

Appendix: Cultural Heritage

Annex 1: Archaeological Desk-Based Assessment

Annex 2: Geophysical Survey Report 2022

Annex 3: Geophysical Survey Report 2023

Annex 4: Written Scheme of Investigation for Archaeological Trial Trenching



Culham Battery Storage Site, Oxfordshire

Historic Environment Desk-Based Assessment

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Culham Battery Storage Site, Oxfordshire

Historic Environment Desk-Based Assessment

Contents

Summary.....	1
1 INTRODUCTION.....	3
2 PROPOSED DEVELOPMENT	3
3 LOCATION, TOPOGRAPHY AND GEOLOGY	3
4 AIMS AND OBJECTIVES.....	4
5 PLANNING BACKGROUND	4
5.1 Planning (Listed Buildings and Conservation Areas) Act 1990	4
5.2 Historic Buildings and Ancient Monuments Act 1953	5
5.3 Historic England Register of Parks and Gardens in England	5
5.4 National Planning Policy	5
5.5 The South Oxfordshire Local Plan 2035	7
5.6 Culham Neighbourhood Plan 2020-41.....	12
6 METHODOLOGY	13
6.1 Introduction	13
6.2 Scope and Sources Consulted	13
6.3 Approach for assessing heritage significance	14
6.4 Assumptions and Limitations	15
7 HISTORIC ENVIRONMENT BASELINE	15
7.1 Introduction	15
7.2 Walkover Survey	15
7.3 Designated Heritage Assets	16
7.4 Previous Archaeological Investigations.....	18
7.5 Prehistoric Period (500,000 BP – AD 43).....	19
7.6 Romano-British Period (AD 43 – 410)	21
7.7 The Medieval Period (AD 410 – 1550)	21
7.8 Post-Medieval Period (1550-1900)	23
7.9 Modern	24
7.10 Undated	25
7.11 Aerial Photographs	25
7.12 LiDAR	26

7.13	Previous Impacts and Survival	26
7.14	Historic Landscape Character	27
8	STATEMENT OF SIGNIFICANCE	27
8.1	Introduction	27
8.2	Designated Heritage Assets	27
8.3	Archaeological Potential	29
8.4	Historic Landscape	30
9	POTENTIAL IMPACTS	31
9.1	Introduction	31
9.2	Proposed Scheme	31
9.3	Assessment of the Proposed Scheme	31
10	POTENTIAL FOR FURTHER WORK	32
11	CONCLUSION	33
APPENDIX A	GAZETTEER OF HERITAGE ASSETS WITHIN THE STUDY AREA	37
Abbreviations	37
APPENDIX B	BIBLIOGRAPHY AND LIST OF SOURCES CONSULTED	45
APPENDIX C	OFFICIAL LIST ENTRY OF NUNEHAM COURTENAY PARK AND GARDEN ...	47

List of Figures

Figure 1	Site location
Figure 2	Designated heritage assets
Figure 3	Previous archaeological events
Figure 4	Non-designated heritage assets
Figure 5	Extract from Roque's map of Berkshire (1761)
Figure 6	Extract from Davis's map of Oxfordshire (1797)
Figure 7	Extract from the pre-enclosure plan of the parish of Culham (1802) (Ref. SL121/M/1 as held at the Oxfordshire History Centre)
Figure 8	Extract from the Ordnance Survey County Series map 1:10560 (1875)
Figure 9	Extract from the Ordnance Survey County Series map 1:10560 (1900)
Figure 10	Extract from the Ordnance Survey County Series map 1:10560 (1910)
Figure 11	Extract from the Ordnance Survey Provisional map 1:10560 (1960)
Figure 12	Extract from the Ordnance Survey National Grid map 1:10000 (1975)
Figure 13	Extract from the Ordnance Survey National Grid map 1:10000 (1982)
Figure 14	Extract from the Ordnance Survey National Grid map 1:10000 (1992)
Figure 15	Extract from the Ordnance Survey National Grid map 1:10000 (2001)
Figure 16	Extract from the Ordnance Survey National Grid map 1:10000 (2010)
Figure 17	Extract from the Ordnance Survey National Grid map 1:10000 (2022)
Figure 18	NMP data and Aerial Photographs interpretation
Figure 19	Multi hill-shade LiDAR visualisation
Figure 20	SLRM LiDAR visualisation
Figure 21	Multi Hill-shade LiDAR visualisation with interpretation
Figure 22	Previous impact (APs Ref. RAF.106G.LA.59 as held by Historic England at Swindon Archive)
Figure 23	Historic Landscape Character
Figure 24	Planned development
Figure 25	Interpretation of the geophysical plot from the 2016 survey, with additions of features identified from LiDAR and APs
Figure 26	Interpretation of the geophysical plot from the 2022 and 2023 survey, with additions of features identified from LiDAR and APs

List of Plates

Plate 1	View of the site looking northwest from Thame Lane
Plate 2	Southern portion of site, looking towards the west
Plate 3	Southern-central part of site, looking towards northeast
Plate 4	Central portion of site, looking towards northwest
Plate 5	View of site looking across towards north and Nuneham Courtenay Registered Park and Garden and Conservation Area
Plate 6	View towards northeast focusing on potential earthwork
Plate 7	View towards northeast across eastern part of site towards Nuneham Courtenay Registered Park and Garden
Plate 8	View across the eastern part of the site

Plate 9	Extract of Aerial Photograph Ref. US/13PH/581 (June 1943) as held by Historic England at Swindon Archive
Plate 10	Extract of Aerial Photograph Ref. US/7PH/GP/LOC107 (December 1943) as held by Historic England at Swindon Archive
Plate 11	Extract of Aerial Photograph Ref. SU5396/5 (2000) as held by Historic England at Swindon Archive
Plate 12	Extract of Aerial Photograph Ref. SU5396/7 (2006) as held by Historic England at Swindon Archive
Plate 13	View from Nuneham Courtenay Registered Park and Garden looking across the site towards southeast and the Culham Science Centre

Summary

This report has been prepared by Oxford Archaeology (OA) on behalf of Statera Energy. This desk-based assessment of the historic environment was conducted to determine how the proposed development at the Culham Battery Storage Site, Oxfordshire, henceforth referred to as 'the site' will affect the heritage assets within its vicinity, both designated and non-designated.

No designated heritage assets have been recorded within the site. However, the site extends in to the Nuneham Courtney Grade I Registered Park and Garden and lies in the immediate environs of Nuneham Courtney Conservation Area.

The proposed development will result in the expansion of an industrial area, through the construction of a new battery storage facility. The proposed development will introduce battery units into views looking south from the designated heritage assets, reducing the arable and grassland landscape visible from these assets. The Culham Science Centre is already visible in views looking south from the designated assets. As a result, the proposed development would be experienced against the backdrop of an existing industrial complex and thus would not significantly alter the character of the views looking south from the designated heritage assets. The construction of the battery storage facility would thus have no more than a minor impact upon the setting of the designated heritage assets mentioned above.

The site is predicted to contain archaeological remains potentially dating to the prehistoric and Romano-British periods. Aerial photographs, LiDAR images, and prior geophysical surveys identified new possible features that will need archaeological investigation in order to be defined and interpreted. These features are particularly clear in the southern portion of the site, which consists of the least previously impacted area by possible groundworks associated with the construction of an airfield in 1943. Groundworks associated with the proposed development have the potential to truncate or remove any surviving archaeological remains present within the site. It is anticipated that further archaeological investigation, in the form of an archaeological evaluation may be required to identify and record any archaeological remains affected by the development. The result of the evaluation would inform a suitable mitigation strategy, if required, intended to reduce, or remove, any archaeological impacts identified.

The need for and nature of any archaeological work within the site should be agreed with the Oxfordshire County Archaeologist prior to the commencement of any works.

1 INTRODUCTION

- 1.1.1 Oxford Archaeology (OA) has been commissioned by Statera Energy to prepare an historic environment desk-based assessment for the construction of Culham Battery Storage Site, Oxfordshire, henceforth known as 'the site'. The site is centred on National Grid Reference SU 52906 96519, and its location is shown on Figure 1.
- 1.1.2 This report has been prepared in accordance with National Planning Policy (2023) and the following good practice and guidance documents:
- Chartered Institute for Archaeologists (CIfA) Standards and Guidance for Historic Environment Desk-based Assessments (2020),
 - A Written Scheme of Investigation (WSI) outlining the scope of the assessment (OA 2022) was submitted to and agreed with the Oxfordshire County Council Planning Archaeologist;
 - Historic England Good Practice Advice in Planning 1-3 (2015a, 2015b, 2017);
 - Historic England Advice Note 12 (2019); and
 - Planning Practice Guidance (2021) - Historic Environment, published by the Ministry of Housing, Communities and Local Government.

2 PROPOSED DEVELOPMENT

- 2.1.1 The proposed development consists of the construction of a battery storage site to the north of Culham Science Centre. A plan of the planned development is showed in Figure 1 and 24.

3 LOCATION, TOPOGRAPHY AND GEOLOGY

- 3.1.1 The site is located to the north of Thame Lane and the Culham Science Centre, primarily within Culham County Parish but extending slightly into the Parish of Nuneham Courtenay, both of which are located within the South Oxfordshire administrative district. It lies c 200m to the east is the Clifton Hampden parish. The site currently partly comprises six agricultural fields. It is bounded by agricultural land to the north and east, Culham Science Centre to the south and the Cherwell Valley railway line to the west.
- 3.1.2 The site's environs consist of a low-lying and fairly flat area of the Thames floodplain, on average reaching 65m above Ordnance Datum (aOD), with a maximum of 69m aOD towards the northeast.
- 3.1.3 The site lies over a bedrock constituted of sedimentary Lower Greensand sandstone, formed between 126.3 and 100.5 million years ago during the Cretaceous period. There is no information recorded on superficial geology (BGS, nd.).

4 AIMS AND OBJECTIVES

- 4.1.1 The purpose of this desk-based assessment is to determine, as far as is reasonably possible, from existing records and observations, an understanding of the historic environment within and surrounding the site in order to:
- Identify known designated assets (scheduled monuments, listed buildings, conservation areas, registered parks and gardens etc.) and non-designated heritage assets (e.g. locally listed or historic buildings) within the site and its environs;
 - Describe the nature, character, coherence, survival, integrity, significance, and extent of the Historic Landscape within the site and its environs, considering any past or existing impacts which may have affected the coherence of the landscape;
 - Assess the significance of known heritage assets within the environs of the site, considering their archaeological, historic, architectural, and artistic interests;
 - Assess the current contribution of the site towards the setting of identified heritage assets;
 - Assess the direct and indirect (setting) impacts of the proposed development upon the landscape and identified heritage assets within the site and its environs;
 - Provide an outline assessment of any potential impacts which may result from the proposal; and
 - Present outline proposals for the appropriate mitigation measures intended to reduce or remove any such impacts defined.

5 PLANNING BACKGROUND

5.1 Planning (Listed Buildings and Conservation Areas) Act 1990

- 5.1.1 Works that affect listed buildings or structures and conservation areas are subject to additional controls administered by the Local Planning Authority (LPA) under the Planning (Listed Buildings and Conservation Areas) Act 1990 (amended by the Enterprise and Regulatory Reform Act 2013). Section 66 states that in considering development which affects a listed building or its setting the local planning authority 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. In respect to conservation areas Section 72 states that special attention should be paid to the desirability of preserving or enhancing the character or appearance of that area.
- 5.1.2 Under the terms of the act a listed building may not be demolished, altered, or extended in any manner which would affect its character as a building of special architectural or historic interest without Listed Building Consent being granted.
- 5.1.3 There are three grades of listing (in descending order):
- Grade I: Buildings of exceptional interest
 - Grade II*: Particularly important buildings of more than special interest; and
 - Grade II: Buildings of special interest, warranting every effort to preserve.

5.1.4 Historic England is a statutory consultee in relation to works affecting Grade I/II* listed buildings.

5.2 Historic Buildings and Ancient Monuments Act 1953

5.2.1 Historic England is enabled by the Historic Buildings and Ancient Monuments Act 1953 (as amended by the National Heritage Act 1983) to maintain a register of parks, gardens and battlefield sites which appear to Historic England to be of special historic interest. Registration in this way makes the effect of proposed development on the sites and their settings a material consideration. Historic England is a statutory consultee in relation to works affecting Grade I/II* registered parks and gardens.

5.3 Historic England Register of Parks and Gardens in England

5.3.1 The Register of Parks and Gardens of Special Historic Interest in England is maintained by Historic England (formerly English Heritage) and divides the sites into three grade bands, similar to those used for Listed Buildings (see above). This Register was established in 1983, and its emphasis is on 'designed' landscapes, rather than on planting or botanical importance.

5.3.2 There are three grades of listing (in descending order):

- Grade I: Park and Gardens of exceptional interest
- Grade II*: Particularly important Park and Gardens of more than special interest; and
- Grade II: Park and Gardens of special interest, warranting every effort to preserve.

5.3.3 The main purpose of the Register is to celebrate designated landscapes of note and encourage appropriate protection. A Registered Park and Garden is not protected by a separate regime, but applications for planning permission will give great weight to their conservation. The National Planning Policy Framework (NPPF) defines them as designated heritage assets and as such their conservation should be an objective of all sustainable development (see below). Substantial harm to or total loss of a Grade II registered Park or Garden should be exceptional and for a Grade II* or I registered Park and Garden such loss or harm should be wholly exceptional. Local Plan Authorities (LPA) are required to consult Historic England when considering an application which affects a Grade I or II* registered site and the Garden Trust on all application affecting registered sites of all grades.

5.4 National Planning Policy

5.4.1 Section 16 of National Planning Policy Framework (NPPF) as issued in December 2023 sets out the Government's planning policies in relation to the conservation and enhancement of the historic environment.

5.4.2 Paragraphs 200 and 201 state:

200. 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.

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

5.4.3 Paragraphs 205 and 206 state:

200. 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.

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

a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional;

b) assets of the highest significance, notably scheduled monuments, protected wreck sites, registered battlefields, grade I and II listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional (non-designated heritage assets of archaeological interest, which are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets).*

5.4.4 Paragraphs 201 and 202 state:

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

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

202. 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.

5.4.5 Paragraph 209 states:

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

5.4.6 Paragraph 211 states:

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

5.4.7 Paragraphs 212 and 213 state:

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

5.4.8 213. Not all elements of a Conservation Area or World Heritage Site will necessarily contribute to its significance. Loss of a building (or other element) which makes a positive contribution to the significance of the Conservation Area or World Heritage Site should be treated either as substantial harm under paragraph 195 or less than substantial harm under paragraph 196, as appropriate, taking into account the relative significance of the element affected and its contribution to the significance of the Conservation Area or World Heritage Site as a whole.

5.5 The South Oxfordshire Local Plan 2035

5.5.1 The South Oxfordshire Local Plan 2035 was adopted in December 2020 and sets out the future for development in South Oxfordshire up to 2035, including regarding the protection and management of the historic environment. Policies considered relevant to this assessment are outlined below:

5.5.2 Policy ENV6: Historic Environment

1. Proposals for new development that may affect designated and non-designated heritage assets should take account of the desirability of sustaining and enhancing the significance of those assets and putting them to viable uses consistent with their conservation. Heritage assets include statutorily designated Scheduled Monuments, Listed Buildings or structures, Conservation Areas, Registered Parks and Gardens, Registered Battlefields, archaeology of national and local interest and non-designated

buildings, structures or historic landscapes that contribute to local historic and architectural interest of the district's historic environment, and also includes those heritage assets listed by the Oxfordshire Historic Environmental Record.

2. Proposals for new development should be sensitively designed and should not cause harm to the historic environment. Proposals that have an impact on heritage assets (designated and non-designated) will be supported particularly where they:

i) conserve or enhance the significance of the heritage asset and settings. The more important the heritage asset, the greater the weight that will be given to its conservation;

ii) make a positive contribution to local character and distinctiveness (through high standards of design, reflecting its significance, including through the use of appropriate materials and construction techniques);

iii) make a positive contribution towards wider public benefits;

iv) provide a viable future use for a heritage asset that is consistent with the conservation of its significance; and/or

v) protect a heritage asset that is currently at risk.

3. Non-designated heritage assets, where identified through local or neighbourhood plan-making, Conservation Area Appraisal or review or through the planning application process, will be recognised as heritage assets in accordance with national guidance and any local criteria. Development proposals that directly or indirectly affect the significance of a non-designated heritage asset will be determined with regard to the scale of any harm or loss and the significance of the asset.

4. Applicants will be required to describe, in line with best practice and relevant national guidance, the significance of any heritage assets affected including any contribution made by their setting. The level of detail should be proportionate to the asset's importance. In some circumstances further survey, analysis and/or recording will be made a condition of consent.

5. Particular encouragement will be given to schemes that will help secure the long term conservation of vacant and under-used buildings and bring them back into appropriate use.

6. Alterations to historic buildings, for example to improve energy efficiency, should respect the integrity of the historic environment and the character and significance of the building.

5.5.3 Policy ENV7: Listed Buildings

1. Proposals for development, including change of use, that involve any alteration of, addition to or partial demolition of a listed building or within the curtilage of, or affecting the setting of a listed building will be expected to:

i) conserve, enhance or better reveal those elements which contribute to the heritage significance and/or its setting;

ii) respect any features of special architectural or historic interest, including, where relevant, the historic curtilage or context, such as burgage plots, or its value within a group and/or its setting, such as the importance of a street frontage or traditional shopfronts; and

iii) be sympathetic to the listed building and its setting in terms of its siting, size, scale, height, alignment, materials and finishes (including colour and texture), design and form, in order to retain the special interest that justifies its designation through appropriate design, with regard to the South Oxfordshire Design Guide.

2. Development proposals affecting the significance of a listed building or its setting that will lead to substantial harm or total loss of significance will be refused unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that demonstrably outweigh that harm or loss or where the applicant can demonstrate that: i) the nature of the heritage asset prevents all reasonable uses of the site; and ii) no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and iii) conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and iv) the harm or loss is outweighed by the benefit of bringing the site back into use.

3. Development proposals that would result in less than substantial harm to the significance of a listed building will be expected to:

i) minimise harm and avoid adverse impacts, and provide justification for any adverse impacts, harm or loss of significance;

ii) identify any demonstrable public benefits or exceptional circumstances in relation to the development proposed; and

iii) investigate and record changes or loss of fabric, features, objects or remains, both known and unknown, in a manner proportionate to the importance of the change or loss, and to make this information publicly accessible.

4. Changes of use will be supported where it can be demonstrated that the new use can be accommodated without any adverse effect on the significance of the building and its setting.

5.5.4 Policy ENV8: Conservation Areas

1. Proposals for development within or affecting the setting of a Conservation Area must conserve or enhance its special interest, character, setting and appearance. Development will be expected to:

i) contribute to the Conservation Area's special interest and its relationship within its setting. The special characteristics of the Conservation Area (such as existing walls, buildings, trees, hedges, burgage plots, traditional shopfronts and signs, farm groups, medieval townscapes, archaeological features, historic routes etc.) should be preserved;

ii) take into account important views within, into or out of the Conservation Area and show that these would be retained and unharmed;

iii) respect the local character and distinctiveness of the Conservation Area in terms of the development's: siting; size; scale; height; alignment; materials and finishes (including colour and texture); proportions; design; and form and should have regard to the South Oxfordshire Design Guide and any relevant Conservation Area Character Appraisal;

iv) be sympathetic to the original curtilage of buildings and pattern of development that forms part of the historic interest of the Conservation Area;

v) be sympathetic to important spaces such as paddocks, greens, gardens and other gaps or spaces between buildings which make a positive contribution to the pattern of development in the Conservation Area;

vi) ensure the wider social and environmental effects generated by the development are compatible with the existing character and appearance of the Conservation Area; and/or vii) ensure no loss of, or harm to any building or feature that makes a positive contribution to the special interest, character or appearance of the Conservation Area.

2. Where a proposed development will lead to substantial harm to or total loss of significance of a Conservation Area, consent will only be granted where it can be demonstrated that the substantial harm is necessary to achieve substantial public benefits that outweigh that harm or loss.

3. Where a development proposal will lead to less than substantial harm to the significance of a Conservation Area, this harm will be weighed against the public benefits of the proposal.

4. Wherever possible the sympathetic restoration and re-use of structures which make a positive contribution to the special interest, character or appearance of the Conservation Area will be encouraged to prevent harm through the cumulative loss of features which are an asset to the Conservation Area.

5.5.5 Policy ENV9: Archaeology and Scheduled Monuments

1. Development must protect the site and setting of Scheduled Monuments or nationally important designated or undesignated archaeological remains.

2. Applicants will be expected to undertake an assessment of appropriate detail to determine whether the development site is known to, or is likely to, contain archaeological remains. Proposals must show the development proposals have had regard to any such remains.

3. Where the assessment indicates archaeological remains on site, and development could disturb or adversely affect archaeological remains and/or their setting, applicants will be expected to:

i) submit an appropriate archaeological desk-based assessment; or

ii) undertake a field evaluation (conducted by a suitably qualified archaeological organisation), where necessary.

4. Nationally important archaeological remains (whether scheduled or demonstrably of equivalent significance) should be preserved in situ. Non-designated archaeological

sites or deposits of significance equal to that of a nationally important monument will be assessed as though those sites or deposits are designated.

5. Where a proposed development will lead to substantial harm to or total loss of significance of such remains consent will only be permitted where it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss.

6. Where a development proposal will lead to less than substantial harm to the significance of such remains, this harm will be weighed against the public benefits of the proposal.

7. For other archaeological remains, the effect of a development proposal on the significance of the remains, either directly or indirectly, will be taken into account in determining the application.

8. In exceptional cases, where harm to or loss of significance to the asset is considered to be justified, the harm should be minimised, and mitigated by a programme of archaeological investigation, including excavation, recording and analysis. Planning permission will not be granted until this programme has been submitted to, and approved by, the Council and development should not commence until these works have been satisfactorily undertaken by an appropriately qualified organisation. The results and analysis of findings subsequent to the investigation should be published and made available to the relevant local and county authorities.

5.5.6 Policy ENV10: Historic Battlefields, Registered Parks and Gardens and Historic Landscapes

1. Proposals should conserve or enhance the special historic interest, character or setting of a battlefield, or park or garden on the Historic England Registers of Historic Battlefields or Register of Historic Parks and Gardens of Special Historic Interest in England.

2. Any harm to or loss of significance of any heritage asset requires clear and convincing justification. Substantial harm to or loss of these assets should be wholly exceptional in the case of Registered Historic Battlefields and Grade I and Grade II* Registered Historic Parks and Gardens and exceptional in the case of Grade II Registered Historic Parks and Gardens.

3. Where a proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, consent will only be granted where it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss. All other options for their conservation or use must have been explored.

4. A balanced judgment, having regard to the scale of any harm or loss and the significance of the heritage asset, will be required in assessing proposals affecting non-designated historic battlefields, parks and historic landscapes including historic routes.

5. Applicants will be required to describe, in line with best practice and relevant national guidance, the significance of any heritage assets affected including any contribution made by their setting. The level of detail should be proportionate to the

asset's importance. In some circumstances, further survey, analysis and recording will be made a condition of consent.

5.6 Culham Neighbourhood Plan 2020-41

5.6.1 The Culham Neighbourhood plan was completed was adopted in June 2023, the relevant policy to this assessment will be CUL6, Local Heritage Assets, which states:

5.6.2 The Neighbourhood Plan identifies buildings as Local Heritage Assets as included in the Appendix B and shown on the Policies Map, for the purposes of applying development plan policies on non-designated heritage assets:

i. The Lion, High Street;

ii. Nos. 7 – 11 The Green;

iii. 22-23 High Street;

iv. School House, High Street;

v. Kiln Cottage;

vi. Station House;

vii. The Railway Inn;

viii. Tollgate Cottage;

ix. 60 Abingdon Road;

x. Maud Hales Terrace, Abingdon Bridge;

xi. Pill boxes (Types FW3/24 The Burycroft; FW3/24C & FW3/28A at Appleford Bridge; FW3/28A at Sutton Bridge; FW3/24C at Sutton Pools; FW3/28A at Zouch Farm and FW3/28A at Tollgate Road).

5.6.3 The policy designates certain buildings or structures as Local Heritage Assets in order to give them additional protection as heritage assets, in recognition of the important contribution they make to the special character of the parish for the application of Policy ENV6 of the SODCLP. Policy ENV6 requires a balanced judgement to take place where proposals directly or indirectly affect the significance of a local heritage asset taking into account the scale of any harm or loss and the significance of the asset, in line with §197 of the NPPF. This means that Policy ENV6 will apply to schemes coming forward which may affect the local heritage assets listed in this policy. Culham parish also comprises a rich archaeological landscape within which is contained numerous cropmark complexes denoting its early occupation and use from the prehistoric period onwards. This policy focuses on the built historic environment. Policy ENV6 of the SODCLP will therefore continue to apply to above or below ground archaeological remains as well as other elements of the historic environment.

6 METHODOLOGY

6.1 Introduction

- 6.1.1 This assessment has been prepared in accordance with National Planning Policy Framework (NPPF 2023) which provides an approach for describing the significance of a heritage asset. NPPF specifies that the significance of any heritage asset(s), including any contribution made by setting, should be described in a *‘level of detail proportionate to the assets’ importance, and no more than is sufficient to understand the potential impacts of the proposal on their significance’*.
- 6.1.2 The impact of the proposed development upon the setting of a heritage asset(s) has been assessed following the methodology detailed in Historic England’s *The Setting of Heritage Assets, Good Practice Guidance Advice in Planning Note 3* (2017).
- 6.1.3 The Historic England guidance note provides guidance for managing change within the setting of heritage assets, including archaeological remains and historic buildings, sites, areas, and landscapes. It puts forward a staged approach to taking decisions on setting as well as providing advice on how to assess the contribution of views to the significance of heritage assets.
- 6.1.4 The following steps, used within this assessment, are recommended by Historic England as a broad approach to assessment:
- Step 1: Identify which heritage assets and their settings are affected;
 - Step 2: Assess the degree to which these settings make a contribution to the significance of the heritage asset(s) or allow the significance to be appreciated;
 - Step 3: Assess the effects of the proposed development whether beneficial or harmful, on that significance or on the ability to appreciate it;
 - Step 4: Explore ways to maximise enhancement and avoid or minimise harm;
 - Step 5: Make and document the decisions and monitor outcomes.

6.2 Scope and Sources Consulted

- 6.2.1 Historic England’s *The Setting of Heritage Assets* (2017) specifies that the first step of the assessment should identify those heritage assets likely to be affected by the proposed development. This is informed by a desk-based study and site visit.
- 6.2.2 A 1 km search area (hereafter the study area) has been used to identify designated and non-designated heritage assets which could be affected by the proposed development. The study area, and list of sources have been agreed with the local authority’s historic environment advisor through the provision of a Written Scheme of Investigation (WSI). The assessment was informed through both a desk-based review and a site visit.
- 6.2.3 The following sources were consulted to inform the presence of heritage assets within the site and surrounding study area and form the archaeological and historic baseline:
- The National Heritage List for England (NHLE) for designated heritage assets;

- Oxfordshire County Council Historic Environment Record (OCCHER) for non-designated heritage assets, archaeological events, and Historic Landscape Characterisation (HLC);
 - Oxfordshire County Council’s digitised collections and Picture Oxon website, for historic maps, photographs, documentary sources and manuscripts;
 - Oxfordshire Historic Landscape Characterisation (HLC);
 - The Oxfordshire History Centre for historic maps, photographs, documentary sources and manuscripts;
 - Groundsure Mapping for Historic Ordnance Survey Maps;
 - National Mapping Project (NMP) data as held by Historic England;
 - Aerial Photographs as held by the Historic England Archive in Swindon;
 - LiDAR data as held by the Environment Agency;
 - Portable Antiquities Scheme (PAS) data;
 - Geotechnical data as held by the client and the British Geological Survey; and
 - Other relevant primary and secondary sources including published and unpublished works as held by OA and relevant libraries.
- 6.2.4 For ease of reference each heritage asset identified has been allocated a unique OA number. This is included in the heritage gazetteer provided in Appendix A, referred to in the text where relevant and marked on Figures 2-4. A full list of sources consulted can be found in Appendix B. Figures 5-17 show historic mapping of the site.

6.3 Approach for assessing heritage significance

- 6.3.1 Step 2 of Historic England’s *The Setting of Heritage Assets* (2017) requires the setting and significance of heritage assets to be identified. NPPF defines significance (for heritage policy) as *‘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’*.
- 6.3.2 Heritage interests are defined in Planning Practice Guidance (2021) as:
- **Archaeological interest:** There will be archaeological interest in a heritage asset if it holds, or potentially holds, evidence of past human activity worthy of expert investigation at some point.
 - **Architectural and artistic interest:** These are interests in the design and general aesthetics of a place. They can arise from conscious design or fortuitously from the way the heritage asset has evolved. More specifically architectural interest is an interest in the art or science of design, construction and craftsmanship and decoration of building and structures of all types. Artistic interest is an interest in other human creative skill like sculpture.
 - **Historic Interest:** An interest in past lives and events (including prehistoric). Heritage assets can illustrate or be associated with them. Heritage assets with historic interest not only provide a material record of our nation’s history, but can also provide meaning for communities derived from their collective experience of a place and can symbolise wider values such as faith and cultural identity.

- 6.3.3 Elements of a heritage assets 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.

6.4 Assumptions and Limitations

- 6.4.1 Data used to compile this report consists of secondary information derived from a variety of sources. The assumption is made that this data is reasonably accurate.
- 6.4.2 The records held by the Oxfordshire County Council HER (OCCHER) are not a record of all surviving heritage assets, but a record of the discovery of a wide range of archaeological and historical components of the historic environment. The information held within it is not complete and does not preclude the subsequent discovery of further heritage assets that are, at present, unknown.

7 HISTORIC ENVIRONMENT BASELINE

7.1 Introduction

- 7.1.1 The following section identifies the known heritage assets within the study area. These were identified from sources listed in section 5 and through a site walkover. In accordance with Step 1 of Historic England's *The Setting of Heritage Assets* (2017) this section also identifies heritage assets that have the potential to receive effects to their setting and heritage significance from the proposed development within the site.

7.2 Walkover Survey

- 7.2.1 A walkover survey of the site was carried out on the 27th of January in cloudy conditions. Not all the areas of the site were accessed, and no new archaeological features were identified during the visit. The site comprised part of six fields and is currently in pasture. The south-west part of the site, west of Thame Lane, could not be accessed as it was fenced, and livestock were grazing the area (Plate 1). However, the area was clearly visible from the road as no vegetation screened the site.
- 7.2.2 The very south-west corner of the site, south of Thame Lane, is overgrown (Plate 2). This portion is characterised by bumps and depressions, possibly confirming the results of the geophysical survey (see below and Figure 25) and the existence of some of the possible enclosures (**OA 42**), and possible ground disturbance due to the construction of the airfield. Although the enclosures (**OA 42**) had been identified in other parts of the site (see Figure 25), no earthworks had been identified in these areas, suggesting that the features are buried. No trees were present in the field, and the electricity pylons are outside the site's boundaries.
- 7.2.3 Two hydrology monitoring points were identified the centre of the site, one within the southern portion (Plate 3) and the other to the north of the pylon (Plate 4). No boundaries in the form of hedgerows or fences define the extent of the Registered Park and Garden (Plate 5). The Conservation Area ends at Lock Wood, visible on Plate 5 in the background, and the Park and Garden boundary runs where Thame Lane bends towards the northeast.

- 7.2.4 The earthwork (**OA 66**) as identified on LiDAR is visible on the ground. However, it appears to be the result of the groundworks due to the ground levelling prior to the construction of the electric pylon (Plate 6).
- 7.2.5 Within the south-east corner of the scheme a mound of undetermined origin was observed (Plate 7). The mound is bisected by a gravel road, possibly on the location of the south drive (**OA 62**). Nearby this gravel road (Plate 8) are some earthworks possibly related to the groundworks identified on aerial photographs during the construction of the airfield (see below).

7.3 Designated Heritage Assets

- 7.3.1 The proposed development boundary encroaches on one designated heritage asset, Nuneham Courtenay Registered Park and Garden. In the wider study area, there are two Conservation Areas, and three Listed Buildings (**OA 1-3**) and one locally listed building (**OA 64**). The locations of these heritage assets are shown on Figure 2 and examined below.

Registered Park and Gardens

- 7.3.2 The north-west boundary of the site extends approximately 250m into the southern boundary of the grade I Nuneham Courtenay Park and Garden (NHLE 1000122). The List Entry is in Appendix C. These 470ha landscaped park and pleasure grounds were laid out around Nuneham House in three main phases from the 1760s to 1832. After relocating the village of Nuneham (called Newnham) in 1760, the first phase of the parkland was laid out by the first Earl Harcourt, who wanted a classical landscape to offset his Greek 'temple', the newly constructed church. The second Earl commissioned a flower garden and a picturesque landscape, by William Mason, in the 1770s. In 1779-82, Mason and the Earl supervised the laying out of the parkland and of Brown's Walk in the pleasure grounds as designed by Lancelot 'Capability' Brown. William Gilpin carried out some other works and designed the arboretum in 1832.
- 7.3.3 The site and the Culham scientific laboratories are partly included within the rural setting located to the south of the main parkland. Four woodlands belonging to this park lie within the study area, Lock Wood, Ewer's Copse, Furze Brake, and New Covent, as shown in Figure 2.
- 7.3.4 According to Historic England's guidance, Nuneham Courtenay's gardens belong to the category of 'Country House Gardens 1660 to the late 18th century' (*Rural Landscapes. Register of Parks and Gardens Selection Guide* 2018, 7). This category is described as follows: 'In the later seventeenth century prospects were of growing importance to garden designers, with views being carried out into the countryside beyond by axial and radial avenues of trees and rides through woodlands' (*ibid.*, 7).
- 7.3.5 There were a complex series of vistas intended to face towards Oxford and Abingdon, with the house and the parkland sitting on a wooded knoll above the River Thames. Part of this carefully laid out landscape was visible from the south drive (**OA 62**), now disused, but that was the principal entrance from London before 1900 and used to enter the park 2km southeast of the house, past the now demolished site of Abingdon Lodge (**OA 63**). The drive curved north-east through the park, with views to the

northwest, south, and east opening up at various points, joining the main drive by Manor Lodge.

Conservation Areas

- 7.3.6 There are no Conservation Areas located within the site. In the wider study area, there are two Conservation Areas, Nuneham Courtenay and Clifton Hampden. The location and extent of the Conservation Areas are shown in Figure 2.
- 7.3.7 The Conservation Area of Nuneham Courtenay only partly coincides with the Nuneham Courtenay Park and Garden as the southern portion of the park is not included within the Conservation Area. For this reason, it lies outside the site boundary.
- 7.3.8 The national importance of the village and the park was one of the reasons for its designation as a single Conservation Area on 11 December 1984. This designation imposes controls over developments in the village as a whole and on the individual buildings which form its special character and appearance, as agreed in the Nuneham Courtenay Agreement, signed by the University, South Oxfordshire District Council, and the inhabitants of the village on 1 August 1980 (*A Guide to the Planning Legal Agreement Nuneham Courtenay*: 3).
- 7.3.9 The Clifton Hampden Conservation Area lies at the southern edge of the study area, c 1.4km from the site. This Area was designated in the 1970s, and includes the historic village of Clifton Hampden, characterised by beautiful old, thatched cottages (*Burcot and Clifton Hampden Neighbourhood Plan* 2020: 10). Given the distance from the site, it has been scoped out from this assessment.

Listed Buildings

- 7.3.10 There are no Listed Buildings located within the site. In the wider study area, there are two Grade II Listed Buildings and one listed II*.
- 7.3.11 Thame Lane Bridge (**OA 1**) is the grade II listed building closest to the site, located c 170m to the south-west of the site. It was built in 1843-4 by Isambard Brunel for the Didcot-Oxford line, it is largely in original handmade red brick.
- 7.3.12 The 18th-century Fullamoor Farmhouse (**OA 2**) is a grade II listed building located c 1.2km to the south of the site. According to the Historic England entry, it possibly originated in the 17th century, and it was named Clifton Farm in the 1st edition (1830) Ordnance Survey (OS) maps.
- 7.3.13 Culham Station Ticket Office (**OA 3**) consists of a grade II* listed building located c 1km to the south of the site. Now disused, it was designed by Brunel for the Great Western Railways, probably at the same time as the Thame Lane Bridge (**OA 1**). Built as 'Abingdon Road Station', it was renamed 'Culham Station' in 1856. It is a unique survival of this station design, in domestic Tudor style characterised by ashlar stone plinth, red brick with ashlar stone dressing and Welsh slate roof.

Local Heritage Assets

- 7.3.14 The Culham Neighbourhood Plan identified fifteen locally listed buildings (see above 5.6.2). Of these, Station House (**OA 64**), built in 1898, is located at c 1km to the south

of the site. Often referred to as the Station Master's House, it was thought to be designed by Brunel, although there is no real evidence for this.

- 7.3.15 There is no Neighbourhood plan for Nuneham and Clifton Hampden, and therefore no locally listed buildings within these parishes.

7.4 Previous Archaeological Investigations

- 7.4.1 Among the fourteen previous archaeological investigations (**OA 4-14, 65, and 67-8**) carried out within the study area, as shown in Figure 3, two partly lie within the site (**OA 10, and 13**). In the broader study area, four geophysical surveys (**OA 4, 10, and 67-8**), four investigations (**OA 5, 7-8, and 11**), four evaluations (**OA 6, 12, 14, and 65**), and two watching briefs (**OA 9, and 13**) had been carried out.
- 7.4.2 In 2016, Headland Archaeology carried out a magnetometry survey (**OA 10**) covering approximately 242 hectares in order to assess the archaeological potential of the area. This survey identified eight areas of probable archaeological significance and isolated archaeological features such as barrows or small enclosures (**OA 42, 56, and 57**). The possible enclosures (**OA 56**) c 175m to the northwest of the site had been subject to an extensive evaluation (**OA 65**). The Archaeological Area 6, complex 8 (**OA 42**) had been identified by the survey in the location of the southern portion of the site and the southern pond (Figure 25). This complex (**OA 42**) had been described as 'Several discrete anomalies of possible archaeological origin have been identified but again it is difficult to discriminate between those anomalies of possible archaeological interest and those due to modern disturbance associated with the former airfield or the cluster of pylons located immediately to the south' (Headland Archaeology 2016, 6).
- 7.4.3 In August 2022, Magnitude Survey carried out a magnetometry survey (**OA 68**) within the western half of the site (Figure 26). Although there are ferrous anomalies, possibly related to the former airfield, buried services, ferrous debris/made ground, the results of the previous magnetometry survey (**OA 10**, see above) was confirmed in terms of the possible archaeology within these areas and the attenuation ponds, and in the southern parts of the site a group of rectilinear features (**OA 42**), some with internal sub-divisions, was detected abutting a track or drove-way feature (Magnitude Survey 2022, 11).
- 7.4.4 In February 2023, Archaeological Surveys carried out a magnetometry survey (**OA 67**) within the eastern part of the site (Figure 26). A series of positive and negative linear anomalies extend across the site, that might be interpreted as possible land drains because are parallel with the northern and southern field boundaries. 'Several appear to be truncated by later anomalies and an association with former cut features is possible. Other anomalies could be associated with drainage and possibly ground make-up or natural features. A zone of dumping in the southeastern corner of the site has resulted in widespread magnetic debris, as has material used within track consolidation in the west' (Archaeological Surveys 2023, 11). Some possible archaeological features were identified to the west of the south drive (**OA 62**).
- 7.4.5 In 1991, a watching brief carried out by Oxford Archaeology (**OA 13**) took place as part of the works for the laying out of the Oxford-Didcot pipeline, which partly runs through the centre of the site, crossing it from north to south. The easement was 25m wide,

and the pipeline crosses the site for c 255m. The three main excavated sites were a Roman settlement at Hadden Hill, a prehistoric and Roman site at Fullamoor Farm, and a Roman industrial site at Lower Farm, Nuneham Courtenay, outside the study area (Booth *et al.* 1993, 87). No archaeology was found within the site.

- 7.4.6 A trial trench evaluation (**OA 65**) was carried out within the site's environs. The evaluation was divided into multiple areas. The area 180m to the south of the site did not uncover any archaeological finds or features except for a layer possibly relating to the railway construction (OA 2023: 111-2). A field system (**OA 56**) was found in the evaluation area 200m to the west of the site, which had been previously recorded in the OCCHER, and was dated to the Roman period with re-use in the Anglo-Saxon period (OA 2023: 31-2).
- 7.4.7 Another watching brief was carried out by Network Archaeology (**OA 9**) within a minimum distance of c 320m to the north of the site. Twenty-seven trenches were excavated along the line of the existing water main to allow the insertion of lining material. A possible boundary ditch in Lock Wood, undated, (**OA 45**) was found (see below 7.6.3).

7.5 Prehistoric Period (500,000 BP – AD 43)

Early Prehistory

- 7.5.1 The broader study area is located within a landscape of high archaeological potential dating to the prehistoric period. Palaeolithic stone tools have been found along the river, especially in the area of gravel extraction north of the Isis River, c 950m to the north of the site.
- 7.5.2 A significant number of Palaeolithic stone tools have been recovered from this area. Three Palaeolithic handaxes (**OA 16**) were found, and in 1978, another was found (**OA 15**), respectively c 800m and c 1km to the northwest of the site. One bout coupe style handaxe (**OA 17**) was recovered during gravel extraction at c 1.2km to the north of the site, dating to the middle Palaeolithic period.
- 7.5.3 Activity on the gravel terraces over the north bank of the river continued during the Mesolithic period. Over 1700 Mesolithic and Neolithic flints and some bones (**OA 19**) were found during construction carried out without a previous mitigation strategy. In particular, a nature pond was dug in 2002, c 1km to the north of the site. OCCHER records that the density of the flints and the small size of some of them indicates flint working and settlement on the site in the Mesolithic and Neolithic periods as evidenced by microliths and pieces of a polished axe. The finds were found on top of the gravel geology, overlaid by a crumbly alluvial clay (Ainslie 2002, 38).
- 7.5.4 Mesolithic findspots consist of a flint blade (**OA 21**) found c 760m to the northwest of the site; a Thames pick (**OA 20**) was discovered in the bottom of a drainage ditch located c 1.1km to the northwest of the site; and microlithic blade (**OA 22**) was recovered from borehole carried out c 1.3km to the north of the site.
- 7.5.5 The Neolithic evidence ranges from findspots (**OA 24-6**) to possible settlements. Traces of activity was mainly recovered from the north side of the river except for some features (**OA 27**) recognised on Aerial Photographs and recorded as possibly Neolithic

by OCCHER. These consisted of rectangular enclosures, pits, linear features, parallel lines, trackways, and a circular feature (**OA 27**), located c 1.2km to the southeast of the site.

- 7.5.6 A knife, a sherd of pottery, and a small quantity of human remains has been identified as a Neolithic burial (**OA 23**), excavated c 800m to the northwest of the site.
- 7.5.7 Neolithic occupation has been revealed by pits (**OA 30**) c 770m to the north of the site. A pit containing 50 sherds of Durrington Walls style pottery (**OA 29**) was discovered in front of an Iron Age hut within a later settlement (**OA 37**, see below 7.5.13), 810m to the north of the site.
- 7.5.8 A Neolithic ring ditch, a layer interpreted as a Neolithic floor level, and finds (**OA 28**) were found during gravel working c 930m to the northwest of the site.

Late Prehistory

- 7.5.9 Bronze Age activity is suggested by the discovery of several sherds of Beaker pottery (**OA 31**) c 910m to the northwest of the site, after topsoil had been stripped for gravel digging.
- 7.5.10 A possible barrow (**OA 32**) was identified in the 2016 geophysical survey (**OA 10**) as a geophysical anomaly with a single discrete anomaly within the feature also likely to be of archaeological significance located c 940m to the east of the site. It is worth noting that other known Bronze Age barrows and barrow cemeteries have been recorded outside of the study area along and adjacent to the River Thames (e.g., at Fullamoor Plantation, Radley, Appleford, Burcot and Dorchester).
- 7.5.11 A substantial Iron Age presence within the site is suggested by cropmarks and excavated sites. As above mentioned, a geophysical survey (**OA 10**) carried out within the site revealed the presence of two series of enclosures (**OA 42**), consisting of a feature aligned southwest-northeast and the other SSW-NNE, a possible trackway, and probable barrow (Headland Archaeology 2016, Ill. 17, and 42). This area is partly located within the southern portion of the site and had been recorded by OCCHER as prehistoric. The anomalies (**OA 42**) have been plotted in Figure 25.
- 7.5.12 Much archaeological evidence was found due to the salvage works carried out during gravel extraction excavations. The gravel, and consequent quarrying areas, are located in the area to the north of the River Thames.
- 7.5.13 Among the archaeological features revealed by one of these salvage works (**OA 8**), a possible Iron Age settlement (**OA 37**) was found c 700m to the northwest of the site. Features included a possible Iron Age inhumation (Wilson *et al.* 1984, 3-4). One of the dated excavated features consisted of a gully that contained a complete Romano-British flagon surrounded by burnt debris, revealed to be cremated human bones (Wilson *et al.* 1984, 3).
- 7.5.14 Within the same area of gravel extraction, OCCHER identified and distinguished several ditches cut in the natural gravel, probably part of an enclosure, (**OA 36**) and located c 800m to the northwest of the site.

- 7.5.15 Cropmarks (**OA 35**) located c 930m to the southeast of the site show a series of linear features which have been identified as possible Iron Age archaeological evidence. Another series of at least 10 enclosures over two complexes, was interpreted as a possible settlement and/or field system (**OA 41**), after being identified as geophysical anomalies at c 700m to the south of the site.
- 7.5.16 Some archaeological features including ditches, gullies, and pits (**OA 18**) dating from the prehistoric to Roman periods had been revealed at c 1km to the southeast of the site.
- 7.5.17 Iron Age ditches reused in the Roman period (**OA 34**) were found at c 930m to the northwest of the site, although they were all badly damaged during topsoil stripping.

7.6 Romano-British Period (AD 43 – 410)

- 7.6.1 An evaluation (**OA 65**) carried out within the undated possible field system (**OA 56**) as recorded in the OCCHER was identified on a geophysical survey (**OA 10**), c 200m to the northwest of the site. It had been interpreted as a Roman enclosure system and potential settlement activity, with the field-system partly re-used in Anglo-Saxon period (OA 2023, 31-2). Discrete features, mainly pits, were recorded across the network of enclosures (*ibid.*).
- 7.6.2 Two Roman pots (**OA 44**) were found during the excavations involved in a railway cutting in 1844 near the corner of Nunheam Park. OCCHER lists the location as being c 10m to the west of the site. Dated to the 3rd or 4th centuries, one consisted of an imitation Samian and the other of greyware.
- 7.6.3 A multi-phase series of ditches and pits (**OA 45**), possibly part of a Romano-British settlement was found c 320m to the northeast of the site.
- 7.6.4 A copper alloy seal matrix with a name cast in retrograde (**OA 43**) was found while metal detecting c 830m to the southwest of the site. The visible letters are NIIMNISTIVS, and this object was possibly used to impress a name into a soft substance, for instance, butter.
- 7.6.5 Among the archaeological features revealed by one of the salvage works (**OA 8**), carried out c 700m to the northwest of the site, there was a gully that contained a complete Romano-British flagon surrounded by burnt debris, revealed to be cremated human bones (Wilson *et al.* 1984, 3).

7.7 The Medieval Period (AD 410 – 1550)

Early Medieval Period (AD 410 – 1065)

- 1.1.1 The reconstruction of the site's surroundings from the early medieval period up to the 16th century is scattered and characterise by historical gaps. The site is close to or crosses the boundaries of three different parishes, Culham, Nuneham Courtenay, and Clifton Hampden. It is possible that the boundaries of these parishes shifted. Each of these parishes are now within the parish of Dorchester, but at the time of the Domesday Book Nuneham was in the hundred of Headington, and Clifton Hampden and Culham are not mentioned.

- 1.1.2 The Domesday Book does not mention Culham, as 'There are, moreover, villages of great age which Domesday Book seems to ignore. Culham, which had been in the possession of Abingdon Abbey since the 10th, if not since the 8th century, is unsurveyed (...) for Abingdon Abbey's special rights over it led to its not being included in Domesday Book, the hundred rolls or the tax lists, and few manorial accounts have survived' (VCH 1939, 373-95). Moreover, Culham's placename suggests an Anglo-Saxon foundation, as Culham means *Cula's hamm*, referring to the village's position in a bend of the Thames (VCH 1962, 27-39). During the early medieval period, a royal residence was built on Andersey Island (*ibid.*), located c 2.2km to the west of the site. In 821 was granted the condition of sanctuary (*ibid.*). It is not possible to determine whether the boundaries of the parish were as far east as the site.
- 1.1.3 The site lies closer to Nuneham parish, which at the time was partly covered by woodland as a coppice of two furlongs long and one wide is mentioned in the Domesday Book (VCH 1957, 234-49). The village was called Newenham, it was held by a Dane called Hacon, and had a recorded population of 45 households which mostly relied on the river for their living, as at the time the settlement was riverside (*ibid.*). Three fisherman and a lucrative water mill are recorded, and the fact that the tenants of the village paid a high rent suggests a wealthy community (*ibid.*). The name means 'new settlement', possibly hinting at an Anglo-Saxon foundation chronologically later than some earlier surrounding villages as for instance Dorchester (*ibid.*). The Domesday Book also mention the existence of 40 acres of meadow and 10 of pastures (*ibid.*).
- 1.1.4 There is little archaeological evidence dating to this period within the study area, and the main instance had been found in the surroundings of Clifton Hampden, a settlement not mentioned in the Domesday Book. In 1892, during drainage work in fields north of Clifton Hampden, several human skeletons with battle axes, swords, and other iron artefacts were revealed. These were identified as Anglo-Saxon inhumation burials (**OA 46**), located c 1.3km to the southeast of the site. Anglo-Saxon pottery sherds found within the Romano-British enclosure system (**OA 56**) suggest the reuse of this system during the early medieval period (OA 2023, 32).

Later Medieval Period (1066 – 1550)

- 7.7.1 In 1086, Nuneham was held by de Courcy's family, until it was inherited in 1224 by a granddaughter, Margaret, married de Riviers, and kept in this family until 1293, when it was transferred to the king's hands (VCH 1957, 234-49). During this period, the village continued to prosper (*ibid.*). In 1310 it was granted to High de Courtenay, the Earl of Devon, and remained in the family until 1391, when it was owned by Sir John Drayton and then by his wife until her death in 1437 (*ibid.*). After a two-decades long dispute among the possible heiresses, in 1492 it passed to the de la Pole, but they lost the estate after their rebellion and Nuneham passed from hands to hands until John Pollard acquired the manor in 1544 (*ibid.*). The Victoria County History also mentions that 'the fields lay no doubt as they did centuries later to the north and east of the village. But in 1086 it seems that much less than half the township's land was cultivated. (...) The rest of the land must have been covered, as much of it has always been since, with woodland and furze' (*ibid.*).

7.7.2 Little is known of Culham before the Tudor period, except that was part of Abingdon Abbey's property (VCH 1939, 373-95). Possibly it was because Culham's rights of sanctuary continued in this period, until 1442, and it was exempted from taxation since 1291 (*ibid.*). The manor of Culham was part of the Abingdon Abbey properties until the Dissolution (1538), when it was seized by the Crown and then seized by the Burys in 1545. The manor seems to have comprised the bulk of the land in the parish. It is not possible to calculate the exact acreage from the survey of 1539, but the manorial land was then at least 1,136 acres, and almost certainly more (*ibid.*).

7.7.3 Various factors suggest that the site during medieval times was either pasture, or heathland: the lack of clear ridges-and-furrows as observed on LiDAR imagery (see below); the fact that Nuneham's agricultural landscape was expanding to the north and east, further away from the site; and that Culham's focus was near Abingdon and the river, to the west.

7.8 Post-Medieval Period (1550-1900)

7.8.1 Historical documents dating to the 16th century regulated the use of the common land. As the site is shown as lying within Culham heath in the later maps (see below), it is very likely that it was part of the common land in the previous centuries as well. 'In 1686 every yardland had customary commons for 5 beasts and 60 sheep. The common called Culham Heath was to be used for horses and cows from 1 May and for sheep from St. Thomas's Day; it was to be hained from 2 February to 1 May' (VCH 1939, 373-95). The Bishopp retained possession of the manor in 1662, when the male line of Burys came to an end (*ibid.*).

7.8.2 An early map drawn by Roque in 1761 shows Culham within Berkshire's boundaries (Fig. 5) and the site located in the environs of a water course. Both Jeffrey's (1767)¹ and Davis's (1797) (Fig. 6) maps of Oxfordshire show the borders of the park and garden, mostly coinciding with the current ones. In the first one, a Lodge, likely Abingdon Lodge (**OA 63**), is annotated. According to these maps, the site lies partly within Nuneham Park and Garden, and the watercourse ends further to the south of the site. Since the cartographic information of pre-Ordnance Survey maps is not always accurate, it is not possible to define with certainty if this water course was actually within the site's environs, and it is likely that the site was not within the park's borders. The fact that the site was located within a blank area suggests that it was probably heathland.

7.8.3 There are two pre-enclosure plans of the parish of Culham held at the Oxfordshire History Centre; one dating 1802 and showing the property of Sir Cecil Bishopp (Ref. SL121/M/1) and the other dating to 1810 (Ref. 50 Geo III c.cxl as and Award MS. D. D. Par. Culham b.12). Both the maps show the same layout of the fields where the site used to lie, and the oldest is depicted in Figure 7. The southern portion of site was within two fields owned by Sir Cecil Bishopp, Lord of the Manor of Culham and Bishop of Oxford. The western one was used as a manorial allotment, and the second was

¹ Jeffrey, T, 1767 The County of Oxford, Surveyed Anno MDCCLXVI & VII. Bodleian Library Gough Maps Oxfordshire 17, Photo: Bodleian Libraries, University of Oxford. Available at: <https://iiif.bodleian.ox.ac.uk/iiif/viewer/a61a88c5-7815-4eb3-b1d8-68f7fd35a09e#?c=0&m=0&s=0&cv=1&r=0&xywh=3271%2C1749%2C1269%2C644> [accessed November 2020]

labelled as Culham Poor, an allotment on the heath. The northern portion of the site lies within a wood, possibly connected to the Lock Wood of Nuneham Park. This suggests that at the beginning of the 19th century the site was mainly used as manorial allotment, a small portion at the east was on the heath allotted to the poor, and another small portion was possibly part of Lock Wood.

7.8.4 The railway line from Didcot to Oxford (**OA 51**) runs partly through the eastern fringe of the parish, west of the site. Although first considered in 1833, it was completed in 1844 (VCH 1962, 27-39).

7.8.5 Nuneham tithe map held by Oxfordshire History Centre (Ref. 292/M) and accessible online is dated 1843.² The site is not within this tithe map as it does not fall within Nuneham's boundaries. However, it is still relevant as Abingdon Lodge used to stand close by the northern border of the site, and it is the first map showing the south drive (**OA 62**). Although not shown in this map, the southern portion of the south drive (**OA 62**) is depicted in later maps as the site. It is thus possible that this drive (**OA 62**) used to cross the site since at least 1843.

7.8.6 The Ordnance Survey map (OS) dated 1875 (Fig. 8) shows Abingdon Lodge as lying in the vicinity of the site.

7.9 Modern

7.9.1 The 1900 Ordnance Survey map (OS) (Fig. 9) shows the division in two fields already identified in the pre-inclosure maps. The only relevant change shown in the 1910 Ordnance Survey map (OS) map (Fig. 10) is the plantation of trees along the south drive (**OA 62**). According to the APs, this remained until 1943, between June (Ref. US/13PH/581 as held at the Swindon Archive; Plate 9) and December (Ref. US/7PH/GP/LOC107; Plate 10). In the last photo, the tree-lined estate road (**OA 62**) that connected the station in a straight line until it crosses Thame Lane has been destroyed.

7.9.2 In 1944, an Aircraft Receipt and Despatch Unit for the Royal Navy was commissioned and built within the site's environs, including the eastern part of the site, the wooded area, and well into Nuneham Park itself. Known as Royal Naval Air Station (RNAS Culham) or HMS Hornbill, this airfield was operational as part of the Fleet Air Arm between 1944 and 1953. In the aerial photographs held at Swindon, reserved due to the military confidentiality until 1993, different phases of construction are recognisable. Thame Lane was diverted to its current layout and the estate road to the station terminated where it met the new line of the lane. The ground layout was characterised by three runways, many hangars, and two encampments. In May 1947, the Photographic Trials and Development Unit was based here.

7.9.3 In the late 1950s, the United Kingdom Atomic Energy Authority identified Culham as suitable for the construction of a new laboratory for plasma physics and fusion research that officially opened in 1965 (<https://culham.org.uk/about-us/>). All the

² <https://www.oxfordshirehistory.org.uk/public/maps/tithe/zoomified/zoom.htm?Nuneham-Courtenay> accessed 28/09/22. It is worth mentioning that it is characterised by a south-up map orientation.

buildings and roadways were dismantled, and the estate handed back to the original owners. It is known nowadays as Culham Science Centre. Possibly given the military importance of this centre, it is not shown on the 1960 OS map (Fig. 11).

7.9.4 In the APs, Abingdon Lodge and the south drive (**OA 62**) seem to have been destroyed during the levelling prior to the airfield construction (Plate 11). On a radio amateur website it is possible to see a photograph dating to the 1970s showing the gate of Abingdon Lodge as preserved. It was not possible to add the photo to this assessment because of copyright issues. However, it is available online (see footnote), and it shows Abingdon Lodge with a caption which reads ‘having become “raised up” presumably after the surrounding ground was levelled. However, this was demolished soon after the picture was taken, and nothing remains’.³ The photo shows the gate as standing over a mound within the site. The mound is still visible today, as investigated during the site visit (Plate 7). Later OS map dated 1975, 1982, and 1992 (Figs. 12-4) show a depression where Abingdon Lodge used to stand, labelled as ‘Camp’ (disused). Despite the impossibility to define the degree of groundworks involved in the airfield’s construction, and whether the mound within the site pre-dated the airfield, it is possible that the lodge was destroyed during the levelling works associated with the airfield construction and then ‘raised up’ again.

7.9.5 The satellite photographs available on Google Earth Pro App range from 1985 to 2022. Although the 1985 photograph is not clear enough to distinguish detail, there are many photographs dated 2003, 2004, 2006, 2009, 2010, 2017, 2018, 2020, 2021, and 2022. The layout of the fields and the rural character of this area to the north of Culham Science Centre remained virtually unchanged, as also confirmed by the OS maps 2001, 2010, and 2022 (Figs. 15-7).

7.10 Undated

7.10.1 A series of undated features have been recorded within the study area, mostly connected with visible cropmarks.

7.10.2 A series of field systems and associated features (**OA 57**) identified by geophysical survey (**OA 10**) are located c 100m to the southwest of the site (Headland Archaeology 2016, Ill. 17, and 42).

7.11 Aerial Photographs

7.11.1 A review of aerial photographs (APs) held at the Historic England Archive in Swindon was carried out as part of the baseline assessment. A total of 144 aerial photographs comprising vertical and oblique images covering the period 1942 – 2008 were reviewed. Figure 18 provides a sketch plot of the cropmarks identified in the National Mapping Programme (NMP) as supplied by the Historic England Archives, and this has been annotated with the features identified during the research.

7.11.2 All the cropmarks identified by the NMP data coincide with an OCCHER monument (**OA 27, 30, 35-7, 57, and 61**). However, some APs post-dating the airfield construction show some cropmarks within the site environs. Some features had been identified

³ www.aeolian-hall.myzen.co.uk/ (HMS Hornbill) [Accessed 01/11/22].

within the site, consisting of a rounded feature (**OA 65**) visible on the aerial photograph dating 2000 (Plate 11), and a linear feature that looks like the foundation of a former building (**OA 67**), visible on APs dating 2006 (SU5396/7, SU5396/8, and SU5396/9; Plate 12). These features are located at c 50m to the east of the site.

7.11.3 The former Abingdon Lodge (**OA 63**) and the south drive (**OA 62**) are also identifiable in all the APs pre-dating December 1943, for instance, in Plate 9.

7.12 LiDAR

7.12.1 The LiDAR data utilized in this report was captured by the Environment Agency (EA) and made available via the EA online archive. In this instance Digital Terrain Model (DTM) tiles and composite data for Ordnance Survey Sheet [SU59NW] were downloaded.

7.12.2 This data was surveyed at 1 m intervals and was collected on 28/09/2022. The DTM data was processed using the Relief Visualisation Toolkit (RVT) and visualisations were created using Hill Shade, Sky View factor, open-positive, open-negative and simple local relief model (SLRM) visualisation techniques. Indicative hill-shade and SLRM visualisation of the site and the surrounding area have been included as Figures 19 and 20 respectively, with annotated version of the hill-shade as Figure 21. Possible archaeological features are visible within the site.

7.12.3 A linear earthwork (**OA 66**), oriented E-W, is recognisable within the northern portion of the site. The site visit assessed that possibly this earthwork might be associated with the construction of an electricity pylon.

7.12.4 The SLRM LiDAR visualisation (Fig. 20), hints at the presence of paleochannels to the west of the railway, where less development has been carried out. It cannot be ruled out the possibility that paleochannels used to run within the site’s environs. LiDAR photos also suggest that the river used to run slightly southwards, c 360m to the north of the site.

7.12.5 There is no trace of ridge-and-furrow within the site’s environs. It is not clear whether this is due either to the use of the site as heath or to the groundworks associated with the airfield construction.

7.13 Previous Impacts and Survival

7.13.1 The history of the site from 1761 to 2022 can be reconstructed from a series of historic maps and aerial photographs. As it appears in the historical maps (Figs. 5-17), the site did not undergo any significant ground disturbance up to the 1940s. However, the aerial photographs (Fig. 22) show that during the Second World War, possible groundworks were focused in the eastern half of the site. In that area, the Royal Naval Air Station (RNAS Culham) or HMS Hornbill, an airfield operational as part of the Fleet Air Arm between 1944 and 1953 was built. Although it was not possible to assess the degree of impact of the groundworks carried out, it is predicted that they might have disturbed archaeological remains. It is noteworthy that there is no ridge-and-furrow noticeable on the LiDAR images. Another indication of a high degree of groundworks are the results of the geophysical survey, with possible enclosures identified in the

central-southern portion of the site, where the airfield was not located, and some magnetic disturbances identified where the development used to lay (Headland Archaeology 2016, Ill. 17, and 42). Archaeological features might survive beneath areas previously impacted by the airfield, especially in areas of runways where deep truncation is likely to be minimal.

- 7.13.2 Aerial Photographs also confirmed an agricultural use of the land prior to and after its military use. Although the degree of impact depends on the thickness of the plough-soil, it is predicted that arable processes did not truncate or remove any surviving buried features.

7.14 Historic Landscape Character

- 7.14.1 The Oxfordshire Historic Landscape Character Assessment records the site as reorganised enclosures (Historic Landscape Type ENC-RE) as shown in Figure 23. The OCCHER records the site's environs as possibly being part of the open field system until 1798, although no evidence or source is mentioned.
- 7.14.2 The boundary between Nuneham Parish (established 1715) and Culham Parish (established 1650) are located within the site. However, there is no hedgerow delimiting this border.

8 STATEMENT OF SIGNIFICANCE

8.1 Introduction

- 8.1.1 In accordance with Step 2 of Historic England's *The Setting of Heritage Assets* (2017) the following section assesses the heritage significance of the known heritage assets as identified in the historic baseline that have the potential to receive effects from development within the site. The section assesses whether and to what degree the site contributes towards the setting and heritage significance of these heritage assets. The archaeological potential of the site is then summarised based on the historic environment baseline and known previous impacts.

8.2 Designated Heritage Assets Registered Park and Gardens

- 8.2.1 Nuneham Courtenay is a Grade I registered Park and Garden (NHLE 1000122, see Appendix 3). These landscape park and pleasure grounds extend south around the Grade II* Nuneham House and form its landscape setting. The site and the Culham scientific laboratories are included within the rural setting located to the south of the main parkland. This rural setting and its views along the river towards Oxford and Abingdon were appreciated by driving along the southern drive (OA 62), now disused as this southern side was industrially developed since 1943.
- 8.2.2 The park is considered nationally important because of its architectural, historic, and artistic elements which are derived from the topography of the park, its association with prominent historical figures such as Capability Brown, England's most influential and best-known designer of the 'informal landscapes', of which this park is an early example, and the views over the river and Oxford's spires.

- 8.2.3 The site extends into the southern limit of the Park, although no feature screens or marks the boundaries of the Park. The main landscape park is located behind the northern ridge, and it is not visible from the site due to the topography of the area.

Conservation Area: Nuneham Courtenay

- 8.2.4 The Conservation Area of Nuneham Courtenay partly coincides with the Nuneham Courtney Park and Garden, except for the southern portion. This means that the site adjacent to but not within the Conservation Area. The Conservation Area includes both the park and the village of Nuneham Courtenay. In 1756, the village was moved from its original location by the first Earl Harcourt. It was deliberately designed, probably by the Earl himself, on a symmetrical plan combining classical formality with elements of picturesque in the design and materials of the semi-detached cottages (*A Guide to the Planning Legal Agreement Nuneham Courtenay*).
- 8.2.5 Except for the new development at the north of the village, the village hall, and one later house on the west side of the street, the village was designed by Harcourt to complement his landscaped park and his classical house. Its architectural integrity is a deliberate statement of the taste and the power of the landed aristocracy and its visual relationship to the adjacent park remains intact. It is one of only two examples in the country of a completely planned estate village (*A Guide to the Planning Legal Agreement Nuneham Courtenay*). The village and its environs, meaning the landscaped park, are considered nationally important because of their unique architectural, historic, and artistic elements.
- 8.2.6 The site is located c 270m to the south of the Conservation Area. There is intervisibility between the site and this designated area, as the southern boundary of Nuneham Courtenay Conservation Area coincides with Lock Wood. This wood is located over a ridge immediately to the north of the site, de facto being the background of the landscape. However, the village and hence the main focus of the Conservation Area is located behind the northern ridge, and it is not visible from the site due to the geomorphology of the area.

Listed Buildings: Culham Station Ticket Office (OA 3)

- 8.2.7 Culham Station Ticket Office is a grade II* Listed Building designed by Brunel for the Great Western Railways, probably at the same time as the Thame Lane Bridge. Built as 'Abingdon Road Station', it was renamed 'Culham Station' in 1856. This station is considered to be significant due to its architectural and historic interest which are derived from the fact that it is reputed to be the unique survival out of four of this station design known as the domestic Tudor style, and more broadly one of the few Brunel-designed stations surviving.
- 8.2.8 Culham Station Ticket Office is located 1km to the south of the site. Due to intervening distance and surrounding planting and development, there is no intervisibility between either the site or this listed building.

Thame Lane Bridge (OA 1)

8.2.9 Thame Lane Bridge is the grade II Listed Building built in 1843-4 by Isambard Brunel for the Didcot-Oxford line. The flying segmental arch road bridge is a rare architectural feature, opposed to the more common larger triple arches. Its historic interest lies in the fact that it was an early subsidiary line, built under Bunuel, giving Great Western Railways access to the Midlands in rivalry to the London and Birmingham railway. This bridge is considered to be significant due to its architectural and historic interest which are derived by its unusual architectural features, its surviving without major works or alterations, its connection to such an important historic figure as Isambard Brunel, and the Didcot-Oxford line's role in the Great Western Railway history. The company, founded in 1833, ran from London to Bristol, and in the 1840s decided to open an access to the Midlands through Didcot and Oxford, in open rivalry to the London & Birmingham Railway.

8.2.10 The site is located c 170m to the east of the Thame Lane Bridge. Due to the intervening distance and surrounding planting and development in the form of an electricity pylon, there is little intervisibility between the site and this listed building.

Fullamoor Farmhouse (OA 2)

8.2.11 The 18th-century Fullamoor Farmhouse is a grade II Listed Building that plausibly originated in the 17th century, and it was named Clifton Farm in the 1st edition (1830) Ordnance Survey (OS) maps. The high-quality construction of the east-west range may reflect the prosperity of the farm during the mid to late 18th century. This building is considered to be significant because of its architectural and historical interest which are derived from its architectural features, its age, and the survival of the historic fabric within the building. It also provides insight into the changing needs and social aspirations of its owners.

8.2.12 The site is located at c 1.2km to the north of this listed building. Due to intervening distance and surrounding planting and development, there is no intervisibility between either the site or this listed building.

Local Heritage Assets:

Station House (OA 64)

8.2.13 Station House (OA 64) is the only locally listed building within the study area. It was thought to have been possibly designed by Brunel. It is built in red brick with English bond brickwork. The 1901 census records the then Station Master, George William Townsend and his wife Louise, as boarding with Charles Lewis and family at 'Station House'. Its historical interest is due to the possible connection with historical figures as Isambard Brunel.

8.2.14 The site is located at c 1km to the north of this locally listed building. Due to intervening distance and surrounding planting and development, there is no intervisibility between either the site or this listed building.

8.3 Archaeological Potential

8.3.1 The site appears to have archaeological potential, as identified by the geophysical survey (OA 10) carried out by Headland Archaeology. The possible archaeological features (OA 42) as interpreted by the report (Headland Archaeology 2016) are shown

in Figure 25, as well as the linear feature identified on LiDAR images (OA 66), the cropmarks (OA 65-7) identified on APs, and the south drive (OA 62).

8.3.2 The geophysical survey revealed a concentration of magnetic disturbance where cropmarks (OA 67) had been identified. Magnetic disturbance was also found where the south drive (OA 62) used to run. It is predicted that possibly these portions of the site were heavily disturbed by the airfield groundworks, but the existence of cropmarks (OA 67), and possible enclosures, in the proximity suggest the possible existence of archaeological artefacts, deposits, and features so far not identified.

8.3.3 Geophysical survey (OA 10, and 68) identified possible enclosures (OA 42) within the southern portion of the site. These have been described as the eastern part of a complex bisected by the railway line. The rectangular area comprising the enclosures is aligned SSW/NNE. 'Several discrete anomalies of possible archaeological origin have been identified but again it is difficult to discriminate between those anomalies of possible archaeological interest and those due to modern disturbance associated with the former airfield or the cluster of pylons located immediately to the south' (Headland Archaeology 2016, 6).

8.3.4 The Palaeolithic and Mesolithic focus of activity appears to be centred to the north of the river, around the gravel terraces 1km to the north of the site, which means that the potential for finds and features of these dates is low but possible.

8.3.5 The chronology of the cropmarks (OA 65-7) in the east of the site, the features (OA 42) identified within the south, and the earthwork (OA 66) identified on LiDAR is indeterminate. However, given that the broader study area is characterised by prehistoric activity, from the Palaeolithic to Iron Age, and that Roman activity is known within the site's environs (OA 56), there is a high potential for the site to contain remains dating to the Iron Age and Roman periods.

8.3.6 Given the little activity identified within the study area for the post-Roman period, and the likely use of the site area as heath or marginal land on the edge of the two parishes, the site is considered to have a low potential to contain post-Roman remains.

8.3.7 Given the high degree of activities carried out for the construction and destruction of the airfield, and the proximity with the railway, it is predicted that the site has a high potential to contain features dating to this period, possibly in the form of man-made layers resulting in levelling processes.

8.4 Historic Landscape

8.4.1 The site is described in the Oxfordshire Historic Landscape Character Assessment as reorganised enclosures (Historic Landscape Type ENC-RE). The area is dominated by a designed landscape, consisting of Nuneham Courtney Park and Garden, and industry, namely the Culham Science Centre. The Park and Garden includes Lock Wood (formerly Park Wood) which is possibly planted before the 17th century, and Furze Brake (formerly the Gorse), a 19th-century plantation.

8.4.2 Given the impact of the airfield and the Science Centre, all the reorganised enclosures including the site and its environs were affected by boundary loss in modern times. The reorganised enclosure is considered to be of low (local) significance.

9 POTENTIAL IMPACTS

9.1 Introduction

- 9.1.1 In accordance with Step 3 of Historic England's *The Setting of Heritage Assets* (2017) this section assesses the effects of the proposed scheme upon designated and non-designated heritage assets and their setting. It also assesses the potential impact that the proposed scheme may have upon archaeological remains where present.

9.2 Proposed Scheme

- 9.2.1 The proposed scheme is for the construction of a 500 megawatt (MW) batter storage facility and is shown on Figure 24. It is anticipated that the proposed development will result in groundworks associated with the following principal activities:

- Excavation of foundation and utilities trenches;
- Construction of either a temporary works or permanent access road;
- Removal and redirection of stone access track (Thame Lane);
- Excavation of attenuation ponds;
- Landscaping and ecological works; and
- Levelling/soil management of the site prior to construction.

9.3 Assessment of the Proposed Scheme

Designated Heritage assets

- 9.3.1 The site extends into Nuneham Courtenay Park and Garden with impact being primarily associated with landscaping, however, the erection of 14m high transmission tower is proposed. Nuneham Conservation Area lies to the north of the site. As such, the proposed development has the potential to indirectly affect both designated heritage assets by changing their setting.
- 9.3.2 The proposed development will result in the expansion of the industrial area, through the construction of the battery storage facility. The proposed development will introduce battery storage units into views looking south from the designated heritage assets, reducing the arable landscape visible from these assets. The Culham Science Centre is already visible in views looking south from the designated assets (Plate 13). As a result, the proposed development would be experienced against the backdrop of an existing industrial complex and thus would not significantly alter the character of the views looking south from the designated heritage assets. This impact is further offset by the introduction of landscaping, including trees and scrubland, to shield the site from view and hence the character of the landscape. During construction, the introduction of additional noise, dust and visual disturbance will have a moderate impact on these assets, although this impact will be temporary and short term. Once completed the facility would have only a minor impact on these assets due to its location within the already industrialised landscape.
- 9.3.3 Thame Lane Bridge (**OA 1**) is part of an infrastructure associated with the railway and industrial in nature. For this reason, the proposed development would be experienced against a background of existing industrial infrastructure and thus would not significantly alter the character of the views looking northeast from the designated

heritage asset. The construction of the battery storage facility would thus have no more than a minor impact upon the setting of the designated listed building.

Non-designated - Archaeology

- 9.3.4 The site has been assessed has having a high potential to contain prehistoric and Roman deposits and low potential to contain post-Roman deposits. The development has the potential to directly and significantly affect the possible archaeological remains as identified through LiDAR, Aerial Photographs, and geophysical survey (**OA 10**) and possible further such features which have not so far been detected.
- 9.3.5 Any below ground works will substantially impact, truncate, or disturb any archaeological remains. The implementation of a programme of archaeological evaluation is suggested, designed to further define and clarify the nature, survival, and sensitivity of any deposits within the site. This would then be used to facilitate the development of a mitigation strategy intended to reduce or remove any potential archaeological implications of the development. The details of any such programme will require clarification with the relevant archaeological officer at Oxfordshire County Council.

Historic landscape

- 9.3.6 The site is situated within an area defined by the Oxfordshire Historic Landscape Character Assessment as reorganised enclosures. The proposed development will result in a small change to the enclosures' boundaries. However, the batteries will affect the character and appearance of the fields, resulting in a further expansion of the industrial area to the north and in a change of the historic landscape of the area. However, these enclosures are quite recent and the historical landscape, i.e., the rural southern side of the park, had been already affected since 1943.

10 POTENTIAL FOR FURTHER WORK

- 10.1.1 The effect of the proposed development on potential archaeological remains will be a material consideration in the determination of a submitted planning application. Whilst no over-riding constraints that would prohibit or significantly constrain development have been identified, the presence of areas of activity within the site indicates that there are likely to be further such features which have not so far been detected. It is anticipated that further archaeological work will be required as part of the planning process.
- 10.1.2 The site has been subject to modern development which may have disturbed and/or truncated surviving archaeological remains, especially within eastern portion of the site. Away from these areas of disturbance it is very likely that archaeological remains could survive in the less disturbed parts of the site. Such remains, if present, could be affected by groundworks associated with the proposed development. Accordingly, further archaeological investigation may be required in the form of evaluation to identify and record any archaeological remains affected by the development.
- 10.1.3 The requirement of all archaeological work should be agreed with the Oxfordshire County Archaeologist prior to the commencement of any works.

11 CONCLUSION

- 11.1.1 The site extends into the south-west limit Nuneham Courtney Registered Park and Garden and lies immediately adjacent to Nuneham Courtney Conservation Area.
- 11.1.2 The proposed development will introduce landscaping and a transmission tower into a designated heritage asset. New battery storage units will be introduced into views looking south from the same assets, reducing the arable landscape visible from these assets. The Culham Science Centre is already visible in views looking south from the designated assets. As a result, the proposed development would be experienced against the backdrop of an existing industrial complex and thus would not significantly alter the character of the views looking south from the designated heritage assets. This impact would be further offset by landscaping within the southern limit of the Registered Park and Garden. During construction, the introduction of additional noise, dust and visual disturbance will have a moderate impact on these assets, although this impact will be temporary and short term. Despite the construction of the transmission tower along the southern boundary of the Registered Park and Garden, the backdrop of the existing Culham Science park and the industrial nature of the landscape reduces the impact of the proposed development and as such the facility would only introduce a minor impact on the asset.
- 11.1.3 The site is predicted to contain archaeological remains likely dating to the prehistoric and Roman periods. Aerial photographs, LiDAR images, and prior geophysical surveys identified new possible features. These features are especially clear within the southern portion of the site, consisting of the area least impacted by possible groundworks associated with the construction of an airfield in 1943. Groundworks associated with the proposed development have the potential to truncate or remove any surviving archaeological remains present within the site. It is anticipated that further archaeological investigation, in the form of an archaeological evaluation may be required to identify and record any archaeological remains affected by the development. The result of the evaluation would inform a suitable mitigation strategy, if required, intended to reduce, or remove, any archaeological impacts identified.
- 11.1.4 The need for and nature of any archaeological work within the site should be agreed with the Oxfordshire County Archaeologist prior to the commencement of any works.

APPENDIX A GAZETTEER OF HERITAGE ASSETS WITHIN THE STUDY AREA

Abbreviations

LB	Listed Building	SM	Scheduled Monument
RPG	Registered Park and Garden	RB	Registered Battlefield
CA	Conservation Area	WHS	World Heritage Site

OA	List Entry	HER Reference	Name and Summary	Monument Type	Period	Easting	Northing
1	1409238	N/A	Thame Lane Bridge (DCL5657)	II LB	1843-4	452823	196055
2	1449039	N/A	Fullamoor Farmhouse	II LB	18 th century	453355	195099
3	1059789	N/A	CULHAM STATION TICKET OFFICE AND WAITING ROOM	II* LB	1843-4	452920	195276
4	N/A	EOX6778	Geophysical Survey as part of Didcot Garden Town HIF 1 Scheme	GS	2020	451539	193601
5	N/A	EOX2765	Thrupp House Cottages: Investigation	IN	2002-4	451844	197220
6	N/A	EOX7165	Didcot Garden Town HIF 1 Overall Scheme: Didcot to Culham River Crossing (North)	EV	2021	452203	194977
7	N/A	EOX7090	Tuckwell's Gravel Quarry: Investigation	IN	1991-2	452320	197630
8	N/A	EOX6808	Investigation at Thrupp Farm: Investigation	IN	1970-84	452331	197106
9	N/A	EOX925	Watching Brief at Wootton Reline (Scheme 07FC)	WB	1999-2000	452458	197750
10	N/A	EOX6399	Geophysical Survey on Land at Culham	GS	2016	452998	196081
11	N/A	EOX2766	Pumney Farm: Investigation	IN	2001	453220	197529
12	N/A	EOX3202	Evaluation at Fullamoor Farmhouse	EV	2011	453364	195118
13	N/A	EOX1246	Oxford-Didcot Pipeline Watching Brief	WB	1991	453846	196538
14	N/A	EOX7166	Didcot Garden Town HIF 1 Overall Scheme: Clifton Hampden Bypass	EV	2021	453929	195784

15	MOX8589	9943	Palaeolithic Handaxe A small pointed handaxe found at Thrupp House Farm that had passed through a screening plant and rescued by Mr P J Wallis in 1978.	FINDSPOT	Palaeolithic	452000	197000
16	MOX8632	13014	Palaeolithic Handaxes Found in a ditch terminal of a late IA pennanular ditch during excavation of 'Thrupp site C' by Abingdon Arch Society in 1979.	FINDSPOT	Palaeolithic	452300	197100
17	MOX8718	15620	Middle Palaeolithic Handaxe Bout coupe style handaxe recovered during gravel extraction found lying at the base of the gravels at Tuckwell's Pit.	FINDSPOT	Middle Palaeolithic	452500	197700
18	MOX28190	29803	Prehistoric to Roman features Archaeological features including ditches, gullies and pits dating to this period were found during evaluation. Later features discussed in PRN29804.	DITCH; PIT; FIELD SYSTEM; POST HOLE	Lower Palaeolithic to Roman	453968	195751
19	MOX23811	26383	Possible Mesolithic - Neolithic Settlement Site, Pumney Farm Over 1700 Neolithic and Mesolithic flints and some bone was found by AAAHS whilst a nature pond was being dug.	HEARTH	Early Mesolithic to Late Neolithic	453220	197529
20	MOX8609	11462	Mesolithic Pick Thames pick found by Mr J P Wallis in bottom of drainage ditch in 1977.	FINDSPOT	Mesolithic	451840	197160
21	MOX8404	2083	Mesolithic Flint Blade (Thrupp Gravel Pit) Flint blade, 10.5cms in length with a pronounced curve, rolled and patinated and slightly stained found at Thrupp Gravel Pit c.1986.	FINDSPOT	Mesolithic	452440	197150
22	MOX8685	13711	Mesolithic Microlithic Blade (S of Pumney Farm) Recovered from borehole 2.5m below modern ground level of sandy clay.	FINDSPOT	Mesolithic	453230	197800
23	MOX8523	7252	Neolithic to Bronze Age Burial and Finds (c.475m SW of junction of railway line) At SW corner of the site a Neolithic landscape was located with accompanying burial.	BURIAL; FINDSPOT	Early Neolithic to Late Bronze Age	452280	197140

24	MOX8696	14368	Neolithic to Bronze Age Arrow/Spearhead Found by Roger Thomas c.1983.	FINDSPOT	Early Neolithic to Late Bronze Age	452300	197200
25	MOX8583	9873	Neolithic to Bronze Age Flint Flakes (SE of Home Farm) 1 untouched flake and 1 rough workshop waste.	FINDSPOT	Early Neolithic to Late Bronze Age	452396	197747
26	MOX8584	9874	Neolithic to Bronze Age Finds (N of viaduct on the River Thames) 2 untouched flakes, 1 core, 1 miscellaneous retouched flake and 2 scrapers found.	FINDSPOT	Early Neolithic to Late Bronze Age	452616	197298
27	MOX8554	8523	Later Prehistoric or Roman enclosures, linear features and pits Rectangular enclosures, pits, linear features, parallel lines and trackways, and a circle identified from AP's.	RECTILINEAR ENCLOSURE; PIT; LINEAR FEATURE; TRACKWAY; RING DITCH	Early Neolithic to Roman	453956	195252
28	MOX8625	12584	Neolithic Ring Ditch, Floor Level and Finds Excavated by Abingdon Arch & Historical Society at Thrupp House Farm in advance of gravel workings.	RING DITCH; FLOOR; FLINT SCATTER	Neolithic	452300	197300
29	MOX12578	16810	Neolithic pit with Grooved ware, Thrupp House Farm In entrance of MIA hut; about 50 sherds of Durrington Walls style.	PIT	Neolithic	452400	197200
30	MOX10831	13313	Neolithic and Iron Age Settlement, Thrupp Farm Site C 1979. Neolithic occupation revealed by pits within IA enclosures. Also, Palaeolithic handaxe. Excavated.	PIT	Neolithic	452500	197200
31	MOX8571	9260	Bronze Age Pottery (Near Trupp House Farm) Several sherds of beaker pottery were discovered after topsoil had been stripped for gravel digging (site of DMV). No other traces of occupation were found at the site.	FINDSPOT	Bronze Age	452100	197100
32	MOX27325	28949	Possible Barrow Single circular anomaly- possible barrow- identified as a geophysical anomaly.	BARROW	Bronze Age	454086	196377

33	MOX8620	12061	Iron Age/Roman Gullies, Field Boundaries & Ditch Site A 1971. Consists of N-S ditch running under the Abingdon branch railway line containing Roman potsherds, horse teeth and organic material from C1-C3.	GULLY; DITCH; FIELD BOUNDARY; BURIAL	Early Iron Age to Roman	451860	197120
34	MOX12579	16812	Roman ditches, Thrupp House Farm Site A 1984. Excavations revealed mainly Roman ditches, all badly damaged during topsoil stripping.	DITCH	Early Iron Age to Roman	452000	196993
35	MOX8519	5641	Undated Enclosures and Pits Cropmarks in a field adjoining the High Road immediately east of Fullamoor Farm show a series of lines clearly marked in the growing corn by their specially luxuriant growth and apparently analogous to those which appear yearly at Northfield Farm, Long	ENCLOSURE; PIT	Early Iron Age to Roman	453476	195264
36	MOX8531	7849	Iron Age Enclosures (c.475m SW of junction of railway line) The west part of the site contains at least two enclosures with a possible five.	ENCLOSURE	Iron Age	452282	197126
37	MOX8622	12236	Iron Age Enclosure, Field Boundary and Trackway Site B 1978. 3-sided ditched enclosure aligned E-W with dog-leg spur ditch continuing from east end of enclosure. See also PRN13313 for Neolithic features found.	DITCHED ENCLOSURE; FIELD BOUNDARY; TRACKWAY; FINDSPOT; SETTLEMENT	Iron Age	452300	197237
38	MOX12555	16795	Iron Age enclosure at Thrupp Domestic enclosure with additional enclosure to N. Extensive animal bone collection.	ENCLOSURE	Iron Age	452320	197630
39	MOX12573	16811	Iron Age hut gullies, Thrupp House Farm Site E 1977. Excavations revealed 2 IA hut gullies; presumably continuations of Site A 1984 (16812).	GULLY	Middle Iron Age	451800	197100
40	MOX8538	8405	Later Prehistoric Enclosures and Beaker Burial Salvage work in 1972/3 during the destruction of a	RECTANGUL AR	Later Prehistoric	452400	197700

				site by gravel extraction revealed an Iron Age round house, beaker burial, pottery, and rectangular enclosures to the NE.	ENCLOSURE; BURIAL; ROUND HOUSE (DOMESTIC)			
41	MOX27323	28947		Series of at least 10 enclosures over two complexes, interpreted as a possible settlement and/or field system, identified as geophysical anomalies.	SETTLEMENT ?; ENCLOSURE; FIELD SYSTEM?; ROUND HOUSE (DOMESTIC)?	Later Prehistoric	452658	195390
42	MOX27324	28948		Possible enclosures, trackway, and barrow Two series of enclosures, one aligned south-west/northeast, and the other aligned south-southwest/northnorth-east; a possible trackway; and probable barrow identified as geophysical anomalies. Possibly related to PRN15272.	ENCLOSURE; TRACKWAY; BARROW	Later Prehistoric	452787	196225
43	MOX24038	27526		Copper alloy Roman seal matrix found near Culham Found while metal detecting in 2008 and recorded by Surrey FLO.	FINDSPOT	Roman	452000	196000
44	MOX8393	1870		Roman Pots Two pots found in railway cutting in 1844.	FINDSPOT	Roman	452753	196375
45	MOX12229	16525		Possible Boundary Ditch for Lock Wood Feature exposed during relining of pipe trenches. It was visible in two sections and ran northeast to southwest. Broad, flat-bottomed profile (2.8m wide and 0.53m deep). Suggested boundary ditch, possibly connected with the landscaping of Lock Wood.	BOUNDARY DITCH	Roman	453080	196770
46	MOX8403	1892		Anglo Saxon Inhumation Burials "About 1865 during drainage work in the fields called 'Long Hadden and	INHUMATIO N	Early medieval	454450	196050

				Yards' several human skeletons with battle axes, swords and other similar articles of iron were found." Site is just north of the village of Clifton Hampden and west of footpath				
47	MOX8405	2136		Medieval Rabbit Warren (Warren Farm) Leland notes site of Abbot of Abingdon's rabbit-warren on his way out of Abingdon. Site may be equated with wood called The Warren or possibly with Warren Farm, 1.5km to east.	RABBIT WARREN	Medieval	451900	196300
48	MOX8413	2908		Thrupp Deserted Medieval Village Mentioned in Domesday Book but period of desertion not known. No local tradition or ground evidence of DMV.	DESERTED SETTLEMENT	Medieval	451900	197200
49	MOX28191	29804		Medieval to Post-Medieval Field System Evaluation revealed ditches which were likely remains of a medieval to post-medieval field system as well as earlier features discussed in PRN29803.	FIELD SYSTEM; TRACKWAY	Medieval to Post-medieval	453960	195750
50	MOX28269	29880		The Abingdon Branch line opened in 1856 as a broad-gauge railway and was converted to standard gauge in 1872. Originally opened for 2 miles between Abingdon and Culham, in 1873 it was extended to Radley, where a new station was opened.	RAILWAY	Post-medieval	451234	197410
51	MOX28099	29712		The Oxford and Didcot Branch Railway, although proposed by the GWR in 1833 as part of a plan to improve links to the Midlands, was delayed by the opposition of the Universities on the grounds of corruption of student's morals.	RAILWAY	Post-medieval	451682	198398
52	MOX8611	11538		Thrupp Farm Cottages, Barton Lane C17 house, now three cottages (2 derelict) remodelled mid/late C19.	HOUSE	Post-medieval	451727	197238
53	MOX23998	27487		Post-Medieval Postholes at Fullamoor Farmhouse Two postholes found during evaluation at above location; one contained Post Med belt buckle.	POST HOLE	Post-medieval	453350	195100

54	MOX8386	307	Site of Canal Lock and Cottages No longer extant.	CANAL LOCK; HOUSE	Post-medieval	453390	197432
55	MOX8607	11251	Milepost on A415 Abingdon 4 Henley 17.	MILEPOST	Post-medieval	454270	195430
56	MOX27644	29258	Four distinct complexes of enclosures and trackways identified by geophysical survey.	ENCLOSURE; TRACKWAY?	Undated	452307	196444
57	MOX8710	15272	Series of field systems and associated features Undated possible field System and pits identified from RCHM gravels overlay and series of multiple enclosures identified by geophysical survey. Possibly related to PRN28948.	FIELD SYSTEM?; PIT; ENCLOSURE; TRACKWAY	Undated	452668	196102
58	MOX27643	29257	Possible archaeological features Potential archaeological features identified during geophysical survey.	LINEAR FEATURE	Undated	453671	196217
59	MOX27320	28944	Possible D-shaped enclosure with a possible entrance to the northeast corner identified as a geophysical anomaly.	D SHAPED ENCLOSURE	Undated	451820	196197
60	MOX27321	28945	Possible irregular (subcircular) enclosure and ring gully identified as geophysical anomalies.	CURVILINEAR ENCLOSURE; RING DITCH	Undated	452171	195830
61	MOX27497	29118	Undated parallel ditches and enclosure visible as cropmarks on AP's.	DITCH; ENCLOSURE	Undated	454184	195403
62	N/A	N/A	South drive to Nuneham Park and Garden identified on OS maps	SOUTH DRIVE	Post-medieval		
63	N/A	N/A	Former Abingdon Lodge	LLB	N/A		
64	N/A	N/A	Station House	LLB	N/A	452951	195278
65	N/A	N/A	Evaluation at land east and west of railway	EV	2022		
66	N/A	N/A	Earthworks visible on LiDAR	EARTHWORK	Undated	452797	196470
67	N/A	N/A	Magnetometry survey carried out within the site in February 2023	MS			
68	N/A	N/A	Magnetometry survey carried out within the site in 2022	MS			

APPENDIX B BIBLIOGRAPHY AND LIST OF SOURCES CONSULTED

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APPENDIX C OFFICIAL LIST ENTRY OF NUNEHAM COURTENAY PARK AND GARDEN

Heritage Category: Park and Garden

Grade: I

List Entry Number: 1000122

Date first listed: 01-Jun-1984

County: Oxfordshire

District: South Oxfordshire (District Authority)

Parish: Clifton Hampden

County: Oxfordshire

District: South Oxfordshire (District Authority)

Parish: Nuneham Courtenay

National Grid Reference: SU5421097651

Details

A country house surrounded by an C18 landscape park and pleasure grounds laid out in three phases: 1760s, the first Earl Harcourt's classical landscape to offset his Greek 'temple' (church); William Mason's picturesque landscape of 1777 for the second Earl (Mason having laid out a famous flower garden here in 1771); the parkland laid out by Lancelot Brown 1779-82 (supervised by the second Earl and Mason), when he also laid out Brown's Walk in the pleasure grounds. A pinetum and other work was carried out by W S Gilpin, 1832.

HISTORIC DEVELOPMENT

The Harcourts, during the Middle Ages, lived at Stanton Harcourt, 10km west of Oxford. Sir Simon (later Viscount) Harcourt bought the manor of Newnham in 1712, although the Harcourt seat was not moved to Newnham Courtenay until 1760. By this time Sir Simon's grandson, the first Earl Harcourt (1714-77), had constructed a new house, designed by Stiff Leadbetter; at this point the spelling of the name was altered to Nuneham. The House was deliberately sited on a wooded knoll above the River Thames to take advantage of the views down to the water, of Oxford's dreaming spires, and into the broad countryside beyond. At the same time surrounding landscaped grounds were laid out. In the early 1760s the first Earl transplanted the village of Newnham, now within his landscape park, to the Oxford to Henley turnpike, building an entirely new settlement for his tenants, demolishing the old village and

incorporating the site into the park and pleasure grounds. He replaced the old parish church with a new one, designed to act as classical temple within his new pleasure grounds. The first Earl's son, Lord Nuneham (later second Earl) prevailed upon his friend, the poet William Mason c 1771-2 to design the informal Flower Garden which became influential on fashions in flower gardening, and was acclaimed as a revolution in taste and sentiment (Batey 1979).

In 1777 the second Earl (1736-1809), a friend and patron of Rousseau, inherited Nuneham. He called upon William Mason to lay out a picturesque landscape upon the first Earl's classical landscape north of the House. The Earl was patron of William Sawrey Gilpin (1762-1843), and wrote his own guidebook, showing that his landscaped garden was to be seen and appreciated like a Gilpin picturesque tour with defined 'stations' for viewing the Thames Valley landscape (Batey and Lambert 1990). The Earl employed Lancelot Brown from 1779 to 1782 and, together with Mason, advised Brown on the transformation of the first Earl's scene into an idealised landscape 'with hanging woods, lush meadows and Abingdon church spire set against the Berkshire hills' (Batey 1979), expanding the park significantly. W S Gilpin, employed in the 1830s, laid out a picturesque pinetum on newly acquired land by the Oxford road, at the same time modifying Mason's Flower Garden. The RAF occupied the estate during the Second World War, after which Lord Harcourt sold the estate to the University of Oxford. The House is now (1997) a religious centre, leased from the University.

DESCRIPTION

LOCATION, AREA, BOUNDARIES, LANDFORM, SETTING Nuneham Park lies 6km south of Oxford, adjacent to the west side of the village of Nuneham Courtenay. The 470ha estate is bounded to the west by the River Thames, and on the other sides largely by agricultural land and woodland. The largely rural setting also includes Culham scientific laboratories to the south. The park overlies low, undulating hills, with a steep slope towards the west boundary where the land drops down to the river. Important long views look west towards Abingdon and north towards Oxford.

ENTRANCES AND APPROACHES The main drive now (1998) enters the park via an approach road running south, off the A423 Oxford to Henley road (the old turnpike road), from the centre of the village of Nuneham Courtenay. The drive enters the park 900m north-east of the House, passing a small, single-storey lodge with a projecting entrance bay, lying adjacent to the drive. The drive continues south-west past The Lake to the west (the old village pond, enlarged in the late C18), 600m north-east of the House. A spur west from the drive, at the south end of The Lake, gives access to Home Farm and the walled garden. The main course skirts to the east and south of the walled garden, running in a straight line along the remains of a broad lime avenue to reach the early C20 Manor Lodge, 200m east of the House, standing at the entrance to the enclosed east lawn. Passing to the south of the Lodge, and between contemporary iron gate piers, gates and flanking railings, the drive extends west down a shallow grass slope, bounded to the south by iron railings and a clipped beech hedge, before dividing into two to enter the forecourt at the north-east and south-east corners. The forecourt, flanked by the north and south wings of the House, is bounded to the east by a low stone wall with low square piers (early C19, listed grade II) marking the drive entrances.

The Manor Lodge was built and the course of the drive within the enclosure altered by Lewis Harcourt, 1904.

A further drive, from the 1830s the main ornamental drive (now largely disused and lost in places), enters the park 1.5km north-east of the House, off the Oxford to Henley road, giving access at its north end to the Arboretum. Set back off the road, the entrance is flanked by two pairs of stone piers with iron carriage and pedestrian gates, from which curve stone screen walls terminated by a further pair of piers. A single-storey stone lodge lies to the south of the entrance, built in Classical style, with a prominent entrance portico facing the drive. The drive runs south-west through the Arboretum, crossing the park to join the north drive at the east end of the lime avenue, 450m east of the House. This drive was constructed by Archbishop Harcourt in the 1830s, having acquired land outside the park to the east, at the same time employing W S Gilpin to lay out at its east end the surrounding pinetum, now the Arboretum. Before this, the main drive during the C18 and early C19 entered at a point between this entrance and the present main entrance, at the south end of the village street. Remains of this former drive exist south of the present drive, which it joins.

The south drive, now disused but before c 1900 the principal entrance from London, enters the park 2km south-east of the House, past the site of the Abingdon Lodge (now gone). The drive curves north-east through the park, with views to the west, south and east opening up at various points, joining the main drive by Manor Lodge, 200m east of the House. At the north-west corner of the park, the ferry (now gone) gave direct access from the Abingdon and the west bank of the river, past Ferry Cottage, a single-storey, rendered building. The drive from here runs east and south, ascending the steep slope from the river into the park, passing the stables and walled garden, joining the main drive 200m east of the House by Manor Lodge.

PRINCIPAL BUILDING Nuneham House (1757, listed grade II*) lies towards the north-west corner of the park. It was built by Stiff Leadbetter for the first Earl Harcourt, altered in 1781 by Lancelot Brown and Henry Holland for the second Earl, and extended in 1832 by Sir Robert Smirke for Archbishop Harcourt. The main block of the three-storey, limestone house, is flanked by quadrant links and connected pavilions, which together surround three sides of the entrance courtyard to the east, overlooking the east lawn. The west, garden front overlooks an open, informal lawn with clumps of trees, with views west over the river towards Abingdon. The north front overlooks the northern pleasure grounds and the church, with views towards Oxford.

The remains of the stable buildings lie 200m north-east of the House, at the north-east corner of the east lawn. The main, severely classical, ornamental block (probably James Stuart 1760s) which formed the south side of the square courtyard has gone (mid C20), together with much of the west side. Two sides of an open yard of two-storey C18 buildings remain, the central area now grassed.

GARDENS AND PLEASURE GROUNDS The gardens and pleasure grounds surround the House, with the main informal features, largely laid out in the later C18, to the north and south, and C19 and early C20 terraces lying adjacent to the House. The pleasure grounds to the east and

north overlie part of the site of the village before it was largely demolished in 1761 and was moved to its present site (Oxoniensia 1968; Beresford 1971). This is the site which inspired Oliver Goldsmith's poem *The Deserted Village* (1770).

Brown's Walk, laid out by Lancelot Brown in 1779, lies south of the House on the west-facing slope above the river. It is a curving, looped woodland walk from the House, partly overlying a former walk to a Corinthian seat of the early 1760s (now gone). The southernmost end of the walk overlooks a small, steep valley, and on the opposite hillside (Brown's Hill), in open pasture, stands the Carfax Conduit (John Clarke 1617, late C18, listed grade I). The square, wallstone plinth (late C18) is decorated with C17 stone ornamentation, originally part of the Carfax conduit in central Oxford. When the conduit was dismantled, the cistern remained in Oxford, the stone ornamentation being removed to the park in 1789 by the second Earl, who used the structure in place of the ruined tower recommended by Lancelot Brown in his 1779 scheme. The north end of Brown's Walk is reached from the House via the southern end of the balustraded and gravelled terraces (W S Gilpin 1830s), with formal flower borders (c 1900-10) surrounding the House to the north, west and south. A path leads from the terrace on the north front towards All Saints' church and Mason's Garden within the northern pleasure grounds. Brown's Walk, the formal terraces, and the northern pleasure grounds are bounded to the west by an informal open lawn above fields leading down to the river, with a ha-ha in places separating the lawn from the field below. The lawn is reached from the terrace on the west front by a set of stone steps.

All Saints' church (first Earl Harcourt, assisted by James Stuart, 1764, listed grade II*), sited on a promontory 200m north-east of the House, overlooks the river to the west and north, and beyond this enjoys views towards Oxford and its surrounding hills to the north, and Abingdon to the west. Lawns slope steeply away to the west and north, to the edge of the pleasure grounds, and a straight terraced path, sited at the top of the north slope, runs along the north front of the church and beyond to the east for c 100m. One of the first churches built as a garden ornament, it was intended as a temple in the classical landscape formed by the first Earl, its north front echoing the entrance front of Chiswick House (qv), and reached, when first built, by a straight avenue walk north from the House. The dome was used as a rotunda, appearing to surmount the orangery (of which only the back wall remains) in Mason's Garden, below to the south.

Mason's Garden, an informal grouping of flower borders within lawn, is surrounded by trees and shrubs, with various small structures and buildings occurring as incidents along the perimeter circuit walk. Some of the original built features have gone, but the Temple of Flora (c 1771, listed grade II) remains a dominant feature, lying on the east boundary of the garden, 160m north-east of the House. The Temple is a small, rectangular, rendered building in Greek-Doric style with an open portico on the west side, overlooking the main east/west vista in the Garden. The grotto and rockery (c 1771 and later, listed grade II) lie on the south boundary, the exterior resembling a rocky cliff, with a central entrance leading to the grotto. The remains of the orangery lie on the north boundary, consisting largely of the rear brick wall, the stone-paved floor being retained as a terrace with low balustrading on the south side.

The Garden, laid out by William Mason c 1771-2, modified in the 1830s by W S Gilpin, and partially restored in the late C20, is important for its early introduction of informality. For a fuller account of its structure (together with the surrounding pleasure grounds), symbolism and influence, the reader is referred to Batey 1968 (CL) and 1979 (guidebook). Several listed structures exist within this area, not all of which have been referred to here; descriptions of them are to be found in the List of Buildings of Special Architectural or Historic Interest produced by the Department of Culture, Media and Sport.

PARK The park surrounds the House, consisting of pasture and arable land, and woodland which is largely sited on the boundaries. The steep slope to the west leads down to the river, with extensive views to the west and north. The central area gives views south and south-east towards the Sinodun Hills north-west of Wallingford, and the surrounding countryside. The brick icehouse lies at the northern boundary, in woodland 750m north of the House. Lacking doors and with its brick dome exposed, it has lost any earth cover it may once have had. A cattle tunnel in the north park leads from Brown's oxpens through the ha-ha beneath Mason's picturesque terrace, avoiding the pleasure ground.

Lancelot Brown (1716-83) worked on the park from 1779 to 1782, it being modified by Lord Harcourt in 1795 when he needed to grow more grain when the country was threatened by famine in the French Revolutionary Wars.

The Rectory (1759, listed grade II) also stands on the northern boundary, together with its contemporary walled garden (1761, listed grade II), 20m to the east. The symmetrical, two-storey, yellow stone house was re-sited by the first Earl from the old village site to high ground facing the river, when he moved the village. The rectangular walled garden is surrounded by brick walls, those to the south and west being of crinkle-crankle form, and those to the north being straight and possibly of later date.

The Harcourt Arboretum was laid out as a pinetum in the 1830s by W S Gilpin, in order to grow the North American conifers being introduced at that time. He used similar promontory-type planting of shrubs in the ridings to that which he had used in Mason's Garden. The Arboretum is now managed as a satellite garden of Oxford University Botanic Garden, with mature trees and informal shrub beds within grassed woodland rides.

KITCHEN GARDEN The 2ha kitchen garden stands 250m north-east of the House, surrounded by red-brick walls, and is now (1997) largely derelict. It is divided into three narrow, rectangular sections by further brick walls with, at the west end, the gardener's house, and, at the main entrance in the east wall, an ornamental gateway (listed grade II). The entrance is flanked by C18 iron gates with an elaborate scrolled overthrow, and brick piers probably rebuilt in the late C19 or early C20. A hooped iron pergola runs along the central section of the walled garden, leading to the gateway. Home Farm and its farmhouse stand adjacent to the north wall. The southern section of the garden is now largely occupied by late C20 repository buildings belonging to the Bodleian Library.

The kitchen garden remains largely as seen on Lancelot Brown's plan of 1779, where it is referred to as the Melon Ground, and was possibly laid out by him (M Batey pers comm, 1999).

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OS 6" to 1 mile: 1st edition published 1881-2 2nd edition published 1901 3rd edition published 1938 OS 25" to 1 mile: 1st edition published 1875

Description written: November 1997 Amended: March 1999 Register Inspector: SR Edited: March 2000

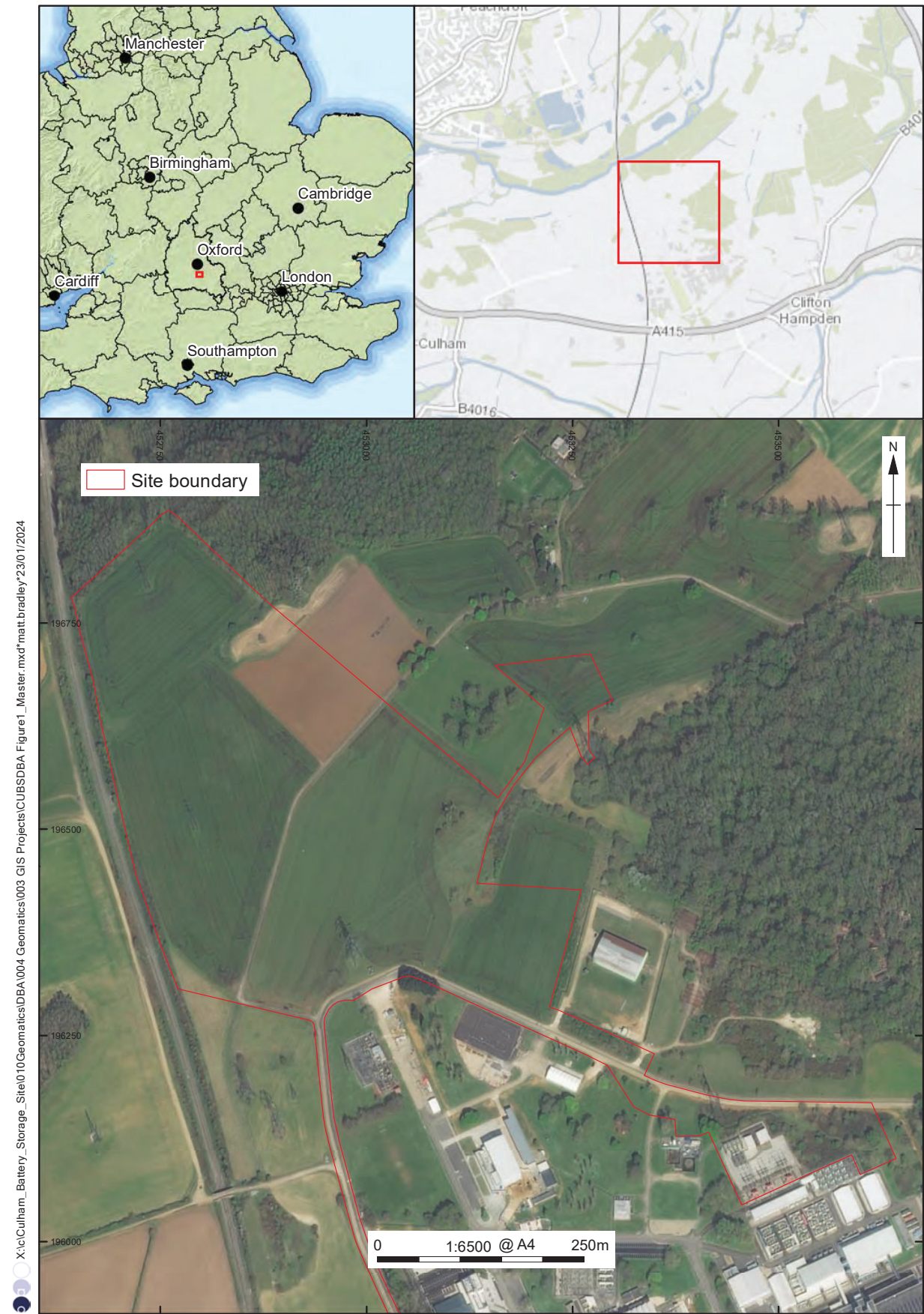


Figure 1: Site location

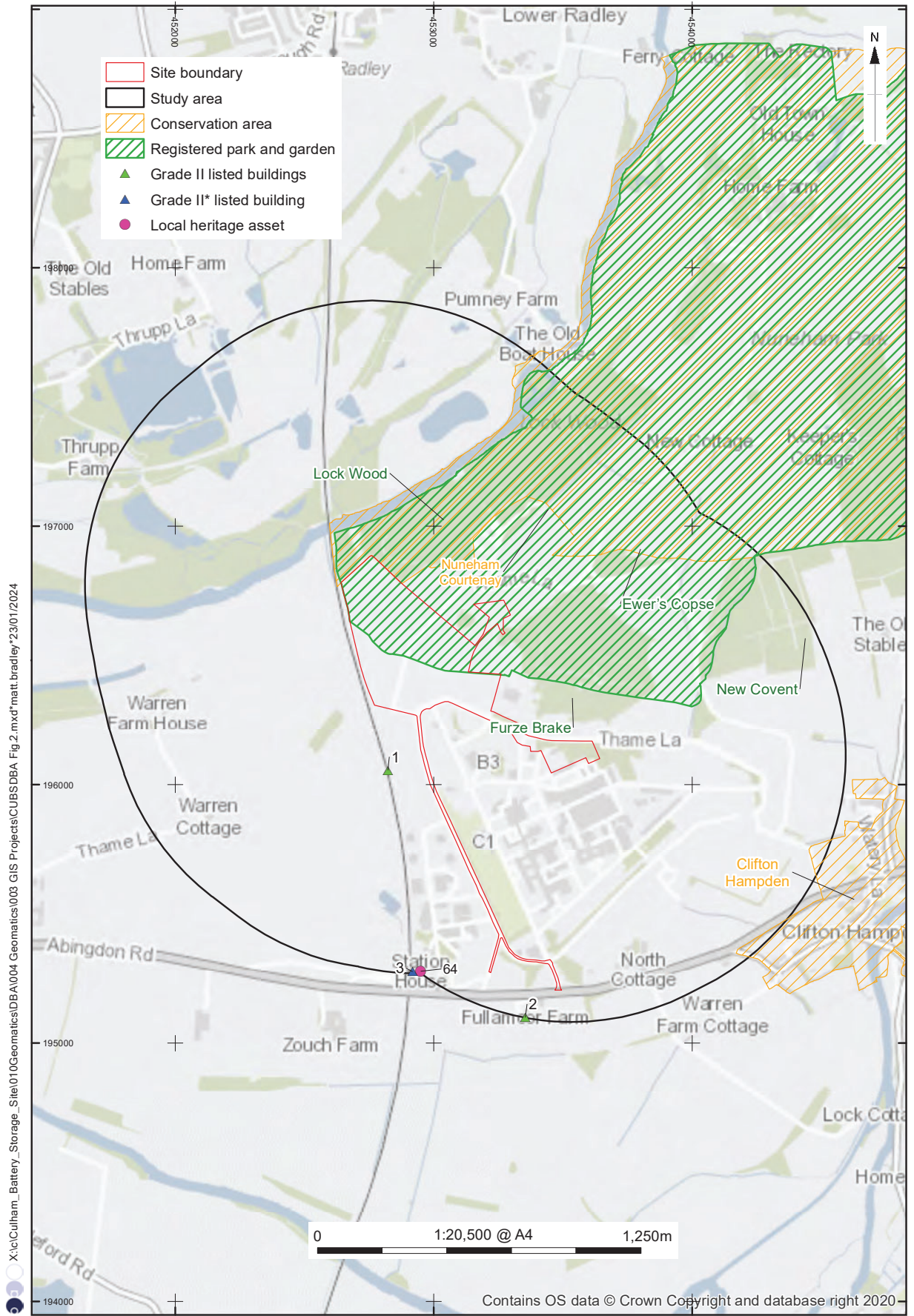


Figure 2: Designated heritage assets

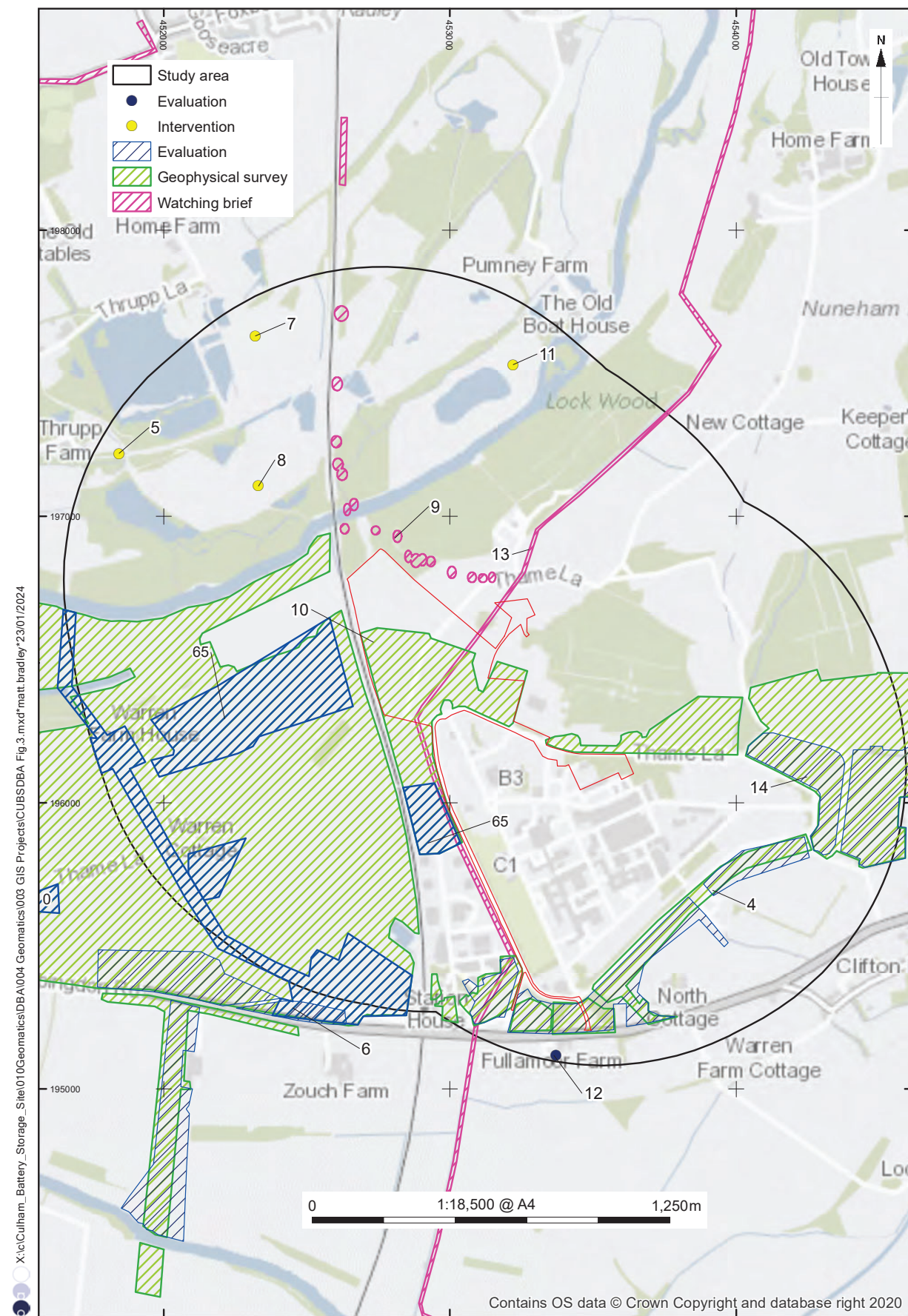


Figure 3: Previous archaeological events

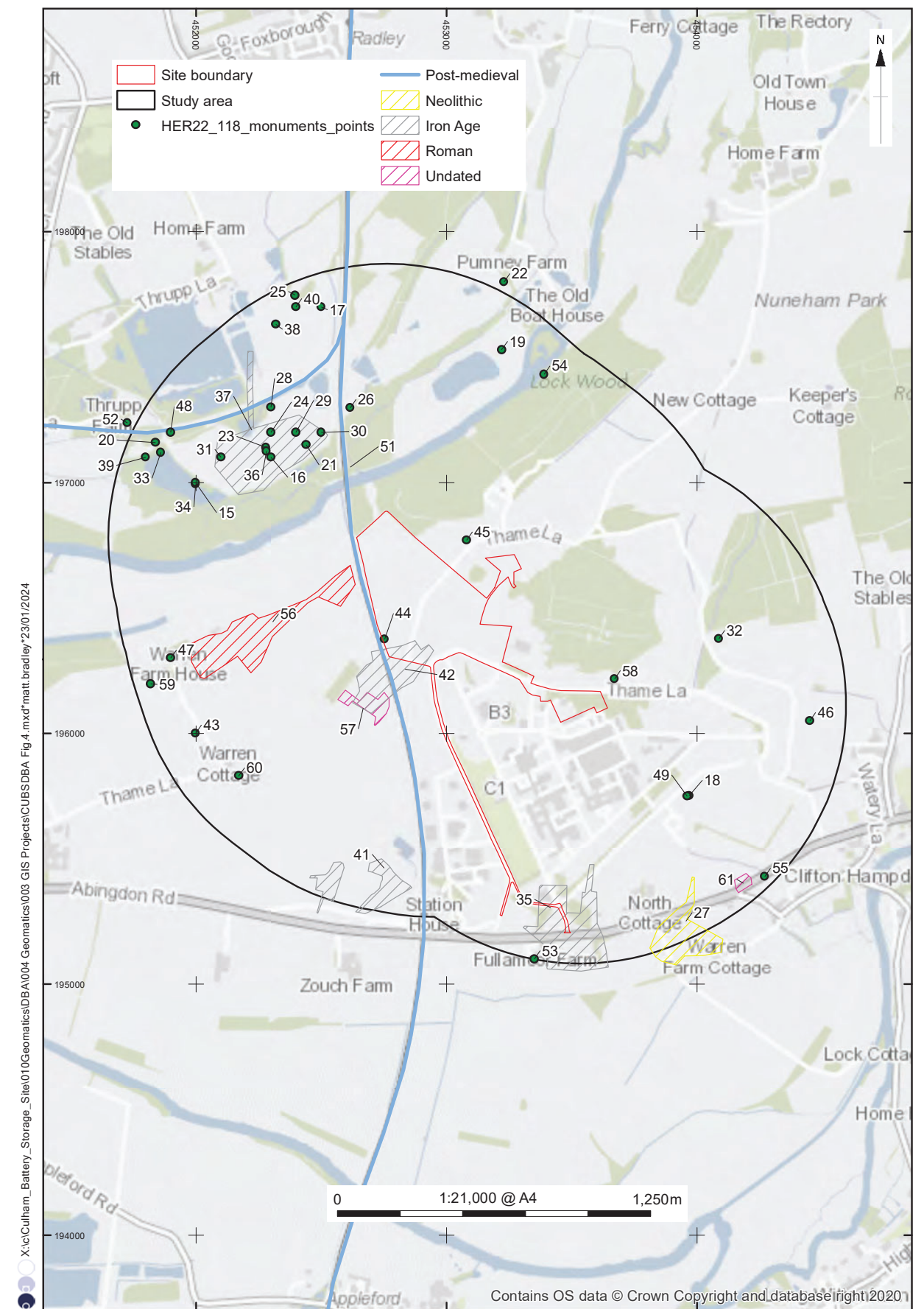


Figure 4: Non-designated heritage assets



Figure 5: Extract from Roque's map of Berkshire (1761)

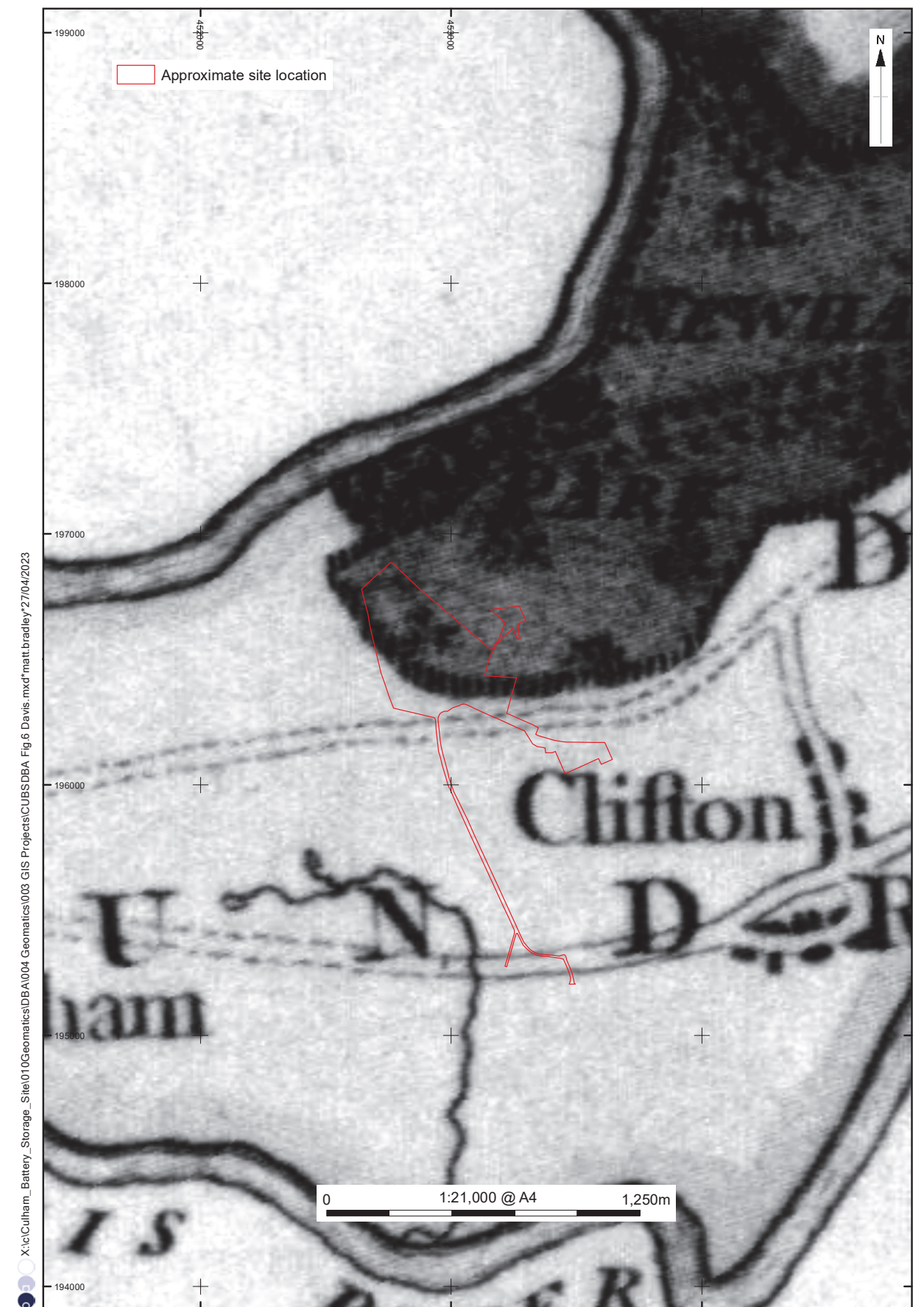


Figure 6: Extract from Davis's map of Oxfordshire (1797)

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Figure 7: Extract from the pre-enclosure plan of the parish of Culham (1802)
(Ref. SL121/M/1 as held at the Oxfordshire History Centre)

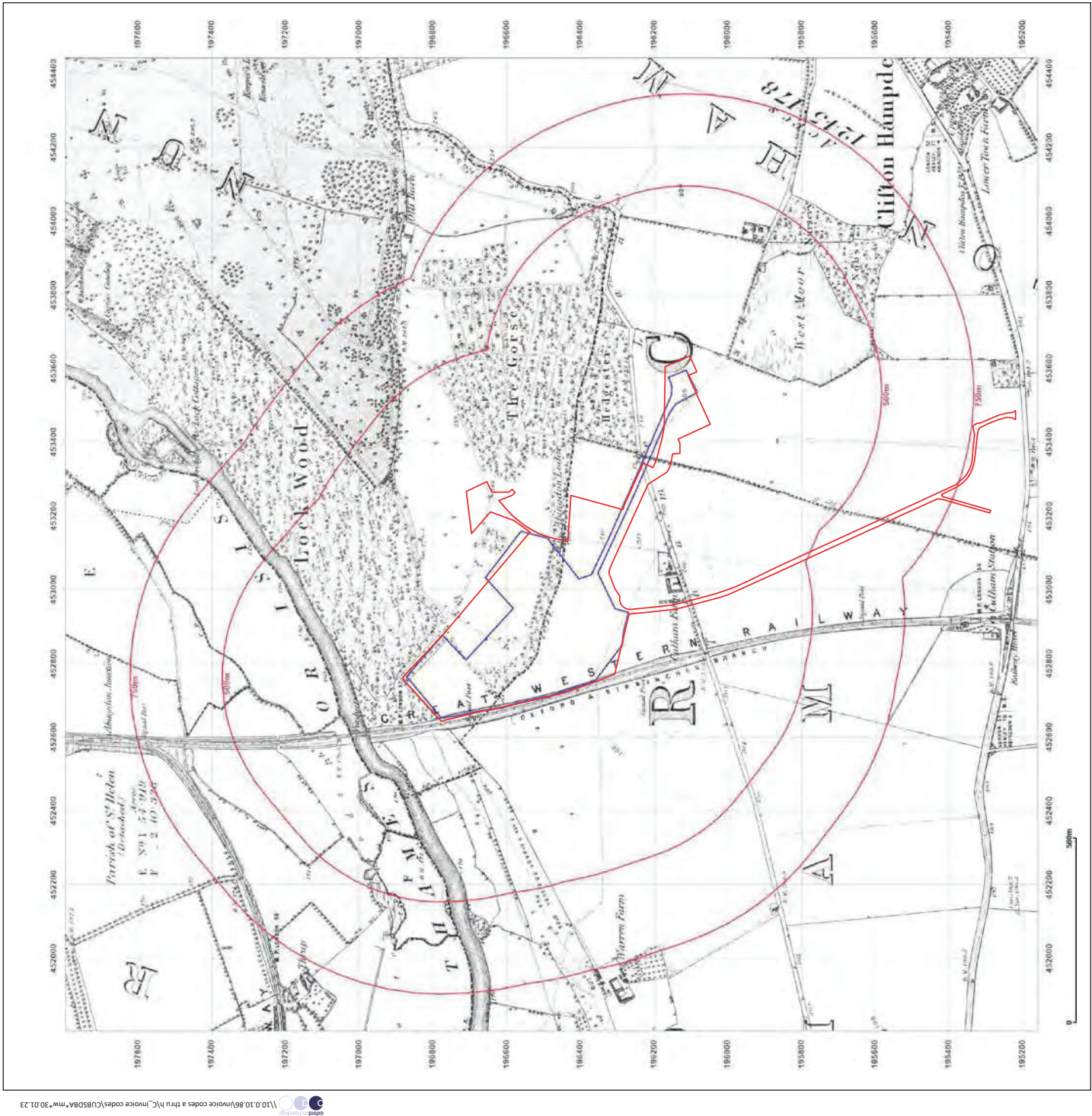


Figure 8: Extract from the Ordnance Survey County Series map
1:10560 (1875)


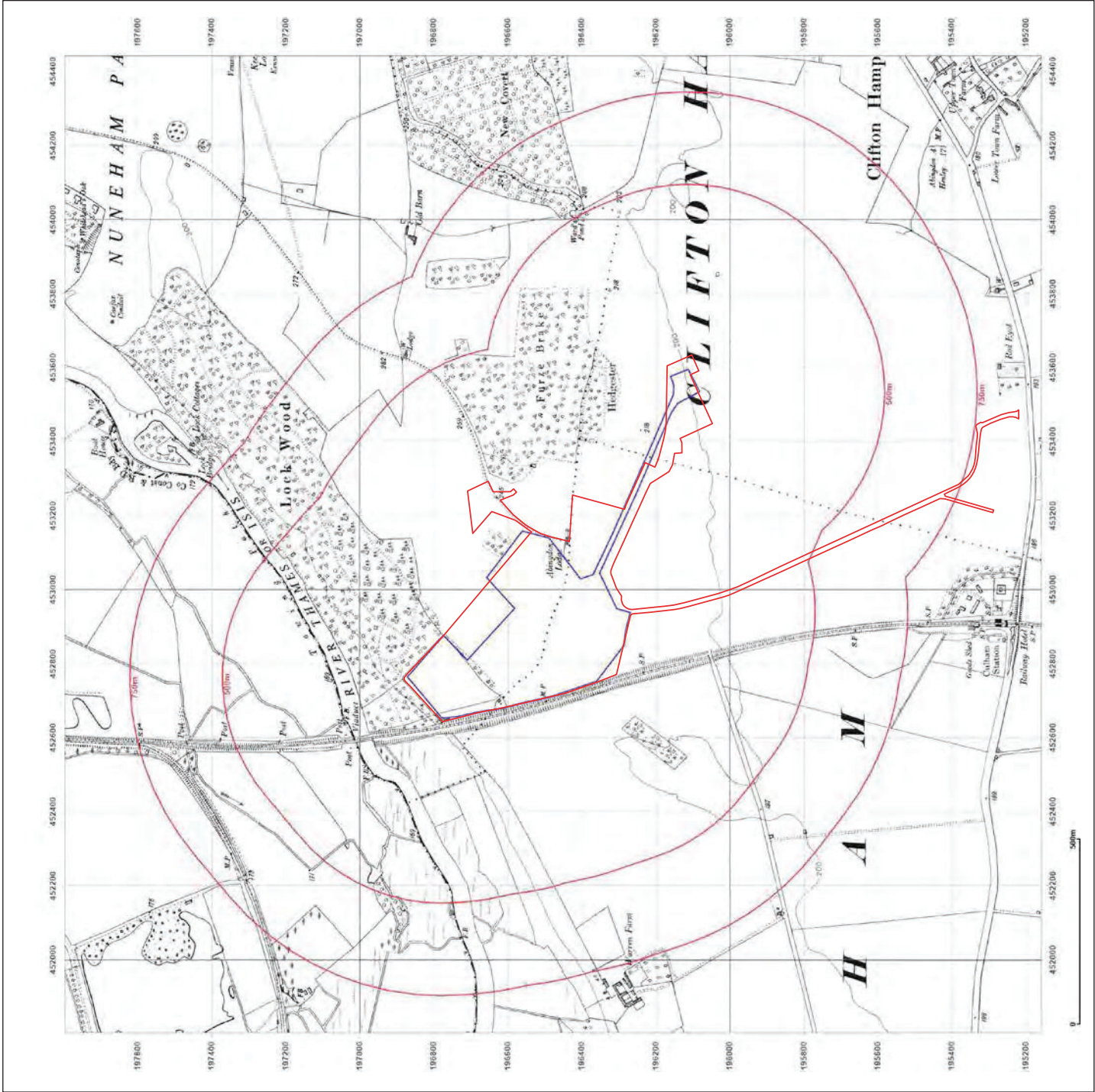
	
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Client Ref: CUBSDBA Report Ref: GS-9098311 Grid Ref: 453122, 196477	
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Map date: 1910	
Scale: 1:10,560	
Printed at: 1:10,560	
<div><div><div>Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A</div><div><div></div><div></div></div></div><div><div>Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A</div></div></div>	

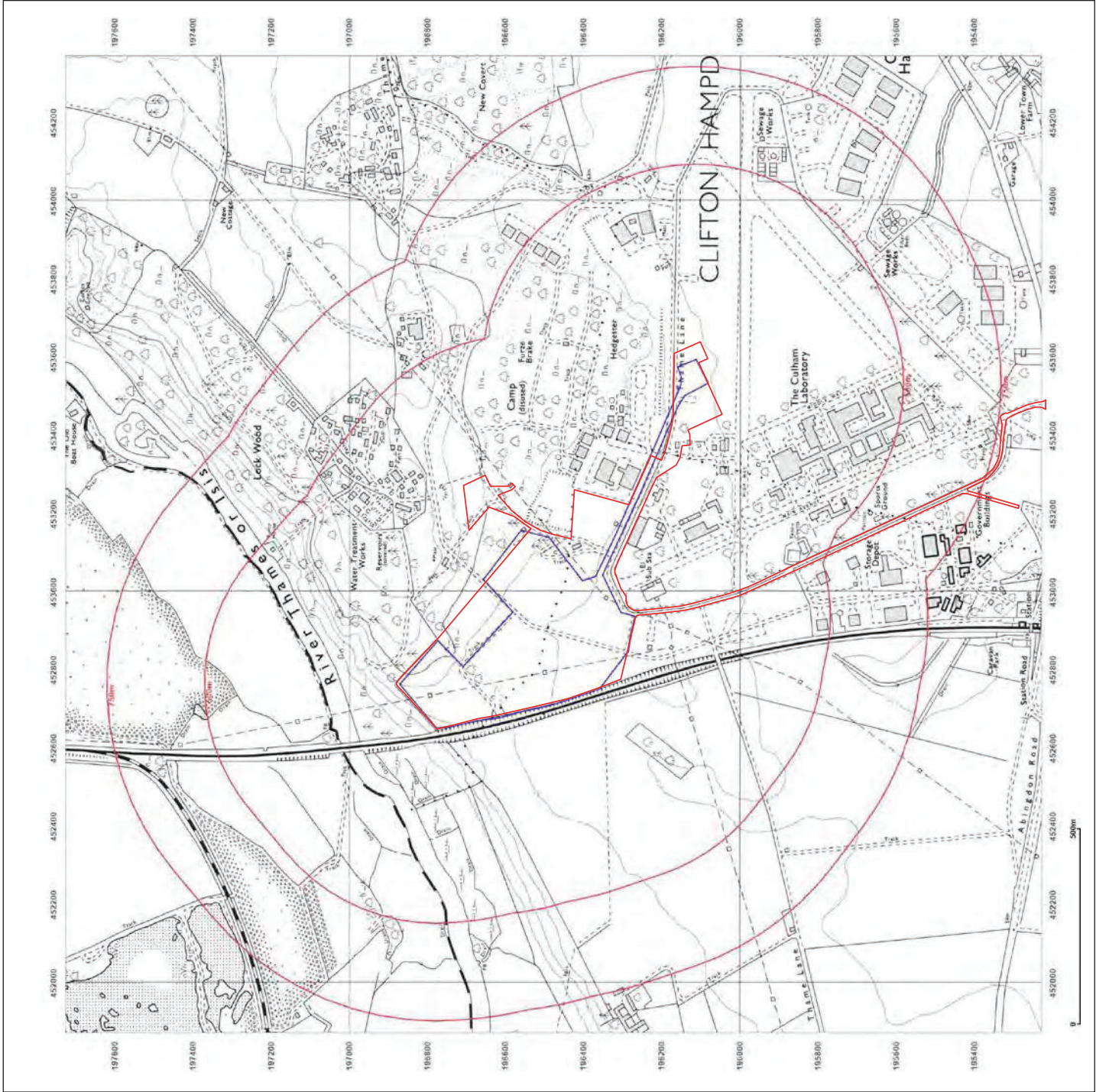
Figure 10: Extract from the Ordnance Survey County Series map 1:10560 (1910)



Groundsure INSIGHTS	
Site Details: 452905.6855119904, 196519.3522861514	
Client Ref: CUBSDBA Report Ref: GS-9098311 Grid Ref: 453122, 196477	
Map Name: Provisional	
Map date: 1960	
Scale: 1:10,560	
Printed at: 1:10,560	
<div>Surveyed N/A Revised 1960 Edition 1960 Copyright 1960 Levelled N/A</div>	
<div>Produced by Groundsure Insights T: 08444 159000 E: info@groundsure.com W: www.groundsure.com</div>	

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Figure 11: Extract from the Ordnance Survey Provisional map 1:10560 (1960)



Groundsure INSIGHTS	
Site Details: 452905.6855119904, 196519.3522861514	
Client Ref: CUBSDBA Report Ref: GS-9098311 Grid Ref: 453122, 196477	
Map Name: National Grid	
Map date: 1975	
Scale: 1:10,000	
Printed at: 1:10,000	
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Figure 12: Extract from the Ordnance Survey National Grid map 1:10000 (1975)



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Figure 13: Extract from the Ordnance Survey National Grid map 1:10000 (1982)



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Figure 14: Extract from the Ordnance Survey National Grid map 1:10000 (1992)

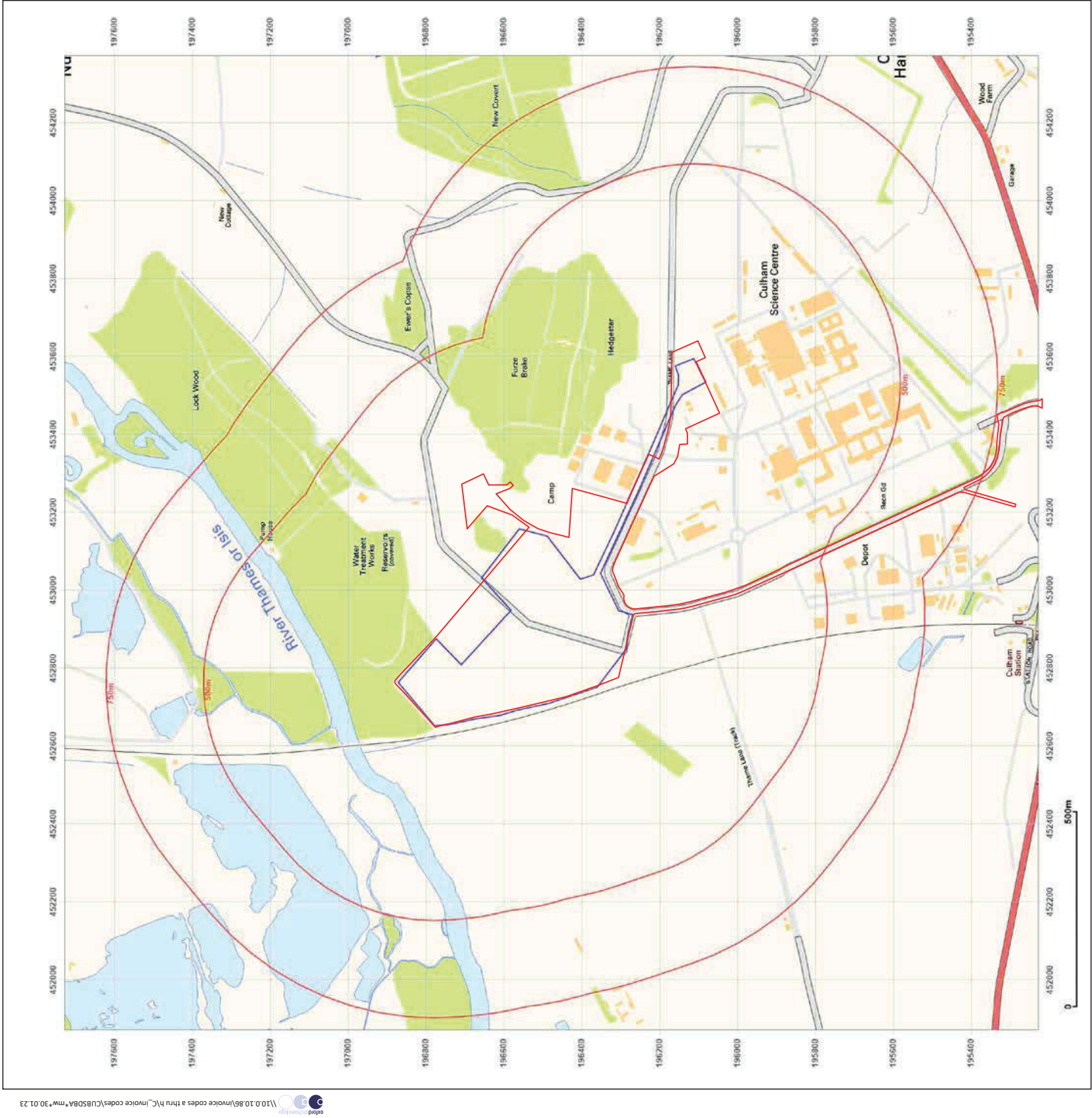


Figure 15: Extract from the Ordnance Survey National Grid map 1:10000 (2001)

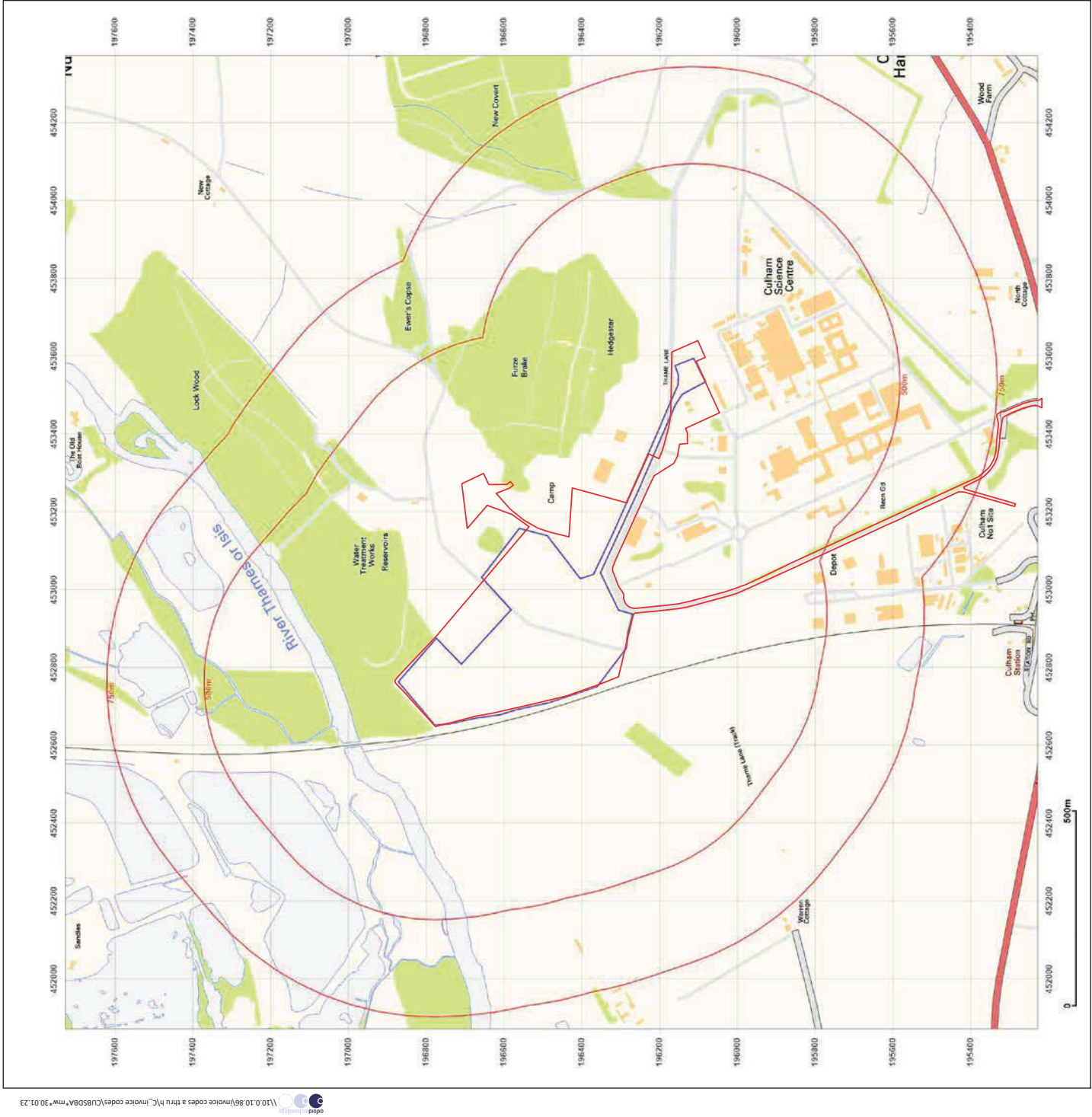


Figure 16: Extract from the Ordnance Survey National Grid map 1:10000 (2010)