



Botley West Solar Farm

Preliminary Environmental Information Report

Volume 1

Chapter 7: Historic Environment

30 November 2023

Approval for issue

Christopher Leconte

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Glossary

Term	Meaning
Bronze Age	The time period 1,800 – 600 BC
Conservation Area	An area designated by a local authority as being of special architectural or historic interest.
Cumulative Effects	The combined effect of the Botley West solar farm in combination with the effects from other proposed developments, on the same receptor or resource.
Designated heritage asset	A World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated under the relevant legislation.
Draft National Policy Statements	The draft National Policy Statements for energy that are undergoing consultation.
Early Medieval	The time period AD 410 - 1066
Environmental Impact Assessment	The process of identifying and assessing the significant effects likely to arise from a project. This requires consideration of the likely changes to the environment, where these arise as a consequence of a project, through comparison with the existing and projected future baseline conditions.
Environmental Statement	The document presenting the results of the Environmental Impact Assessment process.
Heritage asset	A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest.
Historic Landscape Characterisation	An aspect of more general landscape characterisation that seeks to provide an additional element of 'time-depth', allowing the historic evolution of the landscape to be perceived and understood.
Impact	Change that is caused by an action/proposed development, e.g., land clearing (action) during construction which results in habitat loss (impact).
Inter-related Effects	Inter-related effects arise where an impact acts on a receptor repeatedly over time to produce a potential additive effect or where a number of separate impacts, such as noise and habitat loss, affect a single receptor.
Iron Age	The time period 600 BC – AD 43
Local Authority	A body empowered by law to exercise various statutory functions for a particular area of the United Kingdom. This includes County Councils, District Councils and County Borough Councils.
Listed building	A building or structure placed on a statutory 'List' of Buildings of Special Architectural or Historic Interest. There are three grades of listing, which are; grade I (these are of exceptional interest); grade II* (these are particularly important); and grade II (these are of special interest).

Term	Meaning
Medieval	The time period 1066 - 1485
Mesolithic	The time period 12,000 – 4,000 BC
Modern	The time period 1800 - present
National Heritage List for England	List of nationally designated heritage assets maintained by Historic England.
Neolithic	The time period 4,000 – 1,800 BC
Palaeolithic	The time period 900,000 – 12,000 BC
Post-medieval	The time period 1486 - 1799
Prehistoric	The general term used for the time period before the Roman invasion of AD 43.
Preliminary Environmental Information Report	A report that provides preliminary environmental information in accordance with Regulation 12 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. This is information that enables consultees to understand the likely significant environmental effects of the project and which helps to inform consultation responses.
Registered Park and Garden	A park and/or garden of special historic interest placed on a non-statutory Register. There are three grades of registration: grade I – these are of exceptional interest; grade II* - these are particularly important; and grade II – these are of special interest.
Roman	The time period AD 43 - 410
Scheduled Monument	An archaeological site given legal protection by being placed on a 'Schedule' of monuments.
Scoping Opinion	Sets out the Planning Inspectorate's response (on behalf of the Secretary of State) to the Scoping Report prepared by the Applicants. The Scoping Opinion contains the range of issues that the Planning Inspectorate, in consultation with statutory stakeholders, has identified should be considered within the Environmental Impact Assessment process.
Study area	This is an area which is defined for each environmental topic which includes the Botley West solar farm Red Line Boundary as well as potential spatial and temporal considerations of the impacts on relevant receptors. The study area for each topic is intended to cover the area within which an impact can be reasonably expected.

Abbreviations

Abbreviations	Meaning
AD	Anno Domini – after the birth of Christ
BC	Before Christ
CDC	Cherwell District Council

Abbreviations	Meaning
CIfA	Chartered Institute for Archaeologists
CoCP	Code of Construction Practice
DBA	Desk-based Assessment
DECC	Department of Energy and Climate Change
DESNZ	Department for Energy Security and Net Zero
EIA	Environmental Impact Assessment
ES	Environmental Statement
HER	Historic Environment Record
HIA	Heritage Impact Assessment
HLC	Historic Landscape Characterisation
IEMA	Institute of Environmental Management and Assessment
IHBC	Institute of Historic Building Conservation
NGET	National Grid Electricity Transmission
NHLE	National Heritage List for England
NPPF	National Planning Policy Framework
NPS	National Policy Statement
PCS	Power Converter Station
PEIR	Preliminary Environmental Information Report
PINS	Planning Inspectorate
PPG	Planning Policy Guidance
WHS	World Heritage Site
WSI	Written Scheme of Investigation
ZoI	Zone of Influence
ZTV	Zone of Theoretical Visibility

Units

Unit	Description
ha	Hectares
km	Kilometres
m	Metres
kV	Kilovolts

7 Historic Environment

7.1 Introduction

7.1.1 Overview

7.1.1.1 This chapter of the Preliminary Environmental Information Report (PEIR) has been prepared by RPS on behalf of Photovolt Development Partners GmbH. (PVDP) for the Applicant, SolarFive Ltd. (SolarFive). SolarFive is a licence holder under the Electricity Act 1989. SolarFive is also a company registered in England and Wales (company no. 12602740).

7.1.1.2 PVDP intends to submit an application on behalf of SolarFive for development consent to the Planning Inspectorate (PINS) under the Planning Act 2008. The proposal is to install and operate approximately 840MWe of solar generation in parts of West Oxfordshire, Cherwell and Vale of White Horse Districts (the Project). The application will be accompanied by an Environmental Statement (ES) prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, as amended (the EIA Regulations), and other required documents including a statement on pre-application consultation.

7.1.1.3 This PEIR summarises preliminary results of the assessment to date, before being further refined and reported within the Environmental Statement. The assessment was carried out in accordance with the approach set out in the Scoping Report. The purpose of the PEIR is to inform the statutory consultation process, enabling consultees to understand and comment on the likely significant effects of the Project.

7.1.1.4 This chapter provides a preliminary assessment of the impacts and effects of the Project on all aspects of the historic environment, including buried archaeological remains, historic buildings and areas, and the character of the historic landscape.

7.1.1.5 The assessment presented is informed by the following technical chapters:

- Volume 1, Chapter 8: Landscape and visual resources of the PEIR.

7.1.1.6 This chapter also draws upon information contained within:

- Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR
- Volume 3, Appendix 7.2: Assessment of airborne remote sensing and satellite imagery for archaeology of the PEIR
- Volume 3, Appendix 7.3: Interim geophysical survey report of the PEIR.

7.1.1.7 The PEIR will inform pre-application consultation. Following consultation, comments on the PEIR will be reviewed and taken into account, where appropriate, in preparation of the ES that will accompany the application to PINS for development consent.

7.2 Legislative and policy context

7.2.1 Legislation

- 7.2.1.1 A summary of the relevant legislation is provided below, with further details included in section 1.3.1 of Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR.
- 7.2.1.2 Statutory protection for archaeological remains is principally enshrined in the Ancient Monuments and Archaeological Areas Act 1979. Nationally important archaeological sites are listed in a Schedule of Monuments and are afforded statutory protection.
- 7.2.1.3 The Planning (Listed Buildings and Conservation Areas) Act 1990 and the Town and Country Planning Act 1990 provide statutory protection to Listed Buildings and their settings, and present measures to designate and preserve the character and appearance of Conservation Areas.
- 7.2.1.4 Historic Parks and Gardens, and Historic Battlefields, have received recognition under the National Heritage Acts 1980, 1983 and 2002. Such sites are described on registers maintained by Historic England for the Department for Culture, Media and Sport, but such a designation does not afford statutory protection.

7.2.2 Planning policy context

- 7.2.2.1 A summary of the relevant planning policy context is provided below, with further details included in section 1.3 of Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR.
- 7.2.2.2 The Project will be located in the county of Oxfordshire, across an area of approximately 1,300 ha. The Project location extends from an area of land in the north (the Northern Site), situated between the A4260 and the Dorn River Valley near Tackley and Wootton, through a central section (the Central Site), situated broadly between Bladon and Cassington, and connecting to a section further south near to Farmoor Reservoir and north of Cumnor (the Southern Site), where the Project will connect to the National Grid transmission network. The name 'Botley West' is derived from the location of the grid connection point.
- 7.2.2.3 The Project lies within the administrative areas of Cherwell (CDC), West Oxfordshire District Council and Vale of White Horse District Councils, and Oxfordshire County Council. The majority of the Project lies within West Oxfordshire and within the Oxford Green Belt.

National Policy Statements

- 7.2.2.4 There are currently six energy National Policy Statements (NPSs), three of which contain policy relevant to solar farm development, specifically:
- Overarching NPS for Energy (NPS EN-1) which sets out the UK Government's policy for the delivery of major energy infrastructure (DECC 2011a);

- NPS for Renewable Energy Infrastructure (NPS EN-3) (DECC 2011b); and
- NPS for Electricity Networks Infrastructure (NPS EN-5) (DECC 2011c).

7.2.2.5 These are currently being updated and draft versions were published for consultation in March 2023 (DESNZ 2023a; DESNZ 2023b; DESNZ 2023c). The current version of NPS EN-3 (DECC 2011b) does not contain any policies specifically regarding solar farm developments, however the draft consultation version of NPS EN-3 (DESNZ 2023c) has a section addressing this form of renewable energy.

7.2.2.6 There are no policies or requirements specific to the historic environment within NPS EN-5. **Table 7.1** sets out a summary of the policies within NPS EN-1 and EN-3 relevant to the historic environment.

Table 7.1: Summary of designated and draft NPS document requirements relevant to historic environment

Summary of NPS requirement	How and where considered in the PEIR
NPS EN-1	
<p><i>'As part of the ES the applicant should provide a description of the significance of the heritage assets affected by the proposed development and the contribution of their setting towards that significance. The level of detail should be proportionate to the importance of the heritage assets and no more than is necessary to understand the potential impact of the proposal on the significance of the heritage asset. As a minimum the applicant should have consulted the relevant Historic Environment Record (or, where the development is in English or Welsh waters, English Heritage or Cadw) and assessed the heritage assets themselves using expertise where necessary according to the development's impact.'</i></p> <p>(paragraph 5.8.8 of NPS EN-1)</p>	<p>A description of the baseline heritage assets is provided in section 7.5 and in Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR.</p> <p>The Oxfordshire Historic Environment Record has been consulted.</p>
<p><i>'Where a development site includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation. Where proposed development will affect the setting of a heritage asset, representative visualisations may be necessary to explain the impact.'</i></p> <p>(paragraph 5.8.9 of NPS EN-1)</p>	<p>The desk-based assessment is presented in Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR. Field evaluation has been undertaken and the available results are presented in Volume 3, Appendix 7.3: Interim geophysical survey report of the PEIR.</p> <p>No representative visualisations have been produced for the PEIR. Visualisations may be produced for the ES following consultation with relevant stakeholders.</p>

Summary of NPS requirement	How and where considered in the PEIR
<p><i>‘The applicant should ensure that the extent of the impact of the proposed development on the significance of any heritage assets can be adequately understood from the application and supporting documents.’</i></p> <p>(paragraph 5.8.10 of NPS EN-1)</p>	<p>The impact of the Project on the significance of heritage assets is assessed within section 7.9.</p> <p>Additional, more detailed assessment will be undertaken for the ES where this is appropriate.</p>
<p>Draft NPS EN-1</p>	
<p><i>‘The applicant should undertake an assessment of any likely significant heritage impacts of the proposed development as part of the EIA and describe these in the ES. This should include consideration of heritage assets above, at, and below the surface of the ground. Consideration will also need to be given to the possible impacts, including cumulative, on the wider historic environment. The assessment should include reference to any historic landscape or seascape character assessment and associated studies as a means of assessing impacts relevant to the proposed project.’</i></p> <p>(paragraph 5.9.9 of updated NPS EN-1 draft for consultation)</p>	<p>The impact of the Project on the significance of heritage assets is assessed within section 7.9. The assessment considers all heritage assets above and below ground, also impacts on the wider historic landscape. Cumulative impacts are assessed in section 7.11.</p> <p>Additional, more detailed assessment will be undertaken for the ES where this is appropriate.</p>
<p><i>‘As part of the ES the applicant should provide a description of the significance of the heritage assets affected by the proposed development, including any contribution made by their setting. The level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum, the applicant should have consulted the relevant Historic Environment Record (or, where the development is in English or Welsh waters, Historic England or Cadw) and assessed the heritage assets themselves using expertise where necessary according to the proposed development’s impact.’</i></p> <p>(paragraph 5.9.10 of updated NPS EN-1 draft for consultation)</p>	<p>A description of the baseline heritage assets is provided in section 7.5 and in Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR.</p> <p>The Oxfordshire Historic Environment Record has been consulted.</p>

Summary of NPS requirement	How and where considered in the PEIR
<p><i>'Where a site on which development is proposed includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation. Where proposed development will affect the setting of a heritage asset, accurate representative visualisations may be necessary to explain the impact.'</i></p> <p>(paragraph 5.9.11 of updated NPS EN-1 draft for consultation)</p>	<p>The desk-based assessment is presented in Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR. Field evaluation has been undertaken and the available results are presented in Volume 3, Appendix 7.3: Interim geophysical survey report of the PEIR.</p> <p>No representative visualisations have been produced for the PEIR. Visualisations may be produced for the ES following consultation with relevant stakeholders.</p>
<p><i>'The applicant should ensure that the extent of the impact of the proposed development on the significance of any heritage assets affected can be adequately understood from the application and supporting documents. Studies will be required on those heritage assets affected by noise, vibration, light and indirect impacts, the extent and detail of these studies will be proportionate to the significance of the heritage asset affected'</i></p> <p>(paragraph 5.9.12 of updated NPS EN-1 draft for consultation)</p>	<p>The impact of the Project on the significance of heritage assets is assessed within section 7.9.</p> <p>Additional, more detailed assessment will be undertaken for the ES where this is appropriate.</p>
<p><i>'The applicant is encouraged, where opportunities arise, to prepare proposals which can make a positive contribution to the historic environment, and to consider how their scheme takes account of the significance of heritage assets affected. This can include, where possible:</i></p> <ul style="list-style-type: none"> <i>• enhancing, through a range of measures such as sensitive design, the significance of heritage assets or setting affected</i> <i>• considering where required the development of archive capacity which could deliver significant public benefits</i> <i>• considering how visual or noise impacts can affect heritage assets, and whether there may be opportunities to enhance access to, or interpretation, understanding and appreciation of, the heritage assets affected by the scheme'.</i> <p>(paragraph 5.9.13 of updated NPS EN-1 draft for consultation)</p> 	<p>A greater level of understanding of buried archaeological remains within the Project Site has been established as a result of the purposive non-intrusive surveys that have been undertaken. This level of understanding will be further enhanced by the completion of the geophysical survey and the undertaking of a programme of further archaeological evaluation.</p> <p>Additional opportunities for positive enhancement will be sought throughout the design process for the Project.</p>

Summary of NPS requirement	How and where considered in the PEIR
<p><i>‘Careful consideration in preparing the scheme will be required on whether the impacts on the historic environment will be direct or indirect, temporary, or permanent’.</i></p> <p>(paragraph 5.9.14 of updated NPS EN-1 draft for consultation)</p>	<p>The scheme has been designed such that there are no direct physical impacts on any designated heritage assets. Where possible, direct physical impacts on non-designated assets have been avoided through design.</p>
<p><i>‘Applicants 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 better contribution to the asset (or which better reveal its significance) should be treated favourably’.</i></p> <p>(paragraph 5.9.15 of updated NPS EN-1 draft for consultation)</p>	<p>The design of the Project considers the settings of designated heritage assets and in each case seeks to preserve those elements of the setting that make a better contribution to the asset (or which better reveal its significance).</p>
<p><i>A documentary record of our past is not as valuable as retaining the heritage asset, and therefore the ability to record evidence of the asset should not be a factor in deciding whether such loss should be permitted, and whether or not consent should be given.</i></p> <p>(paragraph 5.9.16 of updated NPS EN-1 draft for consultation)</p>	<p>Where possible, direct physical impacts on non-designated assets have been avoided through design. The asset is thus retained.</p>
<p>Draft NPS EN-3 (section 3.10 Solar Photovoltaic Generation)</p>	
<p><i>‘Applicant assessments should be informed by information from the Historic Environment Records (HERs) or the local authority’.</i></p> <p>(paragraph 3.10.103 of updated NPS EN-3 draft for consultation)</p>	<p>Information has been obtained from the Oxfordshire HER. This is described in Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR and summarised within section 7.5.</p>
<p><i>‘Where a site on which development is proposed includes, or has the potential to, include heritage assets with archaeological interest, the applicant should submit an appropriate desk-based assessment and, where necessary, a field evaluation. These should be carried out using expertise where necessary and in consultation with the local planning authority, and should identify archaeological study areas and propose appropriate schemes of investigation, and design measures, to ensure the protection of relevant heritage assets’.</i></p> <p>(paragraph 3.10.104 of updated NPS EN-3 draft for consultation)</p>	<p>Field evaluation has been undertaken and the available results are presented in Volume 3, Appendix 7.3: Interim geophysical survey report of the PEIR.</p> <p>Further field evaluation will be undertaken for the ES.</p> <p>The fields evaluations have been, and will continue to be, carried out in consultation with the local planning authority and in accordance with agreed and appropriate schemes of investigation.</p>

Summary of NPS requirement	How and where considered in the PEIR
<p><i>‘In some instances, field studies may include investigative work (and may include trial trenching beyond the boundary of the proposed site) to assess the impacts of any ground disturbance, such as proposed cabling, substation foundations or mounting supports for solar panels on archaeological assets.</i></p> <p><i>The extent of investigative work should be proportionate to the sensitivity of, and extent of proposed ground disturbance in the associated study area’.</i></p> <p>(paragraphs 3.10.105 and 3.10.106 of updated NPS EN-3 draft for consultation)</p>	<p>No trial trenching has yet been undertaken for the Project, but this issue has been discussed with the relevant stakeholders.</p> <p>A programme of trial trenching will be undertaken, and the results will be reported in the ES. The extent of the trial trenching will be proportionate to the sensitivity of, and extent of proposed ground disturbance.</p>
<p><i>‘Applicants should take account of the results of historic environment assessments in their design proposal’.</i></p> <p>(paragraph 3.10.107 of updated NPS EN-3 draft for consultation)</p>	<p>The results of the historic environment assessment to date have been considered within the design of the Project and will continue to be considered as the design evolves. This is described in section 7.7.</p>
<p><i>‘Applicants should consider what steps can be taken to ensure heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting’.</i></p> <p>(paragraph 3.10.108 of updated NPS EN-3 draft for consultation)</p>	<p>The results of the historic environment assessment to date have been considered within the design of the Project and will continue to be considered as the design evolves. This is described in section 7.7.</p>
<p><i>‘As the significance of a heritage asset derives not only from its physical presence but also from its setting, careful consideration should be given to the impact of large-scale solar farms which depending on their scale, design and prominence, may cause substantial harm to the significance of the asset’.</i></p> <p>(paragraph 3.10.109 of updated NPS EN-3 draft for consultation)</p>	<p>The results of the historic environment assessment to date have been considered within the design of the Project and will continue to be considered as the design evolves. This is described in section 7.7.</p>
<p><i>‘Applicants may need to include visualisations to demonstrate the effects of a proposed solar farm on the setting of heritage assets’.</i></p> <p>(paragraph 3.10.110 of updated NPS EN-3 draft for consultation)</p>	<p>No visualisations have been produced for the PEIR. Visualisations may be produced for the ES following consultation with relevant stakeholders.</p>

The National Planning Policy Framework

- 7.2.2.7 The National Planning Policy Framework (NPPF) was published in 2012 and updated in 2018, 2019, 2021 and 2023 (Department for Levelling Up, Housing and Communities, 2023). The NPPF sets out the Government’s planning policies for England.
- 7.2.2.8 Policies regarding the historic environment are set out in Chapter 16 of the NPPF and further details of these policies are provided in section 1.3 of

Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR.

7.2.2.9 **Table 7.2** sets out a summary of the NPPF policies relevant to this chapter.

Table 7.2: Summary of NPPF requirements relevant to this chapter

Policy	Key provisions	How and where considered in the PEIR
Paragraph 194	Applicants should provide a description of the significance of the heritage assets affected by the proposed development and the contribution of their setting towards that significance.	A description of the baseline heritage assets is provided in section 7.5 and in Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR.

7.2.2.10 The Planning Practice Guidance (PPG) (Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities and Local Government, 2021) supports the NPPF and provides guidance across a range of topic areas.

7.2.2.11 The PPG provides advice on specific issues such as ‘*What is ‘significance’ and ‘What is the setting of a heritage asset and how should it be taken into account?’*. Further details of this guidance are provided in Section 1.3.4 of Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR.

Local planning policy

7.2.2.12 The relevant local planning policies applicable to the historic environment based on the extent of the study areas for this assessment are summarised in **Table 7.3**.

Table 7.3: Summary of local planning policy relevant to this chapter

Policy	Key provisions	How and where considered in the PEIR
Adopted West Oxfordshire Local Plan 2031		
EH 9: Historic Environment	All development proposals should conserve and/ or enhance the special character, appearance and distinctiveness of West Oxfordshire’s historic environment, including the significance of the District’s heritage assets, in a manner appropriate to their historic character and significance and in a viable use that is consistent with their conservation, in accordance with national legislation, policy and guidance for the historic environment.	Where possible, conserving and enhancing of heritage assets, including their settings, has been achieved through the design of the Project as described in section 7.7.
Adopted Vale of White Horse Local Plan 2031 Part 1		

Core Policy 39: The Historic Environment	The Council will work with landowners, developers, the community, Historic England and other stakeholders to ensure that new development conserves, and where possible enhances, designated heritage assets and non-designated heritage assets and their setting in accordance with national guidance and legislation.	Where possible, conserving and enhancing of heritage assets, including their settings, has been achieved through the design of the Project as described in section 7.7.
Adopted Cherwell Local Plan 2011-2031		
ESD 15: The Character of the Built and Historic Environment	New development proposals should conserve, sustain and enhance designated and non designated 'heritage assets' (as defined in the NPPF) including buildings, features, archaeology, conservation areas and their settings, and ensure new development is sensitively sited and integrated in accordance with advice in the NPPF and NPPG.	Where possible, conserving and enhancing of heritage assets, including their settings, has been achieved through the design of the Project as described in section 7.7.

7.3 Consultation and engagement

- 7.3.1.1 On 15 June 2023, the Applicants submitted a Scoping Report to the Planning Inspectorate, which described the scope and methodology for the technical studies being undertaken to provide an assessment of any likely significant effects for the construction, operation and maintenance and decommissioning phases. It also described those topics or sub-topics which are proposed to be scoped out of the EIA process and provided justification as to why the Project would not have the potential to give rise to significant environmental effects in these areas.
- 7.3.1.2 Following consultation with the appropriate statutory bodies, the Planning Inspectorate (on behalf of the Secretary of State) provided a Scoping Opinion on 24 July 2023. Key issues raised during the scoping process specific to the historic environment are listed in **Table 7.4**, together with details of how these issues have been addressed within the PEIR.

Table 7.4: Summary of scoping responses

Comment	How and where considered in the PEIR
Planning Inspectorate	
The Inspectorate agrees that impacts to buried archaeology will not occur during operation and this matter can be scoped out of the ES.	Noted.

Comment	How and where considered in the PEIR
<p>The Inspectorate does not agree that impacts on buried archaeology would not occur during decommissioning as it is unknown what activities will occur during this process. The ES should describe anticipated decommissioning activities and assess potential impacts to buried archaeology where significant effects are likely to occur.</p>	<p>The likely impacts of the decommissioning phase of the Project on buried archaeological remains is assessed within section 7.9.</p> <p>Additional, more detailed assessment will be undertaken for the ES where this is appropriate and when further information on decommissioning is available.</p>
<p>A study area of 2 km is proposed for heritage assets on the basis that this is likely to be the zone of theoretical visibility (ZTV) although some designated heritage assets may be removed or included depending on the potential for impact and its zone of influence (Zol).</p> <p>The Inspectorate notes that a 5 km study area is proposed for the Landscape and Visual assessment in Scoping Report paragraph 7.2.6 and it is not explained why these study areas are different when there is the potential for the same impacts e.g., visual and impacts to setting. The Zol should also take into account potential impacts to the relationships between historic places – please refer to Historic England Guidance The Setting of Heritage Assets Historic Environment Good Practice Advice, Planning Note 3 (2017).</p> <p>The ES should ensure that the study area is based on the Zol and where impacts to the historic environment are assessed in other relevant chapters such as the landscape and visual chapter, any differences in the applied study areas are explained and justified.</p>	<p>The potential impacts examined in the Landscape and Visual Assessment are not the same as for the assessment presented within this chapter, hence it is not necessary for the study area to be the same in each case. Visual impacts as examined within the Landscape and Visual Assessment are not the same as impacts to heritage assets arising from visual changes within their setting. Examination of heritage assets of the highest level of significance (Grade I and II* listed buildings, Grade I and II* Registered Parks and Gardens) beyond the 2 km study area has been undertaken to review whether their significance could be harmed by the construction, operation and maintenance, and decommissioning of the Project. No such assets have been identified.</p> <p>For historic environment the assessment of impacts and effects resulting from change with the setting of heritage assets has been undertaken in accordance with the relevant Historic England guidance on this issue.</p> <p>The extent of the study area has been discussed with Historic England. The assessment takes into account the relationships between historic places where this is relevant.</p> <p>Additional, more detailed assessment will be undertaken for the ES where this is appropriate.</p>
<p>The Scoping Report states that land that is not likely to be directly impacted will not be included in geophysical surveys. This includes areas that are set aside as ‘buffers’ around settlement areas or environmental mitigation areas. The Applicant should seek agreement on appropriate survey areas with the relevant consultees and ensure survey areas are adequate to accommodate the full design envelope so that the final iteration is fully assessed.</p>	<p>The extent of land included within the on-going programme of geophysical surveys is set out in a Written Scheme of Investigation (WSI) that has been agreed with the Lead Archaeologist at Oxfordshire County Council (the relevant consultee) It includes all land within the Project site where development may take place, including areas of ecological mitigation, where the current land use is suitable for this type of survey. The Lead Archaeologist at Oxfordshire County Council will be engaged throughout the process to ensure agreement on areas to be surveyed.</p>
<p>Impacts listed in Table 7.1 include changes to the wider historic landscape, but it is unclear how this has been defined/determined or whether this will be assessed in the proposed 2 km study area.</p> <p>The ES should define what the wider historic landscape is and what study area is applied to this assessment.</p>	<p>The examination of the potential for changes to the character of the historic landscape looks at the Project site and its immediate vicinity and reviews this in relation to the county of Oxfordshire. This is set out in section 1.5 of Volume 3, Appendix 7.1 : Historic environment desk-based assessment of the PEIR.</p>

Comment	How and where considered in the PEIR
<p>Indirect effects are not considered in Table 7.1. The ES should identify and assess any potential indirect effects on the historic environment, for example, changes in drainage patterns or compression of the ground from infrastructure which could affect below ground heritage assets or lead to subsidence of above ground buildings and monuments.</p>	<p>The potential for indirect effects such as those raised here has been discussed within the Project design team. The construction, operation, maintenance, and decommissioning of the Project would not result in any changes to drainage patterns, compression of the ground, or subsidence. No works are proposed that would affect surface water run-off or subsurface movement of water.</p>
<p>The baseline characterisation presented in Scoping Report paragraphs 7.1.4 to 7.1.14 omits the identification of listed buildings located at Woodstock. Additionally, Scoping Report paragraph 7.1.9 states that no part of the Project within which development is proposed would be within a designated Conservation Area however, Figure 8 of the Scoping Report identifies that the red line boundary interacts with identified Conservation Areas. The ES should present a full and accurate characterisation of the baseline environment and all sensitive receptors located within an appropriate study area.</p>	<p>The baseline characterisation presented in Scoping Report paragraphs 7.1.4 to 7.1.14 did not seek to identify all listed buildings within the proposed study area. Instead it identified the presence of clusters of listed buildings within villages close to the perimeter of the Project site. Woodstock is located a bit further from the perimeter of the Project site, however all listed buildings here have been considered within the assessment presented in section 7.7 as appropriate.</p> <p>Additional, more detailed assessment will be undertaken for the ES where this is appropriate.</p> <p>Elements of two Conservation Areas fall within the red line boundary of the Project. However, as identified within the Scoping Report no development is proposed within any part of either of these two Conservation Areas, nor any other Conservation Area.</p> <p>A full and accurate characterisation of the baseline environment and all sensitive receptors located within an appropriate study area is presented in section 7.5.</p>
<p>Historic England</p>	
<p>We would draw your attention in particular to the Blenheim World Heritage Site (WHS) which lies close to the northern area of the solar scheme. UNESCO and the Advisory Bodies to the World Heritage Committee (ICCROM, ICOMOS & IUCN) have recently issued <i>Guidance and Toolkit for Impact Assessment in a World Heritage context</i> - new guidance for assessing impacts from projects that could potentially affect World Heritage Sites: https://whc.unesco.org/en/news/2465/. The new guidance incorporates and replaces ICOMOS' <i>Guidance on Impact Assessment for Cultural World Heritage Properties</i> (2011) and IUCN's <i>World Heritage Advice Note on Environmental Assessment</i> (2013). It therefore now represents the most updated reference on conducting and reviewing impact assessments for all World Heritage properties.</p> <p>https://whc.unesco.org/en/guidance-toolkit-impact-assessments/</p>	<p>The publication of the <i>Guidance and Toolkit for Impact Assessment in a World Heritage context</i> document was acknowledged in the Scoping Report.</p> <p>The applicant has discussed this issue with Historic England and has begun the process of the Heritage Impact Assessment (HIA) with regard to the Blenheim Palace WHS in line with the recent Guidance and Toolkit document. The HIA will be developed through a process of consultation with the relevant organisations involved in the management of the Blenheim Palace WHS. Within this PEIR however, the applicant has undertaken the initial stages of the work required for the HIA, including completion of the spreadsheet tools which themselves comprise a high-level review of the likely effects on the Outstanding Universal Value of the WHS. This preliminary assessment can be found in Volume 3, Appendix 7.4: Preliminary Heritage Impact Assessment.</p>

Comment	How and where considered in the PEIR
<p>We would strongly recommend that you involve the Conservation Officers of the relevant district councils and the archaeological staff at Oxfordshire County Council in the development of this assessment. They are best placed to advise on: local historic environment issues and priorities; how the proposal can be tailored to avoid and minimise potential adverse impacts on the historic environment; the nature and design of any required mitigation measures; and opportunities for securing wider benefits for the future conservation and management of heritage assets. In particular please note that the site area may include archaeological remains which are of equivalent importance to designated remains.</p>	<p>The Lead Archaeologist at Oxfordshire County Council has been consulted in the development of this assessment, with the extent of the consultation recorded in Table 7.5 below.</p> <p>The potential for the Project site to contain archaeological remains which are of equivalent importance to designated remains is acknowledged and this has been the focus of some of the discussions with the Lead Archaeologist at Oxfordshire County Council.</p>
<p>Given the topography of the surrounding landscape, this development is likely to be visible across a very large area and could, as a result, affect the significance of heritage assets at some distance from this site itself. We would expect the assessment to clearly demonstrate that the extent of the proposed study area is of the appropriate size to ensure that all heritage assets likely to be affected by this development have been included and can be properly assessed.</p>	<p>The extent of the study area has been discussed in consultations with Historic England. The impact of the Project on the significance of heritage assets is assessed within section 7.9.</p> <p>Examination of heritage assets of the highest level of significance (Grade I and II* listed buildings, Grade I and II* Registered Parks and Gardens) beyond the 2 km study area has been undertaken to review whether their significance could be harmed by the construction, operation and maintenance, and decommissioning of the Project. No such assets have been identified.</p> <p>Additional, more detailed assessment will be undertaken for the ES where this is appropriate.</p>
<p>It is important that the assessment is designed to ensure that all impacts are fully understood. Section drawings and techniques such as photomontages are a useful part of this. In particular, photographs with wirelines/ shaded areas showing location of solar array and other above ground units from key points should be included. Where there is possibility that glint and glare from the solar array could be visible within sensitive historic views we recommend a glint and glare assessment takes place and is included in submission documents.</p>	<p>No visualisations have been produced for the PEIR. Visualisations may be produced for the ES following consultation with relevant stakeholders.</p> <p>A glint and glare assessment has been undertaken and is presented as Appendix 4.4 of the PEIR. No effects were identified in respect of sensitive historic views.</p>

Comment	How and where considered in the PEIR
<p>The assessment should also take account of the potential impact which associated activities (such as construction, servicing and maintenance, and associated traffic) might have upon perceptions, understanding and appreciation of the heritage assets in the area. The assessment should also consider, where appropriate, the likelihood of alterations to drainage patterns that might lead to in situ decomposition or destruction of below ground archaeological remains and deposits, and can also lead to subsidence of buildings and monuments.</p>	<p>The assessment presented in section 7.9 addresses potential impacts that could occur during construction, operation and maintenance, and decommissioning.</p> <p>The construction, operation and maintenance, and decommissioning of the Project would not result in any changes to drainage patterns, compression of the ground, or subsidence. No works are proposed that would affect surface water run-off or subsurface movement of water.</p>
<p>The EIA should be cross-referenced and internally coherent - the cultural heritage chapter should not be a stand-alone exercise but should refer to and make use of the findings of the landscape and visual assessment. Significant heritage assets should be considered in the LVIA as sensitive receptors.</p>	<p>The team undertaking the landscape and visual assessment has worked closely with the team undertaking the historic environment assessment, and appropriate cross-references will be presented in the ES.</p> <p>Additional, more detailed assessment alongside the landscape and visual assessment will be undertaken for the ES where this is appropriate.</p>
<p>Oxfordshire County Council</p>	
<p>7.1.18 states that any land considered to have potential for buried archaeological features may require further archaeological investigations. We would however highlight that geophysical survey on its own cannot be relied upon to identify all possible archaeological features and there are numerous examples within the county where significant archaeological sites have been identified from field evaluation which were not visible on geophysical surveys. As such we would advise that an archaeological evaluation will need to be undertaken across any areas of the site that are likely to be disturbed by this development.</p>	<p>The requirement to undertake further archaeological evaluation following geophysical survey is acknowledged. This programme of further evaluation will be carried out for the ES, with the nature and scope of the evaluation developed in consultation with the Lead Archaeologist at Oxfordshire County Council.</p>
<p>7.1.33 states that there will be no effect on buried archaeological remains from decommissioning activities. These activities however do have the potential to impact on archaeological remains particularly when removing cables and areas of hardstanding which are likely, without care and monitoring, to remove previously undisturbed areas outside of the original impact. This potential impact should be assessed within the PEIR.</p>	<p>The likely impacts of the decommissioning phase of the Project on buried archaeological remains is assessed within section 7.9.</p> <p>Additional, more detailed assessment will be undertaken for the ES where this is appropriate and when further information on decommissioning is available.</p>
<p>Vale of White Horse District Council</p>	

Comment	How and where considered in the PEIR
<p>Generally supportive of the proposed approach to Built Heritage as outlined in the report. Given the topography of the landscape surrounding the southern of the proposed sites it is likely that impacts may go beyond the 2 km site boundary limit and will need to be informed by a carefully plotted ZTV (following the recommendations below on the methodology for defining the ZTV). Any extension beyond the 2 km area because of the ZTV assessment should include potential non-designated heritage assets as well as designated heritage assets where these have a specific historic relationship to the landscape or area affected. This should extend into those areas within the Vale that are part of the Oxford City View Cones policy.</p>	<p>The study area for impacts on built heritage assets is informed by the ZTV and includes potential non-designated heritage assets where these have a specific historic relationship to the landscape or area affected.</p> <p>No part of the Project would be visible in any of the View Cones defined within Oxford City Council's policy documents regarding this issue.</p>
<p>West Oxfordshire District Council</p>	
<p>Additional policy documents to be included in legislative and policy context</p> <ul style="list-style-type: none"> • Salt Cross Garden Village Area Action Plan (Subject to Judicial Review – Carries significant material weight) • Cassington Neighbourhood Plan (adopted June 2023) • Eynsham Neighbourhood Plan (adopted February 2020) • Woodstock Neighbourhood Development Plan (adopted January 2023) 	<p>These documents and the relevant policies are all identified within section 1.3.3 of Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR.</p>
<p>Additional guidance documents to be included</p> <ul style="list-style-type: none"> • Bladon Conservation Area Character Appraisal • Cassington Conservation Area Character Appraisal • Blenheim World Heritage Site Management Plan 2017 	<p>These guidance documents are all identified within section 1.3.3 of Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR.</p>
<p>Although the applicant indicates that there are no designated heritage assets situated within any part of the site within which development is proposed, the red line area does appear to overlap a scheduled Monument (Roman Villa) in the Northern Area, to the south east of Wootton at Sansom's Platt.</p>	<p>The Scheduled Monument near Sansom's Platt is not within the Project red line boundary. The location of designated heritage assets in relation to the Project site is indicated on Figure 7.1.</p>

Comment	How and where considered in the PEIR
<p>The applicant suggests that no part of the Project within which development is proposed would be within a designated conservation area. It should be noted that the red line area submitted with the Scoping Report includes land within the Conservation Areas at Hanborough and Bladon.</p>	<p>Elements of the Conservation Areas at Church Hanborough and Bladon fall within the red line boundary of the Project. However, as identified within the Scoping Report no development is proposed within any part of either of these two Conservation Areas, nor any other Conservation Area.</p>
<p>Regard should be had to any archaeological findings arising from the development at Salt Cross Garden Village and Eynsham Park and Ride and consider how these affect the baseline conditions and understanding in the locality.</p>	<p>The results of archaeological investigations to date at Salt Cross Garden Village and Eynsham Park and Ride are considered within section 1.5.3 of Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR.</p>
<p>It is proposed that effects on buried archaeology during the decommissioning phase should be scoped out. It may be necessary to confirm the methodology for the removal of piles and foundations during the decommissioning phase to confirm that such activities will not result in further disturbance and potential permanent and irreversible loss of archaeological resources.</p>	<p>The likely impacts of the decommissioning phase of the Project on buried archaeological remains is assessed within section 7.9.</p>
<p>Cherwell District Council</p>	
<p>It is noted that the study area is 2 km from the boundary of the site and this appears to be quite a small area compared to the size of the site, although it is acknowledged that the zone of visibility will potentially extend any assessment beyond this.</p>	<p>The extent of the study area has been discussed with key stakeholders. The assessment takes into account heritage assets beyond the 2 km study area where appropriate.</p>
<p>There are three further conservation areas within Cherwell District that sit relatively close to the site that should be highlighted, Rousham, Shipton-on-Cherwell and Hampton Gay.</p>	<p>The Conservation Area covering Hampton Gay, Shipton-on-Cherwell and Thrupp is within the 2 km study area for designated heritage assets and therefore falls within the assessment presented in section 7.9. The Conservation Area at Rousham is beyond this 2 km study area. This is an extensive Conservation Area which covers not just the historic settlement core at Rousham but also the village of Lower Heyford and a considerable area of land within the valley of the River Cherwell. Examination of the ZTV which has been established for the Project indicates that solar panels within Plot 1.1 may be visible from elevated land to the south-east of Lower Heyford, but from no other part of the Conservation Area. This closest potential view of solar panels in Plot 1.1 would be at a distance of around 4 km. At that distance, views of solar panels within a single field would not affect the character and appearance of the Conservation Area.</p>
<p>Furthermore, non-designated Heritage Assets are identified within the Conservation Area Appraisals and it is suggested that these should also be considered.</p>	<p>Non-designated heritage assets are considered within the assessment presented in section 7.9. Additional, more detailed assessment will be undertaken for the ES where this is appropriate.</p>

Comment	How and where considered in the PEIR
<p>The methodology and approach to assessment is broadly agreed, however it is important that the impact to Heritage Assets through development within their wider setting is considered, including as part of the wider historic landscape.</p>	<p>The assessment presented in section 7.9 includes the consideration of impacts arising from changes within the setting of heritage assets.</p> <p>Additional, more detailed assessment will be undertaken for the ES where this is appropriate.</p>

7.3.1.3 Following scoping, consultation and engagement with interested parties specific to the historic environment has continued. A summary of the key issues raised during consultation activities undertaken to date is presented in **Table 7.5**, together with how these issues have been considered in the production of this PEIR chapter.

Table 7.5: Summary of consultation relevant to this chapter

Date	Consultee	Issues raised	How and where considered in the PEIR
03 February 2023	Oxfordshire County Council Archaeology Team	<p>A Specification for the Desk-based Assessment (DBA) should be agreed with the Oxfordshire County Council Archaeology Team ahead of commencement.</p> <p>The search area for HER data acquisition and review should cover an area extending 1 km from the Project site boundary for the three main areas of development, and 500 m each side of the proposed 200 kV cable route where this lies outside the 1 km buffer area for the three main areas of development.</p> <p>The methodology for the review of aerial photographs and LiDAR data should be included within the Specification for the DBA.</p> <p>A Specification for the proposed geophysical survey should be agreed with the Oxfordshire County Council Archaeology Team ahead of commencement.</p> <p>Certain types of environmental mitigation, such as tree planting, can result in impacts to buried archaeological remains and therefore geophysical survey of such areas was recommended.</p> <p>Further consultation would be required once the results of the DBA (including the aerial photographic and LiDAR study) and the geophysical survey were available. This would enable the development of an agreed programme of trial trenching that would be targeted and proportionate.</p>	<p>A Specification for the DBA was submitted to, and agreed with, the Oxfordshire County Council Archaeology Team prior to commencement.</p> <p>The search area for HER data acquisition and review, as indicated in section 1.5 of Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR is in line with this request.</p> <p>The methodology for the review of aerial photographs and LiDAR data was included within the Specification for the DBA.</p> <p>A Specification for the geophysical survey was submitted to, and agreed with, the Oxfordshire County Council Archaeology Team prior to commencement.</p> <p>The geophysical survey covers proposed areas of environmental mitigation – see Volume 3, Appendix 7.3: Interim geophysical survey report of the PEIR.</p> <p>Consultation with the Oxfordshire County Council Archaeology Team on this issue is ongoing.</p>

Date	Consultee	Issues raised	How and where considered in the PEIR
26 July 2023	Historic England	<p>The proposed study area for the assessment of potential impacts on designated heritage assets needs to be flexible enough to cover assets beyond 2 km where necessary.</p> <p>The assessment of potential impacts on the Blenheim WHS should be undertaken in accordance with the recently issued <i>Guidance and Toolkit for Impact Assessment in a World Heritage context</i> document. This needs to be considered iteratively within a consultation process including Historic England and other organisations involved in the management of the WHS.</p>	<p>The assessment presented in section 7.9 takes into account heritage assets beyond the 2 km study area where appropriate.</p> <p>Additional, more detailed assessment will be undertaken for the ES where this is appropriate.</p> <p>A separate HIA is being prepared with regard to the Blenheim Palace WHS in line with the recent Guidance and Toolkit document. The HIA will be developed through a process of consultation with the relevant organisations involved in the management of the WHS.</p>

7.4 Baseline methodology

7.4.1 Relevant guidance

7.4.1.1 The following guidance documents have been considered in the compilation of the historic environment baseline and the subsequent assessment of impacts and effects.

- Conservation Principles, Policies and Guidance for the sustainable management of the historic environment (English Heritage 2008);
- Standard and guidance for historic environment desk-based assessment (Chartered Institute for Archaeologists (CIfA) 2014a);
- Standard and guidance for archaeological geophysical survey (CIfA 2014b);
- Managing Significance in Decision-Taking in the Historic Environment (Historic England 2015);
- The Setting of Heritage Assets (Historic England 2017);
- Statements of Heritage Significance: Analysing Significance in Heritage Assets (Historic England 2019);
- Commercial Renewable Energy and the Historic Environment (Historic England 2021);
- Principles of Cultural Heritage Impact Assessment in the UK (Institute of Environmental Management and Assessment (IEMA), Institute of Historic Building Conservation (IHBC) and CIfA 2021); and
- Guidance and Toolkit for Impact Assessments in a World Heritage Context, 2022 and the Blenheim Palace World Heritage Site Revised Management Plan 2017.

7.4.1.2 Further information regarding these guidance documents is provided within section 1.3.4 of Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR.

7.4.2 Scope of the assessment

7.4.2.1 The scope of this PEIR has been developed in consultation with relevant statutory and non-statutory consultees as detailed in **Table 7.4** and **Table 7.5**.

7.4.2.2 The historic environment baseline has been established through a review of available information acquired from appropriate sources including the National Heritage List for England (NHLE), the Oxfordshire HER and the Oxfordshire History Centre. The study areas for the acquisition of baseline information extends beyond the land required for the construction, operation and maintenance and decommissioning of the Project as set out below. These study areas have been agreed with stakeholders via the Scoping Report and the Scoping Opinion as well as through subsequent consultation (see **Table 7.4** and **Table 7.5**).

7.4.2.3 The acquisition of available baseline information has been supplemented by field surveys, as set out below. The scope and extent of these field surveys has been developed with, and approved by, the appropriate stakeholders.

7.4.2.4 Taking into account the scoping and consultation process, **Table 7.6** summarises the issues considered as part of this assessment.

Table 7.6: Issues considered within this assessment

Activity	Potential effects scoped into the assessment
Construction phase	
Construction of the Project	Effects arising from damage to or permanent loss of buried archaeological resources.
	Effects arising from changes within the settings of designated heritage assets.
	Effects arising from changes to the character of the historic landscape.
Operation and maintenance	
Operation and maintenance of the Project	Effects arising from changes within the settings of designated heritage assets.
	Effects arising from changes to the character of the historic landscape.
Decommissioning	
Decommissioning of the Project	Effects arising from damage to or permanent loss of buried archaeological resources.
	Effects arising from changes within the settings of designated heritage assets.
	Effects arising from changes to the character of the historic landscape.

7.4.2.5 Effects which are not considered likely to be significant have been scoped out of the assessment. A summary of the effects scoped out is presented in **Table 7.7**.

Table 7.7: Issues scoped out of the assessment

Issue	Justification
Effects arising from impacts on buried archaeological resources during operation and maintenance.	Activities associated with the operation and maintenance of the Project are unlikely to damage or result in the permanent loss of buried archaeological resources.

7.4.3 Study area

7.4.3.1 The historic environment study area is made up as follows.

- For all types of designated heritage assets – a buffer zone extending for 2 km from the edge of the Order Limits for the Project. Designated heritage assets beyond the 2 km buffer zone have been included within the

assessment where they fall within the ZTV established for the Project and where they have designed views towards the Project or where it is considered that have a particular iconic status that may be affected by the Project.

- For all types of non-designated heritage assets – a buffer zone extending for 1 km from the boundaries of the Northern, Central and Southern Sites, also a buffer zone extending for 500 m from the edge of the Order Limits for the 200 kV cable corridor where this falls outside the 1 km buffer zone for the Northern, Central and Southern Sites.

7.4.3.2 These study areas have been discussed with Historic England and with the archaeological advisor to the local authorities, and are identified on Figures 7.1 and 7.2 (see Volume 3, Figures).

7.4.4 Methodology for baseline studies

Desk studies

7.4.4.1 This section of the PEIR chapter provides a brief summary of the baseline historic environment within the historic environment study area. More detailed information on the baseline historic environment within the historic environment study area is presented within Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR.

7.4.4.2 A separate study has been undertaken of historic aerial photographs and LiDAR data. The results of that study are summarised within Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR, with the detailed report presented as Volume 3, Appendix 7.2: Assessment of airborne remote sensing and satellite imagery for archaeology of the PEIR.

7.4.4.3 The methodology for the desk-based assessment, including the separate study of historic aerial photographs and LiDAR data, has been agreed with the archaeological advisor to the local authorities.

Site-specific surveys

7.4.4.4 A programme of archaeological geophysical survey has been initiated within the Project Site. The survey programme is ongoing and will examine all land within the Project site which is suitable for survey.

7.4.4.5 A summary of the results of the geophysical survey undertaken prior to June 2023 is presented within Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR, with the detailed report provided as Volume 3, Appendix 7.3: Interim geophysical survey report of the PEIR. A full report on the results of the complete programme of geophysical survey will be appended to the ES.

7.4.4.6 The geophysical survey methodology comprises magnetometry (fluxgate gradiometry). This methodology was described within a WSI which was submitted to, and approved by, the archaeological advisor to the local authorities prior to commencement of the survey.

7.5 Baseline environment

7.5.1 Desk study

7.5.1.1 Information on the historic environment baseline within the study area was collected through a detailed review of existing studies and datasets. The following sources were reviewed.

- The regional Historic Environment Record (HER) maintained by Oxfordshire County Council.
- Historic England’s National Heritage List for England (NHLE) for information on World Heritage Sites, Scheduled Monuments, Listed Buildings, and Registered Parks and Gardens and Landscapes of Special Historic Interest.
- Documents held by the Oxfordshire History Centre (Oxford).
- 19th century tithe maps, historic county maps and early Ordnance Survey (OS) maps.
- British Geological Survey (BGS) data.
- [ArchSearch](#) (data held by the Archaeology Data Service (ADS)).
- Portable Antiquities Scheme (PAS) online: <https://finds.org.uk/database/search/spatial>.
- British History Online <http://www.british-history.ac.uk/>.
- The Domesday Book <http://www.domesdaybook.co.uk/>.

7.5.1.2 The separate study of historic aerial photographs and LiDAR data (Volume 3, Appendix 7.2: Assessment of airborne remote sensing and satellite imagery for archaeology of the PEIR) included review of additional appropriate sources.

7.5.1.3 A detailed appraisal of the historic environment baseline is set out in Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR, with a summary provided here. **Table 7.8** presents the defined timescales used within this summary.

Table 7.8: Defined timescales

Term	Timescale
Prehistoric	
Palaeolithic	900,000 – 12,000 BC
Mesolithic	12,000 – 4,000 BC
Neolithic	4,000 – 1,800 BC
Bronze Age	1,800 – 600 BC
Iron Age	600 BC – AD 43
Historic	
Roman	AD 43 - 410

Term	Timescale
Early Medieval	AD 411 - 1066
Medieval	AD 1067 - 1485
Post-medieval	AD 1486 - 1799
Modern	AD 1800 - present

7.5.2 Designated heritage assets

- 7.5.2.1 No designated heritage assets would be directly physically impacted by the construction, operation and maintenance of the Project. Any impacts on designated heritage assets would arise from a change within the setting of the asset. Elements of two Conservation Areas extend into the Order Limits for the Project (at Bladon and Church Hanborough. However, no development is proposed within any part of either of these two Conservation Areas, nor any other Conservation Area
- 7.5.2.2 The locations of all designated heritage assets within the defined 2 km study area are indicated on Figure 7.1 (see Volume 3, Figures). A Project-specific Site Number prefixed BW (Botley West) is used to identify each designated heritage asset on Figure 7.1; additional information on each asset is set out in Volume 3, Appendix 7.1: Historic environment desk-based assessment of the PEIR and in Annex A of that document.
- 7.5.2.3 The Blenheim Palace WHS is located to the north-west of the Central Site and to the south-west of the Northern Site (**BW0021**). It was inscribed as a WHS in 1987. Blenheim Palace was built between 1705 and 1722 as the home of the Dukes of Marlborough. It is named after the Battle of Blenheim (1704) and was intended to be a reward to John Churchill (1st Duke of Marlborough) for his successes in the War of the Spanish Succession. The palace is one of the largest houses in England and was designed in the rare and short-lived English Baroque style by the architect Sir John Vanbrugh.
- 7.5.2.4 The Grade I listed Blenheim Palace (**BW0028**) sits within an extensive park in the classic English landscape garden style. This was initially laid out by Vanbrugh but was subsequently altered by Lancelot ‘Capability’ Brown who created two conjoined substantial ornamental lakes by damming the River Glyme. Both the house and the surrounding park were created from a preceding manor house and estate known as Woodstock Park which had been established as far back as the reign of Henry I (1100 – 1135).
- 7.5.2.5 The boundary of the WHS is almost contiguous with the boundary of the Blenheim Palace Grade I Registered Park and Garden (**BW0022**). In addition to the Palace itself, the WHS contains numerous listed buildings including six listed at Grade I and five listed at Grade II*. It also contains five Scheduled Monuments including the possible site of a Romano-Celtic temple (**BW0011**) and a section of a Roman Road known as Akeman Street (**BW0005**).
- 7.5.2.6 Two more Registered Parks and Gardens are present within the defined 2 km study area. One of these is the Grade II* Registered Tackley Water Garden (**BW0023**) which dates back to the early 17th century. The second is the Grade II Registered garden at Yarnton Manor (**BW0024**).

- 7.5.2.7 Three of the five Scheduled Monuments within the Blenheim Place WHS are also within the defined 2 km study area, along with a further 17 Scheduled Monuments. These include: a Neolithic long barrow (**BW0006**); a pair of ring ditches likely representing the remains of Bronze Age round barrows (**BW0014**); an Iron Age hillfort (**BW0015**); a Roman villa or possibly a small settlement (**BW0004**), another Roman villa (**BW0012**) and two enclosures likely to be of Roman date (**BW0003**; **BW0008**); three shrunken Medieval settlements (**BW0002**; **BW0010**; **BW0020**); three Medieval stone crosses (**BW0009**; **BW0013**; **BW0016**); the site of Eynsham Abbey (**BW0017**); elements of the 17th century water garden at Tackley (**BW0023**); an 18th century bridge over the River Thames (**BW0018**); and a group of undated enclosures and other features recorded as cropmarks on aerial photographs (**BW0019**).
- 7.5.2.8 A total of thirteen Conservation Areas are wholly or partially within the defined 2 km study area. These comprise eight within West Oxfordshire District (Bladon; Cassington; Church Hanborough; Eynsham; Long Hanborough; Tackley; Woodstock; Wootton), one within Vale of White Horse District (Cumnor) and two within Cherwell District (Begbroke and Hampton Gay, Shipton-on-Cherwell and Thrupp). They indicate the locations of historic settlements in the area, and most (if not all) have their origins in the Early Medieval period, possibly earlier in some cases.
- 7.5.2.9 Listed buildings are present within all of the Conservation Areas, with a further group located within the Blenheim Palace WHS as reported above. Most of the listed buildings within the Conservation Areas are listed at Grade II, although within each one there are often one or more listed at Grade I or II*, including several Medieval churches.
- 7.5.2.10 There are also some listed buildings within the defined 2 km study area that are outside of any designated historic area such as the WHS or a Conservation Area. Most of these are farmhouses and farm buildings which are all listed at Grade II; examples of other building types with a higher grade of listing include Hordley House (**BW0038**) and Yarnton Manor (**BW0056**), both listed at Grade II*.

7.5.3 Non-designated heritage assets

- 7.5.3.1 None of the three local planning authorities within which the Project Site is located currently maintains a District-wide list of non-designated buildings of local historical importance (otherwise known as 'locally listed buildings'). Some buildings within three of the Conservation Areas designated by West Oxfordshire District Council are identified as 'Locally Listed Buildings' on maps produced as part of Conservation Area Appraisal documents, although there is no information regarding this non-statutory designation process.
- 7.5.3.2 The locations of all non-designated heritage assets within the defined 1 km study area are indicated on Figure 7.2 (see Volume 3, Figures), although the 'Locally Listed Buildings' identified within the Conservation Area Appraisal documents are not included on that figure. A Project-specific Site Number prefixed BW (Botley West) is used to identify each designated heritage asset on Figure 7.2; additional information on each asset is set out in Volume 3,

Appendix 7.1: Historic environment desk-based assessment of the PEIR and in Annex A of that document.

- 7.5.3.3 The Project Site is located within the Thames Valley, an area rich in buried archaeological remains of all periods. A considerable amount of investigation of these remains has taken place, often in connection with development activity including large-scale extraction of sands and gravels within the Thames floodplain.
- 7.5.3.4 In the vicinity of the Project Site, major programmes of archaeological work have been undertaken on the Thames floodplain to the east of the Central Site, most significantly to the east of Cassington and south of Yarnton. This work identified evidence of settlement from the early Neolithic period onwards, along with ceremonial sites and burials.
- 7.5.3.5 Immediately to the south-west of Cassington, rescue excavations ahead of and during gravel extraction examined the site of a possible fortified late Iron Age settlement (or 'oppidum') known as Cassington Big Ring. Neolithic features were also present here, along with possibly as many as 35 ring ditches indicative of Bronze Age round barrows (burial mounds).
- 7.5.3.6 A detailed investigation was undertaken ahead of the construction of Farmoor Reservoir on the Thames floodplain to the west of the Southern Site. This work resulted in the identification of a limited amount of activity of Early Iron Age date, followed by the establishment during the middle Iron Age of a small settlement with three or four unenclosed farmsteads. Settlement in this area was renewed in the later part of the 3rd century AD and a well-ordered landscape developed at that time with extensive drove and trackway systems, field boundaries, stock enclosures and horticultural plots.
- 7.5.3.7 Up until the programme of geophysical survey initiated for the Project, purposive archaeological fieldwork within any part of the Project Site has been limited mostly to investigations in the vicinity of Purwell Farm, in the southern part of the Central Site. Extraction of sand and gravel from to the south and east of the farm during the middle part of the 20th century resulted in the exposure and investigation of archaeological features in several locations. The discoveries here included a burial dated to what is known as the Beaker Period (the transition from the Neolithic to the Bronze Age), along with evidence for activity during the Iron Age and Roman periods. Early Medieval settlement activity was also found here along with at least one cemetery of the same period.
- 7.5.3.8 Material of Palaeolithic date has been found within the defined 1 km study area around the main elements of the Project Site in the form of flint tools. These are most likely to have come from secondary contexts rather than from a primary place of deposition, having been moved to their discovered locations through fluvial action. Similar artefacts may be present in gravels and sands within the Project Site, particularly within the valleys of the Rivers Thames and Evenlode, but are unlikely to be disturbed from their current positions by the construction, operation and maintenance, or decommissioning of the Project.
- 7.5.3.9 Mesolithic activity within the defined study area is also attested predominantly by the presence of flint tools. These are less likely to have moved far from their primary deposition location (when compared to the Palaeolithic examples) but

are often found during programmes of surface artefact collection or as background finds during investigations of archaeological features dating to later periods.

- 7.5.3.10 However, a small pit examined during an archaeological investigation of land immediately adjacent to the Northern Site could be of Mesolithic date, and similar features may be present within any part of the Project Site. Evidence for settlement or other more permanent activities is most likely to be found in areas that have the potential for waterlogged deposits, such as palaeochannels within the floodplain of the River Evenlode.
- 7.5.3.11 Evidence for Neolithic and Bronze Age activity is widespread within the defined 1 km study area. There is a particular focus on the gravels within the floodplain of the River Thames, but also plenty of sites and features on the gently undulating ground beyond these areas. Ring ditches representing burial monuments of Bronze Age date are widespread, with cemeteries made up of multiple examples but also small groups as well as isolated individual instances. The larger groups are most likely to occur on the river floodplains, but small groups and isolated examples are known from the more elevated land within the Project Site.
- 7.5.3.12 Sites and features representing Iron Age activity are also present across much of the defined study area, with larger sites such as hillforts and substantial enclosures as well as smaller settlements including unenclosed examples. There are also sites comprising groups of pits that may represent farmsteads for which the evidence of the buildings has now been lost.
- 7.5.3.13 Key features for the Roman period include the important military road known as Akeman Street which crosses the Northern Site and adjacent to which is a villa or possible a small settlement containing several buildings including a potential temple. Other Roman villas are known or postulated in the vicinity of the Northern Site.
- 7.5.3.14 The potential for significant Roman remains to be present in this area is emphasised by the discovery during the Project-specific geophysical survey of a probable Romano-Celtic temple complex in an elevated location overlooking the valley of the River Evenlode. This site has not been previously identified and does not appear to show up on any historical aerial photographs. Some of the settlement enclosures that have been recorded as cropmarks on aerial photographs, including examples within the Project Site, may have originated during the later prehistoric period but continued in use well into the Roman period.
- 7.5.3.15 Evidence for Early Medieval activity within the defined 1 km study area includes areas of settlement, but also several inhumation cemeteries are known including examples where the mounds representing Bronze Age round barrows were reused by Anglo-Saxons. These can be found on the river floodplains but are also known from more elevated areas such as Purwell Farm.
- 7.5.3.16 There is a reduced potential for remains of Medieval, Post-medieval and Modern activity to be present within the Project Site given the well-documented history of settlement in the area. However, some settlements have reduced in size or even disappeared altogether and remains associated with these may

be present. Elements of the Medieval and Post-medieval landscapes have been identified through a review of available LiDAR data, and in some areas are retained in the current landscape within and around the Project Site. This can include areas of woodland as well as boundaries and other earthworks.

- 7.5.3.17 Examination has been made of the programme of Historic Landscape Characterisation (HLC) that has been undertaken for Oxfordshire. HLC is an aspect of more general landscape characterisation which seeks to provide an additional element of ‘time-depth’, allowing the historic evolution of the landscape to be perceived and understood.
- 7.5.3.18 Overall, most of the Project Site falls within defined HLC Types that represent land which has been enclosed (usually formally) and much of which has been subject to boundary loss and reorganisation since the time at which it was enclosed. These HLC Types are regarded as ‘Common or even ‘Abundant’ within Oxfordshire.
- 7.5.3.19 There are a few exceptions to this overall position with regard to historic landscape character. These include one field in the Northern Site which represents an isolated area of HLC Type ‘Ancient Enclosure’, one field in the Central Site of HLC Type ‘Unenclosed – Rough Ground’ and an area of three fields in the Central Site adjacent to the River Evenlode which form part of an area of HLC Type ‘Water Meadow’. These HLC Types are considered to be Rare or Very Rare within Oxfordshire.

7.5.4 Site-specific surveys

- 7.5.4.1 The results of the geophysical survey work completed by the end of June 2023 are presented in Volume 3, Appendix 7.3: Interim geophysical survey report of the PEIR. This survey has confirmed the presence of some of the archaeological sites identified from the desk-based studies and in a few cases has provided further details regarding the extent and nature of these sites.
- 7.5.4.2 The geophysical survey has also identified the presence of archaeological sites and features of potential archaeological interest which were not previously known from any other sources. It is anticipated that further sites and features of potential archaeological interest will be identified within those parts of the Project site where geophysical survey has not yet been completed. Any such sites and features will be assessed within the ES.

7.5.5 Future baseline conditions

- 7.5.5.1 Future changes to the historic environment baseline could include additions to the list of designated historic assets, e.g. additional designations of Scheduled Monuments, Listed Buildings etc. or amendments to the descriptions of the assets and the area covered by the designation.
- 7.5.5.2 Other changes could occur as a result of further information being discovered regarding archaeological sites, possibly through programmes of intrusive or non-intrusive fieldwork. As described above, a programme of geophysical survey is ongoing within the Project site boundary. Once this has been completed, further investigation of the archaeological potential of land within the Project site boundary is planned to take place ahead of the production of

the ES that would be submitted in support of the application for development consent for the Project. The results of any such investigations would be incorporated into the historic environment baseline reported within the ES.

7.5.5.3 No changes in statutory legislation on historic environment issues are currently anticipated. Additional guidance may be issued by national statutory advisors or others, including guidance on the assessment process.

7.5.5.4 No significant change to the historic environment baseline in this area is anticipated to occur as a result of climate change. Drier weather in the summer months may lead to the discovery of as yet unknown archaeological sites that become visible as cropmarks or parchmarks. However, this could also lead to some drying out of deposits (within palaeochannels) which are currently waterlogged or damp and this may result in some loss of significance of these deposits in terms of palaeoenvironmental potential.

7.5.6 Key receptors

7.5.6.1 **Table 7.9** identifies the key receptors taken forward into the assessment.

Table 7.9: Key receptors taken forward to assessment

Receptor	Description	Sensitivity/value
Blenheim Palace WHS	Designed landscape surrounding 18 th century grand house.	Very High
Grade I and II* listed buildings	Mostly within historic settlements or the WHS but with a few more isolated examples.	High (or Very High if within the WHS)
Grade II listed buildings	Mostly within historic settlements or the WHS but with a several more isolated examples.	Medium (or Very High if within the WHS)
Scheduled Monuments	A wide date range is represented, from Neolithic through to Post-medieval.	High (could be Very High if within the WHS)
Conservation Areas	Thirteen are present within 2 km of the Project Site.	Medium or High
Buried archaeological remains	Known to be present at several locations within the Project Site.	Up to High
Overall character of the historic landscape	The landscape within the Project Site is mostly the result of enclosure in the late 18 th and early 19 th centuries with subsequent boundary losses.	Generally Low

7.6 Key parameters for assessment

7.6.1 Maximum design scenario

7.6.1.1 The maximum design scenarios identified in **Table 7.10** have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. These scenarios have been selected from the Project Design Envelope provided in Volume 1, Chapter 6: Project Description of the PEIR. Effects of greater adverse significance are not predicted to arise

should any other development scenario, based on details within the Project Design Envelope (e.g., different infrastructure layout), to that assessed here be taken forward in the final design scheme.

Table 7.10: Maximum design scenario considered for the assessment of potential impacts

Potential impact	Phase ^a			Maximum Design Scenario	Justification
	C	O	D		
Loss of, or harm to, buried archaeological remains during the construction and decommissioning phases.	Yes	No	Yes	Construction phase <ul style="list-style-type: none"> Maximum total developable area for solar arrays – Northern Site approximately 266 ha. Maximum total developable area for solar arrays – Central Site approximately 572 ha. Maximum total developable area for solar arrays – Southern Site approximately 51 ha. Maximum number of solar photovoltaic (PV) modules – approximately 2,300,000 Maximum height above ground level of solar PV modules – 2.5 m Maximum total number of piles – 1,968,722 Maximum depth of piles below ground level – 2.5 m Maximum number of power converter stations (PCSs) – 156 Maximum size of PCSs – height 3.5 m, width 14.0 m, depth 2.9 m Maximum number of High Voltage Transformers (secondary substations) - 8 Maximum size of High Voltage Transformers (secondary substations) – height 6 m, length 18 m, width 10 m High Voltage Transformer (main substation) – maximum footprint 140 x 62 m Cables from High Voltage Transformers (secondary substations) to High Voltage Transformer (main substation) – length TBC, maximum depth in roadways 0.85 m, maximum depth in fields 1.05 m, maximum depth in footpaths and verges 0.9 m National Grid Electricity Transmission (NGET) substation – site area 3.8 ha., footprint 180 m x 150 m, height 15 m, 	<p>Greatest developable area for solar arrays; number of solar PV modules; number of piles; depth of piles below ground, number and size of PCSs; number and footprint of secondary substations: footprint of main substation; length and width of easement for cable construction; and size of construction compounds represents the greatest potential for impacts on buried archaeological remains.</p> <p>Greatest developable area for solar arrays; number of solar PV modules; height of solar PV modules, number and size of PCSs; number and size of secondary substations: size of main substation; and size of NGET substation represents the greatest potential for impacts on designated heritage assets as a result of change within their setting.</p> <p>Greatest developable area for solar arrays; number of solar PV modules; height of solar PV modules, number and size of PCSs; number and size of secondary substations: size of main substation; and size of NGET substation represents the greatest potential for impacts on the character of the historic landscape.</p>
The impact of construction, operation and maintenance and decommissioning of the Project on buried archaeological remains as a result of change within their setting.	Yes	Yes	Yes		
The impact of construction, operation and maintenance and decommissioning of the Project on the Blenheim Place World Heritage Site as a result of change within its setting.	Yes	Yes	Yes		
The impact of construction, operation and maintenance and	Yes	Yes	Yes		

Potential impact	Phase ^a			Maximum Design Scenario	Justification
	C	O	D		
decommissioning of The Project on designated heritage assets as a result of change within their setting.				<ul style="list-style-type: none"> Likely duration of construction 24 months 	
The impact of construction, operation and maintenance and decommissioning of the Project on the character of the historic landscape.	Yes	Yes	Yes	<p>Operation and maintenance phase</p> <ul style="list-style-type: none"> Maximum total developable area for solar arrays – Northern Site approximately 266 ha. Maximum total developable area for solar arrays – Central Site approximately 572 ha. Maximum total developable area for solar arrays – Southern Site approximately 51 ha. Maximum number of solar PV modules – approximately 2,300,000 Maximum height above ground level of solar PV modules – 2.5 m Maximum number of power converter stations (PCSs) – 156 Maximum size of PCSs – height 3.5 m, width 14.0 m, depth 2.9 m Maximum number of High Voltage Transformers (secondary substations) - 8 Maximum size of High Voltage Transformers (secondary substations) – height 6 m, length 18 m, width 10 m High Voltage Transformer (main substation) – maximum footprint 140 x 62 m Cables from High Voltage Transformers (secondary substations) to High Voltage Transformer (main substation) – length TBC NGET substation – site area 3.8 ha., footprint 180 m x 150 m, height 15 m, <p>Decommissioning phase</p> <p>Decommissioning is likely to operate within the parameters identified for construction (i.e., any activities are likely to occur within construction working areas and to require no greater amount or duration of activity than assessed for construction).</p>	

^a C=construction, O=operational and maintenance, D=decommissioning

7.7 Mitigation measures intended to be adopted as part of the Project

- 7.7.1.1 For the purposes of the EIA process, the term ‘Measures adopted as part of the Project’ is used to include the following types of mitigation measures (adapted from IEMA, 2016):
- Primary (inherent) mitigation - measures included as part of the project design. IEMA describes these as ‘*modifications to the location or design of the development made during the pre-application phase that are an inherent part of the project and do not require additional action to be taken*’. This includes modifications arising through the iterative design process. These measures will be secured through the consent itself through the description of the Project and the parameters secured in the DCO. For example, a reduction in footprint or height.
 - Secondary (foreseeable) mitigation. IEMA describes these as ‘*actions that will require further activity in order to achieve the anticipated outcome*’. These include measures required to reduce the significance of environmental effects (such as lighting limits) and may be secured through an environmental management plan.
 - Tertiary (inexorable) mitigation. IEMA describes these as ‘*actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects*’. It may be helpful to secure such measures through a Code of Construction Practice (CoCP) or similar.
- 7.7.1.2 For the purposes of this PEIR, mitigation measures set out are those considered to be appropriate for the Project at this time. They may evolve and/or be refined in response to the statutory consultation process and/or other considerations.
- 7.7.1.3 Where relevant, measures have been identified that may result in enhancement of environmental conditions. The mitigation measures relevant to this chapter are summarised in Table 7.11.
- 7.7.1.4 Primary and tertiary measures that are intended to form part of the final design (and/or are established legislative requirements/good practice) have been taken into account as part of the initial assessment presented in section 14.9 below (i.e., the initial determination of impact magnitude and significance of effects assumes implementation of these measures). This ensures that the measures that the Applicants are intending to commit to, are taken into account in the assessment of effects.
- 7.7.1.5 Where an assessment identifies likely significant adverse effects, further mitigation measures may be applied. These are measures that could further prevent, reduce and, where possible, offset these effects. They are defined by IEMA as actions that will require further activity in order to achieve the anticipated outcome and may be imposed as part of the planning consent, or through inclusion in the Environmental Statement (referred to as secondary

mitigation measures in IEMA, 2016). For further or secondary measures both pre-mitigation and residual effects are presented.

Table 7.11: Mitigation measures intended to be adopted as part of the Project.

Mitigation number	Measure adopted	How the measure will be secured
Primary Mitigation		
7.1	<p>A range of designated heritage assets (including statutory and non-statutory designations) have been directly avoided by the permanent Project developable footprint, at the point of DCO submission.</p> <p>These include, but are not restricted to:</p> <ul style="list-style-type: none"> • World Heritage Sites; • Listed Buildings; • Scheduled Monuments; • Registered Parks and Gardens; and • Conservation Areas. <p>Other areas containing significant non-designated buried archaeological remains have been directly avoided by the permanent Project developable footprint, at the point of DCO submission.</p>	Committed with the project design and secured through the DCO (see Volume 1, Chapter 4: Alternatives of the PEIR).
Tertiary Mitigation		
7.2	The ongoing programme of geophysical survey will be completed and a follow-up programme of archaeological trial trenching will be implemented.	Undertaken ahead of DCO submission, with results used in the assessment presented within the ES.
7.3	An Outline Written Scheme of Investigation (WSI) will be prepared and submitted with the application for development consent. The Outline WSI will detail the further archaeological work required in advance of and during construction, also any areas containing significant non-designated buried archaeological remains that will be protected against direct physical impacts during construction through the use of a 'no-dig' approach including concrete 'shoes' or similar instead of piles for the installation of solar PV modules.	These measures would be secured as a requirement of the DCO.
7.4	An Outline Landscape Management Plan will be prepared and submitted with the application for development consent. A Landscape Management Plan will be developed in accordance with the Outline Landscape Management Plan. The Landscape Management Plan will include details of mitigation planting at the onshore substation sites, including the number, location, species and details of management and maintenance of planting. Where practical, landscape mitigation planting will be established as early as reasonably practicable in the construction phase.	Outline Landscape Management Plan to be provided as part of application for development consent.

7.8 Impact assessment methodology

7.8.1 Overview

7.8.1.1 The significance of an effect is determined based on the sensitivity of a receptor and the magnitude of an impact. This section describes the criteria applied in this chapter to characterise the sensitivity of receptors and magnitude of potential impacts. The terms used to define magnitude and sensitivity are based on and have been adapted from those used in the Design Manual for Roads and Bridges (DMRB) methodology (Highways England *et al.*, 2020).

7.8.1.2 The approach to determining the significance of effects is a two-stage process that involves defining the magnitude of the impact and the sensitivity of the receptor. This section describes the criteria applied in this chapter to assign values to the magnitude of potential impacts and the sensitivity of the receptors. The terms used to define magnitude and sensitivity are based on those which are described in further detail in Volume 1, Chapter 4: Approach to Environmental Assessment of the PEIR.

7.8.2 Receptor sensitivity/value

7.8.2.1 The criteria for defining sensitivity in this chapter are outlined in **Table 7.12** below.

Table 7.12: Sensitivity/value criteria

Sensitivity/value	Definition
Very High	<p>Historic assets of international importance.</p> <p>World Heritage Sites and the individual attributes that convey their Outstanding Universal Value.</p> <p>Areas associated with intangible heritage and areas with associations with particular innovations, scientific developments, movements or individuals of global importance.</p> <p>Assets that can contribute significantly to acknowledged international research objectives.</p>

Sensitivity/value	Definition
High	<p>Scheduled Monuments, Listed Buildings (Grade I, II*), Registered Historic Parks and Gardens (Grade I, II*), Registered Battlefields, Protected Wrecks, Protected Military Remains.</p> <p>Other listed buildings that can be shown to have exceptional qualities in their fabric or historical association not adequately reflected in the listing grade.</p> <p>Unscheduled sites and monuments of schedulable quality and/or importance including those discovered through the course of evaluation or mitigation.</p> <p>Archaeological assets that can contribute significantly to acknowledged national research objectives.</p> <p>Conservation Areas containing very important buildings (Grade I and II* Listed Buildings).</p> <p>Undesignated structures of clear national importance.</p> <p>Palaeogeographic features with a demonstrable high potential to include artefactual and/or palaeoenvironmental material, possibly as part of a prehistoric site or landscape.</p> <p>Undesignated sites of wrecked ships and aircraft that are demonstrably of equivalent archaeological importance to those already designated.</p>
Medium	<p>Conservation Areas, Grade II Listed Buildings and Grade II Registered Historic Parks and Gardens.</p> <p>Undesignated archaeological assets that can contribute to regional research objectives.</p> <p>Historic townscapes and landscapes with reasonable coherence, time depth and other critical factor(s).</p> <p>Unlisted assets that can be shown to have exceptional qualities or historic association.</p> <p>Undesignated historic landscapes that would justify special historic landscape designation, landscapes of regional value.</p> <p>Averagely well-preserved historic landscapes with reasonable coherence, time-depth or other critical factors.</p> <p>Prehistoric deposits with moderate potential to contribute to an understanding of the palaeoenvironment.</p> <p>Undesignated wrecks of ships or aircraft that have moderate potential based on a formal assessment of their importance in terms of build, use, loss, survival and investigation.</p>
Low	<p>Heritage assets with importance to local interest groups or that contribute to local research objectives.</p> <p>Locally Listed Buildings and Sites of Importance within a district level.</p> <p>Robust undesignated assets compromised by poor preservation and/or poor contextual associations.</p> <p>Robust undesignated historic landscapes.</p> <p>Historic landscapes with importance to local interest groups.</p> <p>Historic landscapes whose value is limited by poor preservation and/or poor survival of contextual associations.</p> <p>Prehistoric deposits with low potential to contribute to an understanding of the palaeoenvironment.</p> <p>Undesignated wrecks of ships or aircraft that have low potential based on a formal assessment of their importance in terms of build, use, loss, survival and investigation.</p>

Sensitivity/value	Definition
Negligible	<p>Heritage assets with importance to local interest groups or that contribute to local research objectives.</p> <p>Locally Listed Buildings and Sites of Importance within a district level.</p> <p>Robust undesignated assets compromised by poor preservation and/or poor contextual associations.</p> <p>Robust undesignated historic landscapes.</p> <p>Historic landscapes with importance to local interest groups.</p> <p>Historic landscapes whose value is limited by poor preservation and/or poor survival of contextual associations.</p> <p>Prehistoric deposits with low potential to contribute to an understanding of the palaeoenvironment.</p> <p>Undesignated wrecks of ships or aircraft that have low potential based on a formal assessment of their importance in terms of build, use, loss, survival and investigation.</p>

7.8.3 Magnitude of impact

7.8.3.1 The criteria for defining magnitude in this chapter are outlined in **Table 7.13** below.

Table 7.13: Impact magnitude criteria

Magnitude of impact	Definition
High	Adverse Change to most or all key elements of the heritage asset, or changes within the setting of the asset, such that the significance of the asset is lost or substantially harmed.
	Beneficial Change to most or all key elements of the heritage asset, or changes within the setting of the asset, such that the significance of the asset is substantially enhanced.
Medium	Adverse Change to elements of the heritage asset, or changes within the setting of the asset, such that the significance of the asset is clearly harmed.
	Beneficial Change to elements of the heritage asset, or changes within the setting of the asset, such that the significance of the asset is clearly enhanced.
Low	Adverse Change to elements of the heritage asset, or changes within the setting of the asset, such that the significance of the asset is slightly harmed.
	Beneficial Change to elements of the heritage asset, or changes within the setting of the asset, such that the significance of the asset is slightly enhanced.
Negligible	Adverse Change to elements of the heritage asset, or changes within the setting of the asset, such that the significance of the asset is barely affected.
	Beneficial Change to elements of the heritage asset, or changes within the setting of the asset, such that the significance of the asset is barely affected.
No change	No changes to elements of the heritage asset, or within the setting of the asset.

7.8.4 Significance of effect

- 7.8.4.1 The significance of the effect upon a heritage asset has been determined by taking into account the sensitivity of the receptor and the magnitude of the impact. The method employed for this assessment is presented in **Table 7.14**. Where a range of significance levels is presented, the final assessment for each effect is based upon expert judgement. In terms of any effect upon the Blenheim Palace World Heritage Site itself, it should be noted that a separate but parallel exercise has begun, the findings of which are reported at Appendix 7.4: Preliminary Heritage Impact Assessment. This assessment is based upon the Guidance and Toolkit for Impact Assessments in a World Heritage Context, 2022.
- 7.8.4.2 In all cases, the evaluation of receptor sensitivity, impact magnitude and significance of effect has been informed by professional judgement and is underpinned by narrative to explain the conclusions reached.
- 7.8.4.3 For the purpose of this assessment, any effects with a significance level of minor or less are not considered to be significant in terms of the EIA Regulations.

Table 7.14: Assessment matrix

Sensitivity/value of Receptor	Magnitude of Impact			
	Negligible	Low	Medium	High
Unknown	Unknown	Unknown	Unknown	Unknown
Negligible	Negligible	Negligible or Minor	Negligible or Minor	Minor
Low	Negligible or Minor	Negligible or Minor	Minor	Minor or Moderate
Medium	Negligible or Minor	Minor	Moderate	Moderate or Major
High	Minor	Minor or Moderate	Moderate or Major	Major
Very High	Minor	Moderate or Major	Major	Major

- 7.8.4.4 Where the magnitude of impact is ‘no change’, no effect would arise.
- 7.8.4.5 The definitions for significance of effect levels are described as follows.
- **Major:** These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category. Effects upon human receptors may also be attributed this level of significance.
 - **Moderate:** These beneficial or adverse effects have the potential to be important and may influence the key decision-making process. The

cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse or beneficial effect on a particular resource or receptor.

- Minor: These beneficial or adverse effects are generally, but not exclusively, raised as local factors. They are unlikely to be critical in the decision-making process but are important in enhancing the subsequent design of the project.
- Negligible: No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.
- No change: No loss or alteration of characteristics, features or elements; no observable impact in either direction.

7.8.5 Assumptions and limitations of the assessment

7.8.5.1 All readily available data required for the assessment have been acquired, collated and critically examined.

7.8.5.2 One key limitation is with regard to the presence, absence, extent, nature and significance of buried archaeological remains within the Project site. A number of non-intrusive methodologies have been utilised in order to gain as much information as possible, including geophysical survey. Some of this work is ongoing, but no site-specific intrusive surveys have yet been undertaken.

7.8.5.3 Further investigation of land within the Project site to determine its archaeological potential is planned to take place ahead of the production of the ES. The results of these investigations will be submitted in support of the application for development consent for the Project. The nature and extent of any investigation will depend on the current understanding of the archaeological potential of the specific area along with the proposed activities required for the construction of the Project. All investigations would be carried out in accordance with written methodologies agreed in advance with the archaeological advisors to the local planning authorities.

7.8.5.4 On this basis, no significant assumptions or limitations have therefore been identified in the preparation of this chapter with regard to historic environment that would prevent an assessment of the potential effects being made, other than with regard to buried archaeological remains. For the latter, a worst case assessment has been made, assuming that buried archaeological remains (potentially including remains of high sensitivity or value) are present at some locations. This will be further refined for the ES.

7.9 Assessment of effects

7.9.1.1 The impacts of the construction, operation and maintenance, and decommissioning phases of the Project have been assessed. The potential impacts arising from the construction, operation and maintenance and decommissioning phases of the Project are listed in **Table 7.18**.

7.9.1.2 A description of the potential effect on receptors caused by each identified impact is given below.

7.9.2 Loss of, or harm to, buried archaeological remains

Construction phase

7.9.2.1 Loss of, or harm to, buried archaeological remains can occur as a result of construction activities including (but not limited to): the installation of panels; the placement of cables within trenches; the works required to form foundations for the power converter stations and the secondary substations; the works required for the NGET substation; the establishment of internal access movement of construction vehicles within the Project site, the planting of woodland; and the establishment of construction compounds and field compounds.

7.9.2.2 The construction of the Project would not result in any changes to the groundwater regime nor in the compression or compaction of any sub-surface sediments, therefore no impacts are predicted with regard to deposits of geoarchaeological interest including waterlogged deposits that may contain well-preserved artefacts and ecofacts.

Sensitivity/value of the receptor

7.9.2.3 The desk-based studies and the programme of geophysical survey undertaken thus far has identified that the Project site contains buried archaeological remains of potential national importance, and certainly remains of regional and importance.

7.9.2.4 The value of the buried archaeological remains is therefore up to **high**.

Magnitude of impact

7.9.2.5 Where the desk-based studies and the programme of geophysical survey undertaken thus far have identified that the Project site contains buried archaeological remains of potential national importance, the area within which the remains are located, along with an appropriate buffer zone, are likely to be removed from the proposed solar PV installation area and may form part of the land provided for the environmental mitigation of the Project. The same design approach will apply with regard to any further buried archaeological remains of potential national importance that may be identified during the completion of the programme of geophysical survey or the trial trenching due to be carried out ahead of the preparation of the ES and the submission of the DCO application. Consequently, there would be no impact on known buried archaeological remains of the highest value during construction.

7.9.2.6 However, it is possible that buried archaeological remains of the highest value may be present within the easement required for construction of the 200 kV grid connection where this is within areas not accessible for pre-construction archaeological evaluation, such as roadside verges. In this situation the buried archaeological remains would only be discovered during construction and therefore avoidance through design would not be possible, although it may be feasible to reduce the impact depending on the nature and extent of the archaeological remains.

- 7.9.2.7 Where the desk-based studies and the programme of geophysical survey undertaken thus far have identified that the Project site contains buried archaeological remains of less than national importance, these areas are less likely to be removed from the proposed solar PV installation. The same design approach will apply with regard to any further buried archaeological remains of less than national importance that may be identified during the completion of the programme of geophysical survey or the trial trenching due to be carried out ahead of the preparation of the ES and the submission of the DCO application.
- 7.9.2.8 A programme of mitigation for these areas will be discussed with the archaeological team at Oxfordshire County Council. This could be through the use of a ‘no-dig’ approach to construction in which the solar PV panels are placed on concrete ‘shoes’ or similar and the cables are placed in suspended troughs rather than within trenches. This approach would be in line with published guidance which advises *‘Mitigation may be possible; for example the use of concrete bases for the panels, which entail less ground disturbance’* (Historic England 2021, paragraph 68).
- 7.9.2.9 Another potential response where land contains buried archaeological remains of less than national importance is the undertaking of an appropriate level of further archaeological investigation and recording ahead of construction. This would need to be agreed with the archaeological team at Oxfordshire County Council. Where programmes of archaeological investigation (including dissemination of results and the placement of acquired materials in suitable archives) are undertaken post-consent (ahead of and during construction), this is not considered to be mitigation as it does not avoid or reduce the magnitude of impact or the significance of effect. Rather it is considered that the programmes of archaeological investigation are a means of ‘offsetting’ or ‘remedying’ those impacts and effects (see Thomas 2019).
- 7.9.2.10 The Project also has the potential for beneficial impacts with regard to buried archaeological remains, where land containing such remains is taken out of an arable regime (ploughing and secondary cultivation) that can cause repeated and incremental damage to archaeological features and deposits and thus reduce their overall value. None of the buried archaeological remains within the Project site, including those of potential national importance, currently have any level of protection against damage from agricultural activities. This beneficial impact would apply to all buried archaeological remains in arable land within the Project site and is acknowledged with the March 2023 consultation draft NPS-EN3 *‘Equally solar PV developments may have a positive effect, for example archaeological assets may be protected by the solar PV farm as the site is removed from regular ploughing and shoes or low-level piling is stipulated’* (DESNZ 2023c paragraph 3.10.101).
- 7.9.2.11 Thus there is the potential for a range of adverse and beneficial impacts in respect of buried archaeological remains. The adverse impacts would be permanent and irreversible and would affect the receptors directly. The greatest potential for, and level of, adverse effects will be those associated with the construction of the 200 kV grid connection where this is within areas not accessible for pre-construction archaeological evaluation, such as roadside verges. Given the sort of construction activities involved and the size

of the trench required for the 200 kV grid connection, the magnitude of adverse impact on any buried archaeological remains is likely to be no greater than **low**.

Significance of the effect

- 7.9.2.12 Overall, the magnitude of the adverse impact is up to **low** (with potential for beneficial impacts) and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **minor adverse** significance, which is not significant.

Operation and maintenance phase

- 7.9.2.13 Impacts on buried archaeological remains during operation and maintenance of the Project have been scoped out of the assessment. This was agreed by PINS in the Scoping Opinion (see **Table 7.4** above).

Decommissioning phase

Sensitivity of receptor

- 7.9.2.14 The desk-based studies and the programme of geophysical survey undertaken thus far has identified that the Project site contains buried archaeological remains of potential national importance, and certainly remains of regional and importance.
- 7.9.2.15 The value of the buried archaeological remains is therefore up to **high**.

Magnitude of impact

- 7.9.2.16 A decommissioning and enhancement plan will be developed in response to relevant representations made by the local planning authority, local community and key stakeholders and form an integral part of the DCO application.
- 7.9.2.17 It is anticipated that the footprint of activities associated with decommissioning will not exceed the footprint required for construction. The decommissioning and enhancement plan will recognise the presence of any protective measures and construction methodologies established with regard to buried archaeological remains and will ensure that such measures and methodologies are followed during decommissioning.
- 7.9.2.18 Few if any adverse impacts on buried archaeological remains are considered likely. Any adverse impacts would be permanent and irreversible and would affect the receptors directly. The magnitude of adverse impact on any buried archaeological remains is likely to be **negligible**.

Significance of effect

- 7.9.2.19 Overall, the magnitude of the adverse impact is **negligible** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **minor adverse** significance, which is not significant.

7.9.3 Impacts on buried archaeological remains as a result of change within their setting

7.9.3.1 As advised in guidance on the settings of heritage assets '*All heritage assets have a setting, irrespective of the form in which they survive and whether they are designated or not*' (Historic England 2017, page 2).

Construction phase

Sensitivity/value of the receptor

7.9.3.2 Buried archaeological remains of potential national importance, and certainly remains of regional importance, have been identified within the Project site, whilst remains of undoubted national importance are located directly adjacent to the site. The value of the buried archaeological remains is therefore up to **high**.

Magnitude of impact

7.9.3.3 Impacts on buried archaeological remains as a result of change within their setting would be direct but non-physical, and would start to occur during construction. For buried remains within the Project site that are preserved in situ through removal of panels, and also for important buried archaeological remains adjacent to the site (such as Scheduled Monuments), the change in setting (and hence the magnitude of impact) would depend on the proximity of development elements such as solar panels and the activities required for construction.

7.9.3.4 The design of the Project will include examination of the settings of buried archaeological remains within and adjacent to the Project site and appropriate buffer zones will be identified. For most buried archaeological remains, the greatest part of their significance comes from the physical presence of the buried remains and the state of preservation of such remains. The setting of any particular area of buried archaeological remains is unlikely to make more than a slight contribution to their significance, although exceptions to this may be identified as the programme of baseline data gathering continues.

7.9.3.5 Any impact on buried archaeological remains as a result of change within their setting during construction would be fully reversible and medium-term. The magnitude of impact has been assessed as **negligible**.

Significance of effect

7.9.3.6 Overall, the magnitude of the adverse impact is **negligible** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **minor adverse** significance, which is not significant.

Operation and maintenance phase

Sensitivity/value of the receptor

- 7.9.3.7 Buried archaeological remains of potential national importance, and certainly remains of regional importance, have been identified within the Project site, whilst remains of undoubted national importance are located directly adjacent to the site. The value of the buried archaeological remains is therefore up to **high**.

Magnitude of impact

- 7.9.3.8 Impacts on buried archaeological remains as a result of change within their setting would be direct but non-physical, and would occur throughout the operation and maintenance phase. For buried remains within the Project site that are preserved in situ through removal of panels, and also for important buried archaeological remains adjacent to the site (such as Scheduled Monuments), the change in setting (and hence the magnitude of impact) would depend on the proximity of development elements such as solar panels and the activities required for maintenance.
- 7.9.3.9 The design of the Project will include examination of the settings of buried archaeological remains within and adjacent to the Project site and appropriate buffer zones will be identified. For most buried archaeological remains, the greatest part of their significance comes from the physical presence of the buried remains and the state of preservation of such remains. The setting of any particular area of buried archaeological remains is unlikely to make more than a slight contribution to their significance, although exceptions to this may be identified as the programme of baseline data gathering continues.
- 7.9.3.10 Any impact on buried archaeological remains as a result of change within their setting during the operation and maintenance phase would be fully reversible and long-term (but time-limited). The magnitude of impact has been assessed as **negligible**.

Significance of effect

- 7.9.3.11 Overall, the magnitude of the adverse impact is **negligible** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **minor adverse** significance, which is not significant.

Decommissioning phase

Sensitivity/value of the receptor

- 7.9.3.12 Buried archaeological remains of potential national importance, and certainly remains of regional importance, have been identified within the Project site, whilst remains of undoubted national importance are located directly adjacent to the site. The value of the buried archaeological remains is therefore up to **high**.

Magnitude of impact

- 7.9.3.13 Impacts on buried archaeological remains as a result of change within their setting would be direct but non-physical, and would occur during decommissioning.
- 7.9.3.14 Any impact on buried archaeological remains as a result of change within their setting during decommissioning would be fully reversible and medium-term. The magnitude of impact has been assessed as **negligible**.

Significance of effect

- 7.9.3.15 Overall, the magnitude of the adverse impact is **negligible** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **minor adverse** significance, which is not significant.

7.9.4 Impact on the Blenheim Palace World Heritage Site as a result of change within its setting

- 7.9.4.1 No part of the Project is within the Blenheim Palace WHS. The WHS does not have a formally identified buffer zone, but as with any heritage asset it has a setting and changes within that setting may harm the significance of the asset.
- 7.9.4.2 A separate HIA has begun to be undertaken to review the potential for the Project to harm the significance of the WHS as a result of change within its setting. This HIA is being carried out in accordance with the appropriate UNESCO guidance documents and will be subject to review by appropriate stakeholders including Historic England and the Blenheim Palace WHS Management Team. The HIA will be included as an Appendix to the ES. As a preliminary stage to the assessment process, in recognition of the importance of the process and its iterative nature, the applicant has completed a high-level assessment of the impact and effect upon the WHS in the form of completion of the spreadsheet tools found within the guidance documents. These can be found at Volume 3, Appendix 7.4: Preliminary Heritage Impact Assessment.

7.9.5 Impacts on designated heritage assets as a result of change within their setting

Construction phase

Sensitivity/value of the receptor

- 7.9.5.1 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

- 7.9.5.2 Impacts on designated heritage assets as a result of change within their setting would be direct but non-physical, and would start to occur during construction. The change in setting (and hence the magnitude of impact) would largely

depend on the visibility and proximity of development elements such as solar panels and the activities required for construction.

7.9.5.3 The design of the Project will include further examination of the settings of designated heritage assets within the defined study area and appropriate buffer zones will be identified. A detailed assessment of the significance of selected designated heritage assets, and the potential impact of the Project on their significance as a result of change within their setting, will be undertaken as appropriate and in accordance with the relevant guidance (Historic England 2017).

7.9.5.4 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.

7.9.5.5 Any impact on designated heritage assets as a result of change within their setting during construction would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

7.9.5.6 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.

7.9.5.7 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Operation and maintenance phase

Sensitivity/value of the receptor

7.9.5.8 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

7.9.5.9 Impacts on designated heritage assets as a result of change within their setting would be direct but non-physical, and would start to occur throughout the operation and maintenance phase. The change in setting (and hence the magnitude of impact) would largely depend on the visibility and proximity of development elements such as solar panels and the activities required for maintenance, and may also change over time as vegetation matures (including any vegetation planted as part of the Project).

7.9.5.10 The design of the Project will include further examination of the settings of designated heritage assets within the defined study area and appropriate buffer zones will be identified. A detailed assessment of the significance of selected designated heritage assets, and the potential impact of the Project on their significance as a result of change within their setting, will be

undertaken as appropriate and in accordance with the relevant guidance (Historic England 2017).

7.9.5.11 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.

7.9.5.12 Any impact on designated heritage assets as a result of change within their setting during the operation and maintenance phase would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

7.9.5.13 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.

7.9.5.14 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Decommissioning phase

Sensitivity/value of the receptor

7.9.5.15 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

7.9.5.16 Impacts on designated heritage assets as a result of change within their setting would be direct but non-physical, and would start occur during decommissioning. The change in setting (and hence the magnitude of impact) would largely depend on the visibility and proximity of development elements such as solar panels and the activities required for decommissioning.

7.9.5.17 Any impact on designated heritage assets as a result of change within their setting during decommissioning would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

7.9.5.18 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.

7.9.5.19 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

7.9.6 The impact of construction, operation and maintenance and decommissioning of the Project on the character of the historic landscape

Construction phase

Sensitivity/value of the receptor

- 7.9.6.1 The character of the historic landscape across almost all of the Project Site is typical of much of Oxfordshire, with the individual historic landscape character types being common or abundant within the county. There are two isolated fields that have historic landscape character types considered to be rare within the county and a small group of three fields that share a historic landscape character type considered to be very rare within the county. The value of the character of the historic landscape is therefore **low**.

Magnitude of impact

- 7.9.6.2 Any impact on the character of the historic landscape during construction would occur through the visual changes as the development progressed. No physical components of the historic landscape would be removed in order to construct the Project. There would also be some construction noise, although this is unlikely to differ significantly from the noise associated with the current agricultural activities. Impacts would be fully reversible and medium-term. The magnitude of impact has been assessed as **low**.

Significance of effect

- 7.9.6.3 Overall, the magnitude of the adverse impact is **low** and the sensitivity of the receptor is **low**. The effect will, therefore, be of up to **minor adverse** significance, which is not significant.

Operation and maintenance phase

Sensitivity/value of the receptor

- 7.9.6.4 The character of the historic landscape across almost all of the Project Site is typical of much of Oxfordshire, with the individual historic landscape character types being common or abundant within the county. There are two isolated fields that have historic landscape character types considered to be rare within the county and a small group of three fields that share a historic landscape character type considered to be very rare within the county. The value of the character of the historic landscape is therefore **low**.

Magnitude of impact

- 7.9.6.5 Any impact on the character of the historic landscape during operation and maintenance would occur through the visual changes as the current arable and pastoral use of the land would be replaced by areas predominantly comprising solar panels. No physical components of the historic landscape would be removed in order to operate and maintain the Project. Impacts would

be fully reversible and long-term. The magnitude of impact has been assessed as **medium**.

Significance of effect

- 7.9.6.6 Overall, the magnitude of the adverse impact is **medium** and the sensitivity of the receptor is **low**. The effect will, therefore, be of **minor adverse** significance, which is not significant.

Decommissioning phase

Sensitivity/value of the receptor

- 7.9.6.7 The character of the historic landscape across almost all of the Project Site is typical of much of Oxfordshire, with the individual historic landscape character types being common or abundant within the county. There are two isolated fields that have historic landscape character types considered to be rare within the county and a small group of three fields that share a historic landscape character type considered to be very rare within the county. The value of the character of the historic landscape is therefore **low**.

Magnitude of impact

- 7.9.6.8 Any impact on the character of the historic landscape during construction would occur through the visual changes as the decommissioning progressed. No physical components of the historic landscape would be removed in order to decommission the Project. There would also be some noise, although this is unlikely to be significant. Impacts would be fully reversible and medium-term. The magnitude of impact has been assessed as **negligible**.

Significance of effect

- 7.9.6.9 Overall, the magnitude of the adverse impact is **negligible** and the sensitivity of the receptor is **low**. The effect will, therefore, be of up to **minor adverse** significance, which is not significant.

7.9.7 Future monitoring

- 7.9.7.1 No monitoring to test the predictions made within the impact assessment is considered necessary.

7.10 Cumulative effect assessment methodology

- 7.10.1.1 The historic environment CEA methodology has followed the methodology set out in Volume 1, Chapter 4: Approach to Environmental Assessment. As part of the assessment, all projects and plans considered alongside the Project have been allocated into 'tiers' reflecting their current stage within the planning and development process.

- Tier 1
 - Under construction

- Permitted application
- Submitted application
- Those currently operational that were not operational when baseline data were collected, and/or those that are operational but have an ongoing impact
- Tier 2
 - Scoping report has been submitted
- Tier 3
 - Scoping report has not been submitted
 - Identified in the relevant Development Plan
 - Identified in other plans and programmes.

7.10.1.2 This tiered approach is adopted to provide a clear assessment of the Project alongside other projects, plans and activities.

7.10.1.3 The specific projects, plans and activities scoped into the CEA, are outlined in **Table 7.15**.

7.10.1.4 It is acknowledged that some 72 cumulative schemes were identified, forming the CEA long list. This list of developments has been reviewed as part of the assessment, with 61 being discounted for one or more of the following reasons:

- The cumulative development is outwith the defined 2 km study area identified for the assessment of impacts arising from change within the setting of designated heritage assets;
- The cumulative scheme is of a scale/type which is anticipated to not cause a significant or any cumulative effect; and
- The cumulative scheme has already been completed and therefore forms part of the current baseline.

7.10.1.5 None of the cumulative schemes are located within the Project Site, therefore there is no potential for cumulative effects in respect of buried archaeological remains.

Table 7.15: List of other projects, plans and activities considered within the CEA

Project/Plan	Status	Distance from the Project (nearest point, km)	Description of project/plan	Dates of construction (if applicable)	Dates of operation (if applicable)	Overlap with the Project
Tier 1-						
20/0187/FUL Land between Woodstock Sewage Works and B4027	Full Planning Application – permitted	Immediately adjacent to Northern Site	Blenheim Net Zero solar farm, 5MW generating capacity on 9.1 ha. of land.	To be confirmed	To be confirmed	To be confirmed
21/00189/FUL	Application consented on appeal in October 2023	1.0 km west of Northern Site	Land north of Hill Rise, Woodstock, residential development of 180 dwellings.	To be confirmed	To be confirmed	To be confirmed
21/00127/OUT	Outline Planning Application – decision pending	0.3 km west of Northern Site	Land north of Banbury Road, Woodstock, residential development of 235 dwellings.	To be confirmed	To be confirmed	To be confirmed
16/01364/OUT	Under construction	0.8 km south west of Northern Site	Land east of Woodstock, residential development of 300 dwellings.	Commenced		
21/03522/OUT	Outline Planning Application – decision pending	0.35 km west of Central Site	West of Rutten Lane, Yarnton, residential development of up to 540 dwellings.	To be confirmed	To be confirmed	To be confirmed
20/01734/OUT	Outline Planning Application – decision pending	Immediately adjacent to Central Site	Outline application for Salt Cross Garden Village – 2,200 dwellings and 40 ha. of employment land.	To be confirmed	To be confirmed	To be confirmed
22/01008/CCREG	Under construction	Immediately adjacent to Central Site	Eynsham Park and Ride and Science Transit	Commenced		
Tier 2-						

Project/Plan	Status	Distance from the Project (nearest point, km)	Description of project/plan	Dates of construction (if applicable)	Dates of operation (if applicable)	Overlap with the Project
P22/V0144/SCR Red House Farm, Botley	Request for a Scoping Opinion – Opinion issued December 2022	Immediately adjacent to Southern Site	Request for a Scoping Opinion regarding a proposed solar farm on approximately 63.1 ha. of land.	To be confirmed	To be confirmed	To be confirmed
Tier 3-						
EW4	Allocation – West Oxfordshire DC	1.0 km west of Northern Site	Land north of Hill Rise, Woodstock, residential development of 180 dwellings – same site as Tier 1 application 21/00189/FUL	To be confirmed	To be confirmed	To be confirmed
EW5	Allocation – West Oxfordshire DC	0.3 km west of Northern Site	Land north of Banbury Road, Woodstock, residential development of 180 dwellings – same site as Tier 1 application 21/00127/OUT	To be confirmed	To be confirmed	To be confirmed
P9	Allocation – Cherwell DC	Immediately adjacent to Central Site	Land west of Yarnton, residential development of 540 dwellings – same site as Tier 1 application 21/03522/OUT (although the allocation extends further west to the boundary of the Botley West site).	To be confirmed	To be confirmed	To be confirmed

7.10.2 Maximum design scenario – cumulative effects assessment

- 7.10.2.1 The maximum design scenarios identified in **Table 7.16** have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. The cumulative effects presented and assessed in this section have been selected from the Project Design Envelope provided in Volume 1, Chapter 5: Project Description, of the PEIR as well as the information available on other projects and plans, in order to inform a ‘maximum design scenario’. Effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within the Project Design Envelope (e.g., different foundation type or substation layout), to that assessed here, be taken forward in the final design scheme.

Table 7.16: Maximum design scenario for the assessment of cumulative effects

Potential cumulative effect	Phase ^a			Maximum Design Scenario	Justification
	C	O	D		
<p>The impact of the Project on the significance of designated heritage assets arising from changes within their settings during construction, operation and maintenance, and decommissioning.</p> <p>The impact of the Project on the character of the historic landscape during construction, operation and maintenance, and decommissioning.</p>	Yes	Yes	Yes	<p>Maximum design scenario as described for the Project (Table 7.10) assessed cumulatively with the following other projects/plans:</p> <p>Tier 1</p> <ul style="list-style-type: none"> 20/0187/FUL Land between Woodstock Sewage Works and B4027 – Blenheim Net Zero solar farm 21/00189/FUL Land north of Hill Rise, Woodstock, residential development of 180 dwellings 21/00127/OUT Land north of Banbury Road, Woodstock, residential development of 235 dwellings 16/01364/OUT Land east of Woodstock, residential development of 300 dwellings 21/03522/OUT West of Rutten Lane, Yarnton, residential development of up to 540 dwellings 20/01734/OUT Outline application for Salt Cross Garden Village – 2,200 dwellings and 40 ha. of employment land 22/01008/CCREG Eynsham Park and Ride and Science Transit <p>Tier 2</p> <ul style="list-style-type: none"> P22/V0144/SCR Red House Farm solar farm on c. 63.1 ha. of land <p>Tier 3</p> <ul style="list-style-type: none"> EW4 West Oxfordshire District Council Allocation - Land north of Hill Rise, Woodstock, residential development of 180 dwellings (same site as Tier 1 application 21/00189/FUL) 	Outcome of the CEA will be greatest when the greatest number of other schemes are considered

Potential cumulative effect	Phase ^a			Maximum Design Scenario	Justification
	C	O	D		
				<ul style="list-style-type: none"> EW5 West Oxfordshire District Council Allocation - Land north of Banbury Road, Woodstock, residential development of 180 dwellings (same site as Tier 1 application 21/00127/OUT) P9 CDC Allocation - Land west of Yarnton, residential development of 540 dwellings (same site as Tier 1 application 21/03522/OUT, although the allocation extends further west to the boundary of the Botley West site) 	

^a C=construction, O=operational and maintenance, D=decommissioning

7.11 Cumulative effects assessment

7.11.1.1 A description of the significance of cumulative effects upon the historic environment receptors arising from each identified impact is given below.

The impact of the Project on the significance of designated heritage assets arising from changes within their settings during construction, operation and maintenance, and decommissioning

Tier 1 projects

20/0187/FUL Land between Woodstock Sewage Works and B4027 – Blenheim Net Zero solar farm

Construction phase

7.11.1.2 This small solar farm may be visible from some of the same designated heritage assets which also have visibility of the Project. If that is the case, then the Blenheim Net Zero solar farm would just appear to be part of the Project as it would be very similar in appearance and is directly adjacent to the Project.

7.11.1.3 Should there be any temporal overlap between the construction phase of the Project and the construction or operation and maintenance or decommissioning phases of the Blenheim New Zero solar farm, the cumulative impact on the significance of any designated heritage asset would be no greater than for the Project when considered on its own.

Sensitivity of the receptor

7.11.1.4 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

7.11.1.5 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.

7.11.1.6 Any impact on designated heritage assets as a result of change within their setting during construction would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

7.11.1.7 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.

7.11.1.8 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the

magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Further mitigation and residual effect

- 7.11.1.9 No further mitigation is proposed, therefore the residual effect would remain as up to **moderate adverse**.
- 7.11.1.10 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Operation and maintenance phase

- 7.11.1.11 Should there be any temporal overlap between the operation and maintenance phase of the Project and the construction or operation and maintenance or decommissioning phases of the Blenheim New Zero solar farm, the cumulative impact on the significance of any designated heritage asset as a result of change within its setting would be no greater than for the Project when considered on its own.

Sensitivity of the receptor

- 7.11.1.12 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

- 7.11.1.13 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.
- 7.11.1.14 Any impact on designated heritage assets as a result of change within their setting during operation and maintenance would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

- 7.11.1.15 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.
- 7.11.1.16 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Further mitigation and residual effect

- 7.11.1.17 No further mitigation is proposed, therefore the residual effect would remain as up to **moderate adverse**.

- 7.11.1.18 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Decommissioning phase

- 7.11.1.19 Should there be any temporal overlap between the decommissioning phase of the Project and the construction or operation and maintenance or decommissioning phases of the Blenheim New Zero solar farm, the cumulative impact on the significance of any designated heritage asset as a result of change within its setting would be no greater than for the Project when considered on its own.

Sensitivity of the receptor

- 7.11.1.20 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

- 7.11.1.21 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.
- 7.11.1.22 Any impact on designated heritage assets as a result of change within their setting during operation and maintenance would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

- 7.11.1.23 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.
- 7.11.1.24 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Further mitigation and residual effect

- 7.11.1.25 No further mitigation is proposed, therefore the residual effect would remain as up to **moderate adverse**.
- 7.11.1.26 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

21/00189/FUL Land north of Hill Rise, Woodstock, residential development of 180 dwellings

21/00127/OUT Land north of Banbury Road, Woodstock, residential development of 235 dwellings

16/01364/OUT Land east of Woodstock, residential development of 300 dwellings

- 7.11.1.27 These three areas of predominantly residential development are all located around the edge of Woodstock. One of these (16/01364/OUT Land east of Woodstock) has been consented and is currently under construction, whilst a second (21/00189/FUL Land north of Hill Rise) was consented on appeal in October 2023. The third one has not yet been consented but this site is allocated for residential development in the local plan.
- 7.11.1.28 Where one or more of these developments fall within the settings of the same designated heritage assets that could be affected by the Project, then there is the potential for cumulative impacts to occur.
- 7.11.1.29 Examination of the locations of designated heritage assets in this area along with the extent of intervisibility as revealed by the ZTVs established for the Project, it seems unlikely that cumulative effects would be experienced by any the designated heritage assets. The contribution of the Project to any cumulative impacts would be time-limited and fully reversible.
- 7.11.1.30 Should there be any temporal overlap between the construction phase of the Project and the construction or operation of these three residential developments, the cumulative impact on the significance of any designated heritage asset would be no greater than for the Project when considered on its own.

Sensitivity of the receptor

- 7.11.1.31 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

- 7.11.1.32 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.
- 7.11.1.33 Any impact on designated heritage assets as a result of change within their setting during construction would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

- 7.11.1.34 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.

- 7.11.1.35 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Further mitigation and residual effect

- 7.11.1.36 No further mitigation is proposed, therefore the residual effect would remain as up to **moderate adverse**.
- 7.11.1.37 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Operation and maintenance phase

- 7.11.1.38 Should there be any temporal overlap between the operation and maintenance phase of the Project and the construction or operation of these three residential developments, the cumulative impact on the significance of any designated heritage asset as a result of change within its setting would be no greater than for the Project when considered on its own.

Sensitivity of the receptor

- 7.11.1.39 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

- 7.11.1.40 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.
- 7.11.1.41 Any impact on designated heritage assets as a result of change within their setting during operation and maintenance would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

- 7.11.1.42 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.
- 7.11.1.43 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Further mitigation and residual effect

- 7.11.1.44 No further mitigation is proposed, therefore the residual effect would remain as up to **moderate adverse**.
- 7.11.1.45 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Decommissioning phase

- 7.11.1.46 Should there be any temporal overlap between the decommissioning phase of the Project and the construction or operation of these three residential developments, the cumulative impact on the significance of any designated heritage asset as a result of change within its setting would be no greater than for the Project when considered on its own.

Sensitivity of the receptor

- 7.11.1.47 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

- 7.11.1.48 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.
- 7.11.1.49 Any impact on designated heritage assets as a result of change within their setting during operation and maintenance would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

- 7.11.1.50 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.
- 7.11.1.51 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Further mitigation and residual effect

- 7.11.1.52 No further mitigation is proposed, therefore the residual effect would remain as up to **moderate adverse**.
- 7.11.1.53 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

21/03522/OUT West of Rutten Lane, Yarnton, residential development of up to 540 dwellings

- 7.11.1.54 This area of proposed residential development is located to the north west of Yarnton and to the south of Begbroke. Although the application has not yet been determined, the site is allocated for residential development in the local plan.
- 7.11.1.55 Where this proposed development falls within the settings of the same designated heritage assets that could be affected by the Project, then there is the potential for cumulative impacts to occur.
- 7.11.1.56 Examination of the locations of designated heritage assets in this area along with the extent of intervisibility as revealed by the ZTVs established for the Project indicates the potential for cumulative impacts, particularly with regard to the Grade II listed Spring Hill. The contribution of the Project to any cumulative impacts would almost certainly be greater than the contribution of the residential development, this is due to the locations of the two schemes and the presence of existing vegetation which would largely screen the residential development. However, the contribution of the Project would be time-limited and fully reversible, unlike the residential development.
- 7.11.1.57 Should there be any temporal overlap between the construction phase of the Project and the construction or operation of this residential development, the cumulative impact on the significance of any designated heritage asset would be no greater than for the Project when considered on its own.

Sensitivity of the receptor

- 7.11.1.58 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

- 7.11.1.59 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.
- 7.11.1.60 Any impact on designated heritage assets as a result of change within their setting during construction would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

- 7.11.1.61 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.
- 7.11.1.62 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Further mitigation and residual effect

- 7.11.1.63 No further mitigation is proposed, therefore the residual effect would remain as up to **moderate adverse**.
- 7.11.1.64 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Operation and maintenance phase

- 7.11.1.65 Should there be any temporal overlap between the operation and maintenance phase of the Project and the construction or operation of this residential development, the cumulative impact on the significance of any designated heritage asset as a result of change within its setting would be no greater than for the Project when considered on its own.

Sensitivity of the receptor

- 7.11.1.66 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

- 7.11.1.67 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.
- 7.11.1.68 Any impact on designated heritage assets as a result of change within their setting during operation and maintenance would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

- 7.11.1.69 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.
- 7.11.1.70 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Further mitigation and residual effect

- 7.11.1.71 No further mitigation is proposed, therefore the residual effect would remain as up to **moderate adverse**.
- 7.11.1.72 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Decommissioning phase

- 7.11.1.73 Should there be any temporal overlap between the decommissioning phase of the Project and the construction or operation of this residential development, the cumulative impact on the significance of any designated heritage asset as a result of change within its setting would be no greater than for the Project when considered on its own.

Sensitivity of the receptor

- 7.11.1.74 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

- 7.11.1.75 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.
- 7.11.1.76 Any impact on designated heritage assets as a result of change within their setting during operation and maintenance would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

- 7.11.1.77 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.
- 7.11.1.78 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Further mitigation and residual effect

- 7.11.1.79 No further mitigation is proposed, therefore the residual effect would remain as up to **moderate adverse**.
- 7.11.1.80 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

20/01734/OUT Outline application for Salt Cross Garden Village – 2,200 dwellings and 40 ha. of employment land

22/01008/CCREG Eynsham Park and Ride and Science Transit

- 7.11.1.81 These two schemes are adjacent to each other, with the proposed garden village also being directly adjacent to the Project Site (immediately south west of the Central Site). The park and ride scheme has been consented and is

under construction whilst the outline application for the garden village has not yet been determined although the land is allocated for this purpose in the local plan.

7.11.1.82 Where these two developments fall within the settings of the same designated heritage assets that could be affected by the Project, then there is the potential for cumulative impacts to occur.

7.11.1.83 Examination of the locations of designated heritage assets in this area along with the extent of intervisibility as revealed by the ZTVs established for the Project indicates the potential for cumulative impacts, particularly with regard to the group of Grade II listed buildings at City Farm. The contribution of the Project to any cumulative impacts would almost certainly be less than the contribution of the garden village, this is due to the locations of the two schemes and the presence of existing vegetation which would largely screen the Project. Also, the contribution of the Project would be time-limited and fully reversible, unlike the garden village.

7.11.1.84 Should there be any temporal overlap between the construction phase of the Project and the construction or operation of these two developments, the cumulative impact on the significance of any designated heritage asset would be no greater than for the Project when considered on its own.

Sensitivity of the receptor

7.11.1.85 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

7.11.1.86 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.

7.11.1.87 Any impact on designated heritage assets as a result of change within their setting during construction would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

7.11.1.88 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.

7.11.1.89 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Further mitigation and residual effect

7.11.1.90 No further mitigation is proposed, therefore the residual effect would remain as up to **moderate adverse**.

- 7.11.1.91 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Operation and maintenance phase

- 7.11.1.92 Should there be any temporal overlap between the operation and maintenance phase of the Project and the construction or operation of these two developments, the cumulative impact on the significance of any designated heritage asset as a result of change within its setting would be no greater than for the Project when considered on its own.

Sensitivity of the receptor

- 7.11.1.93 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

- 7.11.1.94 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.
- 7.11.1.95 Any impact on designated heritage assets as a result of change within their setting during operation and maintenance would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

- 7.11.1.96 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.
- 7.11.1.97 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Further mitigation and residual effect

- 7.11.1.98 No further mitigation is proposed, therefore the residual effect would remain as up to **moderate adverse**.
- 7.11.1.99 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Decommissioning phase

- 7.11.1.100 Should there be any temporal overlap between the decommissioning phase of the Project and the construction or operation of these two developments, the cumulative impact on the significance of any designated heritage asset as a result of change within its setting would be no greater than for the Project when considered on its own.

Sensitivity of the receptor

- 7.11.1.101 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

- 7.11.1.102 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.
- 7.11.1.103 Any impact on designated heritage assets as a result of change within their setting during operation and maintenance would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

- 7.11.1.104 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.
- 7.11.1.105 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Further mitigation and residual effect

- 7.11.1.106 No further mitigation is proposed, therefore the residual effect would remain as up to **moderate adverse**.
- 7.11.1.107 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Tier 2 projects

P22/V0144/SCR Red House Farm, Botley

- 7.11.1.108 This proposed solar farm is located immediately to the north of the Southern Site. If both solar farms are consented and constructed, this one would appear visually to be part of the Project.

- 7.11.1.109 Where this proposed development falls within the settings of the same designated heritage assets that could be affected by the Project, then there is the potential for cumulative impacts to occur.
- 7.11.1.110 Examination of the locations of designated heritage assets in this area along with the extent of intervisibility as revealed by the ZTVs established for the Project indicates the potential for cumulative impacts, particularly with regard to the Grade II listed Red House Farmhouse. The contribution of the proposed Red House Farm solar farm to any cumulative impacts may be slightly greater than the contribution of the Project due to proximity, but this would be marginal. The contribution of both schemes would be time-limited and fully reversible.
- 7.11.1.111 Should there be any temporal overlap between the construction phase of the Project and the construction or operation and maintenance or decommissioning of this other solar farm development, the cumulative impact on the significance of any designated heritage asset would probably be no greater than for the Project when considered on its own.

Sensitivity of the receptor

- 7.11.1.112 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

- 7.11.1.113 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.
- 7.11.1.114 Any impact on designated heritage assets as a result of change within their setting during construction would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

- 7.11.1.115 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.
- 7.11.1.116 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Further mitigation and residual effect

- 7.11.1.117 No further mitigation is proposed, therefore the residual effect would remain as up to **moderate adverse**.
- 7.11.1.118 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Operation and maintenance phase

- 7.11.1.119 Should there be any temporal overlap between the operation and maintenance phase of the Project and the construction or operation and maintenance or decommissioning of this other solar farm, the cumulative impact on the significance of any designated heritage asset as a result of change within its setting would probably be no greater than for the Project when considered on its own.

Sensitivity of the receptor

- 7.11.1.120 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

- 7.11.1.121 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.
- 7.11.1.122 Any impact on designated heritage assets as a result of change within their setting during operation and maintenance would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

- 7.11.1.123 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.
- 7.11.1.124 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Further mitigation and residual effect

- 7.11.1.125 No further mitigation is proposed, therefore the residual effect would remain as up to **moderate adverse**.
- 7.11.1.126 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Decommissioning phase

- 7.11.1.127 Should there be any temporal overlap between the decommissioning phase of the Project and the construction or operation and maintenance or decommissioning of this other solar farm, the cumulative impact on the significance of any designated heritage asset as a result of change within its

setting would probably be no greater than for the Project when considered on its own.

Sensitivity of the receptor

- 7.11.1.128 Designated heritage assets of national importance have been identified within the defined study area. The value of the designated heritage assets is therefore up to **high**.

Magnitude of impact

- 7.11.1.129 For most designated heritage assets, the greatest part of their significance comes from their physical fabric. However, for some designated heritage assets their setting may make a reasonable contribution to their significance.
- 7.11.1.130 Any impact on designated heritage assets as a result of change within their setting during operation and maintenance would be fully reversible and medium-term. The magnitude of impact has been assessed as up to **low**.

Significance of effect

- 7.11.1.131 Overall, the magnitude of the adverse impact is up to **low** and the sensitivity of the receptor is up to **high**. The effect will, therefore, be of up to **moderate adverse** significance, which is significant.
- 7.11.1.132 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Further mitigation and residual effect

- 7.11.1.133 No further mitigation is proposed, therefore the residual effect would remain as up to **moderate adverse**.
- 7.11.1.134 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.

Tier 3 projects

- 7.11.1.135 The three Tier projects identified above in Table 7.15 are all allocations for residential development set out in adopted local plans. Applications for such developments have been submitted in all three cases and are discussed above in the section regarding Tier 1 projects, therefore it is not necessary to provide any further assessment.

The impact of the Project on the character of the historic landscape during construction, operation and maintenance, and decommissioning

- 7.11.1.136 The historic landscape is a receptor that covers the whole of the Project Site and the wider area, including all of the land impacted by the schemes considered within the CEA (across all three Tiers). None of the schemes considered within the CEA would directly impact land that has a historic character type considered rare or very rare within the county.
- 7.11.1.137 Although there is potential for cumulative impacts on the character of the historic landscape to occur with regard to all of the schemes considered within the CEA, the overall magnitude of impact and level of effect would remain the same as for the Project when considered on its own. This is because all of the other schemes are relatively small in comparison, although in most cases the impacts of the other schemes are not time-limited and reversible as they are for the Project. The other schemes may also require removal of elements of the historic landscape such as field boundaries, which is not the case for the Project.

7.12 Transboundary effects

- 7.12.1.1 As per the scoping report, it was concluded that the proposed development is unlikely to have a significant effect either alone or cumulatively on the environment in a European Economic Area State (EEA states) and therefore a transboundary assessment is not proposed in the ES.

7.13 Inter-related effects

- 7.13.1.1 Inter-relationships are the impacts and associated effects of different aspects of the Project on the same receptor. These are as follows.
- Project lifetime effects: Assessment of the scope for effects that occur throughout more than one phase of the Project (construction, operation and maintenance, and decommissioning), to interact to potentially create a more significant effect on a receptor than if just assessed in isolation in these three phases (e.g., construction noise effects from piling, operational substation noise, and decommissioning disturbance).
 - Receptor led effects: Assessment of the scope for all effects (including inter-relationships between environmental topics) to interact, spatially and temporally, to create inter-related effects on a receptor. As an example, all effects on the historic environment, such as direct physical impacts, change within setting etc., may interact to produce a different, or greater effect on this receptor than when the effects are considered in isolation. Receptor-led effects may be short term, temporary or transient effects, or incorporate longer term effects.
- 7.13.1.2 Inter-related effects methodology is provided in Chapter 19: Cumulative Effects and Inter-relationships of the PEIR and will be assessed further at the ES stage.

7.14 Summary of impacts and monitoring

- 7.14.1.1 Information on the historic environment within the study area was collected through desk-based assessment and geophysical survey.
- 7.14.1.2 **Table 7.17** presents a summary of the potential impacts and residual effects in respect to the historic environment. The impacts assessed include:
- Loss of, or harm to, buried archaeological remains;
 - Impacts on buried archaeological remains as a result of change within their setting;
 - Impact on the Blenheim Palace World Heritage Site as a result of change within its setting (see also the high-level assessment using the spreadsheet tools at Volume 3, Appendix 7.4: Preliminary Heritage Impact Assessment);
 - Impacts on designated heritage assets as a result of change within their setting; and
 - Impacts on the character of the historic landscape.
- 7.14.1.3 It is concluded that there is potential for the following significant effects arising from the Project during the construction, operation and maintenance or decommissioning phases:
- Impacts on designated heritage assets as a result of change within their setting.
- 7.14.1.4 There is a level of uncertainty attached to this assessment of significance, and it is anticipated that the refinement of the Project design will enable the magnitude of impact to be reduced and the consequent level of effect to also be reduced to a point where it is no longer significant.
- 7.14.1.5 A separate HIA is being undertaken to review the potential for the Project to harm the significance of the WHS as a result of change within its setting.
- 7.14.1.6 **Table 7.18** presents a summary of the potential cumulative impacts and residual effects. The cumulative impacts assessed include:
- Impacts on designated heritage assets as a result of change within their setting; and
 - Impacts on the character of the historic landscape.
- 7.14.1.7 It is concluded that there will be no significant cumulative effects from the Project alongside other projects/plans.
- 7.14.1.8 No potential transboundary impacts have been identified in regard to effects of the Project.

Table 7.17: Summary of potential environmental effects and monitoring.

Description of impact	Phase ^a			Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
	C	O	D						
Loss of, or harm to, buried archaeological remains	✓		✓	C: Up to Low D: Negligible	C: Up to High D: Up to High	Up to Minor adverse Up to Minor adverse	None None	Up to Minor adverse Up to Minor adverse	None None
Impacts on buried archaeological remains as a result of change within their setting	✓	✓	✓	C: Negligible O: Negligible D: Negligible	C: Up to High O: Up to High D: Up to High	Up to Minor adverse Up to Minor adverse Up to Minor adverse	None None None	Up to Minor adverse Up to Minor adverse Up to Minor adverse	None None None
Impact on the Blenheim Palace World Heritage Site as a result of change within its setting	✓	✓	✓	C: TBC O: TBC D: TBC	C: Very High O: Very High D: Very High	TBC TBC TBC	None None None	TBC TBC TBC	None None None
Impacts on designated heritage assets as a result of change within their setting	✓	✓	✓	C: Up to Low O: Up to Low D: Up to Low	C: Up to High O: Up to High D: Up to High	Up to Moderate adverse Up to Moderate adverse Up to Moderate adverse	None None None	Up to Moderate adverse Up to Moderate adverse Up to Moderate adverse	None None None
The impact of construction, operation and maintenance and decommissioning of the Project on the character of the historic landscape	✓	✓	✓	C: Low O: Medium	C: Low O: Low	Up to Minor Adverse Minor Adverse	None None	Up to Minor Adverse Minor Adverse	None None

Description of impact	Phase ^a			Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
	C	O	D						
				D: Negligible	D: Low	Up to Minor Adverse	None	Up to Minor Adverse	None

^a C=construction, O=operational and maintenance, D=decommissioning

Table 7.18: Summary of potential cumulative environmental effects and monitoring.

Description of effect	Phase ^a			Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
	C	O	D						
Tier 1									
The impact of the Project on the significance of designated heritage assets arising from changes within their settings.	✓	✓	✓	C: Up to Low O: Up to Low D: Up to Low	Up to High Up to High Up to High	Up to Moderate adverse Up to Moderate adverse Up to Moderate adverse	None None None	C: Up to Moderate adverse O: Up to Moderate adverse D: Up to Moderate adverse	None None None
The impact of the Project on the character of the historic landscape.	✓	✓	✓	C: Low O: Medium D: Negligible	C: Low O: Low D: Low	Up to Minor Adverse Minor Adverse Up to Minor Adverse	None None None	Up to Minor Adverse Up to Minor Adverse	None None None
Tier 2									

Description of effect	Phase ^a			Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
	C	O	D						
The impact of the Project on the significance of designated heritage assets arising from changes within their settings.	✓	✓	✓	C: Up to Low	Up to High	Up to Moderate adverse	None	C: Up to Moderate adverse	None
				O: Up to Low	Up to High	Up to Moderate adverse	None	O: Up to Moderate adverse	None
				D: Up to Low	Up to High	Up to Moderate adverse	None	D: Up to Moderate adverse	None
The impact of the Project on the character of the historic landscape.	✓	✓	✓	C: Low	C: Low	Up to Minor Adverse	None	Up to Minor Adverse	None
				O: Medium	O: Low	Minor Adverse	None	Up to Minor Adverse	None
				D: Negligible	D: Low	Up to Minor Adverse	None		None

^a C=construction, O=operational and maintenance, D=decommissioning

7.15 Next steps

- 7.15.1.1 The ongoing programme of geophysical survey will be completed and will be followed by a programme of archaeological trial trenching at selected locations agreed in advance with the archaeology team at Oxfordshire County Council. The results of this staged programme of archaeological fieldwork will feed into the ongoing design of the Project. Reports on the results of any fieldwork will form appendices to the ES submitted as part of the DCO application.
- 7.15.1.2 The results of the archaeological fieldwork along with the review of additional appropriate data sources and more detailed examination of sources already consulted will enable the preparation of an updated DBA. The updated DBA will then form an appendix to the ES submitted as part of the DCO application.
- 7.15.1.3 Further site visits will then be undertaken to selected designated ground heritage assets in order to undertake the settings assessment to the required level. The results of this assessment may feed into the ongoing design of the Project if this is appropriate. Visualisations may need to be produced to assist with the assessment of impacts and effects.
- 7.15.1.4 A detailed HIA will be undertaken with regard to the potential impact on the Blenheim Palace WHS as a result of changes within its setting. This will be an iterative process involving consultation with relevant stakeholders including Historic England and the WHS Management Team. The HIA will form an appendix to the ES submitted as part of the DCO application.

7.16 References

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