

Archaeological Desk Based Assessment

Loddon Garden Village/Thames Valley Science Park Link
Road (LGV/TVSP Link Road)

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Executive Summary

The subject of this assessment, also known as the study site, is land in the ownership of the University of Reading and the proposals are to construct a foul pumping station, access track and access road off the spine road.

The study site has been assessed for its below ground archaeological potential. A separate Heritage Statement considers the significance of built heritage assets.

A low potential has been identified for the presence of significant Prehistoric, Anglo-Saxon and Medieval activity on the study site. The remnants of a Romano-British field system of local significance may extend into the eastern part of the study site. Post Medieval agricultural activity may be present, but this would be of very limited archaeological interest.

Based on current evidence, it is considered that any archaeology present within the study site is likely to be of local significance and should not preclude development.

Contents

EXECUTIVE SUMMARY	3
1 INTRODUCTION & SCOPE OF STUDY	5
2 PLANNING BACKGROUND & DEVELOPMENT PLAN FRAMEWORK.....	6
National Planning Policy	6
Local Planning Policy	7
3 GEOLOGY & TOPOGRAPHY	11
Geology	11
Topography	11
Site Walkover	11
4 ARCHAEOLOGICAL & HISTORICAL BACKGROUND WITH ASSESSMENT OF SIGNIFICANCE	12
Timescales used in this report	12
Prehistoric.....	12
Historic	12
Introduction.....	12
Previous archaeological work	12
Prehistoric (excluding Iron Age)	13
Iron age and Romano-British	14
Anglo-Saxon/Early Medieval	14
Medieval	15
Post Medieval & Modern (including map regression exercise)	15
Undated	16
Assessment of Significance (Designated Assets).....	16
Assessment of Significance (Non-Designated Assets).....	16
5 THE PROPOSED DEVELOPMENT & REVIEW OF POTENTIAL DEVELOPMENT IMPACTS ON ARCHAEOLOGICAL ASSETS	17
Proposed Development.....	17
Proposed Development Impacts	17
6 SUMMARY & CONCLUSIONS	18

1 Introduction & Scope of Study

- 1.1 This below ground archaeological desk-based assessment has been prepared by Susana Parker and Richard Smalley of RPS Tetra Tech on behalf of University of Reading.
 - 1.2 The subject of this assessment, also known as the study site (**Figure 1**), is land in the ownership of the University of Reading and the proposals are to construct a foul pumping station, access track and access road off the spine road.
 - 1.3 In accordance with the “Standard and Guidance for Historic Desk-based Assessments” (Chartered Institute for Archaeologists, January 2017, updated October 2020), this assessment draws together the available archaeological, geological, topographic and land-use information in order to clarify the archaeological potential of the study site.
 - 1.4 This desk-based assessment comprises an examination of evidence on the Berkshire Historic Environment Record (HER), and includes the results of a historic map regression exercise, historic aerial photography search, and a site walkover. This desk-based assessment is intended to inform land promotion and considers general impacts from proposals set out in a draft masterplan.
 - 1.5 A separate Heritage Statement considers the significance of built heritage assets.
 - 1.6 The findings of this report are based on the known conditions at the time of writing and all findings and conclusions are time limited to no more than 6 months from the date of this report (run in concurrence with the data licence for Historic Environment Records).
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2 Planning Background & Development Plan Framework

- 2.1 National legislation regarding archaeology, including scheduled monuments, is contained in the Ancient Monuments and Archaeological Areas Act 1979, amended by the National Heritage Act 1983 and 2002, and updated in April 2014.
- 2.2 In March 2012, the government published the National Planning Policy Framework (NPPF), which was most recently updated in December 2024. The NPPF is supported by the National Planning Practice Guidance (NPPG), which was published online 6th March 2014 and has since been periodically updated.
(<https://www.gov.uk/government/publications/national-planning-policy-framework--2>)
- 2.3 The NPPF and NPPG are additionally supported by three Good Practice Advice (GPA) documents published by Historic England: GPA 1: The Historic Environment in Local Plans; GPA 2: Managing Significance in Decision-Taking in the Historic Environment (both published March 2015). The second edition of GPA3: The Setting of Heritage Assets was published in December 2017.

National Planning Policy

- 2.4 Section 16 of the NPPF, entitled Conserving and enhancing the historic environment provides guidance for planning authorities, property owners, developers and others on the conservation and investigation of heritage assets. Overall, the objectives of Section 16 of the NPPF can be summarised as seeking the:
- Delivery of sustainable development;
 - Understanding the wider social, cultural, economic and environmental benefits brought by the conservation of the historic environment;
 - Conservation of England's heritage assets in a manner appropriate to their significance; and
 - Recognition that heritage makes to our knowledge and understanding of the past.
- 2.5 Section 16 of the NPPF recognises that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term. Paragraph 207 states that local planning authorities should require applicants to describe the significance of any heritage assets affected by their development proposal, and that the level of detail supplied by an applicant should be proportionate to the importance of the asset and should be no more than sufficient to review the potential impact of the proposal upon the significance of that asset.
- 2.6 *Heritage Assets* are defined in Annex 2 of the NPPF as: a building, monument, site, place, area or landscape positively identified as having a degree of significance meriting consideration in planning decisions. They include designated heritage assets (as defined in the NPPF) and assets identified by the local planning authority during the process of decision-making or through the plan-making process.
- 2.7 Annex 2 also defines *Archaeological Interest* as a heritage asset which holds or potentially could hold evidence of past human activity worthy of expert investigation at some point.
- 2.8 A *Designated Heritage Asset* comprises a: World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area.
- 2.9 *Significance (for heritage policy)* is defined as: The value of a heritage asset to this and future generations because of its heritage interest. This interest may be archaeological, architectural,
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artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.

- 2.10 *Setting* is defined as: The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.
- 2.11 In short, government policy provides a framework which:
- Protects nationally important designated Heritage Assets;
 - Protects the settings of such designations;
 - In appropriate circumstances seeks adequate information (from desk based assessment and field evaluation where necessary) to enable informed decisions;
 - Provides for the excavation and investigation of sites not significant enough to merit *in-situ* preservation.
- 2.12 The NPPG reiterates that the conservation of heritage assets in a manner appropriate to their significance is a core planning principle, requiring a flexible and thoughtful approach. Furthermore, it highlights that neglect and decay of heritage assets is best addressed through ensuring they remain in active use that is consistent with their conservation. Importantly, the guidance states that if complete, or partial loss of a heritage asset is justified, the aim should then be to capture and record the evidence of the asset's significance and make the interpretation publicly available. Key elements of the guidance relate to assessing harm. An important consideration should be whether the proposed works adversely affect a key element of the heritage asset's special architectural or historic interest. Additionally, it is the degree of harm, rather than the scale of development, that is to be assessed. The level of 'substantial harm' is considered to be a high bar that may not arise in many cases. Essentially, whether a proposal causes substantial harm will be a judgment for the decision taker, having regard to the circumstances of the case and the NPPF. Importantly, harm may arise from works to the asset or from development within its setting. Setting is defined as the surroundings in which an asset is experienced and may be more extensive than the curtilage. A thorough assessment of the impact of proposals upon setting needs to take into account, and be proportionate to, the significance of the heritage asset and the degree to which proposed changes enhance or detract from that significance and the ability to appreciate it.
- 2.13 In considering any planning application for development, the planning authority will be mindful of the framework set by government policy, in this instance the NPPF, by current Development Plan Policy and by other material considerations.

Local Planning Policy

- 2.14 The site is located within Wokingham Borough Council (the Local Planning Authority henceforth referred to as "LPA"), straddling the Shinfield and Arborfield & Newham parishes. Wokingham Borough Council's adopted local plan contains a number of documents with relevant policy, as set out below.

Wokingham Borough Development Plan – Adopted Managing Development Delivery Local Plan – February 2014

Policy TB13: Science and Innovation Park

1. The boundary of the University of Reading Science and Innovation Park is defined in policy SAL07.

2. Planning permission for the development of the remainder of the Science Park will only be granted where it demonstrates that the proposals:

- a) Are only for purposes appropriate to the primary use of the site as a Science and Innovation Park, including research and development, laboratories and high tech uses together with ancillary and related uses and for no other purpose*
- b) Maintain the visual separation between the Science and Innovation Park and the settlements of Shinfield (North of M4), Earley and Shinfield Village*
- c) Provide high quality landscape*
- d) Provide for high quality design appropriate to its location and setting*
- e) Secure a programme of archaeological work.*

2.15 The site is located outside the boundary of the Thames Valley Science and Innovation Park.

Policy TB24: Designated Heritage Assets (Listed Buildings, Historic Parks and Gardens, Scheduled Ancient Monuments and Conservation Areas)

- 1. Historic Parks and Gardens, Scheduled Monuments and Conservation Areas are shown on the Policies Map.*
- 2. The Borough Council will conserve and seek the enhancement of designated heritage assets in the Borough and their settings by:*
 - a. Requiring works to or affecting heritage assets or their setting to demonstrate that the proposals would at least conserve and, where possible enhance the important character and special architectural or historic interest of the building, Conservation Area, monument or park and garden including its setting and views.*
 - b. Supporting development proposals or other initiatives that will conserve and, where possible, enhance the local character, setting, management and historic significance of designated heritage assets, with particular support for initiatives that would improve any assets that are recognised as being in poor condition or at risk.*
- 3. Proposals for building works shall retain or incorporate existing features or details of historic or architectural significance or design quality into the scheme.*

2.16 The site does not contain any archaeological designated assets, such as scheduled monuments, nor does it fall within the setting of any such asset, and therefore this policy is not enacted.

Policy TB25: Archaeology

- 1. Areas of high archaeological potential are shown on the Policies Map.*
- 2. In areas of high archaeological potential, applicants will need to provide a detailed assessment of the impact on archaeological remains.*
- 3. Where development is likely to affect an area of high archaeological potential or an area which is likely to contain archaeological remains, the presumption is that appropriate measures shall be taken to protect remains by preservation in situ. Where this is not practical, applicants shall provide for excavation, recording and archiving of the remains.*

2.17 The site does not form part of any 'area of high archaeological potential'.

Wokingham Borough Local Development Framework – Adopted Core Strategy Development Plan Document – January 2010

CP3 - General Principles for development

Planning permission will be granted for proposals that:

(...)

c) Have no detrimental impact upon important ecological, heritage, landscape (including river valleys) or geological features or water courses.

(...)

Development proposals will be required to demonstrate how they have responded to the above criteria through the submission of Design and Access Statements, clear and informative plans, elevations and street scenes and where required Masterplans, Development Briefs, Concept Statements and Design Codes.

- 2.18 It is expected that a LPU (Local Plan Update) will be completed ('adopted') by the end of 2023, and therefore draft policies set out in the latest public consultation are also set out below.

Wokingham Borough Council - Draft Local Plan Public Consultation – Feb to March 2020

Policy DH5: The Historic Environment

1. Development proposals should conserve and seek to enhance, wherever possible, the archaeological, architectural, artistic or historic interest of all heritage assets, including the contribution to this interest made by their setting. This will be achieved through:

a) ensuring that development proposals identify and understand the heritage interest(s) that may be affected by the proposed works, at an early stage in the design process;

b) supporting works that secure the sensitive use, enjoyment, conservation and/or enhancement of heritage assets and their settings, particularly in relation to designated assets identified as being at risk; and

c) securing the sensitive design of development which impacts on heritage assets and their settings, retaining or incorporating existing features or details of historic or architectural interest and/or design quality into the scheme.

2. Heritage assets are an irreplaceable resource. Where development proposals have the potential to affect heritage assets, a heritage assessment should be prepared and submitted alongside the development proposal describing the significance of any heritage assets affected, including the contribution to their setting. Where there is harm, information must be provided on whether the harm is assessed as being less than substantial or substantial.

3. Development proposals which would cause harm to the heritage interest of a heritage asset, or to its setting (whether statutorily designated or locally important), will not be permitted without a clear and convincing justification in the form of the public benefits of the proposal that cannot otherwise be achieved and which demonstrably outweigh any harm to the interest of the heritage asset in question, irrespective of the level of harm.

4. Development proposals that would cause substantial harm to, or total loss of significance of a designated heritage asset, will not be permitted unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or all the particular circumstances to:

a) the nature of the heritage asset prevents all reasonable uses of the site; and

b) no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and

c) conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and

d) the harm or loss is outweighed by the benefit of bringing the site back into use.

Policy DH6: Archaeology

1. Development proposals that would affect the significance of a scheduled monument, are within areas defined as Areas of High Archaeological Potential, or locations where archaeological remains are known or suspected, will need to be accompanied with a detailed assessment of the impact of the development upon archaeological remains and their significance. This should be in the form of an appropriate desk-based assessment using suitable references such as the Historic Environment Record and, where necessary, a field evaluation.

2. Development proposal should take appropriate measures to protect any archaeological remains by preservation in situ. Where assessment of archaeological potential demonstrates this is not justified or proportionate, applicants shall provide for the excavation, recording and archiving of remains.

- 2.19 In line with relevant planning policy and guidance, this desk-based assessment seeks to clarify the site's archaeological potential, the likely significance of that potential, and how proposals could affect that significance.
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3 Geology & Topography

Geology

- 3.1 According to the British Geological Survey, the bedrock geology of the study site is the London Clay Formation – Clay, Silt and Sand. These sedimentary rocks are marine in origin. They are detrital and comprise coarse to fine-grained slurries of debris from the continental shelf flowing into a deep-sea environment, forming distinctively graded beds.
- 3.2 Superficial deposits of Brickearth – Clay, Silt and Sand – are present throughout. These sedimentary deposits are aeolian in origin. They are detrital, comprising medium- to fine- grained materials, forming lenses, beds (and locally) dunes.

Topography

- 3.3 The study site is relatively flat at c. 43 m above Ordnance Datum. Levels rise towards Reading on higher ground, visually separated from the study site by the M4 motorway to the north of the study site.
- 3.4 The River Loddon runs to the south of the study site from south-west to north-east.

Site Walkover

- 3.5 A selection of images is included below in **Plates 1-4**. An overview of the site conditions is presented below.
 - 3.6 The M4 motorway runs to the north of the study site, roughly east-west.
 - 3.7 To the west of the study site, there are historic clusters of buildings the nearest being Old House Farm, and there is new development at the sites of Shinfield Studios and the British Museum Archaeological Research Collection Facility. There is a cluster of buildings surrounding the historic Badger / Cutbush Farm and Shinfield Grange and grounds centred on Cutbush Lane East, and further new development at the site of the Thames Valley Science Park further north.
 - 3.8 There are small, wooded areas, and several streams and ditches cross the area. Some of the land surrounding the historic farm clusters remains in agricultural use, mainly arable, but elsewhere this area of the study site has largely lost its agricultural character.
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4 Archaeological & Historical Background with Assessment of Significance

Timescales used in this report

Prehistoric

Palaeolithic	900,000 -	12,000 BC
Mesolithic	12,000 -	4,000 BC
Neolithic	4,000 -	1,800 BC
Bronze Age	1,800 -	600 BC
Iron Age	600 -	AD 43

Historic

Roman	AD 43 -	410
Saxon/early medieval	AD 410 -	1066
Medieval	AD 1066 -	1485
Post medieval	AD 1486 -	1799
Modern	AD 1800 -	Present

Introduction

- 4.1 This chapter reviews the available archaeological evidence for the study site and the archaeological/historical background of the general area, and, in accordance with NPPF, considers the potential for any as yet to be discovered archaeological evidence on the study site.
- 4.2 What follows comprises a review of known archaeological assets within a 500 m radius of the study site overall boundary, also referred to as the study area, held on the Berkshire Historic Environment Record and Historic Land Characterisation (**Figures 2a, 2b, 2c**), together with a historic map regression exercise charting the development of the study area (**Figures 3, 4 and 5**), LiDAR (**Figure 6**), and drone survey (**Figure 7**).
- 4.3 Chapter 5 subsequently considers the site conditions and whether the proposed development will impact the theoretical archaeological potential identified below.

Previous archaeological work

- 4.4 The study site has been the subject of a number of non-intrusive investigations which formed a part of wider research programmes, including the East Berkshire Historic Landscape Characterisation (HLC) project funded by Historic England and undertaken by Berkshire Archaeology. The project covers the unitary authorities of Reading, Windsor & Maidenhead, Bracknell Forest, Slough and Wokingham, and was completed in 2019.
- 4.5 Archaeological investigations associated with development are depicted in Figure 2b, and those with significant archaeological finds are summarised below, with relevant results included in the chronological discussion which follows.
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- 4.6 Six archaeological evaluation trenches have previously been excavated in the western part of the study site (**ERM2797**). The trenching identified only sparse features that were interpreted as being of a Post Medieval or Modern origin (**MRM18652**) and the report concluded that the proposed development would have little impact on significant archaeological remains.
- 4.7 Trial trenching has also been previously undertaken to the east of the study site (**ERM2706**), one of the trenches of which extended into the study site itself. Only limited evidence of potential settlement was recorded in the form of two pits and a few sherds of Roman pottery. The ditches were interpreted as relating to an agricultural field system (**MRM18604**).
- 4.8 Following an initial desk-based assessment, an archaeological evaluation was undertaken at Shinfield Studios. It consisted of 78 trial trenches on a random array, and 22 test pits in areas where Quaternary deposits were encountered (**ERM2506**). Very little evidence of archaeological activity was encountered during the evaluation. That development was deemed to have no impact on any significant archaeology and no further archaeological mitigation was recommended. A potential for further work was identified from the results of the geoarchaeological test pitting (**ERM2559**).
- 4.9 A desk-based assessment was undertaken in support of an application for a new British Museum Archaeological Research Collection Facility (**ERM2163**). General evidence of post-Medieval agricultural and domestic activity was identified, with a high potential for both Medieval and post-Medieval remains. A programme of geophysical survey, followed by targeted trial trenching was secured by planning condition. Cropmarks identified in the desk-based assessment as possible evidence of Medieval activity were not identified by the geophysical survey (**ERM2164**). A trial trench evaluation followed which comprised 31 trial trenches (**ERM2230**), but no finds of archaeological interest were recovered.

Prehistoric (excluding Iron Age)

- 4.10 Activity dating to the Palaeolithic period is often ephemeral, and in situ deposits tend to be associated with specific geological deposits such as river terrace gravels.
- 4.11 Evidence dating to the Mesolithic period is similarly ephemeral, and generally associated with hunter-gatherer patterns of land use. The Lodden Valley would have been rich in natural resources, and an attractive environment for hunter-gatherer societies.
- 4.12 The Neolithic and Bronze Age periods are associated with the establishment of farming and more permanent settlement, with large scale woodland clearances occurring in the Bronze Age.
- 4.13 Areas of cropmarks identified from historic aerial photography on the site of the British Museum Archaeological Research Collection Facility (MRM18312) were tested with both geophysical survey and trial trench evaluation, but no archaeological features were recorded.
- 4.14 Five pieces of worked flint, all in relatively fresh condition, were recovered from three trenches at Shinfield Studios (MRM18543). They are likely to be of Mesolithic or early Neolithic date, but there was very little other evidence of archaeological activity encountered during the evaluation as mentioned above.
- 4.15 Although no evidence dating to the Prehistoric period was recorded during geophysical survey and trial trench evaluation at the British Museum site, the residual flints from the Shinfield studios site, indicate that there may be some background potential for archaeological deposits dating from the Mesolithic, Neolithic and Bronze Age periods in this area.
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Iron age and Romano-British

- 4.16 By the Iron Age, the landscape had been mostly cleared of its woodland cover and was being farmed and settled.
- 4.17 Trial trenching close to the eastern part of the study site identified evidence for a Romano-British field system (**MRM18604**) which may extend into the study site.
- 4.18 Although the route of a possible Roman road has been suggested locally, detailed examination of the available evidence suggests that the route is speculative. It is projected to the west of the study site, running approximately north to south. The road (MWK4818) would form part of a presumed route from Silchester to St Albans. Roman roads can be the focus for associated settlement and land use. However, its presence has not been confirmed despite it being targeted with archaeological investigations.
- 4.19 Three areas of cropmarks have been identified within the study area and are identified as Areas of High Archaeological Potential (Figure 2c). These were interpreted as representing Late Iron Age or Early Roman settlement activity (see 'Undated' below), however subsequent geophysical survey and trial trenching over part of one of these areas did not identify these features.
- 4.20 Equally, whilst evidence for Iron Age and Romano-British settlement has been investigated in Shinfield and is evidenced by air photography elsewhere locally, there is no evidence relating directly to this area of the study site itself, with the exception of two sherds of Late Iron Age/Early Romano British pottery recovered from a ditch during archaeological investigations at Shinfield Studios (ERM2506).
- 4.21 As a result, given the topographic location of existing Iron Age and Romano-British settlement sites and the differing topography of the study site, allied to an absence of site-specific evidence, it is concluded that, on balance, significant deposits (such as settlement) of the later Prehistoric/Romano-British period has a low likelihood to occur within the study site. However, it is recognised that the remnants of a Romano-British field system of local significance may extend into the eastern part of the study site.

Anglo-Saxon/Early Medieval

- 4.22 The HER does not hold records from this period within any area of the study site or in its immediate vicinity.
- 4.23 Shinfield, to the west of the study site, is mentioned in the Domesday Book (listed as 'Selingefelle'), as a moderately sized settlement of 15 households and a mill. Prior to the Norman Conquest, the parish was held by Saxi on behalf of King Edward, indicating a pre-Conquest settlement. In Saxon times Shinfield was referred to as Selingasfeld ('the fields owned by Selingas').
- 4.24 Arborfield, to the south of the study site, is not mentioned in the Domesday Book directly, but is included in the lordship of the Bishop of Sonning. The place-name 'Edburghfeld' may mean "the field of Hereburg" (a woman's name) or possibly derived from the Old English 'eorpburg' meaning "earth fortification". Some sources also attribute the name to Saxon origins.
- 4.25 While there is clearly evidence for settlement in the wider area during this period, the current evidence indicates that settlement activity is focused away from the study site. It is therefore likely that during the Saxon/Early Medieval period the study site was used for agricultural purposes or woodland. Therefore, a negligible potential is identified for this period.
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Medieval

- 4.26 The River Loddon was the Medieval boundary of Windsor Forest during this period and remains the boundary between Arborfield and Shinfield parishes today.
- 4.27 Shinfield settlement is well established by the Medieval period, and its historic core is situated to the west of the study site. This area of the study site is likely to have been an area of agricultural activity and/or woodland.
- 4.28 Although a number of settlement foci are identified within the study area, these lie off site and it is suggested that historic land-use of this area of the study site is dominated by agriculture. A low potential is therefore identified for significant archaeological evidence from the Medieval period.
- 4.29 It is likely that historic land-use on this area of the study site is dominated by agriculture in the Medieval period, and a low potential for archaeological deposits is identified.

Post Medieval & Modern (including map regression exercise)

- 4.30 In these periods our understanding of settlement and the utilisation of the landscape is enhanced by cartographic sources, which can give additional detail to data contained within the HER. This is complemented by information from the Historic Landscape Characterisation (Figure 2d), which identifies most of the study site as 'reorganised fields', with several 'farms' and areas of 'woodland' identified among other localised uses.
 - 4.31 Cutbush Lane is known to be at least eighteenth century in date, as it is depicted on the 1756 estate map (Figure 3).
 - 4.32 Post-Medieval ditches, undated linear features, a pit and possible postholes were revealed during archaeological investigations on land either side of Cutbush Lane, to the east and north of Shinfield Grange (MRM18541).
 - 4.33 The Earl of Fingal's 1756 Estate Map also depicts a pond to the north of Cutbush Lane East, within a triangular area of common or 'green'. However, this may represent early gravel extraction, as the area is later as Brown's Green Gravel Pit in early OS Mapping.
 - 4.34 The 1836 Tithe Map (Figure 3) shows the removal of field boundaries and the amalgamation of fields within this area of the study site. The accompanying tithe apportionment shows that this area of the study site, and much of the surrounding land was owned by Alexander Cobham with the names listed correlated strongly with those identifiable on the 1756 estate map. Many of the field names incorporate the Middle English word 'pightle' meaning small field or enclosure.
 - 4.35 OS mapping (Figure 4) shows that field boundaries within this area of the study site have been removed and additional buildings have been constructed at Badger Farm between the end of the nineteenth century and beginning of the twentieth.
 - 4.36 The 1938 OS map shows further changes in boundaries, with many now disappearing, and Badger Farm is now labelled Cutbush.
 - 4.37 By 1965 most of the study area comes into the ownership of the University's agricultural land holding. Between 1965 and 1975, the M4 is constructed at the north of this area of the study site, and more field boundaries are removed.
 - 4.38 This area of the study site and the three fields it crosses remained in agricultural use throughout the post-Medieval and Modern periods with unchanged boundaries, as evidenced in historic
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mapping. A low potential is therefore identified for significant Post-Medieval to Modern archaeological deposits to be present within the study site.

Undated

- 4.39 Two historic roadways are undated but marked on the 1756 estate map. Hollow Lane to the west of the study site, and Cutbush Lane to the west of the study site.
- 4.40 Linear cropmarks (**MWK1810, MWK1809**), enclosures (**MWK1806, MWK1807, MWK1811**), trackway features (**MWK1805**) and a pit cluster (**MWK1808**) were identified in aerial photography at the site of the British Museum Archaeological Research Collection. Geophysical survey and trial trench evaluation (see above) found no evidence for an archaeological origin for these features, and postulates that they represent variations in the natural drift geology (**MWK1804**).
- 4.41 Further such features (**MWK1129, MWK1130, MWK1131, MWK1132, and MWK1133**) were recorded to the east of the study site, but have not yet been tested with fieldwork.
- 4.42 A recent drone survey (**Figure 7**) identified a number of 'undetermined' features along the course of the proposed access road which may warrant further investigation.

Assessment of Significance (Designated Assets)

- 4.43 Existing national policy guidance for archaeology (the NPPF as referenced in section 2) enshrines the concept of the 'significance' of heritage assets. Significance as defined in the NPPF centres on the value of an archaeological or historic asset for its 'heritage interest' to this or future generations.
- 4.44 There are no designated archaeological assets within the boundary of the study site, and the study site does not fall within the setting of any such asset. A separate Heritage Statement considers the significance of this and other built heritage assets and their setting.

Assessment of Significance (Non-Designated Assets)

- 4.45 As identified by desk-based work, archaeological potential by period and the likely significance of any archaeological remains which may be present is summarised in table form below:

Period	Identified archaeological potential	Identified archaeological significance
Prehistoric (excluding Iron Age)	Low (note Areas of High Archaeological Potential)	Low (Local)
Iron Age and Romano-British	Potential for Romano-British field system of local significance.	Low (Local)
Anglo-Saxon	Negligible	Low (Local)
Medieval	Low (note Areas of High Archaeological Potential)	Low (Local)
Post Medieval	Medium	Low (Local)

- 4.46 A low potential has been identified for the presence of significant Prehistoric, Anglo-Saxon and Medieval activity on the study site. The remnants of a Romano-British field system of local significance may extend into the eastern part of the study site. Post Medieval agricultural activity may be present, but this would be of very limited archaeological interest.

5 The Proposed Development & Review of Potential Development Impacts on Archaeological Assets

Proposed Development

- 5.1 The proposals relate to a detailed planning permission for a foul pumping station, associated access track and access road off the spine road.

Proposed Development Impacts

- 5.2 The proposals would have the potential to further truncate or completely remove any archaeological deposits within areas of ground-intrusive development, should they survive.

6 Summary & Conclusions

- 6.1 The study site has been assessed for its below ground archaeological potential. A separate Heritage Statement considers the significance of built heritage assets.
 - 6.2 The proposals would have the potential to further truncate or completely remove any archaeological deposits within areas of ground-intrusive development, should they survive.
 - 6.3 National Planning Policy determines that planning decisions should be based on the significance of the heritage asset and that level of detail supplied by an applicant should be proportionate to the importance of the asset and should be no more than sufficient to review the potential impact of the proposal upon the significance of that asset.
 - 6.4 Based on current evidence, it is considered that any archaeology present within the study site is likely to be of only local significance and should not preclude development.
-

Sources Consulted

General

Berkshire Historic Environment Record

National Monuments Record

Internet

British Geological Survey – <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>

British History Online – <http://www.british-history.ac.uk/>

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Historic England: The National Heritage List for England <http://www.historicengland.org.uk/listing/the-list/>

[National Planning Policy Framework](https://www.gov.uk/government/publications/national-planning-policy-framework--2) – <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

Portable Antiquities Scheme – www.finds.org.uk

Topographic Maps - <https://en-gb.topographic-map.com/maps/b9/England/>

Arborfield Local History Society <http://www.arborfieldhistory.org.uk/index.htm>

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Ford, S. '*Loddon Valley (Berkshire) Fieldwalking Survey*' in Berkshire Archaeological Journal, 75, 1994-7

Historic England (formerly English Heritage), Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment 2008 (new draft 2017)

Historic England, Historic Environment Good Practice Advice in Planning: 1 The Historic Environment in Local Plans July 2015 unpublished document

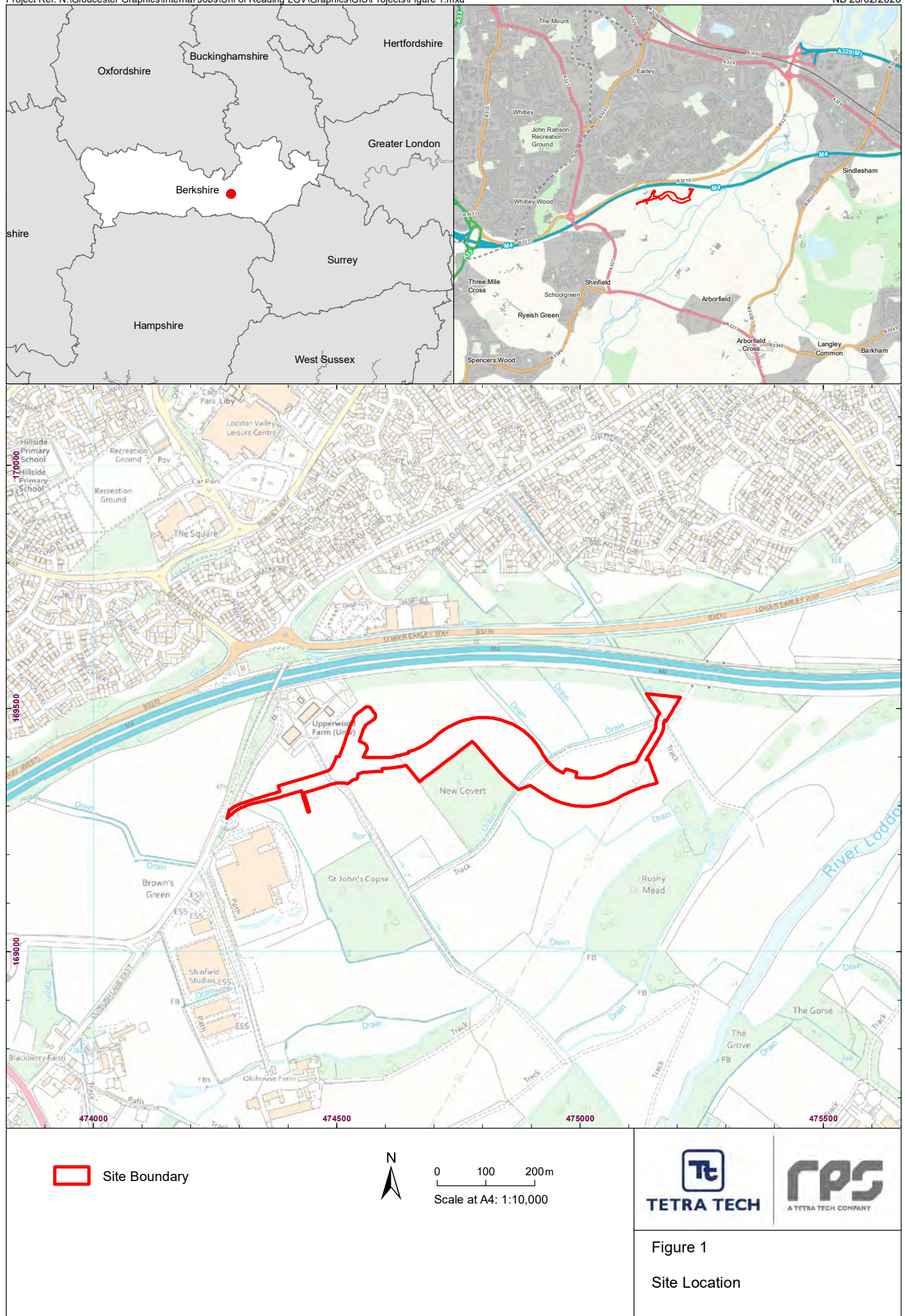
Historic England, Historic Environment Good Practice Advice in Planning: 2 Managing Significance in Decision-Taking in the Historic Environment July 2015 unpublished document

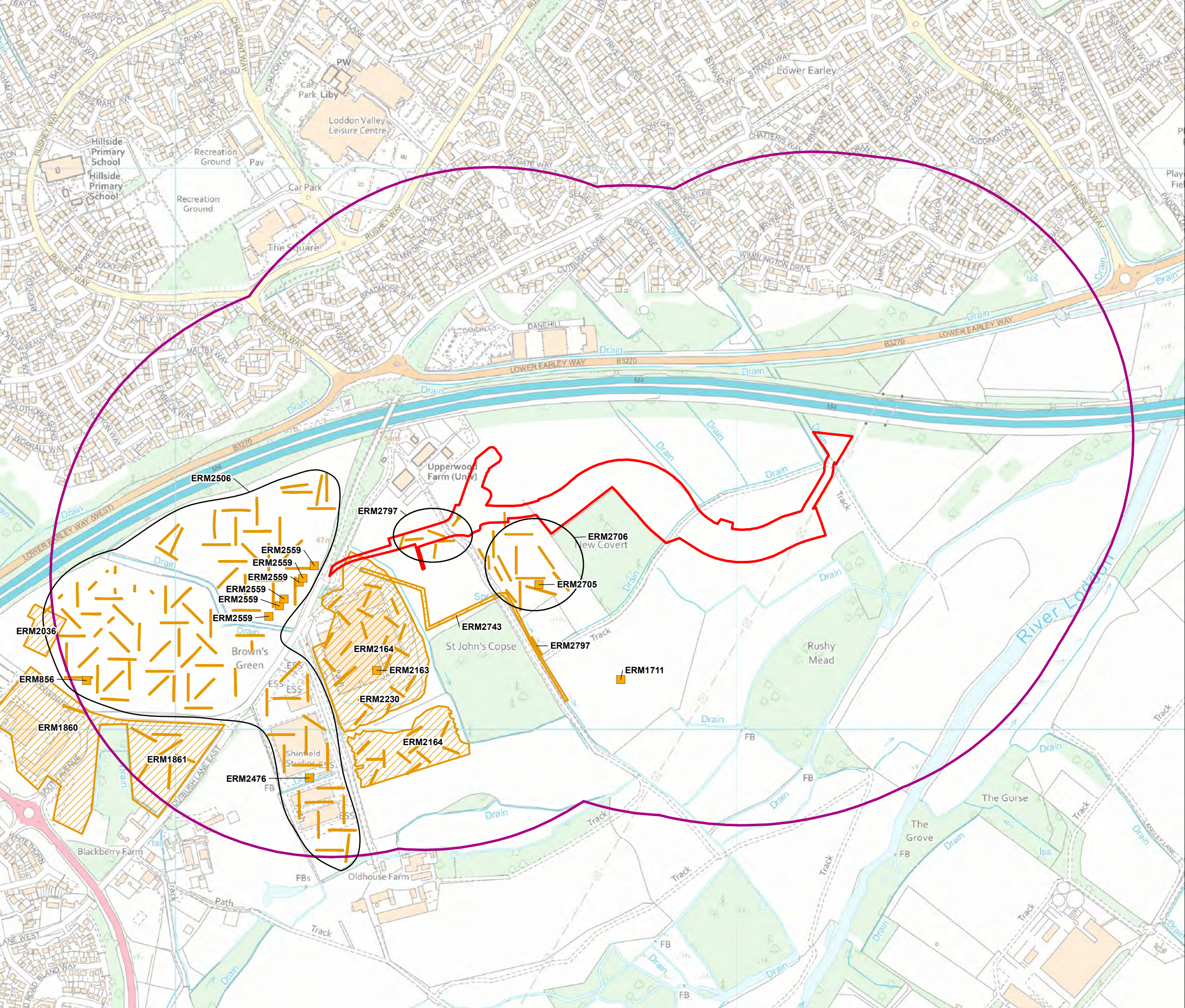
Historic England, Historic Environment Good Practice Advice in Planning: 3 The Setting of Heritage Assets December 2017 unpublished document

Ministry of Housing, Communities & Local Government, 2021, National Planning Policy Framework

Ministry of Housing, Communities & Local Government Planning practice guidance, 2019, Historic environment

Figures





Legend

- Site Boundary
- 500m search buffer

Previous Archaeological Work:

- HER Events Points
- HER Events Polygons

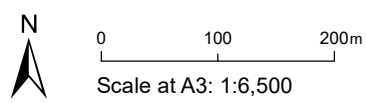
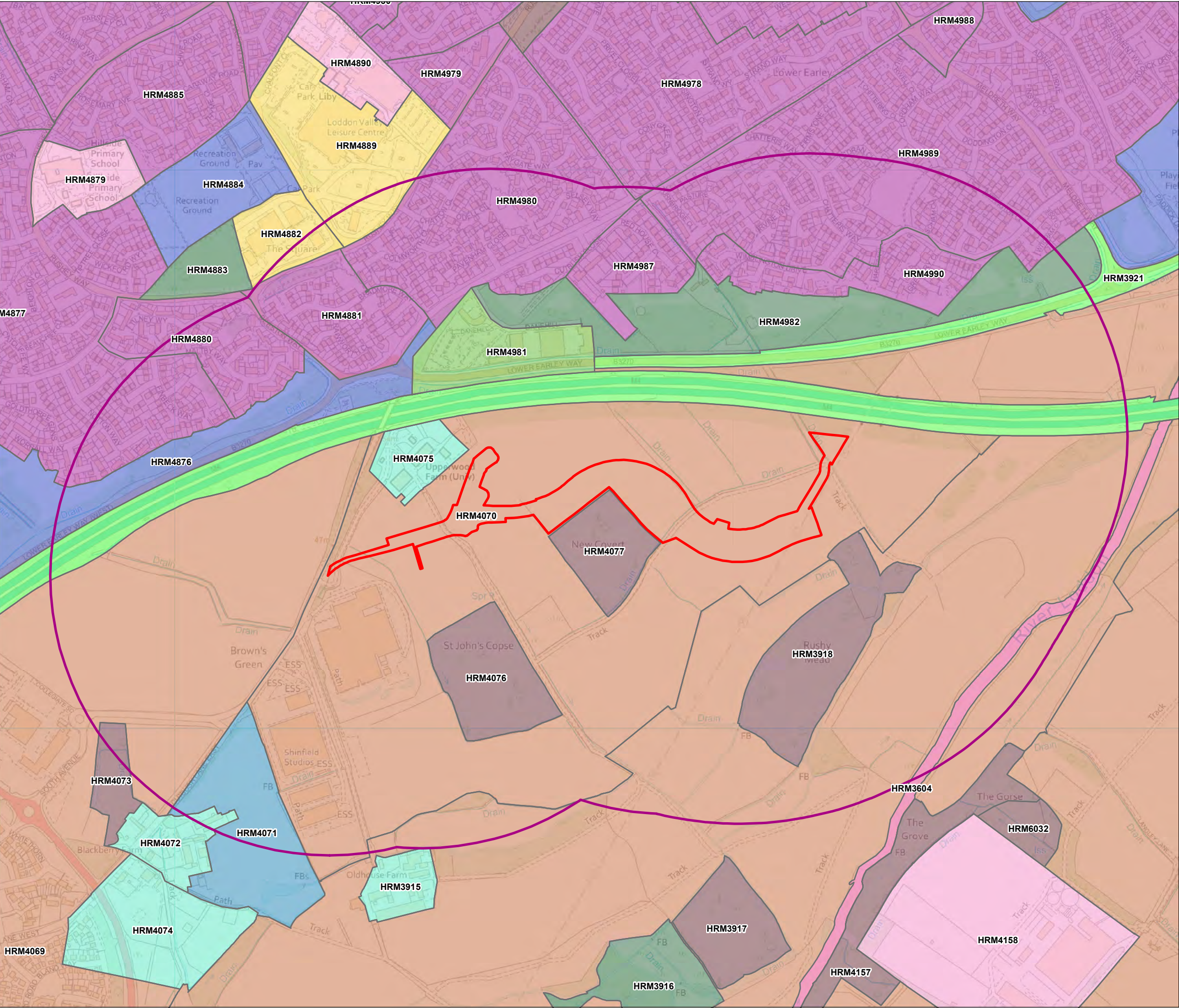


Figure 2b
HER Events Plot

Project Ref: N:\Choucester Graphics\Internal Jobs\Uni of Reading LGV\Graphics\GIS\Projects\Figure 2b events.mxd



Legend

- Site Boundary
- 500m search buffer

Historic Landscape Characterisation:

- Commercial
- Communications
- Enclosed Land
- Industrial
- Civic Provision
- Parkland
- Recreation
- Rural Settlement
- Unimproved
- Urban Settlement
- Valley Floor and Water Management
- Woodland



0 100 200m
Scale at A3: 1:6,500



Figure 2c

Historic Landscape
Characterisation Plot



Legend

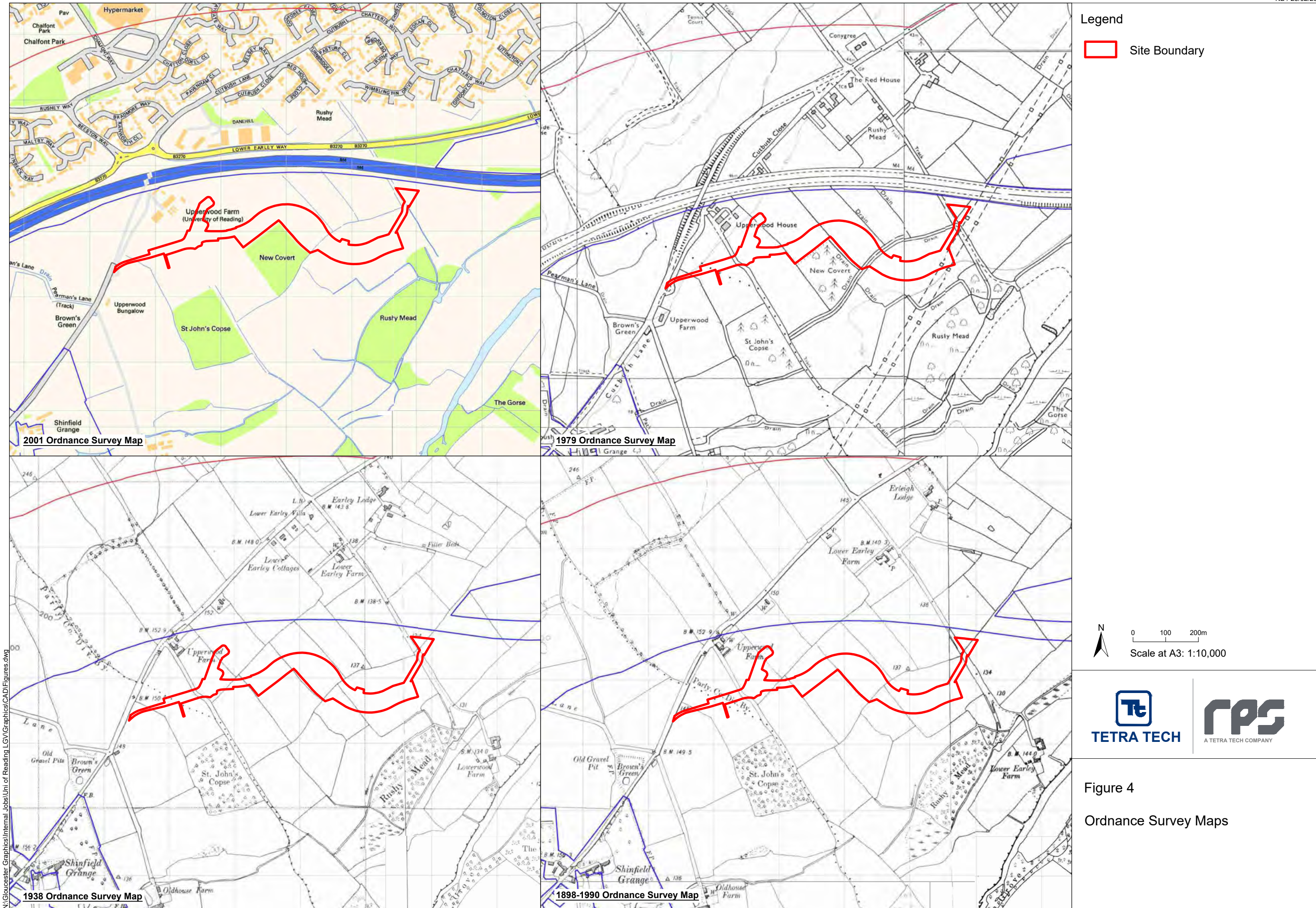
 Site Boundary



 0 100 200m
Scale at A3: 1:10,000



Figure 3
Pre-Ordnance Survey Maps



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 Site Boundary



0 50 100m
Scale at A4: 1:5,000



Figure 5

2022 Aerial Photograph



Legend

 Site Boundary

LiDAR DATA

Source:
Environment Agency

Data Type: DTM

Resolution: 1m

Date Captured:
23.01.2019 - 25.03.2019

Processing:
Multi-direction Hillshade overlaid on
simple Local Relief Model



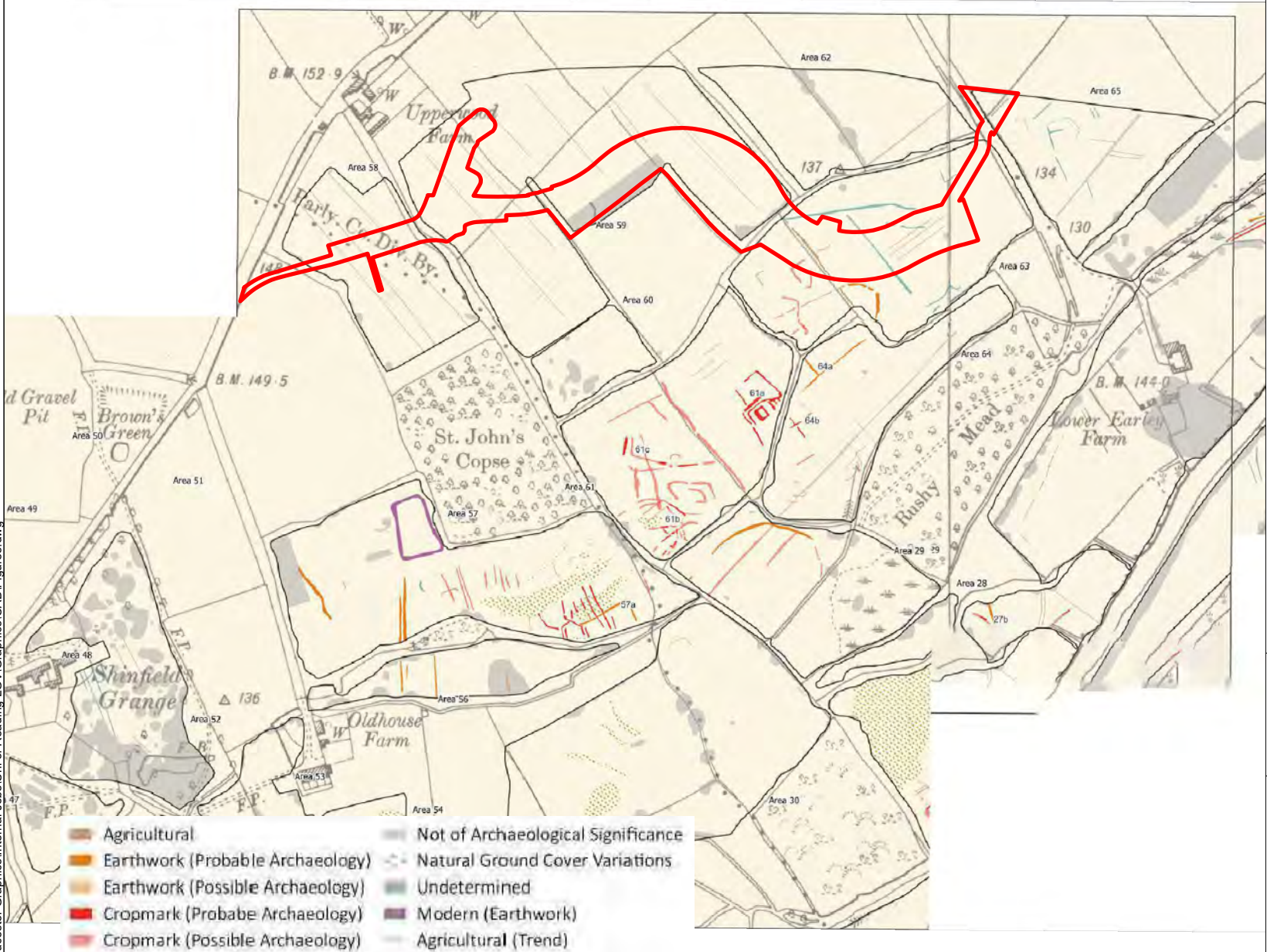
0 50 100m
Scale at A3: 1:3,000



Figure 6

LiDAR Plot

 Site Boundary



N
0 50 100m
Scale at A4: 1:7,000


TETRA TECH


A TETRA TECH COMPANY

Figure 7
Drone Survey

Plates



Plate 1: Site viewed from east-west trackway running across Site looking north towards motorway within Site.



Plate 2: View looking south-east from east-west trackway looking into Site.



Plate 3: Looking north-west from trackway on Site back towards Upperwood Farm white building in centre of picture.



Plate 4: Culmination of access road as proposed adjacent to motorway, beyond hedgerow.

