Botley West Solar Farm

Environmental Statement

Volume 1

Chapter 15: Socio Economics

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Glossary

Term	Meaning
Applicant	SolarFive Ltd. (SolarFive)
Construction Traffic Management Plan (CTMP)	A plan managing all construction traffic, including protocols for delivery of Abnormal Indivisible Loads to site, personnel travel, measures for road cleaning and sustainable site travel measures.
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for one or more Nationally Significant Infrastructure Project (NSIP).
Effect	Best practice guidance defines effect as the change resulting from an impact (which is defined as 'the action being taken') (e.g. the effect erecting a building/structure of removing a tree on seascape/landscape character or views/visual amenity). (GLVIA3, pages 8-9).
Environmental Impact Assessment	A statutory process by which certain planned Projects must be assessed before a formal decision to proceed can be made. It involves the collection and consideration of environmental information, which fulfils the assessment requirements of the EIA Directive and EIA Regulations, including the publication of an Environmental Statement.

Term	Meaning
EIA Scoping Report	A report setting out the proposed scope of the EIA process. The Transmission Assets Scoping Report was submitted to The Planning Inspectorate (on behalf of the Secretary of State) for the Morgan and Morecambe Offshore Windfarms Transmission Assets in October 2022.
Environmental Statement	The document presenting the results of the Environmental Impact Assessment (EIA) process.
Photomontage	A visualisation which superimposes an image of a Project upon a photograph or series of photographs of the existing landscape.
The Project	The Botley West Solar Farm
The Site or Order Limits	The area of land encompassing the Project development and shown on the Site Location and Order Limits plan (Volume 2, Figure 1.1 of the ES **[EN010147/APP/6.4]**).
Study Area	This is an area which is defined for each environmental topic which includes the Order Limits as well as potential spatial and temporal considerations of the impacts on relevant receptors. The study area for each topic is intended to cover the area within which an impact can be reasonably expected.

Abbreviations

Abbreviation	Meaning
ASHE	Annual Survey of Hours and Earnings
BEIS	Department for Business, Energy & Industrial Strategy
EIA	Environmental Impact Assessment
ES	Environmental Statement
FTE	Full Time Equivalent
GVA	Gross Value Added
HCA	Homes & Communities Agency
IEMA	Institute of Environmental Management and Assessment
IRENA	International Renewable Energy Agency
NPPF	The National Planning Policy Framework
NPPG	National Planning Practice Guidance
NPSs	National Policy Statements
MWe	Megawatts Electrical
OCC	Oxfordshire County Council
OxLEP	Oxfordshire Local Enterprise Partnership
ONS	Office for National Statistics
PEIR	Preliminary Environmental Information Report

Abbreviation	Meaning
PINS	Planning Inspectorate
PVDP	PhotoVolt Development Partners GmbH

Units

Unit	Description
%	Percentage
£	British Sterling Pound
ha	Hectares

15 SOCIO ECONOMICS

15.1 Introduction

Overview

15.1.1 This chapter of the Environmental Statement (ES) has been prepared by RPS for Photovolt Development Partners GmbH (PVDP) on behalf of SolarFive Ltd (the 'Applicant'). The Applicant is a licence holder under the Electricity Act 1989.

15.1.2 PVDP intends to submit an application for development consent to the Planning Inspectorate (PINS) on behalf of SolarFive Ltd 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). This would utilise an area of approximately 1,400 ha and deliver approximately 1,350 MWp of power to the National Grid. The application will be accompanied by an ES prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, as amended (the 'EIA Regulations'), and other required documents including a statement on pre-application consultation.

15.1.3 This ES refines the findings of the Preliminary Environmental Impact Report (PEIR) on the basis of newly available information with regards to the Project.

15.1.4 The assessment presented is informed by the following technical chapters in Volume 1:

- Chapter 7: Historic Environment [EN010147/APP/6.3];
- Chapter 8: Landscape and Visual Impact Assessment [EN010147/APP/6.3];
- Chapter 12: Traffic and Transport [EN010147/APP/6.3];
- Chapter 13: Noise & Vibration [EN010147/APP/6.3];
- Chapter 16: Human Health [EN010147/APP/6.3]; and
- Chapter 17: Agricultural Land Use and Public Rights of Way [EN010147/APP/6.3]

15.1.5 This Chapter also draws upon information contained within the socio-economic baseline report (Volume 3, Appendix 15.1) **[EN010147/APP/6.5]** and the Outline Skills, Supply Chain & Employment Plan (Volume 3, Appendix 15.2) **[EN010147/APP/6.5]**.

15.1.6 Comments on the PEIR, following consultation, have been reviewed and taken into account, where appropriate, in preparation of this ES, to accompany the application to the Planning Inspectorate for development consent.

15.2 Legislative and policy context

Legislation

15.2.1 Section 1 of The Equality Act 2010 places a duty on public bodies to consider the socio-economic effects of development, requiring them to adopt transparent and effective measures to address the inequalities that result from differences in occupation, education, place of residence or social class. The Act states that *'An authority to which this section applies must, when making decisions of a strategic nature about how to exercise its functions, have due regard to the desirability of exercising them in a way that is designed to reduce the inequalities of outcome which result from socio-economic disadvantage.'*

15.2.2 As Ministers of the Crown are relevant authorities, the Secretary of State in making its decision must have regard for the Equality Act 2010.

15.2.3 Regulation 5(2)(a) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Ref. 1) requires that the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the likely significant direct and indirect effects of the Project on Socioeconomics.

Planning policy context

National Policy Statements

15.2.4 There are currently six energy National Policy Statements (NPSs)**. Table 15.1** sets out a summary of the policies within these NPSs, relevant to socioeconomics.

Table 15.1: Summary of the Designated NPS requirements relevant to this socio-economic chapter

Summary of NPS requirement	How and where considered in the ES
EN1	
Given the vital role of energy to economic prosperity and social well-being, it is important that our supplies of energy remain secure, reliable and affordable.	Energy generation, capacity and consumption is analysed as part of the socio-economic baseline (Appendix 15.1) **[EN010147/APP/6.5]**. During the operational phase of the project, the energy generated would contribute towards ensuring energy remains secure, reliable and affordable.
The Regulations require an assessment of the likely significant effects of the proposed Project on the environment, covering the direct effects and any indirect, secondary, cumulative, transboundary, short, medium, and long-term, permanent and temporary, positive and negative effects at all stages of the Project, and also of the measures envisaged for avoiding or mitigating significant adverse effects (*para 4.2.3*).	This assessment considers the social and economic effects of the development in **section 15.9**. These effects are considered at construction, operation, and decommissioning and discusses the mitigation measures proposed in **section 15.7.**
Set out information on the likely significant environmental, social, and economic effects of the development, and show how any likely significant	This assessment has considered the social and economic effects of the development in **section 15.9**

Summary of NPS requirement	How and where considered in the ES
negative effects would be avoided, reduced, mitigated or compensated for, following the mitigation hierarchy (*para 4.2.4*).	and discusses the mitigation measures proposed in **section 15.7**.
The ES should cover the environmental, social and economic effects arising from pre-construction, construction, operation and decommissioning of the Project (*para 4.2.5*).	This assessment has considered the social and economic effects of the development in **section 15.9**. These effects are considered at construction, operation, and decommissioning.
Where some details are still to be finalised, the ES should, to the best of the applicant's knowledge, assess the likely worst-case environmental, social and economic effects of the Project to ensure that the impacts of the Project as it may be constructed have been properly assessed (*para 4.2.12*).	This assessment is based on the Maximum Design Scenario (see **section 15.6**) which are those having the potential to result in the greatest effect on an identified receptor or receptor group. These scenarios have been selected from the Project Design Envelope provided in Volume 1, Chapter 6: Project description of the ES **[EN010147/APP/6.3].** Effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within the Project Design Envelope (e.g., different infrastructure layout), to that assessed here be taken forward in the final design scheme.
Where the Project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts as part of the ES (*para 5.13.2*).	As part of the baseline assessment (Appendix 15.1) **[EN010147/APP/6.5]**, the local socioeconomic profile of the area has been considered and compared to regional and national indicators. This assessment has reviewed the socioeconomic impacts of the Project in **section 15.9**.
The applicant is strongly encouraged to engage with relevant local authorities during early stages of Project development so that the applicant can gain a better understanding of local or regional issues and opportunities (*para 5.13.3*)	Consultation and engagement carried out as part of this assessment is discussed in **section 15.3**. Engagement with relevant councils has been carried out to understand the local economic context and employment landscape.
Assessment should consider all relevant socio-economic impacts, which may include: • the creation of jobs and training opportunities • the provision of additional local services and improvements to local infrastructure • indirect beneficial impacts for the region hosting the infrastructure • effects on tourism • the impact of a changing influx of workers during the different construction, operation, and decommissioning phases • cumulative effects (*para 5.13.4*).	The Outline Skills, Supply Chain and Employment Plan (Appendix 15.2) **[EN010147/APP/6.5]** provides information on the creation of jobs and training opportunities and the sustainability of the supply chain, including where jobs will help to develop the skills needed for the UK's transition to Net Zero at the local and regional level as well as nationally. It discusses the provision of educational and visitor facilities and reviews the use of local support services and supply chains. The baseline assessment (Appendix 15.1) **[EN010147/APP/6.5]** has assessed the existing socio-economic baseline of the Study Area and allows this assessment to review the effect of any changes to the local population dynamics. The assessment has considered cumulative development in **section 15.10**.
Describe the existing socio-economic conditions in the areas surrounding the Project and should also refer to how the development's socio-economic	Any assessment of socioeconomic impacts must be set in the context of the local economy. The assessment has considered the socioeconomic impacts within the context of the strategic priorities

Summary of NPS requirement	How and where considered in the ES
impacts correlate with local planning policies (para *5.13.5*).	set out by local and national planning policies. Local planning policy considerations are set out in **Table 15.4.**
Socio-economic impacts may be linked to other impacts, for example visual impacts considered in **section 15.10** but may also have an impact on tourism and local businesses. Applicants are encouraged, where possible, to demonstrate that local suppliers have been considered in any supply chain. (*para 5.13.6*)	This chapter also considers the conclusions of other technical chapters such as Volume 1 Chapter 8 Landscape and Visual Impact Assessment **[EN010147/APP/6.3]** and Volume 1 Chapter 13 Noise and Vibration, in relation to the assessment of tourism impacts **[EN010147/APP/6.3]**. The supply chain and use of local suppliers is discussed in the Outline Skills, Supply Chain and Employment Plan (Appendix 15.2) **[EN010147/APP/6.5]**.
Applicants should consider developing accommodation strategies where appropriate, especially during construction and decommissioning phases, that would include the need to provide temporary accommodation for construction workers if required (*para 5.13.7*).	The need for temporary workers accommodation is discussed as part of the cumulative impact assessment in **section 15.10.**
EN3	
Applicants should consider where there may be socio-economic benefits in retaining site infrastructure after the operational life, such as retaining pathways through the site or a site substation.	The applicant's commitment to make retained and new routes through the arrays appealing to people to encourage their use by providing: information boards (with details of new routes); benches and resting places; wildflowers and hedgerows (for visual screening); children's fun trails and education boards (e.g. on wildlife, heritage and solar energy) is discussed as part of the mitigation in **Table 15.25**.

The National Planning Policy Framework

15.2.5 The National Planning Policy Framework (NPPF) was published in 2012 and updated in 2018, 2019,2021 and 2023 (Department for Levelling Up, Housing and Communities, 2023). The NPPF sets out the Government's planning policies for England. **Table 15.2** sets out a summary of the NPPF policies relevant to this chapter.

Table 15.2: Summary of NPPF requirements relevant to this chapter

Policy	Key provisions	How and where considered in the ES
Paragraph 9	States that in guiding developments towards sustainable development, local circumstances should be considered, to reflect the character, needs and opportunities of each area.	A desktop baseline assessment (Appendix 15.1) **[EN010147/APP/6.5]** has been carried out to understand the socio-economic profile of the Study Area. This ensures that the socio-economic impact of the Project can be considered against the local needs and opportunities of the Study Area.

15.2.6 **Table 15.3** sets out a summary of the National Planning Practice Guidance (NPPG) policies relevant to this chapter.

National Planning Practice Guidance (NPPG)

Table 15.3: Summary of NPPG requirements relevant to this chapter

Document	Key provisions	How and where considered in the ES
Natural Environment	Green infrastructure can improve the wellbeing of a neighbourhood with opportunities for recreation, exercise, social interaction, experiencing and caring for nature, community food-growing and gardening, all of which can bring mental and physical health benefits.	The mitigation measure of providing new routes through the arrays appealing to people to encourage their use by providing: information boards (with details of new routes); benches and resting places; wildflowers and hedgerows (for visual screening); children's fun trails and education boards (e.g. on wildlife, heritage and solar energy) and community agriculture are discussed in **Table 15.12.**

Local planning policy

15.2.7 The relevant local planning policies applicable to socioeconomics based on the extent of the Study Areas for this assessment are summarised in **Table 15.4**.

Table 15.4: Summary of local planning policy relevant to this chapter

Policy	Key provisions	How and where considered in the ES
West Oxfordshire Local Plan		
Objective CO1	Seeks to enable new development, services and facilities of an appropriate scale and type in locations which will help improve the quality of life of local communities.	The baseline assessment has (Appendix 15.1) **[EN010147/APP/6.5]** considered the existing baseline social and economic conditions in the local area and **section 15.9** assesses how the Project will affect quality of life for these local communities.
Objective C07	Supports sustainable economic growth which adds value to the local economy, improves the balance between housing and local jobs, provides a diversity of local employment opportunities, capitalises on economic growth in adjoining areas, improves local skills and work readiness.	**Section 15.9** has assessed the economic effect of the Project in terms of employment opportunities, skills, and economic output.
Vale of Whitehorse Local Plan		
Core Policy 1	Building a resilient, responsive, and competitive economy.	**Section 15.9** has assessed the economic effect of the Project in terms of employment opportunities, skills, and economic output.
Strategic Objective 5	Support a strong and sustainable economy within the district, including the visitor economy.	**Section 15.9** has assessed the economic effect of the Project in terms of employment opportunities, skills, and economic output. It will also assess the impact of the Project on the visitor economy.

Policy	Key provisions	How and where considered in the ES
Cherwell Local Plan		
Strategic Objective 1	To facilitate economic growth and employment and a more diverse local economy.	**Section 15.9** has assessed the economic effect of the Project in terms of employment opportunities, skills, and economic output.
Strategic Objective 3	To help disadvantaged areas, support an increase in skills and innovation.	**Section 15.9** has assessed the effect of the Project in terms of employment opportunities, and skills.
Strategic Objective 5	To encourage sustainable tourism.	**Section 15.9** has assessed the impact of the Project on the visitor economy.
Cassington Neighbourhood Plan		
Policy CAS7: local services and community facilities	The Neighbourhood plan identifies a number of community facilities.	Where these facilities are important for the visitor economy any potential impacts is assessed in **section 15.9**.
Eynsham Neighbourhood Plan		
ENV6	New developments should ensure that Eynsham continues to offer a range of employment opportunities.	The employment effects of the Project are discussed in **section 15.9**.
ENP10	New developments shall support the existing and potential scale of local employment in the Eynsham area.	The employment effects of the Project are discussed in **section 15.9.**
ENP14	The form of any development should have regard to its impact on the village edge as viewed from public paths and bridleways.	As part of the assessment of impact on tourism receptors in **section 15.9,** views from road, rail, Public Rights of Way (PRoW) and cycle tracks are considered.
Woodstock Neighbourhood Development Plan		
WNDP1	This policy identifies local green spaces that are important to the local area.	Where these facilities are important for the visitor economy any potential impacts have been assessed in **section 15.9**.

15.3 Consultation and engagement

15.3.1 On 15 June 2023, the Applicant submitted a Scoping Report to the Planning Inspectorate, which described the scope and methodology for the technical studies being undertaken to provide an assessment of any likely significant effects for the construction, operation and maintenance and decommissioning phases. It also described those topics or sub-topics which are proposed to be scoped out of the EIA process and provided justification as to why the Project would not have the potential to give rise to significant environmental effects in these areas.

15.3.2 Following consultation with the appropriate statutory bodies, the Planning Inspectorate (on behalf of the Secretary of State) provided a Scoping Opinion on 24th July 2023. Key issues raised during the scoping process specific to socioeconomics are listed in **Table 15.5**, together with details of how these issues have been addressed within the ES.

15.3.3 In November 2022, PVDP & RPS held an initial meeting with Nigel Tipple, Chief Executive of OxLEP, to discuss the Oxfordshire local economy, employment market, and potential suppliers. Mr. N Tipple provided valuable insights on how OxLEP support large developments and recommended collaboration with their specialist skills team, OxLEP Skills, led by Cat Armstrong. This meeting led to subsequent engagements via Microsoft Teams with Ms. Armstrong to further explore how the Proposed Development can help boost Oxfordshire's employment, upskilling and make use of local suppliers. Ms. C Armstrong provided PVDP with a comprehensive overview of the services offered by OxLEP Skills, utilizing various case studies to illustrate their success in organizing job fairs and supplier events, which PVDP intends to replicate.

15.3.4 Additionally, throughout 2023, PVDP & RPS conducted a series of meetings with representatives from Oxfordshire County Council and other relevant District Councils during the initial consultation phase in September 2022, where discussions focused on local skills development and employment. PVDP held three meetings with Robert Courts, MP for Witney, concentrating on the project's economic impact on his constituents and their potential involvement. Furthermore, Ms. C Armstrong facilitated introductions with key contacts, including the Oxfordshire Careers Hub, the Careers and Enterprise Company, and the British Association of Supported Employment.

In early 2024, Ms. C Armstrong introduced PVDP to Sarah Marlowe of the No Limits Programme, James Gilpin from JobCentre, and leaders from the Oxfordshire Construction Training Group and Abingdon and Witney College. These introductions aimed to foster collaboration on local employment and skills development. PVDP also engaged in discussions with Mark Pope of Co-Train regarding Flexi-Job Apprenticeships and the Apprenticeship Levy as a means to support local SMEs and apprenticeships. Further meetings were held with Steven Newman, Economic Development Officer at Cherwell District Council, Elaine North from OCC, and Nikki Wakefield from Oxfordshire Careers Hub to enhance local employment initiatives. These discussions have informed the Outline Skills, Supply Chain and Employment Plan (Appendix 15.2) **[EN010147/APP/6.5]** in order to maximise the local benefits of the construction and operational employment creation.

Table 15.5: Summary of scoping responses

Comment	How and where considered in the ES
Planning Inspectorate	
The Planning Inspectorate agrees to scoping out the impacts on temporary workers accommodation during construction and decommissioning on the basis that the ES confirms the number of construction workers both alone and cumulatively with other development would not be likely to result in significant effects in this regard.	The baseline assessment at Appendix 15.1 **[EN010147/APP/6.5]** considers the availability of temporary accommodation in the vicinity of the Site. Furthermore**,** the need for temporary workers accommodation is discussed as part of the cumulative impact assessment in **section 15.10.** The baseline assessment has identified that bedspace occupancy in the South East in 2022 (last year with complete data) was never above 60% in any month of the year. Therefore, given that approximately 45% of the workforce would likely be living within a 60-minute drive time of the Site and therefore be homebased (i.e., would live sufficiently close-by to return home in the evenings rather than needing overnight

Comment	How and where considered in the ES
	accommodation) it is considered that there would be no significant impact on local accommodation facilities. Any increased demand during construction may be offset by a reduction in tourist visitors during this period as discussed in **section 15.9**.
The Planning Inspectorate agrees that the impacts to recreational activities during all phases is scoped into the human health chapter and therefore does not need to be scoped into the socio-economics chapter.	This is, therefore, scoped out of the socioeconomic assessment.
The Planning Inspectorate considers the impact to land use as not limited to one phase of the development and should be assessed holistically across all phases.	The impacts of reduced agricultural output and the loss of related jobs will be considered at construction, operation, and decommissioning stages in **section 15.9** of this report. In addition, the tourism impacts associated with a change in visual receptors on adjacent PROW networks is also considered in **section 15.9**.
The Planning Inspectorate does not agree to scope out impacts to tourism during the construction and decommissioning stages on the premise that impacts such as noise, traffic etc. has potential to impact nearby receptors e.g., Blenheim Palace. The ES should assess effects to tourist receptors where an impact pathway exists for potential significant effects.	The potential impact to tourism is assessed across construction, operation, and decommissioning stages in **section 15.9** of this report.
The Planning Inspectorate agrees that the impacts to health and social care during construction and decommissioning phases is scoped into the human health chapter and therefore does not need to be scoped into the socio-economics chapter.	This is, therefore, scoped out of the socioeconomic assessment.
The Planning Inspectorate agrees that the impacts to open space/Public Rights of Way (PRoWs) during all phases is scoped into the human health chapter and therefore does not need to be scoped into the socio-economics chapter.	This is, therefore, scoped out of the socioeconomic assessment. The ES does, however, consider the impact of the Project on PRoWs as part of the assessment on the impacts on the visitor economy in paragraph 15.9.6.
The Planning Inspectorate agrees that significant effects are not likely in relation to crime and safety.	This is, therefore, scoped out of the socioeconomic assessment.
The Planning Inspectorate broadly agrees that the Project would have a minimal effect on housing value and affordability during operation but states that the ES should explain why.	As part of the literature review in **Table 15.9** existing studies which evaluate the relationship between solar farms and property prices in a UK context have been reviewed. The most recent UK study was carried out in 2021 and found no clear evidence of an effect on residential property values from solar Projects in the UK.
The Planning Inspectorate agrees that the impacts to transport and commuting patterns during operation is scoped into the transport chapter and therefore does not need to be scoped into the socio-economics chapter.	The chapter considers the impact on commuting patterns during construction and decommissioning in **section 15.9.**

Comment	How and where considered in the ES
Bladon Parish Council	
Should a parameter be scoped out, then a detailed justification should be given as to the rationale behind the decision.	Detailed reasoning for all matters scoped out of the socio-economic assessment are given in **Table 15.7**.
The ES should include the assessment of impacts on Land Use and Tourism at all stages.	The potential impact to tourism and land use will be assessed across construction, operation, and decommissioning stages in **section 15.9** of this report.
The ES should assess the impact on Housing at all stages of the Project.	Detailed reasoning is provided for scoping out the impact on housing values in **Table 15.7**. It is noted that the Planning Inspectorate broadly agrees with this approach.
Cassington Parish Council	
The Cassington Local Neighbourhood Plan is not included within the documents related to the socioeconomic assessment.	The Cassington Neighbourhood Plan has been reviewed and is included in the policy review in **Table 15.4.**
Assessment of impact of need for temporary accommodation for construction workers necessary because roads severely congested.	Detailed reasoning is provided for scoping this out of the ES in **Table 15.7**. The Planning Inspectorate agreed to scope this matter out on the basis that the ES confirms the number of construction workers both alone and cumulatively with other development would not be likely to result in significant effects in this regard. This is assessed as part of the cumulative effects at **Section 15.10.**
An assessment of the socioeconomic impacts of the Project on recreational activities and land use to be essential.	The Planning Inspectorate agrees with the approach set out in **Table 15.7** that this will be covered in Volume 1 Chapter 16: Human Health of the ES **[EN010147/APP/6.3]** and, therefore, does not require further reporting as part of this assessment.
An increasing number of studies show impacts of solar farms on house values.	It is noted that the Planning Inspectorate broadly agrees with the approach of scoping this effect out of the socio-economic assessment considering the nature of the Project during operation and the fact that any impact will be less than significant. As part of the literature review in **Table 15.9** existing studies which evaluate the relationship between solar farms and property prices in a UK context have been reviewed. The most recent UK study was carried out in 2021 and found no clear evidence of an effect on residential property values from solar Projects in the UK. It is also noted that according to Department for Business, Energy & Industrial Strategy (BEIS) Public Attitudes Tracker the attitudes to renewable energy are becoming increasingly more positive and thus it would be reasonable to assume that any perceived impacts on housing values as a result of such schemes would also follow the same trajectory.
Scoping out crime is inappropriate.	Detailed reasoning is provided for scoping this out of the ES in **Table 15.7**. The Planning Inspectorate agrees that significant effects are not likely in relation to crime and safety.
Cumnor Parish Council	
Parish contains a number of businesses operating in the leisure/tourism industries, Council would wish the impacts on these sectors to be in scope for construction, operation and decommissioning.	The potential impact to tourism has been assessed across construction, operation, and decommissioning stages in **section 15.9** of this report.

Comment	How and where considered in the ES
Council wishes that 'crime and safety' be scoped in given the known prevalence of theft from solar power stations.	Detailed reasoning is provided for scoping this out of the ES in **Table 15.7**. The Planning Inspectorate agrees that significant effects are not likely in relation to crime and safety.
Hanborough Parish Council	
Essential that a proper assessment of the environmental impact of the number of workers over at least a two-year period should be made.	Assessment of the impact of construction employment is provided in **section 15.9**. In terms of the impact on accommodation providers; detailed reasoning is provided for scoping this out of the ES in **Table 15.7**. The Planning Inspectorate agrees to scope this matter out on the basis that the ES confirms the number of construction workers both alone and cumulatively with other development would not be likely to result in significant effects in this regard. This is assessed as part of the cumulative effects at **Section 15.10.**
The risk and adverse impact of crime should be considered.	Detailed reasoning is provided for scoping this out of the ES in **Table 15.7**. The Planning Inspectorate agrees that significant effects are not likely in relation to crime and safety.
Vale of Whitehorse District Council	
Impact on leisure business should be assessed at construction and decommissioning stages.	The potential impact to tourism has been assessed across construction, operation, and decommissioning stages in **section 15.9** of this report.
West Oxfordshire District Council	
Additional local policy should be considered.	Theses local policy documents are reviewed in **Table 15.4.**
Additional source of baseline information to be added.	This has been reviewed and is included in our data sources in **Table 15.9**.
Assessment of temporary workers accommodation should be considered cumulatively.	The Planning Inspectorate agrees to scope this matter out on the basis that the ES confirms the number of construction workers both alone and cumulatively with other development would not be likely to result in significant effects. This is assessed in **section 15.10** which looks at cumulative impacts.
The potential for increased crime should perhaps be considered at the EIA stage.	Detailed reasoning is provided for scoping this out of the ES in **Table 15.7**. The Planning Inspectorate agrees that significant effects are not likely in relation to crime and safety.
Woodstock Town Council	
Should a parameter be scoped out, then a detailed justification should be given as to the rationale behind the decision.	Detailed reasoning for all matters scoped out of the socio-economic assessment are given in **Table 15.7**.
The ES should include the assessment of impacts on Land Use and Tourism at all stages.	The potential impact to tourism and land use has been assessed across construction, operation, and decommissioning stages in **section 15.9** of this report.

Comment	How and where considered in the ES
The ES should clarify the expected number of workers at each phase of the buildout and should explain how they have assessed that the spending habits of workers will be comparable to the spending habitats of tourists that visit the area.	Detailed consideration of construction worker numbers is provided in **section 15.9** as is the impact of the Project on the visitor economy.
Woodstock Town Council request that Tourism in not scoped out of the ES. Any assessment should encompass views from road, rail and the top of a double decker bus; loss of wider views of the countryside from PROW and cycle tracks because of boundary fences and features the will be in place around these tourist attracting routes; impact on picnic sites and leisure areas; and the effect on the attractiveness on use of all sorts of holiday accommodation when surrounded by construction traffic and later by fields of panels.	The potential impact to tourism has been assessed across construction, operation, and decommissioning stages in **section 15.9** of this report. For the purposes of the ES, photomontages from 55no. Representative Viewpoints have been produced. These are presented following their corresponding Representative Viewpoint photograph(s) at Figures 8.128 to 8.243 of Volume 1 Chapter 8: Landscape & Visual Impact Assessment of the ES **[EN010147/APP/6.3].**
Without including Housing in the ES, how is it possible to know that there is no widespread or significant impact on housing? The ES should assess the impact on Housing at all stages of the Project.	Any potential impact on housing values has been assessed as part of the literature review in **Table 15.9**. The most recent UK study was carried out in 2021 and found no clear evidence of an effect on residential property values from solar Projects in the UK. **Table 15.7.**

15.4 Assessment Methodology

Relevant guidance

15.4.1 There is no specific guidance available which establishes a methodology for undertaking an Environmental Impact Assessment (EIA) of the socio-economic effects of a Project. Accordingly, the approach adopted for this assessment is based on professional experience and best practice, and in consideration of the policy requirements/tests set out within the National Planning Policy Framework (NPPF) National Planning Statement's (NPS), Draft NPS and local planning policy.

Scope of the assessment

15.4.2 The scope of this ES has been developed in consultation with relevant statutory and non-statutory consultees as detailed in **Table 15.5**. This chapter has identified the potential impact of the Botley West Solar Farm on the socio-economic profile of the area. This assessment was informed by relevant conclusions of other Volume 1 technical topics such as Chapter 8: Landscape and Visual Impact Assessment **[EN010147/APP/6.3].**, Chapter 12: Traffic and Transport **[EN010147/APP/6.3]**, Chapter 13: Noise and Vibration **[EN010147/APP/6.3]**, Chapter 16: Human Health, Chapter 17: Agricultural Land Use and Public Rights of Way **[EN010147/APP/6.3]**.

15.4.3 Taking into account the scoping and consultation process**, Table 15.6** summarises the issues considered within this assessment.

Table 15.6: Issues Assessed

Activity	Potential effects scoped into the assessment
Construction & Decommissioning phases	
Creation of Jobs	The Project will create direct and indirect jobs and will also present opportunities to increase local skills by providing training and skills to workers as part of an employment and skills plan.
Spending in local economy	Greater construction worker spending in local economy and the direct investment in the local supply chain could have an impact on economic output.
Production of Skills Plan	The construction and decommissioning stages provide an opportunity for skilling up the workforce by providing a targeted scheme of access to construction, operation and maintenance and decommissioning training schemes and apprenticeships for young people in the local and regional area who are Not in Education, Employment, or Training (NEET).
Temporary road closures/disruption	Temporary road diversions and disruption as a result of increased traffic during construction could impact commuting times/patterns and have potential economic impacts on local economy.
Noise and Visual disruption of construction works	The visual impact of construction equipment and the associated noise and traffic impacts has the potential to impact nearby tourism receptors.
Cessation of agricultural activities	The construction and decommissioning stages will require the agricultural use of the site to stop which has the potential to have an impact on the economic output.
Operation and maintenance	
Creation of Jobs	The maintenance of the Project will require and support the creation of a dedicated work force on a regular basis. Indirect employment may also arise once the Project is operational.
Provision of education/information points	There are opportunities for schools and community group programmes where educational visits to the site are organised. The ongoing educational opportunities could be substantial.
Production of Skills Plan	Opportunity to work with local education and training providers to support opportunities to provide local adult learning linked to operation and maintenance job opportunities relevant to disadvantaged adults facing skills barriers to employment opportunities.
Spending in local economy	The Gross Value Added (GVA) associated with the direct, indirect, and induced jobs over the lifetime of the Project can have potential substantial impact on the local economy.
Change of use of agricultural land	Economic impact of the displacement of agricultural land uses for the duration of the Project could be substantial.
Erection of solar panels in landscape	There is potential for the Project to impact the visual amenity of some tourist destinations and therefore impact the visitor economy.

15.4.4 A summary of the effects agreed to be scoped out is presented in **Table 15.7**.

15.4.5

Table 15.7: Issues scoped out of the assessment

Issue	Justification
Construction & Decommissioning	
Temporary Workers Accommodation	It is assumed that the majority of construction workers are likely to reside within their current locations, due to good road linkages and accessibility at a local and regional level to the Site. As such there is unlikely to be a significant increase in demand for this type of accommodation. Any potential cumulative impacts are, however, discussed in **section 15.10**.
Recreation Activities	Covered within Volume 1 Chapter 16: Human Health of the ES **[EN010147/APP/6.3]**. Not considered to have significant socio-economic impact.
Increased quantum of workers in area	During construction, local health care services could be affected or demand for these services could increase, however, any human health effects are assessed within Volume 1, Chapter 16: Human Health of the ES **[EN010147/APP/6.3]**and is therefore scoped out of the socio-economic reporting.
Restricted access as a result of construction	The construction works may impact upon access to open space or public rights of way, however, any impact associated with this is covered within Volume 1 Chapter 16: Human Health of the ES **[EN010147/APP/6.3]**.
Theft and crime	The Sites of the Project will receive several security risk management threat assessments during the development, construction, operation, and ultimately decommissioning phases. These security risk management threat assessments are to be procured by the Applicant and conducted by suitable qualified and experienced persons (SQEP) and will determine security risks. The security arrangements to be present at the Site will contribute to the overall safety of all entering the Site. The security arrangements will be SQEP reviewed at identified times associated with Security Risk rating and will further assess any changes in the Security Risk Management Threat Assessment. The boundaries of the Sites will be secured both by fencing and by the provision of Closed-Circuit Television (CCTV) equipment at the project substations. Cameras would be placed on galvanised steel painted green poles with a maximum height of 3m. Perimeter fencing used will comprise deer wire mesh and wooden post fencing with a maximum height of 2.5m. All new access tracks will be secured by gates, which will be set back from the public highway. Where existing access tracks are used that also provide access to residential properties, appropriate security measures will be put in place in consultation with the relevant property owner(s). Palisade fencing will be installed around the substations which will have a maximum height of 2.6m. Therefore, there is unlikely to be a significant effect in relation

Issue	Justification
	to crime and safety.
Health and social care	Covered within Volume 1 Chapter 16: Human Health of the ES **[EN010147/APP/6.3]**. Not considered to have significant socio-economic impact.
Open space/Public Rights of Way (PRoWs)	Covered within Volume 1 Chapter 16: Human Health of the ES**[EN010147/APP/6.3]** and Volume 1 Chapter 17: Agricultural Land Use and Public Rights of Way of the ES **[EN010147/APP/6.3]**. Not considered to have significant socio-economic impact.
Operation and maintenance	
Provision of new public access routes	Opportunities to enhance access to recreational activities in the countryside covered in Volume 1 Chapter 16: Human Health of the ES **[EN010147/APP/6.3]**.
Impact of erection of solar panels on visual receptors and housing values	The solar arrays, panels and the substations are relatively low impact in terms of built form, and are only temporary in nature, limiting the potential for any widespread adverse effect on housing value or affordability. Any potential impacts on housing values have been assessed as part of the literature review in **Table 15.9**. The most recent UK study was carried out in 2021 and found no clear evidence of an effect on residential property values from solar Projects in the UK. Any impact will, therefore, be unlikely to be significant.
Human Health & Wellbeing	Covered in Volume 1 Chapter 16: Human Health of the ES**[EN010147/APP/6.3]**.
Crime	No impacts considered likely.
Permanent changes to transport routes	Covered in Volume 1 Chapter 12: Traffic & Transport of the ES **[EN010147/APP/6.3],** no socio-economic impact on commuting patterns.

Study Area

15.4.6 The EIA scoping report proposed to utilise a Study Area consisting of the three local authorities where the Project is located (Cherwell District Council, West Oxfordshire District Council and Vale of White Horse District Council). However, upon undertaking the baseline assessment (Appendix 15.1 **[EN010147/APP/6.5]**), it was identified that a number of residents from other neighbouring local authorities commute in and out of the area for work, and thus, when considering the employment impacts of the Project, the Study Area has been expanded to also consider the local authorities of Oxford City Council and South Oxfordshire District Council (see **Figure 15.1**).

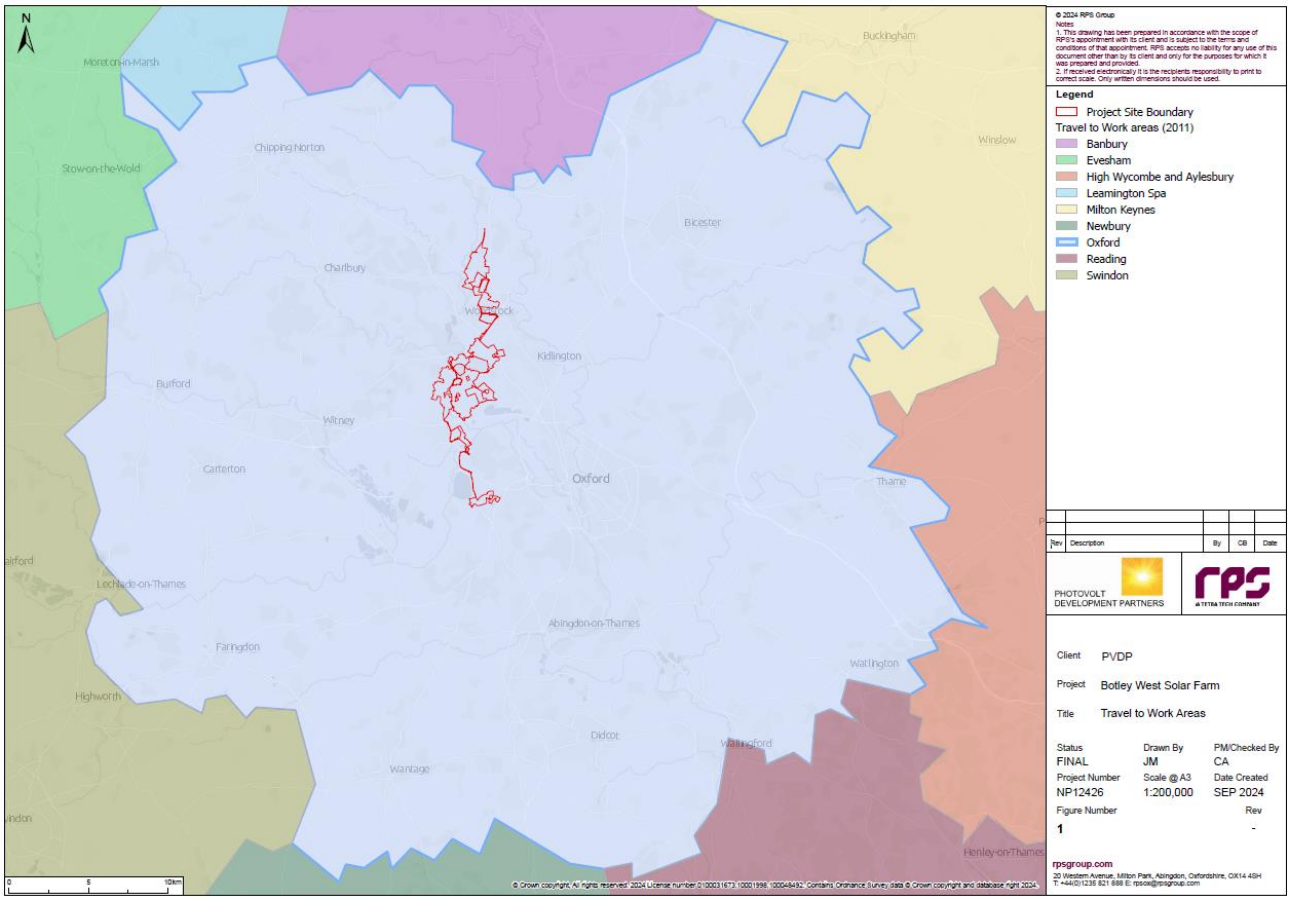


Figure 15.1: Study Area outlined in blue (based on Office of National Statistics Oxford Travel to Work Area) and the Site outlined in red

15.4.7 For tourism receptors, the Study Areas are more localised, i.e., where the assessment looks at the impacts on public rights of way networks these relate to areas where a visual impact or noise impact has been identified in the relevant Volume 1 chapter 8: Landscape Visual Impact Assessment of the ES and 13: Noise and Vibration of the ES [EN010147/APP/6.3]. For tourism impacts on accommodation providers, the assessment has used Google Maps to identify providers within a 2-3km radius from the Site. Volume 1 Chapter 8: Landscape Visual Impact Assessment of the ES[EN010147/APP/6.3] states that the PRoW's which pass through the Site and within approximately 2 to 3 km of the Project are the most likely to have views of it. Where open views are available from further away there would be a magnitude of impact of Low to Medium depending on the relative distance to the Project and therefore unlikely to have a negative effect on tourism receptors. The tourism Study Area and identified tourism receptors are shown in **Figure 15.2**. The accommodation providers are shown in **Figure 15.3** and **Figure 15.4**.

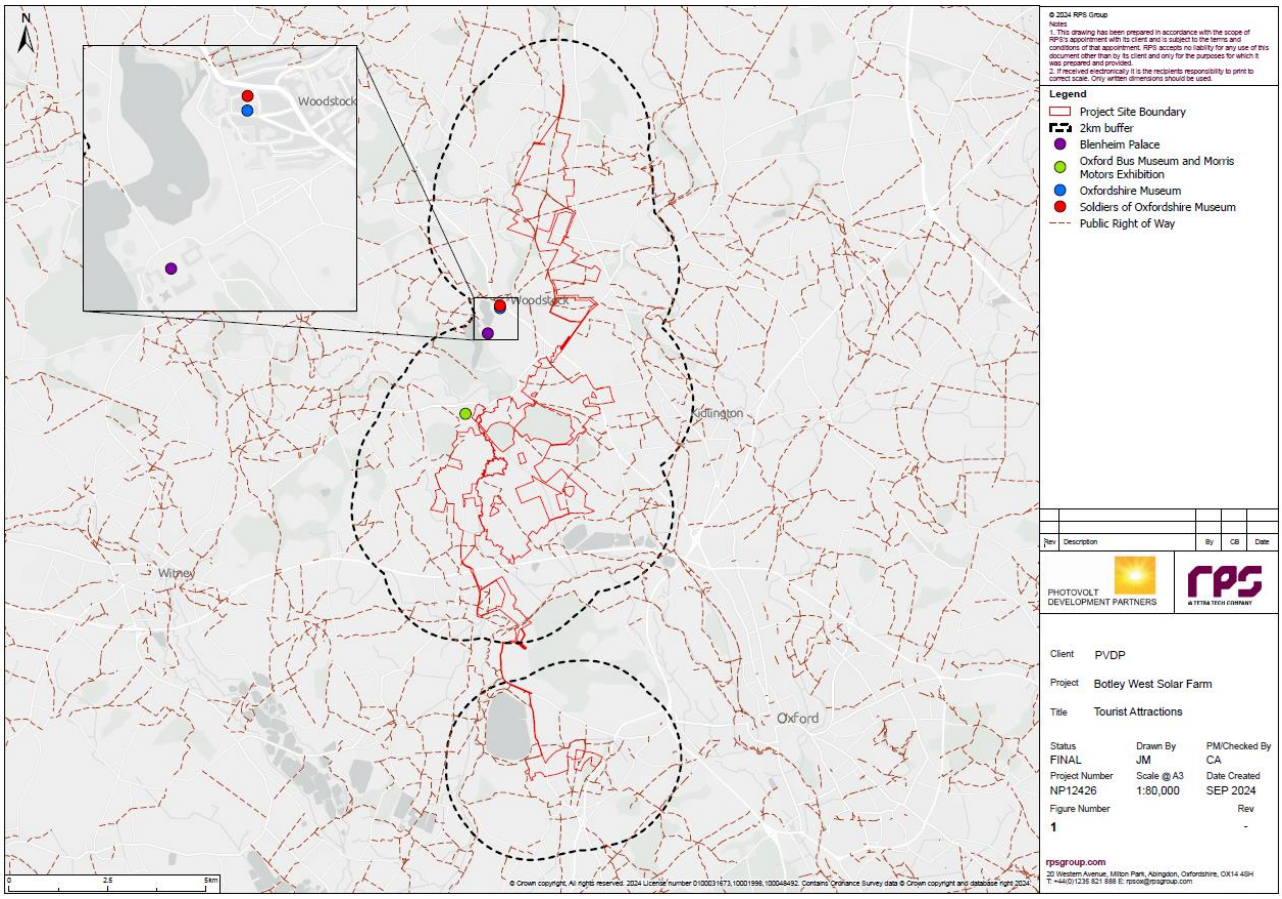


Figure 15.2: Tourism Study Area and PRoW map showing 2km radius (Map 1)

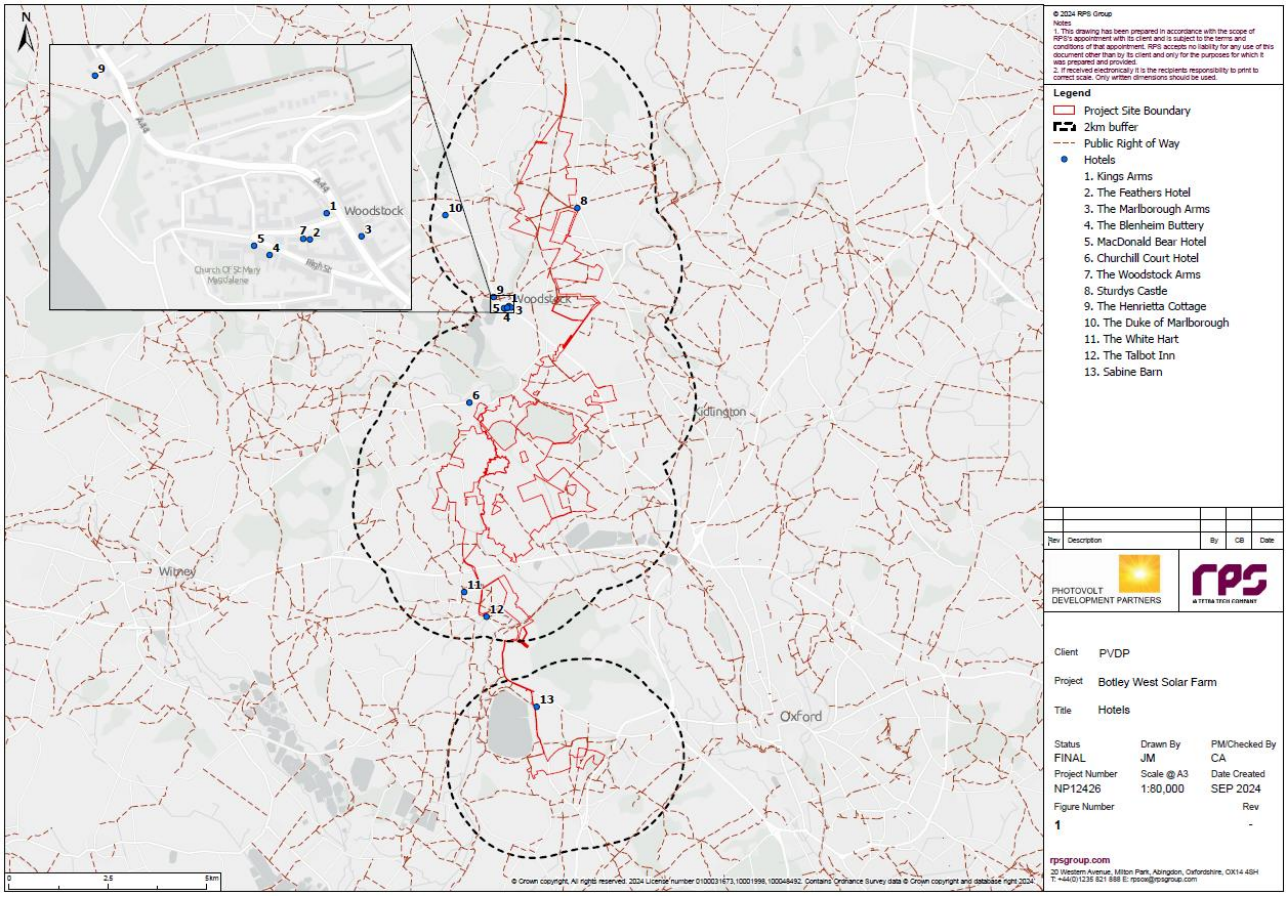


Figure 15.3: Tourism Study Area and PRoW map showing 2km radius (Map 2)

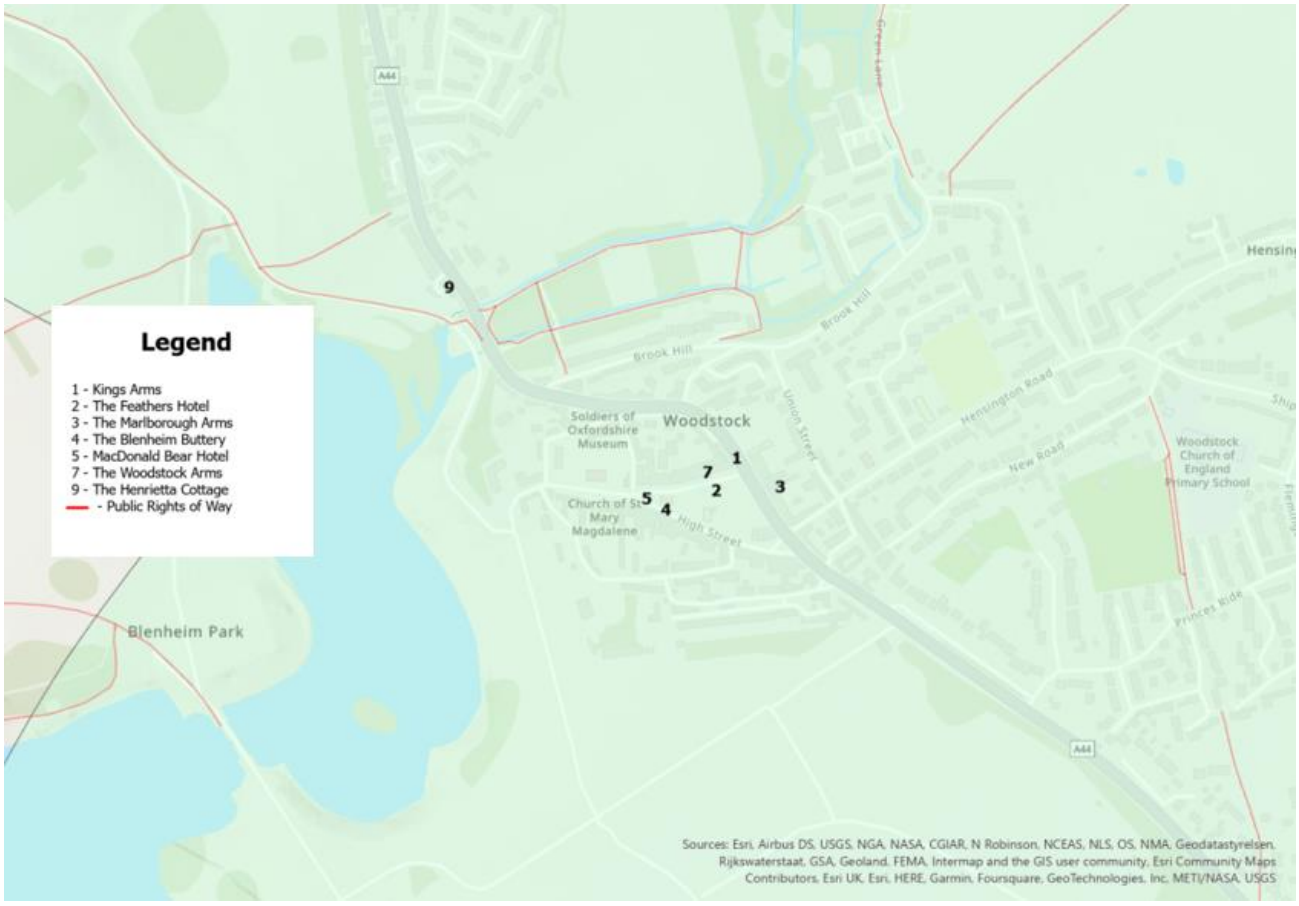


Figure 15.4: Map of Accommodation Providers with insert showing those located in Woodstock

Methodology for baseline studies

Desk studies

15.4.8 A desktop socioeconomic baseline assessment has been carried out to assess the social and economic characteristics of the area in the context of the Project. This is provided at Appendix 15.1 **[EN010147/APP/6.5]**.

15.5 Baseline environment

Desk study

15.5.1 Information on socioeconomics within the Study Area was collected through a detailed review of existing studies and datasets. These are summarised in **Table 15.8** and **Table 15.9.**

Table 15.8: Summary of desk study sources used

Indicator	Elements	Source
Population & Deprivation	Age structure, social class, qualifications, earnings, deprivation, motor car availability and internet access	ONS, Census 2011 & 2021, English Indices of Deprivation, Oxfordshire Insight

Indicator	Elements	Source
Economy	Employment Wages, Economic activity, GVA, business activity	ONS 2011 & 2021, ASHE 2023, UK Business Count, Census, IRENA Renewable Cost Database, Oxfordshire Insight
Employment & Skills	Unemployment, commuting patterns, occupation, industry, earnings, qualifications	ONS, Census 2011 & 2021, BRES, NOMIS Labour Market Profiles, Oxfordshire Insight, BCIS
Land Use, Tourism & Recreation	Agricultural land value, public rights of way, parks and amenity, tourist economy, tourism employment	Google Maps, Natural England (2010); Agricultural Land Classification map, PROW maps, BEIS Public Attitudes Tracker: Autumn 2022, Oxfordshire Insight, Nation Master stats, Census for Agriculture

Table 15.9: Literature review

Title	Source	Year	Author
The Impact of Renewable Energy Farms on Visitors to Cornwall	http://www.deg.wales/wp-content/uploads/2015/09/Theimpactofrenewableenergyfarmsonvisitorsto Cornwall-FINALREPORT-November13.pdf	2013	The South West Research Company Ltd.
Regional electricity generation and employment in UK regions	https://orca.cardiff.ac.uk/id/eprint/77013/	2017	Cardiff University, Bryan, Jane, Evans, Neil, Jones, Calvin and Munday, Max
Economic Impact Report for Tourism in Oxfordshire	https://www.experienceoxfordshire.org/partner/partner-benefits/research-and-insights/	2021	Experience Oxfordshire
Green on green: public perceptions wind power in Scotland and Ireland	https://www.researchgate.net/publication/227619753_'Green_on_Green'_Public_Perceptions_of_Wind_Power_in_Scotland_and_Ireland	2005	Warren et al.
Study into the Potential Economic Impact of Wind Farms and Associated Grid Infrastructure on the Welsh Tourism Sector	https://www.gov.wales/sites/default/files/publications/2019-06/potential-economic-impact-of-wind-farms-on-welsh-tourism_0.pdf	2014	Regeneris Consulting & The Tourism Company
Dynamic properties of the preferences for renewable energy sources – A wind power	https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2409729	2014	Jacob Ladenburg

Title	Source	Year	Author
experience-based approach			
Low carbon and renewable energy economy, UK: 2021	https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/finalestimates/2021	2021	Office for National Statistics
HM Treasury Green Book	https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent/the-green-book-2020	2020	HM Treasury
Is NIMBYism Standing in the Way of the Clean Energy Transition?	[redacted]	2021	Stephen Jarvis
Agricultural Labour in the UK	[redacted]	2016	Food Research Collaboration
Start to Finish (second edition)	[redacted]	2019	Lichfield
Oxfordshire Visitor Economy Vision & Destination Management Plan 2023-2028	[redacted]	2023	OxLEP and Blue Sail
Workforce Mobility and Skills in the UK Construction Sector (2022)	[redacted]	2022	Construction Industry Training Board (CITB)
John Nix Farm Management Pocketbook	Hard copy (Available to buy from a range of bookstores)	2024	Graham Redman

Future baseline conditions

15.5.2 The socioeconomic baseline (Appendix 15.1 **[EN010147/APP/6.5]**) looks in detail at any potential future changes in baseline conditions. This indicates that all local authorities in the Study Area, with the exception of the Vale of White Horse District Council Area, will experience a population decline over the lifetime of the Project. This is in contrast to Oxfordshire as a whole which is expected to experience an 8.4% increase in its population numbers. These assumptions are based solely on recent demographic trends and thus a review of large strategic housing allocations and approvals as well as local authority housing targets has been conducted. This has identified a housing need of 4,311 dwellings per year across the Study Area. Based on the average

household size of 2.4 people (ONS 2021) this would indicate an increase in the Study Area population of 75,443 people over the Project's operational and maintenance period.

15.5.3 Climate change is not considered to have a significant impact upon the socio-economic baseline. Increases to the cost of fossil fuels may result in rising household bills, consequently making home ownership more expensive, however, there should also be a greater take up of green energy and electric vehicle ownership which may combat this. Overall, the socioeconomic baseline is not expected to be significantly affected by the impacts of climate change.

Key receptors

15.5.4 The key receptors assessed are employment, which includes indicators such as unemployment levels, education and skills, which considers elements such as the level of qualifications of workers, economic output, that considers spending in the local economy and the gross value added, land use, which considers the effects on agricultural output, tourism, which looks at effects on the visitor economy and commuting patterns, which assesses any effects of disruption.

15.5.5 **Table 15.10** identifies the receptors taken forward into the assessment.

Table 15.10: Key receptors taken forward to assessment

Receptor	Description	Sensitivity/value
Employment	Unemployment levels, occupations, industry, and earnings, labour supply	**Medium** – Employment generation is a policy priority in all local authorities where the Project is located. Overall unemployment levels are low but note vulnerability in number of jobs in Cherwell and Oxford which fell between 2020 and 2021 and also noting the relatively high percentage of people in Cherwell actively seeking employment.
Education & Skills	Level of qualifications/number of highly skilled workers	**Low –** Education and skills development form part of a number of local plan policies across the Study Area, however, the Study Area generally has a higher proportion of Level 4 Qualifications and above when compared to the national average.
Economic Output	Economic activity and Gross Value Added	**Low –** Although an important policy consideration, the Study Area has a higher average level of economic activity compared to the South East as a region and most of the Study Area falls within the least deprived areas of England.
Land Use	Agricultural land value and agricultural output	**Low** – Receptor is not a key policy consideration and the number of people employed in farm-based agriculture only accounted for 1.1% of all employment in the Study Area.

Receptor	Description	Sensitivity/value
Tourism	Tourist spending in local economy, tourism employment, specific tourist attractions	**High** – The visitor economy is an important local policy consideration. The tourism sector provides a number of employment opportunities and is a large economic contributor.
Commuting Patterns	Motor car availability, travel to work method and time	**Low** – Good transport links exist and there are high levels of working from home and private car access.

15.6 Key parameters for assessment

Maximum design scenario

15.6.1 The maximum design scenarios identified in **Table 15.11** have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. These scenarios have been selected from the Project Design Envelope provided in Volume 1, Chapter 6: Project Description of the ES **[EN010147/APP/6.3]**. Any other development scenario is considered to have less significant effects, based on details within the Project Design Envelope (e.g. different infrastructure layout), to that assessed here being taken forward in the final design scheme.

15.6.2 Within the Cable Corridor shown, there are four locations where alternative cable routes are possible within the wider Cable Corridor. These four locations are shown on Figures 5.1 to 5.5 of Volume 2 of the ES **[EN010147/APP/6.4]**. Where assessments of impacts have been made these have been based on the full extent of the cable corridor options and thus all alternative cable corridors have been assessed on a worst-case scenario basis. There is not considered to be any significant adverse impact on socioeconomics which would arise as a result of any of the potential cable corridors being progressed and construction of any one corridor option would not result in significance of effects over that of other options.

Table 15.11: Maximum design scenario considered for the assessment of potential impacts

Potential impact	Phase[a]			Maximum Design Scenario (Minimum for beneficial effects)	Justification
	C	O	D		
Job Creation	Yes	Yes	Yes	**Construction, Operation and Decommissioning phases** • The minimum capacity of solar generation that consent is being sought for – approximately 840 MWe • Construction period of 24 months • Operation and maintenance – 37.5 years • Decommissioning -24 months.	The minimum capacity of solar generation applied for will result in the minimum number of jobs. As these are beneficial effects, these assumptions therefore lead to a worst-case assessment. Where the impact on temporary workers accommodation has been considered the job creation of other cumulative developments has also been assessed and leakage has not been applied resulting in a worst-case scenario assessment.
Economic Output	Yes	Yes	Yes	**Construction, Operation and Decommissioning phases** • The minimum capacity of solar generation that consent is being sought for – approximately 840 MWe • Construction period of 24 months • Operation and maintenance – 37.5 years • Decommissioning - 24 months.	The minimum capacity of solar generation applied for will result in the minimum number of jobs s and thus spending in the local economy, and a minimum investment in the local supply chain. As these are beneficial effects, these assumptions therefore lead to a worst-case assessment.
Tourism Economy	Yes	Yes	Yes	**Construction and Decommissioning phases** • Four main temporary construction compounds • Total area of approximately 1,400 ha • Temporary compounds for each of the individual installation areas which will serve as storage and welfare facilities • Construction - 24 months • Operation and maintenance – 37.5 years • Decommissioning - 24 months.	The larger the area of construction works, the more compounds needed and the longer the construction lasts the larger the potential for impacts on tourism receptors as a result of noise, traffic, or visual amenities. The greatest number of solar arrays, at the highest slope and height, across the largest area and for the longest period of time will have the most visual impact and

Potential impact	Phase[a]			Maximum Design Scenario (Minimum for beneficial effects)	Justification
	C	O	D		
				Operation phase • Total area of approximately 1,400 ha. • Indicative Number of Solar PV Modules – 2,200,000 PV modules • Indicative slope of solar PV modules from horizontal – 18 degrees • Height range of solar panel 2.2 – 2.3m • Fencing length total 105.5km at a height of 2.1m	thus the most potential to impact upon visitor economy.
Education & Skills	Yes	Yes	Yes	**Construction, Operation and Decommissioning phases** • Indicative Number of Solar PV Modules – 2,200,000 PV modules • The minimum capacity of solar generation that consent is being sought for – approximately 840 MWe	The lower the capacity of solar and complexity of development will provide least opportunity for improving knowledge and skills in the industry and a lower number of opportunities for learning through employment. As this is a beneficial impact, this is a worst case scenario.
Commuting Patterns	Yes	No	Yes	**Construction and Decommissioning phases** • Four main temporary construction compounds • Total area of approximately 1,400 ha • Temporary compounds for each of the individual installation areas which will serve as storage and welfare facilities • Construction - 24 months • Operation and maintenance – 37.5 years • Decommissioning - 24 months.	The larger the area of development and the greater the number of construction compounds provides more opportunity for disruptions to commuting patterns as a result of traffic.
Agricultural Output	Yes	Yes	Yes	**Construction and Decommissioning phases**	The larger the area of the Project for solar arrays, the more agricultural land which

Potential impact	Phase[a]			Maximum Design Scenario (Minimum for beneficial effects)	Justification
	C	O	D		
				• Four main temporary construction compounds • Total area of approximately 1,400 ha • Temporary compounds for each of the individual installation areas which will serve as storage and welfare facilities • Construction -r 24 months • Operation and maintenance – 37.5 years • Decommissioning- 24 months. **Operation phase** • Total area of approximately 1,400 ha	will be required and thus the greatest reduction in agricultural output that will occur.

[a] C=construction, O=operational and maintenance, D=decommissioning

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

15.7.1 The design process for the Project has been heavily influenced by the findings of early environmental appraisals and the EIA process. The Project has had several measures incorporated into the design to avoid or minimise environmental impacts.

15.7.2 The key aspects where the design has evolved are described in Volume 1, Chapter 5: Alternatives Considered of the ES **[EN010147/APP/6.3]**. These include measures required for legal compliance, as well as measures that implement the requirements of good practice guidance documents. The assessment has been undertaken on the basis that these measures are incorporated in the design and construction practices (i.e. they are 'embedded mitigation').

15.7.3 Embedded mitigation measures for the construction phase are set out in the Volume 1, Chapter 6: Project Description of the ES **[EN010147/APP/6.3]**, Volume 3 Appendix 6.1: Project Mitigation Measures and Commitments Schedule of the ES **[EN010147/APP/6.5]** and the various management plans outlined in this chapter **[EN010147/APP/6.3]**.

15.7.4 Implementation of embedded mitigation relied upon in the assessment will be secured in the DCO, including by ensuring the works described in Schedule 1 of the DCO are restricted to their corresponding works areas shown on the Works Plans **[EN010147/APP/2.3]**, a DCO requirement requiring compliance of detailed design of the Project to accord with the Outline Design Principles **[EN010147/APP/7.7]**, or through specific DCO requirements requiring compliance with a management strategy, plan, or other requirement document.

15.7.5 Consideration has been given to any ‘additional mitigation’ over and above the embedded mitigation that may be required and has the potential to mitigate any significant adverse effects identified following the assessment of the Project inclusive of its embedded mitigation. Where significant effects remain following the implementation of embedded mitigation and achievable further measures could lower the identified effect, the topic chapter identifies additional mitigation and explains how the additional mitigation is secured, for example via a specific DCO requirement, via a management plan, or document secured by a DCO requirement like the Project Mitigation Measures and Commitments Schedule **[EN010147/APP/6.5]**.

15.7.6 To the extent any likely significant effects are anticipated following the assessment of the Project after the implementation of embedded and additional mitigation, each topic chapter will report these as residual effects. Residual effects for all topics are summarised in Volume 1 Chapter 21: Summary of Significant Environmental Effects of the ES **[EN010147/APP/6.3]**.

15.7.7 Where relevant, measures have also been identified that may result in enhancement of environmental conditions. Enhancement measures are not required to mitigate significant effects of the Project and are not factored into the determination of residual effects. They are further measures which would have additional beneficial outcomes should they be implemented.

15.7.8 Both embedded and additional mitigation measures relevant to this chapter are summarised in **Table 15.12** below.

Table 15.12: Mitigation measures intended to be adopted as part of the Project

Mitigation Number	Measure adopted	How the measure will be secured
Embedded Mitigation		
15.1	Work with local education and training providers to support opportunities to provide local adult learning linked to construction, operation and maintenance and decommissioning job opportunities relevant to disadvantaged adults facing skills barriers to employment opportunities.	Appendix 15.2: Outline Skills, Supply Chain & Employment Plan **[EN010147/APP/6.5]**
15.2	As far as reasonably practicable (e.g. subject to standards and security checks) provide a targeted scheme of access to construction, operation and maintenance and decommissioning training schemes and apprenticeships for young people in the local and regional area who are Not in Education, Employment, or Training (NEET).	Appendix 15.2: Outline Skills, Supply Chain & Employment Plan **[EN010147/APP/6.5]**
15.3	Engage in the ethical procurement of the supply chain.	Appendix 15.2: Outline Skills, Supply Chain & Employment Plan **[EN010147/APP/6.5]**
15.4	Advertise lane closures in advance so road users are forewarned and can manage commute to work effectively.	Construction Traffic Management Plan (within the Outline Code of Construction Practice) **[EN010147/APP/7.6.1]**
15.5	Make retained and new routes through the arrays appealing to people to encourage their use by providing information boards (with details of new routes); wildflowers and hedgerows (for visual screening); children's fun trails and education boards (e.g., on wildlife, heritage and solar energy).	Committed within the Project design set out in Outline Design Principles document **[EN010147/APP/7.7]**
15.6	Ensure suitable pedestrian access is maintained for diversions of any temporary route closures and provide appropriate wayfinding information for temporary diversions during construction and decommissioning, such as signposting, including approximate journey times on the routes. Wayfinding for circular walks or to destinations should be clearly signposted.	Construction Traffic Management Plan (within the Outline Code of Construction Practice) **[EN010147/APP/7.6.1**]
Additional Mitigation		
15.7	Provide space for at least two food growing community groups (up to 30ha) to operate on the Site, secured by means of an Agricultural License Agreement.	Outline Operational Management Plan **[EN010147/APP/7.6.2]**

Mitigation Number	Measure adopted	How the measure will be secured
15.8	Monitor supply chain and employment records. Monitoring of the proportion of local people (particularly within the local study area) who are not in employment, education or training (NEET), unemployed, have high job instability or low-income characteristics who access training and apprenticeship or good quality stable employment opportunities related to the Project. Monitoring would allow the benefit to be confirmed, support engagement of NEET populations with any relevant opportunities, and also allow further tailoring to target local vulnerable groups if required.	Appendix 15.2: Outline Skills, Supply Chain & Employment Plan [EN010147/APP/6.5]

15.8 Impact assessment methodology

Overview

15.8.1 The significance of an effect is determined based on the sensitivity of a receptor and the magnitude of an impact. This section describes the criteria applied in this chapter to characterise the sensitivity of receptors and magnitude of potential impacts.

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

Receptor sensitivity/value

15.8.3 The criteria for defining sensitivity in this chapter are outlined in **Table 15.13** below.

Table 15.13: Sensitivity criteria

Sensitivity	Definition
High	Receptor is identified as a policy priority Evidence of major socio-economic challenge or underperformance
Medium	Receptor is important in policy Evidence of under-performance or vulnerability
Low	Receptor is not a policy priority Evidence that the receptor is resilient and that there are no particular challenges
Negligible	Receptor is not a policy priority Good overall performance in impact area

Magnitude of impact

15.8.4 The criteria for defining magnitude in this chapter are outlined in **Table 15.14** below.

Table 15.14: Impact magnitude criteria

Magnitude of impact		Definition
High	Adverse	Severe detrimental impact to key social and/or economic characteristics. Where the impact is able to be quantified this would equate to a percentage change of above 20%. Mitigation is likely to be hard to achieve or will require significant intervention.

Magnitude of impact		Definition
	Beneficial	Major enhancement to key social and/or economic characteristics. Where the impact is able to be quantified, this would equate to a percentage change of above 20%. There are unlikely to be better alternative means of achieving this benefit or other methods would be more time consuming, more expensive, and/or less effective.
Medium	Adverse	Discernible detrimental impact upon key social and/or economic characteristics. Where the impact is able to be quantified, this would equate to a percentage change of 11-20%.
	Beneficial	Discernible improvement to key social and/or economic characteristics. Where the impact is able to be quantified, this would equate to a percentage change of 11-20%.
Low	Adverse	Minor detrimental alteration to, one or more key social and/or economic baseline characteristic(s). Where the impact is able to be quantified, this would equate to a percentage change of 6-10%.
	Beneficial	Minor benefit to one or more key social and/or economic baseline characteristic(s), or a reduced risk of negative impact occurring. Where the impact is able to be quantified, this would equate to a percentage change of 6-10%.
Negligible	Adverse	Very minor detrimental alteration to one or more social and/or economic baseline characteristic(s). Mitigation is either easily achieved or little will be required. Where the impact is able to be quantified, this would equate to a percentage change of under 5%.
	Beneficial	Very minor benefit to one or more social and/or economic baseline characteristics. Alternative means of achieving this benefit are likely to be easier, cheaper, more effective, and/or less time-consuming. Where the impact is able to be quantified, this would equate to a percentage change of under 5%.
No change		No loss or alteration of characteristics, features or elements; no observable impact in either direction.

15.8.5 Time periods within the socioeconomic assessment are defined as follows:

- *short term: a period of months, up to one year;*
- *medium term: a period of more than one year, up to five years; or*
- *long term: a period of greater than five years.*

Significance of effect

15.8.6 The significance of the effect upon socioeconomics has been determined by taking into account the sensitivity of the receptor and the magnitude of the impact. The method employed for this assessment is presented in **Table 15.15**. Where a range of significance levels is presented, the final assessment for each effect is based upon expert judgement.

15.8.7 In all cases, the evaluation of receptor sensitivity, impact magnitude and significance of effect has been informed by professional judgement and is underpinned by narrative to explain the conclusions reached.

15.8.8 For the purpose of this assessment, any effects with a significance level of minor or less are not considered to be significant in terms of the EIA Regulations.

Table 15.15: Assessment matrix

Sensitivity of Receptor	Magnitude of Impact			
	Negligible	Low	Medium	High
Negligible	Negligible	Negligible or Minor	Negligible or Minor	Minor
Low	Negligible or Minor	Negligible or Minor	Minor	Minor or Moderate
Medium	Negligible or Minor	Minor	Moderate	Moderate or Major
High	Minor	Minor or Moderate	Moderate or Major	Major

15.8.9 Where the magnitude of impact is 'no change', no effect would arise.

15.8.10 The definitions for significance of effect levels are described as follows:

- Major: These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category. Effects upon human receptors may also be attributed this level of significance.
- Moderate: These beneficial or adverse effects have the potential to be important and may influence the key decision-making process. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse or beneficial effect on a particular resource or receptor.
- Minor: These beneficial or adverse effects are generally, but not exclusively, raised as local factors. They are unlikely to be critical in the decision-making process but are important in enhancing the subsequent design of the Project.
- Negligible: No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

Assumptions and limitations of the assessment

15.8.11 One limitation with this assessment is the age of some of the data that has been used to inform the baseline position. In some instances, this has been taken from the 2011 Census, which is now over 10 years old. This is because, for some indicators, comparable 2021 Census data has yet to be published. Where possible, data from the 2021 Census has been used, however, caution needs to be applied when using this data due to the fact it was undertaken during the COVID-19 pandemic.

15.8.12 Therefore, in these instances (for example with regards to commuting patterns), although the 2011 Census data is now somewhat out-of-date, it is accepted that this is the standard and most accurate method for gathering population and demographic data. Where available and appropriate, more up to date Projections have been used and thus it is concluded that this limitation does not affect the robustness of the assessment for EIA purposes.

15.8.13 Furthermore, in the case of estimating direct and indirect employment from Solar Photovoltaics, the latest available research is from 2017. Therefore, assumptions adopted within the 'Assessment of effects' section could be somewhat outdated.

15.8.14 There are also challenges with disaggregating GVA data by sector. At more localised levels, the data is available only by broad Standard Industrial Classification (SIC) code level. For agriculture, this groups a wide collective of industries which skews the data. The assessment, therefore, utilises regional level data for this GVA receptor.

15.8.15 In addition, there are no generally accepted criteria for assessing the significance of socio-economic effects and, in some cases, it can be difficult to quantify or measure such effects. Where the effect has been difficult to quantify, qualitative professional judgment has been applied, based on experience, best practice and in consideration of relevant planning policy.

15.9 Assessment of effects

15.9.1 The impacts of the construction, operation and maintenance, and decommissioning phases of the Project have been assessed. The potential impacts arising from the construction, operation and maintenance and decommissioning phases of the Project are listed in **Table 15.26**, long with the maximum design scenario against which each impact has been assessed.

15.9.2 A description of the potential effect on receptors caused by each identified impact is given below in **Table 15.16.**

Table 15.16: Assessment of Effects Summary Table

Receptor	Construction Phase			Operation and Maintenance Phase			Decommissioning Phase		
	Sensitivity of Receptor	Magnitude of Impact	Significance of Effect	Sensitivity of Receptor	Magnitude of Impact	Significance of Effect	Sensitivity of Receptor	Magnitude of Impact	Significance of Effect
Reduced Unemployment Levels	Medium	Medium Beneficial	Moderate Beneficial	Medium	Low Beneficial	Minor Beneficial	Medium	Medium Beneficial	Moderate Beneficial
Increased Economic Output	Low	Medium Beneficial	Minor Beneficial	Low	Low Beneficial	Minor Beneficial	Low	Low Beneficial	Minor Beneficial
Improved Skills and Qualification	Low	Low Beneficial	Minor Beneficial	Low	Low Beneficial	Minor Beneficial	Low	Negligible	Negligible
Reduced Agricultural Output	Medium	Low Adverse	Minor Adverse	Medium	Low Adverse	Minor Adverse	Low	Low Adverse	Negligible
Change in Visitor Economy	Medium	Low Adverse	Minor Adverse	Medium	Low Adverse	Minor Adverse	Medium	Low Adverse	Minor Adverse
Disruption to Travel Patterns	Negligible	Minor Adverse or Negligible	Negligible	-	-	-	Negligible	Minor Adverse or Negligible	Negligible

Reduced Unemployment Levels

15.9.3 These are the effects associated with providing employment opportunities as part of the Project.

Construction phase

15.9.4 Construction is estimated to last for 24 months and, based on established estimates of person years of employment per installed MW of electricity generation technologies ('Regional electricity generation and employment in UK regions' (2017)), the Project is expected to create up to 17,472 person years of direct and indirect employment connected to the construction and development phase.

15.9.5 The estimates underpinning this calculation are based on structured research reviews of the employment and economic effect of different electricity technologies carried out by Cardiff University and Regeneris in the 2017 report *Regional Electricity Generation and Employment in UK Regions*.

15.9.6 The research also included a series of consultations with developers/operators to gain information on spending patterns and employment.

15.9.7 The majority of socio-economic assessments of solar developments refer to the report on the growth of solar power in the UK (2014). In this report, the Centre for Economics and Business Research (Cebr) give an employment multiplier for large-scale solar PV investments of 2.33 – i.e., for every job supported on-site, 1.33 indirect/induced jobs are supported in the wider economy. This is, however, now somewhat outdated. Low Carbon and Renewable Energy Economy employment multipliers for 2020 (most recent data available) estimate that solar PV developments have a multiplier of 2.08, this is the figure used for this assessment. Applying this multiplier to the total number of person years of employment results in 8,400 years of direct employment and 9,072 years of indirect and induced employment.

15.9.8 Based on the 2017 study into regional electricity generation and employment in UK regions; 70% of these jobs (5,880) are estimated to be direct construction and manufacturing employment, with 11% of jobs related to associated professional services 10% of jobs related to wholesale/retail trade, 4% transport and communication related, 3% financial services and 2% others.

15.9.9 In order to assess the direct construction jobs in the local area, we need to understand how many of the 5,880 jobs would be related specifically to on-site construction, as opposed to manufacturing (although if the supply chain was local, manufacturing jobs would also be beneficial to the study area).

15.9.10 The 'Regional electricity generation and employment in UK regions' study states that more established technologies (e.g. Solar PV) can have a high level of employment impact, driven by the high proportion of development cost that is physical installation (often reliant on local labour), and the local sourcing of some device and ancillary elements. On that basis, it is assumed that a lower percentage (40%) of the direct jobs would be related to manufacturing, with a higher proportion (60%) associated with the physical installation. This equates to 3,528 direct person years of construction employment.

15.9.11 The impacts of displacement of the construction workforce also needs to be considered. This measures the extent to which the job creation of a project is offset by reductions of employment elsewhere. Any additional demand for labour cannot be treated as a net benefit, as it removes workers from other posts, such as other construction projects, and the net benefit is reduced to the extent that this occurs.

15.9.12 Construction workers typically move between construction projects when delays occur or to help the workforce meet construction deadlines. It is, therefore, assumed that, due to the flexibility of the construction labour market, displacement effects are low. The HCA Additionality Guide[1] (Now Homes England) suggests 25% for low levels of displacements. This factor is a best practice approach in the absence of special local information that might provide a defensible justification for a different level of displacement being used.

15.9.13 Applying this level of displacement to the total jobs created, it is estimated that it will result in a net direct construction employment equivalent to 2,646 direct person years of construction employment.

15.9.14 Some of these jobs will be taken by people living outside of the study area. This is called leakage. Since a reasonably high proportion of the benefits will be retained within the Study Area, a medium level of leakage (25%) from the Homes & Communities Agency (HCA) Additionality Guide has been applied.

15.9.15 Applying this 25% discount to the net jobs results in an overall net direct construction job creation for the study area of circa 1,985 local direct person years of construction employment.

15.9.16 As is standard within socio-economic assessments, it is considered that one permanent Full Time Equivalent (FTE) construction job is equivalent to ten person-years of temporary employment. Therefore, on this basis, the construction phase is estimated to create up to around 199 local direct FTE jobs.

15.9.17 It is then necessary to also consider the jobs lost as a result of the change of use from agriculture. The Agricultural Land Use Chapter identifies that 1,351.2ha of agricultural land will be needed for the Project. On this basis, it is estimated (using the *John Nix Farm Management Pocketbook* (2024) methodology described in section 15.9.102) that this would support approximately circa eight direct local FTE employees, resulting in an overall net gain in direct employment as a result of the Project of 191 direct local FTE jobs.

15.9.18 An Outline Skills, Supply Chain and Employment Plan (OSSEP) (Appendix 15.2) **[EN010147/APP/6.5]** has also been produced. This provides detail on the various employment and skills opportunities to be committed to as part of the Project. Furthermore, various delivery strategies for maximising the

[1] Homes & Communities Agency (2014). Additionality Guide. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/378177/additionality_guide_2014_full.pdf [Accessed on 10/10/2024].

benefits achieved from opportunities are described in the context of the Study Area.

15.9.19 The OSSEP, therefore, ensures that the employment and skills offer during the construction phase is delivered appropriately towards Study Area residents, ensuring maximum benefit is achieved.

Sensitivity of the receptor

15.9.20 In terms of the vulnerability of the receptor; unemployment levels are low across the Study Area when compared regionally and nationally, however, it is noted that there is a vulnerability in employment numbers in Cherwell and Oxford where employment fell between 2020 and 2021. It is considered that the recoverability of the receptor is high given the relatively high percentage of economically inactive people who are looking for employment. Employment generation is a policy priority across all local authorities in the Study Area.

15.9.21 The sensitivity of the receptor is **Medium**.

Magnitude of impact

15.9.22 The impact of reduced unemployment levels is both direct through construction jobs created as part of the Project and also indirect through jobs created in supply chain or local economy.

15.9.23 The impact is predicted to be of regional spatial extent and medium-term continuous duration.

15.9.24 An outline Skills and Employment Plan has been produced to ensure that the employment opportunities are available to local people and as far as reasonably practicable (e.g. subject to standards and security checks) provide a targeted scheme of access to construction training schemes and apprenticeships for young people in the local and regional area who are Not in Education, Employment, or Training (NEET). On this basis the magnitude of impact is considered **Medium Beneficial**.

Significance of the effect

15.9.25 Based on the sensitivity of the receptor and the magnitude of the impact, the overall significance of the effect is considered to be **Moderate Beneficial**, which is significant.

Operation and maintenance

15.9.26 The operational and maintenance stage is expected to last for 37.5 years. During the operational stage, a Project of 840MW of installed solar capacity is estimated to support 336 full time equivalent direct and indirect jobs. This is based on the Cardiff University study Regional Electricity Generation and Employment in UK Regions (2017) and relates to the number of jobs supported by the Project, in supply chains and via wage effects but does not include employment related to the sale of electricity itself.

15.9.27 Low Carbon and Renewable Energy Economy employment multipliers for 2020 estimate that solar PV developments have a multiplier of 2.08, which

means that for every one job provided directly, another 1.08 indirect/induced jobs are supported. This would indicate that the operational and maintenance phase would create circa 162 direct FTE jobs with the remaining circa 174 being indirect FTE jobs associated with the supply chain and wage effects.

15.9.28 Although no other large solar Projects of a similar scale have been identified in the Study Area, the required jobs are likely to be highly skilled and niche in nature. It is therefore considered likely that the jobs may remove a considerable number of workers from other posts and thus a high level of displacement at 75% has been applied, with the remaining 25% of roles envisaged to be filled by local employees enrolled on an employment skills plan as part of the Project. In addition, due to the nature of the highly skilled role and likely requirement for existing experience, it is also considered likely that some of these jobs will be taken from people living outside of the Study Area. A high level of leakage (50%) has, therefore, also been applied.

15.9.29 On this basis, the operational and maintenance stage would result in the creation of approximately 20 direct local FTE jobs in the local economy. The jobs created will be in the renewable energy sector, assisting the UK's transition to net zero.

15.9.30 It is, however, important to consider the jobs lost as a result of the change of use from agriculture. Based on 1,351.2ha of agricultural land it is estimated (based on John Nix Farm Management Pocketbook (2024)) that this would support approximately eight direct local FTE employees. However, as a result of the sheep grazing that is proposed on the installation area of the solar array (see para 15.9.110) six of these FTE jobs will be retained in agricultural enterprises.

15.9.31 The net total jobs created by the Project over the operational phase would, therefore, equate to circa 18 direct local FTE jobs.

15.9.32 The Outline Skills, Supply Chain and Employment Plan (OSSEP) (Appendix 15.2) **[EN010147/APP/6.5]** provides detail on the various employment and skills opportunities to be committed to as part of the Project. Furthermore, various delivery strategies for maximising the benefits achieved from opportunities is described in the context of the Study Area.

15.9.33 The OSSEP therefore ensures that the employment and skills offer during the operational/maintenance phase is delivered appropriately towards Study Area residents, ensuring maximum benefit is achieved.

Sensitivity of receptor

15.9.34 As per the construction stage, in terms of the vulnerability of the receptor; unemployment levels are low across the Study Area when compared regionally and nationally. It is considered that the recoverability of the receptor is high given the relatively high percentage of economically inactive people who want a job, especially in Cherwell (19.7%) and Oxford (28.8%), as of latest data available for each Local Authority. Employment generation is a policy priority across all local authorities in the Study Area.

15.9.35 The sensitivity of the receptor is **Medium**.

Magnitude of impact

15.9.36 The impact of reduced unemployment levels is both direct through construction jobs created as part of the Project and also indirect through jobs created in the supply chain or local economy. Less direct jobs are projected to be created during the operational and maintenance stage than at construction stage with a higher level of displacement also expected.

15.9.37 The impact is predicted to be of regional spatial extent and long-term continuous duration. Although the number of jobs created is lower than at construction stage, there are benefits in terms of job security over the lifetime of the Project. The magnitude is therefore **Low Beneficial**.

Significance of effect

15.9.38 Based on the sensitivity of the receptor and the magnitude of the impact, the overall significance of the effect is considered to be **Minor Beneficial**, which is not significant.

Decommissioning

15.9.39 The number of construction jobs created by the decommissioning stage is considered to be commensurate with the construction stage, however, it is likely the number of indirect jobs created in the supply chain will be reduced as there will be no requirement for manufacturing the solar panels. There will, however, be some indirect job creation associated with the recycling of panels and equipment which is likely to offset this.

Sensitivity of receptor

15.9.40 Sensitivity of receptor remains as per construction stage. The baseline assessment (Appendix 15.1) **[EN010147/APP/6.5]** has identified that continued employment provision remains an important local planning policy position across the Study Area and plans are in place to provide sufficient levels of employment over the Project period. Therefore, the sensitivity of the receptor is considered to remain **Medium**.

Magnitude of impact

15.9.41 The decommissioning effects are likely to be similar to the construction phase effects, though without the impacts on the supply chain in terms of sourcing of components required during construction but with the additional indirect jobs associated with recycling of the panels and equipment. Given the absence of reliable baseline data at a realistic date in the future for decommissioning and given that the effects will be similar in nature any adverse and beneficial decommissioning effects have been assumed to be equivalent to construction phase effects, The magnitude is, therefore considered **Medium Beneficial**.

Significance of effect

15.9.42 The significance of effect is considered commensurate with the construction stage (**Moderate Beneficial)**, which is significant.

Increased Economic Output

15.9.43 The effects of the Project on the economic output of the Study Area are direct through capital investment and indirect from increased spending from employment provision.

Construction Phase

15.9.44 The Project proposes approximately 840MWe of Solar PV. According to the IRENA Renewable Cost Database (IRENA, 2022) the installed cost of utility scale solar PV in the UK is approximately £704 per KW, based on $ to £ exchange rate in October 2024 (Renewable Power Generation Costs in 2022, IRENA). Therefore, applied to the Project this would result in a direct capital investment of circa £591m.

15.9.45 The ONS report 'Low carbon and renewable energy economy, UK: 2019' (latest available data) estimates that for every £1 of direct turnover in the UK's Solar PV energy sector, a further £0.78 of indirect turnover is generated. On that basis a further indirect capital investment of approximately £461m is likely to be generated as a result of the Project.

15.9.46 Overall, this equates to a direct and indirect investment into the local economy of around £1.05 billion.

15.9.47 This investment will be felt throughout the supply chain providing positive impacts not only to solar panel manufacturing businesses but also to local business such as aggregate suppliers, security and monitoring operatives, landscaping contractors and other construction industries and suppliers.

15.9.48 In addition to the direct capital investment in the local economy, there will be an indirect effect on economic output through the additional construction employment generated by the Project. The Project is estimated to create 199 net direct local FTE construction jobs in the Study Area over the 2-year construction programme. The average Gross Value Added (GVA) per construction employee (ONS/BRES 2022) in the Study Area is approximately £85,377.05 per annum.

15.9.49 Over the two-year construction programme this would, therefore, result in a total contribution to GVA in the Study Area of approximately £17.0m. The net FTE jobs figure has been used here in order to assess the worst-case scenario.

15.9.50 However, we do also need to take into account the GVA lost as a result of the cessation of agricultural output. It is estimated that 8 net FTE jobs will be lost. The GVA per agriculture, fishing and forestry employee in Berkshire, Buckinghamshire and Oxfordshire (smallest area for which data was available) equates to approximately £37,899. this will result in a loss to GVA of approximately £0.3m per year or £0.6m over the 24-month construction programme. Overall, the construction phase will result in a total net gain in GVA of circa £16.4m.

Sensitivity of receptor

15.9.51 The vulnerability of the receptor is considered low given that four of the five Study Area local authorities have a higher average level of economic activity compared to the South East as a region and England. In addition, most of the Study Area falls within the least deprived areas of England. The recoverability is also considered high, given the number of businesses that are active in the Study Area. In conclusion, the sensitivity is **Low**.

Magnitude of impact

15.9.52 The impact on economic output is both direct through capital investment in the Project and also indirect through the GVA of jobs created by the construction works.

15.9.53 The impact is predicted to be of regional spatial extent and medium-term continuous duration. The effect on GVA would be considered low, accounting for less than 10% of the GVA for the Study Area. The direct capital investment would be considered high. The magnitude is, therefore, **Medium Beneficial**.

Significance of effect

15.9.54 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Minor Beneficial** which is not significant.

Operation and maintenance

15.9.55 The contribution of the operational phase of the development to economic output has been calculated by taking the job creation associated with the Project (20 direct local FTE jobs) and multiplying this by the average GVA per employee in the Study Area (£72,715.05 per annum). Over the full anticipated operational phase of the Project (37.5 years) this would equate to an additional GVA associated with the operation and maintenance of the Project of approximately £54.5m. It is good practice, however, to apply a discount rate to future benefits and costs to present a current present value. The HM Treasury Green Book (2022) recommends applying a discount rate of 3.5% per annum and on that basis the revised GVA figure would be circa £30.3m.

15.9.56 In addition to the GVA effect, the Project will also generate significant business rate revenue on an annual basis, a proportion of which will be retained by the local authorities in the Study Area. Having regard to the Valuation Agency (2023) Report *Revaluation 2023 Photovoltaic Memorandum of Agreement* and on the assumption that the installation is unsubsidised, the Project would be liable for business rates of £2,040 per MW per annum. This would equate to business rates liability over the Project lifetime of approximately £64m. Applying the same discount rate as discussed above, this would result in a present-day value of circa £35.6m.

15.9.57 Output as a result of sheep grazing equates to a GVA of £8.7m for the full operational period. After applying the appropriate discount rate, this equates to a GVA of circa £4.8m. This is discussed in greater detail in para 15.9.85.

15.9.58 The assessment does, however, need to consider the GVA lost as a result of the temporary cessation of agricultural output. Based on a 1,351.2ha site, it is estimated that this would support approximately eight direct local FTE employees per year. The GVA per agricultural employee equates to approximately £37,899, therefore, over the full operational phase this would result in a loss in GVA (factoring in a discount rate of 3.5%) of £6.0m. On that basis, the output created by the Project will more than offset the GVA lost by the removal of agricultural production, resulting in a net gain in GVA of approximately £29.1m.

15.9.59 In conclusion, therefore, the effect on economic output as a result of the operational and maintenance phase of the Project would equate to a real term economic output of circa £64.7. This figure does not allow for any economic output associated with the sale of the electricity that will be generated and thus the economic output in real terms may be significantly higher, although this will in itself be offset by some loss of agricultural production. This is discussed in para 15.9.109 – 15.9.116.

Sensitivity of receptor

15.9.60 As per the construction stage, the vulnerability of the receptor is considered low given that four of the five Study Area local authorities have a higher average level of economic activity compared to the South East as a region and most of the Study Area falls within the least deprived areas of England. The recoverability is also considered high, given the number of businesses that are active in the Study Area. In conclusion, the sensitivity is **Low**.

Magnitude of impact

15.9.61 The impact on economic output is both direct through business rate spending and also indirect through the GVA of jobs created by the operational requirements.

15.9.62 The impact is predicted to be of local spatial extent and long-term continuous duration and the magnitude is considered to be **Low Beneficial**.

Significance of effect

15.9.63 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Minor Beneficial** which is not significant.

Decommissioning

15.9.64 The Gross Value Added created by employment associated with the decommissioning stage is considered to be commensurate with the construction stage although when applying the appropriate discount rate, the impact would be reduced

Sensitivity of receptor

15.9.65 The future baseline assessment does not provide any indication that the sensitivity of receptor will not remain as per the construction stage.

Magnitude of impact

15.9.66 The decommissioning effects are likely to be similar to the construction phase effects, though without the impacts on the supply chain in terms of sourcing of components required during construction, although noting there may be some beneficial supply chain impact in relation to recycling and disposal of the infrastructure. Given the absence of reliable baseline data at a realistic date in the future for decommissioning and given that the effects will be similar in nature but lesser in magnitude, adverse decommissioning effects have been assumed to be equivalent to construction phase effects, and beneficial decommissioning effects have been assumed to be of the same nature as construction phase effects but not significant. The magnitude is, therefore, assumed to be **Low Beneficial**.

Significance of effect

15.9.67 The significance of effect is considered commensurate with the construction stage.

15.9.68 The magnitude of the impact is low and the sensitivity of the receptor is low. The effect will, therefore, be **Minor Beneficial**, which is not significant.

Improved Skills & Qualifications

15.9.69 The Project will create opportunities for the improvement and employment of local skills. An Outline, Skills, Supply Chain and Employment Plan (OSSEP) **[EN010147/APP/6.5]** has been produced which commits to providing targeted skills development for local people.

15.9.70 In the OSSEP, the various job, skills and supply chain opportunities potentially available to residents, during both the construction, operation and maintenance, and decommissioning phases are discussed in detail. Opportunities are discussed in the context of the Study Area socio-economic profile, ensuring opportunities are appropriate and targeted towards those most in need, maximising benefit.

15.9.71 A detailed delivery strategy for each of the opportunities is also outlined to ensure efficient rollout of opportunities. Subsequently, key actions and outputs are discussed in relation to each of the opportunity areas.

Construction Phase

15.9.72 At construction stage there will be opportunities for local residents to access employment opportunities. Prior to construction work commencing, the associated identified skill needs will be communicated to local education and training providers. The Project team will work alongside the Local Enterprise Partnership, Local Authorities and relevant public sector agencies, as well as businesses in the supply chain, to ensure that relevant stakeholders are well

informed about the labour requirements associated with the Project and any particular gaps in the skills base of the local population that might need to be addressed to help ensure that local people have a good chance of accessing opportunities that arise in the area are identified

Sensitivity of receptor

15.9.73 Education and skills development form part of a number of local plan policies across the Study Area, however, the population within the Study Area generally has a higher level of qualifications when compared to the national average. In conclusion, therefore, the sensitivity is deemed to be **Low**.

Magnitude of impact

15.9.74 The impact on education and skills is direct through on the job training provided as part of an employment and skills plan.

15.9.75 The impact is predicted to be of local spatial extent and medium-term continuous duration and the magnitude is considered to be **Low Beneficial**.

Significance of effect

15.9.76 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Minor Beneficial** which is not significant.

Operation and maintenance

15.9.77 The operation of the Project will require highly skilled employees and, therefore, there are opportunities to improve the knowledge and skills of the Study Area in relation to the renewable energy industry.

15.9.78 There is also a commitment to provide open and covered space in the solar farm for use by school field trips. An educational area could provide local schools with the basic facilities – benches and a covered area to undertake their own learning activities. This will provide early stage solar-specific skills to young people studying in the study area.

Sensitivity of receptor

15.9.79 As per the construction stage, education and skills development form part of a number of local plan policies across the Study Area, however, the population within the Study Area generally has a higher level of qualifications when compared to the national average. In conclusion, therefore, the sensitivity is deemed to be **Low**.

Magnitude of impact

15.9.80 At this early stage of development, information on procurement strategies or employment profiles is not available and as such only a qualitative assessment of magnitude can be made. The impact is predicted to be local and long term continuous in duration. The ongoing employment associated with the operation of the Project is, however, more modest than at the construction stage.

However, the provision of an educational facility allows young people to learn solar skills from an early age. The magnitude is considered to be **Low Beneficial**.

Significance of effect

15.9.81 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Minor Beneficial** which is not significant.

Decommissioning

Sensitivity of receptor

15.9.82 The sensitivity of the receptor is likely to remain as per construction stage. It may become slightly less sensitive as the skills and education initiatives associated with this Project and other cumulative developments are incorporated.

Magnitude of impact

15.9.83 The decommissioning effects are likely to be similar to the construction phase effects, though without the impacts on the supply chain in terms of sourcing of components required during construction. Given the absence of reliable baseline data at a realistic date in the future for decommissioning and given that the effects will be similar in nature but lesser in magnitude, the magnitude is considered to be **Negligible**.

Significance of effect

15.9.84 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Negligible** which is not significant.

15.9.85 As the Employment and Skills Plan is provided in outline and further work is being undertaken to discuss training and skills requirements with local providers, the specific skills and qualifications opportunities are not fully known. However, since there is a commitment to explore this further as part of the DCO consent, there can be confidence attached to this level of significance.

Reduced Agricultural Output

15.9.86 The change of use from agricultural to the stationing of solar panels will have the effect of reducing the agricultural output of the Site. Volume Chapter 17: Agricultural Land Use and Public Rights of Way of the ES **[EN010147/APP/6.3]** states that the Study Area comprises approximately 1,351.2 ha of agricultural land within three broad locations:

- land between Wootton and Tackley;
- land west of Yarnton and north of Cassington; and
- land west of Botley at Oxford.

15.9.87 The majority of the land proposed for the Project is currently used for arable crops or is otherwise down to pasture.

15.9.88 The agricultural land within the Study Area forms part of 10 land holdings as shown on Volume 2, Figures, Figure 17.4 **[[EN010147/APP/6.4]**. Most of the land within the Project forms part of Blenheim Estate (Holding 1), which is a substantial land holding comprising a total of approximately 4900 ha (12,000 acres) of land. The land affected within the Study Area comprises predominantly arable land, with the majority of it farmed on contract farming agreements, with two small areas still operating on farm business tenancy agreements that end by the middle of 2025.

15.9.89 In addition to the arable land within the Project, the wider Blenheim Estate comprises a number of diverse farming businesses including a sheep flock of approximately 1,000 ewes, producing approximately 1,700 lambs each year and employing two full time shepherds. They also farm a herd of British White cattle specifically for conservation grazing in the SSSI High Park. Together, livestock at Blenheim are managed using regenerative farming techniques and predominantly graze permanent pastures, flood meadows, conservation sites, SSSI's and the 2,000 acre World Heritage Site. The Scotch Mule breed of sheep that Blenheim uses is suited to conservation sites with the beef and lamb produced sold locally through the Palace restaurants, local butchers and other regional outlets. Where not grazed, grassland at Blenheim is left to be cut for hay by local farmers or managed as wildflower meadows through their various partnerships to promote biodiversity.

15.9.90 The area identified as Holding 2, comprises approximately 55.5 ha of land and forms part of a larger land holding of approximately 285 ha, which is all within the ownership of one farmer and situated across several land parcels remote from Holding 2. Holding 2 is used for an arable based enterprise, which is run by the main owner with assistance from two further employees.

15.9.91 The area identified as Holding 3, comprises approximately 80.5 ha of arable land and forms part of a larger land holding of approximately 215 ha of land within the ownership of the holding. The holding is a family operated enterprise run by the father with part time assistance from his two sons. The father is considering retirement and the holding would be passed to his two sons to operate it at that point. The holding is predominantly farmed on an arable rotation including wheat, maize and beans.

15.9.92 The remaining known landholdings that are affected by the Project are located where temporary cable routing works may be required. The areas of land within each of these holdings included within the Study Area are approximately as follows:

- Landholding 4 – approximately 8.37ha
- Landholding 5 – approximately 33.21 ha
- Landholding 6 – approximately 0.07ha
- Landholding 7 – approximately 3.43ha
- Landholding 8 – approximately 3.55ha
- Landholding 9 – approximately 10ha

- Landholding 10 – approximately 5.29ha
- Unregistered land where freeholder unknown – 1.25ha

15.9.93 Volume 1 Chapter 17: Agricultural Land Use and Public Rights of Way of the ES **[EN010147/APP/6.3]** states that the Study Area comprises a higher percentage of cereal cropping than the England average and, therefore, without detailed cropping information has assumed that cereals are the predominant crop within the arable land.

15.9.94 On the assumption that approximately 1,351.2 ha of the Site comprises agricultural land that is used predominantly for arable cultivation, in the form of wheat, the *John Nix Farm Management Pocketbook (2024),* estimates that this would provide an average yield of 6.9 tonnes per hectare, which would produce in the order of 9,323 tonnes of wheat/annum.

15.9.95 Whilst the landownership would not change as a result of the Project (since the Site is being leased to the Applicant and not sold), the construction, operational and decommissioning stages will have an effect on the prevailing land use and farming operations will be changed.

15.9.96 In terms of the impacts on the agricultural land holdings; Volume 1 Chapter 17: Agricultural Land Use and Public Rights of Way of the ES **[EN010147/APP/6.3]** states that the predominantly arable based landholdings that form part of the Project are considered to be of medium sensitivity where the agricultural operation requires regular access between the farm infrastructure and the land and where severance to land and loss of certain areas and facilities, as part of the holding during the construction phase, can cause effects to the operation of the wider holding. However, in terms of the significance of any impact, the chapter concludes that the construction impacts would not affect the overall operation of those farms affected and thus the significance of any effect would be negligible.

Construction Phase

15.9.97 It is envisaged that agricultural operations will cease in phases as construction works start at each phase of the Project. However, for the purposes of this assessment, it is envisaged that all agricultural processes will be ceased for the full construction duration of 24 months, which is a precautionary worst-case assessment.

15.9.98 Volume 1 Chapter 17: Agricultural Land Use and Public Rights of Way of the ES **[EN010147/APP/6.3]** estimates that construction of the Project would result in the loss of approximately 1,351.2 ha of arable agricultural land most of which will be temporary except for circa 5.5ha which will be permanently lost during the construction period. This would include areas of land where the substations are located, including the National Grid substation, together with the main and small substations.

15.9.99 The agricultural land which will be lost consists of approximately 2.1 ha of ALC Grade 1, 96.9 ha of Grade 2, 391.2ha of Grade 3a, and 797ha of Grade 3b land. The ALC survey work completed for the Project has identified that approximately 36.4% of the land surveyed comprises land within the category

of BMV agricultural land (ALC Grades 1-3a); and approximately 59% of the land surveyed to date comprises lower quality Subgrade 3b agricultural land.

15.9.100 The Applicant will retain an agricultural land use beneath the proposed solar arrays and between the power converter stations and substations, and on 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. This grazing and horticultural use will be managed in a way that will support the Biodiversity Net Gains expected for the Site. An area of up to 30 hectares is being provided for community food groups.

15.9.101 In predominantly rural areas in England, agriculture only accounts for approximately 2% of GVA and this lowers to less than 1% in predominantly urban areas. Labour productivity for agriculture (£16 per hour) is also less than half of the average across the whole economy (£38 per hour).

15.9.102 Looking more locally at the Study Area it is noted, from the results of our baseline assessment (Appendix 15.1) **[EN010147/APP/6.5]**, the average GVA per Agriculture, Fishing and Forestry employee in Berkshire, Buckinghamshire and Oxfordshire (smallest available area for which data was available) employee equates to approximately £37,899. According to the *John Nix Farm Management Pocketbook* (2024), a standard work day (SWD) is a general estimate of the farm labour requirement for a farm enterprise. A standard work-year is defined as 2,200 hour and these total hours are converted into 275 notional 8-hour standard work days. For wheat and barley production, the pocketbook estimates a requirement for 1.56 SWDs per hectare.

15.9.103 Based on,1,351.2ha of agricultural land, this would, therefore, require 2,108 SWDs or 16,863- hours which is the equivalent of circa eight direct local FTE jobs. On that basis, over the construction programme the loss of agriculture will result in a loss to GVA of £0.3m per year or £0.6m over the 24-month construction programme. This compares to the GVA of £17.0m created by the construction workers, meaning that there is a net benefit in terms of GVA of approximately £16.4m. Also, in terms of employment, the construction stage would result in a net gain of approximately 191 jobs.

15.9.104 In addition, looking at agricultural output, based on wheat production across the 1,351.2ha site, the *John Nix Farm Management Pocketbook* (2024) estimates this would result in a loss of agricultural output of circa £2.0m per annum or £4.1m over the construction period. This is more than mitigated by the significant gain in construction GVA.

Sensitivity of receptor

15.9.105 The sensitivity of the receptor is considered to be **Medium**. The majority of the Site is classified as ALC 3b (59%) and agricultural enterprises do not appear to be high local planning policy priorities. In addition, the number of people employed in farm-based agriculture only accounted for 1.1% of all employment in the Study Area. The vulnerability of the receptor is low since the land will be retained in the same ownership and the recoverability is high given agricultural uses are proposed to be retained on the site after construction.

Magnitude of impact

15.9.106 The impact on agricultural output is direct through the change of use of land and loss of employment and also indirect in terms of the GVA associated with any agricultural jobs lost as a result of the Project. The loss in agricultural output is outweighed by the economic output and jobs created by the Project.

15.9.107 The impact is predicted to be of regional spatial extent and medium-term continuous duration and the magnitude is considered to be **Low Adverse**.

Significance of effect

15.9.108 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Minor Adverse** which is not significant.

Operation and maintenance

15.9.109 Using the same assumptions as the construction stage (circa eight direct local FTE employees) the temporary loss of agricultural output would result in a reduction in GVA of approximately £10.9m over the operational and maintenance phase (37.5 years). After applying the appropriate discount rate this would equate to a real terms GVA loss of circa £6.0m.

15.9.110 However, the Project will include sheep grazing under the installation area of the solar array (838.5ha). In order to estimate the likely employment generated by the sheep grazing on site, a review of BRE's 'Agricultural Good Practice Guidance for Solar Farms' (2014) has been undertaken. This states "between 4 and 8 sheep/hectare may be achievable" on solar farms. On a worst case scenario basis the lower limit of 4 sheep per ha has been assumed.

15.9.111 Given that the sheep grazing will take place on 838.5 ha of land, this would equate to approximately 3,354 sheep grazing the solar areas of the site.

15.9.112 According to the Nix Farm Management Pocketbook (2024), a standard work day (SWD) is a general estimate of the farm labour requirement for a farm enterprise. A standard work year is defined as 2,200 hour and these total hours are converted into 275 notional 8 hour standard work days. In the Nix Farm Pocketbook, it is estimated that the amount of Standard Work Day's (SWD) required per head of sheep equates to 0.5. Subsequently, 3,354 sheep would require 1,677 SWD's or 6 direct local FTE job (rounded). This equates to a GVA of £8.7m for the full operational period. After applying the appropriate discount rate, this equates to a GVA of circa £4.8m,

15.9.113 When added to the GVA created by the operational phase of the Project (circa £30.3m) and the GVA associated with the sheep grazing (£4.8m), GVA lost by cessation of agricultural production is more than offset by the GVA created by the operational phase development (net increase in GVA of £29.1m).

15.9.114 i

15.9.115 It is also appropriate to consider the reduction in agricultural output over the operational period. Using the same assumptions applied at construction stage (circa £2.0m per annum) this would result in a loss of agricultural output of approximately £76.4m over the operational period. After applying the

appropriate discount rate this would equate to a real terms loss of output of £42.5m.

15.9.116 When factoring in the business rates generated by the Project (present day value of £35.6m), overall, this would equate to a net gain of £22.2m across the operational stage.

Sensitivity of receptor

15.9.117 The sensitivity of the receptor is considered to be **Medium**; the majority of the Site is classified as ALC Grade 3b (59%) and agricultural enterprises do not appear to be high local planning policy priorities. In addition, the number of people employed in farm-based agriculture only accounted for 1.1% of all employment in the Study Area. The vulnerability of the receptor is low since the land ownership will not change and will instead be leased to the Applicant and the recoverability is high given the alternative use proposed will generate an income.

Magnitude of impact

15.9.118 The impact on agricultural output is direct through the physical change of use of land and loss of employment and also indirect in terms of the GVA associated with any agricultural jobs lost as a result of the Project. There will be a small net gain in employment numbers as a result of the Project, and a small net gain in GVA. The magnitude of the impact is envisaged to be partly mitigated by the provision of community agriculture support initiatives alongside the Project.

15.9.119 The impact is predicted to be of regional spatial extent and long-term continuous duration and the magnitude is considered to be **Low Adverse**.

Significance of effect

15.9.120 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Minor Adverse** which is not significant.

15.9.121 However, given that loss of agricultural output is somewhat offset by the gain in output associated with sheep grazing, the residual significance of the effect is **Negligible**.

Decommissioning

Sensitivity of receptor

15.9.122 The sensitivity of the receptor is likely to be reduced as farms diversify away from traditional agriculture and increase their revenue streams from alternative sources. Therefore, the sensitivity is considered to be **Low**.

Magnitude of impact

15.9.123 The decommissioning effects are likely to be similar to the construction phase effects, with employment and GVA losses outweighed by the economic output

and jobs created by the Project. The magnitude is, therefore considered to be **Low Adverse**.

Significance of effect

15.9.124 The magnitude of the impact is low and the sensitivity of the receptor is low. The effect will, therefore, be **Negligible** which is not significant.

Change in Visitor Economy

15.9.125 Potential adverse effects may arise from impacts on the tourism economy, including the operation of nearby attractions and accommodation providers, as well as users of the PRoW network. During the construction and decommissioning phases, effects on tourism and recreation could arise from noise, visual and air quality effects of construction, whilst during the operational phase the effects are more associated with the visual impact of the Project. It is noted that there will be no loss of any Public Rights of Way as a result of the proposals.

Construction Phase

15.9.126 During the construction phase, the visual impact of construction equipment and the associated noise and traffic impacts has the potential to impact nearby tourism receptors.

15.9.127 Volume 1 Chapter 12: Traffic and Transport of the ES **[EN010147/APP/6.3]** concludes that there could be an impact on non-motorised users as a result of the construction, although not significant, but that the proposed mitigation limiting HGV movements within a Construction Traffic Management Plan will ensure this becomes negligible.

15.9.128 A Heritage Impact Assessment (Volume 3 Appendix 7.4 of the ES **[EN010147/APP/6.5]**) has been undertaken to review the potential for the Project to harm the significance of Blenheim Palace as a World Heritage Site (WHS). This has found that the construction, 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.

15.9.129 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.

15.9.130 Volume 1 Chapter 16: Human Health of the ES **[EN010147/APP/6.3]** has found that only minor adverse changes in the quality of the physical activity opportunity would be expected for a small minority of the population due to the temporary disruption during rerouting and proximity to construction works. Any adverse effect on health behaviours and outcomes is stated to be short-term

and reversed on completion of the construction work, with a longer-term benefit from an improved footpath network.

15.9.131 Volume Chapter 13: Noise and Vibration of the ES **[EN010147/APP/6.3]** has only identified minor adverse impacts in relation to the noise and vibration impacts associated with the construction stage. These impacts are, therefore, not significant in EIA terms.

15.9.132 Volume 1 Chapter 8: Landscape Visual Impact Assessment of the ES **[EN010147/APP/6.3]** states that Visual receptors on Public Rights of Way (PRoW) would obtain views of the temporary construction works from locations where there is no screening vegetation such as hedgerows or trees along the route and at breaks at field gates or gaps in vegetation cover. Views of the Project may be oblique to the Site and may only be gained by walkers on the approach to the Site or where the footpath runs alongside or within the Site.

15.9.133 The predicted magnitude of visual impact on users of the PRoW network would not be significant during the temporary construction phase. At a number of locations it is reported that due to the local topographical variation, it is anticipated that there would be no/limited appreciation of the construction site as a whole, with those parts of the construction site closed to the PRoW also obscuring views to wider parts of the construction site.

15.9.134 Notwithstanding the above, of the 55 Representative Viewpoints assessed as part of the Environmental Statement, it is concluded that there will be 12 Major adverse (significant) visual effects at winter Year 1 (following the Construction phase of the Project) only, from views available at Representative Viewpoints 5b, 5c, 13, 17, 25, 26, 32, 33, 38, 39, 50 and 54.

15.9.135 Although 12 significant effects have been identified, as detailed above, by Year 15 these are anticipated to be not significant. However, it is reasonable to assume that these effects would start to diminish by year 5.

15.9.136 Of the remaining 43 Representative Viewpoints, no other significant effects have been identified. On balance, it is considered that the quality and character of the landscape and visual resources would largely be maintained and would have the capacity to accommodate the Project without significant effects beyond those identified at a very local level or where it would be difficult to entirely mitigate visual effects. In addition, proposed planting would have a longer term benefit reinforcing the landscape character of the local landscape.

15.9.137 In order to assess the impact on users of footpaths in these locations, surveys were undertaken to assess the frequency and type (tourist or local) of users on these footpaths. The results of these surveys are discussed below.

15.9.138 Overall, 451 respondents took part in the PRoW Botley Farm Survey across three dates in summer 2024 to ensure a wide range of residents and visitors were interviewed. Fieldwork took place on Saturday 13th July, Wednesday 24th July and Monday 26th August (Public Holiday) between 7:00am and 7:00pm. At the locations identified above only 15 tourists (25% of total users) used the paths across the three days (5 per day on average) with 11 of these being cyclists. This would indicate that the paths are not well used for recreational tourism.

15.9.139 In addition to the above, the effect of construction works on the attractiveness of local holiday accommodation has also been considered. The baseline assessment (Appendix 15.1) **[EN010147/APP/6.5]** has found that there are currently over 1,000 properties available for rent in the wider Study Area on the short-term letting site Airbnb. However, of these, only 10 hotels and B&Bs and three other holiday accommodation rentals are located within the tourism Study Area and adjoin or could have views of the Site (within 2km radius). These businesses could experience some loss of custom whilst construction takes place either through direct noise and visual impact or indirect impacts on the surrounding tourism receptors such as the PRoW network. It is noted, however, that the majority of accommodation providers are located within the town of Woodstock. These are likely to experience less of a tourism impact associated with the visual and noise impact on the PRoW network given it is envisaged that a number of visitors will be visiting to see the medieval town in its own right and the tourism offering is not so heavily linked to the recreational enjoyment of the countryside. However, as detailed visitor data is not available (such as reason for and length of stay) for these accommodation providers, we have taken a precautionary approach and assumed that all holiday accommodation providers in the tourism Study Area would be equally impacted.

15.9.140 Research into occupancy rates of accommodation providers in the South East from Visit Britain Occupancy Survey 2023 shows that the most popular months for stays are June, July and September. Although there may be some impact on reduced tourist visitors staying in local accommodation this is likely to be balanced by the need for some construction workers to stay overnight. Detail on the requirement for temporary workers accommodation is discussed in the cumulative development section of **section 15.10.**

15.9.141 One final potential effect is in regard to the impact of traffic and disruption on visitor attractions. Volume 1 Chapter 12: Traffic and Transport of the ES **[EN010147/APP/6.3]** has considered the impact on driver delays caused by construction works or construction traffic (including temporary delays to public transport services) and found these to be negligible to minor adverse.

Sensitivity of receptor

15.9.142 Landscape is an important part of the tourism offer in the local area and, as such, any changes to the natural landscape could impact significantly on its appeal. In addition, tourism in the Study Area provides an important contribution to the local economy, providing approximately 36,969 jobs in the Study Area in 2022 and generating a total tourism value of £2.17 billion (Experience Oxfordshire 2022).

15.9.143 It is also understood that, in addition to the main tourist attractions, such as Blenheim, walking and cycling are popular tourist activities in the Study Area. However, footpath user surveys and data captured using bidirectional sensors on key footpaths around the Site have found these paths are not well used by visitors (approximately 5 users per day at locations discussed previously and 68 visitors in total across all locations over the 3 days) to the area. This indicates that the footpaths around the Site are not a major attraction for

tourists visiting the area, given this accounts for less than 0.01% of daily visitors to the Study Area (Experience Oxfordshire 2022).

15.9.144 In conclusion, the sensitivity of the receptor is considered to be **Medium**.

Magnitude of impact

15.9.145 The impact is both direct in terms of the visual and noise impacts of construction and indirect in terms of any effect of reduced visitor numbers on local jobs and spending in the local economy as well as via potential traffic impacts and congestion on the viability and attractiveness of visitor activities.

15.9.146 Whilst it is acknowledged that accommodation providers would benefit from construction worker stays, particularly in the winter months when occupancy levels drop, a number of peak construction period workers who are not residents of the area will likely stay in the larger urban centres outside the tourism Study Area but within 30-60 minutes' drive. Therefore, on a worst-case basis it has been assumed that there could be a loss in income for some of the accommodation providers in the tourism Study Area during the construction phase of the development. This is due to reduced attractiveness of visiting the area in terms of the visual and noise impact of the development directly at the accommodation provider and also on popular tourist walking and cycling routes.

15.9.147 In conclusion, the magnitude of the receptor is considered to be **Low Adverse**.

Significance of effect

15.9.148 The impact is predicted to be of local spatial extent and medium-term intermittent duration.

15.9.149 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect on the tourism Study Area is considered to be **Minor Adverse** which is not significant.

Operation and maintenance

15.9.150 No restrictions are envisaged to PRoW at operational stage and new permissive routes are proposed within the Site which are envisaged to improve public access across the site. Therefore, any impacts on the visitor economy at operational stage will relate to the effect of the visual change in landscape from agricultural fields to fields with ground mounted solar arrays.

15.9.151 Volume 1 Chapter 16: Human Health of the ES **[EN010147/APP/6.3]** has concluded that the visual changes due to the Project would contribute to subjective changes in the quality of the physical activity opportunity of the existing PRoW network affected by the Project. However, these are considered more likely to impact local residents than tourist visitors. In addition, the Project includes extensive enhancements to PRoW such as upgrading many key routes into greenways, providing visual screening, improved surfaces and signage. Once these measures are established over time, this is likely to result in longer-term positive outcomes in the uptake of physical activity and access to open space, which may have a positive impact on the uptake of recreational tourism with the study area population.

15.9.152 Volume 1 Chapter 8: Landscape & Visual Impact Assessment of the ES **[EN010147/APP/6.3]** states that the Project would not result in any significant harm to the landscape value of the Site.

Sensitivity of receptor

15.9.153 The sensitivity of the receptor is commensurate with the construction stage and thus remains **Medium**. This is because landscape is an important part of the tourism offer in the local area and as such any changes to the natural landscape could impact significantly on its appeal. However, user survey data has found that the PRoW network surrounding the Project is not a major tourist attraction.

Magnitude of impact

15.9.154 The impact is both direct in terms of the visual effect of the solar arrays and indirect in terms of any effect of reduced visitor numbers on local jobs and spending in the local economy.

15.9.155 The impact is predicted to be of regional spatial extent and long-term continuous duration. While the evidence base is not conclusive, the available research suggests that wider perceptions held by tourists in relation to climate change and renewable energy play a role in how tourists weigh up the positive and negative effects of renewable energy infrastructure and may influence their reactions. This means that, even in cases where a solar farm development may have an effect on characteristics of a tourism area that visitors value, the way that this effect is assessed by visitors (and reflected in future behaviour) is influenced by wider views and perceptions. The most recent Business, Energy & Industrial Strategy Public Attitudes Tracker (BEIS PAT) carried out in Spring 2024 found that 84% of people supported renewable energy as a general concept. Solar energy was the most supported form of renewable energy in the survey. Opposition to solar energy represented only 2% of those surveyed.

15.9.156 Although there has been little research into the tourism impact of large-scale solar Projects, the Welsh Government report produced by Regeneris (2014) *Study into the Potential Economic Impact of Wind Farms and Associated Grid Infrastructure on the Welsh Tourism Sector* found that there is little evidence that wind farms have had or are having a negative effect on tourism across Wales and the UK as a whole. Research also conducted in 2014, which reviewed the dynamic properties of the preferences for renewable energy sources, found that in terms of the visual effects of onshore renewable energy infrastructure, there is an increased preference for biomass and solar energy solutions relative to wind power. This suggests that the negative effects on tourism may be slightly lower for solar than for wind farms. This is supported by the latest BEIS PAT.

15.9.157 Given the existing literature which analyses public attitudes to renewable energy and the impacts on tourism, and also considering the landscape mitigation that will be provided, the magnitude of impact is considered to be **Low**.

Significance of effect

15.9.158 The magnitude of the impact is low and the sensitivity of the receptor is Medium. The effect will, therefore, be **Minor Adverse** which is not significant.

Decommissioning

Sensitivity of receptor

15.9.159 Sensitivity of receptor remains largely as per construction stage. It is assumed, however that the sensitivity of the receptor will be somewhat reduced given that the baseline context will have changed as a result of the Project. The sensitivity is, therefore, considered to be **Medium**.

Magnitude of impact

15.9.160 The decommissioning effects are likely to be similar to the construction phase effects. Given the absence of reliable baseline data at a realistic date in the future for decommissioning and given that the effects are likely to be similar in nature but lesser in magnitude, the magnitude is considered to be **Low Adverse**.

Significance of effect

15.9.161 The magnitude of the impact is low and the sensitivity of the receptor is Medium. The effect will, therefore, be **Minor Adverse** which is not significant.

Disruption to Travel Patterns

Construction Phase

15.9.162 Volume 1 Chapter 12: Traffic and Transport of the ES **[EN010147/APP/6.3]** has assessed the impact on driver and non-motorised user delays, fear and intimidation, severance and road safety during construction (operation and maintenance and decommissioning stages scoped out of the ES). All of the above impacts were found to be 'not significant' in EIA terms (see Table 12.40). Subsequently, study area residents are not expected to have travel patterns disrupted during construction.

Sensitivity of receptor

15.9.163 The vulnerability of the receptor is considered low given the high percentage of people in the Study Area who work from home or commute via foot. In addition, the recoverability is considered relatively high given the options for alternative travel routes via private car and the availability of rail as an alternative mode of transport in the local area.

15.9.164 The sensitivity of the receptor is **Negligible**.

Magnitude of impact

15.9.165 The impact is predicted to be of local spatial extent and medium-term intermittent duration. The magnitude is therefore considered to be **Minor Adverse or Negligible**.

Significance of effect

15.9.166 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Negligible**.

Decommissioning

15.9.167 The Decommissioning phase has been scoped out of Volume 1 Chapter 12: Traffic and Transport of the ES [EN010147/APP/6.3] on the basis that "*Vehicle movements generated during the decommissioning phase will not exceed those during the construction phase since the removal of materials does not need to be delicately transported and can be bulk loaded whilst some infrastructure will be retained in-situ. Given that some infrastructure will be left in-situ, this results in less transport requirement which results in fewer vehicle movements in comparison to the construction phase. Thus, it can be determined that the identification of significant effects resulting from traffic generated during the construction phase, would also apply to the decommissioning phase."*

15.9.168 Subsequently, within our assessment of disruption to travel patterns, we can assume that the impact at decommissioning will be in line with or less significant than during construction.

Sensitivity of receptor

15.9.169 The sensitivity of the receptor is not Projected to differ from the construction stage. Any change would likely reduce sensitivity with a Projected increase in remote working and better access to internet in rural areas over the intervening period. The sensitivity of the receptor is **Negligible.**

Magnitude of impact

15.9.170 The impact is predicted to be of local spatial extent and medium-term intermittent duration. The magnitude is, therefore considered to be **Minor Adverse or Negligible**.

Significance of effect

15.9.171 The magnitude of the impact is low and the sensitivity of the receptor is negligible. The effect will, therefore, be of **Negligible** significance, which is not significant.

Future monitoring

15.9.172 Monitoring the scale and type of local economic benefits that the Project realises would provide information about the success of particular measures

proposed, as well as improving the wider evidence base about the local economic benefits associated with similar scale ground mounted solar photovoltaic generating stations.

15.9.173 It is proposed that the monitoring would include the use of the Projects supply chain and employment records. Subject to obligations under the General Data Protection Regulation (GDPR), this would include anonymised information on the home and workplace locations of direct employees and additional supply chain and employment information from the main suppliers. This information would be made available to the local planning authority on request, again subject to GDPR obligations.

15.9.174 **Table 15.17** below outlines the proposed monitoring measures.

Table 15.17: Monitoring measures

Mitigation Number	Measure adopted	How the measure will be secured
15.9	Monitor supply chain and employment records. Monitoring of the proportion of local people (particularly within the local Study Area) who are not in employment, education or training (NEET), unemployed, have high job instability or low-income characteristics who access training and apprenticeship or good quality stable employment opportunities related to the Project. Monitoring would allow the benefit to be confirmed, support engagement of NEET populations with any relevant opportunities, and also allow further tailoring to target local vulnerable groups if required.	Appendix 15.2: Outline Skills, Supply Chain and Employment Plan **[EN010147/APP/6.5]**

15.10 Cumulative effects

Methodology

15.10.1 The socioeconomic CEA methodology has followed the methodology set out in Volume 1, Chapter 4: EIA methodology of the ES. As part of the assessment, all Projects and plans considered alongside the Project have been allocated into 'tiers' reflecting their current stage within the planning and development process.

- Tier 1
  - Under construction
  - Permitted application
  - Submitted application
  - Those currently operational that were not operational when baseline data were collected, and/or those that are operational but have an ongoing impact
- Tier 2
  - Scoping report has been submitted

- Tier 3
  - Scoping report has not been submitted
  - Identified in the relevant Development Plan
  - Identified in other plans and programmes.

15.10.2 This assessment is followed by all other relevant Projects, identified by tier.

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

15.10.4 A cumulative socioeconomic effect is most likely where a population is affected by multiple determinants and a large proportion of the same individuals within that population experience the combination of effects.

15.10.5 A high degree of spatial proximity is required for there to be the potential for cumulative effects for localised changes. In contrast, where there are more far-reaching effects in a determinant, there is greater opportunity for cumulative interactions between Projects.

15.10.6 In terms of socio-economic impact, it has been assessed that there will be no significant cumulative impacts. It is noted that no significant cumulative impact has been identified in terms of noise, visual impact or traffic which could impact on tourism.

Assessment of cumulative effects

15.10.7 Working with the local authorities, and on behalf of the Applicant, a shortlist of Tier 1 cumulative developments has been produced, ranging from solar farms to mixed use developments.

15.10.8 There are 30 Tier 1 developments which are within a 15km distance of the Order Limits. This ‘zone of influence’ was chosen to account for other solar developments in the region.

15.10.9 The 30 Tier 1 developments range from mixed use developments, leisure developments, solar farms and residential developments.

15.10.10 The Tier 1 list includes a range of solar farms, regardless of scale, as the supply of solar construction workers is lower than general construction workers due to its specialist nature. This may lead to greater competition for solar construction workers from solar sites.

Solar Farm Cumulative Developments

15.10.11 The construction employment generated from these developments has been assessed by calculating the cost for solar construction using IRENA Renewable Power Generation Costs (2022) of £704,000 per MW. This was possible for the nine cumulative solar farm developments which included a MW capacity in the development description. For the other two sites, an average cost estimate per hectare (derived from the other sites) was applied.

15.10.12 In order to estimate job creation; the estimated construction cost (Mw x £704,000) was divided by the average annual construction workers salary for the South East (the closest region to the Study Area) which was £34,078 taken

from the 2023 Annual Survey of Hours and Earnings (AHSE). This provided an estimate of the amount of construction workers years generated by each Project.

15.10.13 A displacement of 25% (para 15.9.29) was then applied to these numbers to arrive at a net construction employment number.

15.10.14 A leakage figure was not applied to provide the worst-case scenario for construction workers coming into the study area who may need accommodation. The net employment number was then divided by the number of construction years to get a net annual construction jobs figure for the cumulative solar developments.

15.10.15 The total net annual construction employment figure for the cumulative solar developments is estimated to be 9,461 as seen in **Table 15.18**, which also outlines the location and type of development alongside the estimated construction job creation.

Table 15.18: Cumulative Solar Development Locations and Estimated Employment Numbers

Map Number	Location	Solar Development Description	Gross Estimated Construction Years of Employment	After 25% Displacement	MW Capacity	Estimated Construction Period of Schemes	Estimated Jobs Created
18	OX25 3QQ	{13/01027/F - Rowles Farm, off A34, Bletchingdon, Oxford}	273	205	<50MW	0.5	**410**
19	OX15 4HE	{13/01197/F - Rickfield Farm, off South Newington Road, Milcombe}	207	155	<50MW	0.5	**310**
20	OX5 1PF	{14/00786/F - Flit Solar Farm, off Woodstock Road, Yarnton}	289	217	<50MW	0.5	**163**
21	OX25 6JJ	{15/00570/F - Hill Farm, Duns Tew}	103	77	<50MW	0.5	**154**
22	OX25 1PA	{20/00285/F - North of Ploughley Road and NW of railway line, Arncott}	1050	790	<50MW	0.5	**1,580**
23	OX3 9TT	{22/01682/F - Land north of Manor Farm, Noke}	558	418	<50MW	0.5	**836**
24	OX27 9AQ	{22/03873/F - Land north and adjacent to Mill Lane, Stratton Audley}	1510	1130	<50MW	0.5	**2,260**
9	OX29 4BH	{19/02516/FUL - Twelve Acre Farm - Solar Farm}	659	494	<50MW	0.5	**988**
10	OX20 1QG	{20/01817/FUL - Land Between Woodstock	103	77	<50MW	0.5	**154**

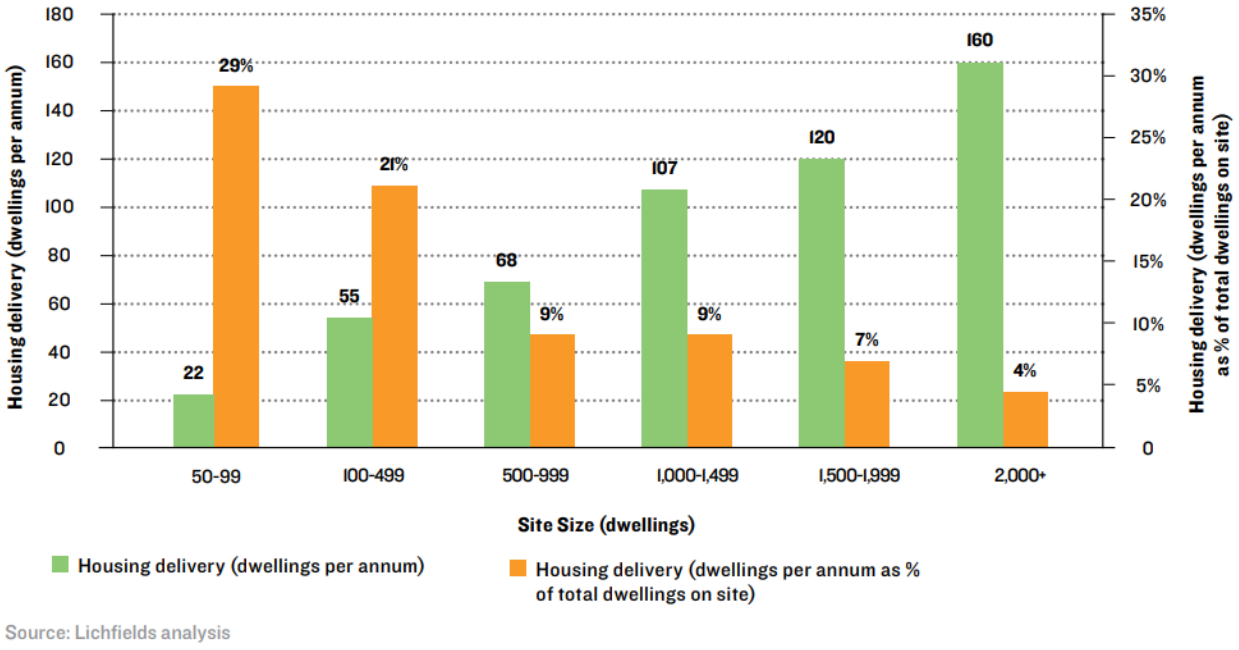
Map Number	Location	Solar Development Description	Gross Estimated Construction Years of Employment	After 25% Displacement	MW Capacity	Estimated Construction Period of Schemes	Estimated Jobs Created
		Sewage Works And B4027 - Solar Farm}					
11	OX29 8HF	{13/1277/P/FP - Salutation Farm - Solar Farm}	273	205	<50MW	0.5	**410**
12	OX29 6UN	{21/03711/FUL - Tar Farm Solar Farm}	1464	1,098	<50MW	0.5	**2,196**
TOTAL							**9,461**

Residential Cumulative Developments

15.10.16 For residential developments, the estimated cost of the Project was calculated using the most up to date Build Cost Information Service (BCIS) data for West Oxfordshire. This provides an average cost per square metre (£1,645) for estate housing in the area. To calculate construction cost, this cost per sqm was multiplied by the GIA of the residential development.

15.10.17 In some cases a cost plan was available for the cumulative schemes and in these instances this cost figure was used instead of BCIS.

15.10.18 The construction programme was then approximated based on research carried out by Litchfield's (2019) on the average construction period for different sized housing developments (see Figure 15.5 and Table 15.20 below).



Source: Lichfields analysis

Figure 15.5: Lichfields 2019 Build out Rate Analysis on Housing Delivery per Annum by Size

Table 15.19: Housing Construction Years

Housing Range	Housing Delivery per Annum	Total Construction Years
50 to 99	22	3
100 to 499	55	5
500 to 999	68	11
1,000 to 1,499	107	12
1,500 to 1,999	120	15
2,000+	160	13

15.10.19 The identified construction cost for each scheme was divided by the estimated construction period to arrive at a yearly construction cost figure. This construction cost per year figure was then divided by the average construction worker salary (as outlined in para 15.10.12) to give an estimate for the total jobs created by the cumulative schemes.

15.10.20 The HCA Additionality Guide states that “Housing” interventions at the district level have a 38% displacement rate, which differs from the solar displacement rate previously mentioned. A displacement percentage of 38% was applied to arrive at a net direct employment number. A leakage figure was not applied to provide the worst-case scenario for construction workers coming into the study area who may need accommodation.

15.10.21 The net annual construction employment figure for the cumulative residential-led developments is estimated to be **2,747**.

15.10.22 **Table 15.20** outlines the location and type of development alongside the estimated construction job creation.

Table 15.20: Cumulative Residential Development Locations and Estimated Employment Numbers

Map Number	Location	Residential Development Project	No of Dwellings	Gross Estimated Construction Jobs	After 38% Displacement	Estimated Construction Years	Estimated Annual Net Jobs
1	51.789979, -1.386588	{20/01734/OUT - Salt Cross Garden Village}	220	8,050	4,991	13	384
2	OX29 4EF	{15/00761/FUL - West Eynsham Strategic Development Area Eynsham Nursery}	77	387	240	3	80
3	OX29 4DF	{West Eynsham Strategic Development Area (Land west of Thornbury Road)}	160	367	227	5	45
4	51.849770, -1.331150	{16/01364/OUT - Land east of Woodstock}	300	1,098	681	5	136
5	OX20 1SE	{21/00189/FUL - Land north of Hill Rise, Woodstock – 180 dwellings}	180	659	408	5	82
6	51.867110, -1.342337	{21/00217/OUT - Land north of Banbury Road, Woodstock}	235	860	533	5	107
7	OX29 8BJ	{14/1234/P/OP - Land south of Witney Road, Long Hanborough}	169	618	383	5	77
8	OX7 3BX		120	549	340	5	68

Map Number	Location	Residential Development Project	No of Dwellings	Gross Estimated Construction Jobs	After 38% Displacement	Estimated Construction Years	Estimated Annual Net Jobs
13	OX5 2LF	{22/00747/OUT - Land at Bicester Road, Kidlington}	370	1,354	839	5	168
14	51.809978, -1.319331	{21/03522/OUT - West of Rutten Lane Yarnton}	540	1,976	1,225	11	111
15	OX5 3BA	{22/01715/OUT - Land south of Perdiswell Farm, Shipton Road}	500	1,830	1,134	11	103
17	OX5 1EA	{23/01233/OUT - OS Parcel 4347 East of Pipal Cottage, Oxford Road, Kidlington}	800	2,927	1,815	11	165
25	OX26 6WB	{21/04275/OUT - NW Bicester (circa 10ha solar farm as part of residential led scheme)}	3,100	11,344	7,033	13	541
26	OX5 1PF	{23/02098/OUT - Multi-phased residential-led mixed used development}	1,800	6,587	4,084	15	272
27	51.779300, -1.273887	{23/03307/OUT - Outline planning application for the residential development of up to 300 dwellings with associated	300	1,098	681	5	136

Map Number	Location	Residential Development Project	No of Dwellings	Gross Estimated Construction Jobs	After 38% Displacement	Estimated Construction Years	Estimated Annual Net Jobs
		infrastructure and open space (outline) and new access off the A44 (detailed)}					
28	OX5 1PA	{24/00657/OUT - Retention of existing garden centre and associated car parking. Outline application for creation of new vehicle access... proposed 10no. two storey dwellings... proposed day nursery... proposed 120no. units of retirement living…proposed parking and landscaping}	120	439	272	5	54
30	OX2 8JR	{18/02065/OUTFUL - Hybrid application for Northern Gateway}	480	1,756	1,089	5	218
TOTAL							**2,747**

Commercial Cumulative Developments

15.10.23 Out of the 30 cumulative developments, two were commercial-led developments, as outlined below in **Table 15.21**. The two schemes provided their construction employment numbers and construction durations.

15.10.24 The HCA Additionality Guide states that “Development” interventions at the district level have a 38% displacement rate, which differs from the solar displacement rate previously mentioned. A displacement percentage of 38% was then applied based on HCA estimates to arrive at a net direct employment number. A leakage figure was not applied to provide the worst-case scenario for construction workers coming into the study area who may need accommodation.

15.10.25 The net construction employment numbers were divided by the construction programme to get a net annual construction jobs figure.

15.10.26 The net annual construction employment figure for the cumulative commercial-led developments is estimated to be 1,355 as seen in **Table 15.21**.

Table 15.21: Cumulative Commercial Development Locations and Estimated Employment Numbers

Map Number	Location	Residential Development Project	No of Dwellings	Gross Estimated Construction Jobs	After 38% Displacement	Estimated Construction Years	Estimated Annual Net Jobs
29	51.799901, -1.275451	{24/00539/F - Erection of a stadium (Use Class F2)}	N/A	2,100	1,302	2	651
16	OX5 1RA	{23/00517/F - New Science Park West of junction with The Boulevard, Oxford Airport, Langford Lane}	N/A	2,270	1,407	2	704
TOTAL							**1,355**

Overall Cumulative Construction Workers Summary

15.10.27 Summarising the information above, a total net additional 13,563 construction workers have been identified (9,461 from solar developments; 2,747 from residential developments and 1,355 from commercial developments) across all 30 cumulative schemes. The split of workers is shown in **Figure 15.6** below.

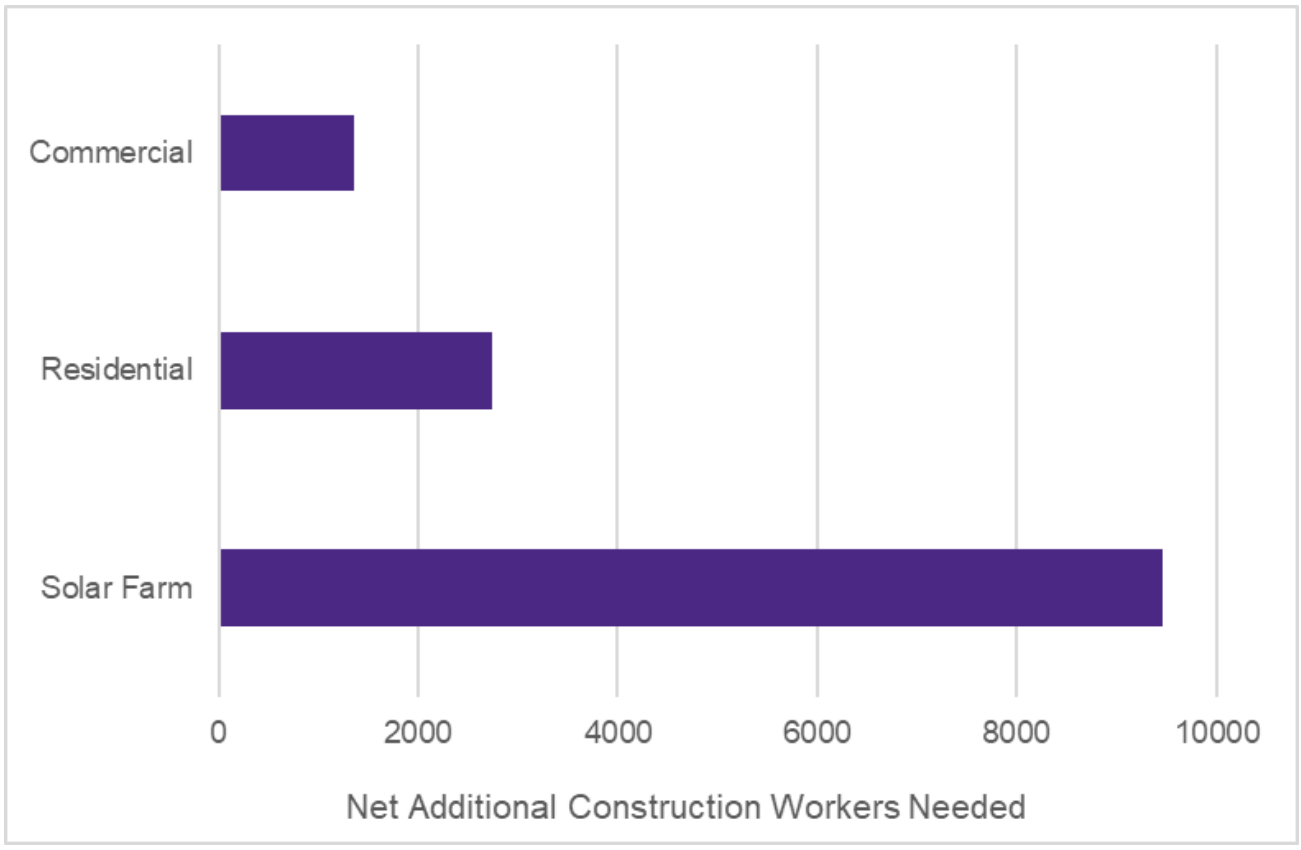


Figure 15.6: Total Number of Construction Workers across Cumulative Developments

Oxfordshire Construction Employment Landscape

15.10.28 According to ONS Employment by Occupation and Job Data (2023), Oxfordshire has a smaller proportion of total employment working in the construction industry, compared to the South East and United Kingdom. However, when taking into consideration the total number of construction jobs expected to be required as a result of the 30 cumulative developments (13,563), it is clear that Oxfordshire (15,000) has approximately 1,500 additional required construction worker, as seen in **Figure 15.7.** This would appear an adequate supply of construction workers for the needs of the cumulative developments.

Table 15.22: Number of Construction Workers in Oxfordshire, South East and UK

Occupation (2023-2024)	Oxfordshire (Numbers)	Oxfordshire (%)	South East (%)	UK (%)
Skilled Trades Occupations	30,100	7.7	8.7	8.7

Occupation (2023-2024)	Oxfordshire (Numbers)	Oxfordshire (%)	South East (%)	UK (%)
Process Plant & Machine Operatives	11,800	3.0	4.3	5.4
Jobs (2022)	**Oxfordshire (Numbers)**	**Oxfordshire (%)**	**South East (%)**	**UK (%)**
Construction	15,000	3.9	5.0	4.9

15.10.29 The Botley West Solar Farm will require a net direct FTE employment of 199 construction workers within the Study Area, which, when combined with the total expected cumulative development workers needed (13,563) this equates to 13,762. There is, therefore, a surplus of 1,238 construction workers when compared to the total number of construction workers available in Oxfordshire – this increases to at least 16,338 if all those in 'Skilled Trades' occupations were included in this figure.

15.10.30 Based on this it is not likely that construction workers will need to come from outside the Study Area or the general Oxfordshire region at large, meaning there will be less pressure on need for temporary workers accommodation.

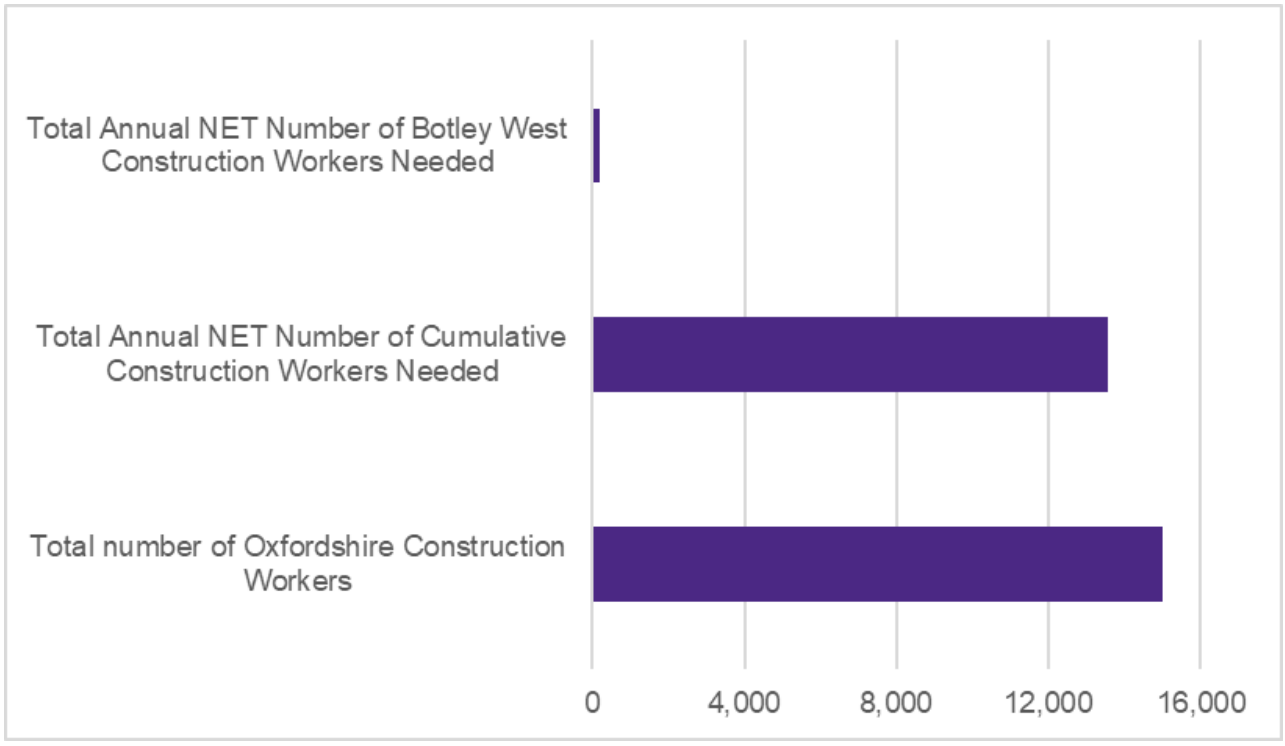


Figure 15.7: Total Number of Oxfordshire Construction Workers vs Total Number of Cumulative Development Workers Needed

15.10.31 As there is such a large provision of construction workers within Oxfordshire (15,000 construction workers or 30,000 skilled trade workers), it is likely these cumulative developments will hire locally.

15.10.32 This will lead to fewer construction workers being hired from a non-commutable distance, therefore decreasing the need for temporary accommodation for construction workers.

Accommodation Demand

15.10.33 Notwithstanding the fact that it is considered the majority of the construction workforce will come from the local area, an analysis of the results of The Economic Impact of Tourism Survey (2022) has been carried out to assess the demand for temporary accommodation from tourist visitors.

15.10.34 On this basis overnight trips are used as a proxy for accommodation demand. Data has been taken from 2019, 2021 and 2022. The average nights per trip across all 3 years is estimated to be 3.7.

15.10.35 **Table 15.23** shows that overnight trips have not yet reached their pre-COVID-19 highs.

Table 15.23: Oxfordshire Total Overnight Trips & Nights

	2019	2021	2022
Number Of Nights	10,533,000	5,117,000	9,133,000
Number Of Trips	2,843,000	1,576,000	2,285,000

15.10.36 **Figure 15.8** shows that approximately 60% of all overnight tourists used paid accommodation, compared to the c.40% who stayed with friends/relatives or in second homes.

15.10.37 As a greater proportion of tourists to Oxfordshire use paid accommodation, any demand from temporary construction workers could have a significant effect depending on the supply of paid accommodation.

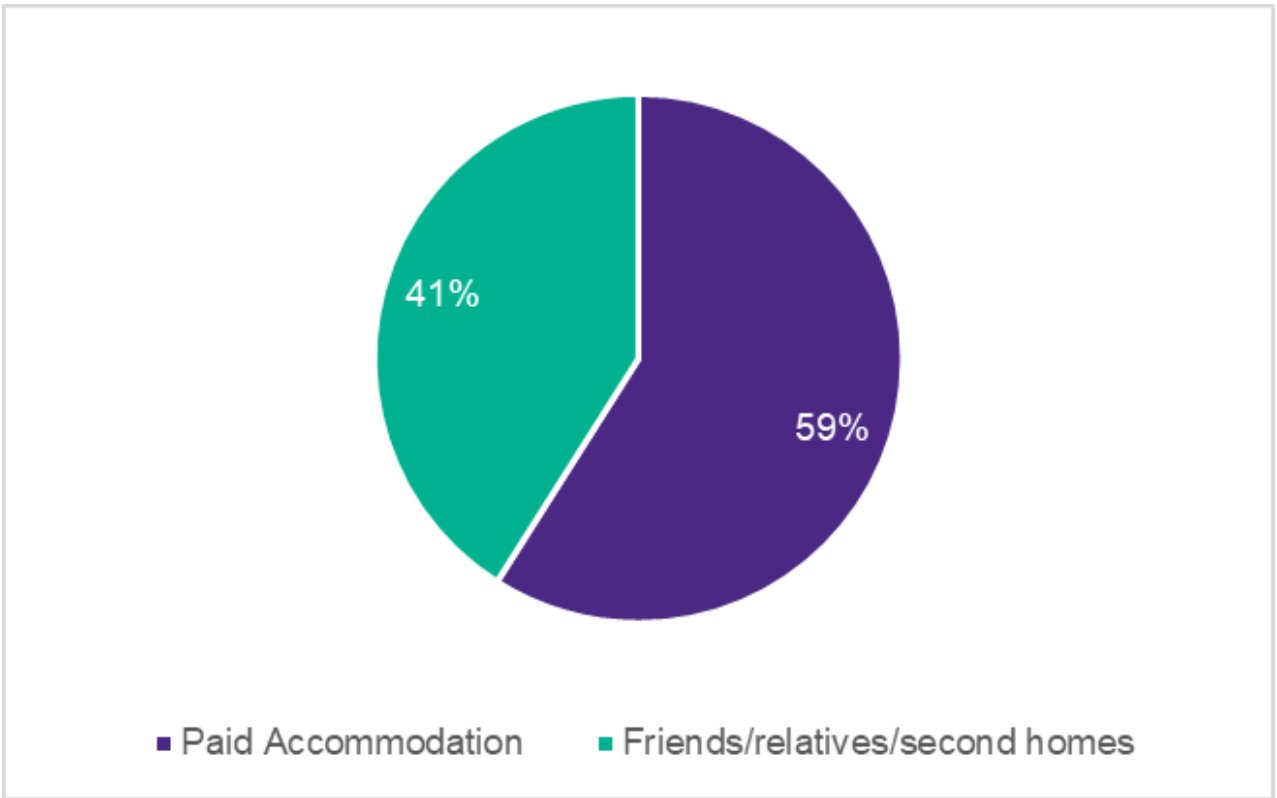


Figure 15.8: Types of Accommodation Used by Oxfordshire Tourists (2022)

15.10.38 On this basis, **Table 15.24** has been produced below to show the approximate number of overnight stays in paid for accommodation.

Table 15.24: Oxfordshire Overnight Paid Trips & Nights

	2019	2021	2022
Number Of Nights	6,214,470	3,019,030	5,388,470
Number Of Trips	1,677,370	929,840	1,348,150

15.10.39 The total number of overnight stays in 2022 was c. 5.38 million or c.449,000 per month.

Temporary Accommodation Demand

15.10.40 Although a total of 13,762 annual net direct construction workers has been identified as a result of the cumulative developments (13,563) and Botley West Solar Farm (199), Oxfordshire has a minimum of 1,200 and up to 16,000 (depending if the 'Skilled Trade Workers' are included as construction workers) more construction workers meaning it is possible that all workers could come from within the Study Area and thus wouldn't require any temporary accommodation.

15.10.41 The CITB Workforce Mobility and Skills in the UK Construction Sector (2022) report claims that 46% of construction workers working in the region do so because they grew up there/have always lived there.

15.10.42 This implies that 54% of the 13,762 (7,431) cumulative development and BWSF workers will either commute from neighbouring regions and return home or commute from neighbouring regions but stay in temporary accommodation in Oxfordshire.

15.10.43 The CITB report (2022) goes on to say that within the South East of the UK (Oxfordshire's region) 7% of workers are in temporary accommodations.

15.10.44 Applying 7% to the 7,431 workers who may be commuting to site, this would equate to 520 workers who may need to stay in temporary accommodation.

Accommodation Supply

15.10.45 According to the Oxfordshire Visitor Economy Vision & Destination Management Plan 2023-2028, there are 1,000 visitor accommodation providers with around 36,000 bedspaces in Oxfordshire. Hotels are said to have a 79% occupancy rate.

15.10.46 There are 3,728 active rentals via short-term rental websites, of which there is an occupancy rate of 59%, as seen in **Figure 15.9.**

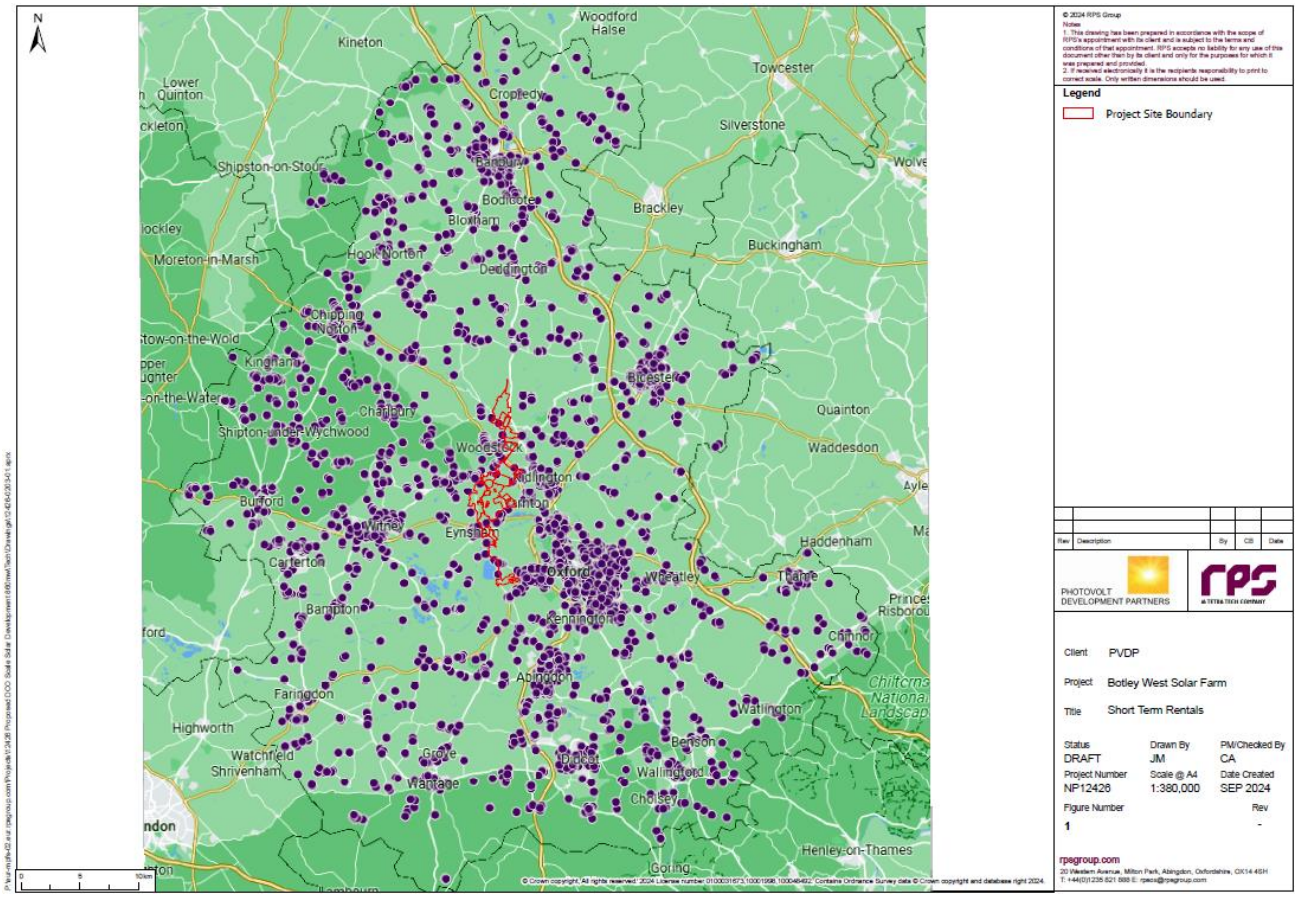


Figure 15.9: AirDNA Active Short Let Rentals in Oxfordshire (July 2024)

15.10.47 **Table 15.25** below shows the occupancy of accommodation across the year taken from the Visit Britain Occupancy Survey (2023). It highlights that in the summer months there are less available rooms compared to other months, due to higher demand.

Table 15.25: South east England Occupancy and Estimated Available Oxfordshire Rooms (2023)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
Occupancy Rate	64%	72%	74%	77%	79%	84%	86%	82%	84%	78%	75%	70%	77%
Room Availability Rate	36%	28%	26%	23%	21%	16%	14%	18%	16%	22%	25%	30%	23%
Rooms Available	12,960	10,080	9,360	8,280	7,560	5,760	5,040	6,480	5,760	7,920	9,000	10,800	8,250

15.10.48 Applying the worst-case scenario, by utilising the highest occupancy rate (July at 86%) to the fewest number of bed spaces (36,000) would suggest that there are a minimum of 5,040 available bed spaces at any given point in any given year.

15.10.49 This means there are circa ten times the amount of available Oxfordshire bed spaces compared to the 520 construction workers from the BWSF

development and 30 Cumulative Developments who are estimated to potentially need them.

15.10.50 On that basis Oxfordshire has a significant supply of accommodation to temporarily house construction workers employed in connection with the Project or other cumulative developments.

15.11 Transboundary effects

15.11.1 It is concluded that the Project would not present a significant effect, in isolation or cumulatively, to the socio-economics output of a European Economic Area State. Assessment of transboundary assessment has therefore not been carried out.

15.12 Inter-related effects

15.12.1 Inter-relationships are the impacts and associated effects of different aspects of the Project on the same receptor. The potential for project lifetime effects that occur throughout more than one phase of the Project (construction, operation and maintenance, and decommissioning), to interact to potentially create a more significant effect on a receptor has been considered, however, the impacts would be mainly beneficial in regards to the GVA impact of employment and skills generation and would not be considered significant in EIA terms.

15.12.2 In terms of receptor led effects; these predominantly relate to the links between tourism and visual effects and agricultural land use and employment. These have been assessed within the relevant sections above and are not considered significant in EIA terms.

15.13 Summary of impacts and monitoring

15.13.1 Information on socioeconomics within the Study Area was collected and informed by a review of relevant evidence sources, including scientific literature, baseline data, policy and legislation and EIA scoping.

15.13.2 **Table 15.26** presents a summary of the potential impacts and residual effects in respect to socioeconomics. The impacts assessed include:

- Unemployment;
- Economic Output;
- Skills & Qualifications;
- Agricultural Output;
- Changes to Visitor Economy;
- Disruption to Travel Patterns.

15.13.3 It is concluded that there will be no significant adverse effects on socioeconomics during the construction, operation and maintenance or decommissioning phases of the Project.

15.13.4 The impact of employment generation on unemployment rates in the Study Area is assessed to be moderately beneficial at construction and decommissioning phases and minor beneficial at the operational and maintenance phase. The impact of providing education and skills benefits as part of a targeted employment and skills plan is assessed to have minor beneficial impacts at construction and operation phases. In addition, the direct investment is assessed to have a minor beneficial impact across all phases of the Project.

Table 15.26: Summary of potential environmental effects and monitoring

Description of impact	Phase[a] C	O	D	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
The impact of employment generation on unemployment rates in the Study Area.	✓	✓	✓	C: Medium Beneficial O: Low Beneficial D: Medium Beneficial	C: Medium O: Medium D: Medium	C: Moderate Beneficial O: Minor Beneficial D: Moderate Beneficial	Targeted scheme of access to construction training and apprenticeships	n/a	See **Table 15.17**
The impact of direct investment, supply chain investment and employment generation.	✓	✓	✓	C: Medium Beneficial O: Low Beneficial D: Low Beneficial	C: Low O: Low D: Low	C: Minor Beneficial O: Minor Beneficial D: Minor Beneficial	None	n/a	TBC
The impact of directed skills and training as part of a skills and employment plan on existing skills and qualifications.	✓	✓	✓	C: Low Beneficial O: Low Beneficial D: Negligible	C: Low O: Low D: Low	C: Minor Beneficial O: Minor Beneficial D: Negligible	None	n/a	See **Table 15.17**
The impact of the change of use on agricultural output.	✓	✓	✓	C: Low Adverse O: Low Adverse D: Low Adverse	C: Medium O: Medium D: Low	C: Minor Adverse O: Minor Adverse D: Negligible	Provision of arable land for sheep grazing, small scale horticultural production areas, for use by community food growing groups and an area of up to 30 hectares provided for community food groups.	C: Minor Adverse O: Negligilble D: Negligible	

Description of impact	Phase[a] C	O	D	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
The impact of traffic disruption, changes to visual amenity, noise impacts and restrictions to access on the visitor economy.	✓	✓	✓	C: Low Adverse O: Low Adverse D: Low Adverse	C: Medium O: Medium D: Medium	C: Minor Adverse O: Minor Adverse D: Minor Adverse	Make retained and new routes through the arrays appealing to people to encourage their use by providing: information boards (with details of new routes); wildflowers and hedgerows (for visual screening); children's fun trails and education boards (e.g. on wildlife, heritage and solar energy). Landscape Masterplan will be secured as a requirement of the DCO which will provide for the creation of woodland belts, and reinforcement of existing field boundary hedgerows as well as planting of individual trees.	C: Minor Adverse O: Negliglble D: Minor Adverse	
The impact of construction works on travel patterns.	✓		✓	C: Minor Adverse or Negligible D: Minor Adverse or Negligible	C: Negligible D: Negligible	C: Negligible D: Negligible	Advertise lane closures in advance so road users are forewarned and can manage commute to work effectively.	n/a	

[a] C=construction, O=operational and maintenance, D=decommissioning

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