



**Land off Bullens
Green Lane,
Colney Heath**

**Archaeology and
Heritage
Assessment**

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

On behalf of:
Canton Ltd

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Non-technical Summary

- S1 The site area does not contain any designated heritage assets, such as world heritage sites, scheduled monuments, listed buildings, registered parks & gardens, registered battlefields and neither is it included within the boundary of a conservation area that has been identified and designated by the Local Planning Authorities (LPA).
- S2 The assessment concludes that only one designated heritage asset within the site's wider surroundings would be affected through change to its setting. This is the Grade II listed 68 Roestock Lane that occupies a well vegetated garden enclosure adjoining the site's north-western boundary and is orientated east-west to face north away from the site. Whilst the proposed development would have no impact on the major elements of the listed building's significance as a designated heritage asset, the assessment still concludes that the implementation of the development proposals would result in a degree of harm being caused to this listed building through change to its setting.
- S3 This harm (at the lowest end of the very broad '*less than substantial*' spectrum) has to be balanced against the public benefits that the proposals would deliver, in accordance with Paragraph 196 of the Framework, recognising the advice provided in the Framework that requires '*great weight*' to be given to the conservation of heritage assets and for '*clear and convincing justification*' to be set out where there would be harm.
- S4 The only archaeological potential within the site is for the presence of low value agricultural remains relating to the utilisation of the land from at least the mid-19th century to the present day and this assessment is underlined by the results of a geophysical survey undertaken in mid-late June 2020. Whilst the rapid growth of the maize crop prevented all of the site being surveyed, the results were nonetheless sufficient to suggest that large areas within its redline boundary contain nothing other than below ground remains of former field boundaries.
- S5 Implementation of the (albeit illustrative) masterplan would result in the all but complete loss of any archaeological remains which may be present at the site; with it being likely that only small and localised pockets could be retained in the areas of undeveloped open space concentrated in the north west, north and centre-south. Nonetheless, the impact of this on the archaeological resource is considered to be limited because there is no evidence that the site contains archaeological features, deposits or remains of greater than low interest, where appropriate investigation and recording ahead of development commencing would represent entirely proportionate and appropriate mitigation.
- S6 Whilst further evaluation (and potentially post-consent mitigation) may well be required, it is still possible to conclude at this stage that, insofar as the potential loss of archaeological remains is concerned, the outline planning application for the site could be determined in accordance with the provisions of not only national, but also local, planning policy and there is absolutely no conflict in that regard.

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Section 1

Introduction

Background, Purpose and Limitations

- 1.1 This report has been prepared by the Environmental Dimension Partnership Ltd (EDP) for Canton Ltd and presents the results of an archaeological and heritage assessment of land off Bullens Green Lane, Colney Heath (hereafter referred to as 'the site'). This document has been commissioned and produced to inform the preparation of proposals underpinning an outline planning application for residential development within the site.
- 1.2 The first aim of this assessment is to consider the available historical and archaeological resources for the site to establish its likely archaeological interest or potential, in line with national and local planning policies, then using this data to determine the likely impact of the proposals.
- 1.3 Secondly, it will identify and assess any likely effects arising in respect of designated and non-designated heritage assets as a result of changes within their setting.
- 1.4 In line with professional best practice guidance, a thorough review of desktop sources has been augmented through the completion of a walkover survey, which was undertaken by a highly experienced surveyor in June 2020.
- 1.5 It should be noted that the sources consulted in the preparation of the baseline are limited to those which are accessible at the time of writing. Due to the UK Government's response to the ongoing COVID-19 pandemic, the Historic England Archive (HEA) in Swindon is closed until further notice and the same also applies to the Hertfordshire Record Office. Hence, in both cases, these archives have not been accessed for any information or records they may hold in respect of the site, although this is not considered to represent a significant limitation in terms of the robustness of conclusions in respect of archaeological and heritage impacts.

Location & Boundaries

- 1.6 The site is located to the east of Roestock Lane, c.1km to the south-east of Colney Heath. The A1 is situated c.470m to the east of the site and the centre of the town of Hatfield is located c.2.5km to the north-east.
- 1.7 The site is centred on approximately National Grid Reference (NGR) TL 21211 05895 and comprises one single parcel of farmland measuring c.5.1 hectares (ha) in area, as shown on **Plan EDP 1**.
- 1.8 The site's boundaries are defined by Bullens Green Lane to the east, Fellowes Lane to the south, residential properties fronting Roestock Lane to the north and Roestock Park to the

west. Other than in the north, where it is defined by the rear gardens of residential houses, the site's boundary is defined by hedgerows with intermittent standards.

- 1.9 A Public Right of Way (PRoW) runs east-west through the north-west corner of the site and another footpath (FP23) runs north-south along the western edge to access Roestock Lane.

Geology & Topography

- 1.10 With regard to the underlying solid geology, the site comprises Lewis Nodular and Seaford Chalk formations formed approximately 84 to 94 million years ago in the Cretaceous Period, and in addition these are overlain by superficial deposits comprising Diamicton of the Lowestoft Formation which were deposited in an environment previously dominated by ice age conditions (www.bgs.ac.uk).
- 1.11 The land at the site is located on broadly level ground which falls only slightly and gently from the south-east corner (77m above Ordnance Datum (aOD)) towards the north-western corner (76m aOD).

Current Land Use

- 1.12 The site is currently (summer 2020) covered with a maturing maize crop, which varies in height, but covers all of the farmland located within the boundaries.

Development Proposals

- 1.13 The site will be subject to the preparation and submission of an outline planning application covering the proposed erection of up to 100 new homes, landscaping and infrastructure, with an access off Bullens Green Lane in the east.
- 1.14 The outline planning application will be supported by an Illustrative Masterplan and also a Parameter Plan. The two plans are included in **Appendix EDP 1**.
- 1.15 The Parameter Plan sets out key design principles, such as the location and quantum of open space separating the Grade II listed building at 68 Roestock Lane from the northern edge of the residential development. The intention is that thereafter the Reserved Matters Application(s) will accord with these principles and therefore ensure that this key mitigation measure is implemented within the completed development.

Section 2 Planning Guidance

- 2.1 This section sets out relevant legislation and planning policy, governing the conservation and management of the historic environment.

Legislation & Case Law

- 2.2 The *Planning (Listed Buildings and Conservation Areas) Act of 1990* is the principal legislative instrument addressing the treatment of listed buildings through the planning process in both England and Wales.

- 2.3 Section 66(1) of the *Planning (Listed Buildings and Conservation Areas) Act of 1990* sets out the statutory duty of the decision-maker, where proposed development would affect a listed building or its setting:

'...in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.'

- 2.4 This 'special regard' duty has been tested in the Court of Appeal and confirmed to require that 'considerable importance and weight' should be afforded by the decision maker to the desirability of preserving a listed building along with its setting. The relevant Court judgement is referenced as *Barnwell Manor Wind Energy Ltd v East Northants DC, English Heritage and National Trust [2014] EWCA Civ 137*.

- 2.5 However, it must be recognised that s66(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.

- 2.6 Although relating to the setting of a listed building, the discussion of 'harm' is of relevance in the judgement in respect of *R (Forge Field Society) v Sevenoaks District Council [2014] EWHC 1895 (Admin)* also makes this clear at Paragraph 49 when it states that:

'This does not mean that an authority's assessment of likely harm to the setting of a listed building or to [the character or appearance of] a conservation area is other than a matter for its own planning judgement. It does not mean that the weight the authority should give to harm which it considers would be limited or less than substantial must be the same as the weight it might give to harm which would be substantial. But it is to recognise, as the Court of Appeal emphasised in Barnwell, that a finding of harm to the setting of a listed building or to [the character or appearance] of a conservation area gives rise to a strong presumption against planning permission being granted. The presumption is a statutory one. It is not irrebuttable. It can be outweighed by material considerations powerful enough

to do so. But an authority can only properly strike the balance between harm to a heritage asset on the one hand and planning benefits on the other if it is conscious of the statutory presumption in favour of preservation and if it demonstrably applies that presumption to the proposal it is considering.'

- 2.7 This key point is also made in Paragraph 54 of *Forest of Dean DC v Secretary of State for Communities and Local Government* [2013] EWHC 4052; i.e.:

'...Section 66 (1) did not oblige the inspector to reject the proposal because he found it would cause some harm to the setting of the listed buildings. The duty is directed to 'the desirability of preserving' the setting of listed buildings. One sees there the basic purpose of the 'special regard' duty. It does not rule out acceptable change. It gives the decision-maker an extra task to perform, which is to judge whether the change proposed is acceptable. But it does not prescribe the outcome. It does not dictate the refusal of planning permission if the proposed development is found likely to alter or even to harm the setting of a listed building.'

- 2.8 In other words, it is up to the decision maker (such as a local authority) to assess whether the proposal which is before them would result in 'acceptable change'.

- 2.9 Case law also illustrates that the assessment of 'harm' to a listed building should be made on the basis of the proposal taken as a whole, bearing in mind that some elements of that proposal could be beneficial.

- 2.10 Paragraph 5 of Lewison LJ in the Court of Appeal judgement covering *Regina (Palmer) v Herefordshire Council* [2016] EWCA Civ 1061 (04 November 2016) covers this matter in detail when it highlights that:

'Since section 66(1) requires that special regard must be paid to the desirability of preserving a listed building or its setting, this means that that desirability must be given considerable importance and weight: The Bath Society v Secretary of State for the Environment [1991] 1 WLR 1303, 1319. In this context the concept of preserving the building or its setting means doing no harm: South Lakeland District Council v Secretary of State for the Environment [1992] 2 AC 141, 150. Although the most obvious way in which the setting of a listed building might be harmed is by encroachment or visual intrusion, it is common ground that, in principle, the setting of a listed building may be harmed by noise or smell. The degree of harm (if any) is a matter of judgment for the decision-maker, but if the decision-maker decides that there is harm, he is not entitled to give it such weight as he thinks. To the contrary he must give it considerable weight: East Northamptonshire District Council v Secretary of State for Communities and Local Government [2015] 1WLR 45, para 22. However, this does not mean that the weight that the decision-maker must give to the desirability of preserving the building or its setting is uniform. It will depend on, among other things, the extent of the assessed harm and the heritage value of the asset in question: East Northamptonshire District Council, para 28; R (Forge Field Society) v Sevenoaks District Council [2015] JPL 22, para 49. This is consistent with paragraph 132 of the National Planning Policy Framework (2012) (the NPPF) which states: 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. The more important the asset, the greater the weight should be.'

- 2.11 Paragraph 7 notes that: *'The existence of the statutory duty under section 66(1) does not alter the approach that the court takes to an examination of the reasons for the decision given by the decision-maker: Mordue v Secretary of State for Communities and Local Government [2016] 1 WLR 2682. It is not for the decision-maker to demonstrate positively that he has complied with that duty: it is for the challenger to demonstrate that at the very least there is substantial doubt whether he has. Where the decision-maker refers to the statutory duty, the relevant parts of the NPPF and any relevant policies in the development plan there is an inference that he has complied with it, absent some positive indication to the contrary: Mordue's case, para 28. In examining the reasons given by a local planning authority for a decision, it is a reasonable inference that, in the absence of contrary evidence, they accepted the reasoning of an officer's report, at all events where they follow the officer's recommendation: Rv Mendip District Council, Ex p Fabre (2000) 80P&CR 500, 511 and R (Zurich Assurance Ltd (trading as Threadneedle Property Investments)) v North Lincolnshire Council [2012] EWHC3708 at [15]'*

National Planning Policy

- 2.12 National planning guidance for England is set out in the National Planning Policy Framework (NPPF) (MHCLG, June 2019), where *Section 16 Conserving and Enhancing the Historic Environment* sets out national planning guidance of relevance here.
- 2.13 In terms of an application, Paragraph 189 identifies 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'.*
- 2.14 Paragraph 192 of the NPPF is of relevance 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.'*

2.15 Paragraph 193 states that: *'When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance'.*

2.16 Paragraph 194 then adds 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.'*

2.17 Paragraph 29 in the Court of Appeal judgement covering *Regina (Palmer) v Herefordshire Council* [2016] EWCA Civ 1061 (04 November 2016) is also clearly of relevance here when it states the following:

'It seems to me that the clear thrust of the reports to the planning committee, and the views of the specialist officers that underlay and were summarised in those reports, was that if the mitigation measures were put in place there would be no adverse effect on the setting of the listed building. I would accept Mr. Reed's submission for the council that where proposed development would affect the setting of a listed building or its setting in different ways, some positive and some negative, the decision-maker may legitimately conclude that although each of the affects has an impact, taken together there is no overall effect on the listed building or its setting. That is what the officers concluded in this case. That is borne out by the overall conclusion that the proposed development would comply with Policies HBA4 and LA4.'

2.18 The Secretary of State's endorsement of the Planning Inspector's reasoning in the Appeal for Oxford Brookes University, Wheatley Campus, College Close [App. Ref. P17/S4254] is noteworthy in this regard because the Inspector concludes as follows in Paragraphs 13.72 and 13.73 of their Report:

'In coming to that view, I am mindful of the comments of HE, the Council's Conservation Officer and heritage witness all of whom found 'less than substantial' harm to the setting of the SM. I do not disagree, but where I depart from those assessments is with regard to the heritage benefits, which in my view have been significantly underplayed.

As I have found no overall heritage harm, it is not necessary to undertake the heritage balancing exercise required by paragraph 196 of the Framework. I have considered the Council's submissions that heritage benefits should properly be considered as 'public benefits' and only introduced at the paragraph 196 balancing stage. However, I can find

no explicit support for that approach in the Framework and as the Palmer Judgement makes clear, the decision maker may legitimately conclude that although each of the effects has an impact, taken together there is no overall adverse effect on the listed building or its setting. In effect the exercise to be undertaken is to weigh the positive and negative aspects of the scheme and to come to an overall judgement as to whether the development would harm, preserve or enhance the asset.'

- 2.19 This leads to the key finding at Paragraph 13.74 of the Inspector's Report that: *'Even if I were to concur with the Council's approach, the question of where and when the benefits are considered makes no meaningful difference to the eventual outcome of the balancing exercise to be undertaken'*.
- 2.20 Hence, the proposal should be assessed in its 'totality' (impacts and enhancements) before considering it in the context of Paragraphs 195 and 196 of the NPPF.
- 2.21 Paragraph 196 highlights the following in respect of the identification of 'harm' which is assessed to be 'less than substantial' harm: *'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'*.
- 2.22 Under the heading *Conserving and Enhancing the Historic Environment*, the Government's *Planning Practice Guidance* highlights the following details in respect of the identification of substantial harm:

'Whether a proposal causes substantial harm will be a judgment for the decision taker, having regard to the circumstances of the case and the policy in the National Planning Policy Framework. In general terms, substantial harm is a high test, so it may not arise in many cases. For example, in determining whether works to a listed building constitute substantial harm, an important consideration would be whether the adverse impact seriously affects a key element of its special architectural or historic interest. It is the degree of harm to the asset's significance rather than the scale of the development that is to be assessed. The harm may arise from works to the asset or from development within its setting.'

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

- 2.23 The key points are that substantial harm is a 'high test' that *'may not arise in many cases'*, highlighted by the example whereby *'partial destruction'* may not necessarily result in there being substantial harm. It is a question of whether that *'adverse impact seriously affects a key element of [the specific listed building's] special architectural or historic interest'* and so its contribution to the building's significance is an important question.

- 2.24 Paragraphs 24 and 25 of the High Court judgement in respect of *Bedford BC v Secretary of State for Communities and Local Government [2013] EWHC 2847* also reiterate the high threshold required for a development proposal to constitute substantial harm, and also serve to emphasise the very broad spectrum of ‘less than substantial harm’ in terms of proposed development:

‘What the inspector was saying was that for harm to be substantial, the impact on significance was required to be serious such that very much, if not all, of the significance was drained away. Plainly in the context of physical harm, this would apply in the case of demolition or destruction, being a case of total loss. It would also apply to a case of serious damage to the structure of the building. In the context of non-physical or indirect harm, the yardstick was effectively the same. One was looking for an impact which would have such a serious impact on the significance of the asset that its significance was either vitiated altogether or very much reduced.’

- 2.25 Therefore, for the ‘harm’ to be ‘substantial’ - and require consideration against the more stringent requirements of Paragraph 195 of the NPPF compared with Paragraph 196; the proposal being considered would need to result in the heritage asset’s significance either being ‘*vitiated altogether [i.e. destroyed] or very much reduced*’.
- 2.26 As far as this Proposal is concerned, it further highlights that ‘less than substantial harm’ must by implication span the full breadth of developmental effects that would not result in an asset’s significance being either ‘*vitiated altogether or very much reduced*’.

Local Planning Policy

St. Albans City and District Council

- 2.27 The current adopted Local Plan for St Albans City and District Council is the *District Local Plan Review 1994*, which is intended to be replaced by the New Local Plan when it is ready and adopted.
- 2.28 The Local Plan is now out of date, but specific policies have been saved and taken forward as current policy. The policies of relevance to archaeology and heritage issues are detailed in the paragraphs which follow:

‘Policy 86 – Buildings of Special Architectural or Historic Interest

In considering any application for listed building consent for the demolition, alteration or extension of a listed building (and also any application for planning permission for a development which affects a listed building or its setting), the Council will have special regard to the desirability of preserving the building or its setting or any features of architectural or historic interest which it possesses.’

- 2.29 There are no policies within the District Local Plan Review that address sites that may or may not be of archaeological potential. However, the policy below addresses known sites of archaeological potential and so it is considered that, if the site is believed to contain

significant archaeological potential, that it would be treated in the manner discussed in below:

'Policy 111 – Archaeological Sites Where Planning Permission May be Subject to a Recording Condition

Within the sites listed below and defined on the proposals map, the District Council will not normally refuse planning applications on archaeological grounds. However, following evaluation, planning permissions may be subjected to a condition requiring facilities for the Council to record remains by excavation in advance of construction and/or during construction.'

Welwyn Hatfield Borough Council

- 2.30 The current adopted Plan for Welwyn Hatfield Borough Council is the *District Plan* that was adopted in 2005. A draft New Local Plan is currently being examined and will replace the saved policies of the District Plan when it is formally adopted.
- 2.31 The policies which are relevant to archaeology and heritage from the current *District Plan* are detailed in the paragraphs below:

'Policy R26 - Alternative Uses for Listed Buildings

Applications for the change of use of Listed Buildings will only be permitted when all of the following criteria are met:

- (i) The proposal would not harm the character or setting of the building;*
- (ii) The change of use could be successfully implemented without the essential need for other development which would harm the building's character or setting; and*
- (iii) The change of use results in the continued preservation of the building's fabric or its restoration.'*

'Policy R29 – Archaeology

Where a proposal for development may affect remains of archaeological significance, or may be sited in an area of archaeological potential, developers will be required to undertake an archaeological assessment, if necessary with a field evaluation, and to submit a report on the findings to the Local Planning Authority, before an application is determined.

Planning permission will not be granted for development which adversely affects the site or setting of Scheduled Ancient Monuments, or other nationally important sites and monuments.

Where development proposals affect sites and monuments of less than national importance, the Council will seek preservation in situ of remains. In cases where this is

neither feasible, nor merited, planning permission may be granted, subject to conditions requiring adequate provision being made for excavation and recording.

When planning permission is granted for development that would affect archaeological remains, taking into account the importance of the remains, conditions will be imposed to ensure that the remains are properly recorded, the results analysed and published and where practicable, the management and presentation of archaeological sites and their settings is enhanced.'

- 2.32 Those policies relevant to archaeology and heritage in the emerging draft Local Plan are detailed below:

'Policy SADM 15 – Heritage

Proposals which affect designated heritage assets and the wider historic environment should consider the following:

- The potential to sustain and enhance the heritage asset and historic environment in a manner appropriate to its function and significance;*
- Successive small scale changes that lead to a cumulative loss or harm to the significance of the asset or historic environment should be avoided;*
- Proposals should respect the character, appearance and setting of the asset and historic environment in terms of design, scale, materials and impact on key views;*
- Architectural or historic features which are important to the character and appearance of the asset (including internal features) should be retained unaltered;*
- The historic form and structural integrity of the asset are retained; and*
- Appropriate recording of the fabric or features that are to be lost or compromised takes place and is deposited into the Historic Environment Record.*

A Heritage Statement, Heritage Impact Assessment and/or Archaeological Assessment will be required if the scale and nature of the proposal are likely to have an impact on the significance of all or part of the asset.

Permission for proposals that result in substantial harm to the significance of a designated heritage asset, including Conservation Areas, will be exceptional or wholly exceptional in accordance with national policy and guidance.

Proposals that result in less than substantial harm to the significance of a designated heritage asset will also be refused unless the need for, and benefits of, the development in that location significantly outweigh that harm and the desirability of preserving the asset, and all feasible solutions to avoid and mitigate that harm have been fully implemented.

Proposals that result in harm to the significance of other heritage assets will be resisted unless the need for, and benefits of, the development in that location clearly outweigh that harm, taking account of the asset's significance and importance, and all feasible solutions to avoid and mitigate that harm have been fully implemented.'

- 2.33 The adopted and draft plans and policies listed above have all been considered in the preparation of this assessment.

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Section 3

Methodology

Archaeological Assessment

- 3.1 This assessment report has been produced in accordance with the *Standard and Guidance for Historic Environment Desk-Based Assessment* prepared by the Chartered Institute for Archaeologists (see CIfA, 2017). These guidelines provide a national standard for the completion of desk-based assessments such as this.
- 3.2 The assessment first involved consultation of readily available archaeological and historical information from documentary and cartographic sources. The accessible repositories of relevant information comprised:
- Records of known archaeological sites, monuments past investigation and findspots maintained by the Hertfordshire Historic Environment Record (HER);
 - Maps and documents accessed from online sources; and
 - *The National Heritage List for England* curated by Historic England (HE).
- 3.3 The assessment of archaeological potential set out in the report utilises a 1km radius study area from the site boundary. This area is considered an appropriate extent to capture any non-designated assets that might be affected by the site's development, including due to change within their settings, and to provide sufficient information on known archaeological data in its vicinity to enable a robust assessment of archaeological interest/potential.
- 3.4 As set out in Paragraph 1.5, it was not possible to access the aerial photographs held at the HEA based in Swindon. Neither was it possible to access the maps and other primary documents held at the local archives for Hertfordshire because, in common with the HEA, they were closed during the Covid-19 lockdown.
- 3.5 The information from the accessible repositories was checked and then augmented by the completion of a site walkover survey in mid-June 2020.
- 3.6 In light of the above, this report provides a synthesis of relevant archaeological information for the site and thereafter concludes with an assessment of its likely interest or potential, made with regard to current best practice guidelines.

The Assessment of Significance

- 3.7 Reference is made (where appropriate) to English Heritage (2008) *Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment* in this assessment, but the identification of 'significance' will be based on the definition outlined in Annex 2 of the NPPF (as follows):

'The value of a heritage asset to this and future generations because of its heritage interest. The interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting. For World Heritage Sites, the cultural value described within each site's Statement of Outstanding Universal Value forms part of its significance.'

- 3.8 Accordingly, the 'significance' of an individual heritage asset could be derived from its *archaeological, architectural, artistic or historic* interest.

Assessment of Potential Setting Effects

- 3.9 This report also considers the nature and significance of any effects arising in terms of the setting of heritage assets.
- 3.10 The setting assessment process employed current HE guidance set out in: *Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets* (HE 2017 Second Edition). This provides best practice guidance for the identification and assessment of potential setting issues in the historic environment.

Pre-application Consultation

- 3.11 Archaeological advice was sought from both St Albans City and District Council (CDC) and Welwyn Hatfield Borough Council on the potential of the site.
- 3.12 A written response was received from Simon West, the District Archaeologist for St Albans CDC, on 18 June 2020. This advised that a heritage statement would be needed to assess the potential impact on archaeology within the site, which this report will address.
- 3.13 It was also suggested that a trial trench evaluation should take place in advance of the application's determination to aid the impact assessment on any potential archaeology within the site. This evaluation would also help to understand the development of field boundaries within the site and therefore the pattern of the landscape in the surrounding area. This request for pre-determination evaluation applies solely to the St Albans portion of the site and a comparable response from the archaeological advisor to Welwyn Hatfield Borough Council (Andy Instone at Hertfordshire County Council) will need to be obtained to ascertain the potential investigation needs for the site altogether.
- 3.14 Unfortunately, despite a number of requests, no comparable response has been received from Andy Instone in respect of Welwyn Hatfield's area of the site.

Geophysical Survey

- 3.15 Following the completion of the walkover survey, which identified that the site contained a maturing maize crop which might not be harvested until the autumn and could restrict the completion of a robust evaluation ahead of the planning application's submission, it was

decided to commission a geophysical survey as quickly as possible and before the results of pre-application consultation were understood.

- 3.16 The 100% detailed magnetic survey of the farmland at the site was undertaken by Archaeological Services WYAS (AS WYAS) on 25 June 2020, but unfortunately it was found that the maize crop had grown significantly over the weekend and therefore only the central area within the site was of suitable height and could be accessed to undertake the survey.
- 3.17 A copy of the Project Design covering the completion of the geophysical survey is included here within this assessment report as **Appendix EDP 2**.

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Section 4 Existing Information

Introduction

- 4.1 There are no scheduled monuments, listed buildings, historic parks & gardens or registered battlefields within the site and it also does not form part of, or adjoin, a conservation area designated by either of the two Local Authorities.
- 4.2 There are 22 non-designated 'monuments' listed by the HER within a 1km radius study area around the site, with a further three archaeological events (**Plan EDP 1**) and these are discussed where relevant to the archaeological background set out underneath.

Designated Heritage Assets

- 4.3 In line with Paragraph 189 of the NPPF and guidance set out in Step 1 of GPA3 (2017), appropriate and proportionate consideration has been afforded to the identification of any heritage assets outwith the site that could be affected by its proposed development as a consequence of changes within their setting.
- 4.4 Only one asset and its setting is considered to be affected by the proposed development, following the completion of a desk-based investigation and a visit to the site and its wider surroundings by an experienced surveyor in fine and dry weather conditions in the middle of June 2020.
- 4.5 This is 68 Roestock Lane, a Grade II listed building [List Entry No. **1172857**], which was first listed on 27 September 1984 and is positioned on land immediately north of the site boundary, as illustrated on **Plan EDP 1**:

'House. Late C17. Timber frame. C20 cement-rendered ground floor and weatherboarded upper floor. Plain tile steep pitched roof. 2 storeys. 4 C20 leaded casements. Ground floor built forward slightly and with 2 leaded bows. C20 porch on right. Towards left of roof is a wide late C17 chimney stack with 3 flues. Possibly a staircase attached inside. Lean-to on left joins with a C20 garage.'

- 4.6 Otherwise, there are no other 'designated' heritage assets within 300 metres of the site's boundary and no other assets which could be affected through changes to their setting in its immediate environs.
- 4.7 There is a group of five Grade II listed buildings circa 300 metres south-west of the site's boundary, to the south-west of the junction of Roestock Lane and High Street, defined by a mini-roundabout and both spatially and visually separated from it by the area of extant residential housing development concentrated on Mead Way and Hall Gardens.

- 4.8 The listed buildings comprise the farmhouse and barns at Colney Heath Farm, the Queen's Head public house and two London Coal Duty marker posts. The assets are concentrated south of High Street/Tollgate Road, where there is absolutely no suggestion or evidence to indicate that any of them possesses a relationship to the land at the site which makes any contribution to its heritage significance.
- 4.9 Accordingly, none of these listed buildings will be considered further in this report, which will instead focus on 68 Roestock Lane from hereon.
- 4.10 The assessment of 68 Roestock Lane's significance and the degree to which its setting contributes to that significance or allows it to be appreciated (Step 2), the effects upon that from the proposed development (Step 3) and the identification of opportunities to enhance or avoid/minimise harm to the asset's significance (Step 4) will be detailed in **Section 5. Step 5** (which requires making and documenting the decision and monitoring outcomes) will not be set out here because it is beyond the scope of this study.

Non-designated Heritage Assets

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

- 4.11 There is currently no evidence for early prehistoric activity or finds within the site and only one prehistoric find is identified by the HER anywhere within the 1km study area around its boundary. This comprises a Mesolithic flint axe that was discovered c.700m to the west of the site (**MHT1884**) and most likely derives from chance or casual loss, rather than being in any way indicative of permanent activity such as settlement and therefore highlighting that *in situ* archaeological features and deposits could be associated with it.
- 4.12 In terms of prehistory in the wider area, the scheduled Beech Bottom Dyke (**1019136**) is located c.6km to the north-east and comprises a stretch of ditch that is thought to be a territorial, and potentially defensive, boundary of Iron Age date.
- 4.13 The extreme paucity of even stray finds from the topsoil, let alone *in situ* deposits found as a result of investigative fieldwork, clearly identifies that the potential for prehistoric activity to be found within the site cannot be more than limited.

Romano-British (AD43–410)

- 4.14 Similarly, there is no Roman archaeology recorded within the site and only one Roman find is recorded within the 1km study area.
- 4.15 This 'find' comprises a box of seven Roman coins found c.730m to the north-east and believed to have been discovered in a garden, although it has equally been suggested that the coins were 'acquired' and were actually found somewhere else entirely (**MHT2934**).
- 4.16 A cropmark has also been identified c.470m to the south of the site through the analysis of aerial photographs (**MHT1180**). Although this has not been investigated and therefore

has not even been confirmed to be of archaeological (rather than natural/geological) origin, it is suggested that it may comprise a Roman building due to its rectilinear shape.

- 4.17 No further evidence of Roman activity has been recorded within the 1km radius study area, even if, in the wider area, the scheduled Roman city of Verulamium is located c.7km to the west of the site and must have provided a significant local focus during the Roman period. Despite the presence of this significant Roman centre, there is a clear paucity of evidence for Roman activity within the vicinity of the site and therefore a low potential for the site to contain archaeological remains of Roman origin.

Early Medieval (AD 410–1066) and Medieval (AD 1066–1485)

- 4.18 As with the prehistoric and Roman periods above, there is little evidence for early medieval or medieval activity within the site or within its surroundings in a general sense. There are no records dating to these periods noted by the HER within the 1km study area.
- 4.19 Located c.1.1km to the north-west of the site, the village of Sleapshyde may have its origins in the medieval period – hide being a former term for an area of land or unit of taxation. A number of scheduled moated sites including Colney Chapel moated site, Coldharbour moat and Batch Wood moated site also exist in the wider area, although these are all over 4km from the site's boundary.
- 4.20 The only indication that there may be some medieval archaeology associated with the site is with the name of one of the fields that is noted by the apportionment for the 1839 North Mimms Tithe Map.
- 4.21 This notes the northernmost field within the site as 'Moat Field', but, despite this, there is no documentary evidence or above ground evidence that a moat existed within the site or indeed within its immediate environs.
- 4.22 Based on the place name (Colney Heath) and the rather dispersed nature of settlement on the available maps, it is considered likely that the site comprised undeveloped woodland and scrub in the early medieval and medieval periods, these being land uses that will not leave significant archaeological evidence.
- 4.23 For this reason, there is considered to be a low potential for significant early medieval or medieval archaeological remains to be found at the site.

Post Medieval - Modern (AD 1485–present)

- 4.24 The majority of HER records in the area surrounding the site are from the post-medieval period, but there are no HER entries within the site or even within 200m of it.
- 4.25 The closest post-medieval record focuses on a former farmstead that was located c.240m to the south of the site (**MHT30699**), which was demolished in the later 19th century. Three other farmsteads of similar date are located c.280m to the south (**MHT30698**), c.460m to the west (**MHT13647**) and c.600m to the north-east of the site (**MHT16619**) and together

they suggest a dispersed settlement pattern associated with the reclamation of the heath's margins in the post-medieval period.

- 4.26 Other post-medieval buildings in the area include two public houses, c.450m (**MHT13645**) and c.480m (**MHT13646**) from the site and the remains of a windmill situated c.700m from the site's boundary (**MHT5828**).
- 4.27 North Mymms deer park and garden is located c.580m to the south of the site (**MHT9593**). The garden (which is locally registered) is thought to have been built in the mid-18th century but was updated and enlarged in the 1890s.
- 4.28 Although the land within the site was, at one time, owned by the owner of North Mymms Park, there is no further historical association and the site area is only ever depicted as agricultural farmland on the available historic maps.
- 4.29 Other post-medieval records identified within the study area include a toll gate c.300m from the site (**MHT30697**), a post box c.380m from the site (**MHT5277**), two coal duty boundary markers located c.460m (**MHT5731**) and c.470m from the site (**MHT5732**) and two chalk pits c.540m (**MHT31195**) and c.720m from the site (**MHT11834**).
- 4.30 The villages of Colney Heath and Sleafshyde likely formed the focus of settlement in the immediate vicinity of the site during the post-medieval period. The evidence from historic maps (Early Historic Mapping) suggests that the land that forms the site continued in agricultural use throughout the post-medieval and modern periods. Several former field boundaries from the period were noted on the historic maps and some of these have been identified by the geophysical survey which has taken place within the site boundary and is reported underneath. These possess and exhibit no archaeological interest.
- 4.31 For this reason, there is deemed to be just a low potential for significant post-medieval archaeological remains to be found at the site, with the most likely scenario being that it contains nothing other than agricultural features and deposits derived from land division and cultivation in this period; of no particular archaeological significance.

Undated

- 4.32 The HER records three undated potential archaeological features within the wider study area around the site's boundary.
- 4.33 These comprise a historic trackway located c.700m to the east of the site (**MHT926**), the soilmark of a possible building located c.700m to the east of the site – this includes a spread of building material in that area, although it is thought that this could be associated with the construction of the motorway nearby (**MHT18088**) and also Colney Heath Common located c.720m to the west of the site, the origins of which are uncertain (**MHT12454**).
- 4.34 None of these 'assets' would be affected by the development and they do not point towards a heightened archaeological interest or potential within the site's boundary as a result of their presence in the surrounding landscape.

Archaeological Investigations

- 4.35 In terms of previous archaeological investigations in the area, only three are noted by the HER. The closest comprises a programme of fieldwalking completed along the course of the A1 improvement route c.430m to the north-east of the site (**EHT7866**). Only post-medieval pottery sherds were identified during this investigation, which further underlines the lack of evidence for archaeological activity prior to this period in the area of the site.
- 4.36 There was another programme of fieldwalking along the route of a proposed pipeline which was, at its closest, c.520m to the north-west of the site (**EHT4113**). The only archaeology that was identified during this investigation was scattered flint and post-medieval pottery sherds which do not suggest any significant archaeological potential.
- 4.37 The only other investigation within the study area involved a photographic survey of a mill tower c.700m from the site (**EHT7866**).
- 4.38 No previously unknown archaeological features were identified and so none of these three investigations has any influence on the archaeological potential of the site.

Historic Maps

- 4.39 The earliest detailed map to show the site and the surrounding area is the 1839 North Mimms Tithe Map (**Plan EDP 2**).
- 4.40 The land within the site is divided into four fields, with the Grade II listed 68 Roestock Lane depicted to the north of the site. The fields are noted by the apportionment as comprising arable land with the field names Moat Field, Blue House Field, Middle Mead and Sue Yorks. Moat field is the northernmost field within the site and there is nothing shown on the Tithe map to suggest that there was a moat or evidence of a moat within it at that time.
- 4.41 The next available map to depict the site and surroundings is the First Edition Ordnance Survey Map of 1879 (**Plan EDP 2**).
- 4.42 One field boundary is shown as having been removed and is shown as a footpath through the north of the site instead. Very few other changes are depicted, either within the site or within its surroundings.
- 4.43 There are no further changes within the site until the OS map of 1924 (**Plan EDP 2**) and, even then, it comprises the removal of another field boundary, this time running through the centre of the site. Further north, the footpath running through the site had also changed route to cut a diagonal through the northern land parcel to access Roestock Lane. The map is also notable for highlighting that the edge of the site in the north was now defined by a physical boundary. Aside from the building of a handful of houses to the east of the site, very little else is depicted to have changed by the time of this map edition.

- 4.44 By the time of the 1937 OS map, all boundaries within the site had been removed and a line drawn through the site to depict the boundary of St Albans CDC and Welwyn Hatfield Borough Council. It is evident that a housing estate was in the process of being constructed to the north of the site and water waste buildings are also shown to have been constructed to the west.
- 4.45 The most recent detailed OS map of the site dates to 1971 and depicts the site as it exists now. Residential housing now bounds the site to the north and includes the housing to the east of the listed 68 Roestock Lane, Roestock Park and housing further to the west.
- 4.46 The historic maps are generally of interest in that they demonstrate that the vast majority of the site was in agricultural use from at least the mid-19th century and remained largely unchanged throughout the 20th century. Historic mapping in relation to the listed building directly to the north of the site and its surroundings is discussed further in **Section 5**.

Site Walkover

- 4.47 The site contained an established maize crop when it was visited in June 2020. This was of variable height, between ankle height and calf-level throughout and reaching to all edges of the single field parcel defined by the boundary.
- 4.48 An 'L-shaped' depression in the north and east of the site defines the course of an internal field boundary shown on the 1st edition 25" OS map (1879) as dividing off a separate field parcel in the north-east corner. The removal of this field boundary in the 1930s completed the homogenisation of land use within the site that saw the number of fields reduced from three to one during the first half of the 20th century.
- 4.49 Other than a slight knoll of elevated ground towards the north-west corner, the land within the site generally slopes downwards gently from south to north and there are no indications in the surface topography to infer or suggest the presence of archaeological sites, features or remains as earthworks within the redline area.
- 4.50 The use of the site as arable farmland, subject to associated cultivation practices such as ploughing and harrowing, will doubtless be having an adverse impact on the conservation and condition of any below ground features, deposits or remains of archaeological interest that may be present; limiting their significance as a consequence.

Geophysical Survey (June 2020)

- 4.51 The preliminary results of the geophysical survey identified one agricultural anomaly in the form of a former field boundary routed from east to west through the site and two possible archaeological anomalies. The anomalies are weak and have been suggested to be former temporary field boundaries that were not previously recorded on historic maps.
- 4.52 All the other anomalies within the site are classed as 'geological' and the archaeological potential of the site is assessed as low.

- 4.53 A copy of the report, detailing the results of the magnetometer survey, is included here with this assessment as **Appendix EDP 3**.

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Section 5 Impact Assessment

- 5.1 This section will identify the nature and magnitude of any effects arising from the proposed form of development in terms of designated and non-designated assets.

68 Roestock Lane Grade II Listed Building

- 5.2 Having identified in **Section 4** that this asset could be affected (Step 1 of GPA 3), the following paragraphs will identify the nature and magnitude of potential impacts on the Grade II listed building, 68 Roestock Lane, through changes to its setting which would arise from the implementation of the proposed development at the site.

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

- 5.3 The majority of this 17th century house's significance (its '*special interest*') is derived from the architectural and historic interest of its built form and fabric, recognised and underlined by its Grade II listing in 1984.
- 5.4 There is no suggestion or evidence that it possesses or exhibits any archaeological interest or any artistic interest, given that there are no recorded artistic depictions of note and the listing citation identifies only a single period of construction for 68 Roestock Lane; thereby reducing the potential for archaeological investigation and research.
- 5.5 The asset's setting is assessed as making a contribution to its overall significance, but this is a smaller contribution than is derived from its built form and fabric; i.e. the setting of this building provides a minority of its significance.
- 5.6 The 1839 Tithe Map (see **Plan EDP 2**) shows that the building comprised a pair of dwellings set back from the frontage of Roestock Lane further west and positioned within a broadly bottle-shaped enclosure divided in two.
- 5.7 No outbuildings are shown on the Tithe Map (nor on the later OS map editions) and there is no physical connection depicted between the enclosure and the adjoining farmland. As a consequence, there is no indication that the occupants of the two dwellings were actively engaged in the management or cultivation of the land forming the site at this time.
- 5.8 The Tithe Apportionment lists the occupants of Parcels 756 and 757 as one Thomas Sams and one Joseph Baldwin Gapp. It identifies the two paired dwellings as '*cottage & garden*' and lists the owner as being one Robert William Gausson, who is similarly identified as the owner of Parcels 736, 737, 738 and 750 which together made up the arable farmland within the site boundary to the south-east.

- 5.9 Robert William Gausson was the owner of the 'Brookmans Estate' centred on Brookmans Manor and was not only the owner of the land within the site and the two properties which together represent 68 Roestock Lane, but also the landowner for a significant amount of North Mimms Parish during the middle years of the 19th century. Therefore, whilst there is an historic connection between the Grade II listed building and the agricultural farmland at the site, it is a limited and indirect one; one that derives from their geographic location and the fact they were owned by one single landowner and formed a very small part of a very large and extensive country estate.
- 5.10 The available editions of the Ordnance Survey map show that 68 Roestock Lane remained two adjoining residential dwellings until the end of the 1960s, first being identified as one single dwelling on the OS edition dated 1971.
- 5.11 The 1839 Tithe Map shows that, at that time, the Grade II listed building formed one of a disparate and widely dispersed collection of buildings arranged along Roestock Lane to the north, Bullens Green Lane to the east and Fellowes Lane to the south and separated by an expanse of undeveloped agricultural fields.
- 5.12 Other than some limited new development in the latter part of the 19th century, including the construction of the Mission Hall in front of 68 Roestock Lane in the years between the first and second editions of the OS map; this situation remained largely unchanged through until the 1930s and the development of the Manor Gardens Estate to the north-east and then the 1960s and the development of the grounds associated with Roestock Hall to the south-west to create the existing Estate.
- 5.13 Together with the construction of the Pumping Station to the south-west and the addition of the arrangement of detached dwellings along the road frontage to the north-east in the middle decades of the 20th century, this 'ink-spot' expansion of the settlement around it served to bring the listed building into the built fabric of a more substantial place that was markedly different to the dispersed settlement pattern on the historic maps.
- 5.14 The architectural and historic interest of the Grade II listed building is best and most easily experienced and appreciated from its garden enclosure, even if its plan form has changed slightly since the 19th century. This well vegetated and enclosed private space is therefore assessed as representing the element of 68 Roestock Lane's setting that contributes most to its significance as a heritage asset (**Image EDP 1**).
- 5.15 The building is set back from the Roestock Lane frontage (**Image EDP 2**), but it can still be experienced and appreciated from the public realm here and this interrelationship with the road; where the architectural character and detailing of the main elevation cannot only be experienced but also appreciated in conjunction with other aspects of the historic built environment illustrating the origins and development of Colney Heath; is deemed to make a positive contribution to its significance.
- 5.16 The rear (southern) boundary of the asset's garden enclosure is defined by mature trees and vegetation that afford a reasonable degree of screening and separation from the fields within the site area to the rear.

- 5.17 This is illustrated in **Images EDP 3, 4 and 5**, which show that, other than the far south-west corner (beside Fellowes Lane) and the north-east corner flanking Bullens Green Lane, the site is situated entirely within the setting of 68 Roestock Lane, insofar as there is a variable experience of its rear elevation.
- 5.18 The mature and relatively thick hedgerows defining the southern and eastern edges of the site (on the north side of Fellowes Lane and west side of Bullens Green Lane) screen out long distance views towards the listed building from all but a small and localised area close to the road junction at the south-east corner of the site.
- 5.19 Even then, in these long range views (nearly 400 metres away) it is difficult to understand and appreciate the architectural interest of the building (a) because of the late 20th century and early 21st century extensions, (b) the screening effect of the boundary trees and (c) the close spatial relationship with the mid 20th century detached dwellings immediately to the north east which stand out much more prominently.
- 5.20 It is true to say that there is an 'experience' of the listed building looking north-west across the open, agricultural field that forms the site, but, in view of the fact that its *special interest* derives to a large extent from its 17th century origins and vernacular construction, it is very basic and actually quite difficult to understand and appreciate those aspects which really underpin and contribute to its significance. In terms of the more distant views across the field and site, it is the building's modest scale and characteristic chimney stack which are the elements of its form and fabric that allow any understanding of its significance when seen alongside the later developments on the road beside it.
- 5.21 It is principally from the PRoW at the north-western corner of the site that it is properly possible to understand and appreciate this designated asset's significance.
- 5.22 With a separation distance of circa 115 metres, the views available from the PRoW crossing the north end of the site enables a largely unobstructed experience of the building's rear elevation in conjunction with the agricultural field within the redline boundary forming the foreground (**Images EDP 6, 7 and 8**).
- 5.23 However; other than maintaining an open and undeveloped agricultural setting to the rear of this Grade II listed building, which has persisted from the time of its construction down to the present day and can most probably be experienced from the windows at the rear of the property looking outwards to the south also; this visual inter-relationship is determined to make just a small contribution to the significance of this asset because it bears little upon our understanding of its form and its function or special interest. The openness of the land within the site is the contributor to the cottage's significance and not any tangible element or feature of the farmland or landscape fabric itself.

Step 3: Assess the effects of the proposed development, whether beneficial or harmful, on that significance or on the ability to appreciate it

- 5.24 The proposed development of the site would affect only one element of the listed building's setting, which comprises the openness of the cultivated fields to the rear of its garden that stretch as far as Bullens Green Lane and Fellowes Lane in the east and south.

- 5.25 The development of the site (although the masterplan is currently only illustrative) would reduce the small contribution that this current sense of agricultural openness makes to the significance of the Grade II listed 68 Roestock Lane.
- 5.26 However, the other (more substantial) contributors to the asset's significance would remain entirely unchanged and unaffected by the implementation of the proposed development. In particular, there would be no impact on the listed building's form and fabric, which make up the majority of its significance and represent the reason for its designation as a listed building in the first place. In the same way, there would be no impact at all on the building's inter-relationships with its garden enclosure or the wider streetscape on Roestock Lane to the north, which represent the two elements of its setting which contribute the most to its significance as a designated heritage asset (NPPF Annex 2).
- 5.27 Although the masterplan is illustrative, the extent of development has been limited in the north-western corner to minimise the potential impact upon the listed building. This leaves an undeveloped space amounting to a distance of circa 123 metres between the northern edge of the nearest dwellings and the Grade II listed building.
- 5.28 This undeveloped space will be appropriately landscaped, particularly along the south edge and in the north-western corner (in the angle of the public footpath and the site boundary), in order to blend in the residential development and soften the visual relationship between the proposed new houses and 68 Roestock Lane in views south from the asset's southern elevation. Although flood attenuation basins are proposed to be included within this space, they will not compromise the sense of openness it retains and subject to detailed design, could be shaped and landscaped to deliver ecological enhancement in addition to amenity space for the residents of the development.
- 5.29 At the same time, there are no proposals to upgrade or carry out significant works to FP23 which runs north-south alongside the western fringe of the Grade II listed building's garden enclosure. Thus there would also be no impact on the experience of the designated asset from this location and there would similarly be no harm.
- 5.30 Therefore, whilst there would be a loss of significance from the Grade II listed building, it is considered to be **very small** and derived from the reduction in the contribution made by a peripheral element of its setting. Overall, this would constitute *less than substantial harm*, but clearly at the very lowest end of that broad spectrum and hence requiring assessment against the provisions of Paragraph 196 of the NPPF, in addition to the local plan policies of St. Albans CDC as the LPA.

Step 4: Explore ways to maximise enhancement and avoid or minimise harm

- 5.31 The outline planning application will be supported by an Illustrative Masterplan and also a Parameter Plan. The two plans are included in **Appendix EDP 1**.
- 5.32 The Parameter Plan sets out key design principles, such as the location and quantum of open space separating the Grade II listed building at 68 Roestock Lane from the northern edge of the residential development. The intention is that thereafter the Reserved Matters

Application(s) will accord with these principles and therefore ensure that this key mitigation measure is implemented within the completed development.

- 5.33 Other than measures to secure the retention of the undeveloped open space in the north-west corner when the outline application is determined and reserved matters applications then come forward, as well as the imposition of a condition to secure a high quality scheme of landscaping for this space within the completed development, no additional measures are available to either avoid or minimise this harm or bring forward enhancements to the Grade II listed building.

Non-designated Archaeology

- 5.34 The results of the desktop review of archaeological and historic information show that there is a low potential for the site to contain features, deposits and/or remains of archaeological significance; the likelihood clearly being that any present will relate to land division and its management for cultivation in the post-medieval period and more recently. In contrast, it is considered to be unlikely that significant archaeological features, deposits and/or remains of earlier than post-medieval origin will be encountered within the site's boundaries.
- 5.35 The (albeit limited) geophysical survey results corroborate this assessment, with only field boundaries and possible field boundaries identified within the area that was accessible for the application of this technique.
- 5.36 Whilst the field name 'Moat Field' on the 1839 Tithe map might suggest the presence of a medieval moated enclosure in the site's north west corner, no evidence has been found to support or confirm that assertion and neither is this map-based data noted on the HER. It is concluded to be unlikely that a moat is present in this north-west corner and completion of the geophysical (magnetic) survey when the crops are harvested should prove sufficient to corroborate that assessment.
- 5.37 Whilst the masterplan is obviously illustrative, it is considered likely that only localised areas of the site will be retained as undeveloped open space and elsewhere groundworks for the development are likely to be extensive prior to construction.
- 5.38 Hence, only relatively small and localised pockets of archaeology (if it exists) would remain following completion of the archaeological groundworks and even there the expectation is that they will be subject to some degree of disturbance regardless.
- 5.39 However, the assessment is that the site does not support archaeological remains that are of greater than low significance and therefore the potential impact of development on their conservation (whilst largely destructive) would be relatively limited if they are subject to the completion of systematic investigation and recording prior to development commencing.

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Section 6 Conclusions

- 6.1 This archaeological and heritage assessment has been researched and prepared to satisfy relevant national and local planning policy which cover the conservation and management of the historic environment.
- 6.2 The report shows that the site does not contain any designated heritage assets, such as world heritage sites, scheduled monuments, listed buildings, registered parks & gardens, registered battlefields and neither is it included within the boundary of a conservation area identified and designated by the Local Planning Authorities.
- 6.3 The assessment concludes that only one designated heritage asset within the site's wider surroundings would be affected through change to its setting. This is the Grade II listed 68 Roestock Lane that occupies a well vegetated garden enclosure adjoining the site's north-western boundary and with its principal elevation orientated east-west to face north away from the site. Whilst the proposed development would have no impact on the major elements of the listed building's significance as a designated heritage asset, the report concludes that the implementation of the development proposals would result in a degree of harm being caused to this listed building through change to its wider setting.
- 6.4 This harm (at the lowest end of the very broad '*less than substantial*' spectrum) has to be balanced against the public benefits that the proposals would deliver, in accordance with Paragraph 196 of the Framework, recognising the advice provided in the Framework that requires '*great weight*' to be given to the conservation of heritage assets and for '*clear and convincing justification*' to be set out where there would be harm.
- 6.5 Even though it is now long out of date, with the most recently adopted Local Plan preceding the publication of the NPPF by just short of 20 years; the proposed development would still accord with Policy 86 of the District Local Plan and could be approved in accordance with its provisions because these effectively repeat the s66(1) statutory duty and do not state or suggest that developments which do not preserve the setting of a listed building should necessarily be treated as unacceptable.
- 6.6 Accordingly, there is nothing in the provisions of the NPPF or the relevant Local Plan which should prevent the proposed development coming forward, and indeed it is concluded that the outline planning application should be treated favourably when it is submitted and then evaluated prior to determination.
- 6.7 A review of the Hertfordshire HER records does not identify or suggest any potential for significant archaeology to be present within the site from the prehistoric, Roman, medieval or post-medieval periods. The available historic maps indicate that the land within the site has been subject to agricultural use from at least the mid-19th century, with the likelihood being that it was part of an expanse of heath prior to that date.

- 6.8 The tithe apportionment, dating to 1839, does name the northernmost field as 'moat field', suggesting at least some potential for medieval archaeology to be present here. However, the available documentary evidence, walkover survey and geophysical survey have found no supporting evidence and therefore it is determined that there is just a low potential for significant archaeology to be encountered of medieval date (or earlier or later).
- 6.9 For this reason, it is considered that the only archaeological potential within the site is for the presence of low value agricultural remains relating to the utilisation of the land from at least the mid-19th century to the present day.
- 6.10 In June 2020 the central area of the site was subject to geophysical survey. A former field boundary and two possible archaeological anomalies were defined by the magnetic survey, with the remainder of the identified anomalies relating to geological features. However, it is also suggested that the two possible archaeological anomalies may similarly represent former field boundaries. These would be of low archaeological significance.
- 6.11 Implementation of the (albeit illustrative) masterplan would result in the all but complete loss of any archaeological remains which may be present at the site; with it being likely that only small and localised pockets could be retained in the areas of undeveloped open space concentrated in the north-west, north and centre-south. Nonetheless, the impact of this on the archaeological resource is considered to be limited because there is no evidence that the site contains archaeological features, deposits or remains of greater than low interest, where appropriate investigation and recording ahead of development commencing would represent entirely proportionate and appropriate mitigation.
- 6.12 Whilst further evaluation (and potentially post-consent mitigation) may well be required, it is still possible to conclude at this stage that, insofar as the potential loss of archaeological remains is concerned, the outline planning application for the site could be determined in accordance with the provisions of not only national, but also local, planning policy and there is absolutely no conflict in that regard.

Section 7

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List of Consulted Maps

1839 Tithe Map of North Mimms

The First Edition Ordnance Survey Map, 1879

The 1924 Edition Ordnance Survey Map

The 1937 Edition Ordnance Survey Map

The 1971 Edition Ordnance Survey Map

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Images



Image EDP 1: View of 68 Roestock Lane looking south-east and showing it within its garden enclosure and set back from the frontage of this minor road.



Image EDP 2: Typical view of 68 Roestock Lane from the public realm to the north and here looking down the public footpath leading south to the site.



Image EDP 3: Typical view of 68 Roestock Lane looking north-west across the site from the roadside at the south-east corner.



Image EDP 4: View of 68 Roestock Lane from inside the eastern boundary of the site and highlighting its relatively limited prominence in comparison with the mid-20th century detached houses located adjacent.



Image EDP 5: Close-up of 68 Roestock Lane from the north-western corner of the site, here looking north-west and illustrating the screening effect of the garden trees for what is a relatively modest residential dwelling.



Image EDP 6: Typical view of the rear of 68 Roestock Lane looking north from the point where the public footpath enters the north-western corner of the site from the recreation ground. The screening effect of the garden trees and vegetation is obvious.



Image EDP 7: Typical view of the rear of 68 Roestock Lane looking north from the public footpath crossing the site's north-western corner.



Image EDP 8: Typical view of the rear of 68 Roestock Lane looking north-west from the public footpath where it meets the south-west corner of the adjacent residential housing estate and the experience of the listed building is entirely screened out.

Appendix EDP 1

Roundhouse Farm Draft Masterplan

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PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING THIS DRAWING

Appendix EDP 2

Project Design for the Geophysical Survey

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June 2020

Project Design for Geophysical Survey for Roundhouse Farm, Roestock Lane, Colney Heath, Hertfordshire

1. Introduction

- 1.1 This Project Design has been prepared by Archaeological Services WYAS (ASWYAS) for EDP (the Client), on behalf of their client, Canton Ltd, in advance of a magnetometer survey of land at Roundhouse Farm, Roestock Lane, Colney Heath, Hertfordshire.
- 1.2 This document details a proposed programme of non-intrusive geophysical (magnetometer) survey.
- 1.3 The Project Design was produced to the standards laid down by the European Archaeological Council's (EAC) guideline publication EAC Guidelines for the Use of Geophysics in Archaeology (Schmidt *et al.* 2015) and the Chartered Institute for Archaeologists (CIfA) Standard and Guidance for Archaeological Geophysical Survey (CIfA 2014).

2. Site location and Description

- 2.1 The survey area is located to the south-east of Roundhouse Farm, Roestock Lane approximately 2.7km to the southwest of Hatfield, centred at TL 21189 05928. The site is bound to the east by Bullens Green Lane and towards the south by Fellows Lane. The western side of the site is bound by Roestock Park with residential properties towards the west and north of the Site. The survey areas consists of one agricultural field that forms an irregular shape. The above Ordnance Datum (aOD), lies between 78m in the northeast and down to 75m in the centre of the site.

3. Geology and Soils

- 3.1 The underlying geology of the site is the Lewes Nodular Chalk Formation and Seaford Chalk Formation which is an undifferentiated chalk sedimentary bedrock formed approximately 84 to 94 million years ago in the Cretaceous Period. This is overlain by superficial desposits of the Lowestoft Formation Diamicton. formed up to 2 million years ago in the Quaternary Period. (BGS 2020). The soils of the survey areas are described as freely draining slightly acid loamy soils (Soilscapes 2020).

4. Archaeological Background

- 4.1 No archaeological background has been provided but a review of Heritage Gateway suggests that there are no archaeological monuments with the site itself.
- 4.2 Prehistoric finds in the local area consist of a Palaeolithic handaxe, recovered southeast of Sleafshyde Farm, Colney Heath, this comprised a Acheulean handaxe,

found in 1954 by J F Wyley on a spoilheap in a sand & gravel pit owned by Messrs Inns & Co. A further Palaeolithic handaxe and flints were recovered towards the west of Bunchleys Pond, North Mymms. A Mesolithic Flint Axe has also been recovered from Colney Heath. This comprised a small Mesolithic flint tranche axe, found in 1973 at the east end of Colney Heath, after reconstitution of a pipeline trench.

- 4.3 Several Roman features have been Recorded around The Site These Include a Soilmark of a possible building, east of Tollgate Wood, Dellsome Lane, South Hatfield. Its date is unclear and its location on the east side of the A1(M) may suggest it relates to motorway construction. Cropmark of a rectilinear Enclosure at Colney Heath suggest a possible regular single ditched long quadrilateral enclosure 120m by 50m lying on an east to west on flat terrain 0.45km from the river Colne. The aerial photographs possibly suggests a Roman building. Finds from around the area include Roman coins, from 'Vixendell', Lane End, Hatfield this was a group of seven coins of Diocletian (AD 284-305) was recorded as having been found here in the garden, c.1927
- 4.4 Post-medieval monuments are also recorded within the HER data and these comprise toll houses, farmsteads and former trackway and route ways.

5. Aims and Objectives

- 5.1 The aims and objectives of the programme of geophysical survey is to gather sufficient information to inform a trial trenching strategy to identify a route for a drainage outfall. The survey will establish the presence/absence, character, extent, of any archaeological remains within the Site. It will be used to inform further strategies should they be necessary.

The aims of the survey are to:

- to provide information about the nature and possible interpretation of any magnetic anomalies identified;
- to therefore determine the presence/absence and extent of any buried archaeological features; and
- to produce a comprehensive site archive and report.

6. Fieldwork Methodology

- 6.1 A geophysical (magnetometer) survey will be carried out across all of the areas amenable for survey. The total area for survey will be approximately 5.1 hectares and is scheduled to start in June 2020.
- 6.2 The geophysical survey site grid will be established using a Trimble R8s Virtual Reference Station (VRS) differential Global Positioning System (dGPS). The site grid will be tied into the Ordnance Survey National Grid so that the survey can be accurately re-located during any later stages of archaeological investigation.

- 6.3 The survey will be undertaken using Bartington Grad601 instruments. The Bartington instruments take readings at 0.25m intervals on zig-zag traverses 1m apart within 30m by 30m grid squares, allowing 3600 readings to be recorded in each grid square. These readings will be stored in the memory of the instrument and later downloaded for processing and interpretation. Bespoke in-house software will be used to process and present the data. This non-invasive technique will be able to detect the magnetic contrast between natural and infilled material for any archaeological material. This methodology is favoured over other methods (e.g. earth resistance), as it allows for a rapid assessment of the survey area and therefore subsequent analysis for potential further informed future work.
- 6.4 The geophysical survey will comply with guidelines outlined by the EAC (Schmidt *et al.* 2015) and by the Chartered Institute for Archaeologists (CIfA 2014). All figures will be reproduced from Ordnance Survey mapping with the permission of the controller of Her Majesty's Stationery Office (Crown copyright).
- 6.5 On completion of the geophysical survey, a report will be produced containing all relevant information including:
- i) Site code/project number; dates for fieldwork visits; grid references; location plan, and a plan showing the limits of the detailed study area.
 - ii) A non-technical summary of the reason, aims and main results of the assessment.
 - iii) An introduction to outline the circumstances leading to the commission of the report and any restrictions encountered.
 - iv) The aims and objectives of the study.
 - v) The methodology used.
 - vi) A summary and synthesis of the archaeological results in relation to the methods used. This shall be supported by a survey location plan (minimum scale 1:2500), a plot of raw data (preferred minimum scale 1:1000, greyscale format, and/or XY trace format as appropriate to the technique(s) used), a plot of enhanced data and one, or more, interpretative plots. Each plan/plot will have a bar scale and accurately oriented north sign.
 - vii) References to all primary and secondary sources consulted.
- 6.7 The project will be archived in-house in accordance with recent good practice guidelines (http://guides.archaeologydataservice.ac.uk/g2gp/Geophysics_3). The data will be stored in an indexed archive and migrated to new formats when necessary.
- 6.8 If required, the archive will be deposited with the Archaeology Data Service (ADS).
- 6.9 A draft report will be issued digitally (in PDF or .doc format) to the Oxfordshire Planning Archaeologist for verification and assessment, with comments addressed within three days.
- 6.11 Following completion and submission of the final report to the client, and compiling of the archive, copies of the report (digitally and if needed a hard copy) will be sent to the relevant Historic Environment Record, local authority Planning Archaeologist and/or

Conservation Officer. In addition, ASWYAS will make their work accessible to the wider research community by submitting digital data and copies of the report on line to OASIS, after an appropriate length of time.

7. Copyright, Confidentiality and Publicity

- 7.1 The copyright of any written, graphic or photographic record and reports produced as part of this project shall belong to the client, unless otherwise agreed, with ASWYAS being acknowledged as the originating body.
- 7.2 The circumstances under which the report or records can be used by other parties will be identified at the commencement of the project, as will the proposals for the distribution of the report. ASWYAS will respect any requirements regarding confidentiality, but will endeavour to emphasise the company's professional obligation to make the results of archaeological work known to the wider archaeological community within a reasonable time.

8. Health and Safety

- 8.1 All work will conform to the ASWYAS Health and Safety Policy (a copy of which can be supplied if requested), which makes particular reference to the FAME (Federation of Archaeological Managers and Employers) Health and Safety Manual and will be carried out according to the relevant Health and Safety Legislation. This includes, in particular, the following regulations:
- Health and Safety at Work 1974
 - Construction (Design and Management) Regulations 2007
 - The Management of Health and Safety at Work Regulations 1999
 - Personal Protective Equipment at Work Regulations 1992
 - Provision and Use of Work Equipment Regulations 1998
 - Manual Handling Operations Regulations 1992
 - Workplace (Health, Safety and Welfare) Regulations 1992
 - National Planning Policy Framework (MHCLG 2019)
- 8.2 In addition each project undergoes a 'Risk Assessment' which sets project specific Health and Safety requirements to which all members of staff are made aware of prior to on-site work commencing.
- 8.3 Health and Safety will take priority over archaeological matters. Necessary precautions will be taken with regard to protecting ASWYAS staff and the public.
- 8.4 Archaeological Services WYAS is a fully accredited member of the Contractors Health and Safety Assessment Scheme (CHAS).

9. Insurance

- 9.1 ASWYAS is covered by the insurance and indemnities of the City of Wakefield Metropolitan District Council. Insurance has been effected with: Zurich Municipal, PO Box 568, 1st Floor, 1 East Parade, Leeds, LS1 2UA (policy number QLA-03R896 0013). Any further enquiries should be directed to: City of Wakefield Metropolitan District Council, Corporate Services, Financial Services (Insurance, Room 403), County Hall, Bond Street, Wakefield WF1 2QW.

10. Quality

- 10.1 ASWYAS is an accredited BSI organisation and a Registered Archaeological Organisation with the Chartered Institute for Archaeologists, operating to nationally agreed guidelines, processes and procedures. These are set within a framework that endeavours to carry out the required work and submit the final report in a manner that meets with our client's specific needs, providing quality assurance throughout the project and for the end product. These guidelines, processes and procedures are contained within a Quality Manual and all staff work in accordance with this manual.

11. Monitoring

- 11.1 A standard working day will involve driving to site, condition surveys of the survey area, survey area setting out and detailed earth resistance and/or magnetic survey recording. Constant updating of the survey work will be relayed back to the office by telephone.

Contacts

Manager: Emma Brunning	0113 535 0184
Field Manager: Chris Sykes	0113 535 0187
Health and Safety Coordinator: David Williams	0113 535 0183

12. Staffing

- 12.1 Archaeological Services WYAS currently employs six dedicated geophysicists. Staffing is dependent on current availability at time of survey, therefore not all members of staff will be deployed on site. Summary Curriculum Vitae for our key staff that are likely to be employed on the proposed project are detailed below.

Project Manager	David Williams BA MCIfA
Supervisor	Alastair Trace BSc MSc
Supervisor	Jake Freeman BA

Name:- Emma Brunning BSc MCIfA

Current Position:- Project Manager (Geophysics)

Proposed Role:- Geophysical Surveyor/Manager

Emma graduated in 2000 from the University of Bradford with a degree in Archaeology. In 2002 Emma began work as an archaeological geophysics assistant with GSB Prospection, working on hundreds of projects all over the UK. She worked herself up the ladder to become senior archaeological geophysicist supervising teams and writing projects. Emma was also involved with Channel 4's Time Team and became Survey Officer for the last 2 years of the programme. In 2004 Emma gained a Post Graduate Certificate in Landscape Archaeology through distance learning from the University of Leicester.

Emma joined Archaeological Services WYAS in September 2015 and now manages all aspects of geophysical projects from client and landowner liaison through to CAD drawings and report writing. Emma is CSCS certified, CRB checked and Emergency First Aid at Work trained.

Name:- Alastair Trace BSc (Hons) MSc

Current Position:- Supervisor (Geophysics)

Proposed Role:- Geophysical Surveyor

Alastair joined Archaeological Services in September 2016, having graduated from the University of Leeds with an MSc in Structural Geology and Geophysics. The focus of his dissertation was the use of GPR survey over Grosmont priory in North Yorkshire. This complements his BA in Geology and Archaeology from the University of Birmingham. Most recently Alastair has been concentrating on managing large infrastructure projects across the Country. He is CSCS certified and has a full driving licence. He has recently been promoted to the position of supervisor and has led a variety of small to medium sized teams on a number of projects around the UK.

Name:- Jake Freeman BA (Hons)

Current Position:- Supervisor (Geophysics)

Proposed Role:- Geophysical Surveyor

Jake graduated from the University of York in 2014 with a BA in Archaeology. Post-graduation, Jake volunteered his services on community archaeological projects in

South Yorkshire during the summer of 2015, assisting in both geophysical survey and excavation roles. Building upon his university and community experience, he began working for Headland Archaeology as a geophysics assistant in September 2015.

Whilst working for Headland, Jake regularly performed a variety of archaeological prospection methods in both urban and agrarian contexts, such as use of Trimble GPS, magnetometry (individual operator and cart based systems), electrical resistivity, GPR, EM and ERT, including associated software packages such as Geoplot, Microsoft Excel and CAD. In addition to a broad range of survey skills, he has also worked on a variety of excavation projects across the country and has assisted with both environmental processing and osteology work in the lab. Jake joined Archaeological Services WYAS in March 2017. He is CSCS certified and has a full driving licence.

13. References

BGS, 2020. <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>, (viewed March 2020).

ClfA, 2014. *Standard and Guidance for archaeological geophysical survey*.
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MHCLG, 2019. National Planning Policy Framework. Ministry of Housing, Communities and Local Government.

Schmidt, A., P. Linford, N. Linford, A. David, C. Gaffney, A. Sarris and J. Fassbinder, 2015.
EAC Guidelines for the use of Geophysics in Archaeology: Questions to Ask and Points to Consider. EAC Guidelines 2 Europae Archaeologiae Consilium

Soilscapes, 2020, <http://www.landis.org.uk/soilscapes/>, (viewed June 2020)

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Appendix EDP 3

Geophysical Survey Report (AS WYAS)

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**Roundhouse Farm
Colney Heath
Hertfordshire**

Geophysical Survey

Report no. 3449
July 2020

Client: Environmental Dimension
Partnership



Roundhouse Farm, Colney Heath, Hertfordshire

Geophysical Survey

Summary

A geophysical (magnetometer) survey was undertaken on approximately 5.2 hectares of land located at Roundhouse Farm, Colney Heath, Hertfordshire. An area of 1.1 hectares was suitable for survey with the remainder covered in a well-developed crop. Fragmented anomalies of a possible archaeological origin have been detected and are likely to represent be a post-medieval boundary ditch. A former field boundary (recorded on 1888 mapping) has also been detected along with a ferrous pipe. Geological and other ferrous responses have been identified throughout.

Overall the archaeological potential of the site is considered to be low.



Report Information

Client: Environmental Dimension Partnership Ltd
Address: First Floor, the Bonded Warehouse, Atlantic Wharf, Cardiff,
CF10 4HY
Report Type: Geophysical Survey
Location: Colney Heath
County: Hertfordshire
Grid Reference: TL 21189 05928
Period(s) of activity: Modern
Report Number: 3449
Project Number: X607
Site Code: RDF20
OASIS ID: archaeol1-
Date of fieldwork: June 2020
Date of report: July 2020
Project Management: David Williams BA MCIfA
Fieldwork: Alastair Trace BSc MSc
Jake Freeman BA
Illustrations: Alastair Trace
Photography: Alastair Trace
Research: Jake Freeman
Report: Alastair Trace

Authorisation for
distribution: -----



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- 4 General view of site, facing northwest

1 Introduction

Archaeological Services ASWYAS has been commissioned by Environmental Dimension Partnership Ltd on behalf of their client Canton Ltd to undertake a geophysical survey at land at Roundhouse Farm, Colney Heath, Hertfordshire. This was undertaken in line with current best practice (CifA 2014; Schmidt *et al.* 2015). The survey was carried out on the 25th June 2020 to provide additional information on the archaeological resource of the Site.

Site location, topography and land-use

The survey area is located to the south-east of Roundhouse Farm, Roestock Lane, approximately 2.7km to the southwest of Hatfield, and is centred at TL 21189 05928 (Fig. 1). The Site is bounded to the east by Bullens Green Lane and to the south by Fellows Lane. The western side of the Site is bounded by Roestock Park, with residential properties towards the west and north of the Site. Over 4 hectares of the Site was unsuitable for survey due to crop height (Plates 1-4). Survey in these areas would have resulted in damage to the crop. As a result, only 1.1 hectares was successfully surveyed. The survey area consists of one agricultural field that forms an irregular shape. The Site lies between 78m aOD (above Ordnance Datum) in the northeast and down to 75m aOD in the centre of the Site.

Soils and geology

The underlying geology of the Site is the Lewes Nodular Chalk Formation and Seaford Chalk Formation which is an undifferentiated chalk sedimentary bedrock formed approximately 84 to 94 million years ago in the Cretaceous Period. This is overlain by superficial deposits of the Lowestoft Formation till, formed up to 2 million years ago in the Quaternary Period. (BGS 2020). The soils of the survey area are described as freely draining slightly acid loamy soils (Soilscapes 2020).

2 Archaeological Background

No archaeological background has been provided but a review of Heritage Gateway suggests that there are no archaeological monuments within the survey area.

Prehistoric finds in the local area consist of a Palaeolithic handaxe, recovered southeast of Sleapshyde Farm, Colney Heath, a further Palaeolithic handaxe and flints recovered towards the west of Bunchleys Pond, North Mymms, and a Mesolithic flint tranche axe, found in 1973 at the east end of Colney Heath, during excavation of a pipeline trench.

Several Roman finds and possible sites have been recorded in the vicinity. These include a soilmark of a possible building, east of Tollgate Wood, Dellsome Lane, South Hatfield. Its date is unclear and its location on the east side of the A1(M) may suggest it relates to motorway construction. Cropmarks of a rectilinear enclosure at Colney Heath suggest a

possible enclosure measuring 120m by 50m lying on flat terrain 0.45km from the river Colne. Finds from around the area include Roman coins, from 'Vixendell', Lane End, Hatfield, where a group of seven coins of Diocletian (AD 284-305) was recorded as being found in a garden, c.1927.

Post-medieval monuments are also recorded within the HER data and these comprise toll houses, farmsteads and former trackways and route ways.

3 Aims, Methodology and Presentation

The aims and objectives of the programme of geophysical survey were to gather sufficient information to establish the presence/absence, character and extent, of any archaeological remains within the specific area and to inform an assessment of the archaeological potential of the Site. To achieve this aim, a magnetometer survey covering all amenable parts of the Site was undertaken (see Fig. 2).

The general objectives of the geophysical survey were:

- to provide information about the nature and possible interpretation of any magnetic anomalies identified;
- to therefore determine the presence/absence and extent of any buried archaeological features; and
- to prepare a report summarising the results of the survey.

Magnetometer survey

The site grid was laid out using a Trimble VRS differential Global Positioning System (Trimble R6 model). The survey was undertaken using Bartington Grad601 magnetic gradiometers. These were employed taking readings at 0.25m intervals on zig-zag traverses 1.0m apart within 30m by 30m grids, so that 3600 readings were recorded in each grid. These readings were stored in the memory of the instrument and later downloaded to computer for processing and interpretation. Bespoke in-house software was used to process and present the data. Further details are given in Appendix 1.

Reporting

A general site location plan, incorporating the 1:50000 Ordnance Survey (OS) mapping, is shown in Figure 1. Figure 2 displays processed magnetometer data at a scale of 1:2000. Processed and minimally processed data, together with interpretation of the survey results are presented in Figures 3 to 5 inclusive at a scale of 1:1250.

Technical information on the equipment used, data processing and survey methodologies are given in Appendix 1. Technical information on locating the survey area is provided in Appendix 2. Appendix 3 describes the composition and location of the archive. A copy of the completed OASIS form is included in Appendix 4.

The survey methodology, report and any recommendations comply with guidelines outlined by the European Archaeological Council (Schmidt *et al.* 2015) and by the Chartered Institute for Archaeologists (CIfA 2014). All figures reproduced from Ordnance Survey mapping are with the permission of the controller of Her Majesty's Stationery Office (© Crown copyright).

The figures in this report have been produced following analysis of the data in processed formats and over a range of different display levels. All figures are presented to most suitably display and interpret the data from this site based on the experience and knowledge of Archaeological Services staff.

4 Results and Discussion (see Figures 3 to 5)

Ferrous anomalies and magnetic disturbance

Ferrous anomalies, as individual 'spikes', or as large discrete areas are typically caused by ferrous (magnetic) material, either on the ground surface or in the plough-soil. Little importance is normally given to such anomalies, unless there is any supporting evidence for an archaeological interpretation, there is no obvious pattern or clustering to their distribution in this survey to suggest anything other than a random background scatter of ferrous debris in the soil.

Magnetic responses characteristic of a modern service have been recorded in the northwest part of the survey area, orientated northwest to southeast. This follows the route of a modern footpath depicted on the base mapping. The response is positioned directly under a modern footpath which was not visible on site. The higher magnitude of this response suggests that this is a service rather than just compacted soils form during use as a public right of way.

Geological anomalies

The survey has detected a number of anomalies that have been interpreted as geological in origin. It is thought that the responses have been detected because of the variation in the composition and depth of the deposits of superficial material in which they derive. A small cluster of anomalies in the central and north-eastern portions on the Site have also been identified. These positive responses are likely to be representative of a build-up of soils, or highly compacted soils. These clusters could be a direct result of former field boundaries

(NLS 2020) and their removal, or modern land drainage as indicated on the base mapping directly to the east.

Agricultural anomalies

A former field boundary has been detected centrally on site trending east to west. The boundary was first recorded on Ordnance Survey (OS) mapping dating from 1888 (NLS 2020). By the 1937 mapping all boundaries have been removed and the modern land drain is now visible.

Possible archaeological anomalies

Fragmented linear anomalies orientated north to south have been interpreted as possible archaeology. They do not correspond with any former boundaries and as such are likely to predate those recorded in the 19th century. The faint, positive responses do appear perpendicular to the recorded former field boundary and may, therefore, represent a temporary boundary not recorded on first edition OS mapping. Because of this level of uncertainty, only a possible archaeological classification has been applied.

5 Conclusions

The geophysical survey has detected a small number of fragmented magnetic anomalies associated with a possible archaeological origin. They respect the course of later recorded field boundaries, and as such the anomalies are likely to be representative of a short-lived post-medieval boundary not present on first edition OS mapping.

A definitive former field boundary has been identified centrally on site, surrounded by groups of both geological and ferrous anomalies. These will have been recorded throughout due to variations within the soils. More isolated areas of geological responses have also been recorded and likely to be linked to the creation of the former field boundaries and the modern land drain, directly to the east. A ferrous service pipe has also been recorded in the northwest part of the survey area.

Overall, based on the survey results, the archaeological potential of the site is considered to be low.

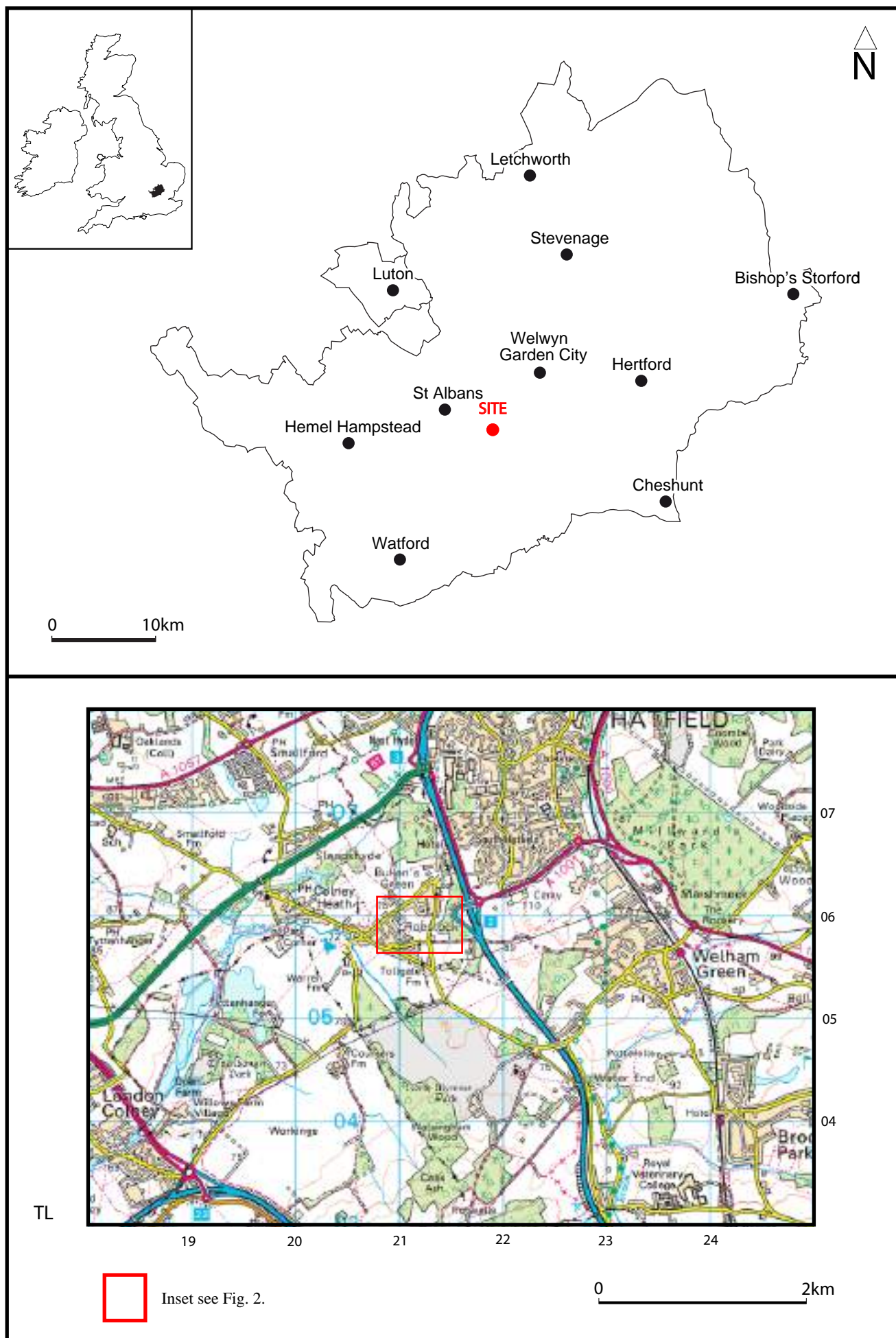


Fig. 1. Site location

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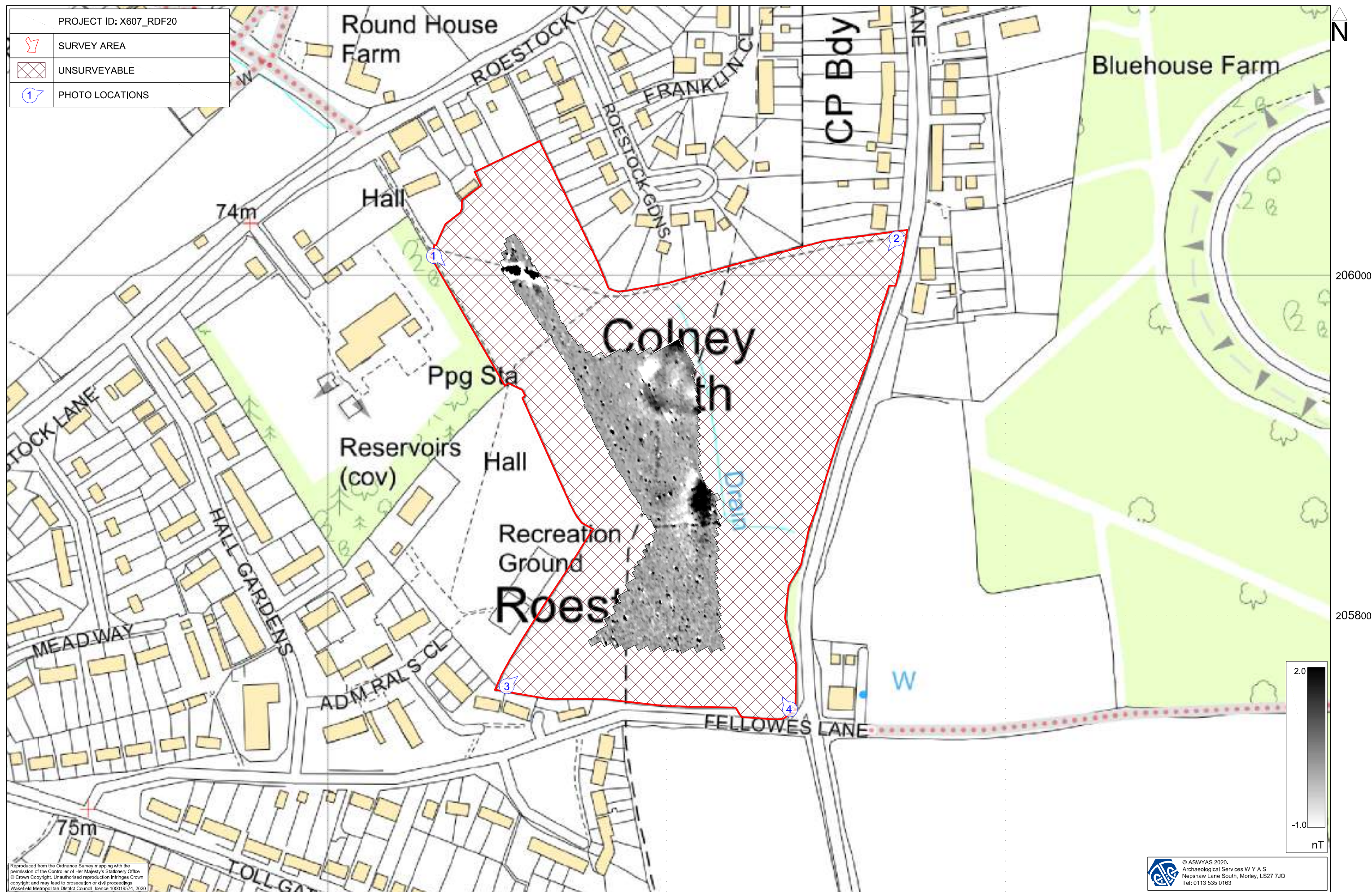
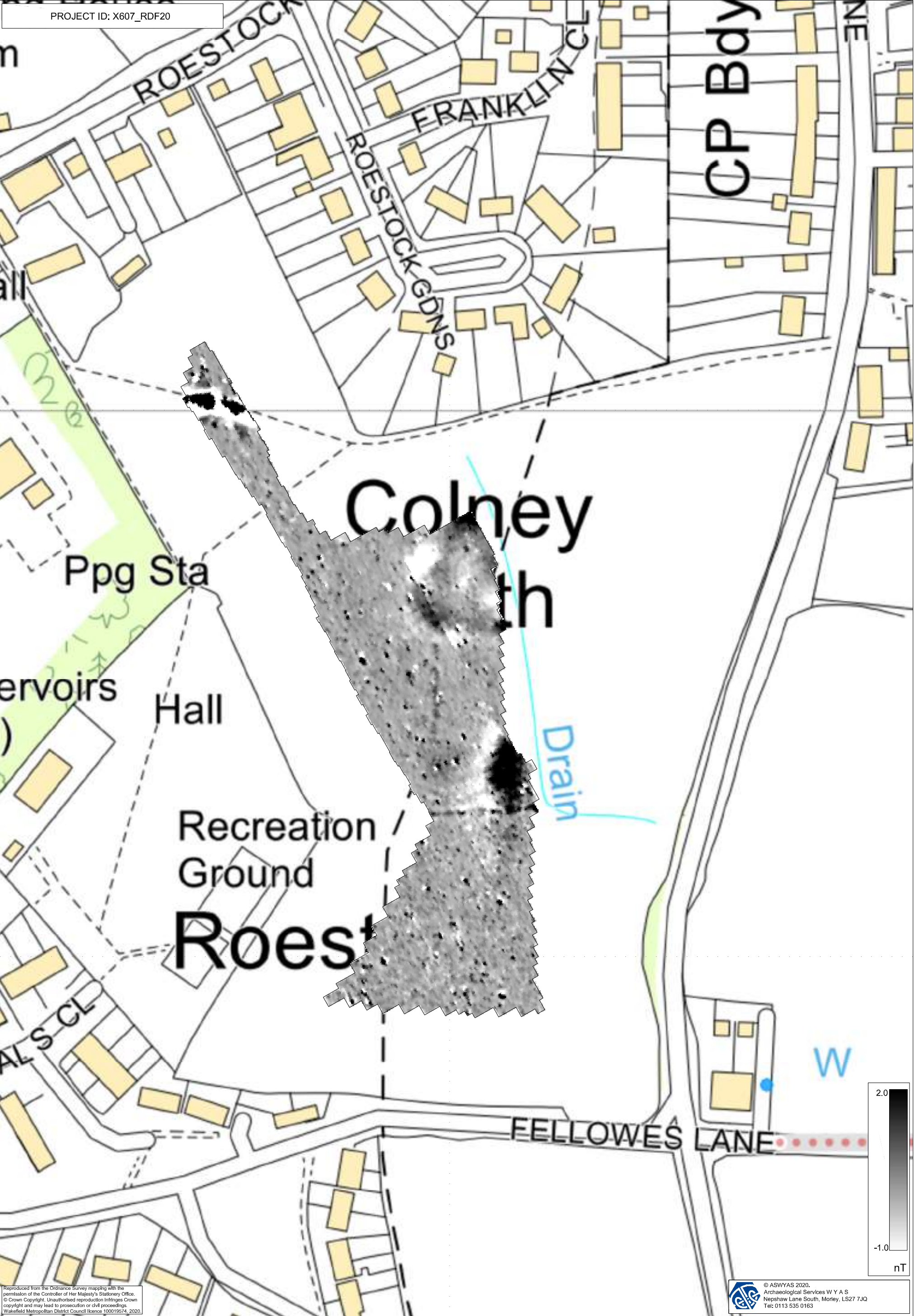


Fig. 2. Survey location showing processed greyscale magnetometer data (1:2000 @ A3)

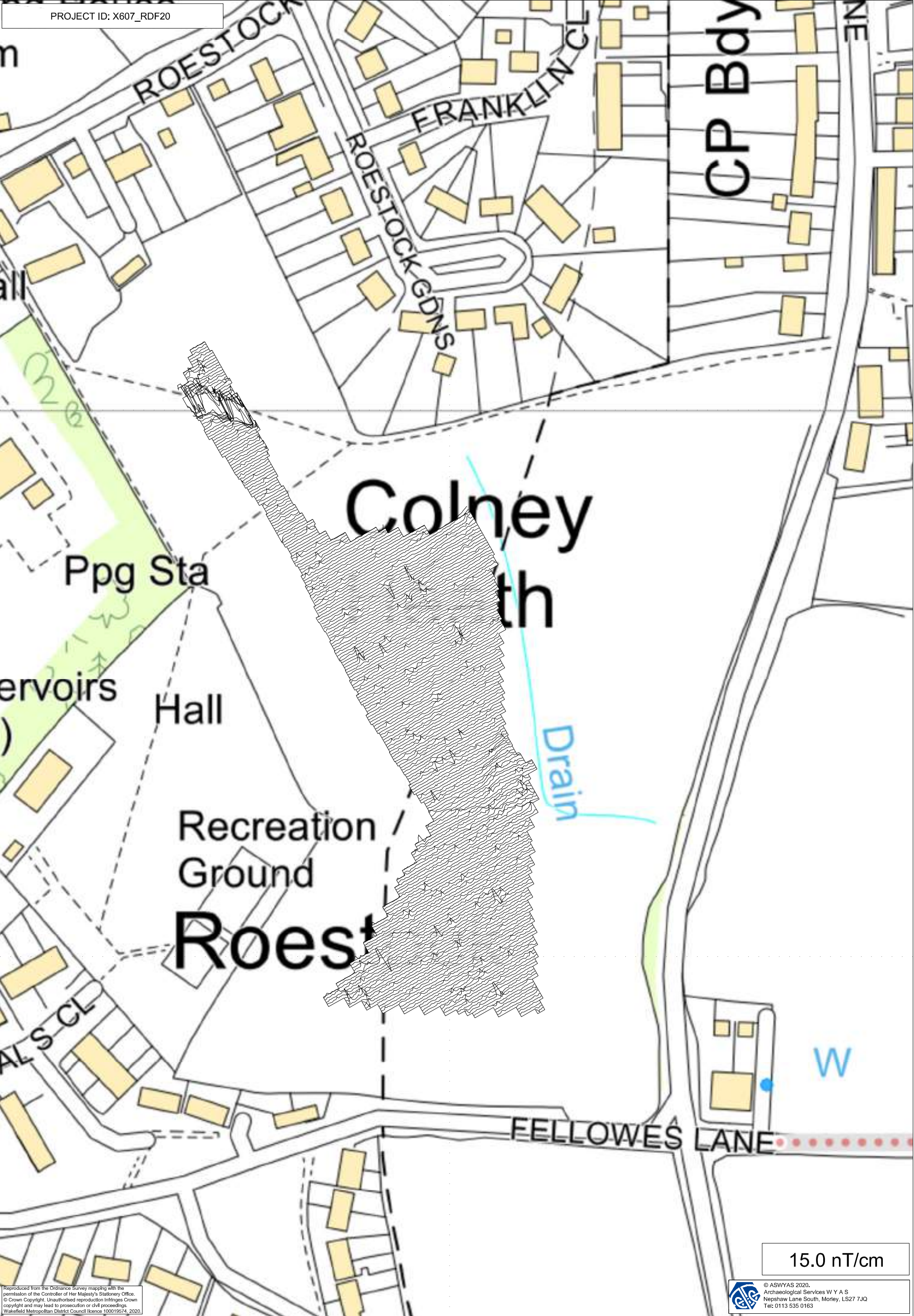


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Tel: 0113 535 0163

Fig. 3. Processed greyscale magnetometer data (1:1250 @ A3)

0 50m

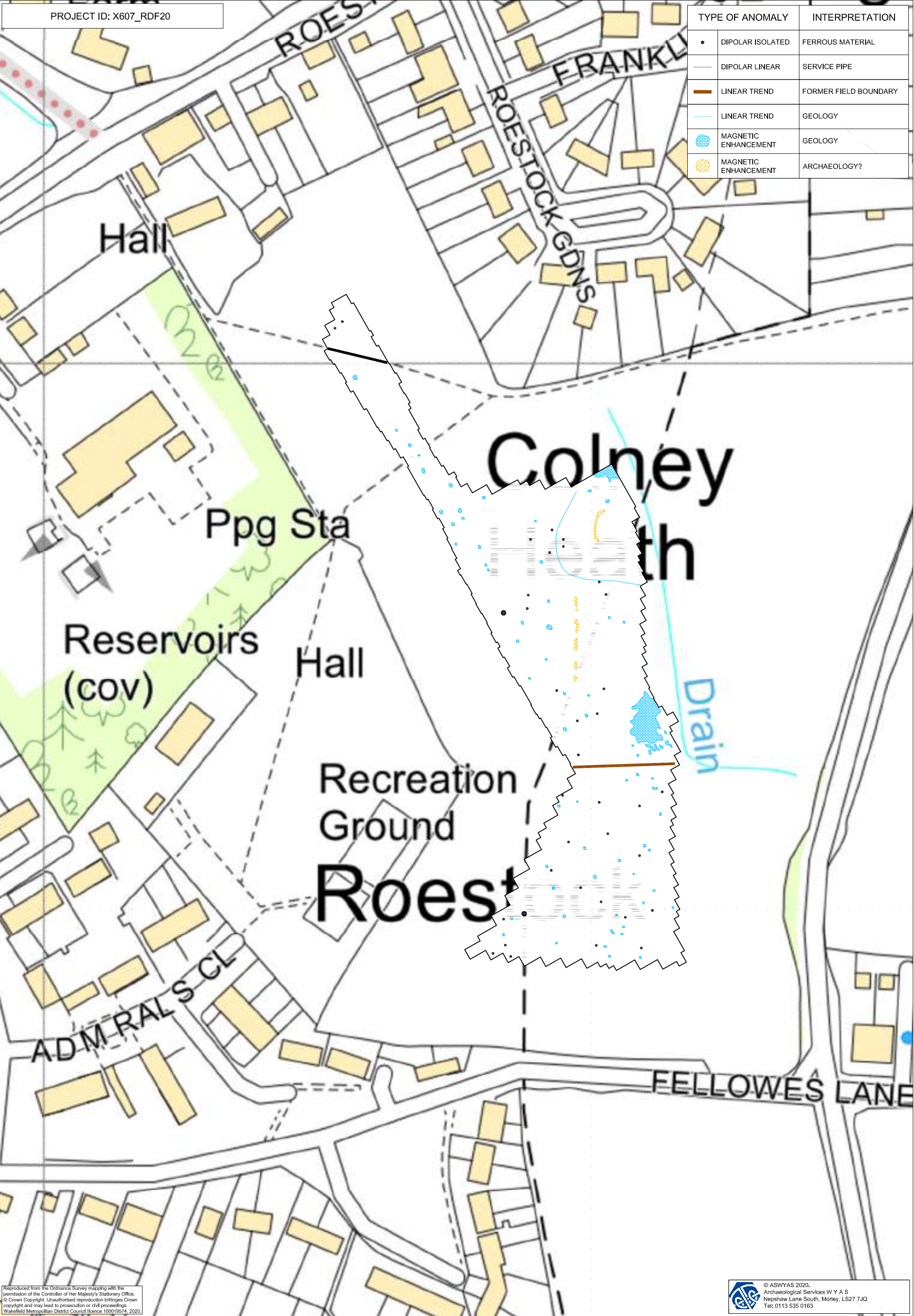


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Fig. 4. XY trace plot of minimally processed magnetometer data (1:1250 @ A3)



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Fig. 5. Interpretation of magnetometer data (1:1250 @ A3)



Plate 1. General view of site, facing southeast



Plate 2. General view of site, facing southwest



Plate 3. General view of site, facing northeast



Plate 4. General view of site, facing northwest

Appendix 1: Magnetic survey - technical information

Magnetic Susceptibility and Soil Magnetism

Iron makes up about 6% of the Earth's crust and is mostly present in soils and rocks as minerals such as maghaemite and haemetite. These minerals have a weak, measurable magnetic property termed magnetic susceptibility. Human activities can redistribute these minerals and change (enhance) others into more magnetic forms. Areas of human occupation or settlement can then be identified by measuring the magnetic susceptibility of the topsoil because of the attendant increase (enhancement) in magnetic susceptibility. If the enhanced material subsequently comes to fill features, such as ditches or pits, localised isolated and linear magnetic anomalies can result whose presence can be detected by a magnetometer (fluxgate gradiometer).

In general, it is the contrast between the magnetic susceptibility of deposits filling cut features, such as ditches or pits, and the magnetic susceptibility of topsoils, subsoils and rocks into which these features have been cut, which causes the most recognisable responses. This is primarily because there is a tendency for magnetic ferrous compounds to become concentrated in the topsoil, thereby making it more magnetic than the subsoil or the bedrock. Linear features cut into the subsoil or geology, such as ditches, that have been silted up or have been backfilled with topsoil will therefore usually produce a positive magnetic response relative to the background soil levels. Discrete feature, such as pits, can also be detected. The magnetic susceptibility of a soil can also be enhanced by the application of heat and the fermentation and bacterial effects associated with rubbish decomposition. The area of enhancement is usually quite large, mainly due to the tendency of discard areas to extend beyond the limit of the occupation site itself, and spreading by the plough.

Types of Magnetic Anomaly

In the majority of instances anomalies are termed 'positive'. This means that they have a positive magnetic value relative to the magnetic background on any given site. However some features can manifest themselves as 'negative' anomalies that, conversely, means that the response is negative relative to the mean magnetic background.

Where it is not possible to give a probable cause of an observed anomaly a '?' is appended.

It should be noted that anomalies interpreted as modern in origin might be caused by features that are present in the topsoil or upper layers of the subsoil. Removal of soil to an archaeological or natural layer can therefore remove the feature causing the anomaly.

The types of response mentioned above can be divided into five main categories that are used in the graphical interpretation of the magnetic data:

Isolated dipolar anomalies (iron spikes)

These responses are typically caused by ferrous material either on the surface or in the topsoil. They cause a rapid variation in the magnetic response giving a characteristic 'spiky' trace. Although ferrous archaeological artefacts could produce this type of response, unless there is supporting evidence for an archaeological interpretation, little emphasis is normally given to such anomalies, as modern ferrous objects are common on rural sites, often being present as a consequence of manuring.

Areas of magnetic disturbance

These responses can have several causes often being associated with burnt material, such as slag waste or brick rubble or other strongly magnetised/fired material. Ferrous structures such as pylons, mesh or barbed wire fencing and buried pipes can also cause the same disturbed response. A modern origin is usually assumed unless there is other supporting information.

Linear trend

This is usually a weak or broad linear anomaly of unknown cause or date. These anomalies are often caused by agricultural activity, either ploughing or land drains being a common cause.

Areas of magnetic enhancement/positive isolated anomalies

Areas of enhanced response are characterised by a general increase in the magnetic background over a localised area whilst discrete anomalies are manifest by an increased response on two or three successive traverses. In neither instance is there the intense dipolar response characteristic exhibited by an area of magnetic disturbance or of an 'iron spike' anomaly (see above). These anomalies can be caused by infilled discrete archaeological features such as pits or post-holes or by kilns. They can also be caused by pedological variations or by natural infilled features on certain geologies. Ferrous material in the subsoil can also give a similar response. It can often therefore be very difficult to establish an anthropogenic origin without intrusive investigation or other supporting information.

Linear and curvilinear anomalies

Such anomalies have a variety of origins. They may be caused by agricultural practice (recent ploughing trends, earlier ridge and furrow regimes or land drains), natural geomorphological features such as palaeochannels or by infilled archaeological ditches.

Methodology: Gradiometer Survey

The main method of using the fluxgate gradiometer for commercial evaluations is referred to as *detailed survey* and requires the surveyor to walk at an even pace carrying the instrument within a grid system. A sample trigger automatically takes readings at predetermined points, typically at 0.25m intervals, on traverses 1m apart. These readings are stored in the memory of the instrument and are later dumped to computer for processing and interpretation.

During this survey a Bartington Grad601 magnetic gradiometer was used taking readings on the 0.1nT range, at 0.25m intervals on zig-zag traverses 0.5m apart within 30m by 30m square grids. The instrument was checked for electronic and mechanical drift at a common point and calibrated as necessary. The drift from zero was not logged.

The gradiometer data have been presented in this report in processed greyscale format. The data in the greyscale images have been interpolated and selectively filtered to remove the effects of drift in instrument calibration and other artificial data constructs and to maximise the clarity and interpretability of the archaeological anomalies.

Appendix 2: Survey location information

An initial survey station was established using a Trimble VRS differential Global Positioning System (Trimble R6 model). The data was geo-referenced using the geo-referenced survey station with a Trimble RTK differential Global Positioning System (Trimble R6 model). The accuracy of this equipment is better than 0.01m. The survey grids were then super-imposed onto a base map provided by the client to produce the displayed block locations. However, it should be noted that Ordnance Survey positional accuracy for digital map data has an error of 0.5m for urban and floodplain areas, 1.0m for rural areas and 2.5m for mountain and moorland areas. This potential error must be considered if co-ordinates are measured off hard copies of the mapping rather than using the digital co-ordinates.

Archaeological Services WYAS cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party.

Appendix 3: Geophysical archive

The geophysical archive comprises:-

- an archive disk containing compressed (WinZip 8) files of the raw data, report text (Microsoft Word 2000), and graphics files (Adobe Illustrator CS2 and AutoCAD 2008) files; and
- a full copy of the report.

At present the archive is held by Archaeological Services WYAS although it is anticipated that it may eventually be lodged with the Archaeology Data Service (ADS). Brief details may also be forwarded for inclusion on the English Heritage Geophysical Survey Database after the contents of the report are deemed to be in the public domain (i.e. available for consultation in the Hertfordshire Historic Environment Record).

Appendix 4: Oasis form

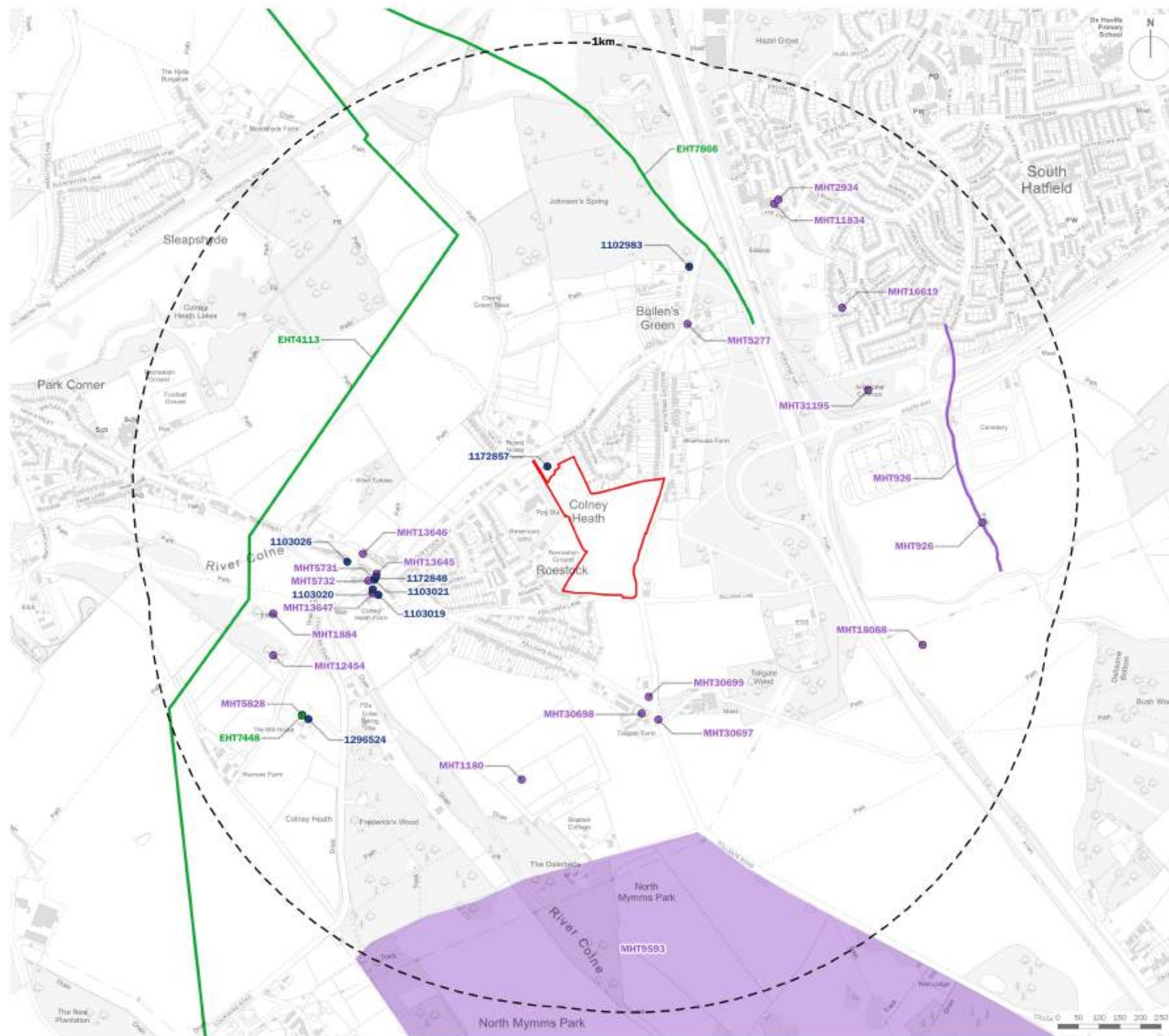
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- Schmidt, A. Linford, P., Linford, N., David, A., Gaffney, C., Sarris, A, and Fassbinder, J. 2015. *EAC Guidelines for the Use of Geophysics in Archaeology*. English Heritage
- Soilscapes, 2020. www.landis.org.uk/soilscapes (viewed July 2020)

Plans

- Plan EDP 1** Heritage Assets
(edp6550_d0011 19 August 2020 GY/HS)
- Plan EDP 2** Historic Mapping
(edp6550_d002b 19 August 2020 GY/HS)

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- Site Boundary
- Range Rings (at 1km intervals)
- Grade II Listed Building
- HER Core
- HER Event

client

Canton Ltd

project title

Land off Bullens Green Lane, Colney Heath

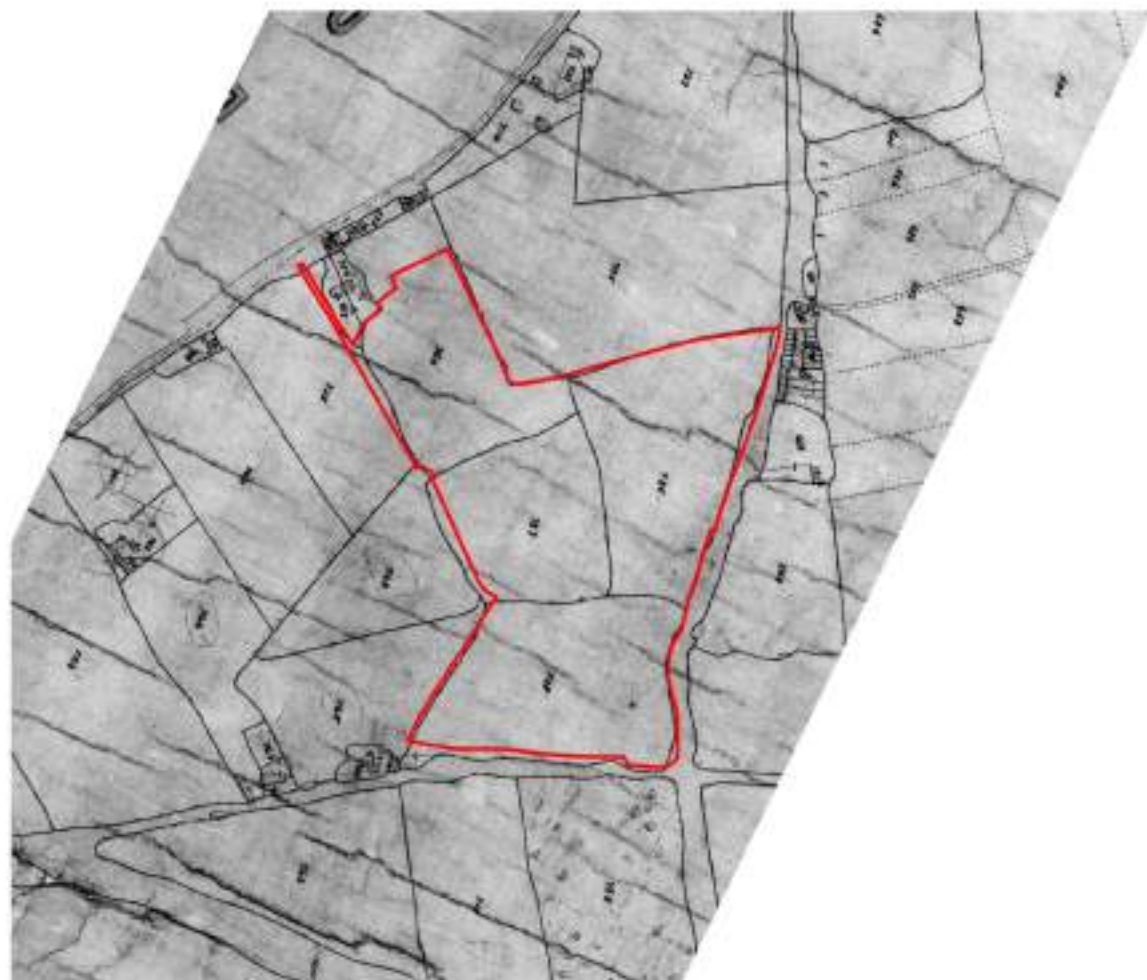
drawing title

Plan EDP 1: Heritage Assets

date	19 AUGUST 2020	drawn by	GY
drawing number	edp6550_d001b	checked	HS
scale	Refer to scale bar @ A3	QA	JTF

edp the environmental dimension partnership

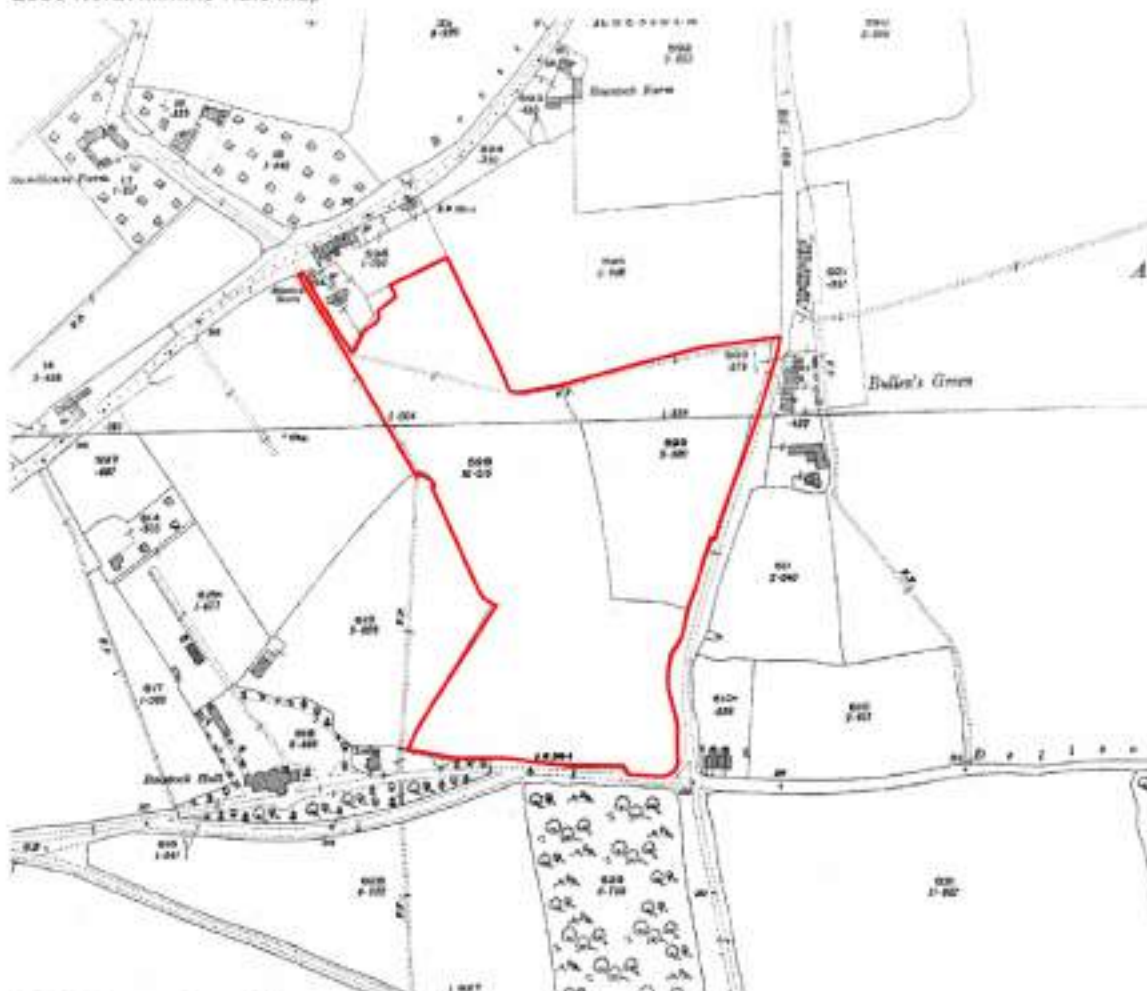
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1839 North Mimms Tithe Map



1879 Ordnance Survey Map



1924 Ordnance Survey Map



1971 Ordnance Survey Map

 Approximate Site Boundary



client

Canton Ltd

project title

Land off Bullens Green Lane, Colney Heath

drawing title

Plan EDP 2: Historic Mapping

date	19 AUGUST 2020	drawn by	GY
drawing number	edp6550_d002b	checked	HS
scale	1:5,000 @ A3	QA	JTF

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