



ADVISORY

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Land at Barlestane Road,
Newbold Verdon

Heritage Statement

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Heritage Statement

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EXECUTIVE SUMMARY

This assessment provides a detailed understanding of the baseline historic environment and the built heritage assets within a 1km study area of the Site and has considered the impacts of the Proposed Development on designated heritage assets, to determine their setting and significance, as well as non-designated assets listed on the Leicestershire and Rutland Historic Environment Record (HER). The assessment was required for an outline planning application for a residential led development, with associated access and infrastructure. The full description of development is 'Outline application for residential development with access details, all other matters reserved'. The Site will be developed for residential development and public open space with associated infrastructure.

The report assesses the significance of any recorded heritage assets within the study area of the Site boundary and assess the potential for archaeological remains to be present within the Site. The assessment also considers any potential impacts on heritage assets and the potential archaeological resource, in line with the requirements of National Planning Policy Framework.

Where residential development is proposed, groundbreaking for foundations and associated infrastructure would have a Major Negative magnitude of impact on any archaeological remains that may be present. The archaeological potential for earlier prehistoric periods through to the medieval period is assessed as Low. Where soft landscaping is proposed the potential impact on any archaeological remains may be less. Tree planting has more potential to impact the archaeological horizon depending on the depth of interventions.

There will be no impact on any built heritage assets within the study area as a result of the Proposed Development due to distance from the Site as confirmed by the ZTV.

The Site has moderate potential for medieval agricultural remains, particularly relict ridge and furrow, though these would be of low importance. The likelihood of medieval settlement remains is low.

A geophysical survey of the Site suggested some anomalies are likely to be the result of historical agricultural processes. Undetermined anomalies, which are likely to have a natural or agricultural interpretation were identified in parts of the Site. The anomalies were classed as undetermined because a firm interpretation was not possible.

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1. INTRODUCTION

- 1.1 BWB Consulting Limited (BWB) was instructed by Wheeldon Bros 1867 Ltd to undertake a Heritage Statement on a site at Land North of Barlestone Road, Newbold Verdon ('the Site'). The outline planning application (24/01061/OUT) is for the erection of up to 67 dwellings with associated landscaping, open space and drainage infrastructure (all matters reserved except for access).
- 1.2 The purpose of the report is to assess the significance of any recorded heritage assets within a 1km study area of the Site boundary and assess the potential for archaeological remains to be present within the Site. The assessment also considers any potential impacts on heritage assets and the potential archaeological resource, in line with the requirements of National Planning Policy Framework (NPPF).¹

Site Location and Topography

- 1.3 The Site is centred approximately on National Grid Reference SK 45111 04019 and comprises agricultural land bordered by hedgerows with Barlestone Road to the south (**Figure 1**). The Site has a small farmstead in the south-west corner with associated farm buildings. To the immediate south is the town of Newbold Verdon. To the north of Barlestone Road, the land is predominantly agricultural (**Appendix 5: Plate 1-5**).

¹ Ministry of Housing, Communities & Local Government, 2012 (as amended 2023), *National Planning Policy Framework*, Chapter 16, paragraph 194.



Figure 1: Site Location

1.4 The datum of the Site slopes to 133m Above Ordnance Datum (AOD) in the north to 135m AOD in the south of the Site.²

Geology and Soils

1.5 According to the online British Geological Survey (BGS) mapping, the underlying bedrock geology across the Site comprises Edwalton Member, while superficial deposits comprise Glaciofluvial Deposits, Mid-Pleistocene with Sand and Gravel inclusions.³ LandIS records the soils as Loamy with naturally high groundwater.⁴

Proposed Development

1.6 The Heritage Statement is for an outline planning application for the erection of up to 67 dwellings with associated landscaping, open space and drainage infrastructure (all matters reserved except for access).

² Free Map Tools, Elevation Finder, <https://www.freemaptools.com/elevation-finder.htm>.
³ British Geological Survey, Geology of Britain Viewer, <https://mapapps.bgs.ac.uk/geologyofbritain/home.html>; LandIS, Soilscape Viewer, <http://www.landis.org.uk/soilscape/>.
⁴ <http://www.landis.org.uk/soilscape/>

1.7 The depth of any basement levels and depth and type of foundations are currently not known. Plans for the Proposed Development are included as **Appendix 1** (CSA/7625/106).

2. PLANNING BACKGROUND

Ancient Monuments and Archaeological Areas Act 1979

2.1 The Ancient Monuments and Archaeological Areas Act, 1979 outlines the provisions for designation, control of works and enforcement measures relating to Scheduled Monuments. The Act consolidates and amends the law relating to ancient monuments; to make provision for the investigation, preservation and recording of matters of archaeological or historical interest and (in connection therewith) for the regulation of operations or activities affecting such matters; to provide for the recovery of grants under section 10 of the Town and Country Planning (Amendment) Act 1972 or under section 4 of the Historic Buildings and Ancient Monuments Act 1953 in certain circumstances; and to provide for grants by the Secretary of State to the Architectural Heritage Fund.

2.2 Section 61(12) defines sites that warrant protection due to their being of national importance as 'ancient monuments'. These can be either scheduled monuments or "any other monument which in the opinion of the Secretary of State is of public interest by reason of the historic, architectural, traditional, artistic or archaeological interest attaching to it". If an ancient monument is scheduled, then it gains additional legal protection.

Planning (Listed Buildings and Conservation Areas) Act 1990

2.3 The Planning (Listed Buildings and Conservation Areas) Act, 1990 outlines the provisions for designation, control of works and enforcement measures relating to Listed Buildings and Conservation Areas. Section 66 of the Act states that, in considering whether to grant planning permission for development which affects a Listed Building or its setting, the local planning authority or, in certain cases, the Secretary of State, shall have special regard to the desirability of preserving the building or its setting, or any features of special architectural or historic interest which it possesses. Section 72 of the Act states that special attention shall be paid to the desirability of preserving or enhancing the character or appearance of Conservation Areas.

National Planning Policy Framework (NPPF)⁵

Chapter 16: Paragraphs 202 to 221

2.4 The NPPF Paragraph 202 states, 'Heritage assets range from sites and buildings of local historic value to those of the highest significance, such as World Heritage Sites which are internationally recognised to be of Outstanding Universal Value. These assets are an irreplaceable resource and should be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations.

⁵ National Planning Policy Framework, Chapter 16.

2.5 Chapter 16, paragraph 203 states that 'Plans should set out a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. This strategy should take into account:

- d) the desirability of sustaining and enhancing the significance of heritage assets, and putting them to viable uses consistent with their conservation;
- e) the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring;
- f) the desirability of new development making a positive contribution to local character and distinctiveness; and
- g) opportunities to draw on the contribution made by the historic environment to the character of a place.'

2.6 Paragraph 205 of the NPPF states that 'Local planning authorities should maintain or have access to a historic environment record. This should contain up-to-date evidence about the historic environment in their area and be used to:

- h) assess the significance of heritage assets and the contribution they make to their environment; and
- i) predict the likelihood that currently unidentified heritage assets, particularly sites of historic and archaeological interest, will be discovered in the future'.

2.7 Paragraph 206 states that 'Local planning authorities should make information about the historic environment, gathered as part of policy-making or development management, publicly accessible'.

2.8 Chapter 16, paragraph 207, of the NPPF states that 'In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation'.

2.9 Paragraphs 208 states that 'Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise. They should take this into account when considering the impact of a proposal on a heritage asset, to avoid or minimise any conflict between the heritage asset's conservation and any aspect of the proposal'.

2.10 Paragraph 210 states that 'in determining applications, local planning authorities should take account of:

- a) the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
- b) the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and
- c) the desirability of new development making a positive contribution to local character and distinctiveness'.

2.11 Paragraph 212 states that 'When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance'.

2.12 Paragraph 213 states that 'any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification. Substantial harm to or loss of:

- a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional;
- b) assets of the highest significance, notably scheduled monuments, protected wreck sites, registered battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional'.

2.13 Paragraph 214 states that 'Where a proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply:

- f) the nature of the heritage asset prevents all reasonable uses of the site; and
- g) no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and
- h) conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and
- i) the harm or loss is outweighed by the benefit of bringing the site back into use'.

2.14 Paragraph 215 states that 'Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use'.

2.15 Paragraph 216 states that 'the effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset'.

2.16 Paragraph 217 states that 'Local planning authorities should not permit the loss of the whole or part of a heritage asset without taking all reasonable steps to ensure the new development will proceed after the loss has occurred'.

2.17 Paragraph 218 states that 'Local planning authorities should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible. However, the ability to record evidence of our past should not be a factor in deciding whether such loss should be permitted'.

2.18 Paragraph 219 states that 'Local planning authorities should look for opportunities for new development within Conservation Areas and World Heritage Sites, and within the setting of heritage assets, to enhance or better reveal their significance. Proposals that preserve those elements of the setting that make a positive contribution to the asset (or which better reveal its significance) should be treated favourably'.

2.19 Paragraph 220 states that 'not all elements of a Conservation Area or World Heritage Site will necessarily contribute to its significance. Loss of a building (or other element) which makes a positive contribution to the significance of the Conservation Area or World Heritage Site should be treated either as substantial harm under paragraph 207 or less than substantial harm under paragraph 208, as appropriate, taking into account the relative significance of the element affected and its contribution to the significance of the Conservation Area or World Heritage Site as a whole'.

2.20 Paragraph 221 states that 'Local planning authorities should assess whether the benefits of a proposal for enabling development, which would otherwise conflict with planning policies but which would secure the future conservation of a heritage asset, outweigh the disbenefits of departing from those policies'

Local Policy

Hinckley and Bosworth Local Plan 2020-2039⁶

2.21 The Site is located within the administrative area of Hinckley and Bosworth. The current adopted Development Plan comprises the Hinckley and Bosworth Local Plan, adopted in 2020. This sets out the overall vision and objectives for 2020 until 2029 and contains the following policy of relevance to heritage:

HE02 Heritage Assets

⁶ Local plan <https://www.bosworthvision.org.uk/wp-content/uploads/sites/124/2022/02/Local-Plan-Reg-19-v5-08.02.22-FINAL.pdf>

2.22 Development proposals affecting heritage assets (both designated and nondesignated) and their settings should recognise and respond to their significance and demonstrate how they conserve or enhance the significance of the asset(s), including any contribution made by their setting where appropriate.

2.23 Designated Heritage Assets

- a) Proposals affecting designated heritage assets and/or their settings should:
 - i. Be sympathetic and complementary to local context, distinctiveness, and character, in terms of the pattern of development and urban grain, building form, siting and layout, building technique(s) and materials, and landscape character;
 - ii. Complement or enhance the historic character of the area through its design with matters including scale, height, density, massing, siting, layout, form, architectural detailing, and high-quality materials;
 - iii. Use landscaping, boundary treatments and surfacing appropriate to the historic setting;
 - iv. Ensure significant views and vistas away from, through, towards and associated with the heritage asset(s) are preserved or enhanced; and
 - v. Consider any further defining characteristics and elements of significance as identified in relevant documents including, but not limited to, the National Heritage List for England (NHLE)59, Conservation Area Appraisals and Management Plans, Heritage Statements, Landscape Character Assessments, and Characterisation Studies.
- b) Any harm to, or loss of, the significance of a designated heritage asset, including from development within its setting, will require clear and compelling justification. c) Proposals that result in substantial harm to or loss of grade II listed buildings should be exceptional and proposals that result in substantial harm to or loss of grade I and II* listed buildings, scheduled monuments, and the Bosworth Battlefield (these being assets of the highest significance) should be wholly exceptional.
 - i. The nature of the heritage asset prevents all reasonable uses of the site;
 - ii. No viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation;
 - iii. Conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and
 - iv. The harm or loss is outweighed by the benefit of bringing the site back into use.

- c) Proposals that result in less than substantial harm to the significance of a designated heritage asset will only be supported where it is demonstrated that the public benefits of the proposal including, where appropriate, securing its optimum viable use, will outweigh any harm identified.

2.24 Non-Designated Heritage Assets

- d) In weighing proposals that directly or indirectly affect a non-designated heritage asset, a balanced judgement will be reached based on the significance of the asset, the scale of any harm identified, and evidence submitted in relation to the proposal.
- e) Proposals that conserve or enhance the significance of a non-designated heritage asset will be supported. For this to be achieved, proposals should be sympathetic to and reflective of the same characteristics identified within criteria 1 of this Policy.

2.25 Heritage Assets at Risk

- f) Proposals involving the viable new use of a heritage asset or temporary use of a heritage asset 'at risk' that conserves its significance will be supported.
- g) Proposals involving enabling development associated with heritage assets 'at risk' will be supported where a clear justification is provided that results in the conservation of the asset and its setting.

3. INFORMATION SOURCES

- 3.1 The following sources of information have been consulted in order to meet the requirements of the assessment and are in line with guidelines laid down by the Chartered Institute for Archaeologists.⁷
- 3.2 Historic England's National Heritage List for England Database was consulted for relevant designated assets within the study area.⁸
- 3.3 Information on previous archaeological finds and investigations within the study area was obtained from a search of the Leicestershire Historic Environment Record (HER) on 2 July 2025.
- 3.4 A review of relevant and available online historic mapping was undertaken using the National Library of Scotland (NLS) Online Map Images.⁹ Other internet sources, including the Historic England Aerial Photo Explorer,¹⁰ Historic England Aerial Archaeology Mapping Explorer¹¹ and Google Earth Pro¹² were also consulted.

Walkover Survey

- 3.5 A site visit was conducted on 10 July 2025. Photographs from the site visit are presented as plates in **Appendix 5 (Plates 1 to 20)** to support the assessment.
- 3.6 The purpose of the site visit was to collate baseline information, assess the setting and significance of designated and non-designated heritage assets and assess any contribution that the Site makes to the setting of designated assets within the study area. It also aimed to identify areas of the Site which may have been disturbed and identify any heritage assets that may not have been catalogued on the HER.

⁷ Chartered Institute for Archaeologists, 2020, *Standard and Guidance for Historic Environment Desk-based Assessment*.

⁸ Historic England, *The National Heritage List for England*, <https://historicengland.org.uk/listing/the-list>.

⁹ National Library of Scotland Map Finder (last accessed September 2025).

¹⁰ Historic England, Aerial Photo Explorer (last accessed September 2025).

¹¹ Historic England Aerial Archaeology Mapping Explorer (Last accessed September 2025).

¹² Google Earth Pro (last accessed September 2025).

4. ASSESSMENT METHODOLOGY

4.1 The NPPF Glossary (NPPF, 2024) defines a heritage asset as “A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. It includes designated heritage assets and assets identified by the local planning authority (including local listing)”.

4.2 The basis for assessing impacts on the historic environment is an understanding of the heritage assets that might be affected by a proposal and evaluating the consequences of change. This process can be broken down into distinct stages as outlined in Principles of Cultural Heritage Impact Assessment in the UK (IEMA/IHBC/CIfA, 2021) and Historic England Advice note 12 (HE 2019). Planning policy and guidance emphasise the need to understand the cultural significance of heritage assets, including their setting, reflecting that the primary purpose is to preserve significance rather than no change. The process of gaining this understanding can be broken down into three distinct stages:

- **Description:** Research leading to a preliminary factual statement that establishes the location, nature and setting of the asset;
- **Cultural significance:** Analysis of what we value about the asset and the contribution made by its setting, leading to a statement of cultural significance. Cultural significance is not scaled but can be expressed in terms of four key ‘heritage interests’ (see **Table 4.1**), and
- **Importance:** A conclusion regarding the level of protection or consideration that the asset merits in planning policy and cultural heritage legislation. A judgement on importance is scaled and can therefore be expressed in terms of the criteria set out within **Table 4.2**.

Table 4.1: Heritage Values

Value	Description
Archaeological	There will be archaeological interest in a heritage asset if it holds, or potentially holds, evidence of past human activity worthy of expert investigation at some point.
Historic	Heritage assets with historic interest provide a material record as well as providing meaning for communities with collective experience and can embody aspects of local and cultural identity
Artistic	Where other human creative skills contribute to the interest of the asset. This can arise directly or fortuitously from an association e.g. depicted in a work of art or literature
Architectural:	Interests in the design of a place. This can arise from conscious design or fortuitously from how the heritage asset has evolved. Architectural interest can lie in the art or science of the design, construction, craftsmanship and decoration of the building or structure

4.3 The attribution of importance (sometimes termed "value") is a measure of the degree to which cultural significance of the asset is sought to be protected. A judgement on importance is scaled and can be attributed in accordance with the criteria set out in below. As well as the criteria providing guidance, professional judgement, regional variation and individual qualities are also considered in all cases to determine the importance of each asset. Not all the component parts of the asset may have the same importance, and this should be discussed where appropriate in the accompanying text.

Table 4.2 Importance of Heritage Assets Criteria

Importance	Examples
Very High	World Heritage Sites; and Places of international importance due to their 'outstanding universal value'.
High	Scheduled Monuments; Grade I or II* Listed Buildings; Grade I or II* Registered Parks and Gardens; Battlefields; Places or structures of national importance; and Non-designated heritage assets of equivalent national importance or potential to contribute significantly to national research objectives.
Medium	Grade II Listed Buildings; Grade II Registered Parks and Gardens; Conservation Areas; and Non-designated assets of regional or high local importance with potential to contribute significantly to regional and local research objectives. This includes assets which have particular regional associations or may have important associations at a local level (e.g., they have significance to local population or embody something of the special identity of a locality).
Low	Locally Listed Buildings; and Non-designated assets which are relatively poorly preserved or have limited importance at a local level and low potential to add to local and regional research objectives.
Negligible	Assets that have very limited or no archaeological, historical or cultural importance.
Uncertain	Sites where there is evidence that a heritage asset may exist, but where there is insufficient information to determine its nature, extent and degree of survival given current knowledge.

4.4 Having understood cultural significance, the next step is to understand the proposed change(s) and the impact they would have on cultural significance. The process of evaluating the consequences of change can be usefully broken down into three distinct analytical stages:

- **Change:** A factual statement of how a proposal would change an asset or its setting including physical, visual appearance, scale, nature and duration;
- **Impact:** An assessment of the degree to which any changes would increase or decrease the cultural significance of an asset. Impact is scaled and the magnitude of impact is a reflection of the extent to which the cultural significance of an asset is changed by a proposal. These impacts may be positive or negative; direct or

indirect; permanent or temporary; and/or cumulative. The impact may also arise at the construction, operation, maintenance or decommissioning phases of a development. The magnitude of impact should take account of mitigation measures which have been embedded within the development proposal as part of the design and optioneering process.

- A judgement of magnitude of impact can be made based criteria set out within **Table 4.3**; and

Table 4.3: Magnitude of Impact

Impact	Criteria
Major Negative	Causes total destruction or change to most key elements of the asset that results in substantial loss of integrity and cultural significance. Comprehensive change to the setting of the asset which is a critical aspect of the asset's cultural significance. Any such change would not normally be reversible.
Moderate Negative	Causes change to, or loss of many key elements which results in a moderate loss of integrity and cultural significance of the asset. Moderate changes to the setting of the asset where this makes an important contribution to the cultural significance of the asset.
Minor Negative	Change to some elements which lead to a limited loss of integrity and cultural significance of the asset. Change to the setting of the asset where this makes a limited contribution to the cultural significance of the asset.
Negligible / No change	No appreciable change to the cultural significance of the asset or its setting.
Minor Positive	Change to some elements which leads to limited improvement in integrity and cultural significance of the asset, or arrests decline. Change to the setting of the asset where this makes a limited contribution to the cultural significance of the asset.
Moderate Positive	Causes change to many key elements which result in a moderate enhancement to integrity and cultural significance of the asset or reverses decline. Moderate changes to the setting of the asset where this makes an important contribution to the cultural significance of the asset.
Major Positive	Causes significant change to most key elements of the asset that results in substantial enhancement of cultural significance. Comprehensive change to the setting of the asset which is a critical aspect of the asset's cultural significance.

- **Effect:** The effect is the measure that brings together the magnitude of the impact and the heritage assets importance. The significance of effect, also referred to as the weighting of the effect, is a conclusion regarding whether an impact matters or not, reflecting the importance of the affected heritage asset. This is a critical stage of the assessment process as this determines the weight that should be given to the matter in either influencing the design of the proposal, or ultimately in the test as to whether the proposal will be acceptable and permitted. The effect can be articulated through the use of a matrix which brings together the importance of an asset and the magnitude of impact on the assets significance (see **Table 4.4**). Where there are two options for a level of effect, it is a matter of professional judgement

which should be articulated in the text description as to the level of effect appropriate. Decisions regarding the acceptability of a proposal will also need to be articulated within the parameters of relevant legislative or policy tests which may use their own specific language and terminology. This assessment considers that major or moderate effects are significant in accordance with standard EIA practice and for the purposes of the EIA regulations.

Table 4.4: Effect Matrix

Importance of Asset	Magnitude of Impact			
	Major	Moderate	Minor	Negligible / No Change
Very High	Very Large	Very Large/Large	Large/Moderate	Slight/Neutral
High	Very Large/Large	Large/Moderate	Moderate/Slight	Slight/Neutral
Medium	Large/Moderate	Moderate	Slight	Neutral
Low	Moderate/Slight	Slight	Slight/Neutral	Neutral

- Following the identification of an effect, additional mitigation measures can be used to offset, reduce or compensate for adverse effects. Following the identification of additional mitigation, the effect can be reassessed to determine the level of residual effect to an asset.

Setting of a Heritage Asset

4.5 The setting of a heritage asset is defined by the NPPF as 'surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral'.¹³

4.6 In determining the impacts on setting, Historic England recommend a staged approach to achieve proportionate decision-taking.¹⁴ The stages recommended are:

- Identify which heritage assets and their settings are affected;
- Assess the degree to which these settings make a contribution to the significance of the heritage asset(s) or allow significance to be appreciated;
- Assess the effects of the proposed development, whether beneficial or harmful, on that significance or on the ability to appreciate it;
- Explore ways to maximise enhancement and avoid or minimise harm; and
- Make and document the decision and monitor outcomes.

¹³ National Planning Policy Framework, Annex 2: Glossary.

¹⁴ Historic England, 2017, *The Setting of Heritage Assets: Historic Environment Good Practice in Planning Note 3 (Second Edition)*.

5. BASELINE ASSESSMENT

5.1 The following outlines the archaeological and historical background of the study area and is compiled from a review of the relevant HER data, as well as available secondary sources that can aid in interpreting the development of the Site and inform the archaeological potential.

5.2 The assessment considers in detail the archaeological baseline within a 1km study area. Tabulated gazetteers summarising pertinent information for individual assets are presented in **Appendix 2 (Tables 1 and 2)**. Within **Appendix 3**, **Figure 2** depicts the locations of designated heritage assets, **Figure 3** depicts the location of non-designated heritage assets, and **Figure 4** depicts previous archaeological events. **Figure 5** depicts the Zone of Theoretical Visibility (ZTV). **Appendix 4** contains the historic maps used during the map regression (**Figures 6 to 9**). **Appendix 5** contains photographs taken during the site visit presented as plates. The results of the geophysical survey are presented as **Appendix 6**.

5.3 Where designated assets are discussed in the text that also correspond to assets on the HER, the relevant NHLE entry number is used.

Designated Heritage Assets

5.4 The study area contains no World Heritage Sites, Registered Battlefields or Registered Parks and Gardens.

5.5 The National Heritage List for England (NHLE) records 13 designated assets within the study area.

5.6 The majority of these are located within the Newbold Verdon Conservation Area principally along Main Street, and was designated by the council in November 1989. Also within the Conservation Area is the Moated Site of the Hall (**1009198**) a Scheduled Monument. The moated area measures 90 x 100m, enclosing a 65 x 65m island on three sides, with the northern arm now infilled. The moat averages 10m in width and is mostly water-filled, with substantial outer banks to the south and west. Excavations in 1981 indicate the northern arm existed when the nearby hall was built around 1680. Finds of medieval roof tile suggest a manor house once stood on the island.

5.7 There is one Grade I Listed Building, Newbold Verdon Hall (**1074089**), a former country house dating to 1700. The remaining ten Listed Buildings are all Grade II Listed.

Newbold Verdon Conservation Area

5.8 The Character Statement within the Newbold Verdon Conservation Area Appraisal¹⁵ states the village developed as a small agricultural village around the Parish Church (**1115785**) and Hall (**1074089**). The settlement spread east along Main Street although the church and hall retained their dominant positions. The Conservation Area can be divided into four distinct areas that are discussed in broad terms below.

¹⁵ Appraisal and management plan | Newbold Verdon Conservation Area | Hinckley & Bosworth Borough Council (last accessed September 2025)

5.9 Newbold Verdon Hall in Grade I Listed (**1074089**) and is one of the key spaces in the Conservation Area. The hall was built around 1680 and is located to the north of a moated site (1009198). The hall is now part of a farm yard complex.

5.10 St James's Church is a Grade II Listed 12th century church that was heavily restored in 1832 and later in 1899. It is constructed in brick and stone in and Early English Style and has a sloping Sussex steeple that was added in 1960. The church yard and graveyard to the rear make an important contribution to the significance of the asset.

5.11 Main Street runs east to west through the Conservation Area and to its west forms the historic core of the village with the appraisal stating that main street itself to the west is the 'heart' of the Conservation Area. Small, two storey terraced cottages face main street to its north and south, with other buildings of interest include Victorian terraced houses and the late 18th century Church Farm, which is Grade II Listed (**1074091**).

5.12 The Old Rectory was built in 1820 and is a Grade II Listed Building that stands in its own grounds behind boundary treatments comprising high brick walls and cast iron gates, and dense tree screening which restrict views of the asset (**1074087**). Standing opposite is the former village school, built in 1874.

5.13 The Conservation Area benefits from no dominant building style and a mixture of ecclesiastical buildings, traditional cottages, larger Victorian houses and more modern dwellings. Red brick in Flemish bond is the predominant building material in the historic core, with other features such as sash windows and Welsh slate roofs being noted in the appraisal.

5.14 The appraisal also discusses factors that have a negative influence of the Conservation Area. This is evident to the east of the Conservation Area at the end of Main Street. This is mainly from later dwellings that are detached from Main Street with a poor relationship due to scale and design. The other threats to the Conservation Area come from unsympathetic minor alterations to historic buildings, such as replacement windows and roof, which have a cumulative, adverse effect. Other documents and plans include the Newbold Verdon Conservation Area Management Plan and the Newbold Verdon Conservation Area Management Plan Long Term Strategy. The Appraisal also has a detailed plan that shows in detail, key spaces, views requiring protection, important trees and other aspects of the Conservation Area that make a contribution to its significance. The appraisal documents are supported by a photographic record of Newbold Verdon.

Archaeological and Historical Background

Prehistoric

5.15 Within the study area there are a series of linear cropmarks approximately 500m south-east from the Site, dating to the Bronze Age along with pit alignments and ring ditches (**MLE2971; MLE2976; MLE3017**). Isolated worked flint sherds were also found south-east of the Fields Farm (**MLE6358**) which is located close to the north-west corner of the Site.

Iron Age and Romano-British

5.16 Iron-Age and Romano-British sites are generally not well represented close to Newbold Verdon, although within the wider area, there is evidence of enclosures (**MLE28979**; **MLE2975**) dating to the Iron Age and several Roman isolated finds, including a kiln and pottery sherds (**MLE2978**).

5.17 A magnetometry survey was carried out north-east of the Site with a subsequent small excavation in 1977. Roman pottery and tile were discovered at the site and the small excavation revealed structural remains and kiln debris, confirming its use as a Roman kiln (**MLE2972**).¹⁶

5.18 Evidence indicates that a substantial amount of the original extensive native woodland had already been cleared by the Late Roman period, with significant clearance likely occurring in the prehistoric era.¹⁷

Early Medieval and Medieval

5.19 Newbold (also recorded as *Niwebold*, *Newbolt*, or *Neubolt*) is mentioned in the Domesday Book¹⁸ as comprising two carucates of land held by Hugh de Grandmesnil and another two carucates held by Huard, a Saxon. The name 'Newbold' likely refers to a 'new building' established on an older site (Nichols, 1971).

5.20 In the 13th century, the village adopted the suffix 'Verdon' (or 'de Verdun') after the manor passed to the Verdun family, likely through marriage. The second Bertram de Verdun died during the Crusades and was buried at Acre; his son Nicholas subsequently presented the first Rector in 1209.

5.21 The historic core of Newbold Verdon (**MLE2992**), the far east extent of which extends into the south-eastern corner of the Site and contains several notable medieval features. These include a moated site (**MLE2984**), a manor house (**MLE2985**), and the Church of St James (**1115770**).

Post-medieval and Modern

5.22 Newbold Verdon's architectural landscape is predominantly shaped by developments from the post-medieval era. A key example is the Old Rectory (**1074087**), constructed in 1820 and later extended at the rear. The property is complemented by its original gates and side screens (**1074088**), which also date to the same year. Another prominent building is the Newbold Verdon Hall (**1074089**; **MLE11733**; **MLE22399**), which originated in the early 18th century and now functions as a farmhouse. The adjacent farm buildings, once ornamental pavilions, are also from the same period (**115785**, **1074090**, **MLE11736**, **MLE22399**), as are the formal gardens (**MLE2988**) which reflect the estate's historical transformation.

5.23 Main Street was the focus for urban development such as road networks and telephone kiosks (**MLE9250**; **MLE26301**; **MLE2974**) and residential development, including, several

¹⁶ Journal: 1976-7. Transactions of the Leicestershire Archaeological and Historical Society, Volume 52. Vol 52 (1977), p100.

¹⁷ Newbold Verdon 2020 Neighbourhood Development Plan

¹⁸ <https://opendomesday.org/place/SK4403/newbold-verdon/>

farmhouses and cottages (**1074091, 1115714, 1361386, 1115715, MLE26300**), schools (**MLS26296; MLE26298**) and chapels (**MLE17226, MLE25603, 1115770**).

5.24 The Newbold Verdon Conservation Area, principally along Main Street was designated in November 1989.¹⁹

5.25 Immediately south of the Site, is Turnpike Road (**MLE21277**) now known as Barlestone Road which separates the town of Newbold Verdon from the agricultural land to the north. Originally in use from 1787, it historically connected Leicester-Welford Road via Desford and continued to Osbaston.

Previous Archaeological Investigations

5.26 The HER records 32 heritage events within the study area. Only events that have the potential to provide relevant information related to the archaeological potential of the Site are discussed. The remaining events are presented within **Appendix 2, Figure 4**.

5.27 In 2025, Phase Site Investigations undertook a geophysical survey of the Site. The survey detected several isolated anomalies which did not appear anthropogenic. Most of the anomalies detected during the survey appeared to result from modern debris, agricultural processes or natural ground variation.²⁰

5.28 In 2023, a geophysical survey²¹ (**ELE12367**) was carried out by Museum of London Archaeology across roughly 16 ha of land situated immediately to the west and north-west of the Site. The survey detected a linear anomaly approximately 32 m long, that was interpreted as part of an enclosure boundary ditch, located in the western portion of the site. Additional anomalies, possibly representing ditches, were identified. Traces of historic agricultural activity, specifically ridge-and-furrow cultivation dating from the medieval to early Post-medieval period, were evident within the survey data.²²

5.29 Within the same area in 1970s, fieldwalking (**ELE2150**) found a Neolithic scraper, several retouched flakes, as well as two Roman and around 35 medieval pottery sherds.

5.30 North-east of the Site, another field walking exercise took place in 1979 (**ELE8090**) which also found 13th century pottery sherds and Post-medieval pottery sherds as well as struck flint flake, reworked flint and a clay pipe bowl.

5.31 During preparatory groundworks for the installation of an all-weather sports pitch at Alan's Way in Newbold Verdon, archaeological monitoring (**ELE6655**) was carried out. The topsoil stripping process revealed no notable archaeological features, and no artefacts were recovered throughout the course of the observation.

¹⁹ Hinckley and Bosworth Borough Council Conservation Area: https://www.hinckley-bosworth.gov.uk/info/511/conservation_areas/340/newbold_verdon_conservation_area

²⁰ Land off Barlestone Road Newbold Verdon Leicestershire Archaeological geophysical survey Project No. 22763

²¹ Unpublished document: Mankelow, Chris. 2023. Archaeological geophysical survey of land off Barlestone Road, Newbold Verdon, Leicestershire.

²² Land off Barlestone Road Newbold Verdon Leicestershire Archaeological geophysical survey Project No. 22763

Cartographic Analysis

5.32 Cartographic depictions of the Site have been used to assess how the Site has developed since the 19th century. The Site boundary has been superimposed on historic maps for ease of interpretation. (Appendix 4, Figures 6 to 9).

5.33 From the First Edition Ordnance Survey (OS) map of 1880 depict the Site as agricultural land enclosed by hedgerows, with a road (**MLE21277**) running along its southern boundary. At that time, the settlement of Newbold Verdon was located to the south and south-west, while the surrounding landscape consisted largely of additional agricultural fields. Immediately north of the Site, a footpath is depicted across several fields as well as a footpath running perpendicular to the Site on the eastern side. Along the road into Newbold Verdon is several unnamed buildings most likely residential dwellings (Figure 6).

5.34 No notable changes to the Site's layout or land use are evident by the 1839 Edition OS map. The surrounding area remains predominantly agricultural, with no significant development or new buildings in the immediate vicinity (Figure 7).

5.35 The 1928 Edition OS map, a small building and enclosure are depicted in the south-west corner of the Site. The area immediately south of the Site had also seen further development, including the addition of a picture theatre and several new buildings. Residential expansion was evident within the Newbold Verdon, with more houses and enlarged garden plots. To the west, new building plots are depicted along Barlestone road (**MLE21277**), reflecting ongoing growth in the area (Figure 8).

5.36 The 1955 Edition OS map, the enclosure around the building within the Site had been extended. Additional residential development had taken place along both Barlestone Road (**MLE21277**), and Hunts Lane, with several new houses and associated gardens now present. Despite these changes, the land north of the Barlestone Road ((**MLE21277**) remained largely agricultural (Figure 9).

Aerial Photographs

5.37 Google Earth Pro contains a number of publicly accessible satellite images of the Site.²³ Recent aerial imagery shows the Site remains primarily agricultural, with a farm building and associated outbuildings enclosed in the south-west corner of the Site. The wider area has experienced substantial residential and urban growth, while the land to the north of the Site continues to be used for agriculture.

5.38 Historic England Aerial Photo Explorer was reviewed but has no available images of the Site.²⁴

Site Visit

5.39 The site visit was conducted in clear conditions. The land to the east of the dwellings, within the arable field, was covered in long grasses at the time of the survey which

²³ Google Earth Pro (last accessed September 2025)

²⁴ <https://historicengland.org.uk/images-books/archive/collections/aerial-photos/>

obscured the ground. The field was generally flat with some undulating areas that coincided with small areas of mixed scrub, possibly indicating some isolated area of disturbed ground (Appendix 5 Plate 1 to Plate 5).

5.40 To the west of the Site, there is a modern brick dwelling with annex that is derelict. To the north of the dwelling, are a small group of outbuildings. These are single storey and hold no heritage interest. They are constructed in modern materials such as concrete blocks, timber panelling and sheet asbestos roofing. The dwelling and outbuilding are within a sub-enclosure of the larger site which is accessed by a driveway from Barlestone Road. To the north of the dwelling there are services and 'manhole' covers. Other services include overhead power lines.

Zone of Theoretical Analysis (ZTV)

5.41 ZTV analysis have been utilised to display the intervisibility between the Site and designated assets (**Appendix 3, Figures 5**). **Figure 5** depicts the theoretical visibility from four points across the Site using an observer height of 9m which is the height of a two storey structure, and the tallest potential buildings put forward with the proposal respectively. The target height has been set at 1.8m to simulate the potential view from an average observer. It should be noted therefore, that where intervisibility is depicted, for example on a rooftop, this illustrates a potential view of a ridgeline viewed from a standing position on that rooftop, and not from the first-floor windows of a designated building for example.

6. ASSESSMENT OF SIGNIFICANCE AND ARCHAEOLOGICAL POTENTIAL

Assessment of Setting

6.1 The setting of the Conservation Area and any contribution to the site makes to that setting was assessed during the site visit. From the Site, there are no views of the Conservation Area and the Site does not form part of a key view or vista identified in the Newbold Verdon Conservation Area Appraisal. Views within the Site extend as far as the dwellings located to the south of Barlestone Road. Views in other directions were screened by the hedgerows that bound the Site.

6.2 The Conservation Area appraisal and its supporting figures and plans provide a detailed assessment of the setting of the Conservation Area, the designated assets within its boundary as well as other important buildings, boundary treatments and views.

6.3 Important assets in the west of the historic core were visited, including St James's Church (**1115785**) (**Appendix 5, Plate 9**) which is located in a prominent, elevated position to the north of Main Street. The graveyard to the north is secluded and is bound by trees on most sides (**Plate 11**). The churchyard provides views towards the Scheduled Monument (**1009198**) which was seen as a small copse of trees from the churchyard (**Plate 10**). Newbold Verdon Hall (**1074089**) was seen from Main Street, with a distant view to the west of the east-facing elevation of the asset (**Plate 13**).

6.4 Facing east, Main Street forms the arterial route through this part of the Conservation Areas historic core. Two further Listed Buildings are present (**132065, 1115770**), although the other non-designated assets also make a significant positive contribution to the character (**Plate 14, Plate 15** and **Plate 17**). Other than The Paddock, this section of Main Street has less side roads branching from it, but in general the amount of through traffic is less than the eastern 'half' of Main Street which has access to the wider area via Dragon Lane and Mill Lane (**Plate 16** and **Plate 18**).

6.5 The eastern part of the Conservation Area has a linear view of Cob Cottage (**1115714**) (**Plate 20**) at which point Main Street curves towards the gateway at the eastern end of the Conservation Area. The appraisal does not identify any key views out of the Conservation Area in the direction of the Site, due to modern development and intervening built form, which screen the Site located approximately 400m to the north-west. None of the other gateways into the Conservation Area share any intervisibility with the Site.

6.6 Ivy Cottage (**1361386**) is the only asset that is located outside the Conservation Area. Located off Main Street, the asset notably stands out from the surrounding modern development due to its timber frame and thatched roof. The setting comprises residential development and the Site makes no contribute to the setting of the asset.

Assessment of Archaeological Potential

6.7 Throughout the 19th and 20th centuries, historic maps consistently depict the Site as agricultural land, enclosed by hedgerows and divided into parcels. Early maps show the

area in active agricultural use, with little change to field boundaries or land use up to the late 19th century. Even as small-scale development began in the early 20th century, such as the appearance of a building and enclosure in the south-west corner, the majority of the Site remained under cultivation. Residential and urban expansion occurred mainly to the south and west, while the land north of the main road (**MLE21277**) retained its agricultural character into the mid-20th century.

- 6.8 Given the agricultural history of the Site, and the lack of historical development, there is a Moderate potential for the presence of medieval cultivation remains within the Site, most likely in the form of relict ridge and furrow and would have Low importance. The potential for medieval settlement-related remains in this area is considered Low.
- 6.9 The geophysical survey carried out by PhaseSI in 2025 has stated the undetermined anomalies are likely to be the result of agricultural processes.
- 6.10 The potential for archaeological remains dating from Prehistoric – Roman period is assessed as Low within the study area. Unstratified artefacts, such as isolated finds, would be of limited significance, as they have been removed from their original archaeological context.
- 6.11 There is a lack of Early-medieval finds within the study area, likely due to the significant residential development that followed in the later medieval period within the town south of Barlestone road.
- 6.12 The Post-medieval period within the study area, comprises assets relating to residential, and urban development. There is some potential for remains dating to the Post-medieval period. However, any remains would also be agricultural in nature such as the continued use of relict cultivation furrows and former field boundaries or drainage. Their importance would be Low.

7. IMPACT ASSESSMENT

7.1 This section will assess the potential impacts of the Proposed Development on the significance of heritage assets and on archaeological remains that may be present within the Site.

Direct Impacts on Recorded Heritage Assets

7.2 The Proposed Development will not directly impact any, currently known designated heritage assets.

Impact on Setting

7.3 A ZTV (**Appendix 3, Figure 5**) has been provided to show the theoretical visibility of the Proposed Development in order to further assess any potential impacts. The ZTV has been set at an observer height of 9m.

7.4 In terms of their importance, the assets within the study area range between High for the Scheduled Moated Site south of the Hall (**1009198**) to Medium for all other designated heritage assets and the Newbold Verdon Conservation Area. Non-designated built heritage assets generally have Low importance, although where these are located with the Conservation Area, and make a positive contribution to its setting and significance, this can increase their importance due to the group value.

7.5 The ZTV confirmed there will be no impact on the setting of Newbold Verdon Conservation Area or any of the designated and non-designated built heritage assets within the study area. The Proposed Development will be screened by intervening built form. The development will be visible in adjacent fields to the west, north and east but these views do not contribute to the setting of any heritage assets within the study area.

7.6 The magnitude of impact on setting as a result of the Proposed Development will be no-change, with the significance of effect assessed as Neutral.

Potential Sub-surface Archaeological Remains

7.7 Intrusive ground investigations and site preparations, including temporary works, excavation and buried service installation, have the potential to impact buried archaeological remains. The impact, where it occurs, will be irreversible. Archaeological features, if present, would be expected to be below the topsoil and sub-soil horizons. Works that require groundworks have the potential to disturb, truncate or remove potential buried archaeological remains.

7.8 The impact on any buried archaeological remains would be on their archaeological interest and can be cumulative. Although the depth of foundations and service infrastructure is unknown, the type of development that is proposed would be expected to truncate the archaeological horizon and impact any archaeological remains if they were present. Where the Site will be developed for residential development (**Appendix 1**), there would likely be a Major Negative magnitude of impact on any archaeological remains in those areas.

7.9 A small section of the Site in the south-west corner has already been subject to development in the form of a dwelling and associated outbuildings, the foundations for which has removed the archaeological potential in this area. The archaeological potential for all periods earlier than the medieval period is Low, based on the assessment of HER data. The archaeological potential increases for remains related to medieval and Post-medieval agricultural regimes, such as relict cultivation furrows and former field boundaries.

7.10 The geophysical survey undertaken on the land within the Site identified some undetermined anomalies which the report stated were likely to be agricultural in origin.

7.11 Remains of agricultural regimes would have Low to Negligible importance. A Major Negative magnitude of impact would have a slight significance of effect at the lower end of that scale.

7.12 The southeastern portion of the site lies on the periphery of the recognised medieval core (**MLE2992**). While this area is acknowledged as being within the broader extent of the historic settlement, there is a direct impact on the portion of the asset which intersects the Site. A review of the available geophysical survey data indicates that there are no significant anomalies within this part of the site that would suggest subsurface features or deposits associated with medieval activity. This supports the interpretation that, although within the wider medieval context, the southeastern area is less likely to contain archaeological remains directly related to the core settlement.

7.13 In terms of harm and NPPF, the impacts of the Proposed Development on archaeological remains are likely to less than substantial at the lower end of the scale

8. CONCLUSION

8.1 The assessment has considered the available and relevant information sources with an aim of determining the presence of archaeological remains within the Site and, where possible, to determine and assess any potential impacts on their significance. To inform the baseline, the assessment has considered relevant HER entries within a 1 km study area, as well as other secondary sources. The assessment has also been informed by a site visit.

8.2 Given the agricultural history of the Site, and the lack of historical development, there is a Moderate potential for the presence of medieval cultivation remains within the Site, most likely in the form of relict ridge and furrow and would have Low importance. The potential for medieval settlement-related remains in this area is considered Low.

8.3 The southeastern part of the site intersects with the edge of the recognised medieval core (**MLE2992**). Although within the broader historic settlement, geophysical survey results show no anomalies indicative of medieval activity. This suggests limited potential for archaeological remains in this area, which lies on the periphery of the core centred around the manor.

8.4 The geophysical survey carried out by PhaseSI in 2025 has stated the undetermined anomalies are likely to be the result of agricultural processes.

8.5 A small portion of the Site, located in the south-west corner, has already been subject to development in the form of a farmstead and associated agricultural buildings. The construction of these structures likely disturbed or removed any underlying archaeological deposits, thereby reducing the archaeological potential in this area. Overall, the archaeological potential across the Site is considered Low for all periods, based on the assessment of HER data. However, the potential increases slightly for remains associated with medieval and post-medieval agricultural practices, such as relict cultivation furrows and former field boundaries.

8.6 In terms of harm and in accordance with the NPPF, the potential impacts on archaeological remains are likely to be less than substantial at the lower end of that scale. Should further information by way of any additional surveys become available, the baseline, significance and impacts section will be updated to reflect the additional information.

8.7 In terms of harm and in accordance with the NPPF, the potential impacts on setting of designated and non-designate heritage assets remains is less than substantial at the lower end of that scale.

9. BIBLIOGRAPHY

Ancient Monuments and Archaeological Areas Act 1979

British Geological Survey, *Geology of Britain Viewer*,
<https://mapapps.bgs.ac.uk/geologyofbritain/home.html>, viewed September 2025.

Chartered Institute for Archaeologists, 2020, *Standard and Guidance for Historic Environment Desk-based Assessment*

English Heritage, 2008, *Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment*

Free Map Tools, *Elevation Finder*, <https://www.freemaptools.com/elevation-finder.htm>, viewed September 2025.

Historic England, *The National Heritage List for England*,
<https://historicengland.org.uk/listing/the-list>, viewed September 2025.

Historic England, 2017, *The Setting of Heritage Assets: Historic Environment Good Practice in Planning Note 3 (Second Edition)*

Historic England, 2019, *Statements of Heritage Significance: Analysing Significance in Heritage Assets (Advice Note 12)*

LandIS, *Soilscapes Viewer*, <http://www.landis.org.uk/soilscapes/>, viewed August 2022

Ministry of Housing, Communities & Local Government, 2012 (as amended 2021), *National Planning Policy Framework*

Planning (Listed Buildings and Conservation Areas) Act 1990

Unpublished document: Manktelow, Chris. 2023. Archaeological geophysical survey of land off Barlestone Road, Newbold Verdon, Leicestershire.

Cartographic Sources

National Library of Scotland, *Map Images*, <https://maps.nls.uk/>, viewed September 2025.

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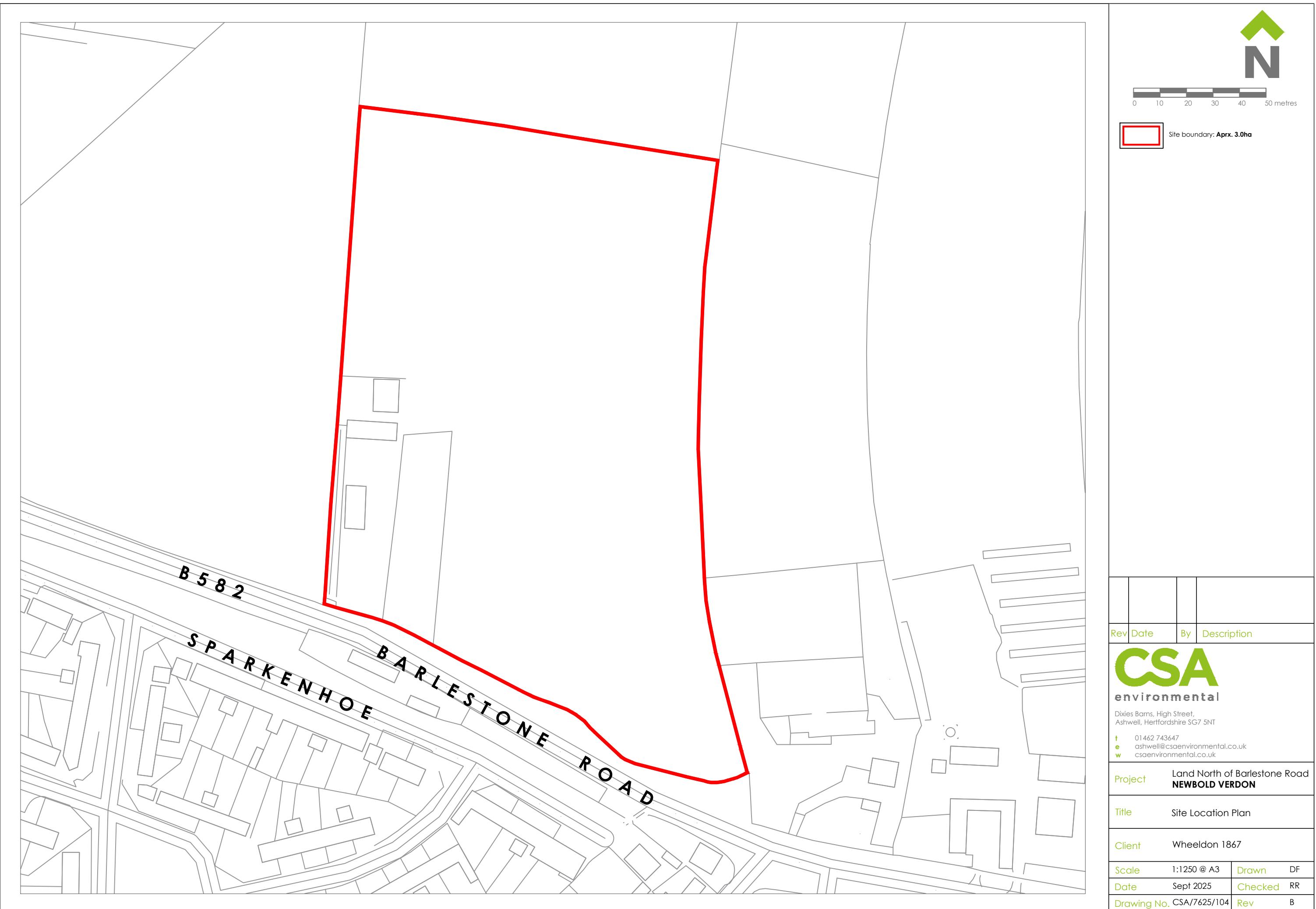
The Historic England GIS Data contained in this material was obtained on [August 2025]. The most publicly available up to date Historic England GIS Data can be obtained from HistoricEngland.org.uk.

APPENDICES

APPENDIX 1: Development Framework Plan and Site Location Plan



0	10	20	30	40	50 metres
N					
	Site boundary: Apx. 3.0ha				
	Developable area: 1.99ha (Up to 67 homes at 33.5 dph)				
	Indicative frontage orientation				
	Childrens play area (LAP)				
	Primary vehicular/pedestrian/cycle access				
	Tree lined primary street with green verge				
	Secondary streets				
	Potential pedestrian link				
	Existing public footpaths				
	Proposed drop curb crossing				
	Toucan crossing proposed by adjacent application (24/01061/OUT)				
	Proposed footway/cycleway				
	Proposed new grassland, wildflower, hedgerow and tree planting				
	Natural play trail features				
	Existing vegetation				
	Sustainable Drainage System (SuDS) basin				
G	28.10.25	DF	Highways updates		
F	27.10.25	DF	Boundary & highways updates		
E	17.10.25	DF	Highways updates		
D	09.10.25	DF	Natural play trail updates		
Rev	Date	By	Description		
CSA	environmental				
Dixies Barns, High Street, Ashwell, Hertfordshire SG7 5NT					
t	01462 743647				
e	ashwell@csaenvironmental.co.uk				
w	csaenvironmental.co.uk				
Project	Land North of Barlestorne Road, NEWBOLD VERDON				
Title	Development Framework Plan				
Client	Wheeldon 1867				
Scale	1:1000 @ A2	Drawn	DF		
Date	August 2025	Checked	RR		
Drawing No.	CSA/7625/106	Rev	G		



APPENDIX 2: Gazetteer of Heritage Assets and Archaeological Events

APPENDIX 1

Catalogue entries for heritage assets and archaeological events recorded on the Historic Environment Record (HER), and those identified as part of this assessment, are provided below. Each entry includes a National Grid Reference (NGR) and the relevant List Entry or HER reference numbers.

Table 1: Gazetteer of Designated Assets

REF (List Entry No./ HER)	NAME	GRID REF	GRADE	DESCRIPTION
1009198	Moated Site South Of The Hall	SK 44184 03751	Scheduled Monument	<p>The moated site at Newbold Verdon is situated on the western edge of the village less than 100m from St James's Church. A post-medieval hall is situated a few metres to the north of the site.</p> <p>The moated area measures 90 x 100m overall and encloses a square island measuring 65 x 65m on the west, south and east sides with an infilled northern arm. The three arms of the moat are an average of 10m wide and are mostly water-filled with the exception of the northern parts of the western and eastern arms. The outer bank on the southern and western sides is up to 1m high and 6-8m wide.</p> <p>A small excavation in 1981 suggested that the northern infilled arm was still in existence when the hall to the north was built for Nathaniel Crew, 3rd Baron Crew of Stene, Bishop of Durham in about 1680. Finds of medieval roof tile indicate the remains of a manor house located within the island.</p>
1074087	The Old Rectory	SK 44500 03756	II	Former rectory now house. c. 1820 with later C19 rear wing, Red brick with pale headers, ashlar dressings, hipped slate roof with overhanging eaves, 4 brick wall stacks. 2 storey 3 bay front with central 6 panelled door, flanked by single glazing bar sashes. The ground floor openings have cambered ashlar lintels with keyblocks. To the first floor are 3 glazing bar sashes to eaves. The 3 bay side front is similar but with central French window. Interior retains stick baluster stair with wreathed handrail and oval skylight with glazed dome above stairwell, Plaster cornices in principal rooms.
1074088	Gates And Side Screens The Old Rectory	SK4448103708	II	Pair of gates, side gates and screens. c. 1820. Cast iron and red brick in Flemish bond, A pair of gates with pierced lozenge flanking piers with ball finials. The gates have plain uprights, lozenge rails and spear head finials. To either side are single matching smaller side gates and screens with plain uprights with spearhead finials, supported on low brick walls.

REF (List Entry No./ HER)	NAME	GRID REF	GRADE	DESCRIPTION
1074089	Newbold Verdon Hall	SK 44217 03817	I	Former country house, now farmhouse. c. 1700 with later C19 addition, and minor C19 and C20 alterations. Built for Nathaniel Crew, 3rd Baron Crew of Stene, Northants, Bishop of Durham from 1674, d. 1721. Red brick in English bond with ashlar dressings, large hipped plain tiled roof with lead dressings and flat top, 4 brick roof stacks with triple shafts and brick cornice. Double pile symmetrical plan of 5 by 3 bays. 2 storeys plus raised basement and attic, stone string courses to ground and first floors, overhanging eaves with moulded wood cornice and lined soffit. All windows have rubbed brick flat arches and projecting stone cills.
1074090	Pavilion At South West Corner Of Forecourt At Newbold Verdon Hall	SK 44234 03785	II	Former pavilion block, now a farm building. c. 1700 with C19 alterations. Red brick, plain tile hipped roof. Nearly identical to and symmetrical with the NW pavilion in the forecourt of Newbold Verdon Hall. Originally a tall 2 storey block except for a 2-storey bay at the north end, but now 2 stores throughout due to inserted C19 floor, also with floored loft in roof space. North and south walls have 2 large high-level windows, and the east and west walls have 3 similar windows, all with rubbed brick flat arches, all now wholly or partly blocked in brick. The north wall has a C19 inserted cart entry with segmental arch cutting into the lower courses of the blocked windows above. The south wall has a pair of inserted, now blocked, windows with timber lintels to each floor, and a window to either side of a central chimney breast which partly survives within on both floors. At the south end of the west wall, an original doorway framed with reused early C17 moulded jamb and lintel stones, now blocked and another blocked inserted doorway in the centre of the wall. Internally, 4 bays with evidence of brick cross partition under north truss, which formerly separated the 2-storey north bay. Evidence of original stairs to loft. Other trusses have stopped chamfered principals exposed below ceiling and cambered collars within the loft; It forms part of an important group with the house and other pavilions in the forecourt.

REF (List Entry No./ HER)	NAME	GRID REF	GRADE	DESCRIPTION
1074091	Church Farmhouse And Fence	SK4438903720	II	Farmhouse and fence. Late C18 enclosing late C17 timber framing, some C19 alterations and early C20 addition. Red brick in Flemish bond, Swithland slate roof having single ridge and gable brick stacks, plain tiles to rear, wrought iron. Lobby entry plan. 2 storey 4 bay front with first floor band and corbelled eaves cornice. Off centre 6 panelled door with bordered over light and narrow hood is flanked by single glazing bar sashes, to right is a single 2 light casement. To first floor are 2 further glazing bar sashes with a 2-light plain casement to right. All windows have segmental brick heads. To right is a lower early C20 service block with plain tiled roof. It has a glazing bar sash to the ground floor and a pair of fixed light windows to the upper. Interior retains a C19 stair and a stopped and chamfered C17 beam in the rear wing. To the front is a C19 wrought iron fence on the street boundary.
1115714	Cob Cottage	SK 44577 03673	II	Cottage. Late C17, altered early C19. Pebbledash render, thatched roof having single brick axial stack. Lobby entry plan. 2 storey irregular 4 bay front, having off centre half glazed door covered by C20 rustic thatched porch with to left 2 glazing bar sashes and to right a single similar window. To first floor are 2 margin light sashes and a small, fixed light. To the left a lower blank narrow addition with slate roof.
1115715	K6 Telephone Kiosk Adjoining Number 49, Main Street	SK4449603701	II	GV II Telephone kiosk. Type K6. Designed 1935 by Sir Giles Gilbert Scott. Made by various contractors. Cast iron. Square kiosk with domed roof. Unperforated crowns to top panels and margin glazing to windows and door.
1115770	Church Of St James	SK 44333 03786	II	Parish Church. C12, C13, C15, 1899 rebuilding by H.C.Goddard of Leicester in a Gothic style, Tower heightened, and spire added in 1960, by L.G.D.Ogden. Randomly coursed Mount Sorrel granite, sandstone ashlar dressings, shingled spire and plain tiled roofs. Western tower, nave, north aisle and chapel, chancel, south porch and vestry. Tower with broach spire, chamfered offset to upper stage, the lower part may be of C12 date. The upper stage has plain 3 lights opening to 3 sides, the spire has a raking 2 light dormer window to each main direction. In the north aisle is a reused 3 light stepped C13 lancet set within a round arch externally. In the north chapel east wall is a reused C15 3 light traceried window thought to be the former east window of the medieval church. All other fenestration dates from the 1899 rebuilding and comprises 2 light windows with ogee heads to the lights and flat headed stone surrounds to the aisle and pointed stone surrounds to the nave. The chancel east window is of 5 lights in a Perpendicular style. The south vestry off the chancel and south porch are both separately gabled and have pointed C19 doorways.

REF (List Entry No./ HER)	NAME	GRID REF	GRADE	DESCRIPTION
1115785	Pavilion At Northwest Corner Of Forecourt At Newbold Verdon Hall	SK 44251 03810	II	Former pavilion block, now a farm building, c. 1700 with C19 alterations, Red brick, plain tile hipped roof. Nearly identical to and symmetrical with the SW pavilion in the forecourt of Newbold Verdon Hall. A tall single storey block except for the 2-storey bay at the south end, which is separated by an internal brick partition. 2 high level windows in the south wall, the west window now a doorway with boarded door approached by a C19 external flight of stone steps on brick support wall, the east window largely blocked in brick, The east wall has 3 similar high level windows, the end windows blocked and the central window now filled with a boarded door, below is an inserted cart entry with steel lintel and to the left a further inserted doorway with segmental arched head. 3 high level windows in the west wall. All original windows have rubbed brick flat arches. At the north end of the west wall an original doorway framed with reused C17 moulded jamb and lintel stones. The north wall is blank but internally retains evidence of a former chimney breast. The internal cross partition has doorways at ground level at either end. The exposed principal beams to the trusses have stopped chamfers. It forms an important group with the house and other pavilions in the forecourt.
1320265	Pavilion At Southeast Corner Of Forecourt At Newbold Verdon Hall	SK 44279 03758	II	Former pavilion block now a farm building. c. 1700 with C19 and C20 alterations. Red brick, plain tile hipped roof with plastered coved eaves cornice probably replacing timber eaves cornice. The southern of a symmetrical pair of pavilions which framed the axial entry to the forecourt of Newbold Verdon Hall. The northern matching pavilion was demolished c.1965. Similar to the SW and NW pavilions, but not as high and longer single storey. In the north wall a central single window with upper part blocked and later window inserted below, 2 similar windows in the south wall, the right hand window completely and the left hand window partly blocked in brick. The west wall has large C20 cart entries at either end replacing earlier openings, a smaller C19 cart entry in the centre with boarded doors and a blocked opening above. A c. 1700 window partly blocked or infilled with a later window to either side of central entry. The west wall is blank except for a central inserted and blocked doorway. Unless altered all c.1700 windows retain rubbed brick flat arched heads. Internally four roof trusses and plaster ceiling with exposed stop chamfered principal beams. It forms part of an important group with the house and other pavilions in the forecourt.

REF (List Entry No./ HER)	NAME	GRID REF	GRADE	DESCRIPTION
1361386	Ivy Cottage	SK4478003739	II	House. C17 altered C19 and C20. Timber framed with colour washed brick panels, thatched roof with single raised brick gable, single bargeboard and 2 red brick gable stacks. T - plan. 2 storey irregular 3 bay front with gable to right. Central C20 door flanked by single 3 light plain casements with segmental brick heads. To first floor are two 2 light plain casements. The main bay posts have straight braces to the tie or wall plate. The C20 brick retail block attached to the right hand side of the building is not included in this description.
	Newbold Verdon		Conservation Area	Newbold Verdon's character assessment is set within the context of national and district character assessments. Newbold Verdon sits on the very southern boundary of National Landscape Area Profiles 71, Leicestershire and Derbyshire Coalfields, described as, ' A gently undulating landscape with features of former mining including tips, clay pits and sprawling mining settlements. Mixed arable and pasture with small fields and low dense hedgerows with few hedgerow trees.

Table 2: Gazetteer of Non-designated Assets

REF (HER)	NAME	GRID REF	PERIOD	DESCRIPTION
MLE10024	Pit/Ditch At Mill Lane, Newbold Verdon	SK 447 039	Unknown	Pit?
MLE11740	K6 Telephone Kiosk, Main Street, Newbold Verdon	SK 444 037	Mid 20th Century to 21st Century	Telephone Box
MLE6358	Worked Flint Found South-East Of The Fields Farm, Newbold Verdon	SK 449 042	Early Bronze Age	Findspot
MLE8376	Undated Pit At Arnold's Crescent, Newbold Verdon	SK 445 034	Unknown	Pit

REF (HER)	NAME	GRID REF	PERIOD	DESCRIPTION
MLE11731	Gates & Side Screens At The Old Rectory, Main Street (North Side), Newbold Verdon	SK 444 037	Late Post-medieval to Modern	Gate
MLE21277	Turnpike Road, Foston Lane To Osbaston	SK 5159 0042	Late Post-medieval	Toll Road
MLE9250	Undated Road Surface, Main Street, Newbold Verdon	Not displayed	Post-medieval	Road
MLE11730	The Old Rectory, 16, Bell Lane (North Side), Newbold Verdon	SK 444 037	Late Post-medieval to Modern	Vicarage
MLE11732	Church Of St. James, Main Street (North Side), Newbold Verdon	SK 443 037	Early Medieval to Modern	Church
MLE11733	Newbold Verdon Hall, Main Street (West Side), Newbold Verdon	SK 442 038	Early Post-medieval to Modern	Country House
MLE11734	Pavilion At Nw Corner Of Forecourt At Newbold Verdon Hall, Main Street (North Side), Newbold Verdon	SK 442 038	Early Post-medieval to Modern	Outbuilding
MLE11735	Pavilion At Sw Corner Of Forecourt At Newbold Verdon Hall, Main Street (South Side), Newbold Verdon	SK 442 037	Early Post-medieval to Modern	Outbuilding

REF (HER)	NAME	GRID REF	PERIOD	DESCRIPTION
MLE11736	Pavilion At Se Corner Of Forecourt At Newbold Verdon Hall, Main Street (South Side), Newbold Verdon	SK 442 037	Early Post-medieval to Modern	Outbuilding
MLE11737	Church Farmhouse & Fence, 16, Main Street (South Side), Newbold Verdon	SK 443 037	Early Post-medieval to Modern	Timber Framed Building; Farmhouse
MLE11738	Cob Cottage, 36, Main Street (South Side), Newbold Verdon	SK 445 036	Early Post-medieval to Modern	House
MLE11739	Ivy Cottage, 92, Main Street (South Side), Newbold Verdon	SK 447 037	Early Post-medieval to Modern	Timber Framed House
MLE17226	Baptist Chapel, Main Street, Newbold Verdon	SK 446 037	Late Post-medieval to Modern	General Baptist Chapel
MLE22398	Site Of Pavilion At North-East Corner Of The Forecourt At Newbold Verdon Hall, Newbold Verdon	SK 4429 0378	Early Post-medieval to Mid-20th Century	Outbuilding
MLE22399	Kitchen Garden, Newbold Verdon Hall, Newbold Verdon	SK 4421 0387	Late Post-medieval	Kitchen Garden
MLE25603	Primitive Methodist Chapel, Main Street, Newbold Verdon	SK 4460 0370	Late Post-medieval to Modern	Primitive Methodist Chapel

REF (HER)	NAME	GRID REF	PERIOD	DESCRIPTION
MLE26296	Former School, 24, Main Street, Newbold Verdon	SK 4445 0368	Late Post-medieval to Modern	School
MLE26298	Primary School, Dragon Lane, Newbold Verdon	SK 4441 0394	Edwardian to 21st Century	Primary School
MLE26300	Miners Welfare Hall, Dragon Lane, Newbold Verdon	SK 4441 0380	Early 20th Century to 21st Century	Trades Union Hall
MLE26301	Newbold Verdon Working Men's Club & Institute Ltd, Main Street, Newbold Verdon	SK 4487 0378	Mid 20th Century to 21st Century	Working Mens Club
MLE26426	C20th Cemetery, St James's Church, Newbold Verdon	SK 4433 0385	Early 20th Century to 21st Century	Cemetery
MLE28979	Possible Iron Age/Roman Enclosure East Of St George's Close, Newbold Verdon	SK 4459 0430	Early Iron Age to Early Roman	Enclosure?
MLE29328	Probable Post-Medieval Quarry North-East Of Newbold Verdon	SK 4533 0443	Unknown	Quarry
MLE2971	Cropmarks East Of Newbold Spinney, Newbold Verdon	SK 458 035	Bronze Age	Pit Alignment; Linear Feature
MLE2972	Roman Site North Of Newbold Spinney, Newbold Verdon	SK 456 041	Roman	Site; Kiln?

REF (HER)	NAME	GRID REF	PERIOD	DESCRIPTION
MLE2974	Newbold Mill, Newbold Verdon	SK 455 039	Early Post-medieval to Late Post-medieval	Post Mill
MLE2975	Possible Iron Age Enclosure North-East Of The Mill Inn, Newbold Verdon	SK 445 031	Iron Age	Rectilinear Enclosure
MLE2976	Pit Alignment South Of Newbold Spinney, Newbold Verdon	SK 452 032	Bronze Age to Late Iron Age	Pit Alignment
MLE2978	Roman Finds From East Of Heath Farm, Newbold Verdon	SK 440 045	Roman	Site?
MLE2984	Moated Site South Of The Hall, Newbold Verdon	SK 441 037	Medieval	Moat
MLE2985	Manor House Site South Of The Hall, Newbold Verdon	SK 441 037	Medieval	Manor House
MLE2988	Newbold Verdon Hall Formal Gardens	SK 438 030	Late Post-medieval	Formal Garden; Tree Avenue; Ornamental Pond; Fishpond
MLE2992	Historic Settlement Core Of Newbold Verdon	SK 446 037	Late Anglo Saxon to Late Post-medieval	Village
MLE3017	Cropmarks North-East Of Kirkby Old Parks, Kirkby Mallory	SK 456 029	Bronze Age to Late Iron Age	Pit Alignment; Linear Feature; Ring Ditch

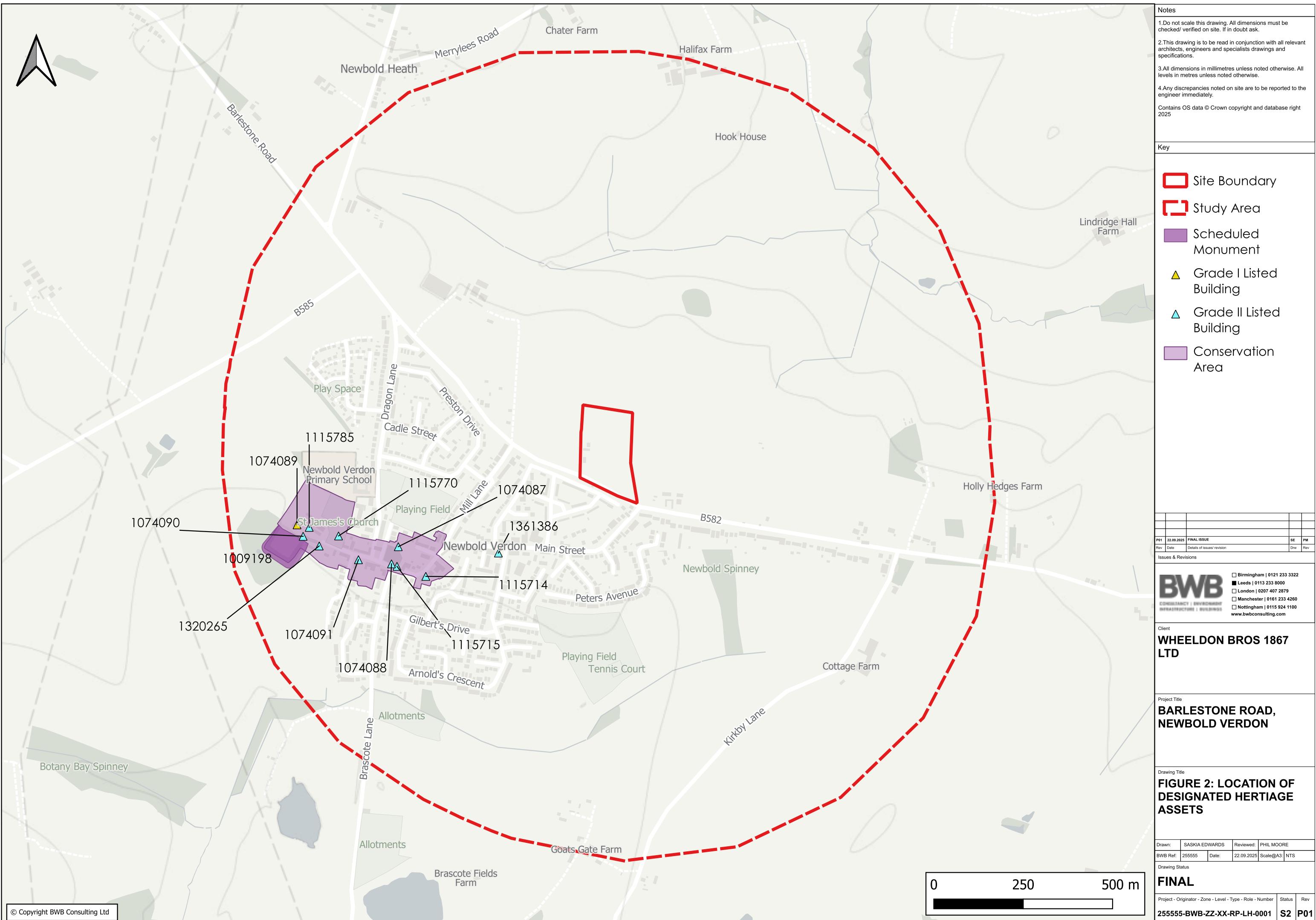
Table 3: Gazetteer of Archaeological Events

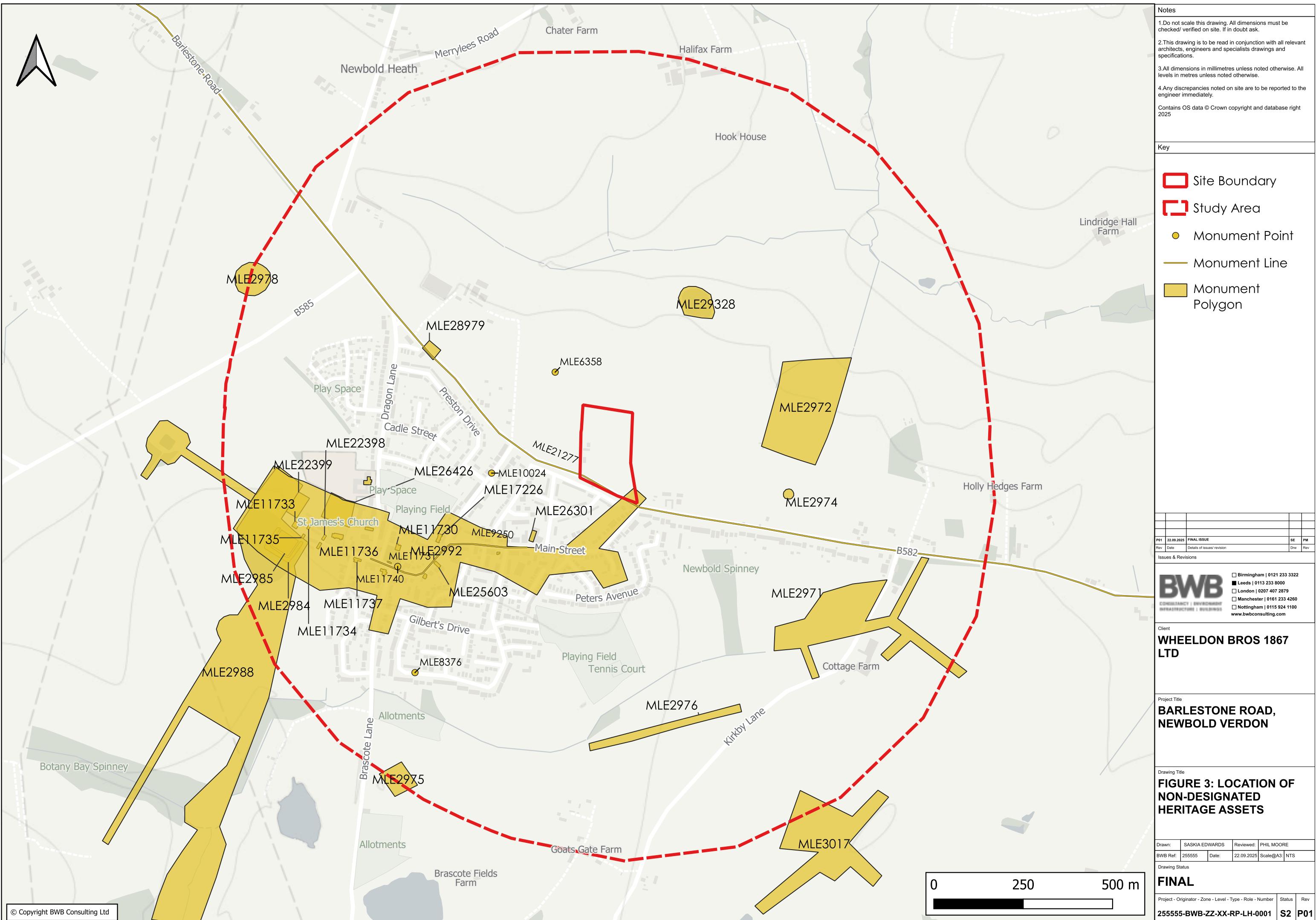
REF (HER)	NAME	GRID REF	DESCRIPTION
ELE2150	Fieldwalking	SK 449 042	1970s fieldwalking, south-east of the George & Dragon, Newbold Verdon
ELE3441	Geophysical Survey	SK 456 041	1980 geophysical survey and excavation north of Newbold Spinney, Newbold Verdon
ELE921	Fieldwalking	SK 456 040	1977 fieldwalking north of Newbold Spinney, Newbold Verdon
ELE922	Fieldwalking	SK 445 031	1978 fieldwalking, north-east of The Mill Inn, Newbold Verdon
ELE924	Fieldwalking	SK 441 045	1979 fieldwalking east of Heath Farm, Newbold Verdon
ELE925	Excavation	SK 441 037	1981 excavation at the moated site at Newbold Verdon
ELE6654	Watching Brief	SK 456 033	2002 watching brief during water main improvements at Newbold Verdon, Leicestershire
ELE6654	Watching Brief	SK 456 033	2002 watching brief during water main improvements at Newbold Verdon, Leicestershire
ELE6654	Watching Brief	SK 456 033	2002 watching brief during water main improvements at Newbold Verdon, Leicestershire
ELE7547	Project Gargoyle	SK 443 037	Project Gargoyle, Church of St James, Main Street, Newbold Verdon
ELE6656	Watching Brief	SK 447 036	1997-8 watching brief during water mains renewal in Newbold Verdon, Leicestershire
ELE10301	Desk-Based Assessment	SK 4407 0258	2015 desk-based assessment, Cadeby Quarry Extension, Brascole
ELE10639	Geophysical Survey	SK 4407 0258	2015 geophysical survey, Cadeby Quarry, Manor Farm Extension
ELE11644	Geophysical Survey	SK 4468 0297	2021 geophysical survey, land off Brascole Lane, Newbold Verdon, Leicestershire
ELE11826	Desk-Based Assessment	SK 4468 0305	2022 desk-based assessment, land off Brascole Lane, Newbold Verdon, Leicestershire

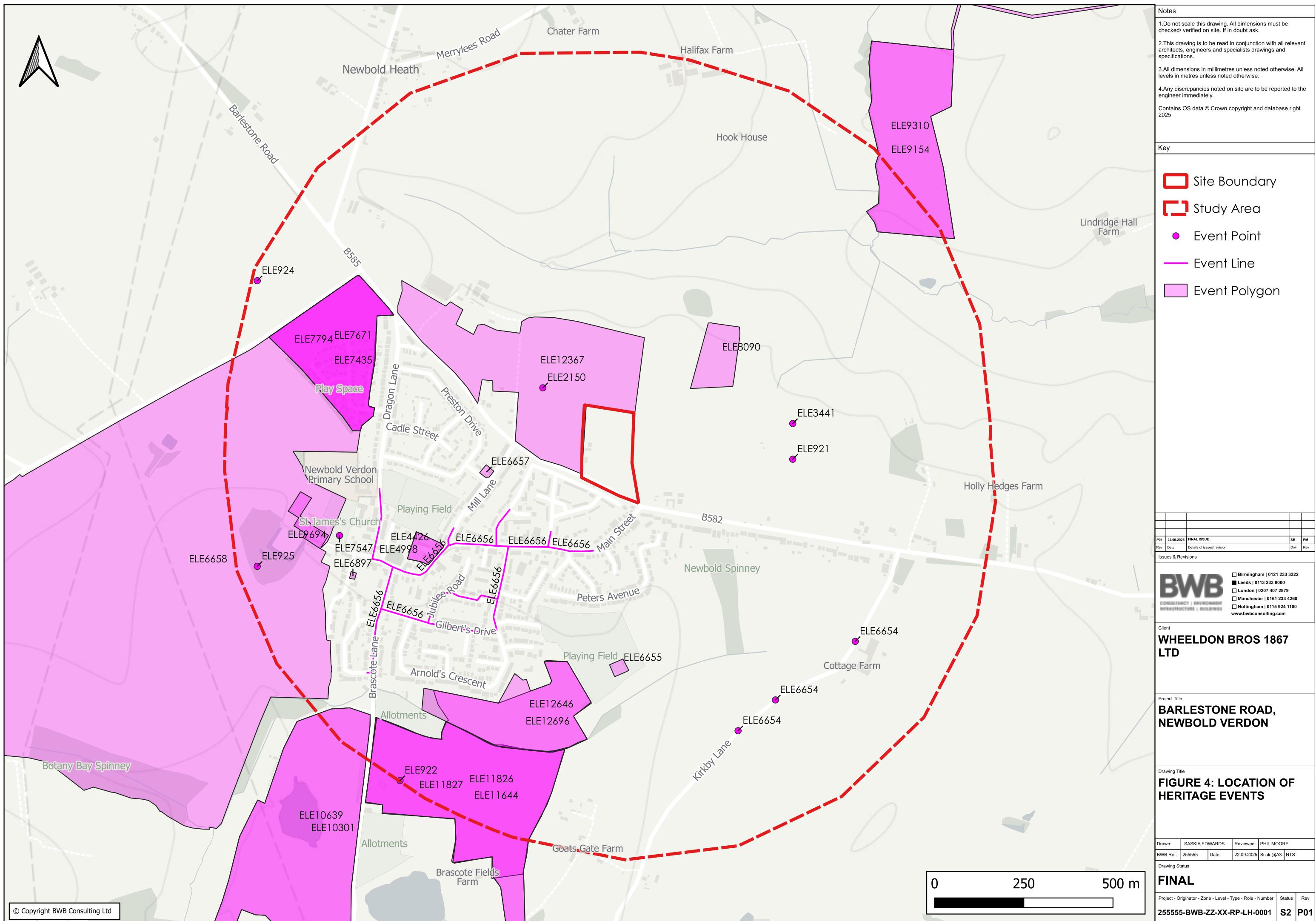
REF (HER)	NAME	GRID REF	DESCRIPTION
ELE11827	Trial Trenching	SK 4468 0297	2022 trial trenching, land at Brascote Lane, Newbold Verdon, Leicestershire
ELE12367	Geophysical Survey	SK 4483 0422	2023 geophysical survey, land off Barlestone Road, Newbold Verdon, Leicestershire
ELE12646	Geophysical Survey	SK 4481 0330	2024 geophysical survey, land at Newbold Verdon, Leicestershire
ELE12696	Heritage Statement	SK 4479 0330	2024 heritage statement, land situated to the east of Brascote Lane and to the south of Arnold's Crescent, Newbold Verdon, Leicestershire
ELE4426	Desk Based Assessment	SK 44571 03751	2006 desk-based assessment on land at the Rectory, Main Street, Newbold Verdon
ELE4998	Trial Trenching	SK 44571 03751	2007 trial trenching at The Rectory, 57, Main Street, Newbold Verdon
ELE6655	Watching Brief	SK 4511 0341	2002 watching brief, Alan's Way, Newbold Verdon, Leicestershire
ELE6657	Watching Brief	SK 447 039	2002 watching brief at Mill Lane, Newbold Verdon, Leicestershire
ELE6658	Archaeological Survey	SK 4358 0373	1994 archaeological survey: Hall Farm, Newbold Verdon
ELE6897	Watching Brief	SK 443 036	2009 watching brief at Church Farmhouse, 16, Main Street, Newbold Verdon
ELE7435	Geophysical Survey	SK 443 042	2011 geophysical survey, Dragon Lane, Newbold Verdon
ELE7671	Trial Trenching	SK 443 042	2011 trial trenching, Dragon Lane, Newbold Verdon
ELE7794	Desk Based Assessment	SK 443 042	2011 desk-based assessment, land at Dragon Lane, Newbold Verdon
ELE8090	Fieldwalking Survey	SK 453 042	1979 fieldwalking survey, north of Wrask Farm
ELE9154	Desk Based Assessment	SK 4604 0517	2014 desk-based assessment, land at Lindridge Farm, Newbold Verdon

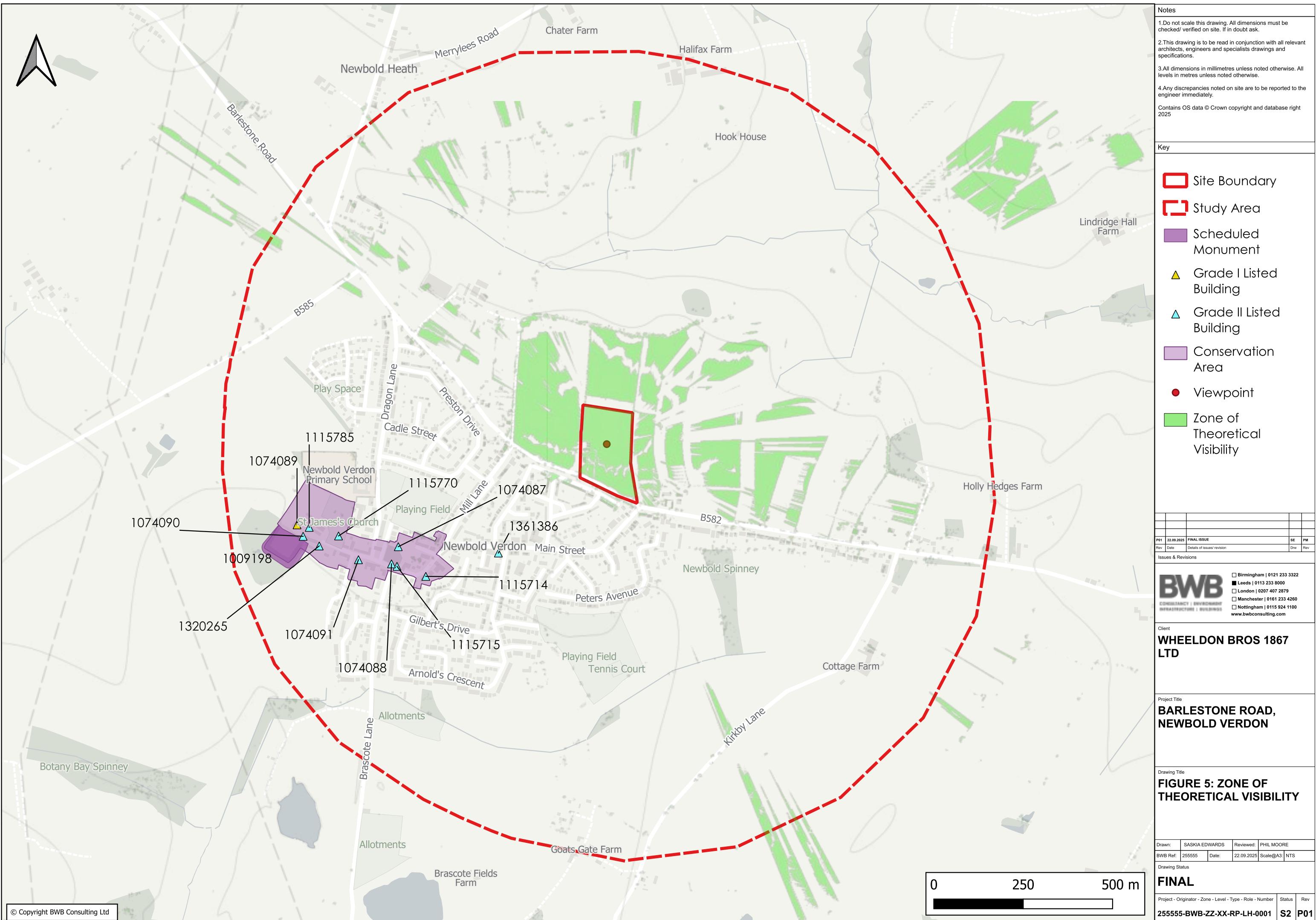
REF (HER)	NAME	GRID REF	DESCRIPTION
ELE9310	Geophysical Survey	SK 4593 0489	2015 geophysical survey, land at Lindridge Farm, Newbold Verdon
ELE9694	Building Survey	SK 4425 0378	2002 building survey of Newbold Verdon Hall

APPENDIX 3: Figures









APPENDIX 4: Map Regression

APPENDIX 4



Figure 6: Leicestershire Sheet XXX.SW. Surveyed: 1885, Published: 1885. Reproduced with the permission of the National Library of Scotland.



Figure 7: Parish of Little Dawley Tithe Map, Published: 1839. Reproduced with the permission of the Genealogist.



Figure 8: Leicestershire Sheet XXX.SW. Surveyed: 1928. Published, 1931. Reproduced with the permission of the National Library of Scotland.



Figure 9: SK40SE - A. Surveyed: 1930. Published, 1955. Reproduced with the permission of the National Library of Scotland.

APPENDIX 5: Plates



Plate 1: View of the Site facing north-west



Plate 2: View of the Site facing south-east



Plate 3: View of the Site and outbuilding facing south



Plate 4: View from south-east corner of the Site facing west



Plate 5: View from the south of the Site facing north



Plate 6: View of the dwelling facing south-west



Plate 7: View of dwelling, outbuildings and driveway facing south



Plate 8: View for dwelling and outbuildings and driveway facing north



Plate 9: View of Grade II Listed Church of St James (1115785) facing west



Plate 10: View in the direction the Scheduled Monument (1009198)



Plate 11: View of graveyard to the rear if Church of St James (1115785)



Plate 12: View from west end of Main Street facing east within the Conservation Area



Plate 13: View towards Grade 1 Listed Newbold Verdon Hall (1074089), facing east



Plate 14: View facing east along Main Street in Newbold Verdon Conservation Area



Plate 15: View facing east along Main Street in Newbold Verdon Conservation Area



Plate 16: View from the Junction of Dragon Lane and Main Street facing east



Plate 17: View of Main Street facing west



Plate 18: View of Main street facing east



Plate 19: View of Newbold Verdon facing Brascote Lane and former village school



Plate 20: View of Grade II Listed (1115714) toward western Conservation Area gateway

APPENDIX 6: Geophysical Survey Report



PHASE
SITE INVESTIGATIONS

**Land off Barlestone Road
Newbold Verdon
Leicestershire**

**Archaeological geophysical survey
Project No. 22763**

August 2025

Land off Barlestone Road

Newbold Verdon

Leicestershire

Archaeological geophysical survey

Project No. 22763

Report prepared by		Report checked by	
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Date	26/08/25	Date	26/08/25

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1. SUMMARY

Phase Site Investigations Ltd was commissioned to carry out a magnetic gradient survey at a site at land off Barlestone Road, Newbold Verdon, Leicestershire. The aim of the survey was to help establish the presence / absence, extent, character, relationships and date (as far as circumstances and the inherent limitations of the technique permits) of archaeological features within the survey area.

The survey was undertaken using a Phase Site Investigations Ltd multi-sensor array cart system (MACS). The MACS comprised 8 Foerster 4.032 Ferex CON 650 gradiometers with a control unit and data logger. The MACS data was collected on profiles spaced 0.5 m apart with readings taken at between 0.1 and 0.15 m intervals.

The majority of the anomalies identified by this survey relate to modern material / objects, agricultural activity (including possible ridge and furrow) and possible natural variations / features.

There are a number of anomalies of uncertain origin. Some anomalies may be related to sub-surface features but the responses are too weak to reliably interpret and it is likely that the majority of them are associated with agricultural activity or natural features / variations.

2. INTRODUCTION

2.1 Overview

Phase Site Investigations Ltd was commissioned by BWB Consulting Ltd to carry out an archaeological geophysical survey at a site at land off Barlestone Road, Newbold Verdon, Leicestershire, utilising magnetic gradiometers.

The aim of the survey was to help establish the presence / absence, extent, character, relationships and date (as far as circumstances and the inherent limitations of the technique permits) of archaeological features within the survey area.

The location of the site is shown in drawing 22763_01.

2.2 Site description

The site is situated at land north of Barlestone Road, Newbold Verdon, Leicestershire (approximate centre at NGR SK 451 040), approximately 13 km to the west of Leicester and covered an area of approximately 3 ha.

The site encompassed one harrowed arable field, one rough pasture field and gardens and hardstanding ground around a residential property. The ground was relatively level and bounded by a combination of hedgerows and wire fencing. Three overhead cable posts were present within the arable field.

The geology of the site consists of mudstone of the Edwalton Member Formation overlain by sand and gravel glaciofluvial deposits (British Geological Survey, 2025).

2.3 Archaeological background

An archaeological / heritage desk-based assessment, or other archaeological background information, was not available at the time of writing this report, although it is understood that one is *in prep*.

An online assessment of historic maps (maps.nls.uk, 2025) indicates that the site has been in use for agriculture since before 1885.

2.4 Scope of work

The survey area was specified by the client.

The area around the residential property was not suitable / accessible for survey and this, coupled dense vegetation adjacent to field boundaries, meant that the area accessible / suitable for survey was reduced to approximately 2.3 ha.

No other problems were encountered during the survey which was carried out on 24 July 2025.

3. SURVEY METHODOLOGY

3.1 Magnetic survey

The survey was undertaken using a Phase Site Investigations Ltd multi-sensor array cart system (MACS).

The MACS comprised 8 Foerster 4.032 Ferex CON 650 gradiometers with a control unit and data logger. The Foerster gradiometers do not require balancing as each sensor is automatically 'zeroed' using the control unit software.

The MACS utilises an RTK GNSS system which means that survey grids do not have to be established. Instead an area is surveyed over a series of continuous profiles and the position of each data point is recorded using an RTK GNSS system. The sensors have a separation of 0.5 m which means that data was collected on profiles spaced at 0.5 m apart. Readings were taken at between 0.1 m and 0.15 m intervals.

Data is collected on zig-zag profiles along the full length or width of a field, although fields can be sub-divided if they are particularly large. Marker canes are set-out along field boundaries at set intervals and these are used to align the profiles. The survey profiles are usually offset from field boundaries, buildings and other metallic features by several metres to reduce the detrimental effect that these surface magnetic features have on the data. The location of the MACS data is converted direct to Ordnance Survey co-ordinates using the UK OSTN15 projection. As the survey is referenced direct to Ordnance Survey National Grid co-ordinates temporary survey stations are not established.

3.2 Data processing and presentation

The MACS data was stored direct to a laptop using in-house software which automatically corrects for instrument drift and calculates a mean value for each profile. A positional value is assigned to each data point based on the sensor number and recorded GNSS co-ordinates. The data is gridded using in-house software and parameters are set based on the sensor spacing and mean values. No additional processing is required. The gridded data is then displayed in Surfer 9 (Golden Software) and image files of the data are created.

The data was exported as greyscale raster images (PNG files). Data for the entire site is presented at a scale of 1:2000 (clipped at -2 nT to 3 nT - which is a 'standard' range for archaeological magnetic data) and a plot at a narrow range (-1 nT to 2 nT) with an accompanying interpretation shown at a scale of 1:1250. Greyscale plots have been 'smoothed' using a visual interpolation but the data itself has not been interpolated.

The data has been displayed relative to a digital Ordnance Survey base plan provided by the client as drawing '*BW1-01232983.dwg*'. The base plan was in the Ordnance Survey National Grid co-ordinate system and as the survey grids / data were referenced directly to National Grid co-ordinates the data could be simply superimposed onto the base plan in the correct position.

X-Y trace plots were examined for all of the data and overlain onto the greyscale plot to assist in the interpretation, primarily to help identify dipolar and bipolar responses that will probably be associated with surface / near-surface iron objects. However, X-Y trace plots have not been presented here as they do not show any additional anomalies that are not visible in the greyscale data. A digital drawing showing the X-Y trace plot overlain on the greyscale plot is provided in the digital archive.

All isolated responses have been assessed using a combination of greyscale and X-Y trace plots. There are a large number of small / relatively weak isolated dipolar and bipolar anomalies present in the data. There is no evidence to suggest that they are associated with archaeological features and so the majority of these have not been shown in the interpretation. Several larger / stronger isolated bipolar anomalies have been shown but these are also not thought to be archaeologically significant.

Anomalies associated with agricultural regimes are present in the data but each individual anomaly has not been shown on the interpretation. Instead the general orientation of the regime is indicated.

The data was examined over several different ranges during the interpretation to ensure that the maximum information possible was obtained from the data.

The anomalies have been categorised based on the type of response that they exhibit and an interpretation as to the cause(s) or possible cause(s) of each anomaly type is also provided.

A general discussion of the anomalies is provided for the entire site. A discussion of the general categories of anomaly which have been identified by the survey is provided in Appendix 1.5.

The geophysical interpretation drawing must be used in conjunction with the relevant results section and appendices of this report.

4. RESULTS

4.1 General

The data quality across the majority of the survey area is very good allowing the data to be viewed at a narrow range of readings to better identify weak anomalies.

There are a large number of isolated responses across the site, the majority, if not all, of which will relate to modern material.

The categories of anomaly, and their possible causes, which have been identified by the survey are discussed in detail below.

4.1.1 Linear / curvi-linear trends – uncertain cause

A number of weak, diffuse and / or fragmented linear / curvi-linear **trends** have been identified. These are all too weak reliably interpret. It is possible that some trends could be associated with sub-surface features but the majority are probably related to agricultural, or other modern, activity or natural features / variations.

Anomalies A appear to run oblique to the obvious agricultural regime and could be related to parts of sub-surface features but this interpretation is very tentative, due to the weakness of the responses, and they could be related to agricultural activity or natural variations.

Anomalies B are broadly parallel with each other and could be related to agricultural activity but it is possible that some could have a different cause.

In the south-east of the site there are several diffuse trends (**Anomalies C**), which may form a regular pattern. However, it is also possible that these anomalies are a combination of agricultural activity and responses from adjacent ferrous features.

4.1.2 Isolated positive responses

There are several **isolated positive responses** across the survey area, some of which are relatively large or strong. This type of anomaly can have a variety of causes including natural features / variations, deeper buried ferrous or fired material, accumulations of topsoil related to agricultural activity, infilled features or areas of burning. At this site it is possible that some of the isolated positive responses are caused by infilled discrete features but there is no obvious pattern or relationship to their distribution that would indicate an archaeological origin and it is considered more likely that they are caused by buried relatively modern, ferrous or fired material or natural variations.

4.1.3 Linear / curvi-linear anomalies and trends – agricultural features / activity

There are several series of **broadly parallel positive linear anomalies** that are associated with possible ridge and furrow or relatively modern agricultural ploughing regimes.

4.1.4 Areas of magnetic disturbance and very strong responses – modern features / activity / material

Areas of **magnetic disturbance** are present. These are areas of strong bipolar and dipolar responses and are usually associated with concentrations of relatively modern magnetic material. In this case they are not considered to be archaeologically significant.

The very strong responses around the perimeter of the survey area are associated with adjacent strongly magnetic modern features. Other strong responses are present related to strongly magnetic (probably modern) features within the survey area. The extents of the areas with strong responses are usually shown as a **limit of very strong response**. It should

be noted that this effect extends beyond the feature and so the limit of the response does not correspond to the actual size or location of the feature within it.

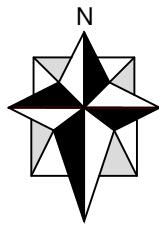
4.1.5 **Isolated dipolar and bipolar responses – probable modern features / activity / material**

There are numerous **isolated dipolar** responses (iron spikes) across the survey area. These contain a strong positive and negative component and are indicative of ferrous or fired material on or near to the surface. **Isolated bipolar** responses are also present. These have strong positive and negative components but are not technically magnetic dipoles. They tend to be caused by ferrous or fired material on or near to the surface and are usually produced from larger, or more strongly magnetic, objects (compared to dipolar anomalies) or a concentration of strongly magnetic smaller objects. In the large majority of cases these two types of isolated responses will be caused by modern material. Selected larger / stronger isolated dipolar and bipolar responses have been shown on the interpretation as these could be associated with more substantial sub-surface features or material (although in this instance they are not thought to be of archaeological interest).

5. DISCUSSION AND CONCLUSIONS

The majority of the anomalies identified by this survey relate to modern material / objects, agricultural activity (including possible ridge and furrow) and possible natural variations / features.

There are a number of anomalies of uncertain origin. Some anomalies may be related to sub-surface features but the responses are too weak to reliably interpret and it is likely that the majority of them are associated with agricultural activity or natural features / variations.



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SK

44

45

46

SCALE

0m 500m 1000m



SITE LOCATION

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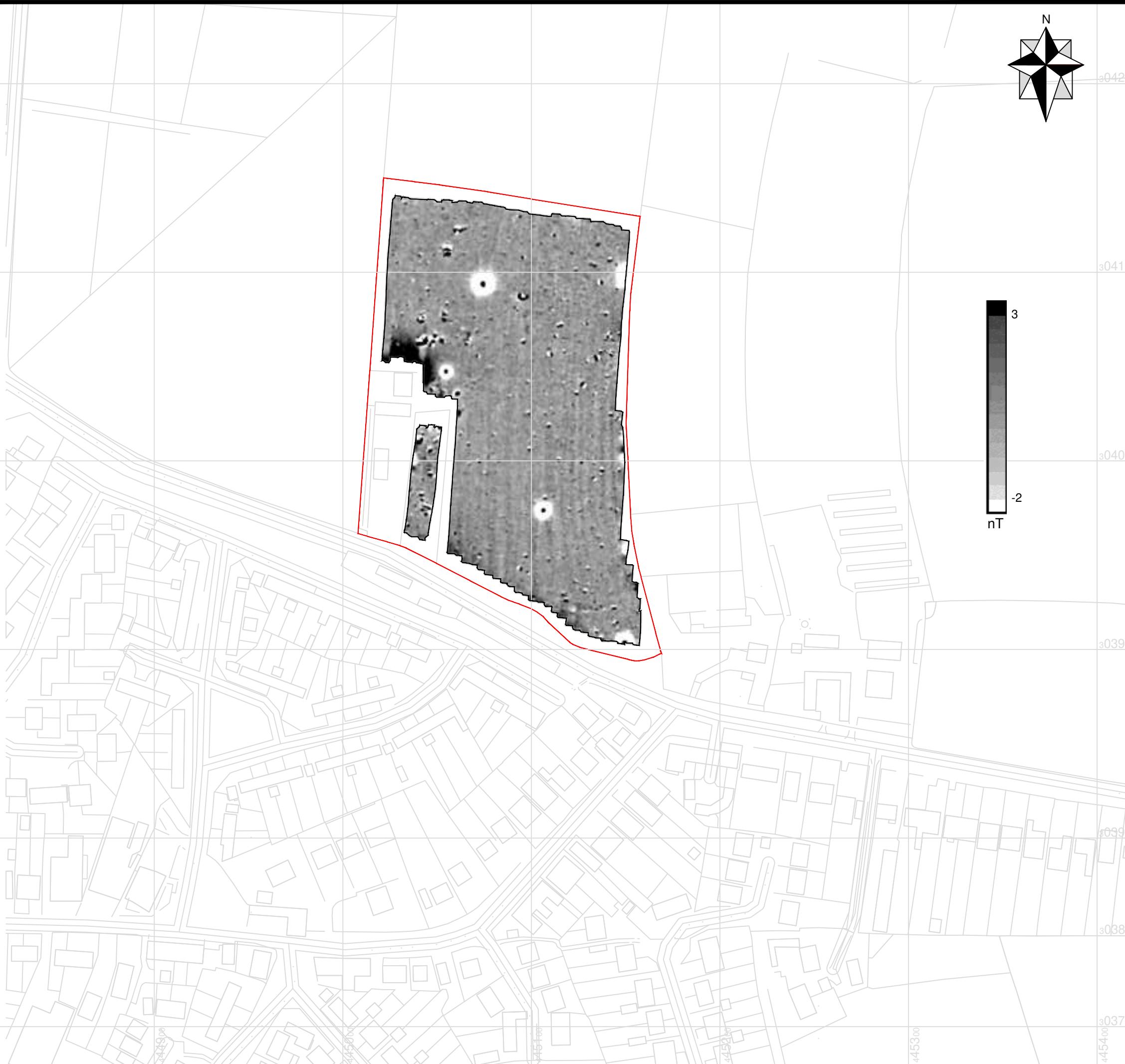


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Scale [A4 Sheet]	Drawing	Status
AS SHOWN	22763_01	FINAL
Client		
BWB CONSULTING LTD LEEDS		
Site		
LAND OFF BARLESTONE ROAD NEWBOLD VERDON LEICESTERSHIRE		
Title		
SITE LOCATION MAP		
Job No		
22763		
		Drawn
		ML
Chk.	MW	Date
		31/07/2025



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1:2000				FINAL

Client

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LEEDS

Site

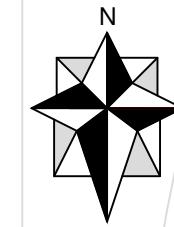
LAND OFF BARLESTONE ROAD
NEWBOLD VERDON
LEICESTERSHIRE

Title

LOCATION OF SITE SHOWING
MAGNETIC GRADIENT DATA
('STANDARD' RANGE)

22763

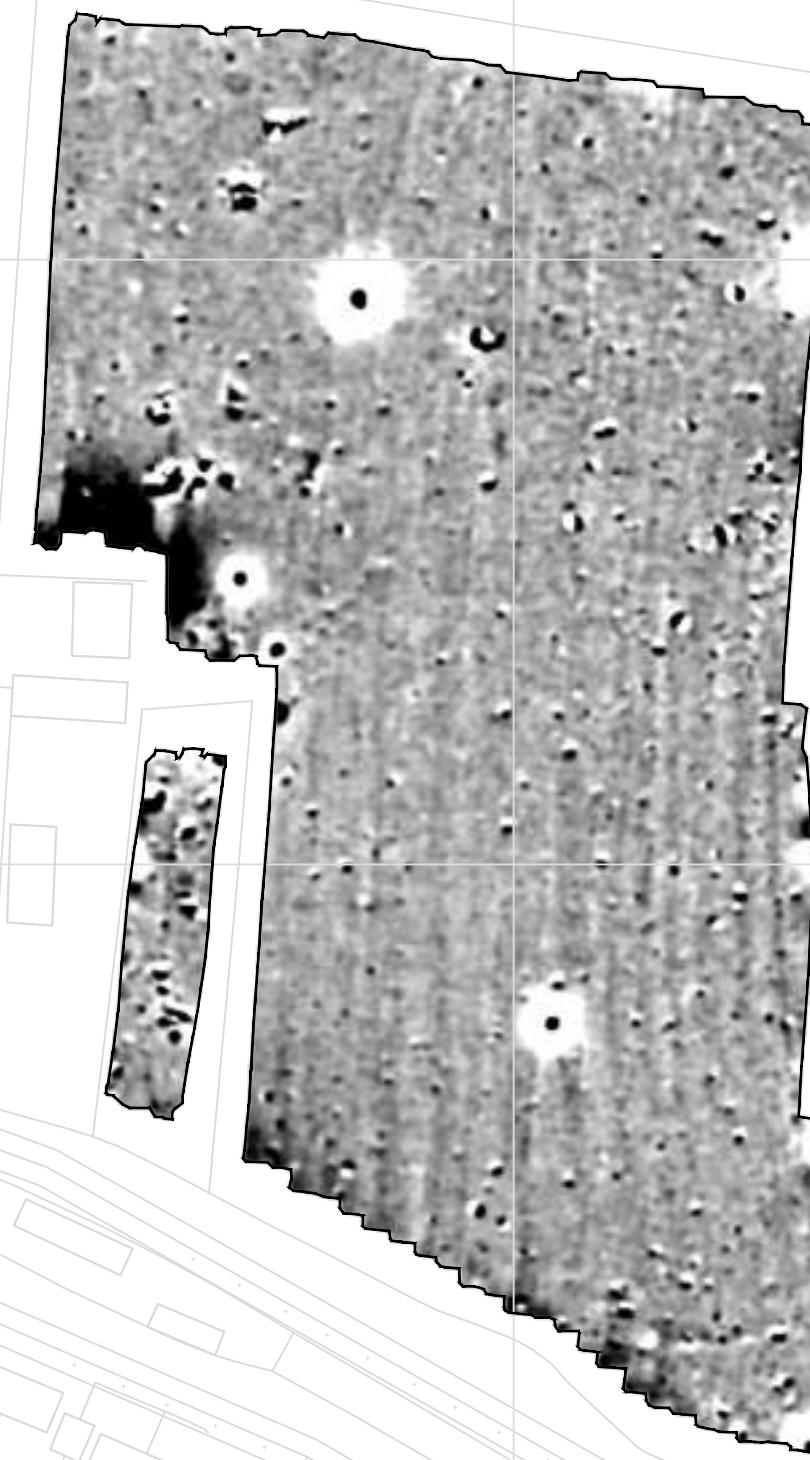
Surveyed	ML, MP	Drawn	MW
Chk.	NF	Date	24/07/2025



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1:1250				FINAL

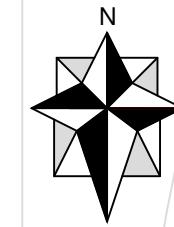
Client
BWB CONSULTING LTD
LEEDS

Site
LAND OFF BARLESTONE ROAD
NEWBOLD VERDON
LEICESTERSHIRE

Title
MAGNETIC GRADIENT DATA
(NARROW RANGE)

22763

Surveyed	ML, MP	Drawn	JW
Chk.	NF	Date	24/07/2025



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Scale [A3 Sheet] Drawing 22763_04 Status FINAL

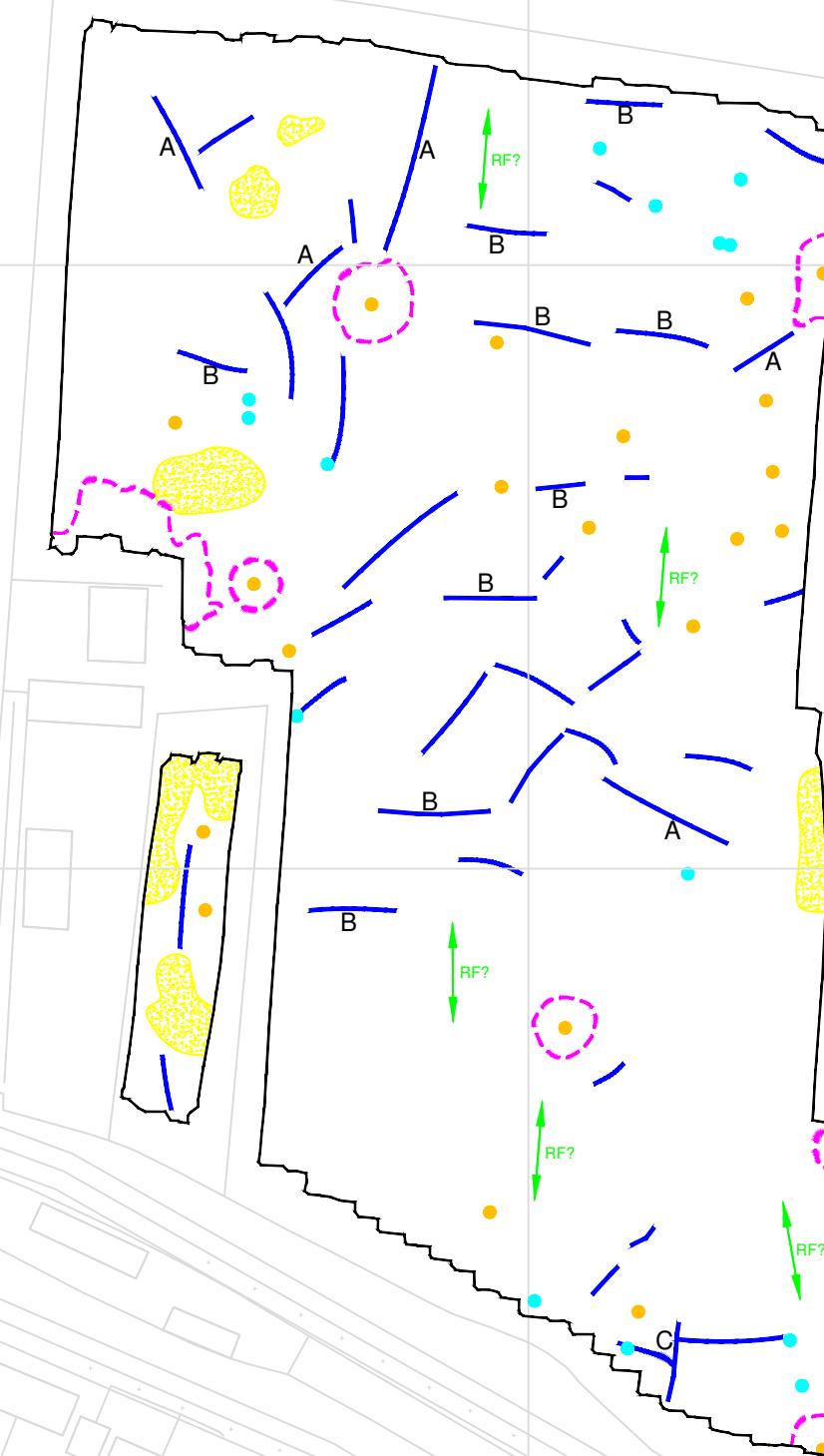
Client BWB CONSULTING LTD LEEDS

Site LAND OFF BARLESTONE ROAD
NEWBOLD VERDON
LEICESTERSHIRE

Title INTERPRETATION OF
MAGNETIC GRADIENT DATA

22763

Surveyed	ML, MP	Drawn	JW
Chk.	NF, MW	Date	24/07/2025



ANOMALY TYPE	INTERPRETATION
LINEAR / CURVI-LINEAR TREND (WEAK / DIFFUSE / FRAGMENTED RESPONSE)	UNCERTAIN ORIGIN. POSSIBLE AGRICULTURAL OR OTHER MODERN FEATURE. BUT COULD BE NATURAL OR REMNANT OF OTHER INFILLED FEATURE
ISOLATED POSITIVE RESPONSE	PROBABLE BURIED MODERN FERROUS / FIRED MATERIAL OR NATURAL VARIATION. BUT SOME COULD BE RELATED TO SUB-SURFACE FEATURES
APPROXIMATE ORIENTATION OF WEAK, BROADLY PARALLEL POSITIVE LINES	AGRICULTURAL ACTIVITY. POSSIBLE REMNANTS OF RIDGE AND FURROW BUT COULD BE RELATED TO LATER AGRICULTURAL ACTIVITY
AREA OF STRONG DIPOLEAR / BIPOLAR RESPONSES (MAGNETIC DISTURBANCE)	SURFACE / NEAR-SURFACE FERROUS OR FIRED MATERIAL (PROBABLE MODERN)
LIMIT OF VERY STRONG RESPONSE	INTERFERENCE CAUSED BY MODERN MAGNETIC FEATURE (FEATURE MAY BE LOCATED BEYOND THE SURVEY AREA)
ISOLATED BIPOLAR / DIPOLEAR RESPONSE	SURFACE / NEAR-SURFACE FERROUS OR FIRED MATERIAL (PROBABLE MODERN)

REFERENCES

British Geological Survey, 2025, online resource - www.bgs.ac.uk
National Library of Scotland, 2025, online resource - maps.nls.uk

APPENDIX 1

Magnetic survey: technical information

1.1 Theoretical background

- 1.1.1 Magnetic instruments measure the value of the Earth's magnetic field; the units of which are nanoTeslas (nT). The presence of surface and sub-surface features can cause variations or anomalies in this magnetic field. The strength of the anomaly is dependent on the magnetic properties of a feature and the material that surrounds it. The two magnetic properties that are of most interest are magnetic susceptibility and thermoremnant magnetism.
- 1.1.2 Magnetic susceptibility indicates the amount of ferrous (iron) minerals that are present. These can be redistributed or changed (enhanced) by human activity. If enhanced material subsequently fills in features such as pits or ditches then these can produce localised increases in magnetic responses (anomalies) which can be detected by a magnetic gradiometer even when the features are buried under additional soil cover.
- 1.1.3 In general, it is the contrast between the magnetic susceptibility of deposits filling cut features, such as ditches or pits, and the magnetic susceptibility of topsoils, subsoils and rocks into which these features have been cut which causes the most recognisable responses. This is primarily because there is a tendency for magnetic ferrous compounds to become concentrated in the topsoil, thereby making it more magnetic than the subsoil or the bedrock. Linear features cut into the subsoil or geology, such as ditches, that have been silted up or have been backfilled with topsoil will therefore usually produce a positive magnetic response relative to the background soil levels. Discrete feature, such as pits, can also be detected. Less magnetic material such as masonry or plastic service pipes which intrude into the topsoil may give a negative magnetic response relative to the background level. The strength of magnetic responses that a feature will produce will depend on the background magnetic susceptibility, how rapidly the feature has been infilled, the level and type of human activity in the area and the size and depth of a feature. Not all infilled features can be detected and natural variations can also produce localised positive and negative anomalies.
- 1.1.4 Thermoremnant magnetism indicates the amount of magnetism inherent in an object as a result of heating. Material that has been heated to a high temperature (fired), such as brick, can acquire strong magnetic properties and so although they may not appear to have a high iron content they can produce strong magnetic anomalies
- 1.1.5 The magnetic survey method is highly sensitive to interference from surface and near-surface magnetic 'contaminants'. Surface features such as metallic fencing, reinforced concrete, buildings or walls all have very strong magnetic signatures that can dominate readings collected adjacent to them. Identification of anomalies caused by sub-surface features is therefore more difficult, or even impossible, in the vicinity of surface magnetic features. The presence of made ground also has a detrimental effect on the magnetic data quality as this usually contains magnetic material in the form of metallic scrap and brick. Identification of features beneath made ground is still possible if the target feature is reasonably large and has a strong magnetic response but smaller features or magnetically weak features are unlikely to be identified.
- 1.1.6 The interpretation of magnetic anomalies is often subjective and it is rarely possible to identify the cause of all magnetic anomalies. Not all features will produce a measurable magnetic response and the effectiveness of a magnetic survey is also dependant on the site-specific conditions. The main factors that may limit whether a feature can be detected are the

composition of a feature, its depth and size and the surrounding material. It is not possible to guarantee that a magnetic survey will identify all sub-surface features.

- 1.1.7 Most high resolution, near surface magnetic surveys utilise a magnetic gradiometer. A gradiometer is a hand-held instrument that consists of two magnetic sensors, one positioned directly above the other, which allows measurement of the magnetic gradient component of the magnetic field. A gradiometer configuration eliminates the need for applying corrections due to natural variations in the overall field strength that occur during the course of a day but it only measures relative variations in the local magnetic field and so comparison of absolute values between sites is not possible.
- 1.1.8 Features that are commonly located using magnetic surveys include archaeological ditches and pits, buried structures or foundations, mineshafts, unexploded ordnance, metallic pipes and cables, buried piles and pile caps. The technique can also be used for geological mapping; particularly the location of igneous intrusions.

1.2 **Instrumentation**

- 1.2.1 A multi-sensor array cart system (MACS) utilising 8 Foerster 4.032 Ferex CON 650 gradiometers, spaced at 0.5 m intervals, with a control unit and data logger was used for the magnetic survey.

1.3 **Survey methodology**

- 1.3.1 The MACS utilises an RTK GNSS system which means that survey grids do not have to be established. Instead an area is surveyed over a series of continuous profiles and the position of each data point is recorded using an RTK GNSS system. The sensors have a separation of 0.5 m which means that data was collected on profiles spaced at 0.5 m apart. Readings were taken at between 0.1 m and 0.15 m intervals.
- 1.3.2 Data is collected on zig-zag profiles along the full length or width of a field, although fields can be sub-divided if they are particularly large. Marker canes are set-out along field boundaries at set intervals and these are used to align the profiles. The survey profiles are usually offset from field boundaries, buildings and other metallic features by several metres to reduce the detrimental effect that these surface magnetic features have on the data. The location of the MACS data is converted direct to Ordnance Survey co-ordinates using the UK OSTN15 projection. As the data is related direct to Ordnance Survey National Grid co-ordinates temporary survey stations are not established.
- 1.3.3 The Foerster gradiometers have a resolution of 0.2 nT but the stability of the cart system significantly reduces noise caused by instrument tilt and movement when compared with a traditional hand-held gradiometer system and the increased data intervals provide a higher resolution data set. The sensors have a range of $\pm 10,000$ nT and readings are taken at 0.1 nT resolution.

1.4 **Data processing and presentation**

- 1.4.1 The MACS data is stored direct to a laptop using in-house software which automatically corrects for instrument drift and calculates a mean value for each profile. A positional value is assigned to each data point based on the sensor number and recorded GNSS co-ordinates. The data is gridded using in-house software and parameters are set based on the sensor spacing and mean values. No additional processing is required. The gridded data is then displayed in Surfer 9 (Golden Software) and image files of the data are created.

1.4.2 The data was exported as greyscale raster images (PNG files). Data for the entire site is presented at a scale of 1:2000 (clipped at -2 nT to 3 nT - which is a 'standard' range for archaeological magnetic data) and a plot at a narrow range (-1 nT to 2 nT) with an accompanying interpretation shown at a scale of 1:1250. Greyscale plots have been 'smoothed' using a visual interpolation but the data itself has not been interpolated.

1.4.3 The data has been displayed relative to a digital Ordnance Survey base plan provided by the client as drawing '*BW1-01232983.dwg*'. The base plan was in the Ordnance Survey National Grid co-ordinate system and as the survey grids / data were referenced directly to National Grid co-ordinates the data could be simply superimposed onto the base plan in the correct position.

1.5 Interpretation

1.5.1 The anomalies have been categorised based on the type of response that they have and an interpretation as to the cause(s) or possible cause(s) of each anomaly type is also provided. The following anomaly types may be present within the data:

Dipolar, bipolar and strong responses

Dipolar and bipolar responses are those that have a sharp variation between strongly positive and negative components.

In the majority of cases these responses are usually caused by modern ferrous features / objects, although fired material (such as brick), some ferrous or industrial archaeological features and strongly magnetic gravel could also produce dipolar and bipolar responses.

Isolated dipolar responses are those that have a single positive and negative element. They are usually caused by isolated, ferrous or fired material on or near to the surface. The objects that cause dipolar responses are usually relatively small, such as spent shotgun cartridges, iron nails and horseshoes (hence they are often referred to as 'iron spikes') or pieces of modern brick or pot. Some types of archaeological artefacts can also produce this type of response but unless there is strong supporting evidence to the contrary they are assumed not to be of archaeological significance.

Bipolar anomalies have strong positive and negative components but are not technically magnetic dipoles. The majority of **isolated bipolar responses** are caused by ferrous or fired material on or near to the surface. These responses tend to be produced from larger objects, compared to dipolar anomalies, or a concentration of smaller objects. Some archaeological features/ activity, including areas of burning or industrial activity can also produce this type of response but unless there is strong supporting evidence to the contrary they are assumed not to be of archaeological significance.

Smaller isolated dipolar and bipolar responses have not been shown on the interpretation as there is no evidence to suggest that they are related to archaeological activity. Several larger isolated bipolar responses have been shown as these could be associated with more significant sub-surface features or material (although in this instance they are not thought to be of archaeological interest).

Bipolar linear anomalies are usually produced by metallic buried pipes / cables, although some ceramic pipes or features containing fired material, such as brick structures or foundations, can also produce bipolar anomalies. In some instances the anomaly can extend for a significant distance beyond the feature that produces the anomaly. Bipolar anomalies are often very strong and can potentially mask responses from other sub-surface features in the vicinity of the underlying feature.

There are no bipolar linear anomalies in this data set.

Areas containing numerous **strong dipolar / bipolar responses (magnetic disturbance)** are usually caused by greater concentrations of ferrous or fired material and are often found adjacent to field boundaries where such material tends to accumulate. Above ground metallic or strongly magnetic features, such as fences, gates, pylons and buildings can also produce very strong bipolar responses. If an area of magnetic disturbance is located away from existing field boundaries then it could indicate a former field boundary, several large isolated objects in close proximity, an area where modern material has been tipped or an infilled cut feature, such as a quarry pit. Areas of dipolar / bipolar response can occasionally be caused by features / material associated with archaeological industrial activity or natural deposits that have varying magnetic properties but they are usually caused by modern activity. Responses in areas of magnetic disturbance can sometimes be so strong that archaeological features located beneath them may not be detected.

Very strong responses, notably bipolar anomalies, from modern features can dominate the data for a significant distance beyond the feature. The extent of these areas is usually shown either as part of the bipolar anomaly or as a **limit of very strong response**. It should be noted that this effect extends beyond the feature and so the limit of the response does not correspond to the actual size or location of the feature within it. In many cases where these strong responses are present at the edge of survey area the feature causing the anomaly be actually be located beyond the survey area. It should be recognised that other sub-surface features located within these areas may not be detected.

Negative linear / curvi-linear anomalies

Negative linear / curvi-linear anomalies occur when a feature has lower magnetic readings than the surrounding material and can often be associated with ploughing regimes or plastic / concrete pipes or natural features.

They can also indicate the presence of a feature that cuts into magnetic soils or bedrock and which is infilled with less magnetic material and in certain geologies can be associated with archaeological features.

There are no significant negative linear anomalies in this data set.

Linear / curvi-linear anomalies (probable agricultural)

In many geological / pedological conditions agricultural features / regimes can produce magnetic anomalies due to the accumulation / alignment of magnetic topsoil. In most cases these are exhibited as a series of **broadly parallel positive linear anomalies**. The majority of these responses are associated with modern ploughing regimes but in some instances, where the responses are broader and more widely spaced, they can indicate the presence of the remnants of ridge and furrow.

Field drain systems can also produce linear anomalies, usually where the drains are made from fired ceramic or infilled with magnetic gravels.

Where a series of parallel anomalies are present then the approximate orientation of the anomalies are shown on the interpretation drawing to indicate the direction of the agricultural regime but for the sake of clarity individual anomalies have not been shown.

Individual anomalies may be shown if the response is not part of a regime.

Broad area of positive / negative responses

Broad areas of positive / negative responses can have a variety of causes. If the areas are generally quite large and irregular in shape then they are usually suggestive of natural features, such as lenses of sand and gravel deposits, palaeochannels or other natural features / variations where the natural material differs from the surrounding sub-surface. In some instances anomalies of this type can be associated with anthropogenic (usually modern) activity.

There are no anomalies of this type in this data set.

Linear / curvi-linear trends

An anomaly is categorised as a **trend** if it is not certain that the response is associated with an extant sub-surface feature. Trends are usually weak, irregular, diffuse or discontinuous and it is usually not certain what their cause is, if they represent significant sub-surface features or even if they are associated with definite features.

It is possible that some of the trends are associated with geological / pedological variations. Others may be produced by artificial constructs within the data, either caused by processing or in some instances by intersecting anomalies (usually different agricultural regimes) that give the appearance of curving or regular shapes. Many trends are a product of weak, naturally occurring responses that happen to form a regular pattern but which are not associated with a sub-surface feature.

In some instances former features that have been severely truncated can still produce broad, diffuse or weak responses even if the underlying feature has been removed. This is due to the presence of magnetic soils associated with the former feature still being present along its route. In other instances the magnetic properties of the soils filling a feature may vary and so the magnetic signature of the feature can change, even if the sub-surface feature itself remains uniform. If a response from a feature becomes significantly weak or diffuse then part of the anomaly may be shown as a trend as it is uncertain if the feature is still present or has been severely truncated or removed.

Isolated positive responses

Isolated positive responses can occur if the magnetism of a feature, area or material has been enhanced or if a feature is naturally more magnetic than the surrounding material. It is often difficult to determine which of these factors causes any given responses and so the origin of this type of anomaly can be difficult to determine. They can have a variety of causes including geological variations, infilled archaeological features, areas of burning (including hearths), industrial archaeological features, such as kilns, or deeper buried ferrous material and modern fired material.

The large number of isolated responses and lack of an obvious pattern to their distribution suggests that these anomalies are probably associated with geological / pedological variations or deeper buried ferrous or fired material. Only the larger or stronger areas of positive response have been shown on the interpretation. The majority, if not all of these responses, will be related to natural variations or relatively modern material but have been shown as their exact cause cannot be determined with certainty.

Positive linear / curvi-linear anomalies

Positive magnetic anomalies indicate an increase in magnetism and if the resulting anomaly is linear or curvi-linear then this can indicate the presence of a man-made feature.

Positive linear / curvi-linear anomalies can be associated with agricultural / drainage activity, or sometimes infilled natural features, but they can also be caused by ditches that are infilled with magnetically enhanced material and as such can indicate the presence of archaeological features.

There are no significant positive linear anomalies in this data set.

- 1.5.2 Several different ranges of data were used in the interpretation to ensure that the maximum information possible is obtained from the data.
- 1.5.3 X-Y trace plots were examined for all of the data and overlain onto the greyscale plot to assist in the interpretation, primarily to help identify dipolar / bipolar responses that will probably be associated with surface / near-surface iron objects. X-Y trace plots have not been used in the report as they do not show any additional anomalies that are not visible in the greyscale data. A digital drawing showing the X-Y trace plot overlain on the greyscale plot has been provided in the digital archive.
- 1.5.4 All isolated responses have been assessed using a combination of greyscale and X-Y trace plots.
- 1.5.5 Anomalies associated with agricultural regimes are present in the data. The general orientation of these regimes has been shown on the interpretation but, for the sake of clarity, each individual anomaly has not been shown.
- 1.5.6 The greyscale plots and the accompanying interpretations of the anomalies identified in the magnetic data are presented as 2D AutoCAD drawings. The interpretation is made based on the type, size, strength and morphology of the anomalies, coupled with the available information on the site conditions. Each type of anomaly is displayed in separate, easily identifiable layers annotated as appropriate.

1.6 Limitations of magnetic surveys

- 1.6.1 The magnetic survey method requires the operator to walk over the site at a constant walking pace whilst holding the instrument. The presence of an uneven ground surface, dense, high or mature vegetation or surface obstructions may mean that some areas cannot be surveyed.
- 1.6.2 The depth at which features can be detected will vary depending on their composition, size, the surrounding material and the type of magnetometer used for the survey. In good conditions large, magnetic targets, such as buried drums or tanks can be located at depths of more than 4 m. Smaller targets, such as buried foundations or archaeological features can be located at depths of between 1 m and 2 m.
- 1.6.3 A magnetic survey is highly sensitive to interference from surface and near-surface magnetic 'contaminants'. Surface features such as metallic fencing, reinforced concrete, buildings or walls all have very strong magnetic signatures that can dominate readings collected adjacent to them. Identification of anomalies caused by sub-surface features is therefore more difficult or even not possible in the vicinity of surface and near-surface magnetic features.
- 1.6.4 The presence of made ground also has a detrimental effect on the magnetic data quality as this usually contains magnetic material in the form of metallic scrap and brick. Identification of features beneath made ground is still possible if the target feature is reasonably large and has a strong magnetic response but smaller features or magnetically weak features are unlikely to be identified.

- 1.6.5 It should be noted that anomalies that are interpreted as modern in origin may be caused by features that are present in the topsoil or upper layers of the subsoil. Removal of soil to an archaeological or natural layer can therefore remove the feature causing the anomaly.
- 1.6.6 A magnetic survey does not directly locate sub-surface features - it identifies variations or anomalies in the local magnetic field caused by features. It can be possible to interpret the cause of anomalies based on the size, shape and strength of response but it should be recognised that a magnetic survey produces a plan of magnetic variations and not a plan of all sub-surface features. Interpretation of the anomalies is often subjective and it is rarely possible to identify the cause of all magnetic anomalies. Geological or pedological (soil) variations or features can produce responses similar to those caused by man-made (anthropogenic) features.
- 1.6.7 Anomalies identified by a magnetic survey are located in plan. It is not usually possible to obtain reliable depth information on the features that cause the anomalies.
- 1.6.8 Not all features will produce a measurable magnetic response and the effectiveness of a magnetic survey is also dependant on the site-specific conditions. It is not possible to guarantee that a magnetic survey will identify all sub-surface features. A magnetic survey is often most-effective at identifying sub-surface features when used in conjunction with other complementary geophysical techniques.

It should be noted that a geophysical survey does not directly locate sub-surface features - it identifies variations or anomalies in the background response caused by features. The interpretation of geophysical anomalies is often subjective and it is rarely possible to identify the cause of all such anomalies. Not all features will produce a measurable anomaly and the effectiveness of a geophysical survey is also dependant on the site-specific conditions. The main factors that may limit whether a feature can be detected are the composition of a feature, its depth and size and the surrounding material. It is not possible to guarantee that a geophysical survey will identify all sub-surface features. Confirmation on the identification of anomalies and the presence or absence of sub-surface features can only be achieved by intrusive investigation.



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