the reasons for variations in the form, shape, and size of Iron Age and Romano-British field systems and fields?
- QSY0040: What were the economic, social or political roles of linear trackways?
- QSY0041: What may we deduce from studies of trackways with respect to changes in the agrarian landscape? What can we say about any relationships or discontinuities between Iron Age and Romano-British routeways and roads?
- QSY0042: Can we identify more tangible physical traces of past human and animal movements through the landscape?

3.2 *Excavation Rationale*

3.2.1 Three main areas of archaeological interest have been identified which warrant investigation through the targeted Strip, Map and Record (Fig. 2).

- Area 1 (1263sqm) is located between trenches 8 and 9 in order to further investigate the potential trackway/ droveway features. The aim of the area is to assess the varying sizes of the features, as identified during the evaluation.
- Area 2 (225sqm) is located to the south-east of Trench 13. Positioned with the aim to further assess two linear features identified within the trench and any potential interactions between them.
- Area 3 (225sqm) is located south-east of Trench 15 in order to further characterise the north to south oriented feature identified within the trench and also the potential interaction between the north-east to south-west ditch identified in Trench 13.

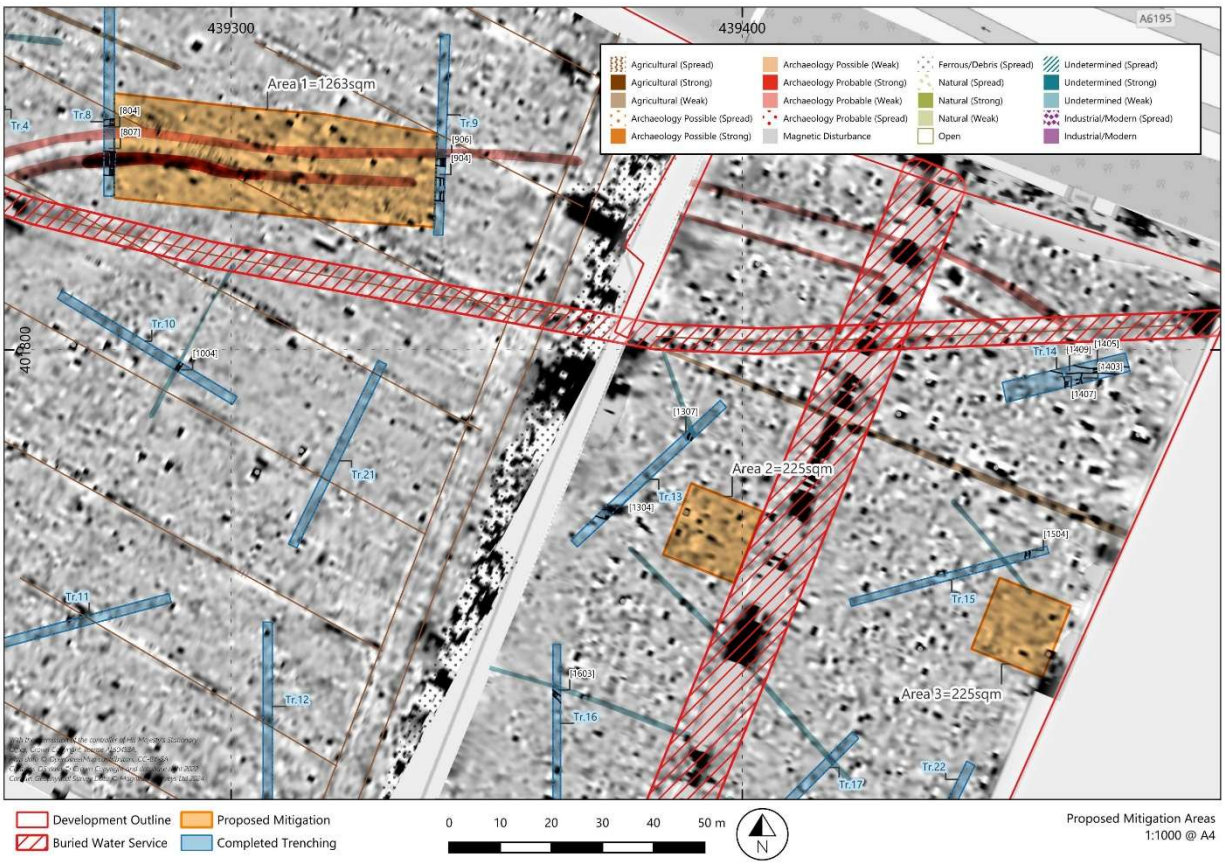

Figure 2: Location of Strip, Map and Record Area

3.3 *Output and Dissemination*

3.3.1 It is anticipated that the project will produce the following output.

Data type	Detail
Physical Archive	• Drawn plans and sections- permatrace. • Site indices (context, photograph, drawing, samples) • Finds collected during the mitigation. • Environmental material retained from samples collected during the mitigation
Digital Archive	• Diggit derived data (PDF context sheets and indices. .xlsx indices) • GIS ESRI Shapefile (.shp & .shx & .dbf, plus associated files) • Photographs .raw (to be deposited as .tiff). to include all photographs taken during the project • Reports (.docx & PDF). WSI, mitigation report and all associated specialist reports
Reports	• Printed assessment report

3.3.2 All digital data will be curated in line with the attached Data Management Plan.

3.3.3 MAP undertake public engagement for all appropriate projects. This will be offered in numerous ways to reflect the nature of the archaeological works. It is likely that public engagement will be via site notices and discussions with the public during the duration of the fieldwork. A copy of the mitigation report will be submitted to the SYAS Historic Environment Record and OASIS for public access. Digital data will be made available to the Archaeology Data Service.

4. Fieldwork Methodology

4.1 *Excavation Methodology*

4.1.1 Prior to the commencement of works a Toolbox Talk will be delivered by the Lead Archaeologist to all on site personnel. It will be outlined that no plant movement will be allowed on any stripped area until it has been inspected and signed off by an archaeologist.

4.1.2 All overburden, topsoil and any subsoils will be carefully removed in spits of no more than 100mm, by mechanical excavator using a wide toothless blade (ditching bucket), under archaeological supervision, to the top of the first archaeological horizon or archaeological perceived natural, whichever is encountered first; thereafter all excavation will be by hand. The site strip will work east to west and, once an appropriate horizon has been identified archaeological supervision of machinery may be intermittent in the western part of the site, dependant on the level of archaeology encountered. Permanent supervision of machinery will be maintained to the east.

4.1.3 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.

4.1.4 Archaeological deposits and features will be initially recorded on a pre-excavation plan which may also include the use of drone derived photography.

4.1.5 Archaeological deposits will be cleaned and excavated by hand using appropriate tools. The stratigraphy of all trenches will be recorded, regardless of a lack of archaeological features.

4.1.6 The excavation sampling policy is:

- An initial half section of all discrete features. Where justified total excavation may be deemed necessary
- 50% sample of pits with a diameter up to 1.5m (where justified, these should be 100% excavated)
- A minimum 25% sample of all pits over 1.5m in diameter, but this should include a complete section across the pit to record a full profile (where justified, these should be 100% excavated)
- Linear or curvilinear features with non-uniform fills will be sampled at a minimum of 20% along their length (each sample section to be not less than 1m).
- All junctions/intersections and corners of linear features will be investigated, and their stratigraphic relationships determined – if necessary, using box sections. All termini will be examined.
- All funerary contexts, all buildings and all industrial features will be subject to 100% excavation. As noted above, postholes and the enclosing ditches around barrows and roundhouses would be first subject to sample excavation, sectioning and recording, but then will be fully excavated.
- Any in situ building remains will be fully recorded for the extent that they are exposed. Brick and stone samples may be taken if potentially diagnostic of date or function.

4.1.7 No area will be backfilled or handed over for development without prior agreement with SYAS.

4.2 *Recording Methodology*

4.2.1 The location of all archaeological features across all areas of the site will be recorded will be positioned to an accuracy of +/-10mm using survey grade GPS or equivalent metric-survey equipment.

4.2.2 All archaeological deposits and features will be recorded using Diggit Archaeology, a digital recording system which is compatible with the MoLAS recording system. During the course of the work the application will tabulate and securely store context information, as would be held on paper records as downloaded CSV tables of context concordance/indices and will produce archivable PDF Context sheets. Site indices will be maintained in parallel with Diggit and produced using MAP's pro forma sheets. At the close of the site material will be downloaded and stored using both MAP's SharePoint application and NAS drive The MAP recording manual will be used on site where necessary.

4.2.3 Drawn records will be undertaken through hand drawn plans at a scale which is suitable to the feature but no smaller than 1:20 for sections and 1:50 for plans. Where possible features may be grouped (e.g. postholes and/or pits) or drawn over multiple sheets to aid interpretation. All other drawing and interpretation will be undertaken through modern survey using both Trimble GPS and Drone derived (and GPS located) orthoimages. Trimble GPS provides a survey which is sub-centimetre accurate, and is utilised for setting out of areas, base stations and post-excavation surveying; this is supplemented with a Leica EDM for use in Photogrammetric Surveying where needed.

4.2.4 Digital photography will be undertaken in accordance with standards set by Historic England and the recipient archive. All digital photography will be undertaken using a high quality camera recommended to have no less than an APS-C or DX size sensor of 10 megapixels and to be capable of generating images in proprietary RAW format. Appropriately sized scales will be used in all record photography. These images will be converted to TIFF for archive (dependent upon the selection strategy) and reduced sized JPEG for reporting.

4.3 *Sampling Strategy*

4.3.1 A sampling strategy for the recovery for environmental remains has been formulated in accordance with an Environmental Strategy written by an Environmental Consultant (Diane Aldritt, Appendix 2).

4.3.2 Soil samples will be taken from all securely stratified deposits using a strategy which combines systematic and judgement sampling, but which also follows the methodologies outlined in the English Heritage (2011) '*Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (Second Edition)*' guidance.

4.3.3 Sampling will also be considered for those features where dating by other methods (for example pottery and artefacts) is uncertain. Such sampling may be carried out at the request of the Development Management Archaeologist or following advice form the Historic England Science Advisor and may include, but is not restricted to, radiocarbon dating, dendrochronological dating, luminescence dating and archaeomagnetic dating.

4.3.4 All samples will be collected in appropriate containers and stored in such a way that reduces the chance of their deterioration which may lead to loss of archaeological information.

4.3.5 Flotation samples and samples taken for coarse-mesh sieving from dry deposits will be processed at the time of the fieldwork wherever possible, partly to permit variation of sampling strategies.

4.4 *Human Remains*

4.4.1 Should any inhumation or cremation burials be encountered, they will be left in situ and covered until the Archaeologist at SYAS has been notified.

4.4.2 Should human remains require full excavation and removal, this will be carried out under the conditions of the licence for the removal of human remains (issued by the Ministry of Justice) and in accordance with the Burial Act (1857), *'Updated Guidelines to the Standards for Recording Human Remains'* (Brickley & McKinley. 2017), CIfA guidelines '*Excavation and Post-Excavation Treatment of Cremated and Inhumed Human Remains*' (McKinley & Roberts 1993), and all Historic England and Advisory Panel on the Archaeology of Burials in England (APABE) guidance, to ensure that they are treated with due dignity. The preferred option would be for them to be adequately recorded before lifting, and then carefully removed for scientific study, and long-term storage with an appropriate museum; however, the burial licence may specify reburial or cremation as a requirement.

4.5 *Artefact recovery*

4.5.1 All stratified archaeological finds will be collected, except for modern (mid-20th century or later) finds from topsoil and subsoil contexts unless it is determined that they are of archaeological interest. All artefacts will be collected and labelled by type and context.

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

4.5.3 Artefacts defined as treasure under the Treasure Act 2023 will be treated in accordance with the Treasure Act Code of Practice. All finds of treasure must be reported to the local 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. The Archaeologist at SYAS should also be notified. A short Treasure Report will be compiled for submission to the coroner.

4.5.4 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.

5. Post-Investigation Assessment, Analysis and Reporting

5.1 *Assessment & Analysis*

5.1.1 Upon completion of the excavation, the artefacts, soil samples and stratigraphic information will be assessed as to their potential and significance for further analysis.

5.1.2 A rapid scan of all excavated material will be undertaken by conservators and finds researchers in collaboration. Material considered vulnerable will be selected for stabilisation after specialist recording.

5.1.3 Where intervention is necessary, consideration will be given to possible investigative procedures (e.g., glass composition studies, residues in or on pottery, and mineral preserved organic material).

5.1.4 Allowance will be made for preliminary conservation and stabilisation of all objects and an assessment of long term conservation and storage needs.

5.1.5 Assessment of artefacts will include inspection of X-radiographs of all iron objects, a selection of non-ferrous artefacts (including coins), and a sample of any industrial debris relating to metallurgy

5.1.6 Once assessed, all material will be packed and stored in optimum conditions, as described in First Aid for Finds.

5.1.7 Processing of all samples collected for biological assessment, or subsamples of them, will be completed. Bulk and site-riddled samples from dry deposits will have been processed during excavation, where possible.

5.1.8 The preservation state, density and significance of material retrieved will be assessed, following methods presented in Environmental Archaeology (Historic England. 2011). Unprocessed sub-samples will be stored in conditions specified by the appropriate specialists.

5.1.9 Assessments for any technological residues will be undertaken. Samples for dating will be submitted to laboratories promptly, so as to ensure that results are available to aid development of specifications for subsequent mitigation strategies.

5.1.10 Basic stratigraphic information will be supplied to the project specialists outlined in section 7.

5.1.11 Recording of ceramic assemblages will be carried out in a manner compatible with existing typological series in local pottery reference collections.

5.2 *Reporting*

5.2.1 A brief, interim report may be required shortly after the completion of fieldwork.

5.2.2 A post-excavation assessment report will be prepared, to include the following as a minimum:

- 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;
- A report of all find and sample categories to assessment level, by appropriate specialists, including their research potential;
- The results of any scientific dating;
- A discussion of the results including a phased interpretation of the site;
- 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;
- An assessment of the effectiveness of the mitigation strategy, including earlier stages of work and a critique of results;
- Recommendations for any further investigation, specialist analysis or conservation, recording and/or preservation of in situ archaeological remains, to be determined in consultation with the Archaeologist at SYAS.
- Supporting illustrations, including as a minimum:
    - A detailed location map;
    - A detailed site plan showing all areas as excavated;
    - Plans for all strip, map and record areas where archaeological features were identified;
    - Detailed plans of archaeological features;
    - Detailed sections of archaeological features;
    - An overall (phased) site plan showing all archaeological features recorded;
    - Selection of photographs of work in progress;
    - Select artefact illustrations and/or photographs
- Supporting tables of data;
- Archive index.

5.2.3 Where an updated WSI is necessary, the updated document should contain:

- Any changes to the aims and objectives of the project;
- The requirement and content of the final analysis report;

- Any changes to the archive arrangements, including details of proposed specialist conservation;
- Any updates to the Selection Strategy and Data Management Plan.

5.2.4 Copies of the report will be submitted to the commissioning body, the Local Planning Authority and the Development Management Archaeologist.

5.2.5 We will provide a physical and digital copy of the report to the SYAS Historic Environment Record. A digital copy will also be lodged with OASIS.

5.2.6 Printed copies of reports will be included with the physical archive to the recipient museum (see section 6).

5.2.7 Where results warrant it, and following discussion with the Archaeologist, full analysis and/or formal publication may be required. This will be discussed at the mid-point review. All further work which may be deemed necessary by any specialist (see section 7), or the Archaeologist will be the subject of an WSI. The Updated Project Design will discuss each recommendation and the scope of further work in detail, and will also contain information about timeframes, financial considerations and all associated personnel.

5.2.8 Unless the individual/organisation commissioning the project wishes to state otherwise, the copyright of any written, graphic or photographic records and reports rests with MAP.

6. Archive *Working Archive*

6.1.1 All material (whether digital or physical) recovered or generated through the duration of the field mitigation 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 (Appendices 1 & 2).

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

6.1.3 Digital security copies will be made of physical and born digital records at regular intervals, to be stored and backed up in a secure location. Documents and drawings will be scanned at an appropriate resolution (generally 1:1, see appendix 2).

6.2 *Archive Deposition*

6.2.1 The requirements for archive preparation and deposition must be addressed and undertaken in a manner agreed with the recipient museum (Experience Barnsley), who will be contacted before

commencement of fieldwork. In line with the '*Archaeological Archive Deposition Policy for Museums in Yorkshire and the Humber*', produced by Renaissance Yorkshire, the museum will also be contacted during a mid-point review of the project during which information will be passed to the museum regarding the archive and the proposed timescale for deposition, and following the completion of work.

6.2.2 The museum will also be contacted during a mid-point review of the project during which information will be passed to the museum regarding the archive and the proposed timescale for deposition and following the completion of work.

6.2.3 Guidance set out in the CIfA Toolkit for Selecting Archives (2019) will be followed, prior to the commencement of fieldwork in order to establish project-specific strategies for the retention or discarding of material. The retention of material will also be discussed with the museum with regards to the significance and research potential of the archive.

6.2.4 Archive deposition will be arranged in consultation with the museum with their deposition policy relating to the preparation and transfer of archives. The timetable for deposition shall be agreed on completion of the site archive and narrative

6.2.5 The digital archive will be deposited with the Archaeology Data Service (ADS) at the University of York. A link to the final digital archive will be provided to the Humber Historic Environment Record.

7. Staffing & Assurances

7.1 MAP Is a Chartered Institute for Archaeologists (CIfA) Registered Organisation (RO). The RO scheme is a quality assurance programme which signifies MAP's commitment to maintaining high professional standards and competence within the team. As a minimum the site will be overseen by a Project Manager who holds the highest level of CIfA accreditation.

7.2 At the time of writing the field work team is to be confirmed however as a minimum, the following contacts will be relevant for the duration of the project.

- Charlie Puntorno- MAP Project Manager
  Telephone- 07879791369
  Email- Charlie@maparchltd.co.uk

- Andy Lines- South Yorkshire Archaeology Service
  Telephone- 01142736354

Email- andrew.lines@sheffield.gov.uk

- Andy Hammon-Historic England Science Advisor

  Telephone- 07747486255

  Email- andy.hammon@historicengland.org.uk

7.3 The following Specialists have been retained to work on the project:

- Prehistoric pottery – M R Stephens (MAP)
- Medieval & Post-medieval pottery – M R Stephens (MAP)
- Roman pottery – Dr David Griffith
- Flint – F. Foulds
- Animal Bone – Jane Richardson
- Environmental Sampling – Diane Alldritt/ Emma Tong
- Conservation – York Archaeology
- Human Remains – York Osteoarchaeology
- Ceramic Building Material – Dr David Griffith
- Clay Tobacco Pipe – M R Stephens (MAP)

7.4 MAP has an Environmental Policy which outlines our commitment to reducing the impact our work has on the environment. We are committed to reducing our carbon footprint as much as possible be it through the considered use of vehicles or reducing paper usage through digital recording,

8. Health and Safety & Insurances

8.1 The safety and welfare of MAP staff and other contractors takes precedence over all other matters on site, irrespective of obligations laid out within this document.

8.2 All work will be carried out in accordance with site specific RAMS which will be produced and disseminated to all parties before the commencement of fieldwork. The RAMS will be read by all members of the site team who will be inducted to the site, and any required updates will be communicated with MAP's health & safety advisor and the Project Manager.

8.3 MAP hold all appropriate insurances, copies of which can be provided on request.

9. Bibliography

Archaeological Services West Yorkshire Archaeological Services. 2007. Land off School Street, Hemingfield,

British Geological Society. Geology of Britain Viewer. Available at: http://mapapps.bgs.ac.uk/geologyofbritain/home.html [accessed 11.08.25]

Chartered Institute for Archaeologists. 2022. Code of Conduct

Magnitude Surveys. 2024. Geophysical Survey Report of Hemingfield Road, Barnsley

MAP. 2023. Land off Hemingfield Road, Hemingfield, South Yorkshire. Archaeology and Heritage Desk Based Assessment

MAP. 2024. Land off Hemingfield Road, Hemingfield, South Yorkshire. Archaeological Evaluation by Trail Trenching

Soilscapes. 2025. Soilscapes Viewer. Available at https://www.landis.org.uk/soilscapes/ [accessed 11.08.25]

Appendix 1: Digital Data Management Plan

Project Administration	
Project Name	Land north of Hemingfield Road
Site Code	05-39-23
Project Description **(E.g., number of trenches, area of excavation)**	Strip, Map & Record of three areas
OASIS ID	maparcha1- -526721
Museum Name & Accession code (where applicable)	Experience Barnsley Museum Site Code: TBC
Client/ Landowner (where applicable)	Hargreaves Land Limited
Project Lead	TBC
Project Manager	Charlie Puntorno
Date & Version	A110825

Data Collection

Data to be Collected/ Created (to be updated throughout duration of project)		
Type	Format	**Volume**
GIS	ESRI Shapefile (.shp & .shx & .dbf, plus associated files) (Metadata to be deposited as .csv)	**WSI (shapefiles)** Site Location (pin) Site Boundary (polygon) Mitigation Area (polygon) **Geotiffs** Interp Greyscale **Mid Excavation Review** Pre-X (polygon) Segments (polygon) Survey (dxf, polyline)
CAD	.dwg, .dxf (Metadata to be deposited as .csv)	
Spreadsheets & databases	Excel (.xlsx) Access (.accdb) (to be deposited as .csv)	
Images	.jpg, .raw (to be deposited as .tiff)	WSI=1 .jpg
Text/ Documents	Word (.docx) PDF (.pdf)	WSI = 3.docx & 5 pdf

- All data will be collected in line with the project specific Written Scheme of Investigation, *Guides to Good Practice* produced by the ADS and MAP's guidance on the *Creation and Treatment of Documentary, Digital and Material Archives*.
- The digital archive will be stored in an appropriately named project specific folder which will be regularly backed up. All data raw data will be stored in the appropriate folder. Version control will be maintained throughout the project.

Documentation and Metadata

- Data collected will include standard formats which maximise opportunities for use and reuse in the future.
- Data documentation will meet the requirement of the Museum Deposition Guidelines, Digital Repository Guidelines and the methodology described in the Written Scheme of Investigation. Following the completion of the project all paper-based material will be digitised and included within the archive.
- A metadata form consistent with ADS examples will be completed for each dataset and included within the final archive. As a minimum the metadata will include a file name, keywords & dates, creator & date of creation, copyright holder, location (site address or coordinates as appropriate), software and version.
- An archive catalogue documenting both physical and digital archive products will be maintained and submitted with both the Museum and Trusted Digital Repository (ADS).

Ethics and Legal Compliance

- MAP staff must only participate in work which conforms to accepted ethical standards and which they are able to competently preform. Where there is any doubt, which should be raised with management.
- MAP places an emphasis on internal peer review of documents and the discussion of results. All Written Schemes of Investigations are reviewed by the relevant Local Authority Archaeologists prior to submission. Where confidentiality is requested by a client, this is strictly upheld by MAP.
- The project archive will include the names of all individuals who contributed to the project unless it is requested otherwise. No personal data will be held within the project archive.
- MAP have a GDPR compliant Privacy Policy underpins the management of all personal data. Such data is not retained in project specific folders and is not accessible to unauthorised staff nor will it be shared with any third-party companies.
- Unless otherwise agreed at the inception of a project, the copyright of all data collected throughout the project belongs to MAP. The inclusion of data derived from

external specialists and/or contractors is secured at the point of agreement of their participation on the project.

- By depositing an archive with an HER or museum MAP gives permission for the material presented to be used by the recipient, in perpetuity, although MAP retains the right to be identified as the author of all project documentation and reports as specified in the Copyright, Designs and Patents Act 1988 (Chapter IV, section 79).
- All relevant licences and permissions to reproduce external data are discussed in the site-specific Written Scheme of Investigation and all subsequent reporting, including Desk Based Assessment. Where site specific licences are required (i.e., for the removal of human remains), licence numbers and dates will also be included within site reports and a copy of the licence held within the archive.

Data Security: Storage and Backup

- MAP's current IT infrastructure is divided between SharePoint for documents and an NAS (Network Attached Storage) drive for larger data files (acting as back up of locally held files on work laptops). Both require username and password intrinsic to the individual users.
- Digital Recording is currently provided by DiggitArchaeology.com, who provide access to their mobile app and web app via email and password login. The backup of recorded material is provided by Diggit's use of the three-point server system with automatic backups working in tandem. Diggit's data is encrypted in transit and stored and backed up on a MongoDB Atlas server cluster of 3 replicate nodes in the Republic of Ireland (in the GDPR-compliant EEA). In the rare event that one server is down, a replicate node instantly replaces it with no perceptible change in behaviour or functionality. These servers are backed up daily, and the datacentres housing them are accredited to ISO 27001 (2005) or higher. In the very unlikely scenario that data must be restored from a backup, we estimate the Recovery Time Objective (RTO) for restoring this data to be approximately 10 minutes of downtime. At the close of the site material will be downloaded and stored using SharePoint.
- In regard to filing within the SharePoint and NAS, a folder template sets out the associated locations of files; these folders should be appropriately named and populated with file names for field data stored on the NAS. See section on "Naming Conventions".

- SharePoint is maintained/delivered under licence by Practical Networks with in-house maintenance by the Commercial Director. The NAS drive is a WD PR2100 and is maintained by the Archaeology and Geomatics Manager with weekly backups and checks of the data; field data such as photographs and survey data to be uploaded weekly by the Project Officer.
- Field and in-house access to the SharePoint and the NAS drive is limited/restricted by user email and password.
- Files such as databases, tables and documents required by the external specialists and in-house post-excavation team will be distributed using the SharePoint system. Any further data such as photographs, AutoCAD files, QGIS projects etc will be distributed via secure alternative means (WeTransfer or similar) to protect the integrity of the NAS Drive.

Selection and Preservation

- A selection strategy and the DMP for each project will be considered from the inception of the work. The process of selection should be devised in consultation with LPA frameworks, guidance and individual stakeholders, reviewed by the Appointed Project Manager at each milestone of a project's lifespan; inclusive a peer review and appropriate consultation with stakeholders to provide quality assurance.
- The strategy should dictate which parts of the archive, both digital and analogue, are relevant and would provide future generations with a soundly curated archive. Documents and Data should be quality assured prior to deposition, checking for consistency and following any deposition guidance of the eventual repository.
- All costs relating to the digital archiving have been factored into the original quote and intended repository will be notified. At each milestone costing considerations must be undertaken to ensure that deposition is not out of pocket or unexpectedly above factored levels.

Data Sharing

- A summary of the site will be made available at the earliest opportunity, latterly curated and adapted at each major milestone to reflect most up to date information regarding the site.

- All reports relevant to the site will also be curated and added to the OASIS record, updated at pertinent milestones of the project; the final report must be lodged with the HER in the first instance.
- Any archive material must be authorised for dissemination by the relevant stakeholders, primarily this is likely to be the client; though any such action will only be temporary, and usually as a result of planning issues.

Responsibilities

- The appointed Project Manager shall ensure the DMP is correctly followed, reviewed and adapted (where appropriate) at each milestone. In the unlikely event that the project changes hands, the responsibility will ultimately rest with the Managing Director, who will ensure the needs of the DMP are addressed and properly handed over to the next Project Manager.
- Curation of the field data, data synthesis/analysis, quality assurance should be the responsibility of senior figures of the project team, usually the Project Officer/Supervisor. They will make sure that all data is stored correctly and backed up to minimise any loss of integrity of the archive.
- Reports both internal and external shall be subject to MAP's ideal naming preferences of project files. It is the responsibility of each department to ensure their curated report/work is correct, quality assured and seek clarification from the authors (external or otherwise) of any document which contains errors.
- All work will be latterly audited by the Project Manager working towards creating an archive and level of reporting which is both ethically sound, accurate and reliable for future use by anyone internal or external to the company.

Naming Conventions

- Files and Folders should be named consistently throughout the project folder. The use of an _ (underscore) should be used to separate words instead of spaces e.g., use Pott_Asmnt instead of Pottery Assessment. File names vary according to the content of the file, the _ rule still applies here.
- There should be no spaces in any file naming.
- No symbols (e.g., #?) should be used as they are not ADS compliant.

- Full stops in file names are not accepted, except between file name and file type.
- Abbreviate where possible, losing extraneous vowels and consonants, as file paths are cumulative and cannot exceed a certain number of characters.
- Naming Examples.

- Reports and digitised registers

Should follow the structure of: Site Code, Type of Work (Adding excavation Phase if required), Component, Version. Varied slightly for digitised registers as per example:

e.g., 05-08-20-TT_FINALReport_A210622

05-26-19-EXC_PhsB_App01_CtxtListing

- Digital Photographs and Black & White Photographs

Should include the Site Code, Type of Work (Adding excavation Phase if required), and Frame No, varied slightly for B&W film:

e.g., 05-08-20-TT_Digi_001

05-26-19-EXC_PhsB_BW_FLM01-001

NB be aware that jpegs and raw (as well as selected archive tiff's) should be in separate folders and be concurrent with each other.

- Scanned Site Registers

Should be scanned in pdf format and be formatted as: Site Code, Type of Work (Adding excavation Phase if required), Register Name.

e.g., 05-08-20-TT_CtxtReg

05-26-19-EXC_PhsB_DrawReg

- Scanned Context Sheets & other site sheets.

Should be scanned in pdf format and be formatted as: Site Code, Type of Work (Adding excavation Phase if required), Type of Sheet, Sheet Nos.

e.g., 05-08-20-TT_Ctxt-0001-0050

05-26-19-EXC_PhsB_Ctxt0001-0050

- Site Drawings and Plans

Should be scanned as TIFF's and be formatted as: Site Code, Type of Work (Adding excavation phase if required), Drw, Sheet No

e.g., 05-08-20-TT_Drw_Sh-001

05-26-19-EXC_PhsB_Drw_Sh-001

NB. The phase of work or field numbers may only be relevant at the time the work was undertaken, if work is part of a larger continuing outline, check where the next tranche of numbers will start and bare that in mind or check with PM prior to archiving reports.

List of Abbreviations

Registers

Ctxt

Drw

Digi

BW

Env

SF

Specialist Reports

Pott	Pottery
ABn	Animal Bone
FeR	Iron Waste Residues
Crbn	Carbonised Plant Remains
Cnsrv	Conservation

Appendix 2: Environmental Strategy

By Diane Alldritt

The on-site environmental sampling strategy will systematically seek to recover a representative sample of botanical, molluscan (both terrestrial and aquatic), avian and mammalian evidence from the full range of contexts encountered during the excavation. This will enable, at the assessment stage, the possibility for radiocarbon dating material to be obtained, and for an initial analysis of the economic and environmental potential of the site. In order to achieve this, a bulk sample (BS, Dobney *et al* 1992) comprising an optimum size of 40litre of sediment (where possible) should be taken from every stratigraphically secure and archaeologically significant context. In practice it may not always be possible to obtain 28l of sediment from certain features during the assessment stage, for instance from partially excavated pits or post-holes, in which case a single bucket sample, c.10 to 14litre should be taken at the site supervisors' discretion. Deposits of mixed origin, for instance topsoil, wall fills and obvious areas of modern contamination, should be avoided where possible, as these will contain intrusive material and not provide secure radiocarbon dates.

All buckets and other sampling equipment must be clean and free of adherent soil in order to prevent cross-contamination between samples. If dry soil is to be stored for any length of time it should be kept in cool, dry conditions, and away from strong light sources. However, it is preferable to process samples as soon as possible after excavation.

Bulk soil samples shall be processed using an Ankara-type water flotation machine (French 1971) for the recovery of carbonised plant remains and charcoal. The flotation tank should contain a >1mm mesh for collection of the retent or 'residue' portion of the sample (which may contain pottery, lithics and animal / bird bone, in addition to the heavier fragments of charcoal which do not float). The 'flot' portion of the sample, which may include carbonised seeds, cereal grain, charcoal and sometimes mollusc shell, should be captured using a nest of >1mm and >300micron Endicot sieves. Flotation equipment, including sieves, meshes, brushes and so forth must be meticulously cleaned between samples in order to prevent contamination of potential radiocarbon dating material. All material resulting from flotation will be dried prior to microscopic examination. Flotation is not suitable for the recovery of pollen or for processing waterlogged samples, which shall be discussed below.

Where there is potential for waterlogged preservation, shown for instance by the presence of wood and other organic or wet material, then a 5 to 10litre size sample should be taken (GBA sample, Dobney *et al* 1992). This material is to be retained for later processing using laboratory methods to enable the recovery of waterlogged plant material and insects. For assessment purposes a 1litre sub-sample of the organic sediment from each potential waterlogged sample shall be processed using laboratory wash-over methods and once processed kept wet. All waterlogged samples awaiting processing should be kept damp, preferably stored in plastic sealable tubs, and in cool conditions. Where large waterlogged timbers are recovered these should be stored under refrigerated conditions and an appropriate conservator consulted.

There is the possibility that the waterlogged deposits may require parasite egg analysis. It is proposed that the 'squash' technique is adapted, this would require small lumps of raw sediment approximately 3mm in diameter taken from three separate points from within the sample and homogenised in a little water by shaking. After allowing coarse particles to settle for a few moments, a drop of the supernatant was removed. This work would be undertaken by either John Carrott or Harry Kenwood if necessary.

If sediment suitable for pollen analysis is encountered, for instance rich organic peaty deposits, or deep ditch sections with organic preservation, the archaeobotanical specialist is to be consulted prior to any sampling taking place. These deposits would require sampling with large kubiena tins and require the specialist to be on-site. Pollen analysis, even at assessment level, would subsequently impose a considerable cost implication should it be carried out.

The specialist is available to provide consultation and advice on the environmental sampling strategy throughout the course of the excavation and during post-excavation processing if required.

References

Dobney, K. D., Hall, A. R., Kenward, H. K. and Milles, A. 1992 A working classification of sample types for environmental archaeology. *Circaea* 9 24-26.

French, D. H. 1971 An Experiment in Water Sieving. *Anatolian Studies 21* 59-64.

Appendix 3: Conservation Strategy

By Ian Panter of York Archaeological Trust

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

If waterlogged conditions are encountered a wide range of organic materials may be recovered, including wood, leather and textiles. Advice will be sought from a conservator to discuss optimum storage requirements before any attempt is made to retrieve organic finds and structural timbers from the ground.

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

Waterlogged wood, including structural elements will be assessed following the English Heritage guidelines, Waterlogged wood: sampling, conservation and curation of structural wood (Brunning 1996). The assessment will include species identification, technological examination and potential for dating.

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