



**Land off Hob Lane and
Pheasant Oak Farm,
Balsall Common**

**Archaeology and
Heritage Assessment**

Prepared by:
**The Environmental Dimension
Partnership Ltd**

On behalf of:
**Barwood Development
Securities Ltd**

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(edp5006_d003b 30 November 2022 GYo/SDo)

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Executive Summary

- S1 This Archaeological and Heritage Assessment has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Barwood Development Securities Ltd to inform a planning application for residential development on Land off Hob Lane and Pheasant Oak Farm, Balsall Common (hereafter referred to as 'the Site'). The Site lies within a draft allocated site included in the emerging local plan under Policy BC4 for residential development.
- S2 It is identified that the Site does not contain any designated heritage assets, as defined in Annex 2 of the National Planning Policy Framework (NPPF), and therefore the proposed development cannot result in a direct impact on the fabric or form of any such assets.
- S3 In addition, those designated heritage assets in the surrounding area have been considered using the 5-step setting assessment approach expounded in Historic Environment Good Practice Advice in Planning: 3 (2nd Edition 2017). It has been concluded that only one designated heritage asset, comprising the Grade II* listed Berkswell Windmill, would be affected. This would result in a negligible level of harm to its significance, at the lowest end of 'less than substantial'.
- S4 The National Planning Policy Framework (NPPF) requires that clear and convincing justification is provided in instances where development would result in harm to a designated heritage asset (Paragraph 200). Furthermore, in the case of 'less than substantial' harm, as in this instance, the harm would need to be outweighed by the public benefits of the proposals.
- S5 Otherwise, no harm is identified to the significance of any other designated heritage assets.
- S6 In terms of non-designated heritage assets, the Site is not identified as containing any previously recorded archaeological remains or locally listed heritage assets. Whilst discussions with the Council's archaeological advisor are ongoing regarding any further fieldwork investigations required prior to determination of an application, on the current evidence there is considered to be a low potential for the Site to contain significant archaeological remains from any period, such that may warrant preservation. Indeed, it is determined that any remains present would be of no more than 'negligible' value. Any surviving remains, if present, could most likely be mitigated through conditioned fieldwork, if any mitigation were required at all.
- S7 The Site does not contain any locally listed heritage assets. Three such assets are recorded in the study area, but it was identified that none of them would experience change to their setting such that their significance would be harmed.
- S8 The Site includes two 19th century buildings that are considered to retain a very limited level of significance, comprising a farmhouse and barn. These are not proposed for retention within the development.
- S9 The impact upon any non-designated heritage assets should be considered in line with paragraph 203 of the NPPF, whereby a balanced judgement is made taking into account

the level of impact and the level of significance. However, given the 'very low' and 'negligible' value of the assets that would be impacted, and the status of the Site as a draft allocation for residential development within the local plan, there is every reason to believe that planning permission should be granted.

- S10 Therefore, the proposed development is also considered to positively address relevant paragraphs of the NPPF concerning non-designated heritage assets, as well as Policy P16 of the local plan and P16 of the emerging local plan.

Section 1

Introduction

- 1.1 This report has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Barwood Development Securities Ltd and presents the results of an archaeological and heritage assessment of Land off Hob Lane and Pheasant Oak Farm, Balsall Common (hereafter referred to as 'the Site').
- 1.2 This document has been produced to support planning proposals for the demolition of the current built form of the Site and their replacement with residential homes. The Site has the benefit of a draft housing allocation under Policy BC4 of the emerging Solihull Local Plan, which is in the closing stages of its Examination.
- 1.3 The first aim of this assessment is to identify and assess the potential for the development within the Site to cause change to designated heritage assets, either directly or through changes within their setting, and to determine whether and to what extent those changes might affect their heritage significance.
- 1.4 The second aim of this assessment is to consider the available historical and archaeological information for the Site and its immediate environs and to establish its likely archaeological potential in accordance with the requirements of the National Planning Policy Framework (NPPF) and local planning policy.
- 1.5 This Assessment has been informed by a search of the Solihull Historic Environment Record (HER) and online database searches, such as the National Heritage List for England (NHLE) and the local authority website, amongst other sources. In accordance with best practice guidance, these desktop sources have been augmented through walkover surveys in February 2019 and September 2022. The Site has also been the subject of a geophysical survey in August 2022.

SITE DESCRIPTION

- 1.6 The Site is located on the eastern edge of Catchems Corner, which adjoins Balsall Common to the west. It is centred on National Grid Reference 425327, 276040, and comprises two farms, a light industrial complex, and a collection of agricultural fields (**Plan EDP 1**).
- 1.7 It is subdivided and bounded on all sides by a mixture of fences and hedgerows. Beyond these, farmland is located to the east, Hob Lane to the south, residential properties and Windmill Lane to the west, and the B4101 to the north.
- 1.8 Topographically, the Site is broadly flat and lies at c.25m above Ordnance Datum (aOD).
- 1.9 The British Geological Survey records the underlying solid geology of the Site on mudstone of the Mercia Mudstone Group, which is broadly overlain by Diamicton of the Oadby Member on the eastern half, and sand and gravel of Glaciofluvial Deposits on the western half (www.bgs.ac.uk).

PROPOSED DEVELOPMENT

- 1.10 The proposal is for Residential Development (up to 250 homes including 40% affordable) via an outline planning application; with vehicular access off Waste Lane; the demolition of existing buildings/structures; associated landscaping and new public open spaces; community growing area/orchard; and enhancements to Millennium Way through the Site.

Section 2 Legislation and Planning Guidance

INTRODUCTION

- 2.1 The following section summarises the key legislation and national/local planning policies which are of relevance to this assessment.

PLANNING (LISTED BUILDINGS AND CONSERVATION AREAS) ACT 1990

- 2.2 Section 66(1) of the *Planning (Listed Buildings and Conservation Areas) Act 1990* sets out the duties of Local Planning Authorities (LPA) in respect of the treatment of listed buildings and conservation areas through the planning process.
- 2.3 The “*special regard*” duty of the 1990 Act has been tested in the Courts and confirmed to require that “*considerable importance and weight*” is afforded by the decision-maker to the desirability of preserving a listed building along with its setting.
- 2.4 However, it must be recognised that Section 66(1) of the 1990 Act does not identify that the local authority or the Secretary of State must preserve a listed building or its setting. Neither is it the case that a proposed development that does not “*preserve*” is unacceptable and should be refused. It is for the decision maker to evaluate and determine.
- 2.5 Paragraph 199 of the NPPF (MHCLG, 2021) transposes these sections of the 1990 Act into national planning policy as they come under the category of designated heritage assets. The balancing exercise to be performed, between any harm arising from a development proposal and the benefits which would accrue from its implementation, is then subsequently presented in paragraphs 201 and 202 of the NPPF.

NATIONAL PLANNING POLICY

- 2.6 The revised NPPF was revised on 05 September 2023. Section 16 sets out the government’s approach to the conservation and management of the historic environment through the planning process.
- 2.7 The opening paragraph (189) recognises that heritage assets are an irreplaceable resource and should be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations.
- 2.8 Paragraph 194 concerns planning applications, stating that:

“In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets’ importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary.”

Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.”

2.9 NPPF paragraph 197 is relevant when it states that:

“In determining applications, local planning authorities should take account of:

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

2.10 Paragraph 199 considers the weighting given within the planning decision with regard to impacts on designated heritage assets, stating that:

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

2.11 Paragraph 200 considers the level of harmful effects on designated heritage assets and states that:

“Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification. Substantial harm to or loss of:

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

2.12 With regard to the decision-making process, paragraphs 201 and 202 are of relevance. Paragraph 201 states that:

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

- a. The nature of the heritage asset prevents all reasonable uses of the site;*

- b. *No viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation;*
- c. *Conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and*
- d. *The harm or loss is outweighed by the benefit of bringing the site back into use.”*

2.13 Paragraph 202 states that:

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

2.14 Paragraph 203 refers to non-designated heritage assets identifying that:

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

2.15 In relation to non-designated heritage assets, footnote 69 explains the exemption to the ‘balanced judgement’ exercise outlined in paragraph 203 in cases where:

“Non-designated heritage assets of archaeological interest, which are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets”.

LOCAL PLANNING POLICY

2.16 The Site falls within the Solihull Metropolitan administrative area, which is covered by The Solihull Local Plan (2013) (SLP) which will, in due course, be replaced by the Solihull Local Plan – Draft Submission Plan (DSLSP).

2.17 The SLP was adopted in December 2013 and provides the strategic planning document for the area, setting out the level of growth and the strategy for delivery, over the plan period from 2011 up to 2028. Whilst the DSLSP will replace the SLP policies in due course, the site allocations from the SLP will be brought forward.

2.18 Policy P16 of the SLP is relevant:

“The Council recognises the importance of the historic environment to the Borough’s local character and distinctiveness, its cultural, social, environmental and economic benefits and the effect this has on civic pride.

The Council considers the following characteristics make a significant contribution to the local character and distinctiveness of the Borough and where applicable, development proposals will be expected to demonstrate how these characteristics have been conserved:

- i. The historic core of Solihull Town Centre and its adjacent parks;*
- ii. The historical development and variety of architectural styles within the Mature Suburbs and the larger established rural settlements of Meriden, Hampton-in-Arden, Balsall Common, Knowle, Dorridge, Bentley Heath, Hockley Heath, Cheswick Green and Tidbury Green;*
- iii. The Arden landscape, historic villages, hamlets, farmsteads, country and lesser houses and the distinct medieval core of historic rural settlements including Berkswell, Barston, Temple Balsall, Meriden Hill, Walsal End, Hampton-in-Arden, Bickenhill and Knowle;*
- iv. Parks, gardens and landscape including common, woodland, heathland and distinctive fieldscapes as defined in the Warwickshire Historic Landscape Characterisation; and*
- v. The canal and railway network, including disused railway lines and the working stations at Solihull, Olton, Dorridge and Shirley, together with associated structures.*

Development will be expected to preserve or enhance heritage assets as appropriate to their significance, conserve local character and distinctiveness and create or sustain a sense of place. In Solihull, heritage assets include; Listed Buildings, Scheduled Ancient Monuments, Registered Parks and Gardens, Conservation Areas and also non-designated assets; buildings, monuments, archaeological sites, places, areas or landscapes positively identified in Solihull's Historic Environment Record as having a degree of significance meriting consideration in planning decisions, such as those identified on the Local List.

All applications and consents that affect the historic environment will be expected to have considered and used the evidence in the Solihull Historic Environment Record to inform the design of the proposal. This should be explained in the accompanying Design and Access Statement or, for significant proposals, in a Heritage Statement.

Proposals seeking to modify heritage assets for the mitigation of and adaptation to the effects of climate change will be expected to be sympathetic and conserve the special interest and significance of the heritage asset or its setting."

2.19 DSLP Policy P16 'Conservation of Heritage Assets and Local Distinctiveness' almost exactly mirrors the wording of the SLP policy. This states that:

- 1. "The Council recognises the importance of the historic environment to the Borough's local character and distinctiveness, and to civic pride, and the cultural, social, environmental and economic benefits that its conservation brings. Heritage assets are an irreplaceable resource that should be conserved as appropriate to their significance, sustained and enhanced, and put to viable use consistent with their conservation.*

2. *The Council considers that the following characteristics make a significant contribution to the local character and distinctiveness of the Borough:*
 - i. *The historic core of Solihull Town Centre and its adjacent parks;*
 - ii. *The historical development and variety of architectural styles within the Mature Suburbs and the larger established rural settlements of Meriden, Hampton-in-Arden, Balsall Common, Knowle, Dorridge, Bentley Heath, Hockley Heath, Cheswick Green and Tidbury Green;*
 - iii. *The Arden landscape, historic villages, hamlets, farmsteads, country and lesser houses and the distinct medieval core of historic rural settlements including Berkswell, Barston, Temple Balsall, Meriden Hill, Walsal End, Hampton-in-Arden, Bickenhill and Knowle;*
 - iv. *Parks, gardens and landscape including common, woodland, heathland and distinctive fieldscapes as defined in the Warwickshire Historic Landscape Characterisation; and*
 - v. *The canal and railway network, including disused railway lines and the working stations at Solihull, Olton, Dorridge and Shirley, together with associated structures.*
3. *Development proposals that impact upon this character and significance will be expected to demonstrate how this impact has been assessed and minimised, using a recognised process of assessment, involvement, evaluation and design.*
4. *Development will be expected to conserve heritage assets in a manner appropriate to their significance, conserve local character and distinctiveness, create or sustain a sense of place and seek and take opportunities to enhance the contribution made by the historic environment to the character of a place. In Solihull, heritage assets include; Listed Buildings, Scheduled Ancient Monuments, Registered Parks and Gardens, Conservation Areas and also non-designated assets. The latter include buildings, monuments, archaeological sites, places, areas or landscapes positively identified in Solihull's Historic Environment Record, or during development management work as having a degree of significance meriting consideration in planning decisions, such as those identified on the Local List of Heritage Assets. The historic landscape includes ancient woodlands, hedgerows and field boundaries, and archaeological features such as earthworks.*
5. *All applications that affect the historic environment will be expected to have considered and used, as a minimum the evidence in the Solihull Historic Environment Record, conservation area appraisals and management plans, to inform the design of the proposal. Development proposals affecting heritage assets should be assessed using further sources, and appropriate expertise where necessary. This should be explained in the accompanying Design and Access Statement or, for significant proposals, in a Heritage Statement.*

6. *Proposals seeking to modify heritage assets for the mitigation of and adaptation to the effects of climate change will be expected to be sympathetic and conserve the special interest and significance of the heritage asset or its setting.*

2.20 Policy BC4, which includes the Site as a draft residential allocation in the DSLP for 200 dwellings, includes the following relevant requirement:

i. *“Protection of the setting of heritage assets adjacent to the site”.*

2.21 The Berkswell Neighbourhood Development Plan was 'made' on 05 September 2019 and addresses heritage matters in point (3) of *Policy B3: Protecting Local Landscape and Built Character*:

“Heritage Assets

a. *Development proposals that impact upon the character and significance of the parish’s heritage assets and their setting will be expected to demonstrate how this impact has been assessed to avoid or minimise conflict with the heritage asset’s conservation.*

b. *The Parish’s heritage assets should be conserved in a manner appropriate to their significance. Proposals will be weighed against the public benefits of the proposal as appropriate; it should be demonstrated that all reasonable efforts have been made to sustain the existing use, find new uses, or mitigate the extent of the harm to the significance of the asset; and whether the works proposed are the minimum required to secure the long term use of the asset.*

c. *All applications that affect the historic environment will be expected to have considered and used, as a minimum, the evidence in the Berkswell Historic Environment Record to inform the principle and design response of the proposal.*

d. *Scheduled monuments and other non-designated archaeological sites of equivalent importance should be preserved in situ. In those cases where this is not justifiable or feasible, provision should be made for excavation and recording with an appropriate assessment and evaluation. The appropriate publication/curation of findings will be expected.”*

2.22 The plans and policies identified above have all been taken into account in the preparation of this assessment.

Section 3 Methodology

INTRODUCTION

- 3.1 This report has been produced in accordance with the Standard and Guidance for Historic Environment Desk-based Assessment issued by the Chartered Institute for Archaeologists (CIfA 2020). These guidelines provide a national standard for the completion of desk-based assessments.
- 3.2 It has also given due regard to the potential for effects on designated heritage assets, in terms of their setting, in line with the five-step process outlined in national guidance (Historic England (HE) 2017) and other relevant documents related to the historic environment (HE 2015).

ARCHAEOLOGICAL METHODOLOGY

- 3.3 The assessment principally involved consultation of readily available archaeological and historical information from documentary and cartographic sources. The major repositories of relevant information comprised:
- Solihull HER for known archaeological sites, monuments, findspots and previous archaeological investigations within 1km of the Site;
 - Maps and documents held by the Warwickshire Record Office and The Genealogist website;
 - Aerial photographs on the Britain from Above website and Historic England Archive (HEA); and
 - The NHLE curated by Historic England.
- 3.4 The assessment provides a synthesis of relevant archaeological information for the Site derived from a search area, hereafter known as the 'study area', to allow for additional contextual information regarding its archaeological interest and/or potential to be gathered. A study area of 1km diameter from the Site boundary was considered proportionate and appropriate, considering the urban location of the proposals.
- 3.5 The information gathered from the repositories and sources identified above was checked and augmented through the completion of site visits and walkovers in February 2019 and September 2022. These walkovers considered the nature and significance of known and/or potential archaeological assets within the Site, identified visible historic features and assessed possible factors that may affect the survival or condition of known or potential archaeological assets.
- 3.6 The Site was also subject to a geophysical survey in August 2022, the results of which are discussed below and included as **Appendix EDP 1**.

- 3.7 The report thereafter concludes with an assessment of the Site's likely archaeological potential, made with regard to current best practice guidelines.
- 3.8 The evidence base for the SLP was also reviewed, where relevant. This comprises an Archaeological Assessment (WCC 2020) and a Heritage Assessment (DBP 2020) of the Site. However, it should be recognised that additional research has been undertaken on the Site since the production of the Archaeological Assessment, in the form of a geophysical survey that gathered first-hand data.

SETTING ASSESSMENT METHODOLOGY

- 3.9 In addition, this report also considers the nature and significance of any effects on the settings of designated heritage assets located within the wider influence of the Site. In this regard, the site walkover included visits to designated heritage assets beyond the Site boundary and considered, where appropriate, their significance, setting and the existing contribution made by the land within the Site to their significance.
- 3.10 The setting assessment process employed current Historic England guidance which is set out in *Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets* (HE 2017). This details best practice guidance for the identification and assessment of potential setting issues in the historic environment.
- 3.11 When assessing the impact of proposals on designated heritage assets, it is not a question of whether there would be a physical impact on that asset, but instead whether change within its 'setting' would lead to a loss of 'significance'.
- 3.12 In simple terms, setting is defined as "*the surroundings in which a heritage asset is experienced*" (MHCLG 2023). It must be recognised from the outset that 'setting' is not a heritage asset and cannot itself be harmed. Its importance relates to the contribution it makes to the significance of the heritage asset.
- 3.13 Historic England guidance identifies that "*change to heritage assets is inevitable, but it is only harmful when significance is damaged*" (HE 2017).
- 3.14 In that regard, 'significance' is defined in Annex 2 of the NPPF as "*the value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic*".
- 3.15 As such, when assessing the indirect impact of proposals on designated heritage assets, it is not a question of whether setting would be affected, but rather a question of whether change within an asset's 'setting' would lead to a loss of 'significance' based on the above 'heritage interest' as defined in the NPPF.
- 3.16 Set within this context, it is necessary to first define the significance of the asset in question, and the contribution made to that significance by its 'setting', in order to establish whether there would be a loss and therefore harm. The guidance identifies that change within a heritage asset's setting need not necessarily cause harm to that asset and that it can be positive, negative or neutral.

- 3.17 In light of the above, the assessment of potential setting effects, arising from the proposed scheme, has followed the guidance set out in Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets published by HE in 2017. This guidance (HE 2017) observes that *“The NPPF makes it clear that the extent of the setting of a heritage asset is not fixed and may change as the asset and its surroundings evolve.”*
- 3.18 The guidance also observes that *“elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate the significance or may be neutral”*.
- 3.19 The guidance states that the importance of setting *“lies in what it contributes to the significance of the heritage asset or to the ability to appreciate that significance”*.
- 3.20 It goes on to note that:
- “...all heritage assets have significance, some of which have particular significance and are designated. The contribution made by their setting to their significance also varies. Although many settings may be enhanced by development, not all settings have the same capacity to accommodate change without harm to the significance of the heritage asset or the ability to appreciate it.”*
- 3.21 Whilst identifying those elements of an asset’s setting can make an important contribution to its significance, the guidance states that *“setting is not itself a heritage asset, nor a heritage designation, although land comprising a setting may itself be designated”*. It continues by adding that *“conserving or enhancing heritage assets by taking their settings into account need not prevent change; indeed change may be positive...”*.
- 3.22 On a practical level, the Historic England guidance (2017) identifies an approach to assessing setting, which is based on a five-step procedure; i.e.:
- Step 1: Identify which heritage assets and their settings are affected;
- Step 2: Assess the degree to which these settings make a contribution to the significance of the heritage asset(s) or allow significance to be appreciated;
- Step 3: Assess the effects of the proposed development, whether beneficial or harmful, on that significance or the ability to appreciate it;
- Step 4: Explore ways of maximising enhancement and avoid or minimise harm; and
- Step 5: Make and document the decision and monitor outcomes.

3.23 As far as Step 2 is concerned, the guidance makes the following observations:

“The second stage of any analysis is to assess whether the setting of a heritage asset makes a contribution to its significance and the extent and/or nature of that contribution...this assessment should first address the key attributes of the heritage asset itself and then consider:

- *The physical surroundings of the asset, including its relationship with other heritage assets;*
- *The asset’s intangible associations with its surroundings, and patterns of use;*
- *The contribution made by noises, smells, etc. to significance; and*
- *The way views allow the significance of the asset to be appreciated.”*

3.24 Thereafter, the guidance notes that: *“This assessment of the contribution to significance made by setting will provide the baseline for establishing the effects of a proposed development on significance, as set out in ‘Step 3’ below.”*

3.25 Having established the baseline, the following guidance is provided in respect of an assessment of the effect upon ‘setting’, i.e.:

“In general, the assessment should address the attributes of the proposed development in terms of its:

- *Location and siting;*
- *Form and appearance;*
- *Wider effects; and*
- *Permanence.”*

3.26 As far as identifying the heritage assets potentially affected by the proposed scheme is concerned, due consideration has been given to the following factors which are considered to influence the potential for the setting of heritage assets to be materially affected:

1. The location within a rural part of Balsall Common;
2. The influence of the local topography and built environment in terms of limiting visual relationships with the wider landscape, as well as the limited scale of the proposals for development; and
3. Consideration of the character and setting of surrounding designated heritage assets.

3.27 The report draws conclusions regarding the potential for development within the Site to affect the significance of the heritage assets.

- 3.28 With regard to Step 1, this was initially considered through map analysis, consideration of the NHLE information, and on-site observations. This identified that due to (1) the broadly flat character of the Site; (2) the character of heritage assets in the wider area; and (3) the influence of the intervening built and vegetated environment; the proposed development of the Site is unlikely to affect assets beyond 1km distance. As such, this study area was determined as the Site's 'wider zone of influence'.
- 3.29 With regard to cumulative impacts, there are no other currently known 'live' application sites that could affect the same assets which would be affected by this proposed development, as discussed in detail below. This is notwithstanding any allocated sites that may be brought forward in the future when the latest local plan is adopted.
- 3.30 In light of the above, the heritage setting assessment in this report has been prepared in a robust manner, employing current best practice professional guidance and also giving due regard to the methodology set out above.

Consultation

- 3.31 In addition to the above, Solihull MBC's Conservation and Archaeological Officers were consulted in 2022 as part of a wider pre-application consultation process regarding the scope of the baseline survey work and the assessment approach.

Section 4 Existing Information

INTRODUCTION

- 4.1 The Site does not contain any designated heritage assets such as world heritage sites, scheduled monuments, listed buildings, conservation areas, registered parks and gardens or registered battlefields, as defined in Annex 2 of the NPPF, where direct effects on their fabric and form could be a consideration.
- 4.2 The designated heritage assets in the wider area around the Site have been assessed to identify those that have the potential to experience change to their setting, such that could result in harm their significance. There are 10 listed buildings in the Site's wider zone of influence (i.e. within a 1km radius; see Paragraph 3.28 above). The locations of the relevant designated heritage assets considered below are each shown on **Plan EDP 1**.
- 4.3 With regard to non-designated heritage assets, there are no previously identified or recorded archaeological features, deposits or remains within the Site according to the HER. There are records for 'monuments and findspots' on the HER within a 1km radius of the Site. These comprise archaeological and historical sites, ridge and furrow lines and artefact findspots which date from between the medieval to modern periods. The locations of these records are identified on **Plan EDP 2**.
- 4.4 In addition, there are records of fieldwork investigations within a 1km radius, which are also labelled on **Plan EDP 2**. Those records and events considered relevant to this assessment are discussed below, therefore not all the returned HER records are included in the text or identified on the accompanying plans.
- 4.5 There are no locally listed heritage assets within the Site, but there are three in the wider study area, all of which comprise extant historic buildings. An assessment is also included below of the value of any buildings that pre-date the mid-20th century within the Site. These structures, within and outside of the Site, are also marked on **Plan EDP 2**.
- 4.6 Otherwise, extracts of historic mapping are included on **Plan EDP 3** and the results of the geophysical survey in August 2022 are included as **Appendix EDP 1**.

DESIGNATED HERITAGE ASSETS

- 4.7 There are no designated heritage assets within the Site and so there would be no direct impact from the implementation of the proposed development in that respect. Instead, any effects would be through changes to the setting of designated heritage assets outside of the Site.
- 4.8 In this regard, the following section addresses Step 1 of the five-step approach to setting assessment ascribed in the Historic England guidance (2017). This was completed through an initial map analysis and review of NHLE information, which was followed by a visual inspection carried out during the site visits.

- 4.9 By necessity, the following discussions will overlap with brief considerations of the assets' significance, the contribution made by their setting and the potential for the proposals to alter this (i.e., Steps 2 and 3).

Listed Buildings

Grade II* Listed Berkswell Windmill

Significance

- 4.10 The nearest designated heritage asset to the boundary of the Site is the Grade II* listed Berkswell Windmill (**1054782**), which is located c. 230m to the south.
- 4.11 This comprises an early 19th century tower windmill, constructed of red brick. It includes a wood and metal boat-shaped cap and is relatively intact internally and externally. The structure is three storeys high, with battered walls, small windows under cambered arches. Internally the building includes an endless-chain drive, wood and iron shafting gears and under-driven stones, with various surviving bins and other fixtures. The listing citation states that:
- “this is the most complete example of a west midlands tower mill”.*
- 4.12 Additional information regarding the later operation of the windmill can be found on the Society for the Protection of Ancient Buildings website, where it is stated that “[t]he sails were last used around the late 1920s or early 1930s, though the mill continued to work commercially until 1948 using auxillary [sic] power”. In this regard, it is notable that the windmill was listed on 18 July 1972, some 24 years after it had ceased to function.
- 4.13 Furthermore, it is evident that in its later life, the windmill was not reliant on wind power for its operation, presumably meaning that this source of energy was sufficiently unpredictable and unreliable that it was necessary to substitute it for a diesel engine as a power source. The windmill was restored to working order in 2013.
- 4.14 The NHLE's description of this building makes clear that it derives its significance primarily from its architectural treatment and historic interest, as the best-preserved example of a West Midlands tower mill, including the survival of its mill machinery. Given the limited alterations to it, there is not considered to be any archaeological interest. Furthermore, whilst there may be a level of artistic interest, as it is an attractive looking vernacular structure of distinctive character, it is nevertheless a functional building of limited architectural embellishment and no paintings of it were identified during the research for this report. Any artistic interest it possesses is therefore largely unintended.
- 4.15 As above, considering that the windmill was listed 24 years after it had ceased to function, it is reasonable to conclude that it was the 'completeness' of the windmill and not its active operation that was key to its Grade II* listing.
- 4.16 So, whilst the operational status of the windmill today is of interest, its contribution to this designated heritage asset's total significance can only be very small.

Contribution of Setting

- 4.17 Multiple attempts were made to gain access to the windmill in order to gather photographs from the upper storeys. Unfortunately, access was not possible, so the following section is based on observations made from outside of the windmill and from photographs included in DBP (2020) *Supplementary Heritage Impact Assessments*. Where located in accessible areas, some of these photographs were re-taken as part of the *Landscape and Visual Impact Assessment* (edp5006_r005), specifically Photoviewpoints EDP H1-6.
- 4.18 With regard to the setting of the windmill, it is located in a small, hedged enclosure, with a contemporary L-shaped house immediately to its north-west and a small barn-like building to its south. They represent survivals of its historic setting, as shown on the Berkeswell Tithe Map and represent the miller's house and a subsidiary building for storing grain etc.
- 4.19 Given the historical and functional relationships between these buildings, and the spatial arrangement within the enclosure, they are considered to contribute positively to the significance of the windmill. Furthermore, this immediate setting provides the best opportunity for experiencing the significance of the external built form of the windmill.
- 4.20 Beyond this immediate setting, Windmill Lane is located to the west, which has a functional and historical relationship with the windmill, being the means by which it is - and has been - accessed. This relationship is considered to contribute positively to the windmill's significance. In addition, the Lane provides a publicly accessible opportunity to experience the significance of the external built form of the windmill (**Image EDP A2.1**: also, LVIA Photoviewpoint EDP H1). Further north along Windmill Lane, the vegetation lining the road limits visibility to the windmill (see Photoviewpoint EDP H2 of the LVIA).
- 4.21 To the south there is a denser, albeit relatively small, area of modern development, represented by a mobile home park. This erodes the immediate agricultural setting in the listed building's close proximity and is incongruous with the vernacular architecture and building materials evident in the windmill. The mobile homes are of a low height and are not an overbearing feature of the setting, although they do partly provide the backdrop in views toward the windmill, such as from Hob Lane (**Image EDP A2.2**).
- 4.22 Taking these considerations into account, including the close proximity of the mobile homes to the windmill, they are considered to have a small but nonetheless negative affect on the heritage significance of the Grade II* listed building.
- 4.23 The owner of the windmill at the time of the Berkeswell Tithe Map (1841) also rented three fields to the west, on the opposite side of Windmill Lane, although there is no evidence of this connection in their physical forms today. These fields are now partly developed for residential properties and are rendered peripheral to the experience of the windmill by the dense boundary planting intended to provide privacy to the residents.
- 4.24 Beyond its immediate enclosure, the windmill is surrounded to the north and the east by agricultural fields. Whilst the windmill was clearly designed for processing grain, there are no known specific, direct, or close links between the windmill and these surrounding fields which bear upon the asset's heritage significance.

- 4.25 The windmill was presumably positioned in the best available location that would enable it to function, i.e. an area where the wind could turn the sails, which in turn would drive the milling equipment. As such, there is no evidence that lying within a fieldscape or away from areas of settlement was integral to its design or desirable in its location.
- 4.26 Therefore, insomuch as the immediate fieldscape to the north and east of the windmill contributes to its significance, this is in the general terms of its historical setting within agricultural fields. However, as mentioned above, it should be recognised that its position was most likely primarily dictated by the availability of suitable land on which such a structure could be sited and expected to function optimally. These fields therefore make a limited contribution to its significance.
- 4.27 The openness of these fields, which are bounded to the north by Hob Lane, also allow some experience and appreciation of the external form of the 19th century windmill through views towards it (see Photoviewpoint EDP H6 of the LVIA). However, only a broad understanding of the form of the structure can be obtained, and the well-preserved internal workings and the relationships with the miller's house and barn (which also forms part of its significance) cannot be experienced from such views.
- 4.28 Similarly, it should also be noted that the views toward and outward from the windmill are an incidental result of the height of the listed building, which was required for the function of the building to mill grain. In other words, there is no evidence that the windmill was sited or designed with the intention of affording 'decorative' views and it was instead a functional structure, the purpose of which was the production of flour.
- 4.29 The windmill is in private ownership, and it was not possible to gain access to the building, but it is probable that there are views from the top of the tower outward into the wider surrounding landscape, as demonstrated in the *Supplementary Heritage Impact Assessments* (DBP, 2020; specifically, page 24, photo 4). However, in addition to the points made above (paragraphs 4.19-4.22), it should also be noted that the view from the top of the windmill would be appreciable through its small windows, which were designed to provide sufficient light in which to work, rather than intended to take in views of the wider surroundings. This is also reflective of its functional design.
- 4.30 Therefore, the intervisibility with the fields immediately to the north and east of the windmill, bounded to the north by Hob Lane, are limited in allowing appreciation of – and do not in themselves contribute toward – the listed building's significance.
- 4.31 In terms of the Site, this is located c.230m to the north of the windmill. There are no direct historical or functional links between any part of the Site and the windmill, such as shared ownership or evidence of close operational ties. The separation provided by Hob Lane, the dense and tall boundaries and the mass of 20th century development around Southview Farm, serves to separate most of the the Site from the immediate fieldscape to the north of the windmill.
- 4.32 The Site is a peripheral element in the experience of the windmill. In terms of views between the asset and the Site, this mostly comprises the limited level of intervisibility with the south-western edge of the Site (additionally evidenced by the *Supplementary Heritage Impact Assessments* (DBP, 2020), page 24, Photo 4). In this location, the south-west corner

of the Site comprises a paddock for geese, bounded, and almost entirely screened, by a mature hedge and subdivided by fencing.

- 4.33 Views from Windmill Lane opposite the listed building (Photoviewpoint EDP 5 of the LVIA) show that it is likely that there are also views from the windmill to the current modern complex of South View Farm in this part of the Site, which has a more open boundary to its south (i.e. toward the listed building). This is dominated by the collection of modern farm buildings, the massing, design and materials of which are at odds with the local vernacular.
- 4.34 Otherwise, no other views were noted toward the windmill from the land within the Site and, if the remainder of the Site is appreciable at all from the asset, it is most likely in terms of the taller elements of its built form and tree/hedge tops. See Photoviewpoints EDP H3-5 of the LVIA, which demonstrate the lack of visibility with the windmill from points around the wider surrounding landscape.
- 4.35 Once more, any such views to the land at the Site, or any other part of the landscape, from the windmill should be considered in terms of: (1) the incidental nature of such intervisibility, being the ‘accidental’ result of the requirement for the windmill to be tall; and (2) the lack of any intentional views toward or away from the windmill.
- 4.36 In addition to not being a specific intention of its design, such views from the windmill toward the Site would most likely be dominated by the modern large-scale structures of the South View Farm complex, which overshadow and dwarf the small historic core of the farmstead, and the light industrial estate in the south-east of the Site, which includes caravan storage and large areas of hardstanding. Such views would also be appreciated in the context of the built form of Balsall Common and Catchems Corner, comprising a mixture of historic and modern properties to the west of the Site.
- 4.37 Therefore, the south-west corner of the Site forms no more than a peripheral element of the setting of the windmill, which – for the reasons outlined above – is considered to make no more than a negligible contribution to its significance by forming a small part of the wider rural backdrop. This contribution mostly derives from the mature hedge on the boundary of the Site in this location, which otherwise mostly obscures views into the interior of this part of the Site. The remainder of the Site is not considered to make any contribution to the listed building’s significance. There are no other specific, direct or close historical or functional links between the Site and the windmill.
- 4.38 As discussed above (paragraph 4.13), the ability of the windmill to function is considered to only make a very small contribution to the significance of the asset and this functionality was reliant on diesel power in its later operational life. As such, the wind flow to the mill today, taking into consideration the intervening buildings and vegetation in the surroundings of the asset, is considered similarly to be a very limited contribution to its significance. In this regard, the predominant wind power is from the west and south-west (EAG 2019), whereas in terms of the wind coming from the north-east (i.e. the direction of the Site), it is of sufficient strength to turn the sails at a rate that would mill grain on c. 10% of the days in the year (see Graph 2, EAG 2019. 8).

- 4.39 In summary, the aspects of the windmill's wider setting that make a positive contribution to its heritage significance are predominantly:
- Its location within, and relationship with, its hedged enclosure, from which the significance of its external form can also be best appreciated;
 - Its historical and functional relationships with the miller's house and barn;
 - Its historical and functional relationships with Windmill Lane, which also provides the best publicly accessible area from which to experience and appreciate the significance of the windmill's external form;
 - The fieldscape immediately to its north and east, bordered to the north by Hob Lane, which reflects its historical setting within agricultural fields – albeit this is a limited contribution – views from which allow a limited appreciation of its heritage significance; and
 - The continued opportunity for the windmill to function through the use of wind power, albeit only a very limited contribution and in the context that in its later life the functionality was reliant on diesel power.

Impact Assessment

- 4.40 The proposed development would not result in any effects on the fabric of the windmill or the contribution made by most of the positive aspects of its setting, as described in paragraph 4.34 above.
- 4.41 Insomuch that it could have an effect, it is in terms of the development of the south-west corner of the Site, which makes a negligible contribution to its significance by forming a small part of its wider rural backdrop. The hedge boundary in this location would be retained, but it is likely that filtered views to the housing beyond would be possible and reduce the negligible contribution made by this part of the site to the significance of the windmill.
- 4.42 The remainder of the Site, which will most likely be dominated and characterised in views from the asset by the modern buildings of the farm complex and light industrial estate, make no contribution to the significance of the listed building. The development of these areas would not represent a loss of, or harm to, the significance of the windmill. Nevertheless, the proposals are designed to retain existing trees and hedgerows where possible and include additional landscaping, so as to help the development 'settle' into the landscape.
- 4.43 Noise levels resulting from the approval and implementation of the proposed development have been identified and assessed (Noise Consultants 2023) and, presuming reasonable mitigation measures are secured by condition and applied, it is concluded that there is no reason to believe that this change would be to such an extent that they would result in a harmful effect to the significance of the asset.
- 4.44 This is taking account of such factors as the distance between the Site and asset and its proximity to Balsall Common and other existing sources of noise. Furthermore, none of the entrances that are proposed to service the proposed development are located off Hob Lane or Windmill Lane (i.e. in the direction of the windmill).

- 4.45 Whilst there is currently no detail on lighting, it also appears probable that, taking into account these factors and the retention and provision of vegetated boundaries and the opportunity to make specifications regarding the lighting through planning conditions, there would not be any harmful effect on the windmill from this either.
- 4.46 As mentioned above, the proposed development would not affect the fabric of the windmill, and particularly its 'completeness' that likely elevates its significance to Grade II*. Whilst the approval and implementation of the proposed development might have some effect on wind flow (assuming that the data presented in EAG 2019 is correct), this would be within a context whereby only c. 10% of the days in each year (so maybe c.36) experience a north-easterly airstream of sufficient strength to mill grain; meaning that for the overwhelming majority of the year, the operation of the 19th century windmill would be wholly unaffected by development in this north-eastern sector. It is noted that the implementation of the development proposals would clearly have absolutely no bearing on the windmill's operation for the majority of the year when the wind flow of sufficient strength is from other sectors.
- 4.47 At the same time, the implementation of the proposed development would have no bearing on the ability of a diesel engine within the mill to replicate the wind power, as was the case in the 1930s/1940s.
- 4.48 As such, the level of effect on the wind flow to the windmill, which is an aspect that is only considered to make a very limited contribution to the significance of the asset to begin with, could only ever be very minor.
- 4.49 The effect of construction activity cannot at the moment be assessed, as such detail is not available at outline planning stage. However, such temporary effects, if any were to occur, could be minimised or avoided through a Construction Environmental Management Plan, to include measures such as control of traffic movement and dust control. Therefore, there is no reason at the moment to believe that this would result in harmful effects.
- 4.50 Therefore, it is considered that the proposed development would result in a negligible level of harm to the significance of this listed building through (1) reducing the contribution made by the south-west corner of the site, as part of its rural backdrop, through the introduction of filtered views to new housing; and (2) reducing the availability of wind power for milling from the north-east, albeit this would only affect it 10% of the year.

Remaining Listed Buildings

- 4.51 Otherwise, the remaining listed buildings within the site's wider zone of influence are all Grade II and comprise:
- Pool Orchard (**1343233**), c.830m to the north-west;
 - Barratt's Lane Farm (**1045801**) and barn (**1075970**), c.520m to the north-west;
 - 85 Meeting House Lane (**1076672**), barn (**1076673**) and outbuilding (**1253080**), c.650m to the north-west;
 - Crabmill Farmhouse (**1343223**), c.620m to the north-east; and

- Image House (**1075939**) and barn (**105848**), c.650m to the south-east.
- 4.52 As evidenced by the Berkeswell Tithe apportionment (see **Historic Map Regression** below), there are no known historical or functional links between the Site and any of these nine listed buildings.
- 4.53 Given that these comprise individual houses/farmhouses, or groups of farm buildings, the positive aspects of their setting derives from their relationships within the farmyard complexes and their immediate rural surroundings, where present.
- 4.54 Furthermore, as they are distant (all over 500m away) and cannot be experienced from the Site due to the intervening topography, and built and planted environment, the Site does not form part of their setting. As such, the Site also does not contribute, or allow the opportunity to experience, the significance of these listed buildings. These assets will not be considered further in this report.

Designated Heritage Assets Summary

- 4.55 The proposed development of the Site would only result in harm to the significance of one designated heritage asset, comprising the Grade II* listed Berkswell Windmill. This level of harm would also only be 'negligible'. There is no other harm identified to the significance of any other designated heritage assets.

NON-DESINGATED HERITAGE ASSETS

- 4.56 The following paragraphs describe the relevant records related to non-designated heritage assets and/or previously recorded archaeology that are located within the study area as recorded by the HER.
- 4.57 These HER entries are discussed by chronological period and their locations are illustrated on **Plan EDP 2**. There are no records from within the Site itself and there are some in the study area that suggest activity in the area during the prehistoric to modern periods.

Palaeolithic-Iron Age (c.500,000 BC-AD 43)

- 4.58 The Site contains no records for previously recorded prehistoric archaeology, as contained in the Solihull HER. There is only one (unconfirmed) record in the wider study area, which may relate to prehistoric activity.
- 4.59 A cropmark of a possible enclosure (**10464**), which the HER entry states may date to anywhere between the Neolithic to medieval periods, is located c.600m to the south-west of the Site. This has not been tested through intrusive survey and therefore there is limited information on this feature or its significance.
- 4.60 In the absence of confirmed prehistoric archaeology, it is concluded that the Site has a low potential to contain remains from this period. The geophysical survey undertaken in 2022 broadly corroborates this conclusion.

Romano-British (AD43-410)

- 4.61 There are no recorded archaeological remains from the Roman period within the Site, as contained within the Solihull HER. There is a single record in the study area, related to a stray coin find (**1795**), recovered c.360m to the east. Given the scarcity of evidence, it is concluded that the Site has a low potential to contain Roman archaeology. The geophysical survey undertaken in 2022 broadly corroborates this conclusion.

Early Medieval (AD 410 -1066)

- 4.62 There are no recorded archaeological remains from the early medieval period within the Site, as contained within the Solihull HER. There is a single record in the study area, comprising a parish boundary (**15142**) c.160m to the south-west.
- 4.63 Given the sparsity of evidence, it is concluded that the Site has a low potential to contain early medieval archaeological remains and the geophysical survey that was undertaken in summer 2022 broadly corroborates this conclusion.

Medieval (AD 1066-1485)

- 4.64 There are no records for previously identified medieval archaeology within the Site, as contained on the Solihull HER, but there are 14 within the wider study area.
- 4.65 The only area of settlement recorded on the HER from this period is a moated site (**15141**) located c.660m to the north. The majority of the recorded remains comprise ridge and furrow earthworks (**8867, 6151, 1397, 8866, 9422, 10844, 10846, 10847, 9421, 9523, 9418** and **9420**) that either survive or are destroyed.
- 4.66 Otherwise, a hedge and trackway (**10843**) and wood (**10845**) that may date from this period are recorded c.300m and c.570m to the east respectively. Additionally, the stray find of a strap fitting (**1793**) was recovered c.690m to the north-west.
- 4.67 The historic landscape evidence for the Site, provided by the Solihull HER, suggests it may once have been common or heath land. As such, the Site has a low potential to contain significant archaeological remains from the medieval period and the geophysical survey that was undertaken in 2022 broadly corroborates this conclusion.

Post-medieval to Modern (AD 1485 – present)

- 4.68 There are no records for previously identified archaeological remains from these periods, as contained within the Solihull HER, but there are five in the wider study area.
- 4.69 These records comprise the following features, none of which are considered to influence the Site's potential to contain significant hitherto unrecorded archaeological remains:
- A railway line between Kenilworth and Berkswell (**6119**), c.420m to the north-east at its closest;
 - The location of an 18th century farm complex (**4185**), c.800m to the north-east;

- The location of a 19th century farm complex (**10842**), c.460m to the north-east, which may have had a medieval predecessor; and
- The location of 19th century guideposts (**1284** and **1285**), c.580m to the west and c.850m to the south respectively.

4.70 As discussed further below, the Site contains the 19th century historic core of Camp Farm and part of Southview Farm, but otherwise appears to have comprised farmland throughout these periods.

4.71 Therefore, it is assessed that the Site has a low potential to contain archaeological remains from these periods, other than ‘negligible’ value archaeology related to demolished 19th century farm buildings and former agricultural practices. The geophysical survey undertaken in 2022 broadly corroborates this conclusion.

Uncertain Date

4.72 Notwithstanding the unconfirmed nature of the aforementioned cropmark (**10464**), there are no other previously identified undated archaeological sites or remains within the Site or the wider study area, as contained in the Solihull HER. This single record is not considered to influence the Site’s archaeological potential.

Previous Archaeological Investigations

4.73 Prior to the geophysical survey in 2022, the Site had not been the subject of any previous archaeological investigations.

4.74 Trial trench evaluations (**ESI742** and **ESI761**) and a geophysical survey are recorded c. 390m and c. 790m south-west of the Site. These identified no significant archaeological remains. Otherwise, a second geophysical survey (**ESI809**) is included in the HER, but without any information on the results of this fieldwork, and the records of a desk-based assessment (**ESI872**) and building recording work (**ESI795**) are also noted.

4.75 None of these investigations are considered to influence or elucidate the archaeological potential of the Site, although the broadly ‘negative’ fieldwork underlines the scarcity of finds from any period within the study area.

Historic Map Regression

4.76 The earliest assessed map source to depict the Site in detail is the Berkeswell Tithe Map of 1841 (see **Plan EDP 3a**). This shows the Site covering 13 agricultural fields, three gardens, the barn and farmhouse of Camp Farm in the centre-south, and two small subsidiary farm buildings of Southview Farm on the south-western edge. The farmhouse for the latter is located outside of the site boundary.

4.77 The First Edition Ordnance Survey (OS) map (1886; see **Plan EDP 3b**) shows a broad continuation of this layout, but with the two farm buildings at Southview Farm replaced by a single L-shaped range on a different alignment. There are two additional farm buildings to the north of Camp Farm. There are also a number of ponds shown in the fields along the eastern edge of the Site.

- 4.78 This arrangement of land broadly continues on the subsequent editions of the OS maps until 1965 (not reproduced here). At this point, there is a large expansion of the Camp Farm complex northwards, comprising several large buildings. Thereafter, the 1986 Edition OS map (not reproduced here due to copyright) broadly shows the Site in its current form, with further large-scale buildings constructed to the north of Camp Farm, and also to the north and east of Southview Farm.
- 4.79 As such, the available cartographic sources confirm the agricultural use of the majority of the Site throughout the 19th and early 20th centuries. They also demonstrate the amount of disturbance that has occurred in the mid to late 20th century through the marked expansion of the two farmsteads in or adjacent to the Site's southern boundary. These impacts will undoubtedly have truncated, if not entirely removed, any earlier remains (if present) within their footprints.
- 4.80 These maps do not provide any evidence for significant archaeological remains as being present on-site, although there is a moderate potential for some footings of earlier farm buildings immediately to the east of Southview Farm and north of Camp Farm to be present, albeit of 'negligible' value.

Aerial Photographs

- 4.81 A total of 51 vertical aerial photographs, covering the Site and its immediate environs were identified within the collection maintained by the HEA in Swindon and the Solihull HER. These dated to between March 1948 and September 2005.
- 4.82 These confirmed the evolution of the Site, as shown on historic cartographic sources, but otherwise did not identify any features of archaeological or heritage interest.

Locally Listed Heritage Assets

- 4.83 There are no locally listed buildings recorded within the Site, but there are three in the wider study area. These comprise:
- Mulberry Cottage (**DSI494**), c.5m to the west;
 - Fox's Cross (**DSI495**), c.40m to the west; and
 - Sunnyside Farmhouse (**DSI488**), c.890m to the north-west of the Site.

Mulberry Cottage

- 4.84 Mulberry Cottage is described in the HER as a brick 17th century house, albeit "*much altered*", with a machine tiled roof and a modern lean-to in front. The HER also describes this as a whitewashed building, although today this treatment appears to have been removed or allowed to lapse, as it is now untreated brick, with an exposed timber framed gable end (**Image EDP A2.3**).
- 4.85 Considering its "*much altered*" form, it is considered to be of no more than low significance. This derives mostly from its limited historical and – to a lesser extent – architectural interest,

as a c. 17th century building in the local vernacular. There is no known archaeological or artistic interest for either building.

- 4.86 Mulberry Cottage is located within private gardens, which is broadly reflective of its historic setting (see **Plan EDP 3**). These gardens have a functional and historical association with the building and are therefore considered to be a positive contribution to the asset's significance. These gardens also provide the best opportunity to experience the asset's significance – such as it is – through views to its outward form.
- 4.87 Beyond the private gardens, Mulberry Cottage is surrounded to the south, west and east (including the north-west corner of the Site) by open fields and is separated from the more densely developed area of Catchems Corner to the west. The straightening of the B4101 to the north of Mulberry Cottage in the 20th century separated the building from the fields to the north.
- 4.88 There is no indication of any functional link between this building and the fields, such that would contribute to its significance. As such, the immediate fieldscape around the building is only considered to make a very limited contribution to its significance by reflecting its broad historic nearby setting. This immediate fieldscape also allows some appreciation of the significance of the building, in terms of its external built form.
- 4.89 Within the proposed development, the north-west corner of the Site, closest to the Cottage, has been sensitively masterplanned to provide an area of planted public open space that will offset the built form of the proposals and preserve an element of the 'rural' immediate setting in this direction. All other aspects of the setting of Mulberry Cottage that contribute positively to its significance will remain unchanged.
- 4.90 Therefore, considering the design mitigation included within the proposed development, Mulberry Cottage will not experience a change to its setting such that would translate into harm to its significance.

Fox's Cross

- 4.91 Fox's Cross is a whitewashed pebble dash, two-storey house, with a machine tiled roof, with two flush lattice casement windows and a gabled closed porch. The HER does not ascribe a date to this building, although it may be of a similar date to Mulberry Cottage but does state that it is also 'much altered'.
- 4.92 Considering their "*much altered*" form, it is considered to be of low significance. This derives mostly from their limited historical and – to a lesser extent – architectural interest, as a building in the local vernacular. There is no known archaeological or artistic interest for either building.
- 4.93 Fox's Cross is also contained within private gardens, which is a positive aspect of its setting. However, by comparison to Mulberry Cottage, it is surrounded by modern development that divorces it from the wider farmed landscape to the east, including the Site. As such, the Site is no more than a peripheral element in the setting of this asset, which can barely be appreciated due to the intervening built environment.

- 4.94 Whilst the Berkeswell Tithe Map indicates that Fox's Cross was in the same ownership as other land plots and structures surrounding it, including field 820 that was partly within the Site (see **Plan EDP 3a**), there is no experience of this ephemeral historic association today. Indeed, in the instance of field 820, this is separated from Fox's Cross by later development. Therefore, this limited historic association is not considered to contribute to its significance.
- 4.95 As such, the Site is not considered to contribute to, or allow appreciation of, the significance of this asset and it will not be considered further in this report.

Sunnyside Farmhouse

- 4.96 Sunnyside Farmhouse is distant from the Site and the land there does not form part of its setting or contribute in any way to its significance. There are also no known historical or functional associations. Therefore, this building is also not considered further in this report.

SITE WALKOVERS

- 4.97 The Site was visited in February 2019 and September 2022 to assess the current ground conditions and topography within it, as well as to confirm the continuing survival of any known archaeological remains and to identify any hitherto unknown remains of significance.

Buildings

- 4.98 The surviving historic (i.e. pre-dating the mid-20th century) core of Camp Farm comprises the farmhouse and barn noted on cartographic sources (see **Plan EDP 3**).
- 4.99 The farmhouse (see **Image EDP A2.4**) is probably an early 19th century building, built of red brick with a clay tile roof, and gable end chimneys. It is much altered, with modern bay windows added to the ground floor main (southern) elevation. Further modern extensions have been added to the west, east and south. Indeed, the eastern extension has involved the removal of part of the original external wall of the house. The interiors have been converted into a series of flats and no original internal features of note were recorded during the visit. All windows and doors have been replaced with modern uPVC versions.
- 4.100 The barn (see **Image EDP A2.5**), which lies immediately to the east of the farmhouse, is also constructed of red brick, dentilled below the eaves, with original door openings on the eastern elevation, including pitching doors. A further original door opening, and a probably later oriel window are present on the southern elevation. All of these openings have been replaced with modern windows, and, in some instances, partly bricked up. Similar to the farmhouse, the barn has been heavily altered, including its roof timberwork having been entirely replaced and clad in modern tiles (see **Image EDP A2.6**).
- 4.101 Given these considerations, the farmhouse and adjacent barn at Camp Farm are identified as having 'very low' significance, derived from their very limited historical and architectural interest. Their setting, as a small group of agricultural structures located on the northern edge of an area of gardens historically associated with the farm complex, is considered to make a moderate positive contribution to their significance. The light industrial complex to the north is considered to have a small negative affect on their significance, due to its large-scale modern appearance and layout.

- 4.102 The L-shaped range (within the Site) to the east of Southview Farm farmhouse and located outside of the Site appears to comprise former stables or cattle/machine shelters, or a combination thereof. The building is of red brick construction with timber gables and purlins, although it is noted that the northern arm of the 'L-shaped' plan seems to survive only as a timber 'skeleton' (see **Image EDP A2.7**).
- 4.103 Only a small portion retains its clay tile roof. It has been much altered, with the introduction of concrete floors and widened door openings and has been partially incorporated into modern farm buildings to the north and east (see **Image EDP A2.8**).
- 4.104 As such, due to the L-shaped range's poor state of preservation; including a large amount of later alteration; its relatively recent date and common form, it is not considered to have any heritage significance.
- 4.105 Whilst none of these buildings are intended for retention within the proposed development, this must be seen in the context that the range has no heritage significance and therefore does not carry any weight (in terms of heritage) in the planning balance. Whilst the farmhouse and barn warrant consideration under paragraph 203 of the NPPF, whereby a balanced judgement is required taking into account the level of harm and the level of significance of the assets, this is in the context that they only have a very low level of significance to begin with. As such, there is no reason to believe that the balanced judgement should not weigh in favour of the grant of planning permission.
- 4.106 Otherwise, the remainder of the buildings on-site are from the 20th century expansion phases of the farm complexes and are not identified as having any heritage significance.

Other Observations

- 4.107 A small area of truncated and barely perceptible ridge and furrow earthworks was noted in the north-west of the Site. Judging by the straightness and close spacing of these earthworks, these are clearly the result of Victorian steam ploughing. These remains are of such a limited and truncated nature as to have no heritage value and will not be discussed further in this report.
- 4.108 There are no other indications of buried archaeological remains or features of heritage interest, but modern earthbanks were noted surrounding the Camp Farm light industrial complex (**Image EDP A2.9**) which underlines the likely level of impact from the ground levelling and construction activity in this area. Indeed, it is likely that any earlier underlying remains, if once present, will have been truncated or removed by this process.

GEOPHYSICAL SURVEY

- 4.109 A geophysical (magnetometer) survey of the Site was undertaken in August 2022 by SUMO Geophysics Ltd (see **Appendix EDP 1**). Whilst not all of the Site could be surveyed, mainly due to buildings, car parks and an extensive area of caravan storage, these excluded areas that have been most heavily impacted by modern development and therefore have the lowest archaeological potential.

4.110 As such, the results of the geophysical survey which was completed are considered relevant and likely to accurately characterise the Site's archaeological potential regardless of these excluded areas.

4.111 The interpretation of the dataset indicated responses which are likely to be due to agricultural or natural processes. The routes of four service pipes were also plotted. A strong ferrous response in one of the areas which marks the location of a capped borehole. Otherwise, the Site produced no anomalies of archaeological potential.

NON-DESIGNATED HERITAGE ASSETS SUMMARY

4.112 The Site area has a low potential to contain archaeological remains from any period, other than 'negligible' value features related to post-medieval and later agricultural practices.

4.113 The proposed development of the Site would not harm the significance of any locally listed heritage assets. Whilst the Site contains two buildings, comprising a barn and farmhouse, that retain a level of heritage significance and which would not be retained, these are only of 'very low' value.

Section 5 Conclusions

- 5.1 This Assessment has been produced by EDP for Barwood Development Securities Ltd to inform an outline planning application for residential development of Land off Hob Lane and Pheasant Oak Farm, Balsall Common ('the Site'). This is in the context that the Site is a draft allocation for housing in Policy BE4 of the emerging local plan.

DESIGNATED HERITAGE ASSETS

- 5.2 The Site does not contain any designated heritage assets (Annex 2, NPPF) and therefore the proposed development would not result in a direct impact on the fabric or form of any such assets. Designated heritage assets in the wider area were considered to identify whether the approval and implementation of the proposed development would result in a change to their setting, such that would result in harm to their significance.
- 5.3 It is considered that the proposed development would result in a negligible level of harm to the significance of one listed building, comprising the Grade II* listed Berkswell Windmill. This would be at the lowest end of 'less than substantial' harm.
- 5.4 This would result from (1) reducing the contribution made by the south-west corner of the site, as part of its rural backdrop, through the introduction of filtered views to new housing; and (2) reduce the availability of wind power from the north-east, albeit this would only affect it c.10% of the year. Otherwise, the proposed development would not affect any of the other contributions that are made to the significance of this asset, such as its built fabric and its relationship with the miller's house and barn.
- 5.5 The NPPF states that 'great weight' should be given to the conservation of designated heritage assets such as Berkswell Windmill (Paragraph 199). In addition, Paragraph 200 of the Framework advises that 'clear and convincing justification' should be provided where development would result in harm. Paragraph 202 then states that where proposals would cause 'less than substantial harm' (such as is the case in this instance), the harm should be weighed against the public benefits they would deliver.
- 5.6 Otherwise, the Site is also not identified as forming part of the setting of, or contributing to the significance of, any other designated heritage assets. As such, its development would not result in harm to the significance of any other designated heritage assets.

NON-DESIGNATED HERITAGE ASSETS (ARCHAEOLOGY)

- 5.7 In terms of non-designated heritage assets, the Site is not identified as containing any previously recorded archaeological remains or locally listed heritage assets.
- 5.8 Based on the results of a geophysical survey in 2022 and analysis of desk-based sources, the Site is identified as having a low potential to contain archaeology from any period, other than 'negligible' value remains related to former farming practices from the post-medieval

to modern periods. This includes features such as plough furrows and field boundaries, and the remains of 19th century farm buildings.

- 5.9 Furthermore, it is likely that the modern development of large areas of the Site, for the farm/light industrial complexes at Southview and Camp Farms, will have truncated (if not entirely removed) any earlier remains within their footprints (if once present).
- 5.10 Whilst discussions are ongoing with the Council's archaeological officer regarding the requirement for further fieldwork investigations prior to determination of a planning application, there is currently no reason to believe that the Site contains significant archaeology, such that may warrant preservation. Any surviving remains, if present, could most likely be mitigated through conditioned fieldwork, if any mitigation is required at all.
- 5.11 The development proposals would comply with the relevant paragraphs of the NPPF and policies of the current and emerging local plans concerning the treatment of non-designated archaeological remains.

NON-DESIGNATED HERITAGE ASSETS (BUILDINGS)

- 5.12 The Site does not contain any locally listed heritage assets, although it is identified as making a small contribution to the significance of one such building, comprising Mulberry Cottage. This concerns the north-west corner of the Site, which forms part of the immediate fieldscape around the Cottage. This contribution will be preserved through sensitive masterplanning that envisages an offset of built form and retention of an element of the rural setting through inclusion of an area of public open space. As such, there is no predicted harm to the significance of Mulberry Cottage through the implementation of the proposed development.
- 5.13 The Site is otherwise not identified as making any contribution to the significance of any other locally listed heritage assets, and its development would therefore not lead to harm to the significance of such assets.
- 5.14 The Site includes three buildings that pre-date the mid-20th century, with only two considered to retain any, albeit very low, levels of significance. These comprise the 19th century Camp Farm farmhouse and barn. Whilst they are not proposed for retention in the development, their loss should be considered in-line with paragraph 203 of the NPPF, whereby a balanced judgement is made taking into account the level of impact and the level of significance. Given their 'very low' level of significance and the status of the Site as a draft allocation for residential development within the local plan, there is every reason to believe that the Site should be granted planning permission.
- 5.15 Therefore, the proposed development should also be found acceptable in terms of the relevant paragraphs of the NPPF and policies of the current and emerging local plan concerning non-designated heritage assets.

Section 6

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MAPS CONSULTED

Berkeswell Enclosure Map, 1841

First Edition Ordnance Survey map 1886

Ordnance Survey map 1905 Edition

Ordnance Survey map 1926 Edition

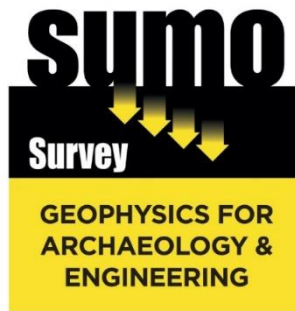
Ordnance Survey map 1934 Edition

Ordnance Survey map 1953-1955 Edition

Ordnance Survey map 1965 Edition

Ordnance Survey map 1986 Edition

Appendix EDP 1 Geophysical Survey Report



GEOPHYSICAL SURVEY REPORT

**Land off Hob Lane, Pheasant Oak Farm,
Balsall Common**

Client

The Environmental Dimension Partnership

For

Barwood Development Securities Ltd

Survey Report

08791

OASIS Ref. No.

sumogeop1-507922

Date

31 August 2022



Survey Report 08791: Land off Hob Lane, Pheasant Oak Farm, Balsall Common

Survey dates 15-16 August 2022

Field co-ordinator Liam Brice-Bateman BA

Field Team Charlotte Mawdsley MA
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Simon Lobel BSc

Report Date 31 August 2022

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2 LIST OF APPENDICES

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| Appendix A | Technical Information: Magnetometer Survey Methods, Processing and Presentation |
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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. All survey techniques followed the guidance set out by CIFA (2014, updated 2020), Historic England (2008), and the European Archaeology Council (EAC) (2016).

Bartington Grad 601-2 Traverse Interval 1.0m Sample Interval 0.25m

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 10 hectares of land off Hob Lane, Pheasant Oak Farm, Balsall Common has not recorded any magnetic responses that could be interpreted as being of definite archaeological interest. A number of uncertain responses have been detected in the survey and are likely to be due to agricultural or natural processes. The routes of four service pipes have also been plotted. A strong ferrous response in Area 5 could mark the location of a capped vertical mineshaft / borehole.

5 INTRODUCTION

- 5.1 **SUMO Geophysics Ltd** were commissioned to undertake a geophysical survey of an area outlined for development. This survey forms part of an archaeological investigation being undertaken by **The Environmental Dimension Partnership** on behalf of **Barwood Development Securities Ltd**.

5.2 Site Details

| | |
|--------------------|--|
| NGR / Postcode | SP 25165 76234 / CV7 7GW |
| Location | The site is located 2km west of Burton Green and 5.5km north-west of Kenilworth. The survey area is bounded to the south by Hob Lane, to the west by Windmill Lane and to the north by Waste Lane (B4101). |
| HER | West Midlands HER |
| OASIS Ref. No. | sumogeop1-507922 |
| District | Solihull |
| Parish | Berkswell Civil Parish |
| Topography | Flat |
| Land Use | Pasture |
| Geology (BGS 2022) | Bedrock: Mercia Mudstone Group - Mudstone Superficial: Glaciofluvial Deposits, Mid Pleistocene - Sand and gravel Oadby Member - Diamicton |
| Soils (CU 2022) | Soilscape 18: Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils Soilscape 22: Loamy soils with naturally high groundwater |
| Survey Methods | Magnetometer survey (fluxgate gradiometer) |
| Study Area | 10 ha (1.5 ha unsurveyable) |

5.3 **Archaeological Background** (EDP 2019)

- 5.3.1 An archaeological and heritage assessment has been carried out by The Environmental Dimension Partnership Ltd on behalf of Barwood Development Securities Ltd to inform a masterplan and site promotion for residential development on land at Pheasant Oak Farm, Balsall Common (hereafter referred to as 'the site').
- 5.3.2 It is identified that the site does not contain any designated heritage assets, as defined in Annex 2 of the NPPF, and therefore the proposed development cannot result in a direct impact on the fabric or form of any such assets.
- 5.3.3 In terms of non-designated heritage assets, the site is not identified as containing any previously recorded archaeological remains or locally listed heritage assets. The site is identified as having a low potential to contain archaeology from any period, other than 'negligible' value remains related to former farming practices from the post-medieval to modern

periods. This includes features such as plough furrows and field boundaries, and the remains of 19th century farm buildings.

5.3.4 Detailed magnetic survey has been selected as the most suitable technique for this site as it can detect a wide range of features including those that may be associated with later prehistoric occupation and medieval settlement such as ditches, land boundaries and agricultural features, including ridge and furrow. It is also fast and more suited to prospection over large survey areas.

5.3.5 There are no Scheduled Monuments on the site thus Scheduled Monument Consent is not required.

5.4 ***Aims and Objectives***

6 **RESULTS**

6.1 *The survey has been divided into eleven survey areas (Areas 1-11). Areas 9 and 10 contain metal debris and bird aviaries which rendered those areas unsuitable for survey.*

6.2 ***Probable / Possible Archaeology***

6.2.1 No magnetic responses have been recorded that could be interpreted as being of definite archaeological interest.

6.3 ***Uncertain***

6.3.1 A number of uncertain linear and curvilinear trends plus a poorly defined pit-like anomaly been detected in the survey. They generally lack the defined morphology of anomalies that would usually be interpreted as being of archaeological interest. The trends are likely to be due to underlying geological variation or agricultural processes. While the ostensibly pit-like response is probably deeply buried ferrous debris.

6.4 ***Service***

6.4.1 Three linear chains of dipolar ferrous responses have been detected in Area 2 which mark the routes of service pipes. A smaller fourth pipe has been plotted in the north of Area 2 which is also visible on aerial imagery (see Figure 05).

6.5 ***Ferrous / Magnetic Disturbance***

6.5.1 A strong large circular ferrous response has been detected in Area 5. One possible explanation for the anomaly is that it marks the location of a capped vertical mining shaft or is due to a borehole. While the 3 strong ferrous anomalies due south-east could mark the location of a former pylon base.

6.5.2 Zones of magnetic disturbance are visible throughout the dataset. A number of former ponds are visible on 1892 - 1914 Ordnance Survey Mapping (see Figure 05), it is likely that the disturbance is due to the infilling of the ponds.

6.5.3 Ferrous responses close to boundaries are due to adjacent fences and gates. Smaller scale ferrous anomalies ("iron spikes") are present throughout the data and are characteristic of small pieces of ferrous debris (or brick / tile) in the topsoil; they are commonly assigned a modern origin. Only the most prominent of these are highlighted on the interpretation diagram.

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 variable. The results from this survey indicate the presence of linear trends; as a consequence, there is no *a priori* reason why archaeological features would not have been detected.

8 CONCLUSION

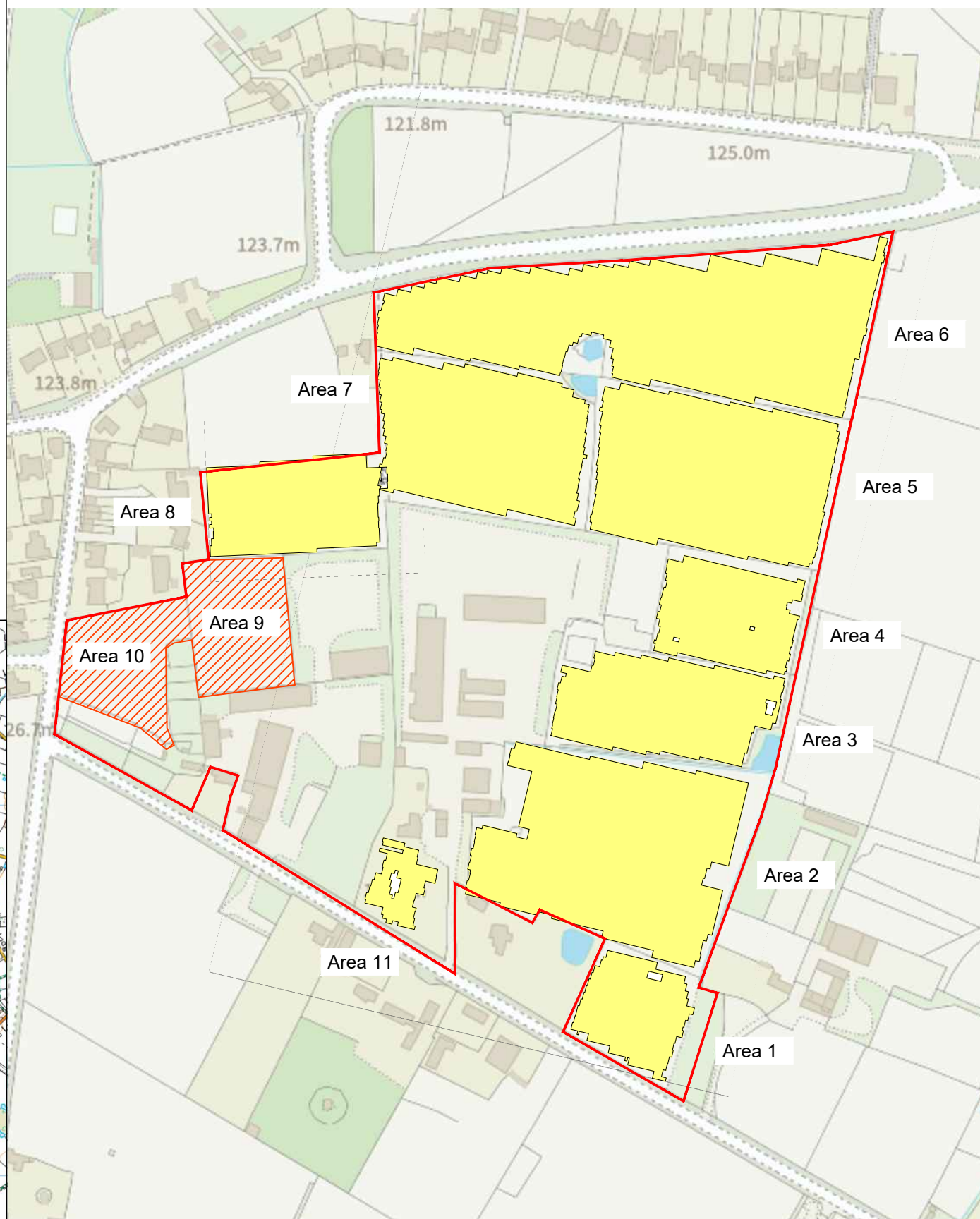
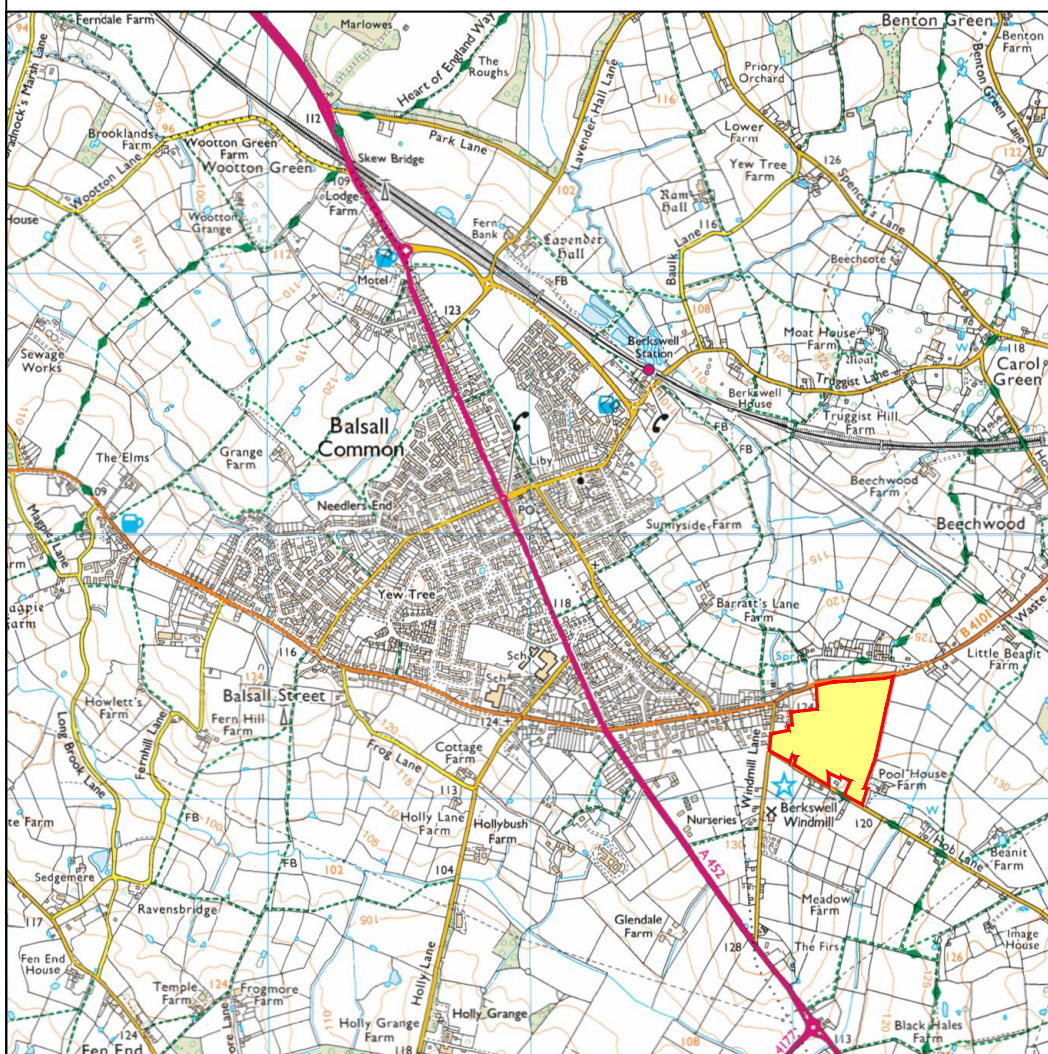
- 8.1 The magnetometer survey has not recorded any magnetic responses that could be interpreted as being of definite archaeological interest. Linear trends and a tentative pit-like response have been recorded in the survey which have been categorised as uncertain; they are likely to be due to agricultural or natural processes. The routes of four service pipes have been plotted in the survey. A strong ferrous response in Area 5 could mark the location of a capped vertical mineshaft / borehole. While zones of magnetic disturbance have been caused by infilled ponds. Areas 9 and 10 contain metal debris and bird aviaries which rendered those areas unsuitable for survey.

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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 Midlands 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.

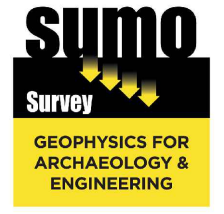
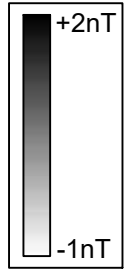


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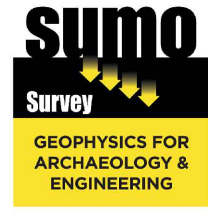
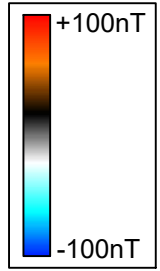
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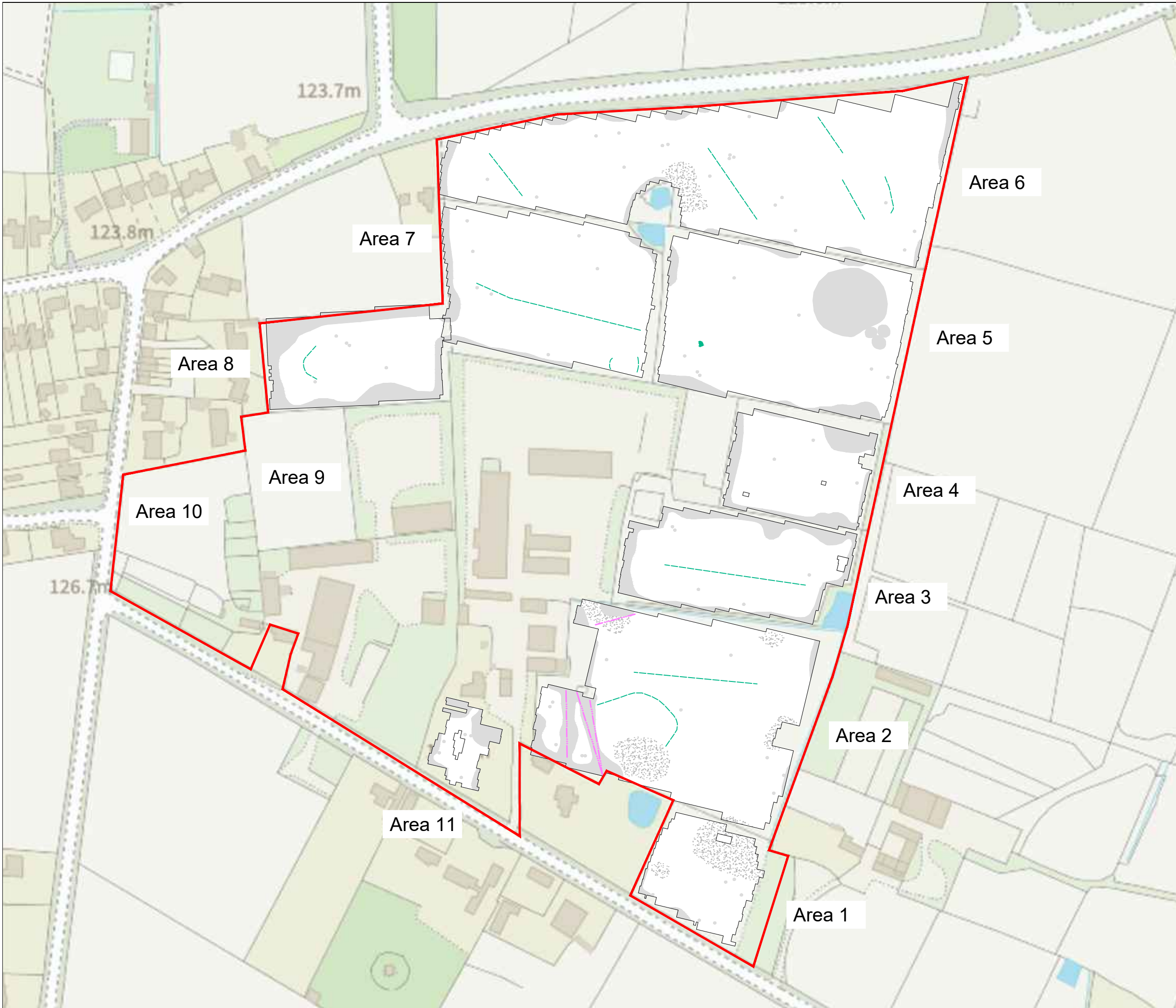
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| Project: | 08791 Land off Hob Lane, Pheasant Oak Farm, Balsall Common | |
| Scale: | NOT TO SCALE | Fig No: 01 |







| | |
|---|---------------|
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| Project: 08791 Land off Hob Lane, Pheasant Oak Farm, Balsall Common | |
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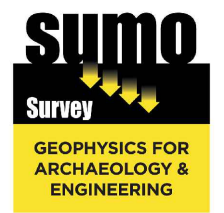


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| Scale: | metres | Fig No: |
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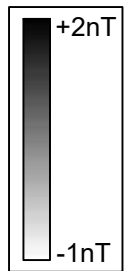
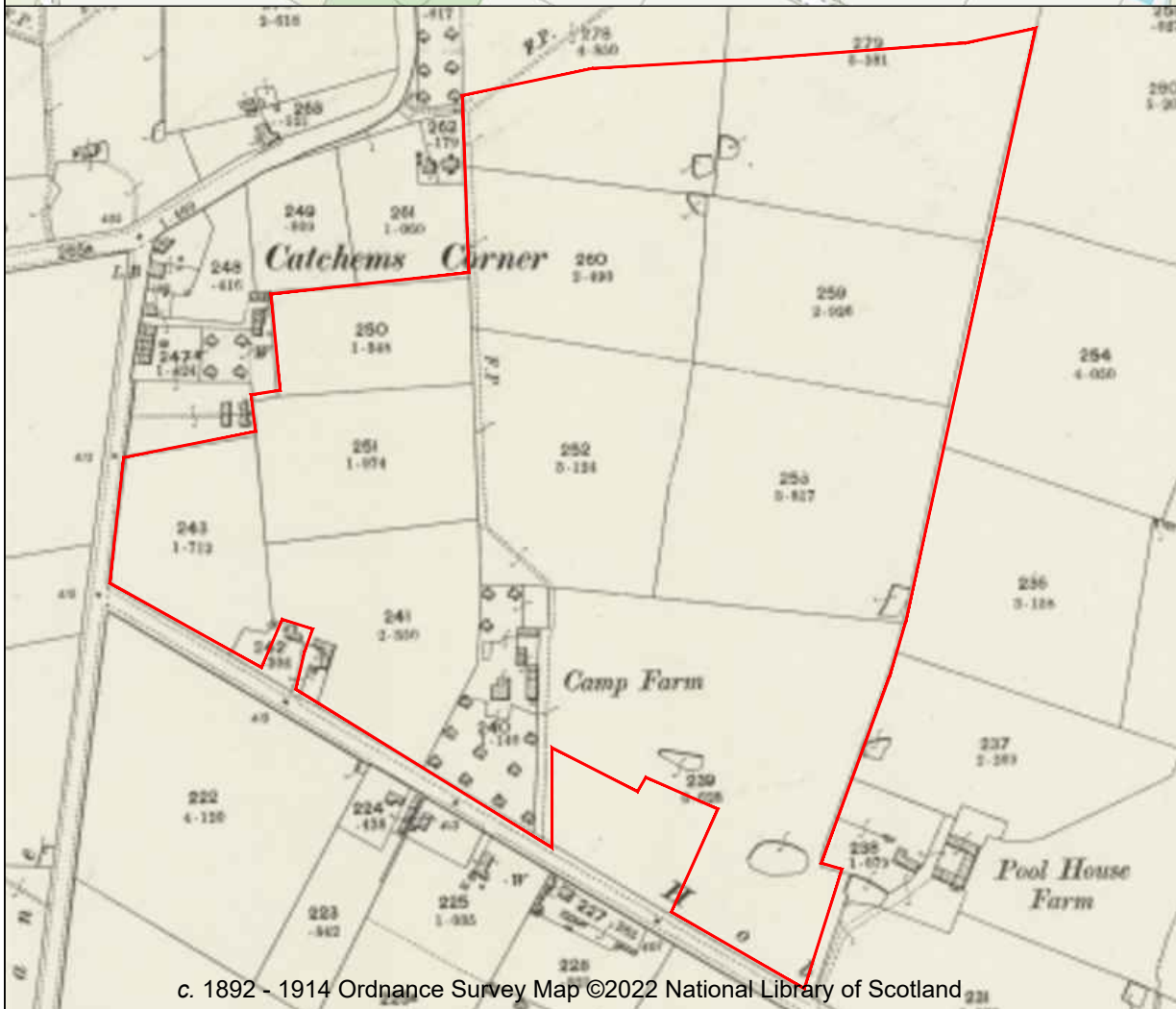
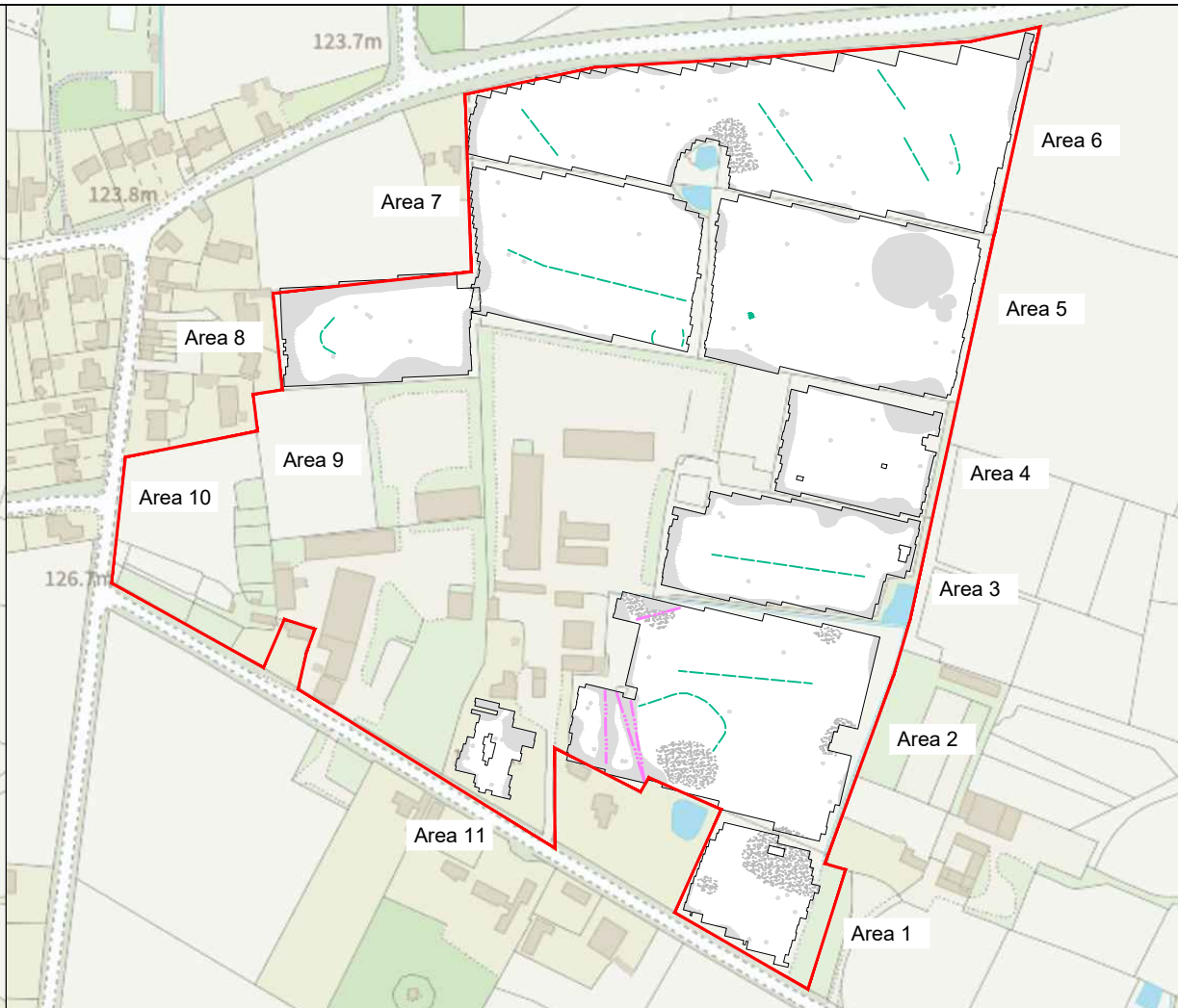


KEY





| | |
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|  | Magnetic disturbance |
|  | Service |
|  | Ferrous |

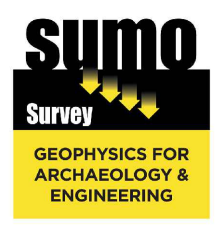


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KEY

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|  | Service |
|  | Ferrous |

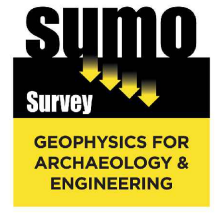
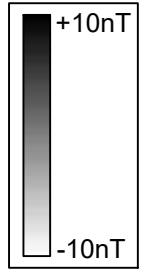


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Ordnance Survey Map / 2021 Aerial Image

Client: The Environmental Dimension Partnership

Project: 08791 Land off Hob Lane, Pheasant Oak Farm,
Balsall Common

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Client:
The Environmental Dimension Partnership

Project:
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Balsall Common

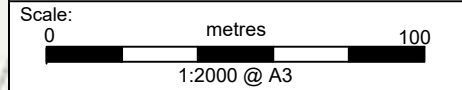
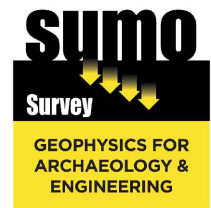


Fig No:
06



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

Client: The Environmental Dimension Partnership

Project: 08791 Land off Hob Lane, Pheasant Oak Farm, Balsall Common

Scale: 0 metres 100
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Fig No: 07

Appendix A - Technical Information: Magnetometer Survey Method

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 | 1.0m | 0.25m |
| Magnetometer | Bartington Cart System | 1.0m | 0.125m |

Instrumentation:

Bartington instruments operate in a gradiometer configuration which comprises fluxgate sensors mounted horizontally, 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.

Bartington Grad 601-2

Hand-Held: Data will be collected using a Bartington Grad 601-2. The instrument consists of two paired sensors and readings are logged at 0.25m centres along traverses 1.0m apart across 30m grids. The collection of data at 0.25m centres provides an appropriate methodology balancing cost and time with resolution as per Historic England guidelines

Bartington Cart System

Data will be collected using a cart carrying four paired Bartington magnetic sensors. 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.

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. |
|--------------------------------|---|

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 & 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 & 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.

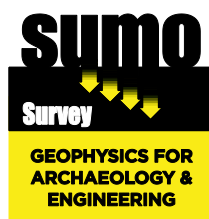
Silting and deliberate infilling of ditches and pits with magnetically enhanced soil creates a relative contrast against the much lower levels of magnetism within the subsoil into which the feature is cut. Systematic mapping of magnetic anomalies will produce linear and discrete areas of enhancement 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 sumogeop1-507922

| | |
|-----------------------------------|--|
| OASIS ID (UID) | sumogeop1-507922 |
| Project Name | Geophysical Survey at Land off Hob Lane, Pheasant Oak Farm, Balsall Common |
| Sitename | Land off Hob Lane, Pheasant Oak Farm, Balsall Common |
| Activity type | Geophysical Survey, MAGNETOMETRY SURVEY |
| Project Identifier(s) | 08791, 08791 |
| Planning Id | |
| Reason For Investigation | Planning requirement |
| Organisation Responsible for work | SUMO Geophysics Ltd. |
| Project Dates | 15-Aug-2022 - 16-Aug-2022 |
| Location | Land off Hob Lane, Pheasant Oak Farm, Balsall Common NGR : SP 25168 76237 LL : 52.3835881775409, -1.63165575360859 12 Fig : 425168,276237 |
| Administrative Areas | Country : England County : West Midlands District : Solihull Parish : Berkswell |
| Project Methodology | A temporary grid system was 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. Hand Held: Data will be collected using a Bartington Grad 601-2. The instrument consists of two paired sensors (see below) and readings are logged at 0.25m centres along traverses 1.0m apart across 30m grids. The collection of data at 0.25m centres provides an appropriate methodology balancing cost and time with resolution as per Historic England guidelines. Two 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. |
| Project Results | The magnetometer survey has not recorded any magnetic responses that could be interpreted as being of definite archaeological interest. Linear trends and a tentative pit-like response have been recorded in the survey which have been categorised as uncertain; they are likely to be due to agricultural or natural processes. The routes of four service pipes have been plotted in the survey. A strong ferrous response in Area 5 could mark the location of a capped vertical mineshaft / borehole. While zones of magnetic disturbance have been caused by infilled ponds. |
| Keywords | Pipeline - 20TH CENTURY - FISH Thesaurus of Monument Types |
| Funder | |
| HER | Solihull HER - unRev - STANDARD |
| Person Responsible for work | Thomas, Cockcroft |
| HER Identifiers | |
| Archives | |



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

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Appendix EDP 2 Images



Image EDP A2.1: View from Windmill Lane roadside, looking east toward the Grade II* listed Berkswell Windmill (**1054782**).



Image EDP A2.2: View from Hob Lane roadside, adjacent to the south-west corner of the Site, looking south toward the Grade II* listed Berkswell Windmill (**1054782**). Note the mobile homes forming part of view to the left of the listed building.



Image EDP A2.3: View from north-west corner of the Site toward Mulberry Cottage.



Image EDP A2.4: View from south-east toward Camp Farm farmhouse. Note the modern extensions, including bay windows on main elevation, and replacement uPVC door and windows.



Image EDP A2.5: View from the north-east toward Camp Farm barn. Note the modern roof, windows and doors.



Image EDP A2.6: Internal view of Camp Farm barn modern roof structure.



Image EDP A2.7: View from the south-west toward the L-shaped range at Southview Farm. Note that it is heavily altered, with the northern arm of the 'L' (on the left of the picture) surviving as a timber skeleton with a corrugated iron roof.



Image EDP A2.8: View westward toward L-shape range at Southview Farm, showing its partial incorporation into a modern farm building.



Image EDP A2.9: View southward, along the western edge of the Camp Farm light industrial complex. Note the earth bank to the right of the photograph, which provides evidence for the amount of earth movement during the construction of the hardstanding and modern buildings.

Plans

Plan EDP 1: Designated Heritage Assets
(edp5006_d003b 30 November 2022 GYo/SDo)

Plan EDP 2: Non-designated Heritage Assets
(edp5006_d004c 30 November 2022 GYo/SDo)

Plan EDP 3: Historic Map Regression
(edp5006_d005b 30 November 2022 GYo/SDo)