Botley West Solar Farm

Environmental Statement

Volume 3

Appendix 7.4: Blenheim Palace World Heritage Site - Heritage Impact Assessment

November 2024

PINS Ref: EN010147
Document Ref: EN010147/APP/6.5
Revision P0
APFP Regulation 5(2)(a); Planning Act 2008; and Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations

Approval for issue

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Glossary

Term	Meaning
Power Converter Station	The Power Converter Stations (PCS) are units that house middle voltage transformers (1kV/33kV), switchgear, and inverters within the solar PV installation area. These stations are responsible for inverting direct current to alternating current while controlling and increasing the voltage of the electricity generated across the solar PV tables before it reaches the high-voltage transformer distance.
Secondary Project Substation	Each secondary substation comprise High voltage transformers (33/275 kV), main components of Gas insulated switchgear, Surge Arrester, Lightning protection and Cabling etc.. The secondary substation plays a critical role ensuring that power can be transmitted from secondary substations to project main substation via underground cables.
The Applicant	SolarFive Ltd.
The Project	The Botley West Solar Farm.
The Project Site or Order Limits	The area of land encompassing the Project development and shown on the Site Location and Order Limits Overview (Volume 2, Figure 1.1 of the ES). **[EN010147/APP/6.4]**.

Abbreviations

Abbreviation	Meaning
CCTV	Closed Circuit Television
DCMS	Department of Media, Culture and Sport
ES	Environmental Statement
HIA	Heritage Impact Assessment
NGET	National Grid Electricity Transmission
OUV	Outstanding Universal Value
PCS	Power Converter Station
PINS	Planning Inspectorate
PoC	Point of Connection
PV	Photovoltaic
PVDP	Photovolt Development Partners GmbH
SolarFive	SolarFive Ltd
SOUV	Statement of Outstanding Universal Value
SSSI	Site of Special Scientific Interest
WHS	World Heritage Site
ZTV	Zone of Theoretical Visibility

Units

Unit	Description
ha	hectares
kV	kilovolts
m	Metres
MWe	Megawatts of electrical output

1 Blenheim Palace World Heritage Site – Heritage Impact Assessment

1.1 Introduction

Overview

1.1.1 This Appendix of the Environmental Statement (ES) 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).

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 Project will help reduce reliance upon fossil fuels, improve energy security, and support the international drive to address the climate change emergency.

1.1.3 This document forms Volume 3, Appendix 7.4: Blenheim Palace World Heritage Site – Heritage Impact Assessment of the Environmental Statement (ES) prepared for the Project. It provides a Heritage Impact Assessment (HIA) regarding the potential impacts of the Project on the Blenheim Palace World Heritage Site (WHS). This information has been used to inform relevant sections of Volume 1, Chapter 7: Historic Environment of the ES [**EN010147/APP/6.3**].

1.2 The Project

1.2.1 A full description of the Project is provided in Chapter 6: Project Description of the ES [**EN010147/APP/6.3**]. Essentially it comprises the construction, operation, maintenance and decommissioning of a photovoltaic (PV) solar farm and associated infrastructure, for approximately 840MWe of solar generation. The Project will export electricity for connection via a new National Grid Electricity Transmission (NGET) substation at Botley West. October 2027 is the current grid connection offer date, although this is likely to be amended to the beginning Q4 2028. October 2028 is therefore now the assumed date of connection for the purposes of EIA assessment. The Project will be in place for up to 42 years, after which the land would revert to the previous agricultural use.

1.2.2 The Applicant will retain agricultural land use beneath the proposed solar arrays, and in areas of the Site that will remain undeveloped, such as the water meadows adjoining the River Evenlode. This continued agricultural use will be in the form of conservation grazing, primarily by sheep. The Applicant also proposes to introduce some small scale horticultural production areas, for use by community food growing groups, and which are intended to be managed by those groups. Some limited areas of the Site will be taken out of agricultural use during the life of the Project, where it would not be possible to allow

grazing, such as areas occupied by Project sub-stations and power converter stations.

1.2.3 The Project Site covers an area of land measuring approximately 1,300 ha., although the land proposed for solar arrays will cover approximately 839 ha. in total.

1.2.4 There are three main areas within which solar generation is proposed:

- The Northern Site Area situated between the A4260 road and the valley of the River Dorn near Wootton and Tackley;
- The Central Site Area situated broadly between Bladon and Cassington;
- The Southern Site Area situated near to Farmoor Reservoir and north of Cumnor.

1.2.5 These three Sites are connected by a 275 kV cable.

1.2.6 The Project Site Location (including the construction corridor for the 275 kV cable) and the Project Boundary Plan (representing the extent of the Order Limits proposed for the Development Consent Order (DCO)) are shown in Volume 2, Figure 1.1. The Project Masterplan Overview, which provides a design layout with key parameters, is shown in Volume 2, Figure 1.2.

1.2.7 The main elements of the Project comprise:

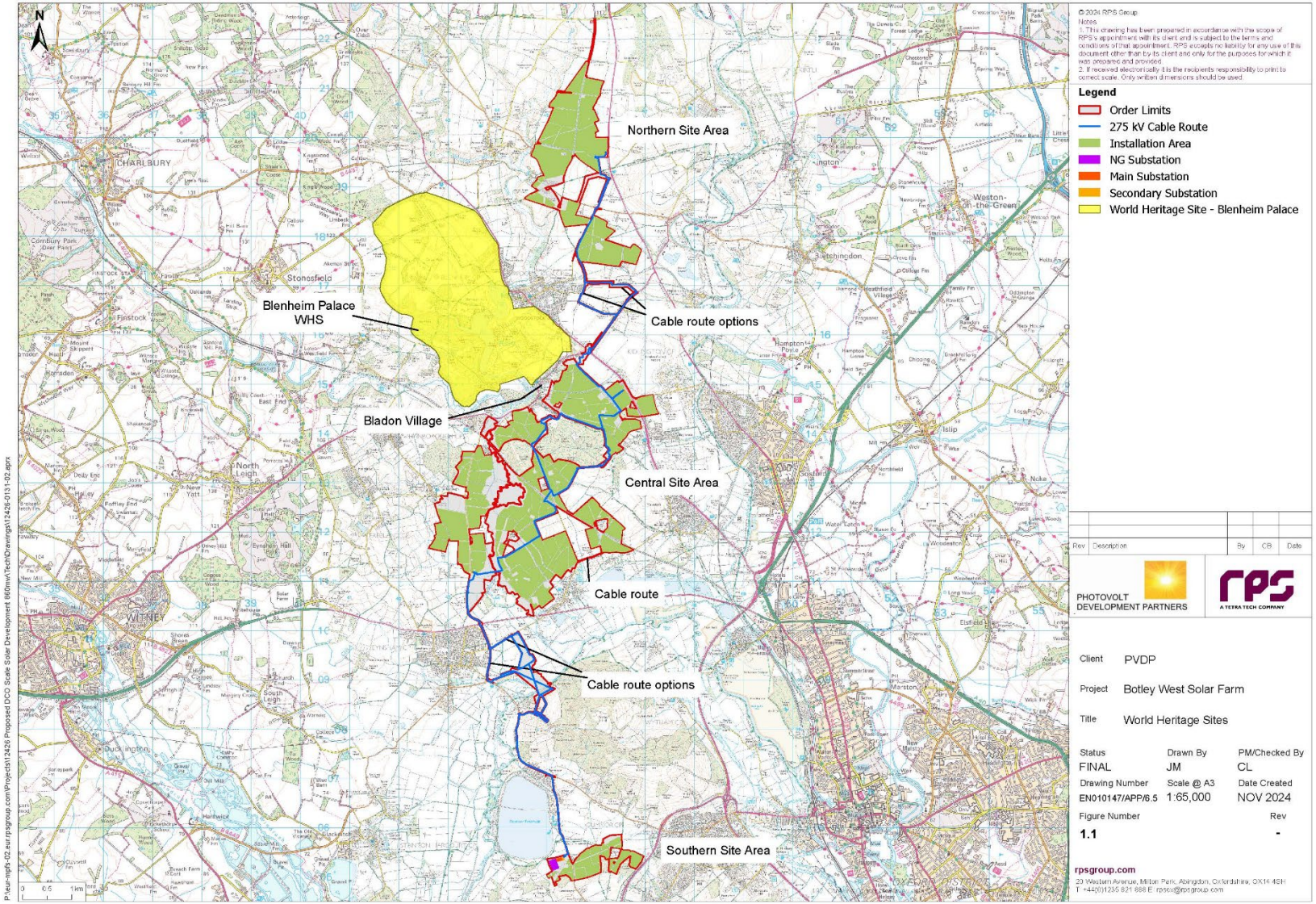
- Solar photovoltaic (PV) panels with a maximum height of 2.3 m
- Power Converter Stations with a maximum height of 3.5 m, maximum length of 14 m and maximum width of 2.9 m
- Onsite cabling (33kV and 275kV)
- Secondary Project Substations with a maximum height of 6 m (including isolator), maximum length of 18 m and maximum width of 10 m
- Main Project Substation (in Southern Site Area)
- NGET Substation (in or adjacent to Southern Site Area)
- One surface water attenuation pond
- Security fencing with a maximum height of 2.1 m
- Closed Circuit Television (CCTV) cameras on support poles maximum 4m high
- Manually operated lighting and motion sensor activated lighting (no permanent night-time lighting)
- Temporary construction compounds
- Temporary satellite construction compounds.

1.2.8 Figure 1.1 within this Appendix shows the Project Site Location in relation to the Blenheim Place WHS. No part of the Project Site is within the WHS.

1.2.9 This Appendix addresses the potential impacts of the Project on the heritage significance of the Blenheim Palace WHS arising from elements of the Project within the Northern Site Area and the Central Site Area, along with the route of the 275 kV cable between these two areas. Those elements of the Project

which are within the Southern Site Area, along with the route of the 275 kV cable between the Central and Southern Site Areas, are not considered due to the distance from the WHS and the lack of any association with The Blenheim Estate.

Figure 1.1: Project Site Location in relation to the Blenheim Place WHS



1.3 Policy Context

1.3.1 A detailed account of the relevant national and local heritage policy and guidance is set out in Section 1.3 of Appendix 7.1: Historic environment desk-based assessment of the ES; additional information is provided here where it is specifically relevant to consideration of impacts on the Blenheim Palace WHS.

1.3.2 Paragraph 2 of the National Planning Policy Framework (NPPF – Ministry for Housing, Communities and Local Government, 2023) states that '*Planning policies and decisions must also reflect relevant international obligations and statutory requirements*'. Amongst those international obligations are the UK Government's duties as set out in the Convention Concerning the Protection of the World Cultural and Natural Heritage (1972), more commonly known as the World Heritage Convention. The Convention was ratified by the UK Government in 1984.

1.3.3 Paragraph 1.1.4 of the Overarching National Policy Statement for Energy (NPS-EN1) (Department for Energy Security & Net Zero 2023a) states that '*The Planning Act 2008 also requires that, where an NPS has effect, the Secretary of State must decide an application for energy infrastructure in accordance with the relevant NPSs except to the extent that the Secretary of State is satisfied that to do so would:*

- *lead to the UK being in breach of its international obligations*
- *be in breach of any statutory duty that applies to the Secretary of State*
- *be unlawful*
- *result in adverse impacts from the development outweighing its benefits*
- *be contrary to regulations about how its decisions are to be taken*'

1.3.4 In 2023 UNESCO adopted the Policy Document on climate action for World Heritage [redacted] The purpose of the policy document is '*to provide high-level guidance on enhancing the protection and conservation of Outstanding Universal Value, through comprehensive adoption of climate action measures*' (paragraph 16). The document recognises that '*A two-pronged approach is therefore needed, recognising that World Heritage properties represent both an asset to be protected from climate impacts and a resource to strengthen the ability of communities to pursue transformative change. In any case, Outstanding Universal Value must be safeguarded, and climate action must be pursued*' (paragraph 13). It goes on to confirm that '*Impact assessments must also be carried out as a pre-requisite for adaptation and mitigation responses within or around a World Heritage property to ensure that the Outstanding Universal Value is not negatively impacted*' (paragraph 35). This is not 'new' policy but rather it represents an expansion on previous positions adopted by UNESCO.

1.4 The Heritage Impact Assessment

Introduction

1.4.1 The 2022 document *Guidance and Toolkit for Impact Assessments in a World Heritage Context* was produced jointly by the United Nations Educational, Scientific and Cultural Organisation (UNESCO), the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), the International Council on Monuments and Sites (ICOMOS) and the International Union for Conservation of Nature (IUCN). It provides a framework in which impact assessments can be undertaken with regard to proposed developments within and adjacent to World Heritage Sites.

1.4.2 The guidance document sets out a series of actions which can be summarised as follows:

- Establish the baseline –the World Heritage property's OUV, attributes, setting etc
- Describe the proposed development and alternatives
- Identify and predict any impacts
- Evaluate these impacts
- Consider mitigation and enhancement

The Blenheim Palace World Heritage Site

1.4.3 The Blenheim Palace WHS was inscribed on the World Heritage List in 1987 on the basis of it meeting criteria (ii) and (iv).

(ii) to exhibit an important interchange of human value, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape;

(iv) to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history.

1.4.4 A Management Plan was published in 2006 and a Statement of Significance for the Blenheim Palace WHS was adopted by the World Heritage Committee in 2008. Paragraph 3 of the World Heritage Committee's Decision stated that the Committee '*Recommends that assessment for statements of authenticity and integrity / statements of protection and management should be postponed to the 33rd session of the World Heritage Committee (2009) awaiting adoption of a methodology and an agreed format for Statements of Outstanding Universal Value for inscribed properties*'.

1.4.5 A detailed Statement of Outstanding Universal Value (SOUV) was formally adopted by UNESCO in 2013. The approved text is as follows:

Brief Synthesis

'Blenheim Palace, in Oxfordshire, was designed by John Vanbrugh. The English nation presented the site to John Churchill, first Duke of Marlborough,

in recognition of his victory in 1704 over French and Bavarian troops, a victory which decided the future of the Empire and, in doing so, made him a figure of international importance. The Palace sites within a large walled landscape park, the structure by Vanbrugh overlaid by the designs of Lancelot 'Capability' Brown from 1761 onwards.

Statement of Outstanding Universal Value

The design and building of the Palace between 1705 and 1722 represented the beginning of a new style of architecture and its landscaped Park, designed by Lancelot 'Capability' Brown, is considered ''a naturalistic Versailles''.

In tangible form Blenheim is an outstanding example of the work of John Vanbrugh and Nicholas Hawksmoor, two of England's most notable architects. It represents a unique architectural achievement celebrating the triumph of the English armies over the French, and the Palace and its associated Park have exerted great influence on the English Romantic movement which was characterised by the eclecticism of its inspiration, its return to national sources and its love of nature. The original landscape set out by John Vanbrugh, who regulated the course of the River Glyme, was later modified by Lancelot 'Capability' Brown who created two lakes, seen as one of the greatest examples of naturalistic landscape design.

Blenheim Palace was built by the nation to honour one of its heroes John Churchill, the first Duke of Marlborough, and is also closely associated with Sir Winston Churchill.

Criterion (ii): By their refusal of the French models of classicism, the Palace and Park illustrate the beginnings of the English Romantic movement which was characterised by the eclecticism of its inspiration, its return to national sources and its love of nature. The influence of Blenheim on the architecture and organisation of space in the 18th and 19th centuries was greatly felt in both England and abroad.

Criterion (iv): Built by the nation to honour one of its heroes, Blenheim is, above all, the home of an English aristocrat, the 1st Duke of Marlborough, who was also Prince of the Germanic Holy Roman Empire, as we are reminded in the decoration of the Great Drawing Room by Louis Laguerre (1719-20).

In virtue of this criterion, just like the Residence of Wurzburg (included in 1981) and the Castles of Augustusburg and Falkenlust in Brühl (included in 1984), Blenheim is typical of 18th century European princely residences, a category which is still under-represented on the World Heritage List'.

Integrity

'The property is enclosed by an 18th century dry stone wall which defines its extent and maintains its physical integrity. Within the wall, the layout of the principal buildings remains unaltered since their construction, and the overall structure of the landscaped park layout remains largely as set out by Vanbrugh and Brown. The buildings and Park were laid out over an earlier Roman and medieval landscape, remnants of which are still visible through the Vanbrugh and Brown landscapes. Changes to the landscape and building by their

owners have continued to the present day although these have not detracted from the Outstanding Universal Value of the property.

The Park contains important veteran trees. Disease and time have caused some loss of original tree specimens, but these have been replanted with the same species where possible and appropriate. Because of climate change and the greater incidence of drought, adjustments have to be made to the mix of species used in conserving the park landscape.

The integrity of the property is well protected by its enclosing wall but important visual links do exist between the gates, the parkland buildings, buildings in the surrounding landscape, and care needs to be taken to ensure these key visual links are protected'.

Authenticity

'*The overall relationship between the Baroque Palace and its Park is still clearly in place and the Outstanding Universal Value of the property can be readily understood despite the early 20th century changes to the landscape. The form and design of the Palace and Park survive well and there is a high degree of survival of fabric and indeed original fittings and furnishings*'.

Protection and management requirements

The UK Government protects World Heritage Sites in two ways. Firstly, individual buildings, monuments, gardens and landscapes are designated under the Planning (Listed Buildings and Conservation Areas) Act 1990 and the 1979 Ancient Monuments and Archaeological Areas Act and secondly, through the UK Spatial Planning system under the provision of the Town and Country Planning Acts.

Government guidance on protecting the Historic Environment and World Heritage is set out in the National Planning Policy Framework and Circular 07/09 (subsequently withdrawn and replaced by the web-based Planning Practice Guidance).

Policies to protect, promote, conserve and enhance World Heritage properties, their settings and buffer zones are also found in statutory planning documents. World Heritage status is a key material consideration when planning applications are considered by the Local Authority planning authority. The West Oxfordshire Local Plan contains policies to protect the property.

The property as a whole is designated as a Grade I registered park and garden and was given National Heritage tax exemption status in 1999 in recognition of its important architecture, its outstanding scenic, historic landscape, and the outstanding importance of the buildings' contents and their intimate association with the property. Forty-five key buildings on the site are Grade I and Grade II Listed Buildings, with the park wall designated Grade II. There are five scheduled ancient monuments within the Park. The lakes and High Park are designated as Sites of Special Scientific Interest (SSSI) and the ancient woodland and hedgerows are both protected. Part of the setting of the property is within the Conservation Areas of Woodstock and Bladon and part is in the Cotswolds' Area of Outstanding Natural Beauty.*

A Management Plan has been in place since 2006 and is monitored on an annual basis by a Steering Group which includes representatives from English Heritage (now Historic England)*, ICOMOS-UK, DCMS, Natural England, the County Council and the local planning authority. Relevant Management Plan policies carry weight in the planning system. There is a comprehensive and successful visitor management plan. The Steering Group is coordinated by the Blenheim Palace and Estate Chief Executive who has responsibility for implementing the Management Plan Action Plan.*

There is an ongoing programme of repair and regular maintenance of the buildings and structures. Recent work has included the strengthening and reinstatement of the Blenheim Dam during 2009 to comply with safety legislation.

The Park is open through the year and the Palace and Formal Gardens are open from mid-February to mid-December each year. The property has a long tradition of public access (going back to at least Easter 1950) and it provides the setting for informal recreation as well as a series of activities including sporting events, craft and country fairs, and entertainment events such as music concerts and historical re-enactments. The property also offers a high quality resource for a variety of educational uses.

Firm implementation of existing policies is important to provide effective protection of the setting of the World Heritage property and it will be important to ensure that management of the Park prioritises conservation of the elements of the landscape that reflect the work of Vanbrugh and Brown.

The Steering Group meets annually to monitor progress and implementation with regard to the 33 stated objectives in the Management Plan and to check awareness with regard to risk preparedness and to monitor any issues regarding the integrity of the property – particularly with regard to the continuous monitoring of the key visual links'.

Attributes

1.4.6 A set of 'attributes' was identified within the development of the SOUV. In the 2022 document *Guidance and Toolkit for Impact Assessments in a World Heritage Context*, 'attributes' are defined as '*the elements of a heritage place that convey its values and make them understandable. They can be physical qualities, relating to the material fabric and other tangible features, but can also be intangible aspects such as processes, social arrangements or cultural practices, as well as associations and relationships which are reflected in physical elements of the property*'. Collectively the defined 'attributes' help to convey or express the Outstanding Universal Value (OUV) of the property. The 'attributes' identified for the Blenheim Palace WHS comprise:

Attribute 1. It remains the home of the same aristocratic family, the successive Dukes of Marlborough, for which it was built.

Attribute 2. It still contains the unique early 18th century architecture of the Palace and its associated assemblage of buildings together with an archive of original survey and building documentation.

Attribute 3. It is still set within the early 18th century grand Vanbrugh landscape overlaid by Lancelot Brown's masterpiece of English Landscape style design, internationally considered to be the ''English Versailles''.

Attribute 4. The surviving special relationship between the important architectural elements and their landscape setting are an exceptional piece of design and, together are greater than the sum of their parts.

Attribute 5. The UK has by far the greatest concentration of veteran trees in northern Europe and within High Park, which sits in the south-west section of Blenheim Park, is one of the finest areas of ancient oak-dominated woodland in the country. It is partially descended from the ancient Wychwood Forest, a 12th century deer park and an Anglo Saxon chase.

Attribute 6. The gardens and pleasure grounds which surround the Palace were partly designed by Lancelot Brown in the mid 18th century, and partly by the French landscape architect Achille Duchene at the start of the 20th century.

Attribute 7. The park retains a complete, 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.

The setting of the Blenheim Palace World Heritage Site

1.4.7 A World Heritage Site Management Plan Review was published in 2017 (Historic Landscape Management Ltd and Nick Cox Architects). The WHS Management Plan Review 2017 was coordinated by the Blenheim Palace WHS Steering Group comprising representatives from the Blenheim Palace senior management team; the Department of Culture, Media and Sport; Historic England; ICOMOS-UK (the UK National Committee of the International Council on Monuments and Sites); Natural England; Oxfordshire County Council and West Oxfordshire District Council.

1.4.8 The WHS Management Plan Review 2017 was accompanied by five appendices, one of which (Appendix 3) comprised a Setting Study which provides information regarding the wider setting of the WHS and the ways in which this wider setting contributes to the OUV. The NPPF defines the setting of a heritage asset as '*The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral*' (Ministry for Housing, Communities and Local Government, 2023, Glossary).

1.4.9 Paragraph 5.02 of Appendix 3 of the WHS Management Plan Review 2017 identifies the elements of the OUV (and the attributes which convey it) that are most directly related to the setting of the WHS as:

- The connection with the River Glyme - the management of this river as it runs through the setting of the WHS directly affects the character, ecological value and water quality of Lancelot Brown's lakes within the WHS;
- The links with the much larger and ancient Wychwood Forest area;

- The value of the boundary wall and plantations which mainly hide the park from outside views, but also form important woodland elements in the wider landscape;
- The key visual linkages between Blenheim and its setting - to Bladon church in the south and from Old Woodstock to the Column of Victory in the east;
- The character of the setting as traditional English countryside, dotted with picturesque villages mainly built using a uniform palette of materials.

Project description and consideration of alternatives

1.4.10 The description of the Project is provided above in section 1.2.

1.4.11 An account of how the Project Site was identified is presented within Chapter 5: Alternatives Considered of the ES [**EN010147/APP/6.3**]. This describes the UK Government's position on the need for ground-mounted solar energy as expressed through published planning policy and strategy documents.

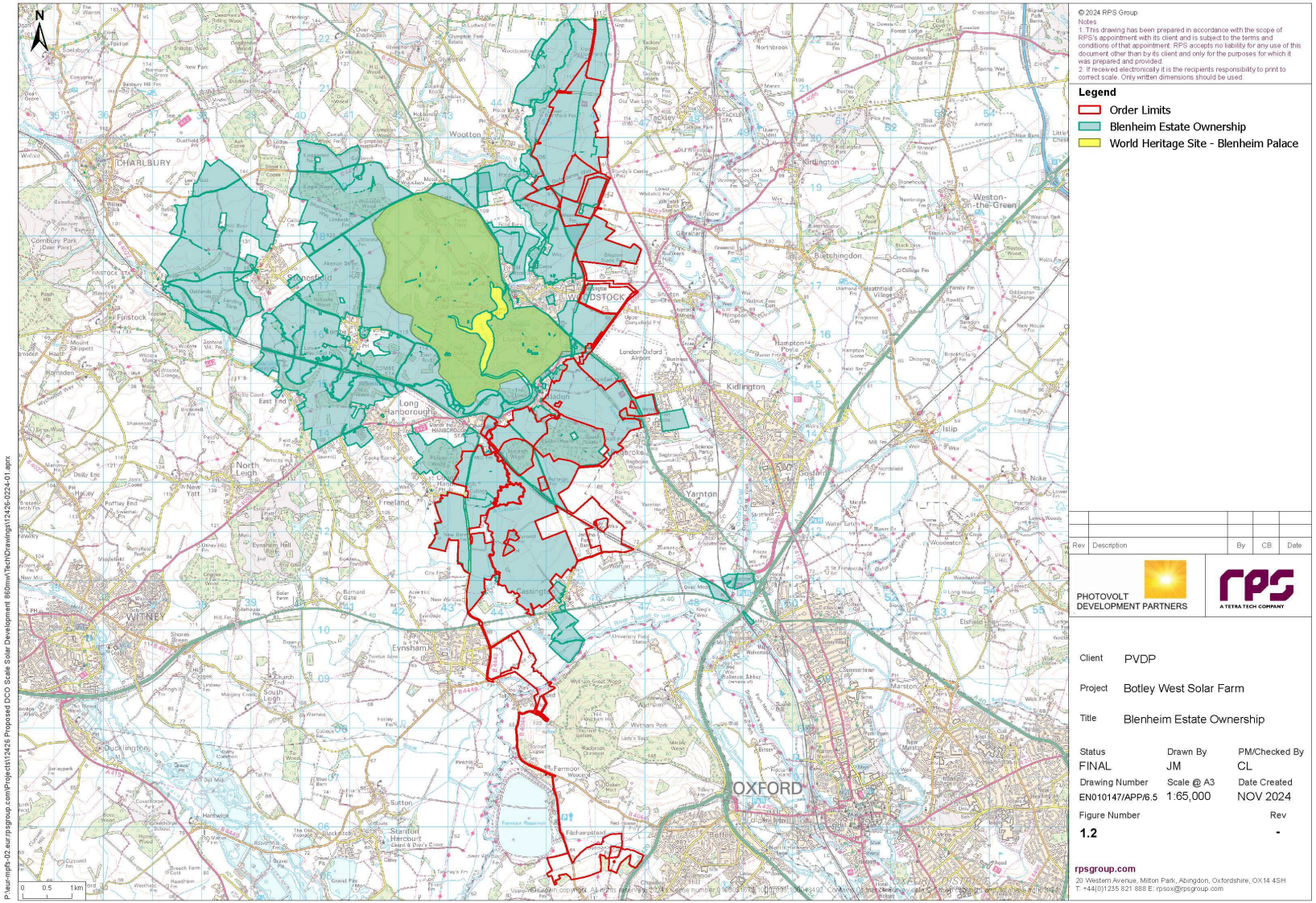
1.4.12 Chapter 5: Alternatives Considered of the ES [**EN010147/APP/6.3**] also sets out the rationale behind the Applicants' search for suitable and available land with the potential to connect to the 400 kV network operated by NGET.

1.4.13 Generators of electricity are incentivised to locate new generating facilities, including ground-mounted solar farms, in areas of greatest demand. The Applicant therefore focused their search on South East England and carried out a search of 20 existing substations that had potential connection capacity for a solar farm. National Grid confirmed that the Cowley substation in south Oxfordshire had more than 1000 MWe of capacity and the Applicant therefore commenced the process of securing land within south Oxfordshire. Initially the search looked for at least 250 hectares of land, preferably in a single ownership. This would then form a 'hub' around which additional land could then be identified.

1.4.14 Discussions with NGET led the Applicant to focus their search on land to the west of Cowley, beneath or close to the 400 kV line as this would allow for a direct connection. NGET were also looking at the construction of a new substation somewhere along this 400 kV line. Following renewed discussions with major landowners, the Blenheim Estate offered land for the Project.

1.4.15 The extent of the land owned by The Blenheim Estate is indicated below on Figure 1.2, along with the designated Blenheim Palace WHS. Additional land was also made available by other landowners, and from this the feasibility of delivering a solar farm in this area was then reviewed against key constraints and core principles. This feasibility study was based around the Point of Connection (PoC) agreement between National Grid and the Applicant which was for 840MWe.

Figure 1.2: The extent of the land owned by The Blenheim Estate



Project design

1.4.16 The precise boundaries of the Project Site, and the internal design, have been influenced through the consideration of a number of environmental issues, including those related to the historic environment and to landscape.

1.4.17 Both the heritage consultant and the landscape and visual effects consultant advising the Applicant had as their priority the imposition of a 'top-down' approach to guide where the development might be located within the Project Site in order to avoid any significant adverse environmental effects. This process itself has been an iterative one over more than two and a half years, evaluating views and the settings of heritage assets (including the Blenheim Place WHS), and has largely dictated the identification of suitable land parcels within which to accommodate the various elements of the Project.

1.4.18 At an early stage, having been presented with land over which leases could be secured to develop the Project by the Applicant, the planning and environmental consultant team provided advice on which areas were likely to give rise to significant adverse effects and therefore which areas to remove from the Project Siteor which to keep within the Project Site but leave undeveloped.

1.4.19 From the outset there was a decision not to remove any hedgerows, trees or woodland, and instead to work with the existing landscape structure, and indeed to enhance it by closing gaps in field boundaries and planting new areas. Safeguarded areas were introduced with regard to the outer edges of ancient woodland and other landscape features as well as residential receptors were also introduced. Part of the Conservation Area at Church Hanborough was also initially included as an option to develop but this was ruled out given likely adverse effects. All listed buildings and other designated heritage assets within and adjoining the Project Site were considered in order to understand their setting, and development was pulled away where the settings of heritage assets were thought to be unacceptably compromised.

1.4.20 Thus, whilst the Project Site covers an area of approximately 1,400 hectares, the land proposed for solar arrays measures approximately 840 hectares. The remaining land within the Project Site is proposed for a variety of different uses as set out in Chapter 6: Project description of the ES [**EN010147/APP/6.3**] and shown in the Project Masterplan Overview (Volume 2, Figure 1.2).

1.4.21 From the outset of the development of the Project, the Applicant has been very aware of the need to avoid adverse impacts upon the Blenheim Place WHS. As set out above, one of the major landowners whose land forms the majority of the Project Site is The Blenheim Estate, and so there has been a clear appreciation of the need to consider likely impacts on the WHS. Figure 1.3 presents a 'heat map' of the land owned by The Blenheim Estate and is based on sensitivity to solar farm developments such as the Project.

1.4.22 Much of the land owned by The Blenheim Estate and located to the west and immediately to the south of the Blenheim Palace WHS is within the Cotswold National Landscape (formerly the Cotswold Area of Outstanding Natural Beauty). The extent of the land within the Cotswold National Landscape is

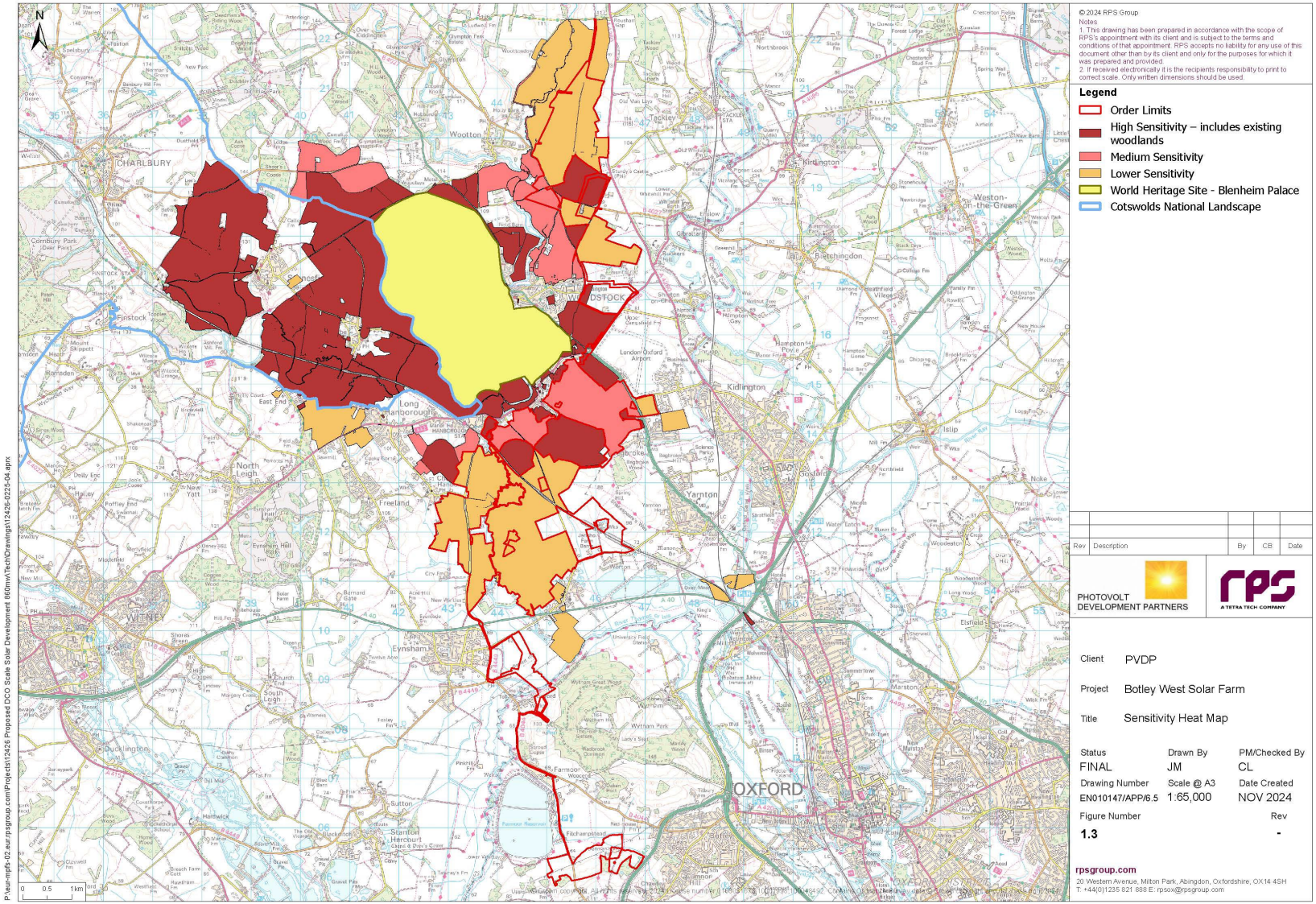
indicated on Figure 1.3. The planning system in England places a high level of value on National Landscapes and therefore all land within the Cotswold National Landscape was considered to be of High Sensitivity and not suitable for inclusion within the Project Site.

1.4.23 The remaining land owned by The Blenheim Estate and outside of the Cotswold National Landscape to the west of the Blenheim Palace WHS (west of Long Hanborough) and to the north west of the Blenheim Palace WHS (north of King's Wood and Wootton Wood) was not considered suitable for inclusion within the Project Site as these areas would be isolated and difficult to connect with the rest of the Project.

1.4.24 Other areas of land owned by The Blenheim Estate were not considered suitable for inclusion within the Project Site on the basis of sensitivity with regard to the Blenheim Palace WHS (see Figure 1.3). This includes proximity to the boundary wall of the Blenheim Palace WHS (e.g. land to the north east of the Blenheim Palace WHS and west of the A44 road), or land adjacent to the major roads leading to the Blenheim Palace WHS (e.g. land on the east side of the A44 road north of Old Woodstock, land to the north and south of the roundabout at the junction of the A44 and A4095 roads, and land west of the A44 road to the south of this roundabout. All of these areas are indicated on Figure 1.3 as being of High Sensitivity, along with areas of existing mature and newly planted woodland, Scheduled Monuments and the recently constructed Blenheim Net Zero solar farm.

1.4.25 Figure 1.3 shows that most of the land within the Project Site is within areas identified on the sensitivity mapping as being of Lower Sensitivity, and no part of the Project site is within an area mapped as being of High Sensitivity. Land within the Central Site Area to the north of Burleigh Wood and Bladon Heath, and between the settlements of Bladon and Begbroke, is mapped as being of Medium Sensitivity.

Figure 1.3: Sensitivity Heat Map



Intervisibility with the Blenheim Palace WHS

1.4.26 In respect of the Blenheim Palace WHS, and prior to the formal evaluation presented within this HIA, both the landscape and visual consultant and the heritage consultant studied the intervisibility between the Project Site and the WHS and adjustments were made to the illustrative masterplan layout to avoid adverse effects resulting from intervisibility.

1.4.27 As stated above, no part of the development falls within the defined Blenheim Palace WHS boundary. However, the Applicant team were also conscious to avoid any significant adverse effects arising from changes within the setting of the WHS. Close consideration was therefore paid to the Setting Study produced as Appendix 3 of the WHS Management Plan Review 2017.

1.4.28 Appendix 3 of the WHS Management Plan Review 2017 describes the setting of the Blenheim Palace WHS with respect to key areas, separated into the areas to the north, east, south and west of the WHS. It also expressly identifies two significant views outwards from the WHS expressed as 'cones'; one looking from the Palace to the south east, towards Bladon Church and beyond, and the other one to the east looking from the Column of Victory towards the town of Woodstock and vice-versa. Figure 1.4 below is a reproduction of Figure 5 from Appendix 3 of the WHS Management Plan Review 2017 and shows the two 'cones' in a light green tone.

1.4.29 The significant view looking from the Palace towards the south east is part of the principal design line for the Blenheim Palace WHS, which starts at the Ditchley Gate at the north western edge of the WHS and extends along the tree-lined avenue to the Column of Victory and then through the centre of the Palace before reaching the church at Bladon.

1.4.30 The accompanying text box on Figure 1.4 regarding this view describes it thus: '*Significant view from Blenheim Palace to Bladon Church, but limited intervisibility between Bladon village and the World Heritage Site. The shaded area represents the extent of the landscape that forms the backdrop to the key view from the Palace, and is, therefore, important to the setting. Views back to the World Heritage Site from public access points within the shaded area are foreshortened by the park wall and boundary plantations*'.

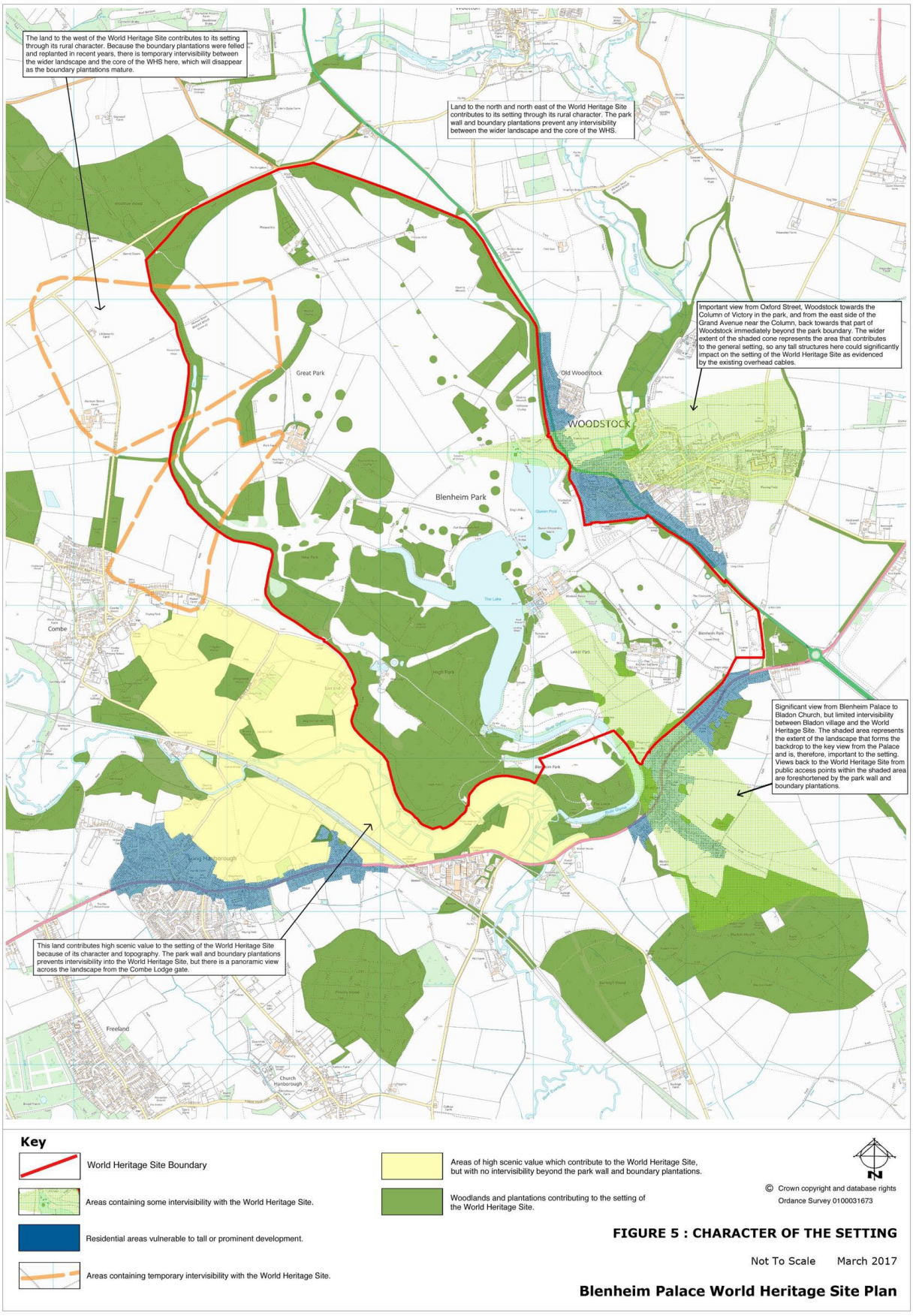


Figure 1.4: Reproduction of Figure 5 'Character of the Setting' from Appendix 3 of the WHS Management Plan Review 2017

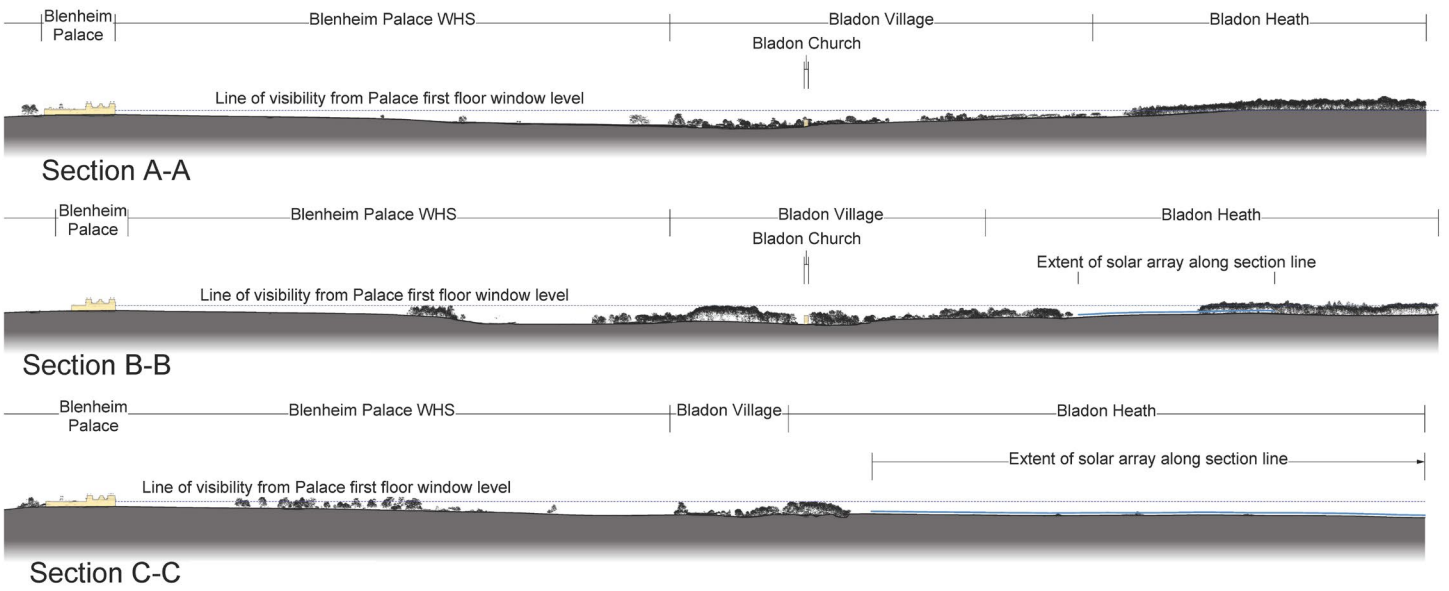
1.4.31 The land to the south of the Blenheim Palace WHS, in particular south of the village of Bladon, is described within paragraphs 4.22 and 4.33 of Appendix 3 of the WHS Management Plan Review 2017 as follows:

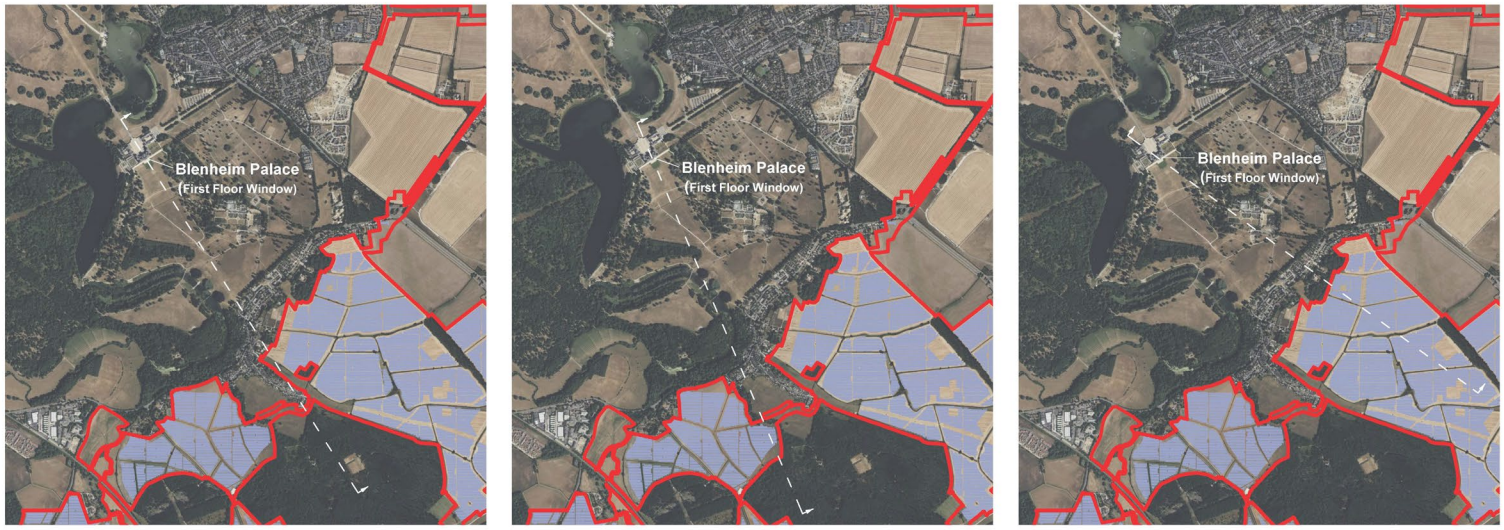
1.4.32 "*The south eastern side of the WHS is bounded by Bladon - a small, linear village strung out along the A4095 road to Witney. South of the village and park the landscape is typical of the semi-enclosed limestone wolds and rises gently up the slopes to the woodlands on Bladon Heath and Burleigh Wood which crown the low lying hills. Bladon is a characterful village, its traditional roof-scape mentioned by Mavor in glowing terms in 1789 as forming part of the charming view from within the park, and its church spire acting as the terminus of the main axial view through the park. Today the experience of being in a small rural village is affected somewhat by the traffic levels on the A4095, although along this road the presence of park lodges gives a physical and experiential link to what lies beyond. Burleigh Wood on the ridge is an important element of the character although the ridge together with the trees prevent any views of the park, and from the park side they stop the view extending any further south. This area is experienced as quiet countryside and is well used by walkers. On the roads and paths nearer the WHS boundary, its ornamental plantations may signal its presence. South east of Bladon there is a more agricultural feel, of fields partly enclosed by small copses and the linear belts along Rowel Brook, which offer limited perception of the proximity of the WHS since the external and boundary woods all blend together in the view.*

In terms of change to land use, any loss of the woodlands on Burleigh Ridge or tall development in this area would be detrimental to setting. Retaining the visual link between the park and the Church spire is also significant, while some screening of the 20th century housing to the south-east of the Church would be beneficial. The forces for change that have the potential to most affect the setting of the WHS are any activities that create height in the landscape since this risks diminishing the importance of the historic roof-scape and the Church tower, as well as major development / infra-structure development. Generally, the activities described as incremental developments could be accommodated depending on the detail and proximity to the boundary of the WHS but it is important to retain the discrete definition of Bladon as separate from Long Hanborough to the west and Woodstock to the east."

1.4.33 Close attention was therefore paid to the identified 'significant view' extending south east from the Palace towards Bladon Church (as described above). Section A-A in Figure 1.5 below is a cross section extending from ground level adjacent to the Palace and passing through the church at Bladon. Sections B-B and C-C represent the outer edges of the defined 'significant view'.

1.4.34 The three cross sections in Figure 3.1 demonstrate that no part of the Project would be visible in this defined 'significant view'. Any potential intervisibility is blocked by existing mature vegetation. The Project would not cause any change to the view of the church at Bladon or the longer view to the woodlands on Burleigh Ridge.





Section A-A Section B-B Section C-C

Figure 1.5: Cross sections from Blenheim Palace looking south and south east. Section A-A is the defined important view towards Bladon church

1.4.35 Figure 1.6 below is an updated version of an image shown on page 25 of Appendix 3 of the WHS Management Plan Review 2017. The photograph used in Figure 1.6 was taken from the first floor of the Palace by the Applicant in order to assist with the design of the Project, whereas the one in Appendix 3 was taken from ground level adjacent to the Palace.

1.4.36 In Figure 1.6 part of a field is visible to the right of the church tower, surrounded on all sides by woodland. This field was initially part of the Project Site. However, it was found to be the only part of the Project Site that would be visible in this defined 'significant view;' and consequently it was removed from the Project and is now largely outside of the Project Site boundary (except for a narrow cable route within the southern edge of the field which would not be seen in this view as it is behind existing vegetation). The image demonstrates that no part of the Project Site is visible in this defined 'significant view' due to the presence of mature vegetation both within and outside of the Blenheim Palace WHS.

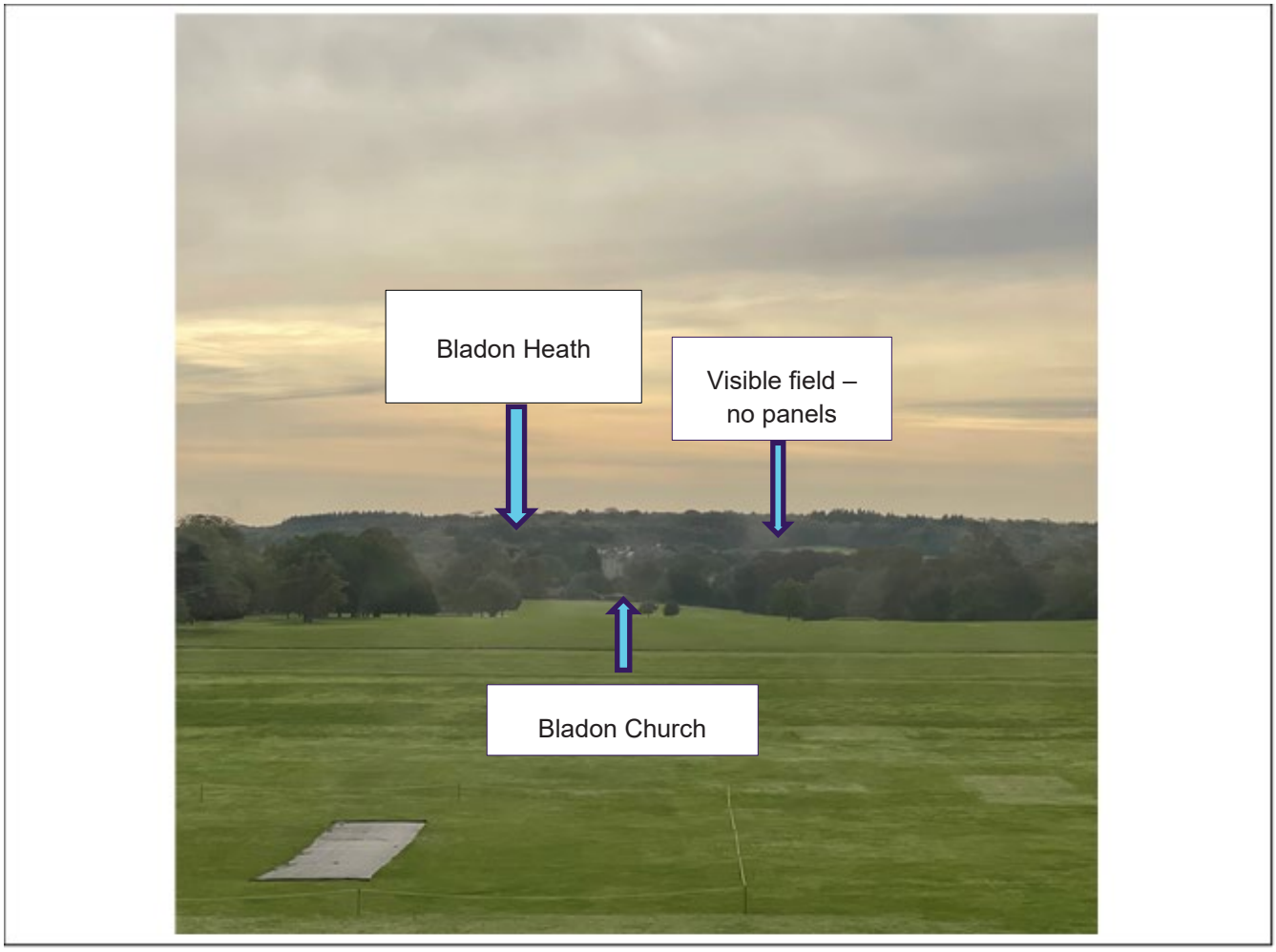


Figure 1.6: View from first floor of Blenheim Palace looking towards the church at Bladon – no visible solar PV panels

1.4.37 Cross sections were also created in respect of the second defined 'significant view' as shown on Figure 5 in Appendix 3 of the WHS Management Plan (2017) and reproduced here as Figure 1.4. This is the view from the Column

of Victory to the east, towards the town of Woodstock, and vice versa. On Figure 5 in Appendix 3 this view is described thus '*Important view from Oxford Street, Woodstock towards the Column of Victory in the park, and from the east side of the Grand Avenue near the column, back towards that part of Woodstock immediately beyond the site boundary. The wider extent of the shaded cone represents the area that contributes to the general setting, so any tall structures here could significantly impact on the setting of the World Heritage Site as evidenced by the existing overhead cables*'.

1.4.38 The Project Site does not include development within the cone of the defined 'significant view'. The cross sections D-D and E-E on Figure 1.7 below are along lines extending north north east and north east from the Column of Victory towards parts of the Project Site where solar panels are proposed. The cross sections demonstrate that no part of the Project Site would be visible in views from this location within the Blenheim Palace WHS due to a combination of topography and existing vegetation.

1.4.39 Figure 1.8 shows the Zone of Theoretical Visibility (ZTV) that has been established for the Project Site. This suggests that there would be some visibility of the Project Site from land within the Blenheim Palace WHS, including land to the south-west of the Column of Victory, land to the south and east of the Palace, and land to the south of the grade II* listed High Lodge which is situated within the High Park area of the WHS.

1.4.40 Visits have been undertaken to all of the areas within the Blenheim Palace WHS for which the ZTV suggests potential visibility of (part of) the Project Site. These visits have confirmed that no element of the Project would be visible from any location within the WHS, regardless of the season or the time of day. Additional Viewpoints have been agreed with Historic England for the production of visualisations that will confirm this.

1.4.41 The identified lack of any intervisibility between the Project and land within the Blenheim Palace WHS, despite what is presented within the ZTV, is almost entirely the result of the presence of mature vegetation. Much of this is within the WHS but there are also important areas of mature vegetation directly adjacent to the WHS (such as the woodland within land known as The Lince to the west of Bladon) and also slightly further away such as the vegetation within and immediately to the east of Bladon.

1.4.42 In the event of the loss of some or all of this mature woodland through natural catastrophe such as storms, drought or disease, the ZTV indicates that intervisibility between the Project and land (and buildings) within the Blenheim Palace WHS is very likely to occur. However, in such a situation there would be two main factors in the consideration of the impact of any views of the Project on the significance of the WHS:

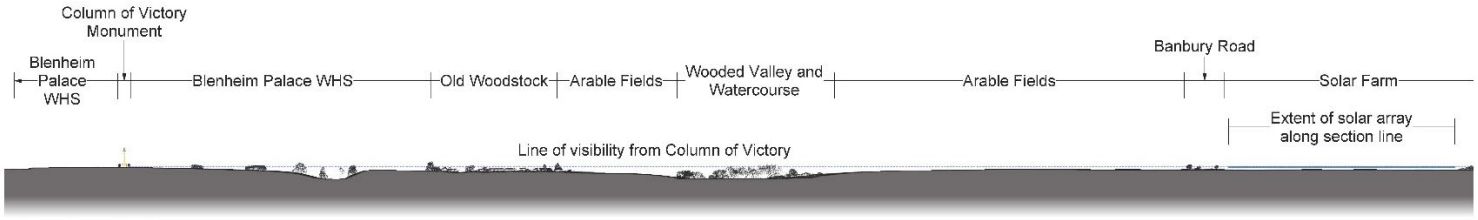
1. Any view of the Project may be very limited in extent – it could be that just one edge of one field of solar PV panels is visible at a distance of more than 1 km, and
2. The catastrophic loss of woodland would itself represent a significant change within the WHS and its setting. There would likely be greatly increased visibility of built development at Woodstock and Bladon along with associated infrastructure such as roads (traffic, street lights,

signage etc) and communication infrastructure (overhead services, pylons, poles etc). The views of the Project would represent a very minor part of the change within the setting of the WHS in this situation.

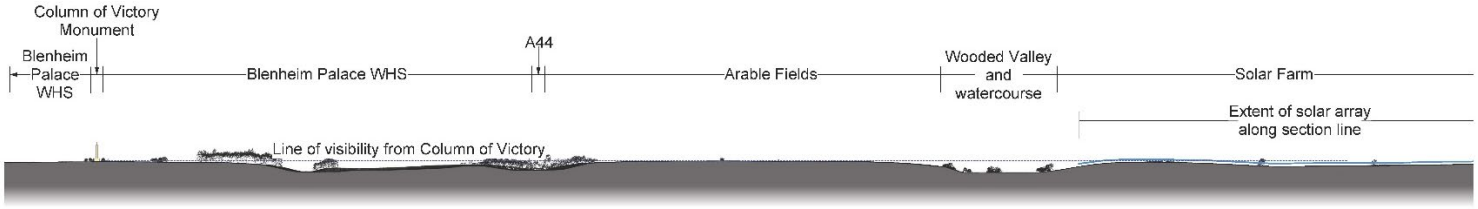
1.4.43 In terms of views towards the Blenheim Palace WHS from locations within the Project site, the top of the Column of Victory is visible in views from within the Northern Site at a distance of more than 2 km. This element of the monument is difficult to discern in these views as it is generally at the same height in the views as the trees which are on or close to the boundaries of the Project Site.

1.4.44 In some views from the elevated land within the Project Site on the eastern and southern side of Bladon, it is possible to see the upper parts of trees within the Blenheim Palace WHS and also (in winter) the roof of the Palace, whilst in views from within the Project Site to the south of Bladon (adjacent to Burleigh Wood) it is also possible in the winter months to see the roof of the grade II* listed High Lodge which is situated within the High Park area of the WHS as well as the upper parts of the trees.

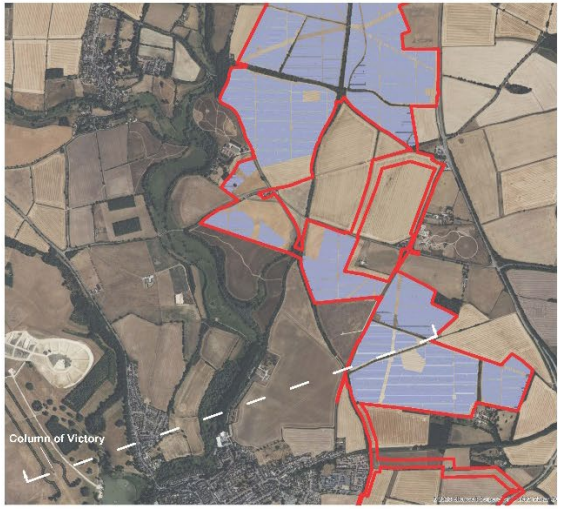
1.4.45 With regard to all of the views towards the Blenheim Palace WHS from within the Project Site in which elements of the WHS are visible, this visibility would remain unchanged during the construction, operation and maintenance, and decommissioning of the Project. What would change, however, is the visible character of the land in the foreground and/or middle ground in such views, as this land would be occupied by solar PV panels and associated Project elements.



Section D-D



Section E-E



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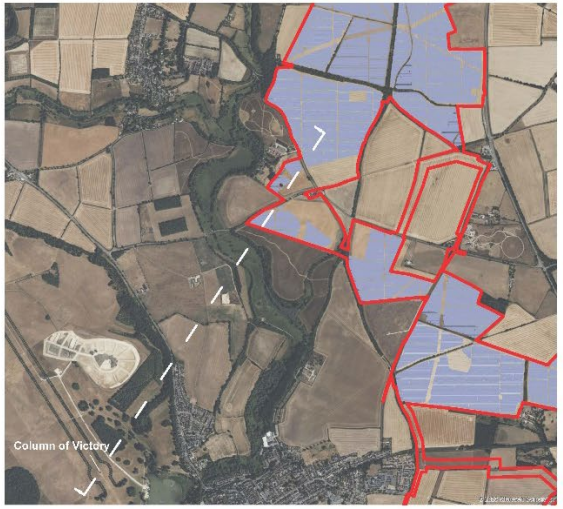
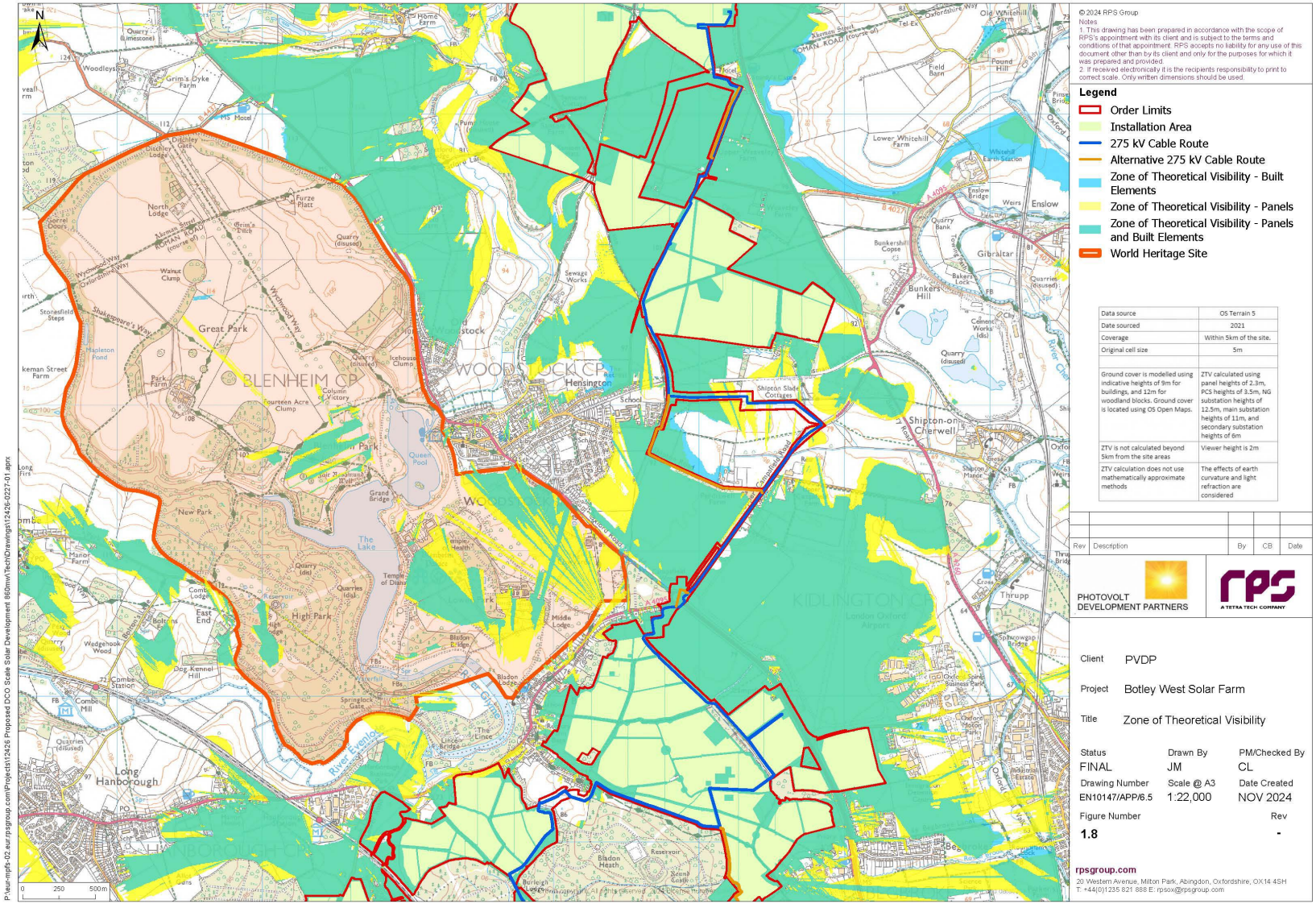


Section E-E

Figure 1.7: Cross sections between the Column of Victory (Blenheim Palace WHS) and the Project Site

Figure 1.8: Zone of Theoretical Visibility



Impact Identification

1.4.46 As set out above, no part of the Project Site is located within the Blenheim Palace WHS. Consequently, any impact would most likely occur as a result of change within the setting of the WHS.

1.4.47 **Table 1.1** below identifies the potential for the Project to result in an impact on the Blenheim Palace WHS as a result of change within its setting. The information is presented separately for each of the identified attributes which help convey or express the OUV of the WHS, and then for each of the identified elements of the OUV (and the attributes which convey it) that are most directly related to the setting of the WHS (*cf*. paragraph 5.02 of Appendix 3 of the WHS Management Plan Review 2017).

Table 1.1: Impact Identification

Attributes/Elements	Potential for Impact
Attributes which help convey or express the OUV	
It remains the home of the same aristocratic family, the successive Dukes of Marlborough, for whom it was built.	The construction, operation and maintenance, and decommissioning of the Project would not result in any impact on this attribute. The World Heritage property would remain as the home of the Dukes of Marlborough. Much of the Project Site is owned by The Blenheim Estate, but the land would be leased to the Applicant for the purposes of construction, operation and maintenance, and decommissioning of the Project, thus there would not be any change in ownership of land associated with the World Heritage Property.
It still contains the unique early 18th century architecture of the Palace and its associated assemblage of buildings together with an archive of original survey and building documentation.	The construction, operation and maintenance, and decommissioning of the Project would not result in any impact on this attribute. The architecture of the Palace and associated buildings, and the archive relating to the World Heritage property, would remain unchanged.
It is still set within the early 18th century grand Vanbrugh landscape overlaid by Lancelot Brown's masterpiece of English Landscape style design, internationally considered to be the 'English Versailles'.	The construction, operation and maintenance, and decommissioning of the Project would not result in any impact on this attribute. The designed landscape surrounding the Palace and associated buildings would remain unchanged.
The surviving special relationship between the important architectural elements and their landscape setting are an exceptional piece of design and, together are greater than the sum of their parts.	The construction, operation and maintenance, and decommissioning of the Project would not result in any impact on this attribute. The relationship between the Palace and associated buildings and their landscape setting would remain unchanged.
The UK has by far the greatest concentration of veteran trees in northern Europe and within High Park, which sits in the south-west section of Blenheim Park, is one of the finest areas of ancient oak-dominated woodland in the country. It is partially descended from the ancient Wychwood Forest, a 12th century deer park and an Anglo Saxon chase.	The construction, operation and maintenance, and decommissioning of the Project would not result in any impact on this attribute. The woodland within High Park, including the veteran trees, would remain unchanged.

Attributes/Elements	Potential for Impact
The gardens and pleasure grounds which surround the Palace were partly designed by Lancelot Brown in the mid 18th century, and partly by the French landscape architect Achille Duchene at the start of the 20th century.	The construction, operation and maintenance, and decommissioning of the Project would not result in any impact on this attribute. The gardens and pleasure grounds which surround the Palace and associated buildings would remain unchanged.
The park retains a complete, 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.	The construction, operation and maintenance, and decommissioning of the Project could impact on this attribute. The Project has been carefully designed to ensure that views into and out of the WHS remain unchanged. However, the construction, operation and maintenance, and decommissioning of the Project would comprise a change within the traditional English countryside surrounding the WHS.
Elements of the OUV (and the attributes which convey it) that are most directly related to the setting of the WHS	
The connection with the River Glyme - the management of this river as it runs through the setting of the WHS directly affects the character, ecological value and water quality of Lancelot Brown's lakes within the WHS.	The construction, operation and maintenance, and decommissioning of the Project would not result in any impact on this element. The management of the River Glyme would remain unchanged.
The links with the much larger and ancient Wychwood Forest area.	The construction, operation and maintenance, and decommissioning of the Project would not result in any impact on this element. The links between the WHS and the wider Wychwood Forest area would remain unchanged. No current areas of woodland would be removed or reduced in area. Some small areas of additional woodland would be planted as part of the landscape mitigation, but these would not affect any historic links between the WHS and the wider Wychwood Forest area.
The value of the boundary wall and plantations which mainly hide the park from outside views, but also form important woodland elements in the wider landscape.	The construction, operation and maintenance, and decommissioning of the Project would not result in any impact on this element. The design of the Project has ensured that there would be no change to views towards the WHS boundary walls from outside the park. To the south of the WHS property and south-west of Bladon, solar panels and associated elements of the Project placed within land to the east of the unclassified Burleigh Road would be visible in views north towards the A4095 road. The stone boundary wall along the north side of the A4095 road would also be visible in these views, although it should be noted that this wall is not the Grade II listed 18th century boundary wall of the WHS but is a later and lower addition built in a similar style. It represents the boundary of the Grade I Registered Park and Garden of Blenheim Palace, but the boundary of the WHS is approximately 630 m further to the north at this point. There would be no loss of, or addition to, the current pattern of woodland within the World Heritage property, nor any loss of woodland within the wider landscape. Some small

Attributes/Elements	Potential for Impact
	additional areas of woodland would be established within the Project Site as part of the landscape mitigation.
The key visual linkages between Blenheim and its setting - to Bladon church in the south and from Old Woodstock to the Column of Victory in the east.	The construction, operation and maintenance, and decommissioning of the Project would not result in any impact on this element. The Project has been carefully designed to ensure that these key visual linkages remain unchanged.
The character of the setting as traditional English countryside, dotted with picturesque villages mainly built using a uniform palette of materials.	The construction, operation and maintenance, and decommissioning of the Project could result in impacts on the character of the setting as 'traditional English countryside'. Such impacts would arise from visual changes within the Project Site, which would affect the way in which the setting of the WHS is perceived and understood. Additional short-term impacts during construction and/or decommissioning could arise from noise, lighting, vibration, dust and traffic.

1.4.48 The identification of the potential for impacts set out above in **Table 1.1** establishes that the construction, operation and maintenance, and decommissioning of the Project could impact on one of the defined Attributes of the OUV, namely '*The park retains a complete, 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it*'.

1.4.49 Similarly, the construction, operation and maintenance, and decommissioning of the Project could impact on one of the defined elements of the OUV (and the attributes which convey it) that are most directly related to the setting of the WHS, namely '*the character of the setting as traditional English countryside, dotted with picturesque villages mainly built using a uniform palette of materials*'. This is one of the elements described within paragraph 5.02 of Appendix 3 of the WHS Management Plan Review 2017.

1.4.50 Impacts would principally arise from visual changes within the Project Site. These changes wouldaffect the way in which the setting of the WHS is perceived and understood. During construction and decommissioning, additional impacts could arise from changes in noise, lighting, vibration, dust and traffic. During operation and maintenance additional impacts could arise from operational noise and from traffic associated with maintenance.

Impacts arising from visual changes

The setting

1.4.51 An initial identification of potential impacts on the attributes which help convey or express the OUV of the Blenheim Palace WHS, and on the elements of the OUV (and the attributes which convey it) that are most directly related to the setting of the WHS, is presented above in **Table 1.1**. The attribute on which potential for impacts is identified refers to '*Blenheim and the traditional English countryside and villages surrounding it*'. The element that is most directly related to the setting of the WHS and on which potential for impacts is identified

refers to '*The character of the setting as traditional English countryside, dotted with picturesque villages mainly built using a uniform palette of materials*'.

1.4.52 The term '*traditional English countryside*' is taken here to be a reference to the prevailing landscape surrounding the Blenheim Palace WHS comprising medium and large fields used for arable or pastoral farming and separated by mature hedgerows, along with woodlands of various sizes.

1.4.53 Paragraph 3.12 of Appendix 3 of the WHS Management Plan Review 2017 discusses the current position regarding farming within the setting of the Blenheim Palace WHS thus '*Today, farms are more evenly spread between land estate ownership and private ownership than they were historically. The predominant farm types are grazing livestock (mainly sheep, with some cattle) on the poorer soils and arable on the better soils, but the area also supports a range of other farm types including mixed use, specialist poultry, general cropping and horticulture. On land particularly to the west, east and to the north of the WHS it is grass and uncropped land that has the highest land use cover, followed by cereals. Because sheep are by far the most numerous livestock, this gives the landscape a pastoral feel since much of the land use is under grass*'.

1.4.54 The land within the Project's Northern and Central Site Areas is located to the north east, south east and south of the Blenheim Palace WHS (see **Figure 1.1**). All of the land within the Northern Site Area is in arable use (cereals) with no land used for pasture and therefore no livestock are present. Some field margins are excluded from the arable use and are planted for game bird cover and/or for winter bird seed plants.

1.4.55 Most of the land within the Central Site Area is in arable use (cereals) with some field margins planted for game bird cover and/or for winter bird seed plants. A small amount of land is used for grazing, principally the steeper slopes to the norther and west of Purwell Farm and the land between Burleigh Road and the railway.

1.4.56 Overall, very little of the landscape within the Project Site still has the '*pastoral feel*' described in the final sentence of paragraph 3.12 of Appendix 3 of the WHS Management Plan Review 2017 (cited above).

1.4.57 This may reflect very recent changes in farming practices, however, the use of land within the setting of the Blenheim Palace WHS, including land within the Project's Northern and Central Sites, has changed between arable and pastoral use over the last few hundred years, potentially on numerous occasions. The choices made by landowners and tenant farmers would depend on a number of factors including (but not exclusively) market conditions, farming subsidies, soil quality, population density, transport links and climate.

1.4.58 Other land use changes within the setting of the Blenheim Palace WHS reflect the need to adapt to the changing needs of society such as new transport links (the airport to the east of the Central Site Area and the (now disused) railway close to the Northern Site Area), improvements/adjustments to existing transport routes, extraction of sand and gravel, and the expansion of settlements.

1.4.59 All of the land within the Project's Northern Site Area and much of the land within the Central Site Area is owned by The Blenheim Estate and therefore has a connection with the Blenheim Palace WHS over and above its physical location. This association is an important factor in the consideration of which parts of the Project Site can be considered to be within the setting of the WHS.

1.4.60 The full extent of land ownership linked to the dukes of Marlborough and Blenheim Palace has varied over time. When the former royal manor of Woodstock was granted to the 1st Duke in 1705, the overall estate was larger than the current area held by The Blenheim Estate. Since 1705 the dukes (and later The Blenheim Estate) have bought and sold land (and buildings) in numerous locations. As a consequence, it is likely that most of the land around the WHS once had this direct connection through ownership, even if that is no longer the case.

1.4.61 Most of the fields within the Project's Northern and Central Site Areas have the straight boundaries typical of enclosure, also indicated by the equally straight nature of roads and footpaths. This is the process through which the small strips within the preceding large open fields were consolidated into regular shaped blocks separated by fencing and subsequently by hedgerows. The land was held by individuals rather than in common, and the rights of commoners were withdrawn. Most enclosure was carried out through the submission of a petition to Parliament, followed by a Bill which if successful became an Act.

1.4.62 For the parishes surrounding the Blenheim Palace WHS, enclosure generally took place in the period 1758-1835, predating the introduction of the General Enclosure Act in 1836 which sought to reduce the need for the direct involvement of Parliament. In some cases, the dukes of Marlborough were directly involved in this process, for example at Bladon the duke acquired land in the period 1760-1765 before petitioning for enclosure (along with the rector) in 1767. At Cassington, enclosure between 1801-1804 saw major parts of the parish (in the north and west) allotted to the duke, whilst at Hanborough the duke was again allotted the greatest area of land in the enclosure award made in 1773. By way of contrast, the enclosure award in 1770 for the parish of Wootton indicates that the duke was only the fifth largest beneficiary in terms of land area allotted.

1.4.63 Overall, it is likely that the present field pattern within the Project's Northern and Central Site Areas is largely the result of enclosure either directly or indirectly influenced by the dukes of Marlborough. Post-enclosure changes include the construction of the railway which bisects the Central Site Area and which cuts across the enclosure field system, along with expansion of settlements and some boundary loss to create larger fields. This association of the Blenheim estate with the historic landscape framework adds another dimension to the understanding of the setting of the Blenheim Palace WHS.

1.4.64 To some extent this is acknowledged within Appendix 3 of the WHS Management Plan Review 2017 where paragraph 5.06 states '*One of the key characteristics of the surroundings of Blenheim Park is that much of the setting lies within the wider extent of the Blenheim estate – which is effectively managed by a single owner*'. This paragraph goes on to say '*In terms of management, therefore, it would be helpful to encourage on-going*

management of the open elements of the landscape and river meadows through effective agricultural practices and appropriate grazing'.

1.4.65 Paragraph 5.04 of Appendix 3 of the WHS Management Plan Review 2017 sets out the implications of not protecting those elements of the setting of Blenheim Palace WHS which support the OUV. These are presented as a series of bullet points of which the first two are:

- '*The conversion of significant areas of agricultural land for other purposes, or the large-scale loss of woodland would detract from the distinctiveness of the setting*'; and
- '*Tall developments on the skyline, or large-scale development (particularly those of a non-residential nature which tend to be bulkier and non-vernacular, for example industrial development; wind turbines; solar farms etc) could detrimentally influence the character of the adjoining rural areas*'.

1.4.66 Chapter 4 of Appendix 3 of the WHS Management Plan Review 2017 divides the setting of the WHS into seven geographical areas and then describes each of these areas along with the 'forces for change' that could affect each one. The defined 'forces for change' include:

- Large-scale development – which includes large-scale renewable energy generation schemes such as solar farms or tall wind turbines;
- Land cover change – which includes large-scale changes such as the planting or removal or woodland or conversion from pasture to arable or creation of horse paddocks;
- Incremental development; and
- Infrastructure development – which includes solar PV.

1.4.67 Of the seven geographical areas established in Chapter 4 of Appendix 3 of the WHS Management Plan Review 2017, four are relevant to this impact assessment. For the south west (Long Hanborough) area, paragraph 4.21 states '*The tranquil character in the Evenlode valley, where the narrow river winds through flat, floodplain meadows and pasture fields which are subdivided by drainage ditches and fences, is very important to the pastoral character and together with the parkland shelterbelts form the backdrop for views of the boundary of the WHS, thus protecting this element of setting. Thus, changes to land use would have a significant impact, particularly through any loss of the small scale pasture and meadow fields. Otherwise, the forces for change that have the potential to most affect the setting of the WHS are major / infrastructure development particularly along the north side of the A4095 that would impact on the view from Combe Lodge (the view from Sheepwalk in the park to Hanborough spire mentioned by Mavor in 1789 is now hidden by tree growth). Generally the activities described as incremental developments could be accommodated depending on the detail and proximity to the boundary of the WHS, and their height in the landscape*'.

1.4.68 The Project Site does not extend north of the A4095 road and no part of the Project Site would be visible in views from Combe Lodge. To the south of the A4095 road and east of Lower Road, the land within the Project Site and west

and immediately east of the River Evenlode will remain undeveloped thus preserving the identified pastoral character of this area. As the ground rises further to the east the land within the Project Site would be developed with solar PV panels and associated infrastructure, however all of this land comprises large fields in arable use rather than the small scale pasture meadow fields referenced within paragraph 4.21 of Appendix 3 of the WHS Management Plan Review 2017. There are views towards the WHS from here, but these views are mostly of the mature woodland within the area known as The Lince which is not part of the WHS.

1.4.69 Five views are produced on pages 32 to 34 of Appendix 3 of the WHS Management Plan Review 2017 to elucidate the setting of the Blenheim Palace WHS in this area. The Project would not affect four of these. The fifth view is from Lower Road, looking north towards the WHS (but actually showing the mature woodland within The Lince which screens the WHS) and with modern farm buildings close to Mill Farm on the right hand side of the image. The Project proposes the placement of solar PV panels and associated infrastructure in the fields east and west of Lower Road here.

1.4.70 For the south south east (Bladon) area, paragraph 4.23 of Appendix 3 of the WHS Management Plan Review 2017 states '*In terms of change to land use, any loss of the woodlands on Burleigh Ridge or tall development in this area would be detrimental to setting. Retaining the visual link between the park and the Church spire is also significant, while some screening of the 20th century housing to the south-east of the Church would be beneficial. The forces for change that have the potential to most affect the setting of the WHS are any activities that create height in the landscape since this risks diminishing the importance of the historic roof-scape and the Church tower, as well as major development / infrastructure development. Generally the activities described as incremental developments could be accommodated depending on the detail and proximity to the boundary of the WHS but it is important to maintain the discrete definition of Bladon as separate from Long Hanborough to the west and Woodstock to the east*'.

1.4.71 The Project would not create height in the landscape and would not affect views of the historic roofscape or the church tower, which is not visible in any views from the land within the Project Site to the east or south east. However, it does fall within the defined categories for major development / infrastructure. Land to the east and south of Blaydon would be used for the placement of solar PV panels and associated infrastructure. The Project would not affect the current separation of settlements in this area.

1.4.72 Three views are produced on pages 35 and 36 of Appendix 3 of the WHS Management Plan Review 2017 to elucidate the setting of the Blenheim Palace WHS in this area. The Project would not affect one of these views (the one from within the churchyard looking towards the WHS). The two other views include land in arable use, within much of which the Project proposes the placement of solar PV panels and associated infrastructure.

1.4.73 For the east south east (airport and Kidlington) area, paragraph 4.25 of Appendix 3 of the WHS Management Plan Review 2017 states '*In terms of change, the shelterbelts and copses that do exist are very valuable in breaking up the open expanses here. The forces for change that have the potential to*

most affect the setting of the WHS are tall, major industrial or infrastructure development. Generally the activities described as incremental developments could be well accommodated depending on the detail and proximity to the boundary of the WHS'.

1.4.74 The Project would not introduce any tall elements into the landscape; the shelterbelts and copses would be retained in full. Four views are produced on pages 37 and 38 of Appendix 3 of the WHS Management Plan Review 2017 to elucidate the setting of the Blenheim Palace WHS in this area. The Project would not affect three of these views. In the image showing the view towards the WHS from the footpath near to Rowel Brook, the Project proposes the placement of solar PV panels and associated infrastructure in this field.

1.4.75 For the north east (between Woodstock and Wootton) area, paragraph 4.27 of Appendix 3 of the WHS Management Plan Review 2017 states '*The park is not perceived from this area except as a dense belt of trees, although when in close proximity along the road, the park wall itself does herald something of interest and value beyond it. However, from a distance these is little to suggest the closeness or character of the WHS. In the valleys, the character of the WHS setting is vulnerable to the loss of the pasturelands on the slopes and the woods on the break of slope, and in general any loss of the expanse of farmland would be detrimental. The other forces for change that have the potential to most affect the setting of the WHS here are major / infrastructure development – particularly those of any height or those with an industrial character. Generally the activities described as incremental developments could be accommodated depending on the detail and proximity to the boundary of the WHS*'.

1.4.76 The Project would not result in the loss of pasturelands or woodland and no part of the Project is located on the slopes of breaks of slope, nor would it introduce any tall structures into the landscape here. However, it does fall within the defined categories for major development / infrastructure. One view is produced on page 39 of Appendix 3 of the WHS Management Plan Review 2017 to elucidate the setting of the Blenheim Palace WHS in this area. The Project would not affect this view.

Impacts

1.4.77 The nature of the likely impacts arising from the construction, operation and maintenance, and decommissioning of the Project within the setting of the Blenheim Palace WHS are primarily associated with visual change. No part of the present framework of the historic landscape (hedgerows, trackways, roads, woodland etc) would be removed for the Project other than minor loss of hedgerows where safe accesses from the highways are required, or within the Project Site itself. Information regarding the widening of existing accesses and the establishment of new accesses is provided within the Site Construction Compound Accesses **[EN010147/APP/7.3.1]** and Appendix 12.8: Accesses and highway drawings in Volume 2 of the ES **[EN010147/APP/6.5]**.

1.4.78 The principal visual change would be that land currently used for agriculture (mostly arable but with some pasture in the Central Site Area) would instead be used for solar PV arrays along with associated infrastructure. Although

conservation grazing would also take place within this land, the solar PV arrays and associated infrastructure would be the dominant visual aspect within the landscape.

1.4.79 The elements of the Project are set out above in paragraph 1.2.7 and include:

- Solar photovoltaic (PV) panels with a maximum height of 2.3 m
- Power Converter Stations with a maximum height of 3.5 m, maximum length of 14 m and maximum width of 2.9 m
- Onsite cabling (33kV and 275kV)
- Secondary Project Substations with a maximum height of 6 m (including isolator), maximum length of 18 m and maximum width of 10 m
- Security fencing with a maximum height of 2.1 m
- Closed Circuit Television (CCTV) cameras on support poles maximum 4m high
- Manually operated lighting and motion sensor activated lighting (no permanent night-time lighting)
- One surface water attenuation pond.

1.4.80 The Main Project Substation would be located within the Southern Site Area, whilst the NGET Substation would be located within or adjacent to the Southern Site Area). Neither of these elements are considered within the assessment of impacts resulting from changes within the setting of the Blenheim Palace WHS.

1.4.81 During construction there would also be additional visual impacts resulting from the establishment and use of the temporary construction compounds and temporary satellite construction compounds. When these are no longer required the land will be restored and used for solar PV panels or retained as managed grassland depending on their location within the Project Site.

1.4.82 The design of the Project includes measures to reduce visual impacts. These include the removal of panels from areas considered to be visually sensitive and from land within Conservation Areas, the establishment of 'buffer zones' to respect Ancient Woodland and residential amenity, the creation of woodland belts, the planting of new hedgerows and the reinforcement of existing hedgerows. More than 30 km of new hedgerows would be established. Where existing Public Rights of Way cut across fields within the Project Site, a double hedge line would be planted (one on each side) so that a new greenway would be established. Additional greenways would also be established where no Public Rights of Way currently exist in order to increase connectivity through the landscape. A further 30 km of existing hedgerows would be reinforced to strengthen these features. All of the proposed planting is set out on the Illustrative Masterplans [**EN010147/APP/7.3.1**].

1.4.83 The establishment of new woodland belts and new hedgerows represents a change within the landscape, but one that would not result in a significant change to the character of the historic landscape. Native plant species would be used with the aim of increasing species diversity wherever possible, as set out in the Outline Landscape and Ecology Mitigation Plan

[**EN010147/APP/7.6.3**]. It should also be noted that new areas of woodland have recently been planted adjacent to the Northern Site Area that are substantially larger than any of the woodland blocks that would be established within the Project Site. These new areas of woodland are shown on the Illustrative Masterplan [**EN010147/APP/7.3.1**].

1.4.84 A surface water attenuation pond would be established at a location just to the north of Cassington, as indicated on the Illustrative Masterplan [**EN010147/APP/7.3.1**]. The construction, and operation and maintenance of the Project would not result in any changes to the current surface water drainage. However, this surface water attenuation pond, along with a number of other measures in the same area (such as ditch clearance), are proposed in order to alleviate existing issues around Cassington with regard to flooding. Further information on this is set out within Volume 1, Chapter 10: Hydrology and Flood Risk of the ES [**EN010147/APP/6.3**]. The details of these measures, including the size of the pond and the discharge location, would be subject to detailed design and modelling.

1.4.85 The surface water attenuation pond would not be a permanent water body, rather it would be an area of ground reduction allowing for the storage of water and controlled release. Subject to the results of the detailed design and modelling, it may be that several smaller ponds would be established rather than just a single, larger one. Regardless of the agreed final design, the establishment of the proposed surface water attenuation features would not represent a significant change to the character of the historic landscape.

1.4.86 The likely impacts and effects arising from the visual change within the setting of the Blenheim Palace WHS as a result of the Project are fully reversible, in that all of the visible elements would be removed as part of the decommissioning of the Project. Landscape elements created as part of the Project (woodland belts, new hedgerows etc) could be removed in order to ensure that the current landscape framework is entirely restored, although this is unlikely to happen given the ecological values of these features by the time of decommissioning.

1.4.87 In terms of duration the impact would be long-term but time-limited in that the Applicants are seeking a limited period consent for up to 42 years. [Government policy as set out in paragraph 2.10.66 of the National Policy Statement for Renewable Energy Infrastructure (NPS EN-3) (Department for Energy Security & Net Zero 2023b) is that time-limited consents should be described as temporary, but long-term is preferred here with regard to assessment of impacts].

1.4.88 The visual impacts would be experienced mostly by local people and also by visitors who stay in the area. The potential for such impacts to be experienced by visitors to the Blenheim Palace WHS travelling from a greater distance was considered within the design of the Project. The advisory routes for visitors coming by road are along the A34 road and then along the A44 road towards Woodstock where there is access into the main car and coach parks via the A4095 road.

1.4.89 The fields immediately to the west of the A44 road approaching the roundabout junction with the A4095 road were excluded from the Project Site on the basis

of their sensitivity to development. The western boundary of these fields would be reinforced with new planting, and solar PV panels and associated infrastructure would be established in the land to the west of the reinforced boundary.

1.4.90 Elements of the Project would still be visible to people travelling along the A44 road towards Blenheim in the section between Begbroke and Campsfield. Solar PV panels and associated infrastructure would be placed within one field east of the A44 road and immediately south of the airport, and in three fields west of the A44 road opposite the airport.However, this part of the setting of the Blenheim Palace WHS makes very little contribution to its OUV. Paragraph 4.24 of Appendix 3 of the WHS Management Plan Review 2017 describes the area to the east south east of the WHS thus '*This area is characterised by busy roads, more intensive larger-scale farming with low hedges and tree lines, and fewer woodlands. The airport is open and expansive and includes an industrial hub. Roads crossing the area are generally very busy (particularly the A44), with fast-moving traffic. All this impacts on the experience of this part of the WHS setting, although the tree lines along Upper Campsfield Road and Shipton Road close any views towards the WHS and remove any perception of its proximity*'. Subsequent to the preparation of this text in Appendix 3 of the WHS Management Plan Review 2017 there has been considerable further development to the south of the airport.

Impacts arising from noise, vibration, dust and traffic during construction and decommissioning

1.4.91 There is the potential for short-term changes within the setting of the Blenheim Palace WHS to arise from increased levels of noise, vibration, dust and traffic during construction and decommissioning of the Project.

1.4.92 Short-term limited impacts arising from increased levels of noise and vibration during construction would be minimised through the implementation of a Construction Noise and Vibration Management Plan which would form part of the Outline Code of Construction Practice **[EN010147/APP/7.6.1]** to be agreed with relevant stakeholders. Further details are provided in Chapter 13: Noise and Vibration of the **[ES EN010147/APP/6.3]**.

1.4.93 Short-term limited impacts arising from increased levels of dust during construction would be minimised through the implementation of the Outline Dust Management Plan which would form part of the Outline Code of Construction Practice **[EN010147/APP/7.6.1]**. A detailed Code of Construction Practice would be agreed with relevant stakeholders and would be in substantial accordance with the Outline Code of Construction Practice. Further details are provided in Chapter 18: Waste and Resources of the ES [**EN010147/APP/6.1**].

1.4.94 Short-term limited impacts arising from increased levels of traffic during construction would be minimised through the implementation of a Construction Traffic Management Plan which would form part of the Outline Code of Construction Practice **[EN010147/APP/7.6.1]**. Further details are provided in Chapter 12: Traffic and Transport of the ES [**EN010147/APP/6.1**].

1.4.95 Short-term limited impacts arising from increased levels of noise and vibration, dust and traffic during decommissioning would be minimised through the implementation of a Decommissioning Plan to be agreed with relevant stakeholders.

1.4.96 As set out above, in all cases these impacts would be short-term and limited and would be fully reversible.

Impacts arising from operational noise and from traffic associated with operation and maintenance

1.4.97 There is potential for changes within the setting of the Blenheim Palace WHS to arise from increased levels of noise and traffic during the operation and maintenance of the Project.

1.4.98 Impacts arising from increased levels of noise during operation and maintenance would be minimised through the implementation of an Operational Noise Management Plan. Further details are provided in Chapter 13: Noise and Vibration of the ES [**EN010147/APP/6.1**].

1.4.99 Impacts arising from increased levels of traffic during the operation and maintenance of the Project were scoped out of the Environmental Impact Assessment. This is because the maintenance would generally require the use of a single light vehicle (typically a 4 x 4) with a maximum of one arriving light vehicle movement per week and one departing light vehicle movement per week. Further information is provided in Chapter 12: Traffic and Transport of the ES[**EN010147/APP/6.1**].

Impacts arising from glint and glare during operation and maintenance

1.4.100 An assessment of potential impacts arising from glint and glare has been undertaken for the Project (Volume 3, Appendix 4.4: Glint and glare assessment of the ES [**EN010147/APP/6.1**]).

1.4.101 This assessment has found a limited number of receptors that could experience significant adverse effects as a result of glint and glare. Mitigation in the form of screening vegetation is proposed for each of these receptors. With the screening in place, all adverse effects would be reduced such that they are no longer significant.

Impact Evaluation

1.4.102 **Table 1.2** below sets out an evaluation of the potential impacts of the Project on any of the identified attributes which convey the OUV of the Blenheim Palace WHS. As established in Table 1.1 above, only one of these attributes, namely '*The park retains a complete, 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it*' would be affected by the Project.

1.4.103 Looking more closely at the description of this attribute, careful design of the Project has ensured that no impacts would arise in respect of the '*key views into and out of the site'*. Any potential impacts would arise primarily through

visual change to the use of land within the '*traditional English countryside*' surrounding the WHS and (to a much lesser extent) increased levels of noise, vibration, dust and traffic during construction and decommissioning of the Project.

1.4.104 The impact on this single attribute has been assessed as minor negative.

Table 1.2: Impact Evaluation

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
The construction of solar PV panels with a maximum height of 2.3 m.	The park retains a complete 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.	The construction period would see the gradual visible change of the use of much of the land within the Project Site from agriculture to solar PV panels. This would detract from the experience of the land within the Project Site as 'traditional English countryside'. No key views into and out of the World Heritage Site would be affected.	Constant from start of construction through to completion.	24 months	Fully reversible through decommissioning of the Project.	24 months	Minor	Negative	Minor negative
The construction of Power Converter Stations with a maximum height of 3.5 m, maximum length of 14 m and	The park retains a complete 18th century enclosing stone wall which protects its integrity, but views into and out of the site	The construction period would see the gradual placement of Power Converter Stations within the areas of solar PV panels across much of the land	Constant from start of construction through to completion.	24 months	Fully reversible through decommissioning of the Project.	24 months	Minor	Negative	Minor negative

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
maximum width of 2.9 m.	still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.	within the Project Site. This would detract from the experience of the land within the Project Site as 'traditional English countryside'. The colour of the Power Converter Stations would be important and would form part of the detailed design to be agreed with relevant planning authorities. No key views into and out of the World Heritage Site would be affected.							
The construction of onsite cabling (33kV and 275kV).	The park retains a complete 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key	The construction period would see works associated with onsite cabling, such as the opening and backfilling of trenches and entrance and exit pits for trenchless	Constant from start of construction through to completion.	24 months	Fully reversible through decommissioning of the Project.	24 months	Minor	Negative	Minor negative

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
	linkages between Blenheim and the traditional English countryside and villages surrounding it.	crossings. This would detract from the experience of the land within the Project Site as 'traditional English countryside'. No key views into and out of the World Heritage Site would be affected.							
The construction of Secondary Project Substations with a maximum height of 6 m (including isolator), maximum length of 18 m and maximum width of 10 m.	The park retains a complete 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.	The construction period would see the gradual construction of Secondary Project Substations, two within the Northern Site Area and three within the Central Site Area. The locations of these substations have been carefully selected such that all are at a considerable distance from the World Heritage	Constant from start of construction through to completion.	24 months	Fully reversible through decommissioning of the Project.	24 months	Minor	Negative	Minor negative

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
		Site. However, their construction would detract from the experience of the land within the Project Site as 'traditional English countryside'. No key views into and out of the World Heritage Site would be affected.							
The construction of security fencing with a maximum height of 2.1 m.	The park retains a complete 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.	The construction period would see the gradual establishment of security fencing around the areas of solar PV panels within the Project Site. Although the fencing is wide mesh and therefore does not screen any views, the presence of the fencing would detract from the experience of the	Constant from start of construction through to completion.	24 months	Fully reversible through decommissioning of the Project.	24 months	Minor	Negative	Minor negative

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
		land within the Project Site as 'traditional English countryside'. No key views into and out of the World Heritage Site would be affected.							
The construction of Closed Circuit Television (CCTV) cameras on support poles maximum 4m high.	The park retains a complete 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.	The construction period would see the gradual placement of CCTV cameras on support poles at each gate leading into an area of solar PV panels and also at each of the Secondary Project Substations. The presence of the CCTV cameras on support poles would detract from the experience of the land within the Project Site as 'traditional English	Constant from start of construction through to completion.	24 months	Fully reversible through decommissioning of the Project.	24 months	Minor	Negative	Minor negative

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
		countryside'. No key views into and out of the World Heritage Site would be affected.							
The construction of manually operated lighting and motion sensor activated lighting.	The park retains a complete, 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.	The construction period would see the gradual placement of manually operated lighting and motion sensor activated lighting at each area of solar PV panels and also at each of the Power Converter stations and Secondary Project Substations. The presence of the lighting would detract from the experience of the land within the Project Site as 'traditional English countryside'. No key views into and out of the	Constant from start of construction through to completion.	24 months	Fully reversible through decommissioning of the Project.	24 months	Minor	Negative	Minor negative

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
		World Heritage Site would be affected.							
The construction of a surface water attenuation pond.	The park retains a complete, 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.	The surface water attenuation pond is located more than 4 km from the World Heritage Site. The works required for the construction of this feature would be very limited in terms of extent and visibility, and would not detract from the experience of the land within the Project Site as 'traditional English countryside'. No key views into and out of the World Heritage Site would be affected.	Constant from start of construction through to completion.	24 months	Fully reversible through decommissioning of the Project.	24 months	No change	N/A	No impact
The establishment and use of temporary construction	The park retains a complete, 18th century enclosing stone wall which	The locations of the temporary construction compounds have been selected	Constant from start of construction	24 months	Fully reversible through decommission	24 months	Minor	Negative	Minor negative

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
compounds and temporary satellite construction compounds.	protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.	such that they would be well away from the World Heritage Site. Temporary satellite construction compounds would be short-lived as the construction progresses across the Project Site. The presence of the temporary compounds would detract from the experience of the land within the Project Site as 'traditional English countryside'. No key views into and out of the World Heritage Site would be affected.	through to completion.		ing of the Project.				
The establishment of new planting for	The park retains a complete, 18th century enclosing stone	The construction period would see the gradual establishment of	Constant from start of construction	24 months	Fully reversible through decommission	24 months	No change	N/A	No impact

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
landscape mitigation.	wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.	new planting for landscape mitigation within the Project Site, including new hedgerows and woodland. The presence of the new planting would not detract from the experience of the land within the Project Site as 'traditional English countryside'. No key views into and out of the World Heritage Site would be affected.	through to completion.		ing of the Project.				
The operation and maintenance of solar PV panels with a maximum height of 2.3 m.	The park retains a complete, 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between	The operation and maintenance period would see the visible change of the use of much of the land within the Project Site from agriculture to solar PV panels. This would detract	Constant throughout operation and maintenance.	37.5 years	Fully reversible through decommissioning of the Project.	37.5 years	Minor	Negative	Minor negative

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
	Blenheim and the traditional English countryside and villages surrounding it.	from the experience of the land within the Project Site as 'traditional English countryside'. The impact would decrease over time as the new planting designed to screen and break up the areas of solar PV panels reaches maturity. No key views into and out of the World Heritage Site would be affected.							
The operation and maintenance of Power Converter Stations with a maximum height of 3.5 m, maximum length of 14 m and maximum width of 2.9 m.	The park retains a complete, 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and	The operation and maintenance period would require Power Converter Stations within the areas of solar PV panels across much of the land within the Project Site. This would detract from the experience of the	Constant throughout operation and maintenance.	37.5 years	Fully reversible through decommissioning of the Project.	37.5 years	Minor	Negative	Minor negative

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
	the traditional English countryside and villages surrounding it.	land within the Project Site as 'traditional English countryside'. The impact would decrease over time as the new planting designed to screen and break up the areas of solar PV panels reaches maturity. The colour of the Power Converter Stations would be important and would form part of the detailed design to be agreed with relevant planning authorities. No key views into and out of the World Heritage Site would be affected.							
The operation and maintenance of Secondary Project Substations with	The park retains a complete, 18th century enclosing stone wall which	The operation and maintenance period would require two Secondary	Constant throughout operation and maintenance.	37.5 years	Fully reversible through decommission	37.5 years	Minor	Negative	Minor negative

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
a maximum height of 6 m (including isolator), maximum length of 18 m and maximum width of 10 m.	protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.	Project Substations within the Northern Site Area and three Secondary Project Substations within the Central Site Area. The locations of these substations have been carefully selected such that all are at a considerable distance from the World Heritage Site. The impact would decrease over time as the new planting designed to screen the substations reaches maturity. However, they would detract from the experience of the land within the Project Site as 'traditional English countryside'. No			ing of the Project.				

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
		key views into and out of the World Heritage Site would be affected.							
The operation and maintenance of security fencing with a maximum height of 2.1 m.	The park retains a complete, 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.	The operation and maintenance period would require security fencing around the areas of solar PV panels within the Project Site. Although the fencing is wide mesh and therefore does not screen any views, the presence of the fencing would detract from the experience of the land within the Project Site as 'traditional English countryside'. The impact would decrease over time as the new planting designed to screen the fencing reaches	Constant throughout operation and maintenance.	37.5 years	Fully reversible through decommissioning of the Project.	37.5 years	Minor	Negative	Minor negative

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
		maturity. No key views into and out of the World Heritage Site would be affected.							
The operation and maintenance of Closed Circuit Television (CCTV) cameras on support poles maximum 4m high.	The park retains a complete, 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.	The operation and maintenance period would require CCTV cameras within the Project Site. The presence of the CCTV cameras would detract from the experience of the land within the Project Site as 'traditional English countryside'. The impact would decrease over time as the new planting designed to screen the perimeter security fencing reaches maturity. No key views into and out of the World Heritage	Constant throughout operation and maintenance.	37.5 years	Fully reversible through decommissioning of the Project.	37.5 years	Minor	Negative	Minor negative

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
		Site would be affected.							
The operation and maintenance of manually operated lighting and motion sensor activated lighting.	The park retains a complete, 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.	The operation and maintenance period would require manually operated lighting and motion sensor activated lighting at each area of solar PV panels and also at each of the Power Converter stations and Secondary Project Substations. The presence of the lighting would detract from the experience of the land within the Project Site as 'traditional English countryside'. No key views into and out of the World Heritage Site would be affected.	Constant throughout operation and maintenance.	37.5 years	Fully reversible through decommissioning of the Project.	37.5 years	Minor	Negative	Minor negative
The operation and maintenance	The park retains a complete,	The surface water attenuation	Constant throughout	37.5 years	Fully reversible	37.5 years	No change	N/A	No impact

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
of a surface water attenuation pond.	18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.	pond is located more than 4 km from the World Heritage Site. The operation and maintenance of this feature would not detract from the experience of the land within the Project Site as 'traditional English countryside'. No key views into and out of the World Heritage Site would be affected.	operation and maintenance.		through decommissioning of the Project.				
The maintenance of new planting for landscape mitigation.	The park retains a complete, 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional	The new planting for landscape mitigation within the Project Site includes new hedgerows and woodland. The presence of the new planting would not detract from the experience of the land within the Project Site as	Constant throughout operation and maintenance.	37.5 years	Fully reversible through decommissioning of the Project, although the planting is unlikely to be removed due to its ecological value.	37.5 years	No change	N/A	No impact

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
	English countryside and villages surrounding it.	'traditional English countryside'. No key views into and out of the World Heritage Site would be affected.							
The decommissioning of the Project.	The park retains a complete, 18th century enclosing stone wall which protects its integrity, but views into and out of the site still provide key linkages between Blenheim and the traditional English countryside and villages surrounding it.	The decommissioning of the Project is likely to have some limited negative impacts in terms of noise, but would mostly be positive in gradually restoring the land to agricultural use and therefore enhancing the experience of the land as 'traditional English countryside'. Negative impacts would be minimised through the implementation of measures set out in a	Constant	24 months	Fully reversible	24 months	Minor	Positive	Minor positive

Element of Project	Attribute	Description of Potential Impact	Frequency of action	Duration of action	Reversibility of change to the attribute	Longevity of change to the attribute	Degree of change to the attribute	Quality of change to the attribute	Evaluation of Impact
		Decommissioning Plan							

1.5 Benefits of the Project

Introduction

1.5.1 This section of the assessment provides information regarding the benefits of the Project insofar as they are directly related to the Blenheim Palace WHS. A discussion of the wider public benefits associated with the Project is set out in the Planning Supporting Statement [**EN010147/APP/7.1**].

Climate change

1.5.2 Chapter 5: Alternatives Considered of the ES [**EN010147/APP/6.3**] sets out the current UK Government's position on the need for renewable energy, including ground-mounted solar PV installations, as part of efforts required to minimise the effects of climate change.

1.5.3 As would be expected, the Blenheim Palace WHS is not immune to the effects of climate change and indeed this is explicitly referenced in the Integrity section of the SOUV which was prepared a decade ago '*The Park contains important veteran trees. Disease and time have caused some loss of original tree specimens but these have been replanted with the same species where possible and appropriate. Because of climate change and the greater incidence of drought, adjustments have to be made to the mix of species used in conserving the park landscape*'. Hence climate change is acknowledged as a factor causing change within the WHS. As part of their efforts to combat climate change, Blenheim made a five-year pledge in 2017 to become a net generator of green energy, to be achieved through the reduction of energy usage and a focus on renewable energy projects.

1.5.4 The Blenheim Estate has identified the following impacts of climate change on the built heritage aspects of the World Heritage property:

- Increased rainfall – the current rainwater goods have insufficient capacity to deal with high intensity rainfall events. This leads to flooding of roof spaces and lower levels, and damage to chattels. It is not possible to expand the capacity of the rainwater goods as they are largely placed within the walls of the buildings, hence the designs for the new roof on the main part of the Palace (work commencing early 2025) include on-roof rainwater storage
- Overheating – in summer months some of the State Rooms heat up to the point where they become unusable without major intervention to provide shading, and this can also lead to damage of chattels.
- Increased humidity – this can impact chattels but also affects the painted walls and ceilings.
- Temperature fluctuations and increase extreme climate events (storms, high winds) – these are causing extensive damage to external stonework.

1.5.5 Impacts of climate change within the designed landscape of the World Heritage property include:

- Weather extremes – these cause destabilisation of trees which can result in uprooting and sudden limb drop as the trees are unable to adapt.
- Flooding – areas within the designed landscape that have not historically flooded are now regularly inundated in the winter months. This causes issues with land maintenance, soil structure and soil erosion, and vegetation growth.
- Disease and pests – these are particularly an issue with regard to trees, many of which are susceptible to changes in temperature. Additional stress results in the speeding-up of diseases such as Acute Oak Decline, whilst warmer, wetter winters result in increases in pest invasions which are also longer in duration.
- Habitat alterations – this can result in reduced biodiversity and an increased vulnerability of certain animal and plant species.
- Rising temperatures – this results in the replacement of trees using more reliant species that were not part of the original designed planting.

1.5.6 The landscape which forms the wider setting of the Blenheim Palace WHS is similarly subject to pressures that result in part from climate change. These include modifications to farming practices and the establishment of new (or revived) uses of the land. One example of that is the recent planting of trees on around 150 hectares of low-grade arable fields along the Dorn and Glyme river valleys on the Blenheim Estate. A total of 270,000 trees have been planted to create nine new publicly accessible woodlands, again part of Blenheim's commitment to sustainable change. This renewed woodland planting represents a visual change within the setting of the WHS, albeit a fairly benign one in that the landscape was more wooded in the past and that when fully grown these new plantations will not look out of place here.

1.5.7 A climate change emergency has been declared by all three local authorities within which the Project Site is located, thus recognizing the problem at a local level.

1.5.8 Nationally, Historic England issued their document Heritage and Climate Change: A strategy for Historic England's response to the climate, energy and biodiversity crisis in 2022 (Historic England 2022). This document identified that '*Our climate is already changing. Projections can be used to estimate where and when hazards driven by climate change will threaten vulnerable heritage. We need to prepare to experience some loss of heritage*' (page 4). It goes on to say that by 2040 '*Historic buildings, places and landscapes will have led the way to our low-carbon future*' (page 5), also '*Removing carbon emissions and sustaining our heritage are compatible goals*' (page 6). One of the recorded action points states '*By 2025, we and others will develop a toolkit that equips those who care for our heritage to plan for and manage decisions where some loss of, or transformative change to, heritage assets is unavoidable*' (page 8).

1.5.9 This issue of 'transformative change' is also identified within the 2023 updating of the UNESCO Policy Document on climate action for World Heritage as referenced above in paragraph 1.3.4. This document identifies that '*Climate change has become one of the most significant threats to World Heritage, impacting the Outstanding Universal Value, including integrity and authenticity, of many properties, as well as the economic and social development and quality of life of communities connected with World Heritage Properties*' (page 3).

1.5.10 Transformative change is defined thus within the 2023 UNESCO document: '*In the context of the World Heritage Convention, transformative change would be exemplified by decisions that contribute towards making World Heritage properties carbon neutral, as much as possible, while safeguarding their Outstanding Universal Value. By acting as exemplars of climate action, World Heritage properties may serve as catalysts for change in the wider policy, economic, environment and social sectors for the benefit of present and future generations. World Heritage properties can embrace transformative change to become demonstration cases of the change the world needs*' (page 4). The document goes on to state '*For World Heritage stakeholders, it is therefore fundamental to increase the awareness of the connectivity of climate change and interactions between decision makers, communities, and natural and cultural heritage to support transformative change*' (page 5).

1.5.11 The document also refers to the World Heritage Committee's recognition that '*the growing evidence of climate change impacts across World Heritage properties confirm that urgent and rapid action to reduce global warming and adapt to climate change's impact is essential*' (page 5). This is addressed further in a section regarding transformative changes that states '*This transformative change section of the Policy Document highlights and synthesises the elements associated with the urgency and scale of action required by the World Heritage Convention to support bold decisions to transition to a carbon neutral and resilient world that can sustain World Heritage properties for future generations*' (page 16).

1.5.12 The Project represents a transformative change for the Blenheim Palace World Heritage property in making land available for a scheme that represents a measurable response to climate change at a regional and national level whilst safeguarding the OUV of the World Heritage Site. The Project has been carefully designed to the extent that it would not be visible in either of the two identified important views out of the World Heritage which provide key linkages between Blenheim and the traditional English countryside and villages surrounding it. As set out in this Heritage Impact Assessment, the only impact would relate to the change in the vision and experience of the 'traditional English countryside' in those parts of the Project Site where development is proposed.

Land use

1.5.13 Reference is made above to modifications in farming practices as a result of climate change. There are numerous other factors which could lead to modifications in farming practices. One of these is declining soil quality.

1.5.14 As described above, most of the land within the Northern and Central parts of the Project Site are in arable use, with very little pasture. The Project would result in the cessation of the arable use of land within the Project Site. Conservation grazing would be undertaken in land where solar PV panels are proposed, with other areas managed for ecological value.

1.5.15 This cessation of arable farming provides an opportunity for the soil structure and soil quality to improve over time through increases in the accumulation of organic matter and soil carbon, increases in biological activity and the associated soil structural development.

1.5.16 Consequently, the hiatus in arable use of the land means that there is a greater chance that such use can be resumed following decommissioning. In other words, the presence of the Project for a period of up to 42 years provides greater certainty for the longer term survival of the '*traditional English countryside*' which forms the setting of the Blenheim Palace WHS. Although 42 years is a considerable part of a person's lifetime and therefore the Project represents a long-term change, the impacts are fully reversible. This farming landscape has represented the setting of the WHS for more than 300 years and should continue to do so for many more years after the decommissioning of the Project.

Maintenance of the World Heritage property

1.5.17 The Blenheim Palace WHS is very unusual amongst World Heritage Sites in that it is wholly privately owned. As such it does not benefit from any form of public sector funding. Full implementation of the strategy set out in the 2017 Management Plan will be completed by 2026 at a cost of at least £40 million pounds, all of which has to be generated by The Blenheim Estate.

1.5.18 Part of the Blenheim-owned land which would be utilised for the Project is owned by a Maintenance Fund whose purpose is the upkeep and maintenance of the World Heritage property. A significant part of the revenues from the Project would therefore flow as regular long-term income to the Maintenance Fund, giving it a significantly enhanced revenue over and above the current low grade agricultural uses. Consequently, benefits would accrue to the World Heritage property by way of increased revenues to help address the current heritage funding deficit when compared against the targets within the WHS Management Plan. This very positive impact should be taken into account when assessing the proposed Project.

1.6 Summary

1.6.1 A Heritage Impact Assessment has been undertaken with regard to the proposed Botley West Solar Farm, elements of which are located within the setting of the Blenheim Palace WHS. The Heritage Impact Assessment has been prepared in accordance with the relevant guidance documents, and has had regard to the Blenheim Palace WHS Management Plan Review 2017.

1.6.2 No part of the proposed Botley West Solar Farm is located within the Blenheim Palace WHS. Careful design has also ensured that no part of the proposed Botley West Solar Farm would be visible from any location within the WHS,

including the 'significant views' identified within the WHS Management Plan Review 2017.

1.6.3 The Heritage Impact Assessment has found that the construction, operation and maintenance, and decommissioning of the proposed Botley West Solar Farm would result in a minor negative impact on one of the defined attributes which contribute towards the Outstanding Universal Value of the WHS. This impact arises from the visual change within the '*traditional English countryside*' which forms the setting of the Blenheim Palace WHS. This change is time-limited and fully reversible, and in terms of Government policy the change is regarded as temporary.

1.6.4 This time-limited and fully reversible impact should be considered alongside the benefits of the Botley West Solar Farm. These include direct benefits to the Blenheim Palace WHS in terms of long-term revenue for the maintenance of the World Heritage property and also the enhancement of soil quality, along with the wider benefits that would accrue from the considerable contribution that the proposed development would make to the UK's strategy to minimise the effects of climate change.

1.7 References

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