



# LONG LANE, CHAPEL-EN-LE- FRITH, DERBYSHIRE

## PHASE 2

### Geophysical Survey Report



**Oxford Archaeology North**

May 2015

**Seddon Homes Ltd**

Issue No: 2015-6/1620  
OA North Job No: L10842  
NGR: SK 055 797

**Document Title:** Long Lane, Chapel-en-le-Frith, Derbyshire: Phase 2

**Document Type:** Geophysical Survey Report

**Client Name:** Seddon Homes Ltd

**Issue Number:** 2015-6/1620  
**OA Job Number:** L10842

**National Grid Reference:** SK 055 797

Prepared by: Mike Birtles  
Position: Assistant Supervisor  
Date: May 2015

Checked by: Jamie Quartermaine  
Position: Senior Project Manager  
Date: May 2015  
Signed.....

Approved by: Alan Lupton  
Position: Operations Manager  
Date: May 2015  
Signed.....

**Oxford Archaeology North**

Mill 3, Moor Lane Mills  
Moor Lane  
Lancaster  
LA1 1QD  
t: (0044) 01524 541000  
f: (0044) 01524 848606

w: [www.oxfordarch.co.uk](http://www.oxfordarch.co.uk)  
e: [info@oxfordarch.co.uk](mailto:info@oxfordarch.co.uk)

**© Oxford Archaeology Ltd (2015)**

Janus House  
Osney Mead  
Oxford  
OX2 0EA  
t: (0044) 01865 263800  
f: (0044) 01865 793496

Oxford Archaeology Limited is a Registered Charity No: 285627

**Disclaimer:**

*This document has been prepared for the titled project or named part thereof and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authority of Oxford Archaeology being obtained. Oxford Archaeology accepts no responsibility or liability for the consequences of this document being used for a purpose other than the purposes for which it was commissioned. Any person/party using or relying on the document for such other purposes agrees, and will by such use or reliance be taken to confirm their agreement to indemnify Oxford Archaeology for all loss or damage resulting therefrom. Oxford Archaeology accepts no responsibility or liability for this document to any party other than the person/party by whom it was commissioned.*

---

## CONTENTS

---

<b>CONTENTS.....</b>	<b>1</b>
<b>SUMMARY .....</b>	<b>2</b>
<b>ACKNOWLEDGEMENTS.....</b>	<b>3</b>
<b>1. INTRODUCTION .....</b>	<b>4</b>
1.1 Circumstances of the Project .....	4
1.2 Site Location And Topography.....	4
1.3 Geology.....	5
<b>2. METHODOLOGY.....</b>	<b>6</b>
2.1 Project Design.....	6
2.2 Geophysical Survey .....	6
2.3 Archive.....	7
<b>3. SURVEY RESULTS .....</b>	<b>8</b>
3.1 General Observations.....	8
3.2 Geophysical Survey .....	9
<b>4. CONCLUSIONS.....</b>	<b>11</b>
4.1 Discussion.....	11
4.2 Recommendations.....	11
<b>5. BIBLIOGRAPHY .....</b>	<b>12</b>
<b>APPENDIX 1: PROJECT DESIGN.....</b>	<b>13</b>
<b>ILLUSTRATIONS .....</b>	<b>18</b>
Figures.....	18
Plates.....	18

---

## SUMMARY

---

An area off Long Lane, Chapel-en-le-Frith, Derbyshire (SK 055 797) is proposed for a housing development by Seddon Homes Ltd. There are no entries from the Historic Environment Record within the study area but there are significant numbers of prehistoric monuments in the environs. On this basis, it was recommended by the Development Control Archaeologist, Derbyshire County Council, that a programme of archaeological investigation of the site be undertaken as a planning condition in advance of the proposed development. This would entail a programme of geophysical survey to examine the underlying archaeological potential and a programme of archaeological evaluation, which would entail excavating trial trenching across 3% of the study area, and which would target anomalies identified by the geophysical survey. OA North was commissioned to undertake this programme of work in March 2015. The geophysical survey was conducted over two days, 5<sup>th</sup> to 6<sup>th</sup> March 2015.

The geophysical survey and site inspection has revealed an ancient farming landscape, with irregular fields, edged by mature hedgerows. The land is presently under pasture but has in the past been subject to former ploughing evidenced by broad ridge and furrow, which may be a survival of medieval arable farming. There are faint positive magnetic responses evident in the southern half of the study area, which are potentially indications of former field boundaries. One of them appears to coincide with the northern limit of an area of ridge and furrow, and there is a possible continuation of the feature up to an extant field boundary.

It is recommended that the proposed evaluation trenching examine the extent of the study area to investigate the potential for sub-surface remains that have not been revealed by the geophysics, and at least some of these trenches should target the putative field boundaries that were indicated by the magnetic responses..

---

## ACKNOWLEDGEMENTS

---

Oxford Archaeology North (OA North) would like to thank Amanda Oakden of Seddon Homes Ltd for commissioning the project, and we would also like to thank Steve Baker, Development Control Officer, Environmental Services, Derbyshire County Council for advice at the outset of the project.

The fieldwork was undertaken by Mike Birtles, who also wrote the report and compiled the drawings with assistance from Mark Tidmarsh. Jamie Quatermaine managed the project, and also edited the report.

---

## 1. INTRODUCTION

---

### 1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 An area off Long Lane, Chapel-en-le-Frith, Derbyshire (SK 055 797) is proposed for a housing development by Seddon Homes Ltd (Fig 1). There are no entries from the Historic Environment Record within the study area but there are significant numbers of prehistoric monuments in the environs. The valleys that extend through the Peak District between Buxton and Chapel-en-le-Frith appear to have been important routeways during the Mesolithic and Neolithic periods in the context of seasonal movement, and the potential exists for, as yet undiscovered, remains within the study. On this basis, it was recommended by the Development Control Archaeologist, Derbyshire County Council, that a programme of archaeological investigation of the site be undertaken as a planning condition in advance of the proposed development. This would entail a programme of geophysical survey to examine the underlying archaeological potential and a programme of archaeological evaluation, which would entail excavating trial trenching across 3% of the study area, and which would target anomalies identified by the geophysical survey. OA North submitted a project design for the work (*Appendix 1*), which was approved by Environmental Services, Derbyshire County Council.
- 1.1.2 OA North was commissioned to undertake this programme of work in March 2015. The geophysical survey was conducted over two days, 5<sup>th</sup> to 6<sup>th</sup> March 2015, when the weather was dry and cold. This report sets out the results of the survey.

### 1.2 SITE LOCATION AND TOPOGRAPHY

- 1.2.1 The site is located within a diamond-shaped field of approximately 6.9ha, defined on the east side by Long Lane, and on the west side by a railway embankment (NGR SK 055 797) (Fig 1); the northern boundary is defined by a single track road. The site lies approximately 1.5km to the south-west of Chapel-en-le-Frith town centre. The north and eastern boundaries comprised dry stone walling. The site is divided by a wooden fence with the pasture to the south being further subdivided by tree lined ditches. The south-eastern part of the study area is occupied by a strip of recent woodland plantation which has restricted the geophysical survey in that direction. Given the topographic and surface restrictions, it proved possible to undertake a geophysical survey, in two blocks, covering an extent of *c* 4 ha.
- 1.2.2 The survey area is mostly level and laid down to rough pasture (Plate 1); clear ridge and furrow plough scars were evident in the southern field. The northern field was very saturated and boggy and had in part been mechanically stripped prior to the survey, the eastern end of the northern field had been covered by a spread of excavated earth brought in from elsewhere rendering much of this part of the field unsuitable for survey. The centre of the field is 238m above Ordnance Datum.



Plate 1: The general rough pasture terrain of the northern field

### 1.3 GEOLOGY

- 1.3.1 The solid geology consists of Carboniferous Period mudstones, siltstones and sandstones of the Millstone Grit Group (Geology of Britain 2014). The drift geology comprises Quaternary Period glacio-lacustrine deposits of clay and silt in the northern half of the site with deposits of till in the southern half (*ibid*). The soils within the site are classified as slowly permeable, seasonally wet acid loamy and clayey soils ([www.landis.org.uk](http://www.landis.org.uk)).

---

## 2. METHODOLOGY

---

### 2.1 PROJECT DESIGN

- 2.1.1 The first stage of the required evaluation of the site comprised a non-intrusive magnetic geophysical survey, the methodology for which was outlined in the project design (*Appendix 1*) and which was approved by Steve Baker, Environmental Services, Derbyshire County Council. The purpose of the geophysical survey was to inform the location of the trial trenches and the results of the surveys are therefore presented as a report in advance of the trial trenching programme.
- 2.1.2 The geophysical element of the project design was adhered to in full and was consistent with the relevant standards and procedures of English Heritage (English Heritage 2007 and 2008), the Institute for Archaeologists (IfA 2011), and generally accepted best practice.

### 2.2 GEOPHYSICAL SURVEY

- 2.2.1 **Magnetometer Survey:** the preferred geophysical technique in the detection of many archaeological remains is a magnetometer survey, which is effective in locating 'positively magnetic' material, such as iron-based (or 'ferrous') features and objects, or those subjected to firing, such as kilns, hearths, and even the buried remains of brick walls. This technique is also widely used to locate more subtle magnetic features associated with settlement and funerary remains, such as boundary or enclosure ditches and pits or postholes, which have been gradually infilled with more humic material. The breakdown of organic matter through microbial activity leads to the humic material becoming rich in magnetic iron oxides when compared with the subsoil, allowing the features to be identified by the technique. In addition, variations in magnetic susceptibility between the topsoil, subsoil and bedrock have a localised effect on the Earth's magnetic field. This enables the detection of features, such as silted-up or backfilled 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 remains can also be identified with magnetometry as a 'negative' feature due to the action in creating the earthwork of depositing the relatively low magnetic subsoil on top of the more magnetic topsoil. In this way, magnetometry is a very efficient technique and is recommended in the first instance by English Heritage (2008) for such investigations.
- 2.2.2 **Equipment:** the strength of the present geomagnetic field in Great Britain is approximately 50,000nT (nanoTeslas). Most buried archaeological features usually result in very weak changes of less than 1nT to the magnetic field (Clark 1990, 65). The instrument used for this survey was a Bartington Grad 601-2 dual sensor fluxgate gradiometer, which has a sensitivity of 0.1nT when used in the 100nT range setting.
- 2.2.3 **Sampling interval:** the survey area was divided into 30m x 30m grids wherein sampling was at 0.25m intervals, with inter-transect distances of 1m, equating to 3600 sample readings per grid. The survey was carried out in a 'zigzag' mode, with precautions to minimise any heading error on site.



- 2.2.4 All survey grid nodes were staked out with canes using a Leica 1200 series RTK GPS system. Survey guidelines and/or traverse canes were then staked out.
- 2.2.5 **Data capture and processing:** the data was captured in the internal memory of the instrument and downloaded to a portable computer on-site and backed-up on to a USB drive. The individual grids were combined to produce an overall plan of the surveyed area, or 'composite'. The results were analysed and basic initial processing was carried out on-site using the software programme *Archaeosurveyor*. Final minimal processing of raw data was undertaken off site in accordance with English Heritage guidelines (English Heritage 2008) to remove any instrument error or survey effects in order to enhance any more subtle anomalies associated with archaeological features:
- Zero median traverse (ZMT) was applied to correct slight baseline shifts between adjacent survey lines;
  - The data were selectively 'de-staggered' where necessary, to remove any displacement caused by surveying in zigzag mode. This is sometimes required when surveys are carried out on boggy, wet, overgrown or steeply-sloped areas;
  - The data were de-spiked in order to remove random spikes. Random spikes are usually caused by erroneous small ferrous objects.
- 2.2.6 **Presentation of results and interpretation:** the presentation of the data for the site involves a print-out of the minimally processed data as a grey-scale plot (Fig 3). Magnetic anomalies have been identified, abstracted and plotted onto Figure 4.

## 2.3 ARCHIVE

- 2.3.1 A full archive has been prepared to a professional standard in accordance with current United Kingdom Institute for Conservation (UKIC 1990) and English Heritage guidelines (English Heritage 1991; 2006). The paper and digital archive will be deposited with the Derbyshire HER on completion of the project. Copies of the report, together with the archive, will be deposited with the Derbyshire Record Office in Matlock.

## 3. SURVEY RESULTS

### 3.1 GENERAL OBSERVATIONS

- 3.1.1 The study area (Fig 1) comprises a series of small fields, which have slightly irregular shapes, and which includes curved boundaries; the lines of these boundaries are as they were depicted on the first edition Ordnance Survey 1:2500 map (1879) (Plate 2). The irregular form of these field boundaries would suggest that the field system is of some antiquity and has developed over time. There are four fields within the area, each of which are presently under pasture (Plate 3). The fields are divided by hedgerows containing mature deciduous trees and are an indication that the boundaries have some antiquity. The central two fields and the southern field have remains of north/south-orientated broad ridge and furrow, which is probably a product of oxen ploughing and may be a survival of medieval ploughing. The northernmost field presently has a triangular shape, and the OS first edition map shows that these fields butt against the boundaries of Long Lane, which extends diagonally across the landscape; the area to the north of the fields and Long Lane is presently occupied by a housing estate. The southernmost field also has a triangular shape, and was truncated by the establishment of the Manchester Branch of the Midland Railway which was opened in 1867 (Wright 2014; Williams 1874). Beyond the ridge and furrow there are few indications of any other archaeological earthworks or surface indications of archaeological sites within the area. The field system and broad ridge and furrow are an indication that this is an historic landscape which has been under pastoral use for a considerable period.

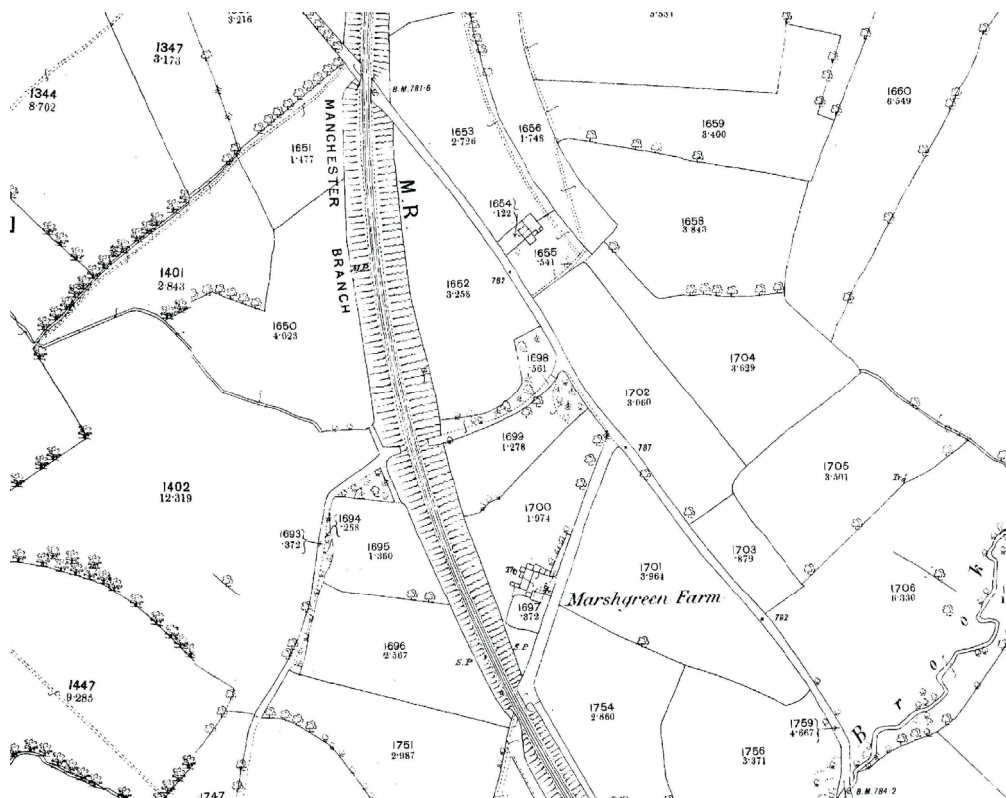


Plate 2: The Ordnance Survey first edition 1: 2500 map (1879)



Plate 3: A Google Earth aerial image of the study area

### 3.2 GEOPHYSICAL SURVEY

- 3.2.1 The results of the magnetometer survey (Figs 2, 3 and 4) show several strong dipolar responses, including areas of magnetic disturbance, adjacent to the western boundaries of the northern and southern fields, and a dipolar linear feature running adjacent to the eastern boundary of the southern area (Fig 4). Responses such as these are characteristic of modern features, likely to be caused by buried thermo-remnant material, such as hardcore or building rubble and/or dumped material. The dipolar linear response is due to buried services crossing the site, their amplitude suggestive of metallic pipes or ducts. Features such as these normally produce a very strong response in the data and a wide area around the actual feature (up to

several metres) can be affected, which inhibits weaker responses from more subtle features, such as archaeological features.

- 3.2.2 Several discrete ferrous spikes are present, the strongest of which have been plotted on Figure 4. These are usually due to individual metallic objects at or just below the surface and it is not possible to discern whether these have any archaeological significance or whether they are modern debris.
- 3.2.3 Criss-crossing the centre of the south site are two linear areas of magnetic disturbance, which are exactly in line with the ditch field boundaries and are likely to be caused by the dumping of thermo-remnant material in the ditches since they had fallen out of use (Fig 4).
- 3.2.4 The majority of the southern area is characterised by linear anomalies which coincide with lines or ridge and furrow observed during the site inspection and which appear to confirm the existence of historic cultivation earthworks.
- 3.2.5 There is a positive magnetic semi-curvilinear anomaly (Feature A) approximately 50m in length that is located in the southern half of the southern area (Fig 4). There are also two faint, positive magnetic linear features (Features B and C), which have slightly convergent orientations. The southernmost of these appears to coincide with the northern limit of an area of ridge and furrow and there is the possibility that it marks the line of an historic field boundary. Similarly, the northern arm of Feature A is orientated towards the western terminal of Feature B and there exists the possibility that they were related.

---

## 4. CONCLUSIONS

---

### 4.1 DISCUSSION

4.1.1 The geophysical survey and site inspection has revealed an ancient farming landscape, with irregular fields, edged by mature hedgerows. The land is presently under pasture but has in the past been subject to former ploughing evidenced by broad ridge and furrow, which may be a survival of medieval arable farming. There are faint positive magnetic responses evident in the southern half of the study area, which are potentially indications of former field boundaries, as one of them (Feature C) appears to coincide with the northern limit of an area of ridge and furrow, and there is a possible continuation of the feature up to an extant field boundary.

### 4.2 RECOMMENDATIONS

4.2.1 The geophysical survey has identified the remains of a relict field system and associated cultivation features which may have its origins in the medieval period, but there are no diagnostic indications of any other earlier, or non agricultural remains. It is recommended that the evaluation trenching examine the extent of the study area to investigate the potential for sub-surface remains that have not been revealed by the geophysics, and at least some of the trenches should target Features A to C.

---

## 5. BIBLIOGRAPHY

---

- Association of County Archaeological Officers (ACAO), 1993 *Model briefs and specifications for Archaeological Assessments and Field Evaluations*, Bedford
- Clark, A, 1990 *Seeing Beneath the Soil*, London
- Countryside Commission, 1998 *Countryside character, Volume 2: North West*, Cheltenham
- English Heritage, 1991 *Management of Archaeological Projects*, second edition, London
- English Heritage, 2006 *Management of Research Projects in the Historic Environment (MoRPHE)*, London
- English Heritage, 2007 *Understanding the archaeology of landscapes, a guide to good recording practice*, Swindon
- English Heritage, 2008 *Geophysical Survey in Archaeological Field Evaluation* (2nd edition), Swindon
- IfA, 2011 *Standard and Guidance for archaeological geophysical survey*, Reading
- Ordnance Survey, 1879 First Edition 1:2500 map
- Schmidt A, 2002 *Geophysical Data in Archaeology: A Guide to Good Practice*, Oxford
- UKIC, 1990 *Guidelines for the Preparation of Archives for Long-Term Storage*, London
- Wright, P, 2014 Disused Stations Chapel-en-le-Frith Central, [www.disused-stations.org.uk/c/chaple\\_en\\_le\\_frith/index.shtml](http://www.disused-stations.org.uk/c/chaple_en_le_frith/index.shtml)
- Williams, FS, 1874 *The Midland Railway: Its Rise and Progress*, Derby

### **Web Resources**

- Geology of Britain, 2014 [mapapps.bgs.ac.uk/geologyofbritain/home.html](http://mapapps.bgs.ac.uk/geologyofbritain/home.html)
- Soils Mapping, 2014 [www.landis.org.uk/soilscapes/](http://www.landis.org.uk/soilscapes/)

---

## APPENDIX 1: PROJECT DESIGN

---

### 1. INTRODUCTION

#### 1.1 PROJECT BACKGROUND

- 1.1.1 An area off Long Lane, Chapel-en-le-Frith, Derbyshire (SK 055 797) is proposed for a housing development by Seddon. There are no entries from the Historic Environment Record within the study area but there are significant numbers of prehistoric monuments in the environs. The valleys that extend through the peak between Buxton and Chapel-en-le-Frith appear to have been important routeways during the Mesolithic and Neolithic periods in the context of seasonal movement. This is marked by the presence of significant monuments, such as the Dove Holes henge monument and numerous Bronze Age burial monuments on the high ground on either side; a notable example of the latter is the Cow Low bowl barrow. Recent investigations in the dry limestone valley at Waterswallows Lane, Buxton have identified extensive Mesolithic and early Neolithic evidence, including rare evidence for an early Neolithic longhouse. On this basis it is recommended by Steve Baker, Development Control Archaeologist, Derbyshire County Council, that a programme of archaeological investigation of the site be undertaken as a planning condition in advance of the proposed development. This would entail a programme of geophysical survey which is non-destructive and is an effective preliminary technique; however, it may not be able to identify smaller, more ephemeral remains and would not be able to identify artefacts which are a good indicator of prehistoric activity. In addition it is required that an archaeological evaluation be undertaken, which would entail trial trenching across 3% of the study area.
- 1.1.2 These archaeological investigations are required as a condition of planning to advise on archaeological significance as required by National Planning Policy Framework (NPPF) para 128. This is the initial phase of a scheme of work and if significant archaeology is found there will be a further requirement for mitigation and a separate written Scheme of Investigation address this. The present project specification provides for a methodology to undertake this initial process of archaeological investigation within the extent of the study area which is approximately 6.3ha.

### 2. METHODS

#### 2.1 INTRODUCTION

- 2.1.1 It is proposed to initially undertake a programme of geophysical survey across the site, which has the potential to identify below ground archaeological remains, and while this can demonstrate the existence of substantial archaeological features of all periods; however, insubstantial, transient prehistoric sites may not have left a substantial magnetic signature and would not necessarily be identified by this survey. If archaeological features are identified by the survey then it is proposed to target these with evaluation trenching.

#### 2.2 GEOPHYSICAL SURVEY

- 2.2.1 **Magnetic Survey:** a magnetometer, survey is usually the first choice for a geophysical survey owing to its ability to be carried out relatively quickly (due to recent improvements in commercially available instruments), and is therefore more cost effective. Consequently, magnetometry is a very efficient technique and is recommended in the first instance by the English Heritage Guidelines (2008) for such investigations.
- 2.2.2 Magnetometry easily locates 'positively magnetic' material such as iron-based features and objects, or those subjected to firing such as kilns, hearths, and even the buried remains of brick walls. Therefore, this technique is suitable for the detection of features associated with industrial activity. This technique can also be widely used to locate the more subtle magnetic features associated with settlement and funerary remains, such as boundary or enclosure ditches and pits or postholes, which have been gradually infilled with more humic material. The breakdown of organic matter through microbiotic activity leads to the humic material becoming rich in magnetic iron oxides when compared with the subsoil, allowing the features to be identified. Conversely, earthwork or embankment remains can also be identified with magnetometry as a 'negative' feature due to the action in creating the earthwork of upturning the relatively low magnetic subsoil

on to the more magnetic topsoil. This technique is classed as a passive technique as it relies on measuring the physical attributes, or the magnetic field, of features that exist in the absence of a measuring device, such as a kiln or ferrous object (Schmidt 2002, 6).

- 2.2.3 **Method Statement:** a detailed magnetic survey would be carried out using a Bartington Grad601-2 gradiometer which has an internal data logger. Data would be collected in zig-zag mode over the same 30m by 30m grids, the magnetic data being collected at 0.25m intervals on profiles 1m apart (3600 readings per grid).
- 2.2.4 The survey grid would be staked out and surveyed using either a survey grade GPS system or total station to Ordnance Survey co-ordinates to at least 0.05m accuracy. Bamboo canes would be placed at grid node points and survey ropes and canes would be used to mark out the survey traverses.
- 2.2.5 All data would be downloaded immediately following collection using specialist survey software (Archaeosurveyor) and would be minimally processed where applicable. Raster images would be exported, usually in .png or .jpg format for presentation and dissemination. These images would then be imported into CAD software and overlain on a geo-referenced base plan. An interpretation of the anomalies would be presented in CAD and a non-technical summary and discussion of the results would be included in a report which would accompany the interpretation.
- 2.2.6 The survey would be carried out in accordance with English Heritage guidelines, 'Geophysical Survey in Archaeological Field Evaluation', 2008 and Institute for Archaeologists standards, 'Standard and Guidance for archaeological geophysical survey', 2010.

### 2.3 EVALUATION

- 2.3.1 The programme of trial trenching would establish the presence or absence of any previously unsuspected archaeological deposits and, if established, would then test their date, nature, depth and quality of preservation. In this way, it is possible to adequately sample the threatened available area.
- 2.3.2 **Trench configuration:** while the wider development area is 6.1ha in extent, the area that is proposed to be impacted by the development is 4.2ha. The evaluation is required to examine 3% of the impact area, and this would equate to the excavation of 21 trenches which are each 30m x 2m in extent. These would be arranged to systematically cover the extent of the impact areas.
- 2.3.3 **Methods:** the programme of trenching would establish the presence or absence of any archaeological deposits or structures and, if established, would then test their date, nature, depth and quality of preservation. The trenches would be excavated by a combination of mechanised and manual techniques; the topsoil would be removed by mechanical excavator, fitted with a 2.0m wide toothless bucket. Archaeological excavation would be to the top of significant archaeological remains, although a sondage would be taken to natural deposits or to the maximum safe working depth. The uppermost levels of overburden would then be removed using the same machine to the top of the first significant archaeological level. The work would be supervised closely by a suitably experienced archaeologist. Spoil from the excavation would be stored adjacent to the trench, and would be backfilled upon completion of the archaeological works. Machine excavation would then be used to define carefully the extent of any surviving foundations, floors, and other remains. Thereafter, structural remains would be cleaned to define their extent, nature, form and, where possible, date. It should be noted that no archaeological deposits will be entirely removed from the site. If the excavation is to proceed below a depth of 1.2m, then the trenches would be widened sufficiently to allow the sides to be stepped in. One long section of each trench would be manually cleaned to enable close examination and recording. Sensitive deposits would be manually excavated, which would enable an assessment of the nature, date, survival and depth of deposits and features. The trench would be excavated in a stratigraphical manner, whether by machine or by hand.
- 2.3.4 **Context Recording:** all contexts will be recorded using *pro-forma* sheets, and details would be incorporated into a Harris matrix. Similar object record and photographic record *pro-formas* would be used. All written recording of survey data, contexts, photographs, artefacts and ecofacts would be cross-referenced from *pro-forma* record sheets using sequential numbering.
- 2.3.5 **Photography:** a full and detailed photographic record of individual contexts would be maintained and similarly general views from standard view points of the overall site at all stages of the evaluation would be generated. Photography would be undertaken using 35mm cameras on



archivable black and white print film as well as digital photography using a 13megapixel digital camera. All frames would include a visible, graduated metric scale. Photographs records would be maintained on special photographic *pro-forma* sheets.

2.3.6 **Planning:** the precise location of all archaeological structures encountered would be surveyed by EDM tacheometry using a total station linked to a pen computer data logger. This process would generate scaled plans within AutoCAD, which would then be subject to manual survey enhancement. The drawings would be generated at an accuracy appropriate for 1:20 scale, but can be output at any scale required. Sections will be manually drafted as appropriate at a scale of 1:10. All information would be tied in to control left from the earlier 1989 survey, if possible.

2.3.7 **Reinstatement:** it is assumed that there will be a basic requirement for the backfilling of trenches: excavated material will be backfilled so that the topsoil is laid on the top, and the ground will be roughly graded.

## 2.4 Finds

2.4.1 **Finds policy:** finds recovery and sampling programmes would be in accordance with best practice (following current Institute of Field Archaeologists guidelines). Finds storage during fieldwork and any site archive preparation would follow professional guidelines (UKIC). All finds would be treated in accordance with OA North standard practice, which is cognisant of IFA and UKIC Guidelines. In general this would mean that (where appropriate or safe to do so) finds are washed, dried, marked, bagged and packed in stable conditions.

2.4.2 **Faunal remains:** if there is found to be the potential for discovery of bones of fish and small mammals, a sieving programme would be carried out. These would be assessed as appropriate by a specialist in faunal remains, and subject to the results, there may be a requirement for more detailed analysis. A contingency has been included for the assessment of such faunal remains for analysis.

2.4.3 Human remains are not expected to be present, but if they are found they would, if possible, be left *in situ* covered and protected. If removal is necessary, then the relevant Home Office permission would be sought, and the removal of such remains would be carried out with due care and sensitivity as required by the *Burials Act 1857*.

2.4.4 Any gold and silver artefacts recovered during the course of the excavation would be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act, 1996.

## 2.5 REPORT

2.5.1 **Digital Presentation:** the survey data would be collated within a CAD environment and would combine the geophysics, topographic and survey data. A digital copy of the archive can be provided in shape file format alongside the final report. Digital photography would be provided, and would be appropriately indexed.

2.5.2 **Reporting:** the report would include the results of the survey, and evaluation would present, summarise, and interpret the results of the programme, and would include a full index of archaeological features identified in the course of the project. The reports would consist of an acknowledgements statement, lists of contents, summary, introduction summarising the brief and project design and any agreed departures from them. The report could also include sections on the following:

- A concise, non-technical summary of the results;
- Archaeological background
- Methodology
- Survey Results, presenting the geophysics data
- Results of the evaluation trenching;
- Summary of finds assemblages, coupled with any specialist reports, and a list of, and dates for, finds recovered and a description and interpretation of the deposits identified;
- Outline of the landscape development and an assessment of the archaeological significance;

- An interpretation of the findings and any management recommendations arising;
  - A site location plan related to the Ordnance Survey national grid;
  - Plans and sections of the site at an appropriate scale showing the location and position of deposits, together with the position of each feature of architectural or archaeological interest;
  - Copies of plans, photographs, and other illustrations as appropriate, with individual descriptions;
  - Index to the archive
  - Bibliography
  - Copies of the project brief and project design
- 2.5.3 The report would incorporate appropriate illustrations, including copies of the site plans, landscape survey mapping, all reduced to an appropriate scale. The site mapping would be based upon the CAD base. The report would be accompanied by photographs and historic illustrations illustrating the principal elements of the landscape.
- 2.5.4 **Editing and submission:** the report would be subject to the OA North's stringent editing procedure and then a draft would be submitted to the client for consultation. Following acceptance of the report ten bound copies of the report would and a PDF copy would be submitted.
- 2.5.5 **Output:** two hard and one digital copies and of the full report would be submitted to the client, and a bound copy of the report would be submitted to the Derbyshire Historic Environment Record. Each report would be illustrated by a selection of prints and maps.
- 2.5.6 **Publication:** a summary report of the results should be submitted to a regional journal, and information from the project should be fed into the OASIS project (On-line Access to Index of Archaeological Investigation).
- 2.6 ARCHIVE**
- 2.6.1 **Archive:** the results of all archaeological work carried out during fieldwork would form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (Management of Research Projects in the Historic Environment (MoRPHE) 2006). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. It would include summary processing and analysis of all features, finds, or palaeoenvironmental data recovered during fieldwork to the appropriate level. OA North conforms to best practice in the preparation of project archives for long-term storage. This archive would be provided in the English Heritage Centre for Archaeology format and a synthesis would be submitted to the Derbyshire Historic Environment Record (the index to the archive and a copy of the report). The ordered archive will be prepared according to the Museums in Derbyshire guidelines '*Procedures for the Transfer of Archaeological Archives* (2003) and the addendum (Interim Guidance Note June 2014), and will ensure that entire the archive is retained together. The original record archive of projects (paper, magnetic and plastic media) along with the material archive (artefacts, ecofacts, and samples) will be deposited with Buxton Museum. The Derbyshire Development Control Officer will be notified once the archive is deposited with the museum.
- 2.6.2 The contacts for the museum are:  
Buxton Museum and Art Gallery  
***Terrace Road***  
Buxton  
Derbyshire  
SK17 6DA  
Tel: 01298 24658  
***Buxton.museum@derbyshire.gov.uk***
3. OTHER MATTERS
- 3.1 ACCESS**

- 3.1.1 It is assumed that there will be unrestricted pedestrian and vehicular access to the study area for the duration of the project.

### **3.2 HEALTH AND SAFETY**

- 3.2.1 Full regard will, of course, be given to all constraints (services) during the survey, as well as to all Health and Safety considerations. The OA North Health and Safety Statement conforms to all the provisions of the SCAUM (Standing Conference of Unit Managers) Health and Safety manual, as well as the OA Health and Safety Statement. Risk assessments are undertaken as a matter of course for all projects, and would anticipate the potential hazards arising from the project.

### **3.3 INSURANCE**

- 3.3.1 The insurance in respect of claims for personal injury to or the death of any person under a contract of service with the Unit and arising in the course of such person's employment shall comply with the employers' liability (Compulsory Insurance) Act 1969 and any statutory orders made there under. For all other claims to cover the liability of OA North in respect of personal injury or damage to property by negligence of OA North or any of its employees there applies the insurance cover of £10m for any one occurrence or series of occurrences arising out of one event.

### **3.4 PROJECT MONITORING**

- 3.4.1 OA North would inform the client of all significant developments, and any potential departures from the agreed programme would be discussed and agreed with them prior to implementation. The project would be monitored on behalf of the local planning authority by Steve Baker, Derbyshire Development Control Officer (01629 539773; [steve.baker@derbyshire.gov.uk](mailto:steve.baker@derbyshire.gov.uk)). He would be informed in advance of the dates for the proposed fieldwork and would be notified in the event of significant findings.

## **4. WORK TIMETABLE**

- 4.1 The phases of work would comprise:

### **4.1.1 *Geophysical Survey***

Two days would be required for the field survey

### **4.1.2 *Evaluation Trenching***

Five days would be required to complete this element

### **4.1.3 *Archive and Reporting***

15 days would be required to complete this element.

- 4.1.4 The project can be undertaken at short notice, subject to the requirements of the client.

---

## ILLUSTRATIONS

---

### FIGURES

Figure 1: Site location

Figure 2: The survey area

Figure 3: The greyscale results of the magnetometer survey

Figure 4: Interpretation of the magnetometer survey data

### PLATES

Plate 1: The general rough pasture terrain of the northern field

Plate 2: The Ordnance Survey first edition 1: 2500 map (1879)

Plate 3: A Google Earth aerial image of the study area