Land between Garden House Close and Back Lane, Monk Bretton.

Written Scheme of Investigation

for a Geophysical Survey

February 2022

ARCHAEOLOGICAL
RESEARCH SERVICES LTD
Digging with Purpose

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Prepared on behalf of:	Mr Anthony Lidster
Date of compilation:	11th February 2022
Compiled by:	John Lavender
Local Authority:	Barnsley Metropolitan Borough Council
Site central NGR:	SE 36246 08032

1 INTRODUCTION

1.1 Project Background

1.1.1 This Written Scheme of Investigation (WSI) has been prepared by Archaeological Research Services Ltd (ARS Ltd) for Mr Anthony Lidster (the Client) for a geophysical survey of the former Belmont Care Home and Garden House Farm on the land between Garden House Close and Back Lane, Monk Bretton, Cudworth, S71 2DY.

1.1.2 The aim of the programme of works is, in line with the *National Planning Policy Framework (NPPF)* paragraph 194 (MHCLG 2021), to require an applicant to describe any significance of any heritage assets affected including any contribution made by their setting.

1.2 Site Description and Location

1.2.1 The 'red line boundary' of the proposed development is depicted by a red polygon on Figure 1 and covers a total area of *c. 1.8*ha in area, centred on NGR SE 36246 08032.

1.2.2 The site comprises the former Belmont Care Home, 1-6 Walkers Terrace and Garden House Farm, which is level ground at *c.*100–108m above Ordnance Datum. The site is situated *c.*2km to the northeast of Barnsley town centre but is situated upon a promontory ridgeline overlooking the River Dearne to the west and a smaller tributary valley to the east.

1.3 Geology and Soils

1.3.1 The underlying solid geology of the site comprises Oaks Rock - Sandstone. Sedimentary Bedrock formed approximately 315 to 318 million years ago in the Carboniferous Period in a local environment previously dominated by rivers. No superficial geology has been recorded for this area (BGS 2022).

1.3.2 The soils are characterised by the Cranfield Soil and Agrifood Institute as Soilscape 17, which are lowly permeable seasonally wet acid loamy and clayey soils (Cranfield University 2022).

DRAFT

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Archaeological and Historical context

This archaeological and historical background is drawn from the Heritage Impact Assessment of the site (Raper 2020). The information on the key archaeological events is summarised below.

Prehistoric–Roman (10,000BC–AD410)

2.1.1 Some sparse evidence for prehistoric activity has been found locally including scrapers and a leaf-shaped flint arrowhead on land to the west of Manor Farm.

2.1.2 A Roman coin was recovered to the west of Cross St at the cricket ground 150m from the proposed area of development and reported to the Portable Antiquities Scheme.

2.1.3 A rectilinear cropmark, recorded as late Iron Age or Roman, was identified by aerial photography in 2001 near Oaklands Avenue, 500 metres east of the site.

Saxon–late medieval (AD410–1543)

2.1.4 The village of Monks Bretton likely has its origins in the Saxon period and is recorded in the Domesday Survey of 1086.

2.1.5 The medieval village sat between a 12th-century Cluniac priory in the southeast and St Helens well and Chapel to the north, its exact location has not been found.

2.1.6 Up until the early 19th century much of the proposed area of development is presumed to have been agricultural land.

Post-medieval (AD1544–present)

2.1.7 A 17th-century stone house stood 50m west of the proposed development area as late as the 1970s, remains of post-medieval cottages may lie beneath later terraces.

2.1.8 Immediately to the southwest of the site, the oldest building at Manor Farm is a Grade II Listed 17th-century stone barn (English Heritage Legacy ID: 333706).

2.1.9 Thomas Jeffrey's 1771 map of Yorkshire shows Monk Bretton as being centered on Westgate, Cross Street, High Street, the proposed area of

DRAFT

development is shown as open land bound to the south by the buildings lining the north side of High Street.

2.1.10 There is potential for the remains of "Oxley's Terrace" to be present in the northwest of the site, given the location on what was at the time the periphery of the village, they are thought to be 19th-century weavers cottages

2.1.11 The earliest phases of Garden House farm likely date to the early 19th century, historic map regression shows it has expanded on several occasions.

2.1.12 Monk Bretton was heavily developed in the 1960s with earlier terraces being replaced by the care home and the newer terraces.

2.2 Regional Research Aims and Objectives

2.2.1 The proposed site's proximity to areas of known archaeological significance suggests that further archaeological prospection has the potential to greatly further the understanding of heritage assets in this area. More specifically, given the proximity of the site to 17th-century buildings including the Grade II Listed barn at Manor Farm, further research and prospection provides a opportunity to investigate the post-medieval development of Monk Bretton.

2.2.2 The proposed archaeological works have the potential to identify evidence contributing to research objectives and overarching research themes identified in the *South Yorkshire Historic Environment Research Framework* (South Yorkshire Archaeology Service 2022), notably the following:

POST-MEDIEVAL PERIOD (1540–1720): RESEARCH AGENDA

Agriculture and rural landscapes

- How did major changes in land tenure, due to the dissolution of monastic estates and enclosure, affect the post-medieval rural landscape?

Research Objective 5G

- Can we identify shrinking, removal or relocation of rural settlements in the post-medieval period, as well as identifying the causes?

2.2.3 Other research objectives may be relevant if archaeological features from any other periods are found.

2.2.4 Where the results of a fieldwork project contribute towards agenda topics the *South Yorkshire Historic Environment Research Framework* can be updated using the interactive digital resource online at https://researchframeworks.org/emherf/ where noted explicitly in the conclusions of the relevant report.

DRAFT

3 GEOPHYSICAL SURVEY AIMS AND OBJECTIVES

3.1 The project will aim to gather sufficient information to establish the presence/absence of potentially significant archaeological anomalies and the character and extent of those anomalies within the survey area. It should also identify areas of land where geological or recent deposits (e.g. disturbed ground, alluvium, or colluvium) or modern features (e.g. culverts, pipelines, cellar activity) could be masking the detection of anomalies or have removed anomalies.

3.2 The following objectives will contribute towards this:

- to develop an appropriate scanning and targeted survey strategy using appropriate techniques to enable the targeted evaluation of archaeological features through trial trenching;
- to determine the presence, extent and number of archaeological features; and,
- to provide a detailed interpretative subsoil map of the site including archaeological anomalies and blank areas to assist in scoping any further stages of evaluation/mitigation that might be required.

4 PROFESSIONAL STANDARDS

4.1 ARS Ltd is a Registered Organisation with the Chartered Institute for Archaeologists (CIfA). Registered Organisations are continuously assessed to ensure that the highest standards of work are carried out, in line with CIfA's *Code of Conduct* (2019). In addition to key management staff, who have achieved the highest grade of corporate CIfA membership, many of our field staff also hold corporate grade membership.

4.2 The presentation and interpretation of the results are defined by best practise and will follow the relevant standards and guidance of CIfA (2020), Historic England (2008) and the European Archaeological Council (2015).

4.3 ARS Ltd is a corporate member of the International Society of Archaeological Prospection (ISAP).

4.4 All staff employed on the project will be suitably qualified for their respective project roles and have substantial experience of geophysical survey. All staff will be made aware of the circumstances and potential archaeological importance of the work and will be fully briefed on the requirements of this specification.

4.5 All site operations will be carried out in a safe manner in accordance with ARS Ltd's health and safety policy. A risk assessment will be prepared before commencement on site.

DRAFT

5 GEOPHYSICAL SURVEY

5.1 Coverage

5.1.1 Geophysical (magnetometer) survey will be conducted to provide 100% coverage of all surveyable areas currently estimated at *c.*1.8 ha (Figure 1).

5.2 Selected Technique

5.2.1 The geophysical survey technique selected for the site is magnetometry. Magnetometry using Fluxgate Gradiometer instruments is the preferred geophysical technique utilised for the detection of buried features such as magnetically enhanced features and objects, or those subjected to firing such as kilns, hearths and the buried remains of brick walls.

5.2.2 It is also used to locate subtle features such as boundary or enclosure ditches, pits and postholes that have been filled by more humic material. The breakdown of organic matter through microbiotic activity leads to humic material becoming rich in magnetic iron oxides when compared with the subsoil allowing features to be detected.

5.2.3 In addition to this, variations in the magnetic susceptibility between the topsoil, subsoil and bedrock have a localised effect on the Earth's magnetic field enabling the detection of features such as backfilled ditches or pits due to the fact that the topsoil has more magnetic properties than the subsoil or bedrock, resulting in a 'positive' magnetic anomaly. Conversely, earthwork or embankment features can also be identified as 'negative' magnetic anomalies due to the action of placing less magnetic subsoil on top of more magnetic topsoil.

5.3 Methodology

5.3.1 A survey grid comprising 30m x 30m individual grids will be set up over the selected survey area. The grids will be accurately positioned using a Leica Zeno 20 GNSS field controller connected to Leica Smartnet to receive corrections resulting in an accuracy of typically 0.1m or better.

5.3.2 These grids will then be surveyed using a Bartington Grad 601-2 gradiometer. The Grad 601-2 has two gradiometer sensors and therefore collects two lines of data during each traverse. Data are collected in a zig-zag fashion within the grid. If possible, the survey will be started in the south-west corner, facing north. Readings are taken every 0.25m on traverses 1m apart. This equates to 3600 readings in a complete 30mx30m grid. Sensor balance will be checked and adjusted at regular intervals.

5.3.3 Upon completion of a data collection shift, all data will be downloaded to a PC or laptop using Geoscan Geoplot V3.

5.4 Data Processing, Interpretation and Report

5.4.1 Data processing will be undertaken by a geophysicist using Geoscan *Geoplot V3*. Anomalies will be digitised and geo-referenced. They will be colour coded using ARS Ltd's standard scheme to provide the most likely interpretation. Anomalies will

DRAFT

be numbered and catalogued as systematic groups or individual anomalies as appropriate.

5.4.2 The results of the gradiometer survey should be processed, and the results then discussed between ARS Ltd, the Client and DCC. The results of the gradiometer survey should be presented in at least two different formats at a minimum 1:500 scale, one of which must be an X/Y trace plot. There must also be an accompanying interpretation drawing at an appropriate scale.

5.4.3 The final report will include a graphical and textual account of the techniques undertaken, the data obtained and an archaeological interpretation of that data and conclusions about any likely archaeology. The report will describe the work undertaken and the results obtained. It will (as a minimum) include the following.

- A non-technical summary
- Introduction
- Geological and topographical setting
- Methodology
- Discussion of archaeological and historical background
- Discussion on the results of the survey
- Conclusions and recommendations
- Sources
- Copy of brief
- Figure showing location of the site
- Figure showing location of survey grids and referencing
- Figure showing processed data
- Figure showing trace plots of processed data
- Figure showing abstraction and interpretation of anomalies.

5.4.4 A digital copy of the report in PDF format will be deposited for review with the Archaeologist for Derbyshire County Council. A copy of the final report will be uploaded as part of the OASIS record (see below) for online access via the Archaeological Data Service.

5.4.5 At the start of work (immediately before fieldwork commences) an OASIS online record http://ads.ahds.ac.uk/project/oasis/ will be initiated and key fields completed on Details, Location and Creators forms. All parts of the OASIS online form will be completed for submission to the Derbyshire Historic Environment Record (HER). This will include an uploaded *.PDF/A version of the entire report.

5.5 Staffing and Timetable

5.5.1 All staff employed on the project will be suitably qualified and experienced for their respective project roles and have practical experience of archaeological excavation and recording. All staff will be made aware of the archaeological

DRAFT

importance of the area surrounding the site and will be fully briefed on the work required by this specification.

5.5.2 All members of staff employed by ARS Ltd are fully qualified and experienced archaeologists, this will ensure that appropriate decisions regarding excavation and sampling will be made in the field.

5.5.3 The outline timetable for the works is as follows. This will be updated by email as the project progresses.

Proposed Commencement Date	Task
W/C 31st January 2022	Geophysical survey
Upon completion of survey +4 weeks	Geophysical survey report

5.5.4 The report will be completed within four weeks of undertaking the survey

5.5.5 The project will be managed by Dr Roger Doonan, Head of Specialist Services at ARS Ltd. The Geophysical Surveyor will be Richard Durkin ACIfA.

5.6 Monitoring Arrangements

5.6.1 ARS Ltd acknowledges that it is the responsibility of the Archaeologist for South Yorkshire to monitor the archaeological works. Reasonable notice, ideally no less than 5 working days, shall be provided before the commencement of works and to arrange monitoring visits.

5.6.2 The archaeological planning advisor for the Local Planning Authority (LPA) is Dinah Saich, Principal Archaeologist, South Yorkshire Archaeology Service, Sheffield City Council.

5.6.3 ARS Ltd will liaise with the archaeological planning advisor at regular intervals throughout the course of the work.

5.6.4 The client will afford reasonable access to the archaeological planning advisor for the LPA or representative officers, for the purposes of monitoring the evaluation works.

6 General Items

6.1 Health and Safety

6.1.1 All work will be carried out in accordance with The Health and Safety at Work Act 1974. Specific health and safety policies exist for all our workplaces and all staff employed will be made aware of the policy and any relevant issues.

6.1.2 The particular risks involved with this project will be assessed, recorded and relevant mitigation measures put in place as part of a full risk assessment, which will be compiled in advance of fieldwork and will be read and signed by all on-site operatives.

DRAFT

6.2 Publication and dissemination

6.2.1 In the event of significant remains being encountered, there may be the need for a more formal publication than in the summary form. It is envisaged this would be done as a synthesis with any further work that may take place rather than as a stand alone article. The requirement for, and the final form of, any publication arising from the project will be agreed with the archaeological planning advisor and the client dependent on the results of the fieldwork.

6.2.2 Provision may be made for publicising the results of the work locally, e.g. via ARS Ltd's website, social media and local media (at the client's discretion) and talking to local societies.

6.3 Publicity and Copyright

6.3.1 Any publicity will be handled by the client. ARS Ltd will retain the copyright of all documentary and photographic material under the Copyright, Designs and Patent Act (1988).

DRAFT

7 REFERENCES

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FIGURES

Figure 1 Location map showing proposed development area in red line boundary.

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