

Land south of Green Lane, Chesterton, Oxfordshire  
Historic Environment Desk-Based Assessment  
February 2022

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**Report**

Historic Environment Desk-Based Assessment

**Site**

Land south of Green Lane, Chesterton, Oxfordshire

**Clients**

Wates Developments Ltd

**Date**

February 2022

**Planning Authority**

Cherwell District Council

**Site Centred At**

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**Report Status**

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## Timescales Used in This Report

### Prehistoric

Palaeolithic	450,000 -12,000 BC
Mesolithic	12,000 - 4,000 BC
Neolithic	4,000 - 2,200 BC
Bronze Age	2,200 - 700 BC
Iron Age	700 - AD 43

### Historic

Roman	43 - 410AD
Saxon/Early Medieval	410 - 1066AD
Medieval	1066 - 1485AD
Post Medieval	1486 - 1901AD
Modern	1901 - Present Day

## Executive Summary

This historic environment desk-based assessment considers land south of Green Lane, Chesterton, Oxfordshire (Figure 1). It has been researched and prepared by Orion Heritage on behalf of Wates Developments Ltd. The site (hereinafter referred to as the “study site”) is located at grid reference SP 55785 20986. It has been prepared to inform an outline planning application of the site. The proposals include the construction of c. 150 residential houses.

The study site contains no finds or features recorded on the Oxfordshire Historic Environment Record. However, recently completed magnetometer survey (SUMO 2022; Appendix B) has recorded several magnetic responses which are clearly of archaeological interest; they comprise small ‘rings’ [1] and [2], rectilinear enclosures [3], [4] and possibly [6] and a possible trackway [7]. The form of these are suggestive of a prehistoric to Romano-British date. These are located in the eastern part of the study site; no archaeological features are recorded by geophysical survey or aerial imagery across the remainder of the site.

The archaeological remains are considered likely to be of local significance and will not require preservation in situ. The archaeological interest of the site could be secured by a programme of archaeological works as a condition of outline planning consent; early consultation with the LPA Archaeological Advisor is advised.

The assessment has identified no designated archaeological assets in the wider area that are sensitive to change by the proposed development by effects to their setting.

The study site contains no designated or non-designated built heritage assets. The setting of designated and non-designated heritage assets in the wider area has been considered and no significant effects are anticipated.

## 1.0 Introduction

- 1.1** This historic environment desk-based assessment considers land south of Green Lane, Chesterton, Oxfordshire (Figure 1). It has been researched and prepared by Orion Heritage on behalf of Wates Developments Ltd. The site (hereinafter referred to as the “study site”) is located at grid reference SP 55785 20986. It has been prepared to inform an outline planning application of the site. The proposals include the construction of c. 150 residential houses.
- 1.2** This assessment forms an update to an earlier desk based assessment which was produced to inform promotion of the site in the Local Plan. A Written Scheme of Investigation (WSI) for this updated assessment was submitted to and approved by Oxfordshire County Archaeological Service (OCAS) in December 2021. This assessment is in draft form to facilitate pre-submission discussions with OCAS.
- 1.3** In accordance with the Standard and Guidance for Historic Environment Desk-Based Assessment (Chartered Institute for Archaeologists 2017), the assessment draws together available information on designated and non-designated heritage assets, topographic and land-use information so as to establish the potential for non-designated archaeological assets within the study site. The assessment includes the results of a site survey, an examination of published and unpublished records, and charts historic land-use through a map regression exercise. The assessment also considers the setting of heritage assets, and provides an assessment of how their settings contribute to their significance.
- 1.4** The assessment enables relevant parties to assess the significance of heritage/archaeological assets on and close to the study site and considers the potential for hitherto undiscovered archaeological assets, thus enabling potential impacts on assets to be identified along with the need for design, civil engineering or archaeological solutions. It also provides an understanding of any constraints to development of the study site due to the presence of nearby heritage assets, provides an assessment of the potential impact development would have on the significance of heritage assets. It also provides design responses that would serve to reduce that impact in line with local and national policy.
- 1.5** The study area used in this assessment is a 1km radius from the centre of the study site (Figures 2 and 3).

### Location, Topography and Geology

- 1.6** The study site occupies an irregular greenfield parcel of land measuring approximately 15 hectares. The study site is located to the south of Green Lane to the south-east of the village of Chesterton. The study site comprises two large enclosed agricultural fields containing no building stock. The study site is bound to the north by Green Lane, to the west an unnamed road leading to Little Chesterton, modern development fronting Vespasian Way to the north-east, and agricultural fields to the south-east and south.

- 1.7 The study site is generally flat, sloping slightly to the south with an average height above ordnance datum (aOD) of 75m.
- 1.8 The solid geology of the majority of the study site comprises 'Cornbrash Formation (limestone) with Kellaways Clay Member (mudstone) towards the south. No superficial deposits are recorded across the majority of the study site, with a small area of River Terrace Deposits (sand and gravel) recorded at the eastern edge (GeoIndex 2020).
- 1.9 At the time of writing there is no on-site geotechnical data. GeoIndex records no historic borehole data within or adjacent to the study site.



## 2.0 Aims, Objectives & Methodology

2.1 The principal aims of the desk-based assessment are to:

- Gain an understanding of the archaeological potential of the study site;
- Identify any archaeological constraints to the development of the study site; and to
- Assess the likely impact of the proposed development.

2.2 The results of the archaeological desk-based assessment will inform an archaeological strategy for further on-site assessment and formulation of a mitigation strategy, as appropriate to the archaeological potential of the study site.

2.3 This desk-based assessment conforms to the requirements of current national and local planning policy (including *National Planning Policy Framework 2021*) and it has been designed in accordance with current best archaeological practice, and the appropriate national and local standards and guidelines, including:

- Management of Recording Projects in the Historic Environment: MORPHE (English Heritage 2006);
- Code of Conduct (Chartered Institute for Archaeologists [CIfA] [revised edition] 2014);
- Standard and Guidance for Historic Environment Desk-Based Assessment (CIfA January 2017); and
- Archaeological Desk-Based Assessment: Advisory Document (Oxfordshire County Archaeological Services undated).

2.4 It is noted that the Chartered Institute for Archaeologists defines desk-based assessment as:

*“a programme of study of the historic environment within a specified area or site on land, the inter-tidal zone or underwater that addresses agreed research and/or conservation objectives. It consists of an analysis of existing written, graphic, photographic and electronic information in order to identify the likely heritage assets, their interests and significance and the character of the study area, including appropriate consideration of the settings of heritage assets and, in England, the nature, extent and quality of the known or potential archaeological, historic, architectural and artistic interest. Significance is to be judged in a local, regional, national or international context as appropriate.”*

2.5 The Chartered Institute for Archaeologists Standard for desk-based assessment states that:

*“Desk-based assessment will determine, as far as is reasonably possible from existing records, the nature, extent and significance of the historic environment within a specified area. Desk-based assessment will be undertaken using appropriate methods and practices which satisfy the stated aims of the project, and which comply with the Code of conduct and other relevant regulations of CIfA. In a development context desk-based assessment*

*will establish the impact of the proposed development on the significance of the historic environment (or will identify the need for further evaluation to do so) and will enable reasoned proposals and decisions to be made whether to mitigate, offset or accept without further intervention that impact.”*

## Methodology

- 2.6** The archaeological desk-based assessment is produced in accordance with the Archaeological Desk-Based Assessment: Advisory Document (Oxfordshire County Archaeological Services, undated). As per the advisory document a Written Scheme of Investigation for the desk-based assessment (Orion Heritage 2020) has been submitted and approved by OCAS for the assessment.
- 2.7** Oxfordshire County Archaeological Services were contacted to ascertain whether there were any specific requirements or data sources required for inclusion in the assessment. None were identified; the limitations to undertaking the assessment during Covid-19 restrictions is discussed below (paragraph 2.12).
- 2.8** The following sources will be consulted for the whole study area:
- a) the Oxfordshire Historic Environment Record (OHER) (December 2021);
  - b) the National Heritage List for England held by Historic England;
  - c) Designated assets such as Scheduled Monuments, Battlefields and Listed Buildings;
  - d) all Ordnance Survey maps (19th and 20th century) at 1:10000, 1:10560, 1:2500 and 1:1250 scales;
  - e) tithe maps (and apportionments), estate maps and any other relevant historical maps within the relevant County Record Office (parts of Oxfordshire were formerly part of Berkshire and may still be covered by the Berkshire Record Office), or readily available elsewhere;
  - f) English Place Name Society volumes or similar authoritative works covering place names of the study area;
  - g) geological maps of the study area;
  - h) geotechnical reports where such evidence is not being separately assessed;
  - i) previous archaeological evaluation and excavation records relating to sites in and immediately adjacent to the study area;
  - j) such other published works, reports and other information relevant to the desk-based assessment;
  - k) air photographic collections by Historic England Swindon and such other collections as are held by Oxfordshire County Council within the HER for the area of study (beyond the specific development area);
  - l) An assessment of any Lidar holdings held by the Environment Agency for the study area (beyond the specific development area).
  - m) The Oxfordshire Historic Landscape Characterisation data (provided as part of the HER consultation).

n) National Mapping Programme Data where available (see '*Limitations*' below).

o) Portable Antiquities Scheme data, available from the PAS website.

**2.9** The assessment will include a site walkover survey to gain a greater understanding of existing land use, the potential for archaeological constraints within the study site and potential settings issues.

### **Limitations**

**2.10** The assessment includes HER data which was ordered in December 2021. A site visit was undertaken on 20<sup>th</sup> August 2020 when the conditions were sunny and visibility clear.

### 3.0 Planning Background and Development Plan Framework

#### Ancient Monuments & Archaeological Areas Act 1979

- 3.1 The Ancient Monuments & Archaeological Areas Act 1979 (as amended) protects the fabric of Scheduled Monuments but does not afford statutory protection to their settings.

#### Planning (Listed Building and Conservation Areas) Act 1990

- 3.2 The Planning (Listed Building and Conservation Areas) Act 1990 sets out broad policies and obligations relevant to the protection of listed buildings and conservation areas and their settings.

- 3.3 Section 66(1) states:

*“In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, 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”.*

- 3.4 Section 69 of the Act requires local authorities to define as conservation areas any ‘areas of special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance’ and Section 72 gives local authorities a general duty to pay special attention ‘to the desirability of preserving or enhancing the character or appearance of that area’ in exercising their planning functions. These duties are taken to apply only within a Conservation Area. The Act does not make specific provision with regard to the setting of a Conservation Area that is provided by the policy framework outlined in section 2.2, below

#### National Planning Policy Framework (NPPF) & National Planning Practice Guidance (NPPG)

- 3.5 Government policy in relation to the historic environment is outlined in Section 16 of the National Planning Policy Framework (NPPF), entitled ‘Conserving and Enhancing the Historic Environment’. This provides guidance for planning authorities, property owners, developers and others on the conservation and investigation of heritage assets. Overall, the objectives of Section 16 of the NPPF can be summarised as seeking the:

- Delivery of sustainable development;
- Understanding the wider social, cultural, economic and environmental benefits brought by the conservation of the historic environment;
- Conservation of England's heritage assets in a manner appropriate to their significance; and
- Recognition of the contribution that heritage assets make to our knowledge and understanding of the past.

- 3.6 Section 16 of the NPPF recognises that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term.

- 3.7 Paragraph 194 states that planning decisions should be based on the significance of the heritage asset, and that the level of detail supplied by an applicant should be proportionate to the importance of the asset and should be no more than sufficient to understand the potential impact of the proposal upon the significance of that asset.
- 3.8 Paragraph 198 states that decisions regarding the removal or alteration of historic statues, plaques, memorials or monuments should have regard to the importance of their retention in situ and, where appropriate, explaining their historic and social context rather than removal.
- 3.9 Paragraph 203 requires the decision-maker to take into account the effect on the significance of non-designated heritage assets and to take a balanced judgement having regard to the scale of harm or loss and the significance of the asset(s) potentially affected.
- 3.10 *Heritage Assets* are defined in Annex 2 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).
- 3.11 *Archaeological Interest* is defined as: a heritage asset which holds or potentially could hold evidence of past human activity worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.
- 3.12 *Designated Heritage Assets* comprise: A World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Parks and Garden, Registered Battlefield or Conservation Areas designated under the relevant legislation.
- 3.13 *Significance* is defined as: The value of a heritage asset to this and future generations because of its heritage interest. This interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.
- 3.14 *Setting* is defined as: The 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.
- 3.15 The NPPF is supported by the PPG (July 2019). In relation to the historic environment, paragraph 002 (002 Reference ID: 18a-002-20190723) states that:
- “Where changes are proposed, the National Planning Policy Framework sets out a clear framework for both plan-making and decision-making in respect of applications for planning permission and listed building consent to ensure that heritage assets are conserved, and where appropriate enhanced, in a manner that is consistent with their significance and thereby achieving sustainable*

*development. Heritage assets are either designated heritage assets or non-designated heritage assets.”*

- 3.16** Paragraph 18a-013 (Paragraph: 013 Reference ID: 18a-013-20190723) outlines that although the extent and importance of setting is often expressed in visual terms, it can also be influenced by other factors such as noise, dust and vibration. Historic relationships between places can also be an important factor stressing ties between places that may have limited or no intervisibility with each other. This may be historic as well as aesthetic connections that contribute or enhance the significance of one or more of the heritage assets.
- 3.17** Paragraph 18a-013 concludes:
- “The contribution that setting makes to the significance of the heritage asset does not depend on there being public rights or an ability to access or experience that setting. This will vary over time and according to circumstance. When assessing any application for development which may affect the setting of a heritage asset, local planning authorities may need to consider the implications of cumulative change. They may also need to consider the fact that developments which materially detract from the asset’s significance may also damage its economic viability now, or in the future, thereby threatening its on-going conservation.”*
- 3.18** The key test in NPPF paragraphs 199-202 is whether a proposed development will result in substantial harm or less than substantial harm to a designated asset. However, substantial harm is not defined in the NPPF. Paragraph 18a-017 (Paragraph: 018 Reference ID: 18a-018-20190723) of the PPG provides additional guidance on substantial harm. It states:
- “What matters in assessing whether a proposal might cause harm is the impact on the significance of the heritage asset. As the National Planning Policy Framework makes clear, significance derives not only from a heritage asset’s physical presence, but also from its setting.”*
- 3.19** Proposed development affecting a heritage asset may have no impact on its significance or may enhance its significance and therefore cause no harm to the heritage asset. Where potential harm to designated heritage assets is identified, it needs to be categorised as either less than substantial harm or substantial harm (which includes total loss) in order to identify which policies in the National Planning Policy Framework (paragraphs 199-202) apply.
- 3.20** Within each category of harm (which category applies should be explicitly identified), the extent of the harm may vary and should be clearly articulated.
- 3.21** Whether a proposal causes substantial harm will be a judgment for the decision-maker, having regard to the circumstances of the case and the policy in the National Planning Policy Framework. In general terms, substantial harm is a high test, so it may not arise in many cases. For example, in determining whether works to a listed building constitute substantial harm, an important consideration would be whether the adverse impact seriously affects a key element of its special architectural or historic interest. It is the degree of harm to the asset’s significance rather than the scale of the development that is to

be assessed. The harm may arise from works to the asset or from development within its setting.

**3.22** While the impact of total destruction is obvious, partial destruction is likely to have a considerable impact but, depending on the circumstances, it may still be less than substantial harm or conceivably not harmful at all, for example, when removing later additions to historic buildings where those additions are inappropriate and harm the buildings' significance. Similarly, works that are moderate or minor in scale are likely to cause less than substantial harm or no harm at all. However, even minor works have the potential to cause substantial harm, depending on the nature of their impact on the asset and its setting."

**3.23** Paragraph 202 of the NPPF outlines that where a proposed development results in less than substantial harm to the significance of a heritage asset, the harm arising should be weighed against the public benefits accruing from the proposed development. Paragraph 18a-020 of the PPG (Paragraph: 020 Reference ID: 18a-020-20190723) outlines what is meant by public benefits:

*"Public benefits may follow from many developments and could be anything that delivers economic, social or environmental objectives as described in the National Planning Policy Framework (paragraph 8). Public benefits should flow from the proposed development. They should be of a nature or scale to be of benefit to the public at large and not just be a private benefit. However, benefits do not always have to be visible or accessible to the public in order to be genuine public benefits, for example, works to a listed private dwelling which secure its future as a designated heritage asset could be a public benefit.*

*Examples of heritage benefits may include:*

- *sustaining or enhancing the significance of a heritage asset and the contribution of its setting;*
- *reducing or removing risks to a heritage asset; and*
- *securing the optimum viable use of a heritage asset in support of its long-term conservation."*

**3.24** In considering any planning application for development, the planning authority will be mindful of the framework set by government policy, in this instance the NPPF, by current Development Plan Policy and by other material considerations.

### **Local Planning Policy**

**3.25** In considering any planning application for development, the local planning authority must determine the application in accordance with the development plan unless material considerations indicate otherwise. Where proposed development accords with an up-to-date Local Plan, applications should be approved, and proposed development that conflicts should be refused unless other material considerations indicate otherwise. The role of the NPPF is to provide guidance for local planning authorities and decision-takers both in

drawing up plans and as a material consideration in determining planning applications.

- 3.26** The Cherwell District Council Local Plan 2011-2031 Part 1 (Adopted 2015) contains the following policy relating to archaeology:

*Policy ESD 15: The Character of the Built and Historic Environment*

*Successful design is founded upon an understanding and respect for an area's unique built, natural and cultural context. New development will be expected to complement and enhance the character of its context through sensitive siting, layout and high quality design. All new development will be required to meet high design standards. Where development is in the vicinity of any of the District's distinctive natural or historic assets, delivering high quality design that complements the asset will be essential.*

- 3.27** The policy outlines a number of stipulations for new proposals, of particular relevance to archaeology and built heritage:

*New development proposals should:*

- *Contribute positively to an area's character and identity by creating or reinforcing local distinctiveness and respecting local topography and landscape features, including skylines, valley floors, significant trees, historic boundaries, landmarks, features or views, in particular within designated landscapes, within the Cherwell Valley and within conservation areas and their setting*
- *Conserve, sustain and enhance designated and non designated 'heritage assets' (as defined in the NPPF) including buildings, features, archaeology, conservation areas and their settings, and ensure new development is sensitively sited and integrated in accordance with advice in the NPPF and NPPG. Proposals for development that affect non-designated heritage assets will be considered taking account of the scale of any harm or loss and the significance of the heritage asset as set out in the NPPF and NPPG. Regeneration proposals that make sensitive use of heritage assets, particularly where these bring redundant or under used buildings or areas, especially any on English Heritage's At Risk Register, into appropriate use will be encouraged*
- *Include information on heritage assets sufficient to assess the potential impact of the proposal on their significance. Where archaeological potential is identified this should include an appropriate desk based assessment and, where necessary, a field evaluation.*
- *Respect the traditional pattern of routes, spaces, blocks, plots, enclosures and the form, scale and massing of buildings. Development should be designed to integrate with existing streets and public spaces, and buildings configured to create clearly defined active public frontages*
- *Reflect or, in a contemporary design response, re-interpret local distinctiveness, including elements of construction, elevational detailing, windows and doors, building and surfacing materials, mass, scale and colour palette*



- *Promote permeable, accessible and easily understandable places by creating spaces that connect with each other, are easy to move through and have recognisable landmark features*
- *Use locally sourced sustainable materials where possible.*

## Guidance

*Historic Environment Good Practice Advice In Planning Note 2: Managing Significance in Decision-Taking in the Historic Environment (Historic England 2015)*

**3.28** The purpose of this document is to provide information to assist local authorities, planning and other consultants, owners, applicants and other interested parties in implementing historic environment policy in the NPPF and NPPG. It outlines a six-stage process to the assembly and analysis of relevant information relating to heritage assets potentially affected by a proposed development:

- Understand the significance of the affected assets;
- Understand the impact of the proposal on that significance;
- Avoid, minimise and mitigate impact in a way that meets the objectives of the NPPF;
- Look for opportunities to better reveal or enhance significance;
- Justify any harmful impacts in terms of the sustainable development objective of conserving significance and the need for change; and
- Offset negative impacts on aspects of significance by enhancing others through recording, disseminating and archiving archaeological and historical interest of the important elements of the heritage assets affected.

*Historic Environment Good Practice Advice In Planning Note 3: The Setting of Heritage Assets (Historic England 2017)*

**3.29** Historic England's Historic Environment Good Practice Advice in Planning Note 3 provides guidance on the management of change within the setting of heritage assets.

**3.30** The document restates the definition of setting as outlined in Annex 2 of the NPPF. Setting is also described as being a separate term to curtilage, character and context; while it is largely a visual term, setting, and thus the way in which an asset is experienced, can also be affected by noise, vibration, odour and other factors. The document makes it clear that setting is not a heritage asset, nor is it a heritage designation, though land within a setting may itself be designated. Its importance lies in what the setting contributes to the significance of a heritage asset.

**3.31** The Good Practice Advice Note sets out a five-staged process for assessing the implications of proposed developments on setting:

1. Identification of heritage assets which are likely to be affected by proposals;

2. Assessment of whether and what contribution the setting makes to the significance of a heritage asset;
3. Assessing the effects of proposed development on the significance of a heritage asset;
4. Maximising enhancement and reduction of harm on the setting of heritage assets; and
5. Making and documenting the decision and monitoring outcomes

**3.32** The guidance reiterates the NPPF in stating that where developments affecting the setting of heritage assets results in a level of harm to significance, this harm, whether substantial or less than substantial, should be weighed against the public benefits of the scheme.

## 4.0 Archaeological and Historic Baseline

4.1 The heritage assets under consideration have been identified by means of a review of the following sources listed in paragraph 2.8 (unless stipulated in the limitations paragraph). In summary this includes:

- Oxfordshire Historic Environment Record (OHER) Data;
- The National Heritage List for England (NHLE) held by Historic England;
- Historic England Archive;
- Pastscape;
- Local studies and record office research;
- Review of historic mapping;
- Geophysical survey (Appendix B); and
- Lidar and Aerial Photography assessment (Appendix C).

4.2 This resource has been used to provide an understanding of the heritage assets which may be affected by the proposed development. This chapter will describe the heritage assets which may be affected and assess their significance.

4.3 The location of heritage assets mentioned in the text are shown on Figures 2, 3 & 4.

4.4 The assessment includes a review and illustration of Portable Antiquity Scheme data for the parish.

### *Previous archaeological investigations*

4.5 Detailed magnetic survey (magnetometry) of the 14ha site was undertaken in January 2022 (SUMO; Appendix B; Plate A). The magnetometer survey has recorded several magnetic responses which are clearly of archaeological interest; they comprise small 'rings' [1] and [2], rectilinear enclosures [3], [4] and possibly [6] and a possible trackway [7]. Ridge and furrow cultivation patterns are visible in the data along with former field boundaries. A few uncertain magnetic responses have been identified and two areas of magnetic disturbance have been mapped.

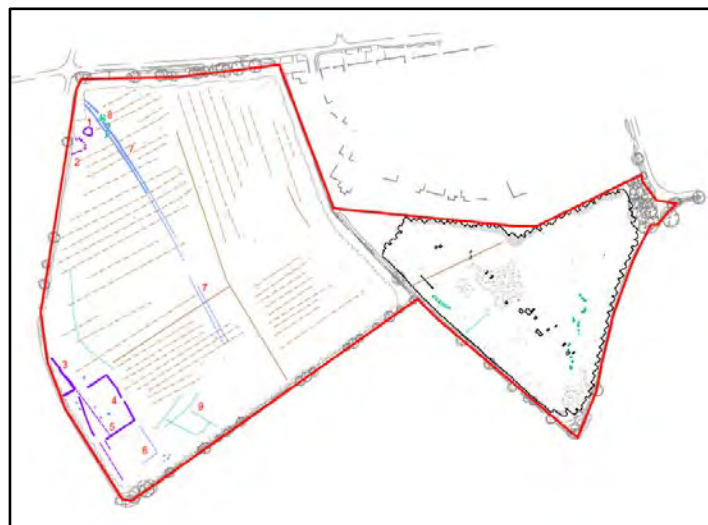


Plate A: Magnetometer Survey – Interpretation

- 4.6** The study site has not been subject to previous intrusive archaeological investigation. The OHER records a total of 21 archaeological investigations within the study area, of which 19 are intrusive. Intrusive archaeological investigations in close vicinity to the study area include:
- OHER EOX6672: Evaluation at BSA Sports Hub, Green Lane, Chesterton, immediately west of the study site (TVAS 2020). *In the areas examined, despite the potential for archaeological discovery on this site, only one posthole-sized feature of Iron Age date was recorded during the evaluation. Various geophysical anomalies investigated were shown to be of non-archaeological origin. Therefore, the majority of the site which has been investigated is considered to have low archaeological potential, but with an area around the Iron Age feature having some potential of uncertain significance.*
  - OHER EOX2839: Evaluation at Green Lane immediately east of the study site (TVAS 2009). *Despite investigation of 19 soil anomalies, very few features certainly of man-made origin were found, the best being a stone-lined drain. None of these features were dated and no pre-modern artefacts were recovered as stray finds from the trench spoilheaps. Nothing resembling Roman roadside settlement was discovered. The site is considered to have no archaeological potential.*
  - OHER EOX1205: Watching brief along route of M40 immediately north of the study site (OAU 1990). *Akeman St partly sectioned by bridge foundations. Ditches not visible, but metalled surface found.*
  - OHER EOX64: Watching brief at Green Lane immediately north-east of the study site (OAU 1993).
  - OHER EOX6136: Archaeological evaluation at Land west of Chesterton c. 100m north of the study site (Wessex Archaeology 2015). *Previous geophysical survey of the site had indicated the presence of anomalies of probable archaeological origin within the site, and the archaeological trenches were mainly targeted on these anomalies as well as a small number within blank areas in order to ground test the results. The evaluation consisted of ten 30 m by 1.8 m machine excavated trenches, representing a 2% sample of the development area. The evaluation identified archaeological features in seven of the trenches, all of which were ditches and corresponded well with the geophysical anomalies.*

*Undated*

- 4.7** The Oxfordshire Historic Environment Record (OHER) records no unknown finds or features within or adjacent to the study site. A rectangular enclosure with interior curvilinear enclosure (OHER 28497) is recorded c. 50m west of the study site. This feature has been archaeologically investigated with negative results (TVAS 2020).
- 4.8** The magnetometer survey has recorded several magnetic responses which are clearly of archaeological interest; they comprise small 'rings' [1] and [2],

rectilinear enclosures [3], [4] and possibly [6] and a possible trackway [7]. The form of these are suggestive of a prehistoric to Romano-British date.

#### *Prehistoric*

- 4.9** The OHER records no prehistoric records within the study site, however recent geophysical survey has identified probable archaeology in the east of the study site. The form of these are suggestive of a prehistoric to Romano-British date.
- 4.10** The earliest evidence relates to a Mesolithic Quartzite Macehead (OHER 2547), the exact location of its recovery is unknown.
- 4.11** Early Neolithic to Roman occupation has been identified on the outskirts of Alchester Roman Town (OHER 28294) c. 960m east of the study site. A Neolithic to Bronze Age axehead (OHER 16075) was recovered from a field c. 965m south-west of the study site. Excavations at the A421 crossroads at Chesterton Lane revealed an isolated Bronze Age burial and evidence of Late Iron Age activity (OHER 16213) adjacent to Gagle Brook, c. 700m east of the study site. Further evidence of Bronze Age activity is recorded c. 746m west of the study site, where a single ring ditch has been identified by aerial photography analysis (OHER 13906).
- 4.12** A single Iron Age post hole was recorded during the archaeological investigations immediately west of the study site (OHER 29256; EOX6672).
- 4.13** An Iron Age Banjo Enclosure and regular aggregate field system (OHER 13904) has been identified by aerial photography, c. 1km south-east of the study site, to the west of Dorchester/Alchester Roman road.
- 4.14** Geophysical survey c. 550m north of the study site recorded possible Iron-Age/Romano-British trackway, field system and settlement (OHER 29027). Potential Iron Age settlements resembling farming establishments (OHER 29542) have been identified by geophysical survey, c. 900m south of the study site.

#### *Roman*

- 4.15** The OHER records no Roman records within the study site, however recent geophysical survey has identified probable archaeology in the east of the study site. The form of these are suggestive of a prehistoric to Romano-British date.
- 4.16** The study site lies immediately south of the course of a Roman road. It is thought that Green Lane follows Akeman Street, from near the Roman town of Alchester to Cirencester (Corinivm). A stretch of this road was examined in 1937 at Chesterton Lane just north of Alchester (Margary 1955, 144); it was substantial and well-preserved, and the line westwards as far as Kirtlington was also described by Margary as a distinct agger. The scheduled remains of the Roman town of Alchester are situated c. 1km south-east of the centre of the study site (NHLE 1006365; OHER 1583). Alchester was a planned Roman settlement with rampart and ditch boundaries. It was occupied throughout the Roman period and preceded by a possible vexillation fort with associated

Parade ground. Extra-mural settlement and a cemetery have been found between Akeman Street to the north and the town itself.

- 4.17** Approximately 126m south-west of the study site a hoard of Roman coins is recorded by the OHER. This area has been subject to subsequent archaeological investigation which revealed no further evidence of Roman occupation (TVAS 2020).
- 4.18** A rectilinear enclosure (OHER 28649) 220m north of the study site identified by geophysical survey has been archaeologically investigated. The only dated material was a single sherd of Romano-British pottery which suggests a terminus post quem for the enclosure. The enclosure was fairly shallow and had been nearly completely truncated within the south-western field, but it survived to a greater depth towards the north-eastern boundary of the site (Wessex Archaeology 2016).

#### *Saxon and early medieval*

- 4.19** The study site lies west of the historic settlement of Chesterton, which appears to have its origins in the early medieval period based on place name analysis: Chesterton being Old English in origin meaning Roman site farm/settlement (University of Nottingham, 2020). It is presumably named after the nearby Roman settlement of Alchester. Chesterton is also recorded as a pre-conquest manor in the hundred of Kirtlington (Open Domesday 2020). The VCH records the manor as being held by Wigod, Lord of Wallingford (Lobel, 1959).
- 4.20** The OHER records no early medieval finds or features within or immediately adjacent to the study site. A watching brief at the Tithe Barn, Manor Farm Lane, Chesterton, c. 355m north-east of the study site recorded an Anglo-Saxon/medieval rubbish pit and ditch (OHER 26417).
- 4.21** Early medieval pottery was recovered during archaeological investigations at the A421 crossroads at Chesterton Lane (OHER 16214), 1km east of the study site.
- 4.22** Given the limited evidence for activity relating to these periods the potential for significant finds and features from these periods to be present within the study site is considered negligible.

#### *Medieval*

- 4.23** The VCH describes the manor of Chesterton as being among the possessions of Norman landowner Miles Crispin, who held the honour of Wallingford and Wallingford Castle. His tenant William de Suleham gave certain tithes to Abingdon Abbey, and his successor Robert granted lands at Chesterton to the abbey at Thame around 1150. The Chesterton estate passed to his son Robert the younger, then to his brother Ralph. His son, also Robert, held Chesterton at the turn of the 13th century but he entered the Church in 1222, granting the estate to his young son Ralph, whose granddaughter Sarah and her husband John le Bret sold Chesterton to Edmund, Earl of Cornwall in 1272. The earl included Chesterton as part of the endowment of Ashridge Priory, a college of

the monastic order of the Brothers of Penitence, that was founded in 1283. The order held the estate until the Dissolution.

- 4.24** The medieval core of Chesterton is likely to have focused around the church of St Mary (OHER 5108; NHLE 1300898), c. 300m north of the eastern edge of the study site. The current church dates to the late 12<sup>th</sup> century, with 13<sup>th</sup>, 14<sup>th</sup> and 15<sup>th</sup> alteration and restored in the 19<sup>th</sup> century. 12<sup>th</sup> – 13<sup>th</sup> century archaeological evidence has been recorded by the church during archaeological investigations by members of the QUAS. It is noted that a church at Chesterton is recorded in the Domesday Survey.
- 4.25** The Conservation Area Appraisal (Cherwell District Council 2008) provides a detailed historic background for the settlement. It is noted that early 14<sup>th</sup> century tax assessments indicate a fairly large and prosperous settlement, with 44 householders being assessed in 1316. The original manor house is believed to have been located on the site of the 17-18<sup>th</sup> century Manor Farm (OHER 12700), c. 350m north-east of the study site.
- 4.26** The study site forms the agricultural hinterland between the medieval settlements of Chesterton and Little Chesterton. The site of a 12<sup>th</sup> century Abbey grange is believed to be located at Little Chesterton c. 600m south of the study site. No medieval occupation evidence has been recorded during the investigations to the east, west and north-east of the study site.
- 4.27** Given the limited evidence for activity relating to these periods the potential for significant finds and features from these periods to be present within the study site is considered negligible.

#### *Post Medieval*

- 4.28** The Victoria County History volume that includes the history of the parish of Chesterton (1959) also includes a map which is not fully sourced, but appears to be based on an estate map in the archive of the earls of Jersey held at Oxford History Centre, ref. J IV/1. The catalogue entry states that this is a “Pre-enclosure map of the parish of Chesterton, undated (but drawn between 1764 and 1768)” showing field divisions and names, strip divisions and names of freeholders and leaseholders. The area of the red line plan seems to be contained with the *New Digging Piece*, *Buckles Piece* and *Little Moor* though no further details of these fields are available in the VCH. Chesterton is recorded as ‘Great Chesterton’ and comprises a linear settlement along Alchester Road.
- 4.29** The Chesterton Conservation Area records the enclosure of the Parish in 1768. It also notes that the agricultural history of the parish has been affected by poor soil quality and bad drainage, giving a consistently average split of 63% pasture and 37% arable (Cherwell District Council 2008).
- 4.30** Between 1768 (Figure 5) and the 1815 Ordnance Survey Drawing (Figure 6) Chesterton Lodge has been constructed and the line of Green Lane re-routed around the to the south-west corner of Chesterton Lodge to the immediate east of the study site. It is recorded in the Conservation Area Appraisal that there is a house mentioned on the site of the present Chesterton Lodge from the early 18<sup>th</sup> century. In 1801 the house was improved and the grounds

extended by Francis Penrose and George Clarke, Sheriff of Oxfordshire (Cherwell District Council 2008). The study site covers part of four enclosed fields indicating some change to the field system in the intervening 50 years.

- 4.31** The 1823 Bryant map (Figure 7) illustrates a similar layout to the 1815 Ordnance Survey drawing (Figure 6), but does not record the field systems across the village of Chesterton.
- 4.32** The 1884-85 Ordnance Survey (Figure 8) records the detail of Chesterton Lodge prior to the construction of the present house which was built between 1889-90 by Henry Tubb, a Bicester banker. A small area of woodland is recorded at the eastern edge of the study site and the study site comprises three enclosed fields and part of a fourth.
- 4.33** The 1923 Ordnance Survey (Figure 9) records the present Chesterton Lodge and grounds. Some additional enclosure has occurred within the study site, with an additional north-south field boundary recorded in the west and the creation of allotments in the south-west of the study site. No changes are recorded on the 1945 and 1947 aerial photography sources (Figures 10 and 11). The construction of a number of properties south of Green Lane are recorded to the north of the study site. By 1970 (Figure 13) the playing fields have been established to the immediate north of the study site. Further sub-urban development south of Green Lane is noted. Between 1970 and 1990 the area north of Green Lane was developed for housing. Boundary loss is noted within the study site. Based on an appraisal of map sources the existing field boundaries date to at least the late 19<sup>th</sup> century. Recently the area immediately north of the study site has been developed for housing (Figure 15).
- 4.34** The OHER records no post-medieval finds or features within the study site. The OHER records a total of nine post-medieval sites within the 1km study area all of which relate to buildings or former buildings which are not relevant to the archaeological potential of the study site.
- 4.35** The historic and archaeological record for the post-medieval period is well documented and it is clear that the study site is located within the agricultural hinterland of known post-medieval settlement. It is therefore considered that the study site has a low potential for previously unknown finds and features from the post-medieval period to be present.

#### *Aerial Imagery and Lidar*

- 4.36** An assessment of aerial imagery has been completed (Appendix B). The assessment has identified the following features within the site:
- A possible trackway that crosses the site northwest to central south
  - Curvilinear features and a ring ditch at the northwest
  - Former field boundaries
  - Ridge and furrow at the southeast
- 4.37** Within the 1km study area there are numerous examples of ridge and furrow in varying states of preservation. To the west of the site is an area of cropmarks including ditches, trackways, a rectilinear enclosure, banks and pits. An area



of possible pits and ditches has been identified c. 780m to the west of the site. These features may be archaeological or geological in origin.

*Site walkover*

- 4.38** A site visit was undertaken on 20<sup>th</sup> August 2020 to gain a greater understanding of existing land use and the potential for archaeological constraints within the study site. The study site is irregular in shape and accessed through a gate at the east of the study site, south of the Chesterton Community Centre. The study site forms two agricultural fields which are bound by mature, high vegetation along the north-east and north-west boundaries. Open views were noted towards the modern development immediately north. The study site is generally flat with views beyond the study site screened by existing vegetation with the exception of the modern development to the north. Vegetation covered both fields screening the ground surface and making full traverse of the study site not possible. The perimeter of the study site was walked. No noticeable archaeological finds or features noted during the site visit.



**Plate 1:** View from north-east of study site along north-east boundary (dir. west)



Plate 2: View from west of eastern field towards southern boundary of study site (dir. south)



Plate 3: View from northern boundary of western field (dir. south)



**Plate 4:** View from north-west corner of the study site (view south)

*Summary of Archaeological Potential and Assessment of Significance*

- 4.39** The study site contains no finds or features recorded on the Oxfordshire Historic Environment Record, however, recently completed magnetometer survey (SUMO 2022; Appendix B) has recorded several magnetic responses which are clearly of archaeological interest; they comprise small 'rings' [1] and [2], rectilinear enclosures [3], [4] and possibly [6] and a possible trackway [7]. The form of these are suggestive of a prehistoric to Romano-British date. These are located in the eastern part of the study site; with no archaeological features recorded by geophysical survey or aerial imagery across the remainder of the site. In terms of significance of the archaeological remains, these do not appear particularly complex or well-preserved. As such the archaeological remains are considered likely to be of local significance and will not require preservation in situ.
- 4.40** The study site forms part of the agricultural hinterland of known settlement and is considered to have low potential for significant remains dating from the early medieval to post-medieval periods.

**Designated Archaeological Assets**

- 4.41** No statutory designations (Scheduled Ancient Monuments, Registered Battlefields or World Heritage Sites) are located within or adjacent to the study site boundary. None are recorded within the 1km study area.
- 4.42** As such the assessment has not identified any designated archaeological assets which will be negatively impacted by the proposed development.

## 5.0 Built Heritage Assets

### *Introduction*

- 5.1** This section will consider the potential effects of development within the study site on the significance of built heritage assets, including through effects to their settings. This will include heritage assets within the study site, and those in the surrounding area, whose setting may be affected.
- 5.2** The study site contains no building stock, as such this section will consider indirect effects to the built environment only. Within the 1km study site there are two Grade II\* listed buildings and 7 Grade II listed buildings. Non-designated assets are described as unlisted buildings of historic interest. In 2013 Cherwell established a programme of Local Heritage Assets, working with local communities to nominate structures which have a specific local heritage value which will replace the former list. There are no Locally Listed Assets recorded in the OHER search on the Cherwell DC online mapping system, therefore the assessment has identified no non-designated built heritage assets sensitive to change by the proposed development.
- 5.3** Heritage assets and potential impacts will be assessed using best practice, including that set out in Historic England's Good Practice Advice Note 3, The Setting of Heritage Assets. The heritage assets which require assessment have been selected with reference to the National Heritage List for England (NHLE) database held by Historic England, as well as information held by the LPA on conservation areas.
- 5.4** Stage 1 of Historic England's five-stage settings assessment (HistE 2017) requires the assessor to "Identify which heritage assets and their settings are affected" (HistE 2017). There are no strict parameters for the setting of study areas. This has been defined based on the results of the site visit, professional judgement and experience of potential significant direct and indirect effects likely to arise from the Proposed Development:
- A radius of 1 km from the boundary of application site has been used for assessing indirect effects on all non-designated and designated heritage assets.
- 5.5** In some limited cases, some particular assets can have a wider setting which is sensitive, therefore the wider area outside of the search radius was also considered in the preparation of this assessment. No additional heritage assets have been identified.
- 5.6** A site visit was undertaken on 20<sup>th</sup> August 2020 to assess the setting of nearby designated heritage assets. The conditions were sunny and visibility clear. Additional desk-based assessment using Google Earth and maps were also utilised.
- 5.7** The study site occupies an irregular greenfield parcel of land measuring approximately 15 hectares. The study site is located to the south of Green Lane to the south-east of the village of Chesterton. The study site comprises two large enclosed agricultural fields containing no building stock. The study site is bound to the north by Green Lane, to the west an unnamed road leading to Little Chesterton, modern development fronting Vespasian Way to the

north-east, and agricultural fields to the south-east and south. The study site forms two agricultural fields which are bound by mature, high vegetation along the north, north-west and eastern boundaries. Open views of the modern residential development were visible to the north. The study site is generally flat with views beyond the study site generally screened by existing vegetation. Green Lane is a single carriageway with high vegetation on either side with occasional glimpsed views of the study site. Existing modern development provides a visual boundary and degree of separation between the majority of the study site and the historic core of Chesterton. For this reason, it is clear that no harm to the significance of the following listed assets within Chesterton will result from the proposed development: Stables and Coach Houses northwest of Chesterton Lodge (NHLE 1241628); Bridge c.200m north-east of Lodge Farmhouse (not included) (NHLE 1200177); 4 Tubbs Lane (NHLE 1200194); 6 Tubbs Lane (NHLE 1046536); Manor Farmhouse (NHLE 1369747); Thatchover (NHLE 1046535); Ivy Cottage including front garden area railings and gate to west (NHLE 1276742). These range between 200-400m in distance to the study site and as such no non-visual impacts are anticipated. As such, further assessment is not necessary.



**Plate 5:** View from south-west of the study site towards the Chesterton Recreation Ground and Chesterton Conservation Area (view north)



Plate 6: View from north-east of the study site towards the Grade II\* Listed St Marys Church (dir. north-east)



Plate 7: View towards Chesterton Conservation Area and modern residential development north of study site (dir. east)



**Plate 8:** Road around Chesterton House immediately east of study site, with Chesterton Conservation Area (dir. north)



**Plate 9:** Green Lane (dir. west)

### Designated assets requiring assessment

- 5.8** The following designated assets have the potential to be affected by the proposed development.
- Chesterton Conservation Area immediately west of the study site;
  - Grade II\* Church of St Mary c. 300m north of the study site; and

- Grade II Chesterton Lodge including forecourt balustrade immediately west c. 170m east of the study site.

## Heritage Assets

### *Chesterton Conservation Area*

- 5.9** The study site lies immediately west of the Chesterton Conservation Area, which was designated in March 1988. The Chesterton Conservation Area was reviewed in 1995 and subsequently updated in 2008. The updated appraisal was approved by the Council's Executive on 4<sup>th</sup> February 2008. The appraisal is now a material consideration in the determination of planning applications within the conservation area and its setting.
- 5.10** The Conservation Area is divided into separate areas, the study site lies immediately adjacent to the Chesterton Lodge Character Area. This is described as a, 'self contained character area within the village comprising the house, grounds and outbuildings of the former Chesterton lodge, now Bruern Abbey School' (Cherwell District Council, 2008). The following summarises the attributes and qualities of this part of the Conservation Area:
- *Land use: Chesterton Lodge was originally constructed as a gentleman's residents for a local banker Henry Tubb from Bicester. The buildings first use as a school is reported to be in 1955 when a preparatory school called Audley House was situated there. The stables and coach house once of Chesterton Lodge have now been converted into residential apartments.*
  - *Building age, type and style: Local knowledge suggests that Chesterton Lodge was constructed in 1890 for Henry Tubb in an Italianate style. The coach house and stables were also thought to have been constructed at this time. The building is designed on a classical plan form with one central building with two smaller proportionate wings either side. This forms a symmetrical plan which appears to have had little external alterations to accommodate its current educational use. The pitches at the front of the building provide a good use of open parkland and retain the expansive views of the main building and balustrade, which is listed along with the rest of the building.*
  - *Scale and massing: The character area is made up by the grounds of Chesterton Lodge. The grounds are secluded from view, but open up into large parklands with trees located sporadically throughout. The area includes only two buildings of worthy mention, which are some of the tallest within the village at over 2.5 storeys.*
  - *Construction and Materials: Both the main buildings are constructed of limestone with freestone dressings and incorporate slate roofs. The buildings display a variety of windows including the notable segmental headed sash windows in the coach house and stable to the two large 2 storey bow windows on the south side of the main house.*
  - *Means of enclosure: The boundary of Chesterton Lodge is either trees and dense greenery or stone walls of slightly over 1 metre in height. The walls*



*are predominantly roughly coursed dry stone walls and incorporate a traditional coping with stones laid at right angles to the courses.*

- *Trees, hedges, verges, open space: Tree cover is highly important to the character of this area. Trees line the east, south and west boundaries and are extremely prominent in the approach to the Conservation area from the south and east. This greenery is important as it defines this area and the development of the village. The parkland of Chesterton Lodge, once described as pleasure grounds were, by the middle of the 18th Century improved and were further improved by the end of the 18th Century, when permission was obtained to divert the line of Akeman Street to enable the construction of the current building and to further extend the grounds.*
- *Threats: The character of this area is formed by the open parklands of Chesterton Lodge and the greenery contained within and along its boundary. It is therefore important that these elements are protected as their loss would completely transform the appearance of the area.*

**5.11** As outlined in the Chesterton Lodge Character Area Visual Analysis illustration (Plate 10), positive views are noted in the south-west and north-west corner of the study site. No key or distant views are recorded. The boundary of the Conservation Area is visible at a distance as a large mature tree line. As detailed above, this greenery is important it as it defines this area and the development of the village. No direct views of the Lodge or designed grounds are visible from beyond the edge of the Conservation Area. The Conservation Area is bordered by large enclosed agricultural lands to the east and south with recreational ground to the west. The study site forms enclosed agricultural land to the south-west of the Conservation Area.

**5.12** The study site, currently agricultural in character, forms part of the wider rural setting of the Conservation Area. There is limited visibility at ground level with the Conservation Area due to existing vegetation. The contribution that the study site makes to the setting of the designation relates to the ability to visually appreciate the historic boundary and semi-rural context of the Conservation Area. Development within the study site that would obstruct or visually detract from this visual appreciation has the potential to impact its setting and significance.

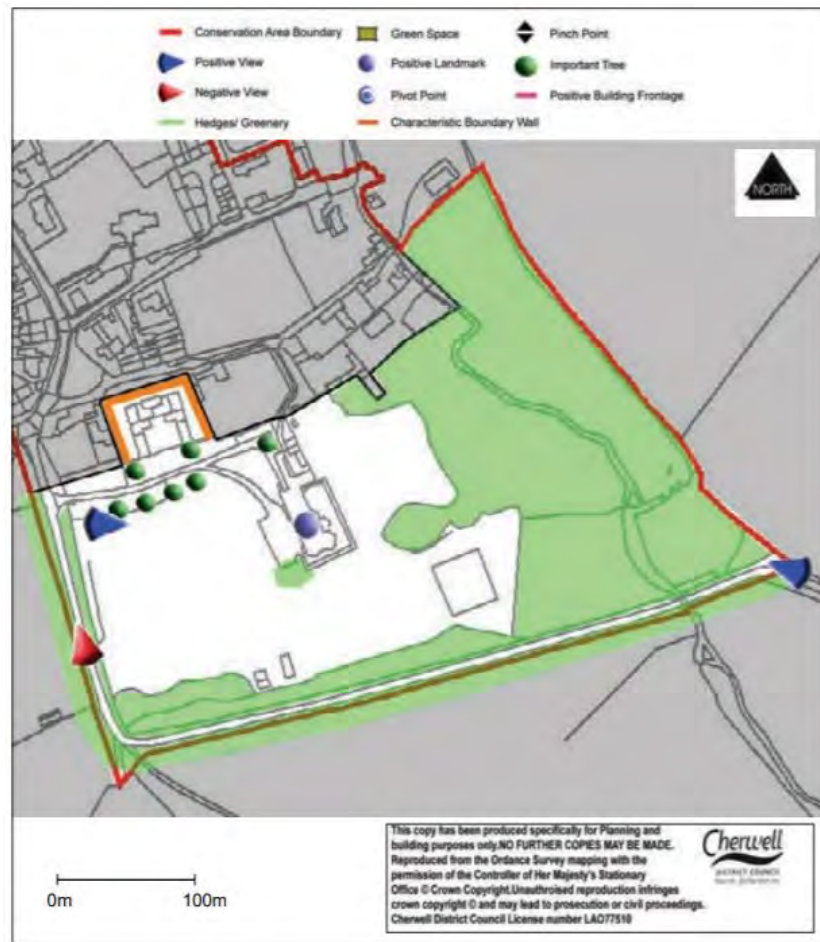


Plate 10: Chesterton Lodge Character Area Visual Analysis (Cherwell District Council 2008)

### Listed Buildings

5.13 The study site does not contain any listed buildings. The following listed buildings have been identified for assessment based on their proximity to and potential visual connections with the study site:

- Grade II\* Church of St Mary c. 300m north of the study site; and
- Grade II Chesterton Lodge including forecourt balustrade immediately west c. 170m east of the study site.

#### Grade II\* Church of St Mary (NHLE 1300898)

*Church. Late C12, C13, C14 and C15; restored 1866 by F.C. Penrose. Limestone rubble, partly rendered, with ashlar dressings; lead roofs. Chancel, aisled nave, west tower and south porch. Chancel has two 2-light Decorated windows to south but has C13 lancet low-side windows, cusped to south, and a C13 priests' door with a renewed shouldered arch; east window is of 1852 and the parapet is probably C15. Narrow south aisle has a 2-light Decorated window with geometrical tracery and 3 square-headed C15 windows. South porch is probably C14 but the entrance arch has been rebuilt though retaining ancient doors; it shelters a simple C14 doorway. Rendered north aisle is restored, with C19 windows to east and west, but it retains a blocked chamfered doorway and 2 square-headed windows, one with Perpendicular*

*tracery. C15 clerestory has square-headed windows of 2 trefoiled lights. 3-stage C14 tower has a 2-light west window with reticulated tracery, and has similar bell-chamber openings; the solid parapet has a frieze of quatrefoils. Interior: chancel has a C14 triple sedilia with free-standing shafts and ball-flower ornament plus traces of painted decoration; rectangular double-bowl piscina and aumbry, above, also have some painted patterning. Roof is dated 1857. Chancel arch has detached shafts with stiff-leaf capitals. Transitional north arcade of 3-bay nave has pointed arches on round piers with scalloped capitals; taller C13 south arcade has moulded capitals. Nave roof with moulded cambered beams and moulded purlins is probably C15/C16, but aisle roofs are C19. Fittings include a plain tub font with an elaborate C18 wrought-iron finial and arched crane, plus several pieces of C16 and C17 woodwork incorporated into furnishings and a fine C17 communion table with carved baluster legs. Memorials include a brass to William Maunde (died 1612) and his wife. Wrought-iron chandeliers have details similar to the font ironwork and may be contemporary. (V.C.H.; Oxfordshire, Vol. VI, p.102; Buildings of England: Oxfordshire, pp.617-8).*

- 5.14** The significance of the church relates primarily to its architectural, evidential and communal values as a medieval and post-medieval place of worship and place of burial. Its immediate setting, the churchyard and the wider village setting contribute to its significance by providing an appreciation of its historic interest. The church does not form a prominent visual marker in the wider area due to the flat topography, existing vegetation and intervening modern development. Occasional glimpsed views of the church tower were noted from the north-east of the study site; no views were possible from the west or south of the study site.
- 5.15** The study site makes a very limited contribution to the setting of the designation; residential scale development within the majority of the study site is unlikely to obstruct or visually detract from this visual appreciation has the potential to impact its setting and significance. The placement of tall development in the east of the study site would have the potential to alter the visual experience of the church when experienced in its immediate setting.

Grade II Chesterton Lodge including forecourt balustrade immediately west (NHLE 1241627)

*Country house. 1890; for Henry Tubb, a banker of Bicester. Coursed dressed limestone with freestone dressings. Slate hipped roofs with lead roll hips and ridge and moulded stone eaves cornice. Stone axial stacks with cornices. PLAN: Central 3-storey block with entrance and stairhall, flanking 2-storey wings and service wing on left [north]. Italianate style. EXTERIOR: 3-storey 2:2:2 bay centre block with superimposed orders with Composite pilasters, entablatures, pedimented centre bay with acroteria, rusticated corner pilasters and central doorway in antis with tripartite window above with balustrade. 2-storey 2:2 bay flanking wings with tripartite sashes on the ground floor and paired sashes with scrolled pediments. The right [south] wing projects at the rear and has two large 2-storey bow windows on its south side. 2:5:4 bay east garden front. Service wing on north side has tower with balustraded parapet. Centre block has wooden lantern over centre. INTERIOR: Elaborate intact interior with large central stairhall. INCLUDING balustrade to*

*forecourt immediately west of house. SOURCES : Buildings of England, p. 618. Kelly's Directory.*

- 5.16** The significance of the lodge relates primarily to its architectural, evidential and historic values as a post-medieval country house and the principal building of Chesterton. The landscaped grounds of the house and associated listed structures form its immediate setting and contribute to its significance. The grounds and boundary also form part of the Chesterton Conservation Area. The boundary of the grounds is formed by a large mature tree line. No direct views of the Lodge or designed grounds are visible from beyond the edge of the grounds above the existing treeline. The grounds of the lodge are bordered by large enclosed agricultural lands to the east and south with recreational ground to the west. The historic core of Chesterton is located to the north.
- 5.17** The study site, currently agricultural in character, forms part of the wider rural setting of the Conservation Area. There is limited visibility at ground level with the listed Lodge due to existing vegetation. The contribution that the study site makes to the setting of the designation relates to the ability to visually appreciate the historic boundary and semi-rural context of the Lodge. Development within the study site that would obstruct or visually detract from this visual appreciation has the potential to impact its setting and significance.

## 6.0 Proposed Development Proposed Development and Predicted Impact on Designated and Non-Designated Heritage

### Site Conditions

- 6.1 The study site occupies an irregular greenfield parcel of land measuring approximately 15 hectares. The study site is located to the south of Green Lane to the south-east of the village of Chesterton. The study site comprises two large enclosed agricultural fields containing no building stock. The study site is bound to the north by Green Lane, to the west an unnamed road leading to Little Chesterton, modern development fronting Vespasian Way to the north-east, and agricultural fields to the south-east and south. The study site forms two agricultural fields which are bound by mature, high vegetation along the north, north-west and eastern boundaries. Open views of the modern residential development were visible to the north. The study site is generally flat with views beyond the study site generally screened by existing vegetation.

### The Proposed Development

- 6.2 The assessment has been commissioned by Wates Developments Ltd in relation to the proposed residential development of the study site. The development comprises the construction of c. 150 residential units across the north-west and north-east part of the study site. Managed woodland is proposed across the south-west of the study site and allotments in the south-east. The eastern limit of the study site, comprises an area of open space, a bowling green and recreational / community facilities.



Plate 11: Draft masterplan (Boyer January 2022)

### Potential Archaeological Impacts and Mitigation Measures

- 6.3 Development of the study site will have below-ground impacts associated with foundations, utilities and landscaping which have the potential to truncate or

erase archaeological deposits, if present. This includes potential re-planting and landscaping associated with the proposed woodland and allotments in the south of the study site.

- 6.4** The study site contains no finds or features recorded on the Oxfordshire Historic Environment Record, however, recently completed magnetometer survey (SUMO 2022; Appendix B) has recorded several magnetic responses which are clearly of archaeological interest; they comprise small 'rings' [1] and [2], rectilinear enclosures [3], [4] and possibly [6] and a possible trackway [7]. The form of these are suggestive of a prehistoric to Romano-British date. These are located in the eastern part of the study site; with no archaeological features recorded by geophysical survey or aerial imagery across the remainder of the site.
- 6.5** It is noted that the geophysical survey and aerial imagery assessment conclusions correspond. The identification of cropmarks to the west of the site further supports the conclusion that the majority of the site has low archaeological potential.
- 6.6** In terms of significance of the identified archaeological remains, these do not appear particularly complex or well-preserved. As such the archaeological remains are considered likely to be of local significance and will not require preservation in situ. The archaeological interest of the site could be secured by a programme of archaeological works as a condition of outline planning consent; early consultation with the LPA Archaeological Advisor is advised.
- 6.7** The assessment has identified no designated archaeological assets in the wider area that are sensitive to change by the proposed development by effects to their setting.

#### Potential Impacts on Designated Heritage Assets

- 6.8** The study site contains no designated or non-designated built heritage assets. As outlined in section 5, the development of the site has the theoretical potential to have indirect impacts on Chesterton Conservation Area, Grade II\* Church of St Mary and Grade II Chesterton Lodge including forecourt balustrade.
- 6.9** By virtue of their designation as listed buildings, those identified in the vicinity of the study site are a nationally important component of the historic environment resource.
- 6.10** In order to understand how any new development could affect the significance of these heritage assets, it is important to understand the specific heritage values which combine to inform that significance. An understanding of the contribution setting makes to its significance is also considered.

#### *Chesterton Conservation Area*

- 6.11** The eastern limit of the study site lies immediately adjacent to the Chesterton Conservation Area. As such this area of the study site is considered sensitive to change by proposed development. It is noted from the site visit that the boundary of the Conservation Area at this location is well screened by dense mature vegetation and no clear views of the built form within the Conservation Area was identified. The study site, currently agricultural, and forms part of the wider rural setting of the designation. The contribution that the study site

makes to the setting of the designation relates to the ability to visually appreciate the historic boundary and semi-rural context of the Conservation Area. Development within the study site that would obstruct or detract from this visual appreciation has the potential to impact its setting and significance.

- 6.12** The proposed masterplan retains open space and low scale development in this part of the Application Site to ensure that views towards or from the Conservation Area are not harmed. Subject to the restriction of building height and density in this area significant effects to Chesterton Conservation Area are not anticipated.

*Grade II\* Church of St Mary (NHLE 1300898)*

- 6.13** Grade II\* listed Church of St Mary lies c. 300m north of the study site. Based on the results of the site visit, occasional glimpsed views of the church tower were noted from the north-east of the study site only. The church does not form a prominent visual marker in the wider area due to the flat topography, existing vegetation and intervening modern development. Its immediate setting, the churchyard and the wider village setting contribute to its significance by providing an appreciation of its historic interest. This will be unchanged by the proposed development.

- 6.14** The study site makes a very limited contribution to the setting of the designation; residential scale development within the majority of the study site is unlikely to obstruct or visually detract from the church. Significant effects to the setting or significance of Church of St Mary are not anticipated.

*Grade II Chesterton Lodge including forecourt balustrade immediately west (NHLE 1241627)*

- 6.15** Grade II Chesterton Lodge including forecourt balustrade immediately west c. 170m east of the study site. The landscaped grounds of the house and associated listed structures form its immediate setting and contribute to its significance. This will be unchanged by the proposed development. The eastern edge of the study site lies immediately adjacent to the boundary of the Chesterton Lodge grounds. There is limited visibility at ground level with the listed Lodge due to existing vegetation. The contribution that the study site makes to the setting of the designation relates to the ability to visually appreciate the historic boundary and semi-rural context of the Lodge.

- 6.16** The proposed masterplan retains open space and low scale development in the eastern part of the study site to ensure that views towards or from the listed Lodge or its grounds are not harmed. Subject to the restriction of building height and density in this area significant effects to Chesterton Lodge are not anticipated.

## 7.0 Summary and Conclusions

- 7.1** This historic environment desk-based assessment considers land south of Green Lane, Chesterton, Oxfordshire (Figure 1). It has been researched and prepared by Orion Heritage on behalf of Wates Developments Ltd. The site (hereinafter referred to as the “study site”) is located at grid reference SP 55785 20986. It has been prepared to inform an outline planning application of the site. The proposals include the construction of c. 150 residential houses.
- 7.2** The study site contains no finds or features recorded on the Oxfordshire Historic Environment Record, however, recently completed magnetometer survey (SUMO 2022; Appendix B) has recorded several magnetic responses which are clearly of archaeological interest; they comprise small ‘rings’ [1] and [2], rectilinear enclosures [3], [4] and possibly [6] and a possible trackway [7]. The form of these are suggestive of a prehistoric to Romano-British date. These are located in the eastern part of the study site; with no archaeological features recorded by geophysical survey or aerial imagery across the remainder of the site.
- 7.3** The archaeological remains are considered likely to be of local significance and will not require preservation in situ. The archaeological interest of the site could be secured by a programme of archaeological works as a condition of outline planning consent; early consultation with the LPA Archaeological Advisor is advised.
- 7.4** The assessment has identified no designated archaeological assets in the wider area that are sensitive to change by the proposed development by effects to their setting.
- 7.5** The study site contains no designated or non-designated built heritage assets. The setting of designated and non-designated heritage assets in the wider area has been considered and no significant effects are anticipated.



## Sources

### General

British Library

The National Archives

Oxfordshire Historic Environment Record

### Cartographic

1574 Oxonii, Buckinghamiae et Berceariae Comitatum, BL Ref Royal MS. 18. D.III f.30

c1764-68 Pre-enclosure map

1815 Ordnance Survey Drawing, BL Ref OSD 223

fields between Chesterton Magna and Chesterton Parva.

1822 Map of the County of Oxford by A. Bryant, BL Ref Maps C.44.d.57.(1.)

1884-85 Ordnance Survey 10,560 Map

1923 Ordnance Survey 10,560 Map

1947 Aerial Photograph

1955 Ordnance Survey 10,000 Map

1970 Ordnance Survey 10,000 Map

1999 Ordnance Survey 10,000 Map

2020 Ordnance Survey 10,000 Map

### Websites

Archaeological Data Service – [www.ads.ahds.ac.uk](http://www.ads.ahds.ac.uk)

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## APPENDIX A – GAZETTEERS

### GAZETTEER OF ARCHAEOLOGICAL ASSETS (Figure 2)

In order to understand the nature and extent of the surrounding archaeological resource, a study area of a 1km radius from the centre of the study site was adopted. The following gazetteer represents all of the entries from the Oxfordshire Historic Environment Record. Where previously unrecorded heritage assets are identified, these will be given an Orion reference e.g. (Orion X), otherwise, these will be referenced by the Oxfordshire Historic Environment Record.

#### Abbreviations:

**OHER:** Oxfordshire Historic Environments Record

**Prefref:** Oxfordshire Historic Environments Record monument identification reference number

OHER Prefref/ ORION REF.	NAME	SUMMARY	TYPE	DATE
28497	RECTANGULAR ENCLOSURE WITH INTERIOR CURVILINEAR ENCLOSURE	AERIAL PHOTOGRAPHIC EVIDENCE OF LARGE RECTANGULAR ENCLOSURE WITH POSSIBLE INTERIOR ENCLOSURE AND PITS.	CURVILINEAR ENCLOSURE?; RECTANGULAR ENCLOSURE; PIT	UNKNOWN
2547	MESOLITHIC QUARTZITE MACEHEAD	RECORDED ON OS RECORD CARD. MARGINAL	FINDSPOT	MESOLITHIC
28294	OCCUPATION, MORTUARY AND AGRICULTURAL ACTIVITY ON OUTSKIRTS OF ALCHESTER ROMAN TOWN	EPHEMERAL LATER PREHISTORIC OCCUPATION, ROMANO-BRITISH AGRICULTURAL AND MORTUARY ACTIVITY. POST-MEDIEVAL OR LATER FARMING ACTIVITY DISCUSSED IN PRN29679.	FINDSPOT; CREMATION BURIAL; OCCUPATION SITE; TRACKWAY; DITCH; ENCLOSURE; PIT; POST HOLE; GULLY	EARLY NEOLITHIC TO ROMAN
16075	NEOLITHIC TO BRONZE AGE AXEHEAD	FLINT AXEHEAD FOUND IN FIELD NEAR BICESTER BY TRAVELLING VETERAN DURING LAST WAR.	FINDSPOT	LATE NEOLITHIC TO EARLY BRONZE AGE
16213	BRONZE AGE TO IRON AGE ACTIVITY (A421 CROSSROADS AT CHESTERTON LANE)	SITE A. EXCAVATIONS HAVE REVEALED AN ISOLATED BRONZE AGE BURIAL AND EVIDENCE OF LATE IRON AGE ACTIVITY ADJACENT TO GAGLE BROOK.	SETTLEMENT; CREMATION; FIELD SYSTEM	LATE NEOLITHIC TO ROMAN
13906	BRONZE AGE RING DITCH (500M S OF AKEMAN STREET)	SINGLE RING DITCH IDENTIFIED FROM NMR AP.	RING DITCH	BRONZE AGE
29256	IRON AGE POSTHOLE, BSA SPORTS HUB	A SINGLE IRON AGE POSTHOLE LOCATED DURING AN EVALUATION.	POST HOLE	IRON AGE
29027	POSSIBLE IRON-AGE/ROMANO-BRITISH TRACKWAY, FIELD SYSTEM	LINEAR ANOMALIES IDENTIFIED BY GEOPHYSICAL SURVEY OF TRACKWAYS AND MULTI-	TRACKWAY; LINEAR FEATURE; ENCLOSURE;	EARLY IRON AGE TO ROMAN

OHHER Prefref/ ORION REF.	NAME	SUMMARY	TYPE	DATE
	AND SETTLEMENT	PHASE SETTLEMENT AND CULTIVATION ACTIVITY	FIELD SYSTEM	
29542	POTENTIAL IRON AGE SETTLEMENTS	APPARENT DISCRETE IRON AGE SETTLEMENTS WHICH RESEMBLE FARMING ESTABLISHMENTS. RIDGE AND FURROW THOUGHT TO HAVE COVERED AREA BUT NONE SURVIVING AS EARTHWORK.	SETTLEMENT; FARMSTEAD?; ENCLOSURE; DITCH	IRON AGE
16214	MIDDLE IRON AGE TO ROMAN SETTLEMENT (A421 CROSSROADS AT CHESTERTON LANE)	SITES B & C (MAIN EXCAVATION AREA). MAINLY MIA, BUT ALSO ROMAN DITCH AND NEARBY CEMETERY. C5-8 ANGLO-SAXON POTTERY FOUND IN TWO AREAS, AS WELL AS EARLIER MATERIAL.	SETTLEMENT; BOUNDARY DITCH; STRUCTURE; INHUMATION CEMETERY; TRACKWAY; BUILDING; INHUMATION CEMETERY; CORN DRYING OVEN; DITCH; FINDSPOT	MIDDLE IRON AGE TO EARLY MEDIEVAL
13904	BANJO ENCLOSURE AND REGULAR AGGREGATE FIELD SYSTEM (300M S OF ALCHESTER; WITHIN SAM)	SERIES OF LINEAR TRACKWAYS TO WEST OF DORCHESTER/ALCHESTER ROMAN ROAD WITH SOME EXTENSION TO EAST. ALSO LINEAR DITCHES OF PROBABLE FIELD SYSTEM/ENCLOSURES.	BANJO ENCLOSURE; TRACKWAY; AGGREGATE FIELD SYSTEM	LATE IRON AGE TO ROMAN
3058	POSSIBLE ROMAN STONE FOUNDATIONS	APPARENT REMAINS OF ROMAN FOUNDATIONS FOUND IN 1841.	BUILDING	ROMAN
1585	BATH HOUSE AT ALCHESTER	SITE MARKED BY A MOUND OF EARTH KNOWN AS THE 'CASTLE MOUND'.	BATH HOUSE?	ROMAN
14292	ROMANO-BRITISH CEMETERY (SITE C) AT A421 CROSSROADS AT CHESTERTON LANE	LATE RB CEMETERY.	INHUMATION CEMETERY	ROMAN
9949	ROMAN BROOCH	BRONZE DISC BROOCH WITH TEN RADIATING LUGS, FACE WITH CENTRAL FIELD OF BLUE ENAMEL WITHIN RING OF RED ENAMEL; CATCH PLATE AND HINGE ATTACHMENT. DIAMETER = 23MM. FOUND NEAR ALCHESTER BUT EXACT LOCATION UNKNOWN.	FINDSPOT	ROMAN
16581	ROMAN BROOCH FOUND AT GREENFIELD	ROMAN BROOCH, PERHAPS 2ND CENTURY. FOUND C.1997.	FINDSPOT	ROMAN
4935	ROMAN SAMIAN POTTERY (IMMEDIATELY N OF ROMAN ROAD)	A LARGE SHERD OF HEMISPHERICAL BOWL DECORATED WITH ROSETTES AND FIGURES (DRAG. 37) AND DATING	FINDSPOT	ROMAN

OHHER Prefref/ ORION REF.	NAME	SUMMARY	TYPE	DATE
		TO THE 2ND CENTURY AD, LOCATED BENEATH THE ROOTS OF AN UPTURNED ELM TREE ON THE SIDE OF A DITCH PARALLEL TO THE ROMAN ROAD PRN 8921.		
1583	ALCHESTER ROMAN TOWN AND FORT	PLANNED ROMAN SETTLEMENT WITH RAMPART AND DITCH BOUNDARIES. OCCUPIED THROUGHOUT THE ROMAN PERIOD AND PRECEDED BY A POSSIBLE VEXILLATION FORT WITH ASSOCIATED PARADE GROUND.	TOWN; VEXILLATION FORT; RECTANGULAR ENCLOSURE; PARADE GROUND; CREMATION; TRAINING CAMP	ROMAN
8921	AKEMAN STREET (WEST SECTION)	MARGARY ROAD 16B; SECTION OF ROAD FROM ALCHESTER TO CIRENCESTER. SEE ALSO PRN 8920.	ROAD	ROMAN
16452	ROMAN COINS	CA 25 LATE ROMAN COINS FROM A RURAL AREA IN PROXIMITY TO ALCHESTER. SUGGESTIVE OF PRESENCE OF VILLA OR SETTLEMENT NEARBY.	FINDSPOT	ROMAN
28649	ROMAN ENCLOSURE AND UNDATED DITCH	EARLIEST EVIDENCE WAS AN EBA ARROWHEAD, BUT TRENCHES REVEALED RECTILINEAR ENCLOSURE IDENTIFIED BY GEOPHYSICAL SURVEY.	RECTILINEAR ENCLOSURE; BOUNDARY DITCH	ROMAN
1591	MEDIEVAL BUILDING (SITE OF)	EARTHWORKS IN CENTRE OF CHESTERTON ORIGINALLY THOUGHT TO BE ROMAN FORT. NOW KNOWN TO BE REMAINS OF 13TH CENTURY BUILDING. MEDIEVAL POTTERY FINDS IMPLY THAT OCCUPATION STOPPED IN 14TH CENTURY	FORT; BUILDING	ROMAN TO MEDIEVAL
16579	MEDIEVAL OBJECTS WITH ROMAN BROOCH FOUND NEAR BICESTER	C14-15 COLLECTION, INCLUDING HORSESHOE, BELT PLATE, MEDIEVAL SEAL DIE, AND DRESS FASTENER FOUND NEAR BICESTER C. 13/12/2000; AM ID FORM FILED IN DRF.	FINDSPOT	ROMAN TO MEDIEVAL
26417	ANGLO SAXON/MEDIEVAL PIT AND DITCH, MANOR FARM LANE	WATCHING BRIEF LOCATED AN ANGLO SAXON/MEDIEVAL RUBBISH PIT AND A CONTEMPORARY DITCH.	RUBBISH PIT; DITCH	EARLY MEDIEVAL/DARK AGE TO MEDIEVAL
4986	MEDIEVAL DITCHES AND PIT (SE OF CHURCH OF ST MARY)	DITCHES AND A PIT DATING FROM THE C12TH TO THE C13TH HAVE BEEN LOCATED BY MEMBERS OF THE OUAS	DITCH; PIT	MEDIEVAL
9402	SITE OF MEDIEVAL	IN 1179 THAME ABBEY HAD A GRANGE AT	GRANGE	MEDIEVAL

OHHER Prefref/ ORION REF.	NAME	SUMMARY	TYPE	DATE
	GRANGE (THAME ABBEY)	CHESTERTON AND SITE IS BELIEVED TO BE AT GRANGE FARM, LITTLE CHESTERTON.		
28484	PROBABLE ENCLOSURE, LINEAR DITCH AND POSSIBLE PITS AND DITCHES	MAGNETOMETER SURVEY RESULTS INDICATE THE PRESENCE OF CUT FEATURES OF ARCHAEOLOGICAL POTENTIAL IN THE FORM OF A RECTILINEAR ENCLOSURE AND LINEAR DITCH. SEVERAL OTHER DISCRETE ANOMALIES MAY BE CUT PIT AND DITCH FEATURES.	RIDGE AND FURROW; ENCLOSURE; DITCH; PIT?	MEDIEVAL
861	BIGNELL DESERTED MEDIEVAL VILLAGE	FORMERLY THE MANOR OF BIGENHULL RECORDED C.1700. MODERN HOUSES COVER SUSPECTED SITE, NO VISIBLE REMAINS. VILLAGE WAS DESERTED BETWEEN 1350 AND 1450.	DESERTED SETTLEMENT	MEDIEVAL
16961	MEDIEVAL SILVER STRAP END FROM BICESTER	FOUND FROM METAL DETECTING IN SEPT 2001; LATE MEDIEVAL. POSSIBLY ST JEROME.	FINDSPOT	MEDIEVAL
29228	SITE OF MANOR HOUSE	PROBABLY C14TH MANOR HOUSE.	MANOR HOUSE; FARMHOUSE; ESTATE COTTAGE	MEDIEVAL TO POST MEDIEVAL
29227	SITE OF MEDIEVAL CHAPEL	PRIVATE C14TH CHAPEL ATTACHED TO THE MEDIEVAL MANOR-HOUSE.	CHAPEL	MEDIEVAL TO POST MEDIEVAL
5108	CHURCH OF ST MARY, MANOR FARM LANE, GREAT CHESTERTON	LATE C12, C13-C15. RESTORED IN 1865 BY F.C. PENROSE.	CHURCH	MEDIEVAL TO POST MEDIEVAL
5108	CHURCH OF ST MARY, MANOR FARM LANE, GREAT CHESTERTON	LATE C12, C13-C15. RESTORED IN 1865 BY F.C. PENROSE.	CHURCH	MEDIEVAL TO POST MEDIEVAL
12700	MANOR FARM HOUSE, MANOR FARM LANE	EARLY C12 AND C16/17, REMODELLED LATE C18.	MANOR HOUSE; HALL HOUSE	MEDIEVAL TO POST MEDIEVAL
4369	SITE OF MANOR FARM MILL	THE WALLS OF A WHEEL SPACE ON THE SMALL STREAM MARK THE REMAINS OF A MILL. SITE ONLY. WHEEL MISSING, PROBABLY UNDERSHOT.	WATERMILL	POST MEDIEVAL
16295	WELL AT CHESTERTON LODGE	LIMESTONE CONSTRUCTION; 19M DEEP; 70 CM DIAMETER. STILL WATERFILLED; NO DATING EVIDENCE. VISIBLE ON C18 MAPS IN SETTLED AREA; MAY BE COEVAL WITH FIRST CHESTERTON LODGE IN C.	WELL	POST MEDIEVAL

OHHER Prefref/ ORION REF.	NAME	SUMMARY	TYPE	DATE
		1800. ROMAN DATE CANNOT BE RULED OUT.		
18114	BRIDGE APPROXIMATELY 200 METRES NORTH EAST OF LODGE FARMHOUSE (NOT INCLUDED)	ROAD BRIDGE. PROBABLY C18	ROAD BRIDGE; SITE	POST MEDIEVAL
18117	THATCHOVER, ALCHESTER ROAD, GREAT CHESTERTON	HOUSE, FORMERLY SUBDIVIDED. C17	HOUSE; SITE	POST MEDIEVAL
18120	NO 4 TUBBS LANE GREAT CHESTERTON	HOUSE. C17 OR POSSIBLY EARLIER	HOUSE; SITE	POST MEDIEVAL
18121	CHESTERTON LODGE INCLUDING FORECOURT BALUSTRADE IMMEDIATELY WEST	COUNTRY HOUSE. 1890; FOR HENRY TUBB, A BANKER OF BICESTER	SERVICE WING; COUNTRY HOUSE; SITE; BALUSTRADE	POST MEDIEVAL
18122	STABLES AND COACH HOUSES NORTH WEST OF CHESTERTON LODGE	STABLES AND COACH HOUSES. PROBABLY 1890; FOR HENRY TUBB, A BICESTER BANKER	COURTYARD; COACH HOUSE; CLOCK TOWER; STABLE; WALL; GATE PIER; SITE	POST MEDIEVAL
29679	POST-MEDIEVAL FEATURES ON OUTSKIRTS OF ALCHESTER ROMAN TOWN	FEATURES DATING TO THE POST-MEDIEVAL REVEALED DURING EVALUATION AND EXCAVATION. EARLIER FEATURES DISCUSSED IN PRN28294.	POND; LAYER; GULLY	POST MEDIEVAL
29226	BIGNELL HOUSE	19TH-CENTURY MANSION BUILT BY THE ARCHITECT W. WILKINSON	COUNTRY HOUSE; STABLE; ESTATE LAUNDRY; HOUSE	POST MEDIEVAL TO MID 20TH CENTURY
18118	IVY COTTAGE INCLUDING FRONT GARDEN AREA RAILINGS AND GATE TO WEST, ALCHESTER ROAD	HOUSE. CIRCA 1840; EXTENDED CIRCA LATE C19 OR C20	RAILINGS; GATE; HOUSE; HOUSE; SITE	POST MEDIEVAL TO 20TH CENTURY
18119	NO 6 TUBBS LANE GREAT CHESTERTON	COTTAGE, PROBABLY FORMERLY A MILL HOUSE. 1769 ON DATESTONE, PART POSSIBLY EARLIER: EXTENDED C20	MILL HOUSE; DATE STONE; HOUSE; HOUSE; SITE	POST MEDIEVAL TO 20TH CENTURY

## GAZETTEER OF ARCHAEOLOGICAL EVENTS (Figure 3)

The following gazetteer represents all intrusive events recorded by the OHER within the 1km study area.

### Abbreviations:

**OHER:** Oxfordshire Historic Environments Record

**EVUID:** Oxfordshire Historic Environments Record event identification reference number

OHER EVUID	NAME	DESCRIPTION
EOX1205	M40 INVESTIGATIONS	WATCHING BRIEF ALONG ROUTE OF M40; AKEMAN ST PARTLY SECTIONED BY BRIDGE FOUNDATIONS. DITCHES NOT VISIBLE, BUT METALLED SURFACE FOUND.
EOX1206	M40 INVESTIGATIONS	WATCHING BRIEF ALONG M40; SECTION S OF PRESENT CHESTERTON LANE REVEALED ROUGH STONE COBBLE EXPOSED IN 2 TRENCHES.
EOX1789	EXCAVATIONS IN THE EXTRAMURAL SETTLEMENT OF ROMAN ALCHESTER	TRIAL TRENCHING ALONG THE A41 (FORMERLY A421) WENDLEBURY - BICESTER DUALLING
EOX2791	LAND ADJACENT TO RED COW PUBLIC HOUSE	WB CARRIED OUT DURING EXCAVATION OF FOOTINGS PRIOR TO THE CONSTRUCTION OF A HOUSE. NO ARCHAEOLOGICAL FEATURES WERE IDENTIFIED BUT DISTURBANCE WAS IDENTIFIED ASSOCIATED WITH THE LANDSCAPING OF THE BEER GARDEN AND THE USE OF THE SITE AS A BOTTLE DUMP. ALL
EOX2839	GREEN LANE	DESPITE INVESTIGATION OF 19 SOIL ANOMALIES, VERY FEW FEATURES CERTAINLY OF MAN-MADE ORIGIN WERE FOUND, THE BEST BEING A STONE-LINED DRAIN. NONE OF THESE FEATURES WERE DATED AND NO PRE-MODERN ARTEFACTS WERE RECOVERED AS STRAY FINDS FROM THE TRENCH SPOILHE
EOX2893	THE TITHE BARN, MANOR FARM LANE	WATCHING BRIEF LOCATED ANGLO SAXON/MEDIEVAL PIT AND CONTEMPORARY DITCH. WATCHING BRIEF OCCURRED DURING MONITORING OF AREA FOR NEW BUILD AND EXCAVATION FOR NEW FOUNDATIONS AND SERVICES.
EOX2953	LINEAR A421 WENDLEBURY-BICESTER DUALLING	ANALYSIS OF THE 1991 EXCAVATIONS PRODUCED EVIDENCE FOR NEOLITHIC ACTIVITY, A BRONZE AGE BURIAL, MIDDLE IRON AGE SETTLEMENT, EXTENSIVE ACTIVITY THROUGHOUT THE ROMAN PERIOD AND ANGLO SAXON BURIALS.
EOX5795	LAND NORTH OF GREEN LANE	A DETAILED MAGNETOMETER SURVEY WAS UNDERTAKEN WITHIN TWO LAND PARCELS, TOTALLING APPROXIMATELY 2.6HA, AHEAD OF A PROPOSED RESIDENTIAL DEVELOPMENT. THE NORTH EASTERN PART OF THE SITE CONTAINED SHORT GRAZED GRASS AND THE AREA TO THE SOUTH WEST CONTAINED A
EOX6136	LAND W OF CHESTERTON	WESSEX ARCHAEOLOGY WAS COMMISSIONED BY TAYLOR WIMPEY OXFORDSHIRE TO UNDERTAKE AN



OTHER EVUID	NAME	DESCRIPTION
		ARCHAEOLOGICAL EVALUATION ON LAND WEST OF CHESTERTON AS PART OF A PROGRAMME OF ARCHAEOLOGICAL INVESTIGATION CARRIED OUT PRIOR TO PROPOSED RESIDENTIAL DEVELOPMENT AT THE SITE
EOX64	GREEN LANE	LOCATED AT E END OF CHESTERTON OPPOSITE ROW OF HOUSES KNOWN AS "THE GREEN." TOPSOIL STRIPPED.
EOX6482	BURNEHYLL COMMUNITY WOODLAND	FLUXGATE MAGNETOMETER SURVEY ACROSS C.36.4HA AREA OF LAND (C. 40.16 HA AREA, OF WHICH C.4.6HA COULD NOT BE SURVEYED DUE TO CONSTRUCTION RELATED ACTIVITY). THE SURVEY TECHNIQUE RESPONDED WELL TO THE ENVIRONMENT. A POSSIBLE IRON AGE/ROMANO-BRITISH TRACKWAY
EOX6672	EVALUATION AT BSA SPORTS HUB, GREEN LANE, CHESTERTON	EVALUATION UNDERTAKEN TO INFORM THE EXTENSION OF THE EXISTING BICESTER SPORTS FACILITIES. DUE TO LAST MINUTE CHANGES TO THE SPECIFICATION OF WORK REQUESTED BY THE CLIENT ONLY 24 OF THE PROPOSED 40 TRENCHES WERE EXCAVATED. THE WORK FOLLOWED ON FROM A DESK
EOX689	THE OLD MANOR HOUSE	ARCHAEOLOGICAL OBSERVATIONS AND PHOTOGRAPHS OF UNDERCROFT, RARE C12 SURVIVAL OF UTILITARIAN NATURE. ALL PROPOSED ALTERATIONS WILL NOT IMPINGE ON UNDERCROFT.
EOX835	THE OLD MANOR HOUSE	ATTENTION WAS GIVEN TO THE C12TH UNDERCROFT, WHICH SURVIVES BECAUSE OF STONE CONSTRUCTION. GOOD STATUS INDICATOR. A BRIEF WALK WAS TAKEN AROUND THE INTERIOR OF THE HOUSE TO ASCERTAIN THE OVERALL RELATIONSHIP OF THE PARTS. DETAILED HISTORICAL ACCOUNT.
EOX1786	EXCAVATIONS IN THE EXTRAMURAL SETTLEMENT OF ROMAN ALCHESTER	EXCAVATION PROCEEDED AFTER EVALUATION REVEALED BA CREMATION URN; EXCAVATION AREA (16X40M) DESIGNED TO LOCATE ANY OTHER BA BURIALS; NONE FOUND.
EOX1788	EXCAVATIONS IN THE EXTRAMURAL SETTLEMENT OF ROMAN ALCHESTER	MAJOR EXCAVATION AHEAD OF ROAD CONSTRUCTION. TWO SITES UNCOVERED NEOLITHIC AND BRONZE AGE FLINTWORK, MIDDLE IRON AGE SETTLEMENT, EXTENSIVE ROMAN SETTLEMENT AND LATE ROMAN BURIALS.
EOX5457	CONSTRUCTION OF PARK AND RIDE FACILITY	AN EVALUATION CARRIED OUT ON THE C. 2.04HA SITE OF A PROPOSED PARK AND RIDE SITE TO THE SOUTH OF BICESTER, ON THE NW PERIPHERY OF THE EXTRA-MURAL SETTLEMENT OF ALCHESTER ROMAN TOWN. SEVENTEEN TRENCHES WERE EXCAVATED AND ARCHAEOLOGY POTENTIALLY ASSOCIATED
EOX6409	BICESTER A41 PARK AND RIDE	STRIP, MAP AND RECORD OF C. 0.8HA AND WATCHING BRIEF ON C. 1.3HA, PRIOR TO DEVELOPMENT. THE INVESTIGATIONS SUGGESTED TWO MAIN PERIODS OF ACTIVITY: ROMANO-BRITISH (MAINLY C2ND-4TH AD) AND POST-MEDIEVAL OR LATER, IN ADDITIONAL TO EPHEMERAL PREHISTORIC OCCU

OTHER EVID	NAME	DESCRIPTION
EOX6713	GREAT WOLF LODGE	NEGATIVE 14-TRENCH PRE-DETERMINATION EVALUATION (25-50M X 2M) OF A GOLF COURSE SITE PROPOSED FOR DEVELOPMENT TO A LEISURE FACILITY AND HOTEL. THE RESULTS SUGGEST THAT THE GROUND LEVEL OF THE SITE UNDERWENT ALTERATION AND LANDSCAPING DURING THE CREATION
EOX6946	GEOPHYSICAL SURVEY AT JUNCTION 9, BICESTER	MAGNETOMETRY SURVEY PRIOR TO PROPOSED DEVELOPMENT IN THE AREA. APPROXIMATELY 57HA WAS SURVEYED, THE REMAINING 3HA WERE OBSTACLES SUCH AS HEDGES ETC. THE SURVEY CONCLUDED THAT A NUMBER OF DISCRETE SETTLEMENTS WERE APPARENT AND POSSIBLY FARMING ESTABLISHME
EOX958	ARCHAEOLOGICAL WATCHING BRIEF AT F-STATION, CHESTERTON	WB OCCURRED DURING DEMOLITION OF PUMPTING STATION AND ENLARGEMENT OF EXISTING FACILITIES. SITING OF NEW DEEPER CHAMBERS OVER EXISTING ONES MINIMISED AREA OF GROUND DISTURBANCE. NO SOILS PRE-DATING THE CONSTRUCTION OF ORIGINAL PUMPING STATION WERE VISIBLE

## GAZATTEER OF BUILT HERITAGE ASSETS (Figure 4)

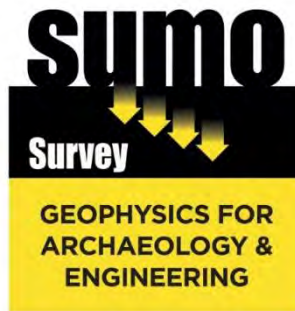
The following gazetteer represents all known built heritage assets (listed buildings, conservation areas and registered parks and gardens) within the 1km study area.

### Abbreviations:

**NHLE:** National Heritage List for England

NHLE REF.	NAME	DESIGNATION
	CHESTERTON CONSERVATION AREA	
1241628	STABLES AND COACH HOUSES NORTHWEST OF CHESTERTON LODGE	II
1200177	BRIDGE APPROXIMATELY 200M NORTH-EAST OF LODGE FARMHOUSE (NOT INCLUDED)	II
1241627	CHESTERTON LODGE INCLUDING FORECOURT BALUSTRADE IMMEDIATELY WEST	II
1200194	4 TUBBS LANE	II
1046536	6 TUBBS LANE	II
1369747	MANOR FARM HOUSE	II*
1300898	CHURCH OF ST MARY	II*
1046535	THATCHOVER	II
1276742	IVY COTTAGE INCLUDING FRONT GARDEN AREA RAILINGS AND GATE TO WEST	II





## **GEOPHYSICAL SURVEY REPORT**

**Land South of Green Lane, Chesterton,  
Oxfordshire**

Client

**Orion Heritage Ltd**

For

**Wates Developments Ltd**

Survey Report

**05787**

OASIS Ref. No.

**sumogeop1-504556**

Date

**10 February 2022**



## Survey Report 05787: Land South of Green Lane, Chesterton, Oxfordshire

**Survey dates** 17-21 January 2022

**Field co-ordinator** Simon Lobel BSc

**Field Team** Robert Ottolangui MSc

**Report Date** 10 February 2022

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Figure 05	NTS	Magnetometer Survey - Greyscale Plot / Interpretation / 1923 Ordnance Survey Mapping / 2020 Aerial Imagery
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## 2 LIST OF APPENDICES

Appendix A	Technical Information: Magnetometer Survey Methods, Processing and Presentation
Appendix B	Technical Information: Magnetic Theory
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## 3 SURVEY TECHNIQUE

3.1 Detailed magnetic survey (magnetometry) was chosen as the most efficient and effective method of locating the type of archaeological anomalies which might be expected at this site.

Bartington Grad 601-2	Traverse Interval 1.0m	Sample Interval 0.25m
Bartington Cart System	Traverse Interval 1.0m	Sample Interval 0.125m

The only processes performed on data are the following unless specifically stated otherwise:

Zero Mean Traverse	This process sets the background mean of each traverse within each grid to zero. The operation removes instrument striping effects and edge discontinuities over the whole of the data set.
Step Correction (De-stagger)	When gradiometer data are collected in 'zig-zag' fashion, stepping errors can sometimes arise. These occur because of a slight difference in the speed of walking on the forward and reverse traverses. The result is a staggered effect in the data, which is particularly noticeable on linear anomalies. This process corrects these errors.



## 4 SUMMARY OF RESULTS

- 4.1 A magnetometer survey of 14ha of land south-west of Chesterton, Oxfordshire, has identified two small 'rings', two or more rectilinear enclosures and a possible trackway, all of which are archaeological interest. Ridge and furrow cultivation regimes plus former field boundaries have been mapped along with a number of uncertain magnetic responses and two areas of magnetic disturbance.

## 5 INTRODUCTION

- 5.1 **SUMO Geophysics Ltd** were commissioned to undertake a geophysical survey of a residential development. This survey forms part of an archaeological investigation being undertaken by **Orion Heritage Ltd** on behalf of **Wates Developments Ltd**.

### 5.2 Site Details

NGR / Postcode	SP 5577 2096 /
Location	The site is located c.3km south-west of Bicester, Oxfordshire, in a triangle of land between the M40 and A41 roads. The two fields under investigation lie on the south south-west of the village of Chesterton. Green Lane (Akeman Street Roman Road) forms the northern boundary; residential housing and a cricket ground lie to the north-east and agricultural fields lie to the south-east and south. A minor road leading to Little Chesterton is to the west of the site.
HER	Oxfordshire
OASIS Ref. No.	sumogeop1-504556
District	Cherwell District Council
Parish	Chesterton CP
Topography	Gently undulating between 72m and 75m aOD
Land Use	Arable agriculture
Geology (BGS 2022)	Bedrock: Cornbrash Formation – Limestone (west) Kellaways Clay Member – Mudstone (east). Superficial: River Terrace Deposits, 2 - sand and gravel (west)
Soils (CU 2022)	Soilscape 5: freely draining lime-rich loamy soils
Archaeology (Orion 2022)	The DBA has identified no designated or non-designated archaeological assets within the study site. The study site lies immediately south of the course of a Roman road, Akeman Street. The study site forms part of the agricultural hinterland of known settlement and is considered to have low potential for all historic periods. The potential for previously unrecorded prehistoric to Romano-British remains has considered the results of intrusive archaeological investigations, lidar and aerial photographic evidence and proximity to known occupation sites recorded on the Oxfordshire Historic Environment Record. Based on an appraisal of these sources the potential for significant remains is considered low.
Survey Methods	Magnetometer survey (fluxgate gradiometer)
Study Area	14 ha (linear corridor)

### 5.3 ***Aims and Objectives***

- 5.3.1 To locate and characterise any anomalies of possible archaeological interest within the survey area.

## 6 **RESULTS**

- 6.1 *The survey covers two fields but they are considered together; specific anomalies of interest been given numerical labels [1] [2] which appear in the text below, as well as on the Interpretation Figure(s).*

### 6.2 ***Probable / Possible***

- 6.2.1 In the north-west of the survey area there is a small (c.8m x 7m) irregular-shaped 'ring' anomaly [1] which could be small paddock, a barrow ditch or conceivably a round house gully. Some 5m to the south-west is a second irregular-shaped response [2] (c13m x 12m) which appears to comprise a 'ring' of possible closely spaced post-pits, though the responses could indicate a plough-damaged ditch of gully. Both of these responses are considered to be of archaeological interest.
- 6.2.2 In the south-western corner of the site several well-defined linear anomalies are visible and they form at least two partial rectilinear enclosures [3] and [4]; the latter measures 55m x 42m. A weaker linear response [5] extends southwards from [3] while a possible third enclosure formed by weaker trends [6] is appended to [4]. There are several discrete anomalies within the enclosures and these could be pit features.
- 6.2.3 Parallel linear anomalies [7] approximately 2.5m apart run from near the north-west corner of the field for some 30m before they fade into trends and apparently disappear. They would appear to be a trackway and as such they could be associated with the archaeological features [1] and [2]. The linears are visible on several images on Google Earth, especially in 2004 which appears to show the track extending as far as the southern field boundary. While a possible archaeological interpretation has been assigned, the feature could be modern.

### 6.3 ***Uncertain***

- 6.3.1 A cluster of responses [8] appears to be geological or a result of extraction, though the presence of the tentative trackway [7] and nearby features [1] and [2] suggests that an archaeological origin cannot be ignored, hence the uncertain interpretation category.
- 6.3.2 Very weak linear trends [9] are just discernible in the data, but without the evidence of the enclosures to the west (see 6.2.2) the trends would probably be dismissed as simply being agricultural; an uncertain interpretation is thus appropriate. The same applies to the cluster of pit-like responses [10] which could reflect material spread in the topsoil (see below 6.6).

### 6.4 ***Former Field Boundary – Corroborated / Conjectural***

- 6.4.1 Linear responses and trends are visible in the data which coincide with former field boundaries marked on historic Ordnance Survey maps.

### 6.5 ***Agricultural – Ridge and Furrow***

- 6.5.1 Parallel linear anomalies throughout the western field indicate ridge and furrow ploughing patterns carried out on differing alignments.

### 6.6 ***Magnetic Disturbance / Ferrous***

- 6.6.1 Two areas of strong magnetic disturbance are visible in the eastern field; each comprises a large ferrous component which is deemed to be modern debris, possibly reflecting infilled

ponds. This field contains more ferrous debris in the topsoil compared to the western one, and may reflect material spread across the field from the two concentrations. It is possible that the debris derives from the adjacent new residential development which occupies what was once the northern half of this field.

- 6.6.2 Ferrous responses close to boundaries are due to adjacent fences and gates; two pylons are present in the eastern field.

## 7 DATA APPRAISAL & CONFIDENCE ASSESSMENT

- 7.1 Historic England guidelines (EH 2008) Table 4 states that the typical magnetic response on the local soils / geology is good to variable. The results from this survey indicate the presence of a range of anomalies including archaeological features and as such the technique is deemed to have worked successfully.

## 8 CONCLUSION

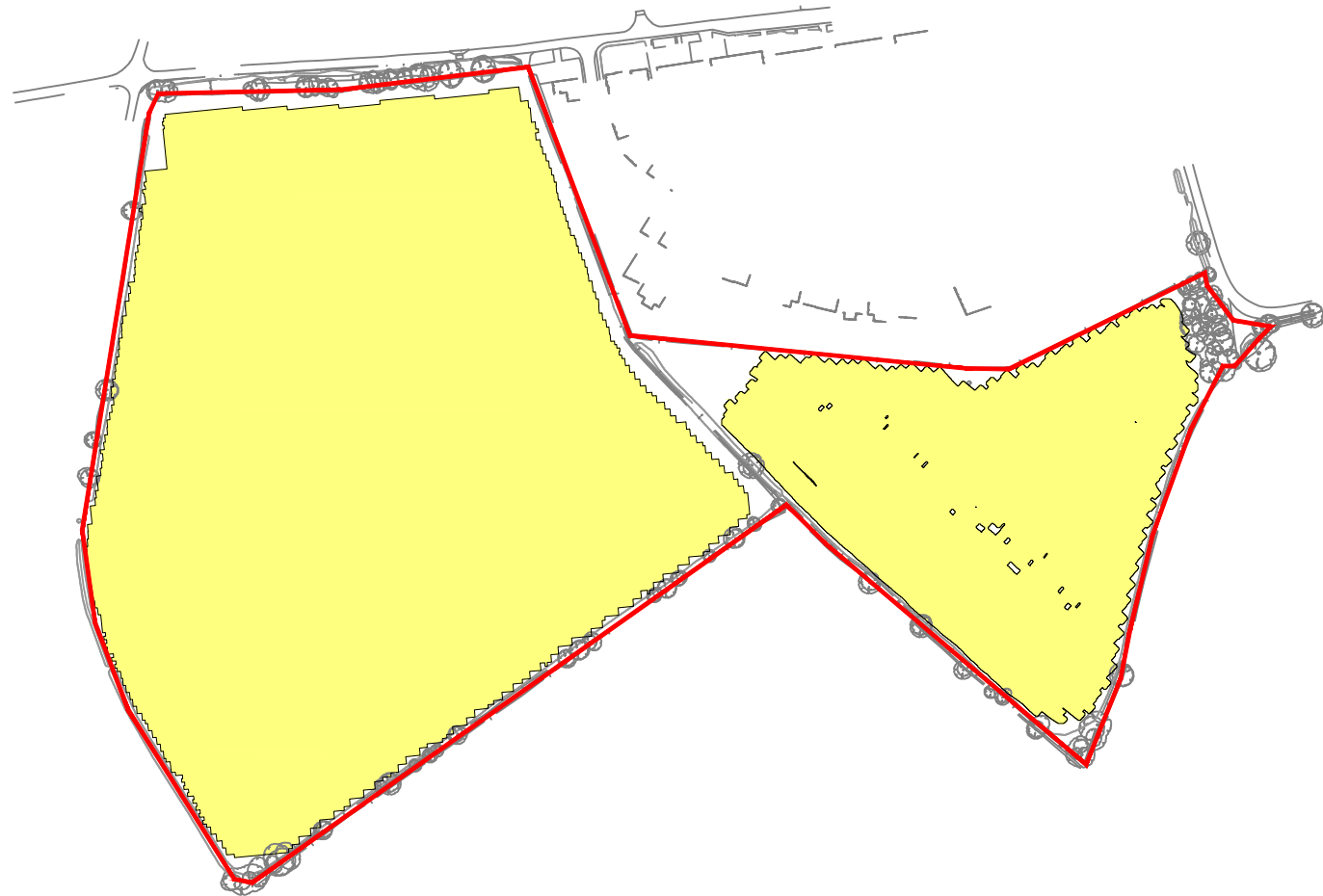
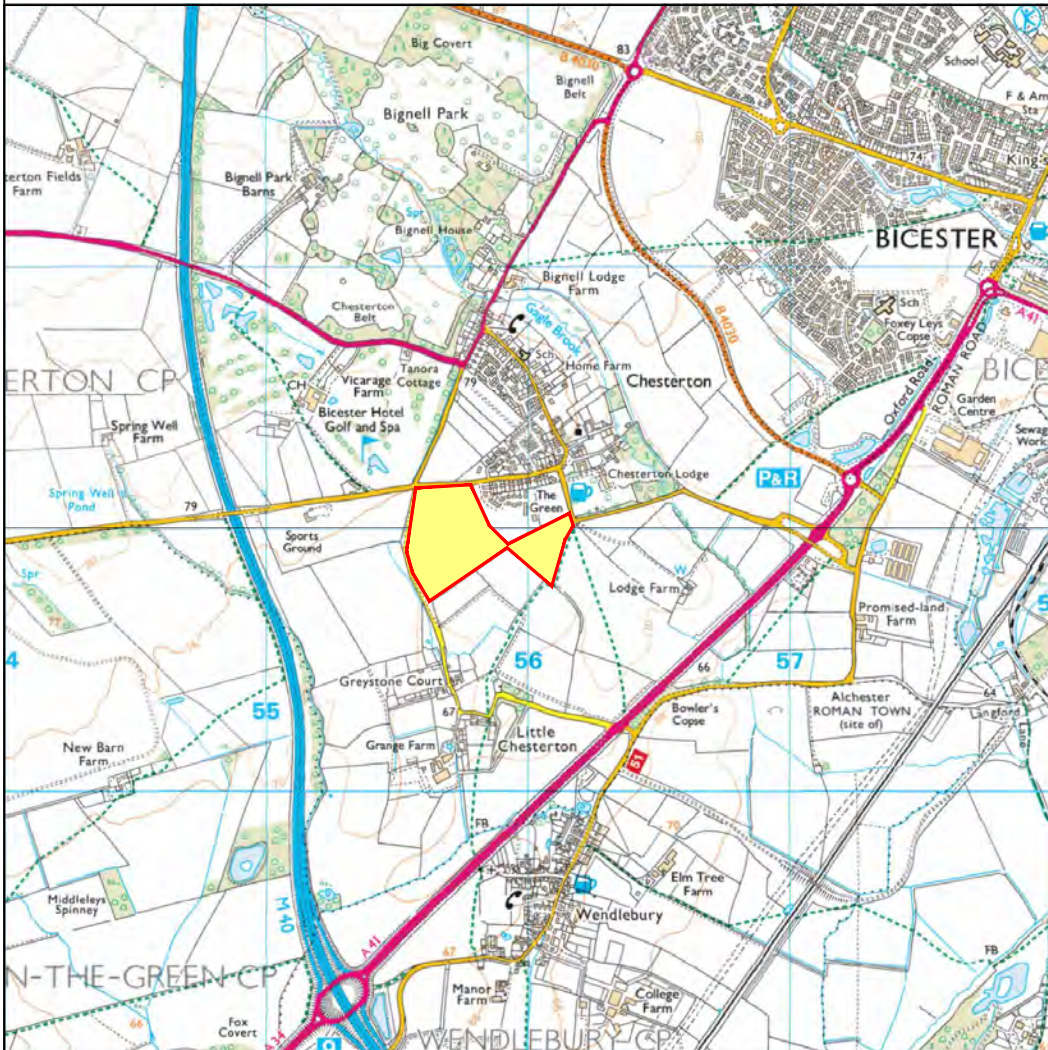
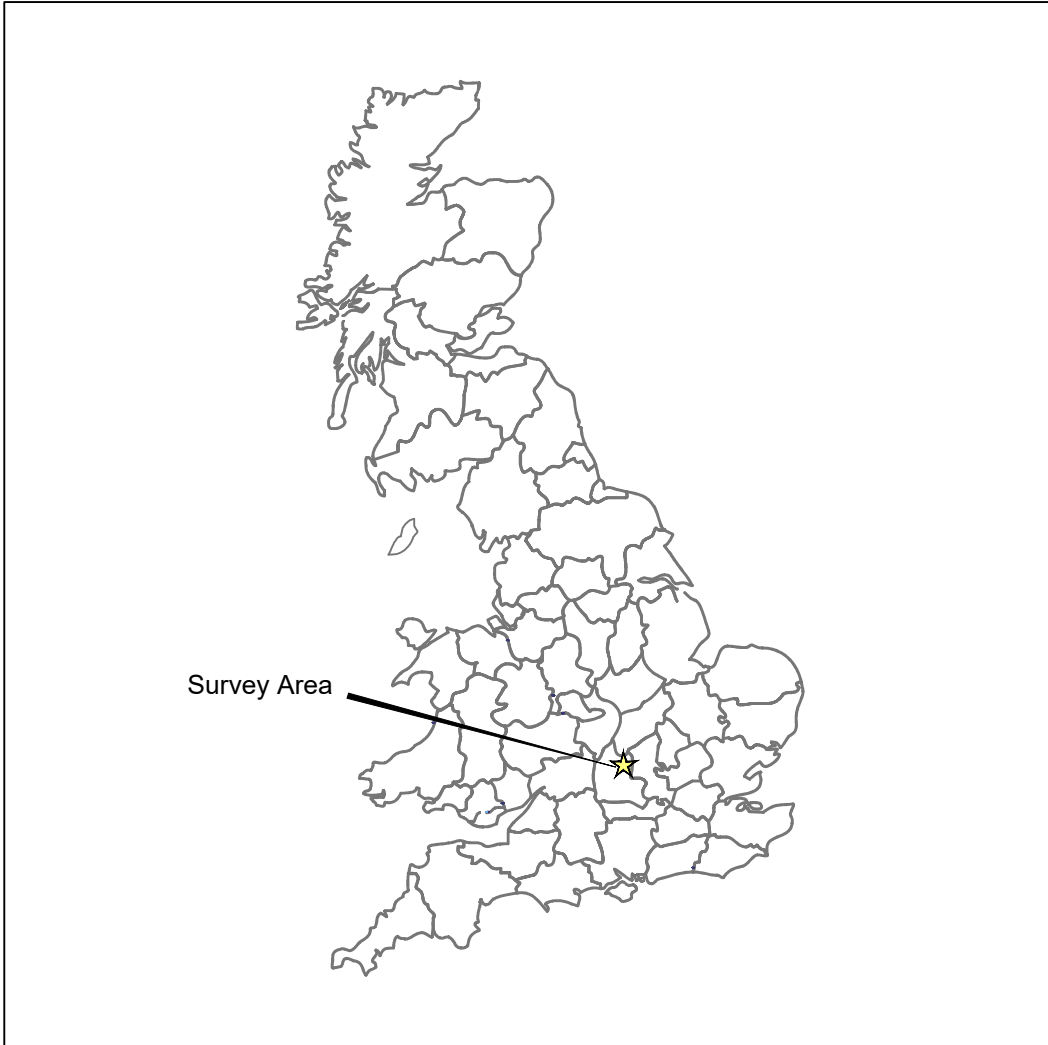
- 8.1 The magnetometer survey has recorded several magnetic responses which are clearly of archaeological interest; they comprise small 'rings', rectilinear enclosures and a possible trackway. Ridge and furrow cultivation patterns are visible in the data along with former field boundaries. A few uncertain magnetic responses have been identified and two areas of magnetic disturbance have been mapped.

## 9 REFERENCES

- BGS 2022 British Geological Survey, Geology of Britain viewer [accessed 07/02/2022] *website*: (<http://www.bgs.ac.uk/opengeoscience/home.html?Accordion1=1#maps>)
- CIfA 2014 *Standard and Guidance for Archaeological Geophysical Survey*. Amended 2020. CIfA Guidance note. Chartered Institute for Archaeologists, Reading  
[http://www.archaeologists.net/sites/default/files/CIfAS%26GGeophysics\\_2.pdf](http://www.archaeologists.net/sites/default/files/CIfAS%26GGeophysics_2.pdf)
- CU 2022 The Soils Guide. Available: [www.landis.org.uk](http://www.landis.org.uk). Cranfield University, UK. [accessed 07/02/2022] *website*: <http://mapapps2.bgs.ac.uk/ukso/home.html>
- EAC 2016 *EAC Guidelines for the Use of Geophysics in Archaeology*, European Archaeological Council, Guidelines 2.
- EH 2008 *Geophysical Survey in Archaeological Field Evaluation*. English Heritage, Swindon  
<https://content.historicengland.org.uk/images-books/publications/geophysical-survey-in-archaeological-field-evaluation/geophysics-guidelines.pdf>  
(now withdrawn)
- Orion 2020 *Land south of Green Lane, Chesterton, Oxfordshire, Historic Environment Desk-Based Assessment*, Orion Heritage Ltd, PN2738/HEDBA, unpublished.

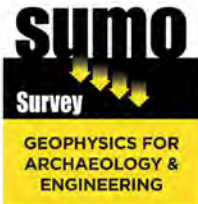
## 10 ARCHIVE

- 10.1 The minimally processed data, data images, XY traces and a copy of this report are stored in **SUMO Geophysics Ltd.**'s digital archive, on an internal RAID configured NAS drive in the Midland's Office. These data are also backed up to the Cloud for off-site storage.
- 10.2 The Grey Literature will be archived with OASIS and the relevant HER within a period of 12 months

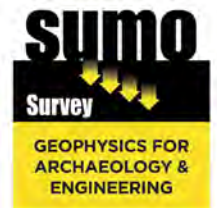
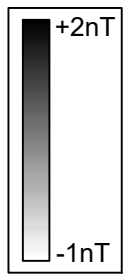


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	Survey Areas	
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Client:	Orion Heritage Ltd	
Project:	05787 - Chesterton, Oxfordshire	
Scale:	NOT TO SCALE	Fig No: 01



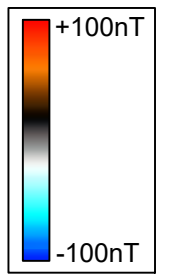
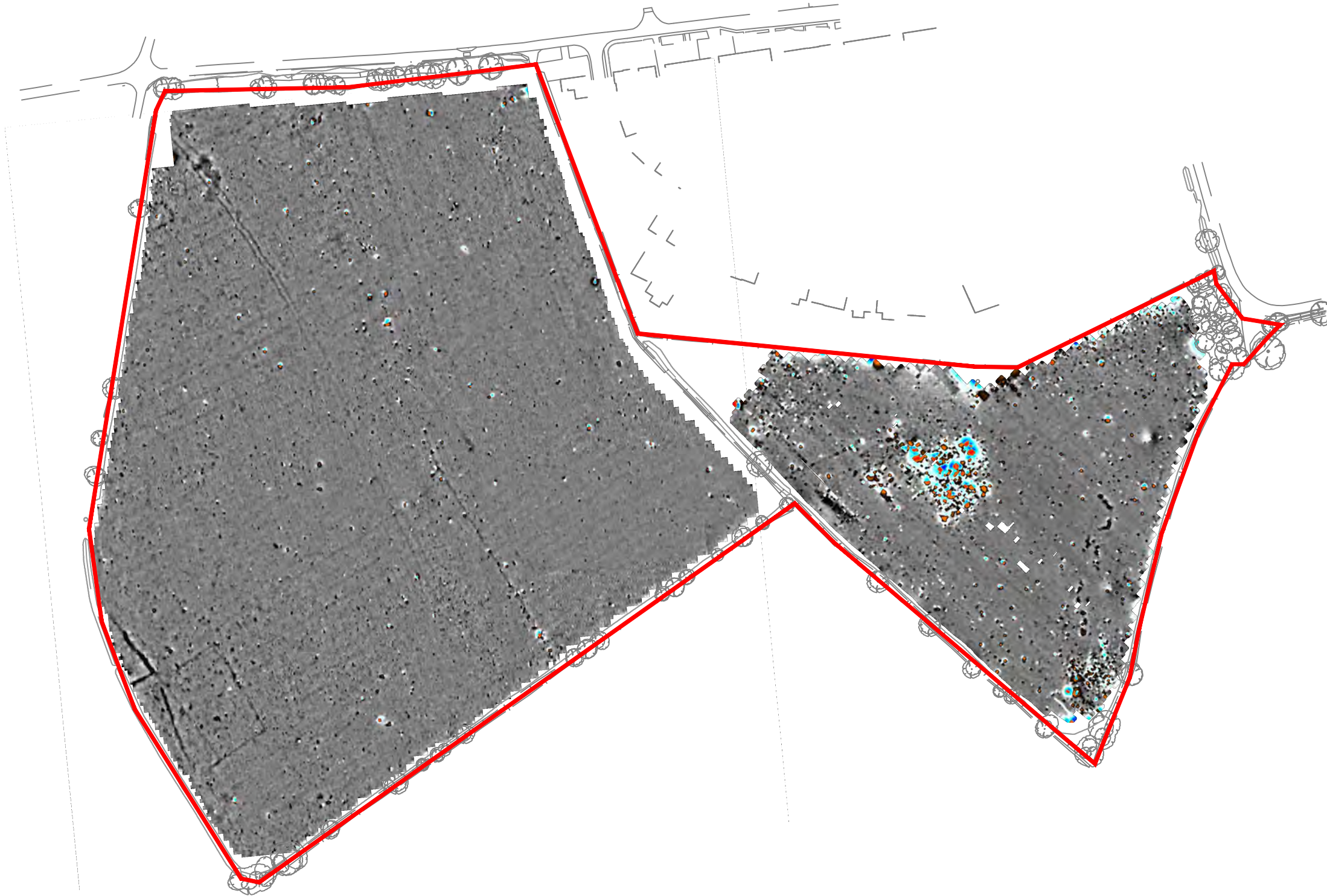
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Magnetometer Survey - Greyscale Plots

Client:  
Orion Heritage Ltd

Project:  
05787 - Chesterton, Oxfordshire

Scale:  
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1:2500 @ A3

Fig No:  
02



Title:  
Magnetometer Survey - Colour Plots

Client:  
Orion Heritage Ltd

Project:  
05787 - Chesterton, Oxfordshire

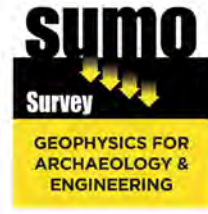
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Fig No:  
03



**KEY**

	Probable archaeology (discrete anomaly / trend)
	Possible archaeology (discrete anomaly / trend)
	Uncertain Origin (discrete anomaly / trend / Increased response)
	Former field boundary (corroborated)
	Agriculture (ridge and furrow)
	Service
	Ferrous



Title: Magnetometer Survey - Interpretation

Client: Orion Heritage Ltd

Project: 05787 - Chesterton, Oxfordshire

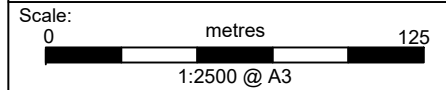
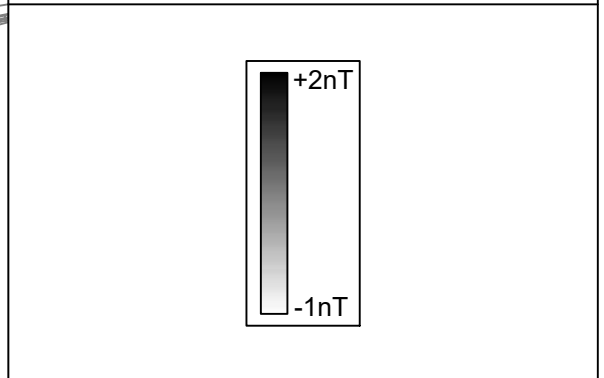
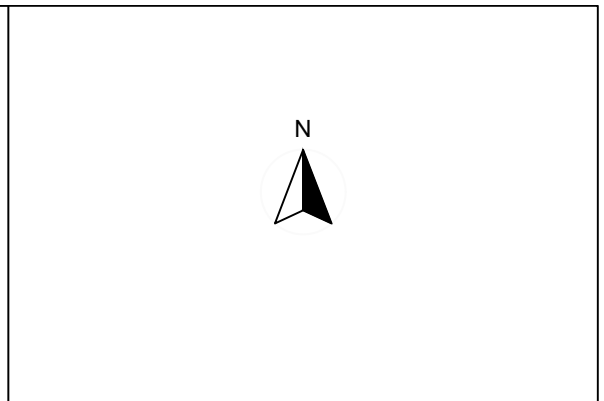
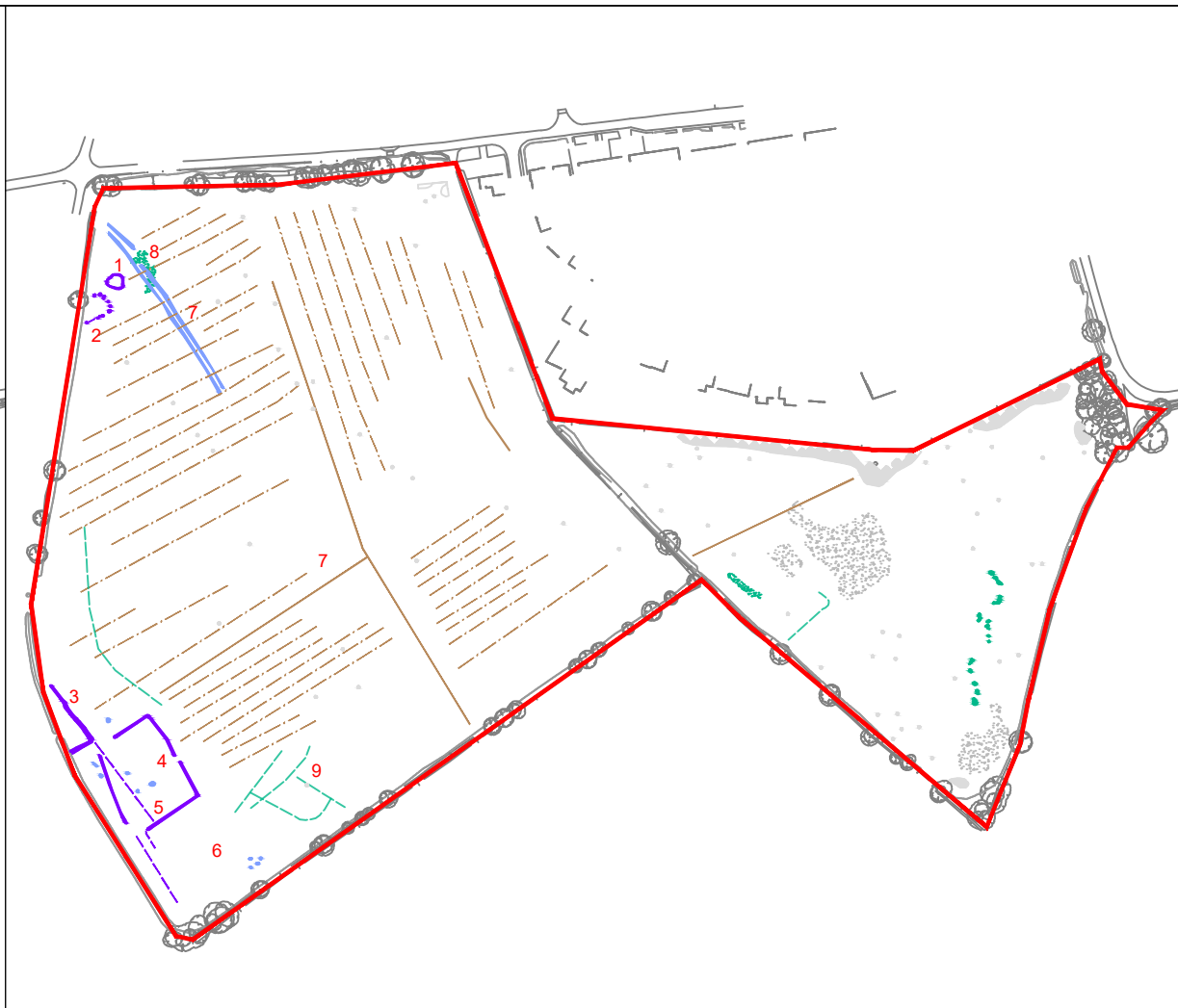
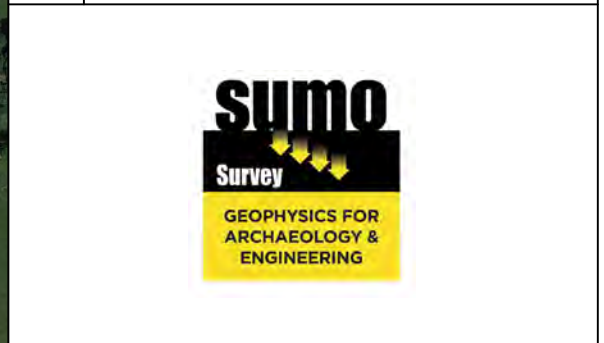
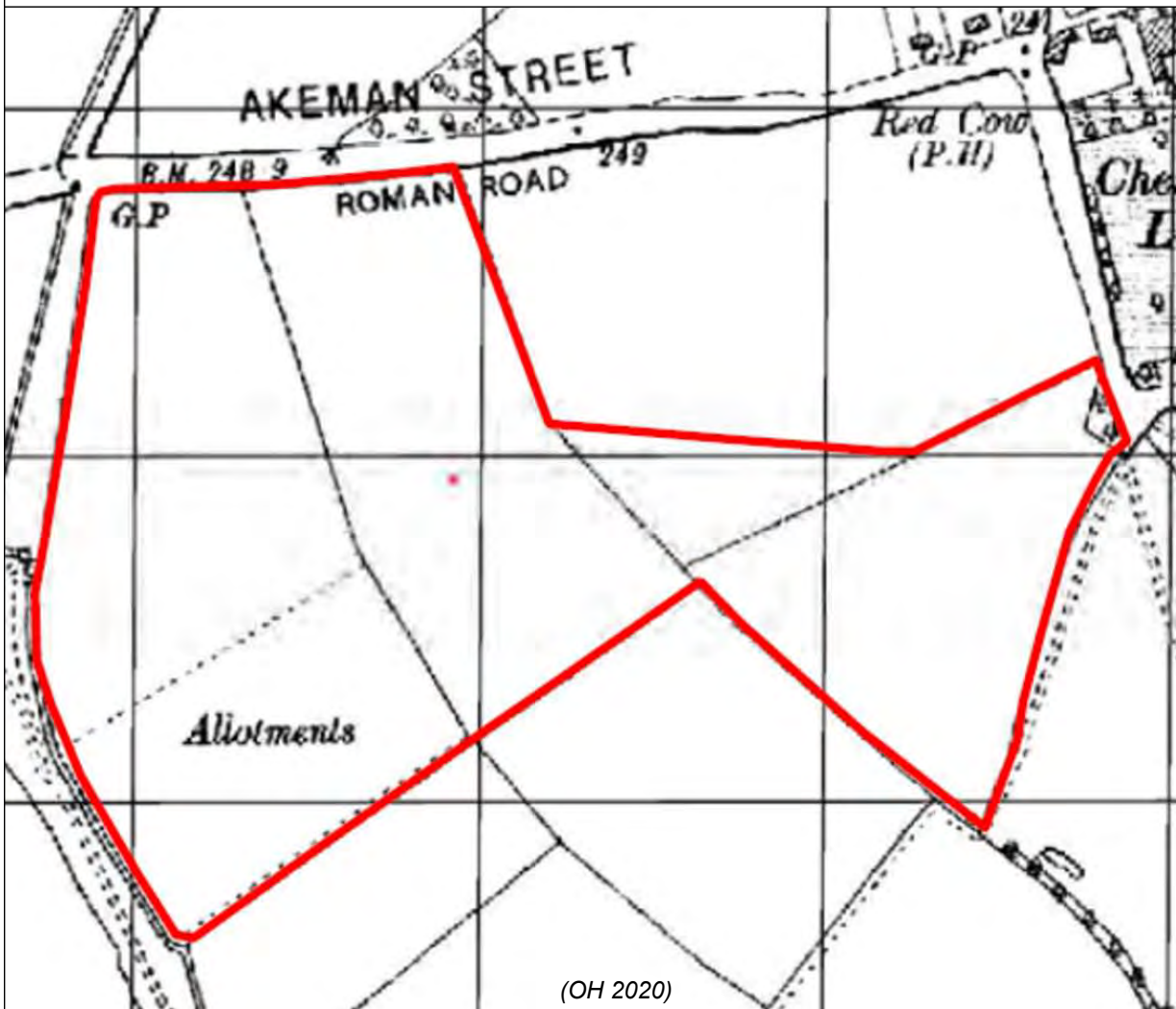


Fig No: 04





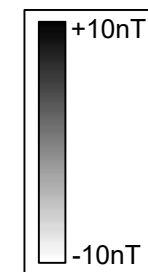
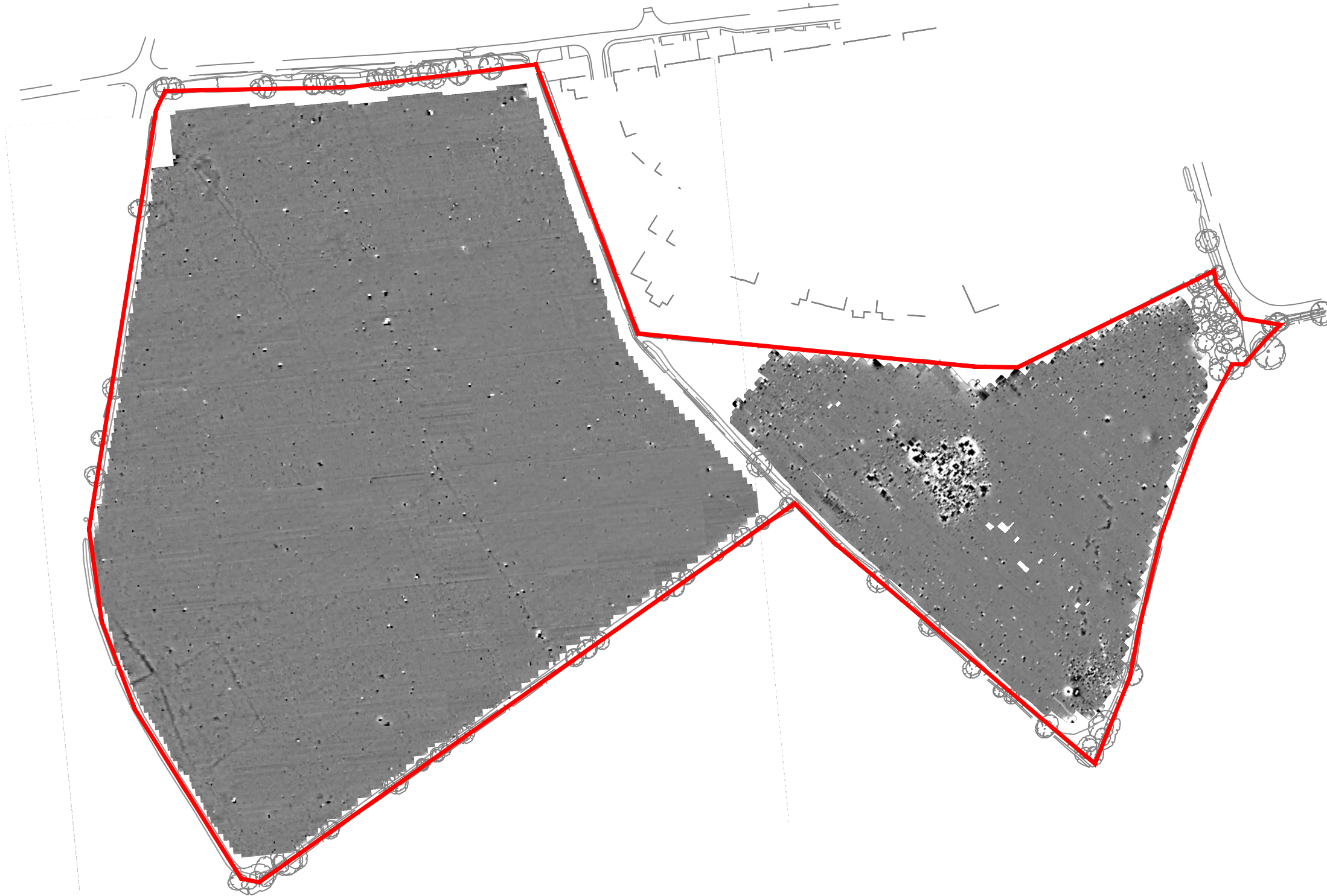
KEY	
	Probable archaeology (discrete anomaly / trend)
	Possible archaeology (discrete anomaly / trend)
	Uncertain Origin (discrete anomaly / trend / Increased response)
	Former field boundary (corroborated)
	Agriculture (ridge and furrow)
	Service
	Ferrous



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Client: Orion Heritage Ltd	
Project: 05787 - Chesterton, Oxfordshire	
Scale: NOT TO SCALE	Fig No: 05

(OH 2020)

©2022 GoogleEarth



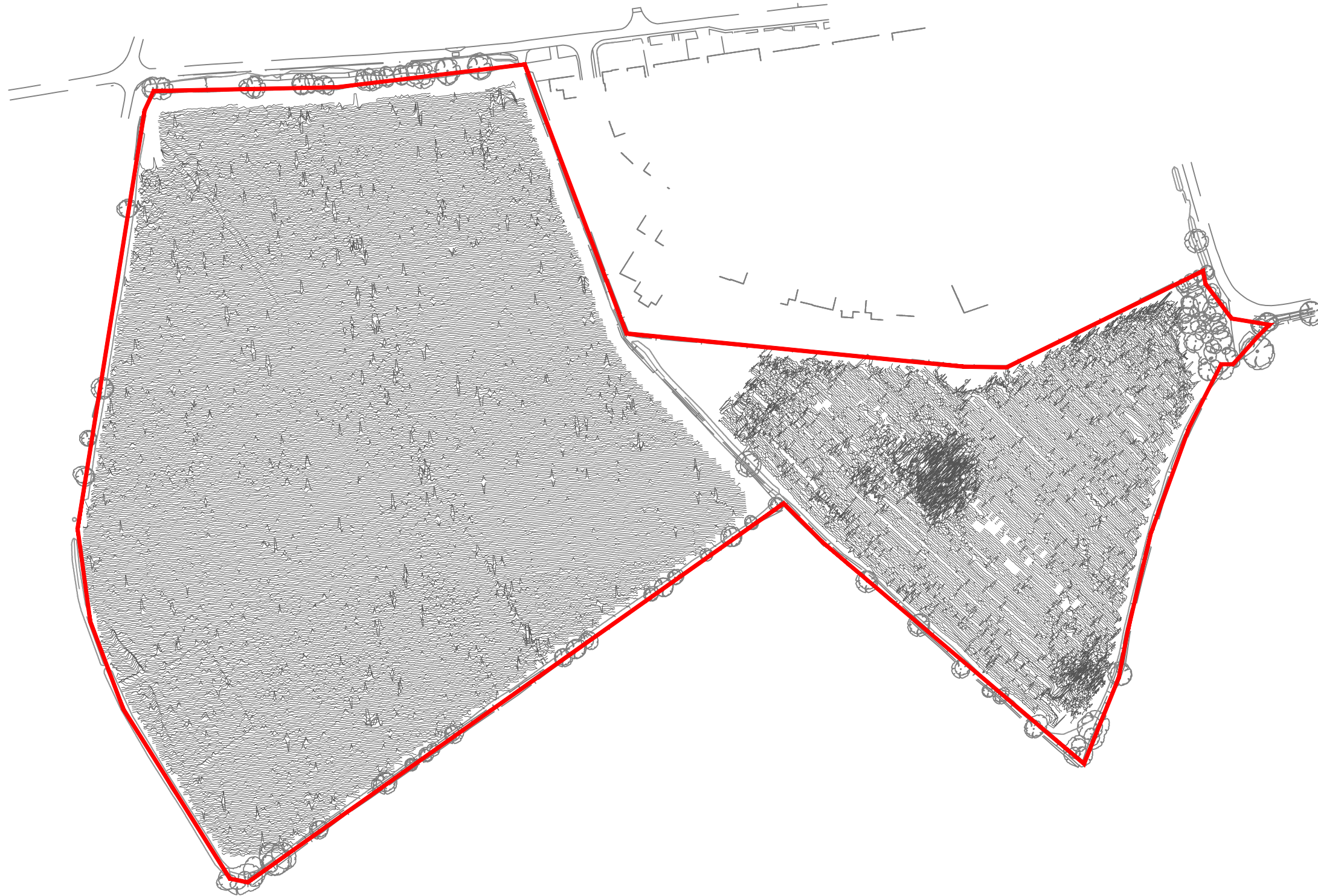
Title:  
Minimally Processed Data - Greyscale Plots

Client:  
Orion Heritage Ltd

Project:  
05787 - Chesterton, Oxfordshire

Scale:  
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1:2500 @ A3

Fig No:  
06



Title:  
XY Trace Plots (clipped at +/-15nT)

Client:  
Orion Heritage Ltd

Project:  
05787 - Chesterton, Oxfordshire

Scale:  
0 metres 125  
1:2500 @ A3

Fig No:  
07

## Standards & Guidance

This report and all fieldwork have been conducted in accordance with the latest guidance documents issued by Historic England (EH 2008) (then English Heritage), the Chartered Institute for Archaeologists (CIfA 2014) and the European Archaeological Council (EAC 2016).

## Grid Positioning

For hand held gradiometers the location of the survey grids has been plotted together with the referencing information. Grids were set out using a Trimble R8 Real Time Kinematic (RTK) VRS Now GNSS GPS system.

An RTK GPS (Real-time Kinematic Global Positioning System) can locate a point on the ground to a far greater accuracy than a standard GPS unit. A standard GPS suffers from errors created by satellite orbit errors, clock errors and atmospheric interference, resulting in an accuracy of 5m-10m. An RTK system uses a single base station receiver and a number of mobile units. The base station re-broadcasts the phase of the carrier it measured, and the mobile units compare their own phase measurements with those they received from the base station. This results in an accuracy of around 0.01m.

Technique	Instrument	Traverse Interval	Sample Interval
Magnetometer	Bartington Grad 601-2	1m	0.25m

## Instrumentation: **Bartington Grad 601-2**

Bartington instruments operate in a gradiometer configuration which comprises fluxgate sensors mounted vertically, set 1.0m apart. The fluxgate gradiometer suppresses any diurnal or regional effects. The instruments are carried, or cart mounted, with the bottom sensor approximately 0.1-0.3m from the ground surface. At each survey station, the difference in the magnetic field between the two fluxgates is measured in nanoTesla (nT). The sensitivity of the instrument can be adjusted; for most archaeological surveys the most sensitive range (0.1nT) is used. Generally, features up to 1m deep may be detected by this method, though strongly magnetic objects may be visible at greater depths. The Bartington instrument can collect two lines of data per traverse with gradiometer units mounted laterally with a separation of 1.0m. The readings are logged consecutively into the data logger which in turn is daily down-loaded into a portable computer whilst on site. At the end of each site survey, data is transferred to the office for processing and presentation.

## Data Processing

Zero Mean	This process sets the background mean of each traverse within each grid to zero.
Traverse	The operation removes striping effects and edge discontinuities over the whole of the data set.
Step Correction (De-stagger)	When gradiometer data are collected in 'zig-zag' fashion, stepping errors can sometimes arise. These occur because of a slight difference in the speed of walking on the forward and reverse traverses. The result is a staggered effect in the data, which is particularly noticeable on linear anomalies. This process corrects these errors.

## Display

Greyscale/ Colourscale Plot	This format divides a given range of readings into a set number of classes. Each class is represented by a specific shade of grey, the intensity increasing with value. All values above the given range are allocated the same shade (maximum intensity); similarly, all values below the given range are represented by the minimum intensity shade. Similar plots can be produced in colour, either using a wide range of colours or by selecting two or three colours to represent positive and negative values. The assigned range (plotting levels) can be adjusted to emphasise different anomalies in the data-set.
--------------------------------	---

## **Presentation of results and interpretation**

The presentation of the results includes a 'minimally processed data' and a 'processed data' greyscale plot. Magnetic anomalies are identified, interpreted and plotted onto the 'Interpretation' drawings.

When interpreting the results, several factors are taken into consideration, including the nature of archaeological features being investigated and the local conditions at the site (geology, pedology, topography etc.). Anomalies are categorised by their potential origin. Where responses can be related to other existing evidence, the anomalies will be given specific categories, such as: Abbey Wall or Roman Road. Where the interpretation is based largely on the geophysical data, levels of confidence are implied, for example: Probable, or Possible Archaeology. The former is used for a confident interpretation, based on anomaly definition and/or other corroborative data such as cropmarks. Poor anomaly definition, a lack of clear patterns to the responses and an absence of other supporting data reduces confidence, hence the classification Possible.

## Interpretation Categories

In certain circumstances (usually when there is corroborative evidence from desk-based or excavation data) very specific interpretations can be assigned to magnetic anomalies (for example, *Roman Road, Wall, etc.*) and where appropriate, such interpretations will be applied. The list below outlines the generic categories commonly used in the interpretation of the results.

<i>Archaeology / Probable Archaeology</i>	This term is used when the form, nature and pattern of the responses are clearly or very probably archaeological and /or if corroborative evidence is available. These anomalies, whilst considered anthropogenic, could be of any age.
<i>Possible Archaeology</i>	These anomalies exhibit either weak signal strength and / or poor definition, or form incomplete archaeological patterns, thereby reducing the level of confidence in the interpretation. Although the archaeological interpretation is favoured, they may be the result of variable soil depth, plough damage or even aliasing as a result of data collection orientation.
<i>Industrial / Burnt-Fired</i>	Strong magnetic anomalies that, due to their shape and form or the context in which they are found, suggest the presence of kilns, ovens, corn dryers, metal-working areas or hearths. It should be noted that in many instances modern ferrous material can produce similar magnetic anomalies.
<i>Former Field Boundary (probable &amp; possible)</i>	Anomalies that correspond to former boundaries indicated on historic mapping, or which are clearly a continuation of existing land divisions. Possible denotes less confidence where the anomaly may not be shown on historic mapping but nevertheless the anomaly displays all the characteristics of a field boundary.
<i>Ridge &amp; Furrow</i>	Parallel linear anomalies whose broad spacing suggests ridge and furrow cultivation. In some cases, the response may be the result of more recent agricultural activity.
<i>Agriculture (ploughing)</i>	Parallel linear anomalies or trends with a narrower spacing, sometimes aligned with existing boundaries, indicating more recent cultivation regimes.
<i>Land Drain</i>	Weakly magnetic linear anomalies, quite often appearing in series forming parallel and herringbone patterns. Smaller drains may lead and empty into larger diameter pipes, which in turn usually lead to local streams and ponds. These are indicative of clay fired land drains.
<i>Natural</i>	These responses form clear patterns in geographical zones where natural variations are known to produce significant magnetic distortions.
<i>Magnetic Disturbance</i>	Broad zones of strong dipolar anomalies, commonly found in places where modern ferrous or fired materials (e.g. brick rubble) are present.
<i>Service</i>	Magnetically strong anomalies, usually forming linear features are indicative of ferrous pipes/cables. Sometimes other materials (e.g. pvc) or the fill of the trench can cause weaker magnetic responses which can be identified from their uniform linearity.
<i>Ferrous</i>	This type of response is associated with ferrous material and may result from small items in the topsoil, larger buried objects such as pipes, or above ground features such as fence lines or pylons. Ferrous responses are usually regarded as modern. Individual burnt stones, fired bricks or igneous rocks can produce responses similar to ferrous material.
<i>Uncertain Origin</i>	Anomalies which stand out from the background magnetic variation, yet whose form and lack of patterning gives little clue as to their origin. Often the characteristics and distribution of the responses straddle the categories of <i>Possible Archaeology / Natural</i> or (in the case of linear responses) <i>Possible Archaeology / Agriculture</i> ; occasionally they are simply of an unusual form.

Where appropriate some anomalies will be further classified according to their form (positive or negative) and relative strength and coherence (trend: weak and poorly defined).

## Appendix B - Technical Information: Magnetic Theory

Detailed magnetic survey can be used to effectively define areas of past human activity by mapping spatial variation and contrast in the magnetic properties of soil, subsoil and bedrock. Although the changes in the magnetic field resulting from differing features in the soil are usually weak, changes as small as 0.1 nanoTeslas (nT) in an overall field strength of 48,000 (nT), can be accurately detected.

Weakly magnetic iron minerals are always present within the soil and areas of enhancement relate to increases in *magnetic susceptibility* and permanently magnetised *thermoremanent* material.

Magnetic susceptibility relates to the induced magnetism of a material when in the presence of a magnetic field. This magnetism can be considered as effectively permanent as it exists within the Earth's magnetic field. Magnetic susceptibility can become enhanced due to burning and complex biological or fermentation processes.

Thermoremanence is a permanent magnetism acquired by iron minerals that, after heating to a specific temperature known as the Curie Point, are effectively demagnetised followed by re-magnetisation by the Earth's magnetic field on cooling. Thermoremanent archaeological features can include hearths and kilns; material such as brick and tile may be magnetised through the same process.

Silting and deliberate infilling of ditches and pits with magnetically enhanced soil creates a relative contrast against the much lower levels of magnetism within the subsoil into which the feature is cut. Systematic mapping of magnetic anomalies will produce linear and discrete areas of enhancement allowing assessment and characterisation of subsurface features. Material such as subsoil and non-magnetic bedrock used to create former earthworks and walls may be mapped as areas of lower enhancement compared to surrounding soils.

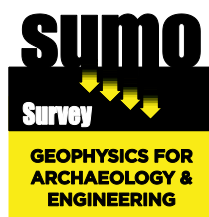
Magnetic survey is carried out using a fluxgate gradiometer which is a passive instrument consisting of two sensors mounted vertically 1m apart. The instrument is carried about 30cm above the ground surface and the top sensor measures the Earth's magnetic field whilst the lower sensor measures the same field but is also more affected by any localised buried feature. The difference between the two sensors will relate to the strength of a magnetic field created by this feature, if no field is present the difference will be close to zero as the magnetic field measured by both sensors will be the same.

Factors affecting the magnetic survey may include soil type, local geology, previous human activity and disturbance from modern services.

# Summary for sumogeop1-504556

OASIS ID (UID)	sumogeop1-504556
Project Name	Geophysical Survey at Land South of Green Lane, Chesterton, Oxfordshire
Activity type	Geophysical Survey, MAGNETOMETRY SURVEY
Project Identifier(s)	05787
Planning Id	
Reason For Investigation	Planning requirement
Organisation Responsible for work	SUMO Geophysics Ltd.
Project Dates	17-Jan-2022 - 21-Jan-2022
Location	Land South of Green Lane, Chesterton, Oxfordshire NGR : SP 55848 20955 LL : 51.8843706382127, -1.19000098234245 12 Fig : 455848,220955
Administrative Areas	Country : England County : Oxfordshire District : Cherwell Parish : Chesterton
Project Methodology	A temporary grid system will be established over the site and marked out using canes. The location of the grid will be set out using an RTK GPS system theoretically accurate to some 0.01m and referenced to OS co-ordinates. Data will be collected using a cart carrying four paired Bartington magnetic sensors. Four sensors mounted 1m horizontally apart and very accurately aligned to nullify the effects of the earth's magnetic field. Readings relate to the difference in localised magnetic anomalies compared with the general magnetic background. Each data point is geographically referenced using an on-board Trimble RTK survey grade GPS system. Readings will be taken at 0.125m centres along traverses 1.0m apart. Readings relate to the difference in localised magnetic anomalies compared with the general magnetic background.
Project Results	The magnetometer survey has recorded several magnetic responses which are clearly of archaeological interest; they comprise small 'rings', rectilinear enclosures and a possible trackway. Ridge and furrow cultivation patterns are visible in the data along with former field boundaries. A few uncertain magnetic responses have been identified and two areas of magnetic disturbance have been mapped.
Keywords	Pit - UNCERTAIN - FISH Thesaurus of Monument Types Oval Enclosure - UNCERTAIN - FISH Thesaurus of Monument Types Rectangular Enclosure - UNCERTAIN - FISH Thesaurus of Monument Types Ditch - UNCERTAIN - FISH Thesaurus of Monument Types Field Boundary - POST MEDIEVAL - FISH Thesaurus of Monument Types Ridge And Furrow - MEDIEVAL - FISH Thesaurus of Monument Types
HER	Oxfordshire HER - unRev - STANDARD
HER Identifiers	
Archives	





- Archaeological
- Geophysical
- Laser Scanning
- Measured Building
- Topographic
- Utility Mapping

SUMO Services Ltd, incorporated under the laws of England and Wales,  
Company Registration No.4275993.  
Registered Office Unit 8 Hayward Business Centre, New Lane, Havant, Hampshire, PO9 2NL

## APPENDIX C      AERIAL IMAGERY ASSESSMENT

Land South of Green Lane, Chesterton  
Aerial Imagery Assessment  
February 2022

**Land South of Green Lane, Chesterton  
Aerial Imagery Assessment  
February 2022**

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**Report**

Aerial Imagery Assessment

**Site**

Land South of Green Lane, Chesterton

**Client**

Wates Developments Ltd

**Date**

February 2022

**Planning Authority**

Cherwell District Council

**Grid Reference**

455682, 221111

**Prepared By**

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**Report Status**

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### Timescales Used in This Report

#### Prehistoric

Palaeolithic	450,000 -12,000 BC
Mesolithic	12,000 - 4,000 BC
Neolithic	4,000 - 2,200 BC
Bronze Age	2,200 - 700 BC
Iron Age	700 - AD 43

#### Historic

Roman	43 - 410AD
Saxon/Early Medieval	410 - 1066AD
Medieval	1066 - 1485AD
Post Medieval	1486 - 1901AD
Modern	1901 - Present Day

## Executive Summary

This aerial photography assessment considers Land South of Green Lane, Chesterton. The purpose of this assessment is to provide information on the location and nature of archaeological features which are visible on aerial photography and Environment Agency Lidar Data sources.

This assessment of aerial imagery has reviewed aerial imagery sources including the Historic England Archive, Google Earth, Bing, Cambridge University Collection of Aerial Photographs and Environment Agency Lidar data. These data were reviewed for the study site and a 1km buffer.

A review of the available sources has identified the following features within the site:

- A possible trackway that crosses the site northwest to central south
- Curvilinear features and a ring ditch at the northwest
- Former field boundaries
- Ridge and furrow at the southeast

Within the 1km study area there are numerous examples of ridge and furrow in varying states of preservation. To the west of the site is an area of cropmarks including ditches, trackways, a rectilinear enclosure, banks and pits. An area of possible pits and ditches has been identified c. 780m to the west of the site. These features may be archaeological or geological in origin.

## 1.0 Introduction

- 1.1** This archaeological appraisal considers Land South of Green Lane, Chesterton (Figure 1). It has been researched and prepared by Orion Heritage on behalf of Wates Developments Ltd. The site (hereinafter referred to as the “study site”) is located at grid reference 455682, 221111.
- 1.2** The purpose of this assessment is to provide information on the location and nature of archaeological features which are visible on aerial photography sources and Environment Agency Lidar Data. This assessment is intended to supplement a historic environment desk-based assessment (Orion Heritage 2022).
- 1.3** The study area used in this assessment is a 1km buffer from the boundary of the site (Figure 1).

### Location, Topography and Geology

- 1.4** The site occupies an irregular greenfield parcel of land measuring approximately 15 hectares. The study site is located to the south of Green Lane to the south-east of the village of Chesterton. The site comprises two large enclosed agricultural fields containing no building stock. The study site is bound to the north by Green Lane, to the west an unnamed road leading to Little Chesterton, modern development fronting Vespasian Way to the north-east, and agricultural fields to the south-east and south.
- 1.5** The study site is generally flat, sloping slightly to the south with an average height above ordnance datum (aOD) of 75m.
- 1.6** The solid geology of the majority of the study site comprises ‘Cornbrash Formation (limestone) with Kellaways Clay Member (mudstone) towards the south. No superficial deposits are recorded across the majority of the study site, with a small area of River Terrace Deposits (sand and gravel) recorded at the eastern edge (GeoIndex 2020).



## 2.0 Aims, Objectives & Methodology

- 2.1 The principal aim of the aerial imagery assessment is to gain an understanding of the archaeological potential of the site and 1km study area.
- 2.2 The results of the aerial imagery assessment will inform an archaeological strategy for further on-site assessment and formulation of a mitigation strategy, as appropriate to the archaeological potential of the study site.

### Methodology

- 2.3 The aerial imagery assessment will include:
- A review of the digital terrain model Environment Agency National Lidar Programme data available for the study site and 1km study area (2020);
  - A review of all accessible oblique, military oblique and vertical aerial photographs held at the Historic England Archive;
  - A review of the Cambridge University Collection of Aerial Photographs (CUCAP) online repository;
  - A review of Oxfordshire Historic Environment Data; and
  - A review of Google Earth (1945-2020) & Bing Aerial (undated).
- 2.4 It is noted that the site is not covered by Historic England National Mapping Programme data.
- 2.5 The Cambridge University Collection of Aerial Photographs (CUCAP) is presently closed to the public and there is currently no projected reopening date for services. The CUCAP collection is searchable online and a list of aerial photographs within the study area is at Appendix 1. In some cases, there are detailed descriptions and thumbnail images which indicate the subject of the photographs however full analysis has not been possible. It is noted that some CUCAP photographs are listed in the Historic England search results and will be reviewed at the same time.
- 2.6 Light Detection and Ranging data, otherwise known as Lidar are routinely collected by the Environment Agency with the primary purpose to assess topography and flooding patterns. These data also prove useful for the identification and mapping of archaeological features and are increasingly used by the heritage industry to identify topographic remains of heritage assets. The Environment Agency provides access to download their data via their website:  
<https://environment.data.gov.uk/DefraDataDownload/?Mode=survey>
- 2.7 Lidar data records variation in the height of the ground surface and is collected by an airborne survey platform fitted with a sensor (usually an aeroplane), which sends and receives reflected laser beam pulses. These data, collected as point cloud, are processed into a series of Digital Elevation Models (DEM) which are usually in American Standard Code for Information Interchange (ASCII) format. The two key models used for archaeological research are:
- Digital Surface Model (DSM) – Contain tree cover and buildings
  - Digital Terrain Model (DTM) – Filters out tree cover and buildings

- 2.8** This assessment has utilised DTM data, as it is necessary to assess the archaeological resource beneath tree and vegetation cover. This assessment has not utilised composite Lidar data as these data represent blended datasets, this assessment has instead utilised timestamped tiled data which has not been additionally processed.
- 2.9** The DTM data were visualised into Hillshade, Multi directional Hillshade, Simple Local Relief Model (SLRM), Slope, Sky View Factor, Anisotropic Sky View Factor, Open Positive and Open Negative using the Relief Visualisation Toolkit (RVT) Version 1.2. These visualisations were chosen as they are of most use for archaeological prospection. The multiple ASCII tiles were merged before being visualised for ease of use in the GIS. The data were analysed alongside satellite imagery to confirm the topography and nature of features interpreted from Lidar data.
- 2.10** This assessment will map archaeological features noted within the site itself and will illustrate the visible extent of features identified within the 1km study area using extent of area polygons.

### Limitations

- 2.11** Aerial photographic evidence is limited by seasonal, agricultural, meteorological and environmental factors which impact upon the visibility of archaeological features from the air. Therefore, photographs may not indicate the full extent of archaeological features.
- 2.12** Lidar data show topographic features which survive as earthworks, the resolution of the data, the time of year collected, and vegetation cover of the area surveyed all impact upon the visibility of archaeological features within the data. For these reasons, Lidar data is best collected in the winter months when vegetation is at its thinnest, giving the laser the best opportunity to reach and return from the grounds surface. Similarly, the higher the resolution of the data the more likely archaeological features will be identified, the resolution depicts the frequency at which readings are collected and therefore the more readings that are taken increases the accuracy of the survey. It is generally agreed that a 1m resolution or better is preferred for archaeological survey, however features may still be visible in 2m+ data sets.
- 2.13** Lidar assessment will not identify archaeological features beneath the ground surface, nor will it identify cropmarks if these do not also survive as earthworks.
- 2.14** Aerial imagery assessment is a non-intrusive survey technique and therefore features cannot be securely dated to a particular archaeological period using this method. Assessment of the morphology of features can assist in their identification and interpretation, however secure dating can only be achieved through intrusive survey.

### 3.0 Archaeological and Historic Baseline

- 3.1 A detailed appraisal of the heritage baseline is provided in a Historic Environment Desk Based Assessment (Orion Heritage 2022).
- 3.2 The site is the subject of a geophysical survey which identified two curvilinear features and a possible trackway at the north of the site and rectilinear enclosures at the south of the site. The survey also noted the presence of ridge and furrow within the site (SUMO 2022).
- 3.3 There have been no previous invasive investigations within the site.
- 3.4 The HER does not record any known finds or features from the Prehistoric, Roman, Saxon, early medieval, medieval, or post medieval periods.

## 4.0 Results

4.1 The table below presents a gazetteer of archaeological features identified from aerial imagery, these are illustrated at Figures 2 and 3. Figures 2 and 3 shows detailed mapping of features within the site and extent of area polygons for features identified within the 1km study area.

Orion Site Number	Description	HER Number
AP_001	<b>Curvilinear Ditch</b> A curvilinear ditch is visible as a cropmark at the northwest of the site. The ditch may be archaeological or geological in origin.	N/A
AP_002	<b>Possible Archaeology</b> A dark irregular shaped cropmark is visible on aerial imagery at the northwest of the site. The feature may be either archaeological (e.g., a pit) or geological in origin.	N/A
AP_003	<b>Linear Ditch</b> A Linear ditch visible as a cropmark in the south of the site. The ditch runs roughly parallel to AP_011 and AP_004 and may relate to a former trackway. These features may represent an extension to features AP_012 and AP_013 at the north of the site.	N/A
AP_004	<b>Linear Ditch</b> A Linear ditch visible as a cropmark in the south of the site. The ditch runs roughly parallel to AP_011 and AP_003 and may relate to a former trackway. These features may represent an extension to features AP_012 and AP_013 at the north of the site.	N/A
AP_005	<b>Possible Archaeology</b> A dark irregular shaped cropmark is visible on aerial imagery at the northwest of the site. The feature may be either archaeological (e.g., a pit) or geological in origin.	N/A
AP_006	<b>Field Boundary</b> A field boundary was observed as an extant feature on aerial photography, the boundary has since been removed and is visible as a cropmark feature on some images.	N/A
AP_007	<b>Ring Ditch</b> A circular ditched feature is visible as a cropmark on aerial imagery. There are no extant earthwork elements to this feature.	N/A
AP_008	<b>Field Boundary</b> A field boundary was observed as an extant feature on aerial photography, the boundary has since been removed and is visible as a cropmark feature on some images.	N/A
AP_009	<b>Field Boundary</b> A field boundary was observed as an extant feature on aerial photography, the boundary has since been	N/A

Orion Site Number	Description	HER Number
	removed and is visible as a cropmark feature on some images.	
AP_010	<b>Curvilinear Ditch</b> A curvilinear ditch is visible as a cropmark at the northwest of the site. The ditch may be archaeological or geological in origin.	N/A
AP_011	<b>Linear Ditch</b> A Linear ditch visible as a cropmark in the south of the site. The ditch runs roughly parallel to AP_003 and AP_004 and may relate to a former trackway. These features may represent an extension to features AP_012 and AP_013 at the north of the site.	N/A
AP_012	<b>Linear Ditch</b> A Linear ditch visible as a cropmark in the north of the site. The ditch runs roughly parallel to AP_013 and may relate to a former trackway. These features may represent an extension to features AP_003, AP_004 and AP_011 at the south of the site.	N/A
AP_013	<b>Linear Ditch</b> A Linear ditch visible as a cropmark in the north of the site. The ditch runs roughly parallel to AP_012 and may relate to a former trackway. These features may represent an extension to features AP_003, AP_004 and AP_011 at the south of the site.	N/A
AP_014	<b>Ridge and Furrow</b> The south eastern field within the site contained earthwork ridge and furrow on a rough northwest-southeast alignment on historic aerial photographs. Agricultural practice within the site has eroded the earthworks which are no longer extant.	N/A
AP_015	<b>Possible Pits and Ditches</b> An area of possible pits and ditches c. 780m to the west of the site. These features may be archaeological or geological in origin.	N/A
AP_016	<b>Ridge and Furrow</b> Multiple fields of ridge and furrow all of which were observed as earthworks on historic aerial imagery, each field is in a differing state of preservation from extant earthwork to cropmark. The alignments of the ridge and furrow are indicated by directional arrows.	N/A
AP_017	<b>Cropmark Site</b> A site to the west of the study site containing cropmark evidence of ditches, trackways, rectilinear enclosure, and pits. Environment Agency Lidar data shows a series of residual banks across the site which are likely former field boundaries. There is an area of former ridge and furrow at the east of this area.	MOX11297 MOX27641 MOX26821
AP_018	<b>Possible extraction</b> Irregular shaped dark toned areas are visible as cropmarks on aerial photographs. This differential	N/A

Orion Site Number	Description	HER Number
	appearance may represent possible archaeological features, historic extraction or geological activity.	
AP_019	<b>Ridge and Furrow</b> Multiple fields of ridge and furrow all of which were observed as earthworks on historic aerial imagery, each field is in a differing state of preservation from extant earthwork to cropmark. The alignments of the ridge and furrow are indicated by directional arrows.	N/A
AP_020	<b>Bank</b> Environment Agency Lidar data shows a residual bank in this area which is likely a former field boundary.	N/A
AP_021	<b>Bank</b> Environment Agency Lidar data shows a residual bank in this area which is likely a former field boundary.	N/A
AP_022	<b>Ridge and Furrow</b> Multiple fields of ridge and furrow all of which were observed as earthworks on historic aerial imagery, each field is in a differing state of preservation from extant earthwork to cropmark. The alignments of the ridge and furrow are indicated by directional arrows.	N/A
AP_023	<b>Ridge and Furrow</b> Multiple fields of ridge and furrow all of which were observed as earthworks on historic aerial imagery, each field is in a differing state of preservation from extant earthwork to cropmark. The alignments of the ridge and furrow are indicated by directional arrows.	N/A
AP_024	<b>Area of Disturbance</b> An irregular ovoid bank feature which is visible as an earthwork on Lidar data. The feature may relate to agricultural activity.	N/A
AP_025	<b>Ridge and Furrow</b> Multiple fields of ridge and furrow all of which were observed as earthworks on historic aerial imagery, each field is in a differing state of preservation from extant earthwork to cropmark. The alignments of the ridge and furrow are indicated by directional arrows.	N/A
AP_026	<b>Ridge and Furrow</b> An area of ridge and furrow which survive as residual earthworks. The alignments of the ridge and furrow are indicated by directional arrows.	N/A

## 5.0 Summary and Conclusions

- 5.1** This assessment of aerial imagery has reviewed aerial imagery sources including the Historic England Archive, Google Earth, Bing, Cambridge University Collection of Aerial Photographs and Environment Agency Lidar data. These data were reviewed for the study site and a 1km buffer.
- 5.2** A review of the available sources has identified the following features within the site:
- A possible trackway that crosses the site northwest to central south
  - Curvilinear features and a ring ditch at the northwest
  - Former field boundaries
  - Ridge and furrow at the southeast
- 5.3** Within the 1km study area there are numerous examples of ridge and furrow in varying states of preservation. To the west of the site is an area of cropmarks including ditches, trackways, a rectilinear enclosure, banks and pits. An area of possible pits and ditches has been identified c. 780m to the west of the site. These features may be archaeological or geological in origin.

## Sources

### Websites

Archaeological Data Service – [www.ads.ahds.ac.uk](http://www.ads.ahds.ac.uk)  
 British History Online – <http://www.british-history.ac.uk/>  
 British Geological Society Geology of Britain Viewer -  
<http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>  
 Historic England National Heritage List for England -  
<https://www.historicengland.org.uk/listing/the-list/>  
 Heritage Gateway - [www.heritagegateway.org.uk](http://www.heritagegateway.org.uk)  
 MAGIC - [www.magic.gov.uk](http://www.magic.gov.uk)  
 PastScape - [www.pastscape.org.uk](http://www.pastscape.org.uk)

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Bennett, R. Welham, K. Hill, R.A. & Ford, A. 2012. 'A Comparison of visualisation techniques for models created from airborne laser scanned data' in *Archaeological Prospection* 19. PP. 41-48.

Hesse, R. 2010. 'LiDAR derived Local Relief Models - a new tool for archaeological prospection' in *Archaeological Prospection* 2.

Orion Heritage, 2022. Land South of Green Lane Chesterton Historic Environment Desk Based Assessment.

Scollar, I. & Palmer, R. 2008. 'Using Google Earth Imagery' in *AARG News* 37. PP. 15-21.

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Scollar, I. 2014. <http://www.uni-koeln.de/~al001/> <Accessed on 08.02.22>

Štular, B. Kokalj, Ž. Oštir, K. Nuninger, L. 2012. 'Visualisation of LiDAR – derived relief models for detection of archaeological features' in *Journal of Archaeological Science* 39. PP. 3354-3360.

SUMO, 2022. Geophysical Survey Report - Land South of Green Lane, Chesterton, Oxfordshire. Report No. 05787.



## Lidar

Lidar data were downloaded from the Environment Agency website in February 2022 - <https://environment.data.gov.uk/DefraDataDownload/?Mode=survey>

Tile Name	Year	Resolution (m)
SP51 NE	2020	1
SP51 NW	2020	1
SP52 SE	2020	1
SP52 SW	2020	1

## Appendix 1 – Aerial Photography Cover Searches

### Historic England Aerial Photographs

A search of the Historic England Archive aerial photography collection in December 2021 under reference AP/131912 returned 22 oblique records, 0 Military oblique records and 139 vertical records. These are listed in the tables below.

#### Oblique Aerial Photographs

Photo Reference	Date	Grid Reference
SP 5420 / 1	11 JUN 2015	SP 546207
SP 5420 / 5	11 JUN 2015	SP 545207
SP 5420 / 6	11 JUN 2015	SP 545207
SP 5520 / 1	20 JUL 2005	SP 554207
SP 5520 / 2	20 JUL 2005	SP 554207
SP 5520 / 3	20 JUL 2005	SP 555207
SP 5520 / 4	20 JUL 2005	SP 555207
SP 5520 / 5	20 JUL 2005	SP 555208
SP 5520 / 6	20 JUL 2005	SP 554207
SP 5520 / 7	20 JUL 2005	SP 555208
SP 5520 / 8	20 JUL 2005	SP 555207
SP 5520 / 9	20 JUL 2005	SP 556207
SP 5520 / 10	08 JUL 2013	SP 553207
SP 5520 / 11	08 JUL 2013	SP 553207
SP 5520 / 12	08 JUL 2013	SP 554207
SP 5520 / 13	08 JUL 2013	SP 555208
SP 5520 / 14	08 JUL 2013	SP 555208
SP 5620 / 1	12 APR 1936	SP 569204
SP 5620 / 2	06 JUL 2016	SP 569205
SP 5620 / 3	06 JUL 2016	SP 569205
SP 5621 / 1	17 MAR 1930	SP 561216
SP 5720 / 99	06 JUL 2016	SP 570203

#### Military Oblique Aerial Photographs

None Recorded.

## Vertical Aerial Photographs

Sortie Number	Frame Number	Date	Grid Reference
RAF/106G/UK/620	3148	10 AUG 1945	SP 560 204
RAF/106G/UK/620	3149	10 AUG 1945	SP 557 206
RAF/106G/UK/620	3150	10 AUG 1945	SP 554 209
RAF/106G/UK/620	4151	10 AUG 1945	SP 558 219
RAF/106G/UK/620	4152	10 AUG 1945	SP 562 215
RAF/106G/UK/620	4153	10 AUG 1945	SP 566 212
RAF/CPE/UK/1897	3316	12 DEC 1946	SP 561 223
RAF/CPE/UK/1897	3317	12 DEC 1946	SP 556 223
RAF/CPE/UK/1897	3318	12 DEC 1946	SP 550 222
RAF/CPE/UK/2013	4097	16 APR 1947	SP 563 213
RAF/CPE/UK/2013	4098	16 APR 1947	SP 557 213
RAF/CPE/UK/2013	4099	16 APR 1947	SP 551 213
RAF/CPE/UK/2013	4109	16 APR 1947	SP 561 203
RAF/CPE/UK/2013	4110	16 APR 1947	SP 554 203
FSL/6125	11093	1961	SP 555 198
FSL/6125	11094	1961	SP 562 198
FSL/6125	12016	1961	SP 564 212
FSL/6125	12017	1961	SP 557 212
FSL/6125	12018	1961	SP 551 212
RAF/82/1006	294	31 AUG 1954	SP 558 219
RAF/82/1006	295	31 AUG 1954	SP 561 208
RAF/540/1400	136	01 SEP 1954	SP 553 215
RAF/540/1400	137	01 SEP 1954	SP 557 214

Sortie Number	Frame Number	Date	Grid Reference
RAF/540/1400	138	01 SEP 1954	SP 561 214
RAF/540/1400	137	01 SEP 1954	SP 556 198
RAF/540/1400	138	01 SEP 1954	SP 560 198
RAF/540/1400	139	01 SEP 1954	SP 565 198
RAF/543/673	12	24 AUG 1959	SP 571 211
RAF/58/4627	386	16 AUG 1961	SP 566 197
RAF/58/4627	387	16 AUG 1961	SP 559 195
RAF/58/4627	386	16 AUG 1961	SP 570 218
RAF/542/1	3	04 AUG 1954	SP 549 196
RAF/542/1	4	04 AUG 1954	SP 548 209
RAF/542/1	5	04 AUG 1954	SP 547 222
RAF/542/1	3	04 AUG 1954	SP 570 199
RAF/542/1	4	04 AUG 1954	SP 569 212
RAF/542/1	5	04 AUG 1954	SP 568 224
RAF/541/340	3122	26 JUL 1949	SP 563 199
RAF/541/340	3123	26 JUL 1949	SP 557 198
RAF/541/340	3124	26 JUL 1949	SP 551 198
RAF/541/340	4122	26 JUL 1949	SP 565 217
RAF/541/340	4123	26 JUL 1949	SP 559 217
RAF/541/340	4124	26 JUL 1949	SP 553 217
RAF/16/AC638	5017	07 NOV 1943	SP 549 200
RAF/16/AC638	5021	07 NOV 1943	SP 565 204
RAF/16/AC638	5022	07 NOV 1943	SP 562 211
RAF/16/AC638	5023	07 NOV 1943	SP 558 218

Sortie Number	Frame Number	Date	Grid Reference
US/7PH/GP/LOC267	5029	10 APR 1944	SP 578 205
US/7PH/GP/LOC267	5030	10 APR 1944	SP 577 195
OS/75391	266	21 SEP 1975	SP 562 194
OS/75391	267	21 SEP 1975	SP 554 194
OS/66042	68	29 APR 1966	SP 552 218
OS/66042	69	29 APR 1966	SP 558 218
OS/66042	70	29 APR 1966	SP 565 217
OS/66042	95	29 APR 1966	SP 566 204
OS/66042	96	29 APR 1966	SP 560 205
OS/66042	97	29 APR 1966	SP 554 205
OS/75312	84	05 JUL 1975	SP 549 211
OS/75312	85	05 JUL 1975	SP 558 210
OS/75312	86	05 JUL 1975	SP 567 210
OS/75392	187	21 SEP 1975	SP 552 210
OS/75392	188	21 SEP 1975	SP 560 209
OS/84243	1009	26 NOV 1984	SP 558 213
OS/84243	1010	26 NOV 1984	SP 558 204
OS/89439	17	23 SEP 1989	SP 553 201
OS/89439	18	23 SEP 1989	SP 560 210
OS/91021	129	10 APR 1991	SP 551 212
OS/91021	130	10 APR 1991	SP 552 205
OS/91258	19	19 SEP 1991	SP 552 216
OS/91258	20	19 SEP 1991	SP 558 216
OS/91258	21	19 SEP 1991	SP 564 216

Sortie Number	Frame Number	Date	Grid Reference
OS/93002	19	19 FEB 1993	SP 559 201
OS/93002	20	19 FEB 1993	SP 564 205
OS/93002	21	19 FEB 1993	SP 568 210
OS/94213	22	28 JUN 1994	SP 551 203
OS/94213	23	28 JUN 1994	SP 558 203
OS/94213	24	28 JUN 1994	SP 565 203
OS/94213	28	28 JUN 1994	SP 567 215
OS/94213	29	28 JUN 1994	SP 561 215
OS/94213	30	28 JUN 1994	SP 555 215
OS/94213	31	28 JUN 1994	SP 549 215
OS/96633	9	15 JUN 1996	SP 565 205
OS/96633	10	15 JUN 1996	SP 560 205
OS/96633	11	15 JUN 1996	SP 554 205
OS/96633	12	15 JUN 1996	SP 548 205
OS/96633	91	15 JUN 1996	SP 564 214
OS/96633	92	15 JUN 1996	SP 559 214
OS/96633	93	15 JUN 1996	SP 554 214
OS/96633	94	15 JUN 1996	SP 550 214
OS/74264	317	24 OCT 1974	SP 555 201
OS/74264	318	24 OCT 1974	SP 562 201
OS/74264	319	24 OCT 1974	SP 567 201
RAF/540/673	3441	12 FEB 1952	SP 553 199
RAF/540/673	3442	12 FEB 1952	SP 555 206
RAF/540/673	3443	12 FEB 1952	SP 554 212

Sortie Number	Frame Number	Date	Grid Reference
RAF/540/673	3444	12 FEB 1952	SP 552 218
RAF/540/673	4441	12 FEB 1952	SP 571 198
RAF/540/673	4442	12 FEB 1952	SP 573 206
RAF/540/673	4443	12 FEB 1952	SP 571 212
RAF/540/673	4444	12 FEB 1952	SP 570 218
OS/99329	95	03 SEP 1999	SP 567 210
OS/99329	96	03 SEP 1999	SP 562 210
OS/99329	97	03 SEP 1999	SP 557 210
OS/99329	98	03 SEP 1999	SP 553 210
OS/99329	99	03 SEP 1999	SP 548 210
OS/99329	131	03 SEP 1999	SP 567 219
OS/99329	132	03 SEP 1999	SP 562 219
OS/99329	133	03 SEP 1999	SP 557 218
OS/99329	134	03 SEP 1999	SP 553 218
OS/99329	135	03 SEP 1999	SP 548 218
OS/03670	266	14 AUG 2003	SP 561 204
OS/03670	267	14 AUG 2003	SP 561 211
OS/03670	332	14 AUG 2003	SP 549 204
OS/03670	333	14 AUG 2003	SP 549 210
OS/04978	2979	15 JUN 2004	SP 566 197
OS/04978	2980	15 JUN 2004	SP 559 197
OS/04978	2981	15 JUN 2004	SP 552 197
OS/04978	3088	15 JUN 2004	SP 552 211
OS/04978	3089	15 JUN 2004	SP 559 212

Sortie Number	Frame Number	Date	Grid Reference
OS/04978	3090	15 JUN 2004	SP 565 212
OS/09061	97	19 AUG 2009	SP 559 211
OS/09061	98	19 AUG 2009	SP 559 203
HEA/S3336	2218	25 JUN 2020	SP 548 218
HEA/S3336	2219	25 JUN 2020	SP 548 216
HEA/S3336	2220	25 JUN 2020	SP 548 214
HEA/S3336	2221	25 JUN 2020	SP 549 212
HEA/S3336	2222	25 JUN 2020	SP 548 209
HEA/S3336	2223	25 JUN 2020	SP 549 207
HEA/S3336	2224	25 JUN 2020	SP 549 206
HEA/S3336	2225	25 JUN 2020	SP 548 203
HEA/S3336	2226	25 JUN 2020	SP 549 201
HEA/S3336	2251	25 JUN 2020	SP 558 200
HEA/S3336	2252	25 JUN 2020	SP 558 203
HEA/S3336	2253	25 JUN 2020	SP 557 205
HEA/S3336	2254	25 JUN 2020	SP 558 208
HEA/S3336	2255	25 JUN 2020	SP 557 210
HEA/S3336	2256	25 JUN 2020	SP 557 213
HEA/S3336	2257	25 JUN 2020	SP 557 216
HEA/S3336	2258	25 JUN 2020	SP 557 218



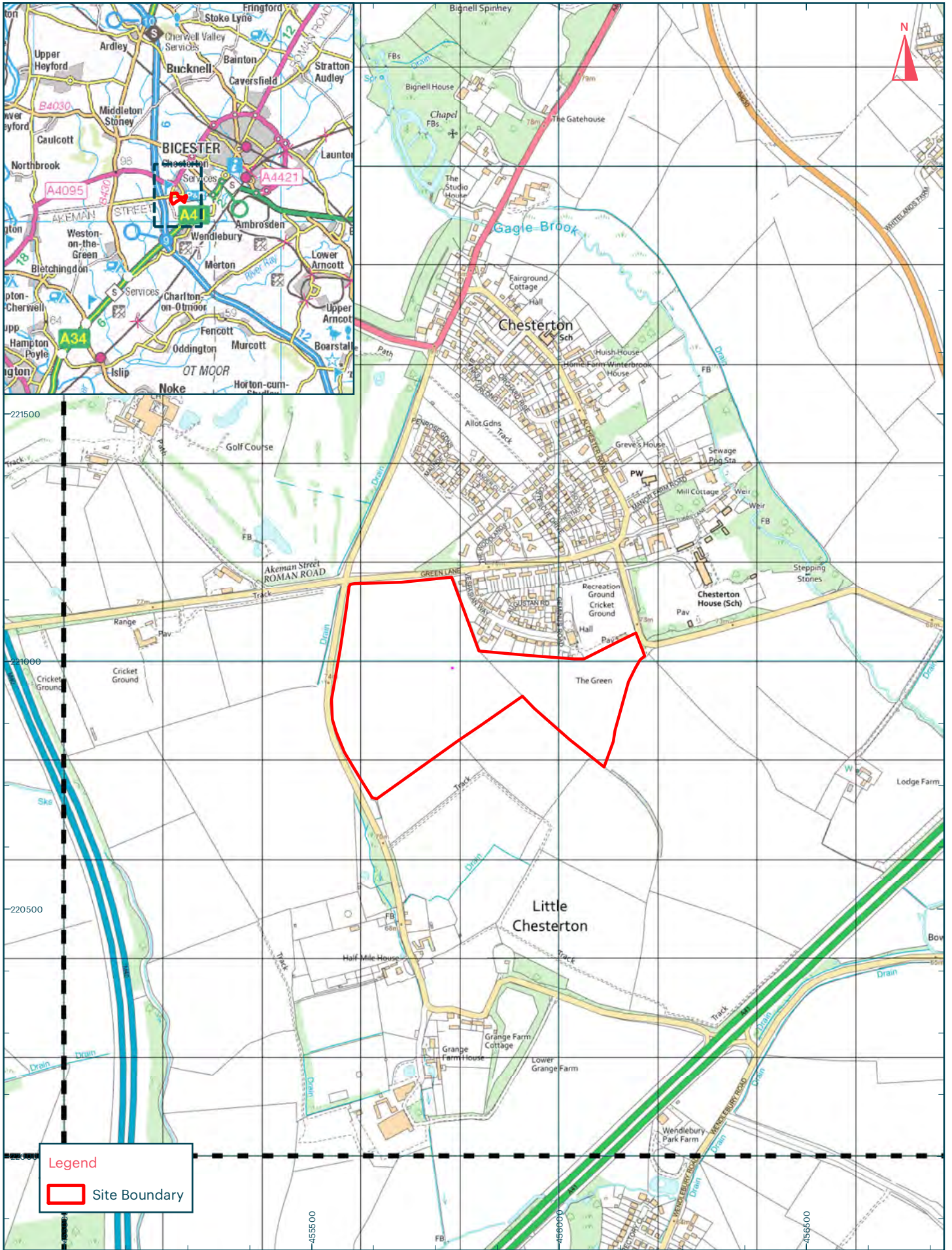
## Cambridge University Collection of Aerial Photographs

The following cover search lists all aerial photographs covering the study site and 1km study area, which were accessioned to the digital CUCAP archive as of 08.02.2022.

**Abbreviations:**

**CUCAP:** Cambridge University Collection of Aerial Photographs

Photo Reference	Oblique Or Vertical	Date	Subject	Easting	Northing
ZH15	Oblique	02/07/1959	Chesterton	456300	221300
ZH16	Oblique	02/07/1959	Chesterton	456300	221300
ZknSE58	Vertical	09/11/2006	ULM extra 2 South	457059	221462

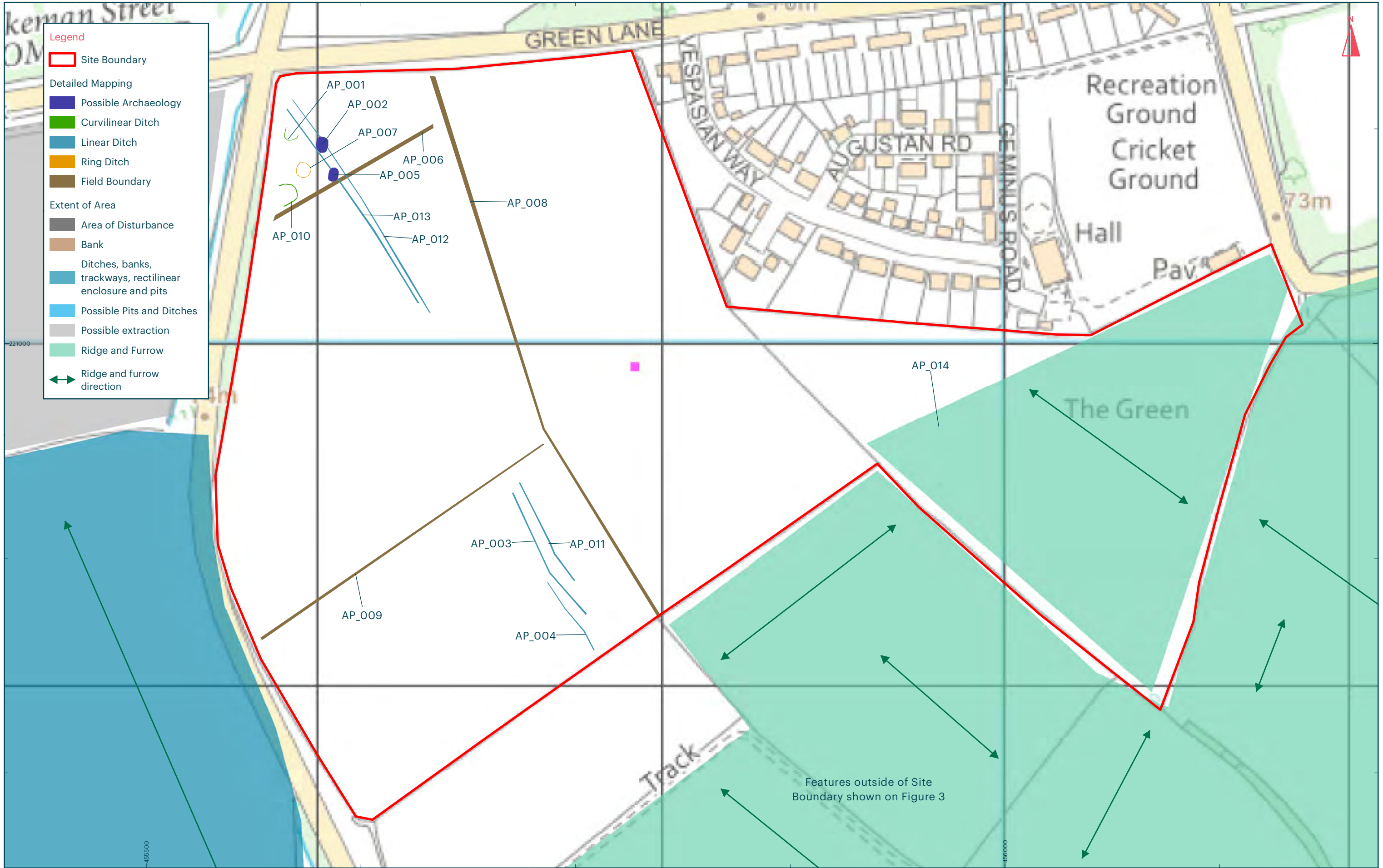


Title:  
Figure 1: Site Location

Address:  
Land south of Green Lane, Chesterton, Oxfordshire

Scale at A4: 1:10,000

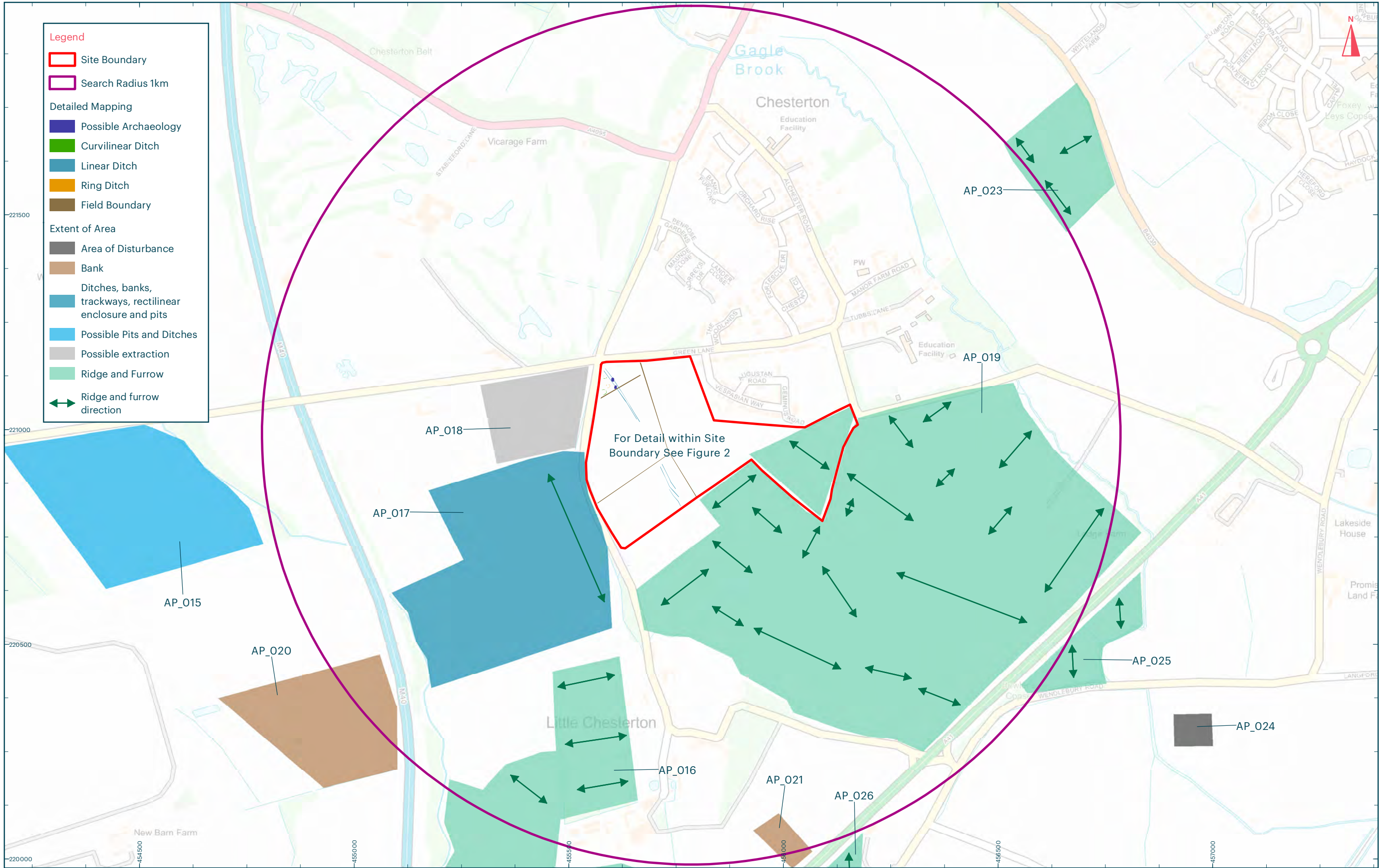




**Title:**  
 Figure 2: Features Identified from Aerial Imagery within the Site  
**Address:**  
 Land south of Green Lane, Chesterton, Oxfordshire

Scale at A3: 1:2,000  
 0 50m



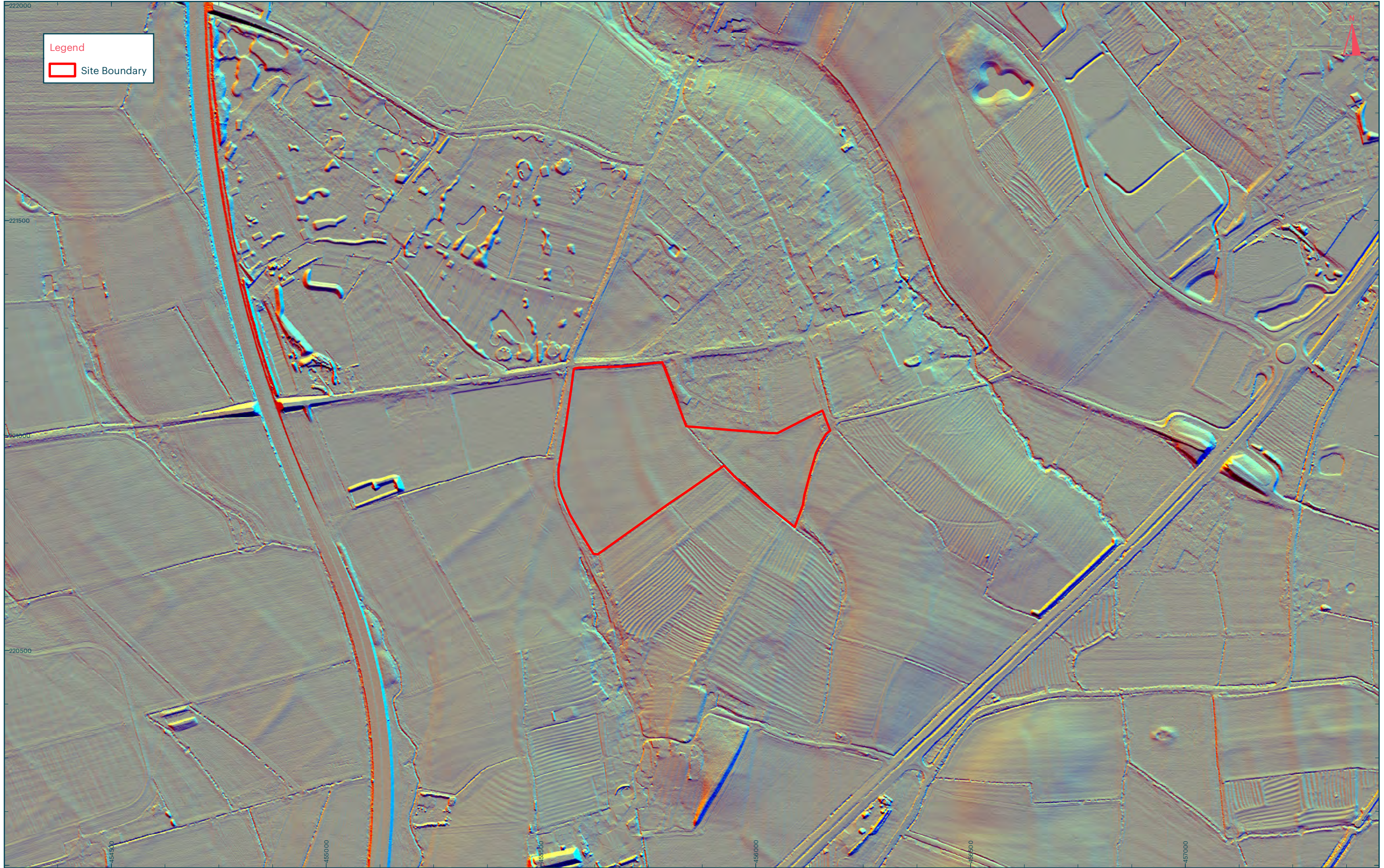


**Title:**  
 Figure 3: Features Identified from Aerial Imagery within the 1km Study Area  
**Address:**  
 Land south of Green Lane, Chesterton, Oxfordshire

Scale at A3: 1:8,000

0 250m

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**Title:**  
Figure 4: Environment Agency National Lidar Programme 1m Digital Terrain Model – Multidirectional Hillshade  
**Address:**  
Land south of Green Lane, Chesterton, Oxfordshire

Source: Environment Agency (NLP)  
Data Type: Digital Terrain Model  
Resolution: 1.0m

Scale at A3: 1:8,000  
0 250m

