



One Earth Solar Farm

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Volume 2: Aspect Chapters

Chapter 17: Socio-Economics

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Glossary

Term	Definition
Host Authorities	Bassetlaw District Council, West Lindsey District Council, Newark and Sherwood District Council, Nottinghamshire County Council and Lincolnshire County Council

List of Abbreviations and Acronyms

Term	Definition
BRES	Business Register and Employment Survey
CASE	Culture and Sport Evidence
CEBR	Centre for Economics and Business Research
DCO	Development Consent Order
DEMP	Decommissioning Environmental Management Plan
EIA	Environmental Impact Assessment
ES	Environmental Statement
FTE	Full Time Equivalent
GHG	Greenhouse Gases
GVA	Gross Value Added
ha	Hectares
HCA	Homes and Communities Agency
IMD	Index of Multiple Deprivation
km	Kilometre
LEMP	Landscape and Ecology Management Plan
LSOA	Lower-Layer Super Output Area
m	Metre
MSOA	Middle-Level Super Output Area
MW	Megawatt
oCEMP	Outline Construction Environmental Management Plan
ONS	Office for National Statistics
PRoW	Public Right of Way

17. Socio-Economics

- 17.1.1 This Chapter of the Environmental Statement (ES) has been prepared by Logika and presents an assessment of the likely significant socio-economic effects of the Proposed Development.
- 17.1.2 A description of the methods used in the assessment is set out in this Chapter. This is followed by a description of the relevant baseline conditions, future baseline conditions and sensitive receptors, together with an assessment of the likely significant effects of the Proposed Development during construction, operation and maintenance, and decommissioning. Consideration of the likely significant environmental effects has been undertaken throughout the design of the Proposed Development. Specific environmental measures relevant to Socio-Economics have been identified and have been considered as part of the assessment. To conclude, a summary of the assessment is presented. Details of the cumulative effects assessment is presented separately within **ES Volume 2, Chapter 18: Cumulative Effects [EN010159/APP/6.18]**.
- 17.1.3 As was defined by the Scoping Opinion (see **ES Volume 3: Scoping opinion [EN010159/APP/6.23]**), the following are the likely significant environmental aspects considered within this chapter:
- > Local economy (during construction, operation and maintenance, and decommissioning);
 - > Employment (during construction, operation and maintenance, and decommissioning);
 - > Public Rights of Way (during construction, operation and maintenance, and decommissioning); and
 - > Tourism (during construction, operation and maintenance, and decommissioning).
- 17.1.4 This Chapter is supported by the following figures located within **ES Volume 3: Figures Supporting Volumes 1 and 2 [EN010159/APP/6.20]** and further detailed information contained within the following appendices located within **ES Volume 3: Technical Appendices Supporting ES Volumes 1 and 2 [EN010159/APP/6.21]**:
- > **ES Volume 3 [EN010159/APP/6.20]: Figures**
 - **Figure 17.1:** Order Limits and LSOA Boundaries
 - **Figure 17.2:** Order Limits, District and Regional Boundaries
 - **Figure 17.3:** Claimant Count Unemployment Trends (2010 to 2024) (Absolute Numbers)

- **Figure 17.4:** Claimant Count Seasonal Trends (2023) (Absolute Numbers)
- **Figure 17.5:** Benefit Claimants (% of population)
- **Figure 17.6:** Employment Trends 2015 – 2022 by Industry
- **Figure 17.7:** Distribution of Current Employment within the Order Limits
- **Figure 17.8:** Index of Multiple Deprivation (2019)
- **Figure 17.9:** Public Rights of Way
- **Figure 17.10:** Local Amenities and Tourist Attractions
- > **ES Volume 3 [EN010159/APP/6.21]:** Appendices
 - **Appendix 17.1:** Summary of Legislation, Policy and Technical Guidance
 - **Appendix 17.2:** Landowner Survey

17.2 Relevant Legislation, Policy and Technical Guidance

17.2.1 There is no specific legislation relevant to assessing socio-economic impacts. However, this assessment has been undertaken with regard to the following planning policy and guidance.

- > Policy
 - Overarching National Policy Statement for Energy (EN-1) (2024)¹
 - National Policy Statement for Renewable Energy Infrastructure (EN-3) (2024)²
 - National Policy Statement for Electricity Networks Infrastructure (EN-5) (2024)³

¹ Department for Energy Security & Net Zero (2024) Overarching National Policy Statement for Energy (EN-1). Available: https://assets.publishing.service.gov.uk/media/64252f3b60a35e00120cb158/NPS_EN-1.pdf

² Department for Energy Security & Net Zero (2024) National Policy Statement for Renewable Energy Infrastructure (EN-3). Available: https://assets.publishing.service.gov.uk/media/64252f5f2fa848000cec0f52/NPS_EN-3.pdf

³ Department for Energy Security & Net Zero (2024) National Policy Statement for Electricity Networks Infrastructure (EN-5). Available: <https://assets.publishing.service.gov.uk/media/65a78a5496a5ec000d731abb/nps-electricity-networks-infrastructure-en5.pdf>

- National Planning Policy Framework (NPPF) (2024)⁴
- Newark and Sherwood Amended Core Strategy (2019)⁵
- Central Lincolnshire Local Plan (2023)⁶
- Bassetlaw Local Plan (2024)⁷
- > Technical Guidance
 - The Green Book, HM Treasury⁸
 - Additionality Guide⁹

17.3 Assessment Methodology and Significance Criteria

The Study Area

- 17.3.1 The Order Limits comprises an area of approximately 1,409 hectares (ha) of land, mainly consisting of agricultural fields, located to the east and west of the River Trent. The Order Limits extends broadly between the A57 in the north, toward the villages of High Marnham and South Clifton to the south, Skegby to the west and toward Thorney to the east. At its maximum, the Order Limits extends approximately 4.5 km in a north-south direction and approximately 8 km in an east-west direction.
- 17.3.2 The Order Limits falls across two county boundaries and three local district authorities. Approximately 1,209 ha of the Order Limits falls within Nottinghamshire County Council and the remaining 206 ha of the Order Limits falls within Lincolnshire County Council. The Order Limits also extends across three district authority administrative boundaries, these being Newark and

⁴ Ministry of Housing, Communities & Local Government (2024) National Planning Policy Framework, [Online], Available: <https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf>

⁵ Newark and Sherwood District Council (201) Amended Core Strategy. Available: <https://www.newark-sherwooddc.gov.uk/media/newark-and-sherwood/images-and-files/planning-policy/pdfs/core-strategy/ACS2019.pdf>

⁶ Central Lincolnshire Joint Strategic Planning Committee (2023) Local Plan. Available: <https://www.n-kesteven.gov.uk/sites/default/files/2023-04/Local%20Plan%20for%20adoption%20Approved%20by%20Committee.pdf>

⁷ Bassetlaw District Council (2024) Bassetlaw Local Plan. Available: <https://www.bassetlaw.gov.uk/media/gn1kjm1b/adopted-bassetlaw-local-plan-2020-2038.pdf>

⁸ HM Treasury (2024) The Green Book. <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government/the-green-book-2020>

⁹ Homes and Communities Agency (2014) Additionality Guide. Available: https://assets.publishing.service.gov.uk/media/5a7ec4b9e5274a2e87db1c92/additionality_guide_2014_full.pdf

Sherwood District Council, West Lindsey District Council and Bassetlaw District Council.

- 17.3.3 When considering baseline social and economic conditions and assessing the effects on socio-economics (such as additional job creation), the spatial levels as described below in **Table 17.1** and **ES Volume 3, Figure 17.1: Order Limits and LSOA Boundaries [EN010159/APP/6.20]** to **ES Volume 3, Figure 17.2: Order Limits, District and Regional Boundaries [EN010159/APP/6.20]** have been used. This area represents the most appropriate statistical fit.

Table 17.1 Spatial Levels

Spatial Level	Study Area
Order Limits	The area within the boundary of the Order Limits (see the Order Limits boundary in Figure 3.1 (ES Volume 3: Figures Supporting Volumes 1 and 2 [EN010159/APP/6.20])). Illustrated in Figure 17.1 (ES Volume 3: Figures Supporting Volumes 1 and 2 [EN010159/APP/6.20]) .
Local Area	<p>An area comprising four Lower-Layer Super Output Areas (LSOA) that the Order Limits intersects. Illustrated in Figure 17.1 (ES Volume 3: Figures Supporting Volumes 1 and 2 [EN010159/APP/6.20]). Where this is not available, data for Districts (see below) will be used. Illustrated in Figure 17.2 (ES Volume 3: Figures Supporting Volumes 1 and 2 [EN010159/APP/6.20]).</p> <p>Note: LSOAs typically contain 400-1,200 households. The combined LSOA area covers a larger area than the Order Limits but is the closest area for which published socio-economic data is available. At smaller areas, published socio-economic data is typically prone to a greater margin for error. As such it presents a broad approximation of socio-economic characteristics in and around the Order Limits itself.</p> <p>The four LSOAs where the Order Limits is located being: Bassetlaw 015D, Bassetlaw 015F, Newark and Sherwood 004C and West Lindsey 007C.</p>
District Areas / Three Districts	The Order Limits falls within three District Council areas (Bassetlaw, Newark and Sherwood and West Lindsey).
Labour catchment area	The area within which a majority of the existing workforce in the Local Area lives (i.e. the place of residence of those whose place of employment is within the Local Area). This indicates the approximate area within which new employees at the Order Limits may be drawn. This is investigated with reference to Census data in Table 17.6 .
Region	East Midlands (illustrated in Figure 17.2 (ES Volume 3: Figures Supporting Volumes 1 and 2 [EN010159/APP/6.20])).
National	England

- 17.3.4 **Table 17.2** describes the Study area considered for each of the socio-economic impacts considered in this assessment and the rationale for using these areas.

Table 17.2 Study Area by Impact

Impact	Study Area	Rationale
Contribution to net Zero and Greenhouse Gas (GHG) emission reduction ¹⁰	National	Such effects are not considered in detail in this chapter but in greater detail in ES Volume 2, Chapter 14: Carbon and Climate Change [EN010159/APP/6.14] , the Proposed Development is expected to materially contribute toward GHG emission reductions with the associated benefits to current and future generation of electricity. Given the role of Nationally Determined Contributions (NDCs) under the Paris Agreement, such effects are considered at a national level ¹¹ .
Employment and Local Economy	The Order Limits, LSOA, District, labour catchment area and Regional levels.	Potential for likely significant effects of the Proposed Development include changes in employment within the Order Limits during construction, operation (including maintenance) and decommissioning. This might result from changes in land use as well as additional jobs and training opportunities created via the Proposed Development. Such changes will also be considered at Local Area District and Regional levels for context. Consideration is also given to the indirect effects in supply chains the wider economy using economic multipliers. Note that whilst we consider effects on the economy (i.e. to businesses this is primarily assess through looking at possible effects on employment. We do not provide a quantitative estimate of economic effects, using Gross Value Added or other measurements of economic output, for example) given insufficient data, particularly at the local level and within the Order Limits.
Public Rights of Way (PRoW)	Area within 500 m of the Order Limits.	Potential for likely significant effects relate to changes in the availability of PRoWs through temporary closures during construction and the benefits of new permissive paths during operation and maintenance. This will mainly be within the Order Limits boundary, but usage of routes close to the Order Limits may also be indirectly impacted.
Demand for accommodation from construction workers	The Local Area, and labour catchment area	Potential for likely significant effects on accommodation providers/business owners from temporary increase in demand for local accommodation during construction of the Proposed Development.

¹⁰ The impacts on GHG emissions and climate change are not assessed further in this chapter (see ES Volume 2, Chapter 14: Carbon and Climate Change [EN010159/APP/6.14]), but it is important to acknowledge the link these impacts have to the socio-economic impacts of the Proposed Development.

¹¹ Department for Energy Security and Net Zero (2022) UK's Nationally Determined Contribution. Available: Once operational the Proposed Development includes various enhancement measures including permissive paths to create new routes connecting the villages. At this stage approximately 6 km of permissive paths are proposed. To the west of the River Trent, combined with the existing PRoW network the permissive paths would create a circular route for pedestrians extending for approximately 5.6 km.

Impact	Study Area	Rationale
Tourism – recreational/leisure facilities and open space ¹²	The Local Area	Potential for likely significant effects relating to the change in use of visitor attractions, recreation and community facilities within and close to the Order Limits will be considered.

Establishing the Baseline

Existing Baseline

17.3.5 Baseline socio-economic data has been gathered to guide the assessment of socio-economic impacts described in **Table 17.2**. In addition to satellite and street view imagery, the following published data sources have been used to establish the existing socio-economic conditions within the relevant study areas:

- > 2011¹³ and 2021¹⁴ Census Data;
- > Labour Force Survey¹⁵;
- > Annual Population Survey¹⁶;
- > Business Register and Employment Survey¹⁷ all available via Office for National Statistics Nomis¹⁸;
- > Land Use and Livestock¹⁹;

¹² For this assessment, recreational, leisure and tourism facilities, and the potential effects on the users of them, are grouped together. Other than the presence of these facilities, baseline data are not readily available for the Local Area. It has been assumed that these facilities are well used to ensure the assessment of potential effects is sufficiently robust.

¹³ Office for National Statistics (2011) 2011 Census. Available: <https://www.ons.gov.uk/census/2011census/2011censusdata>

¹⁴ Office for National Statistics (2021) 2021 Census. Available: <https://www.ons.gov.uk/census>

¹⁵ Office for National Statistics (2022) Labour Force Survey. Available: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologies/annualpopulationsurveyapsqmi>

¹⁶ Office for National Statistics (2022) Annual Population Survey. Available: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologies/annualpopulationsurveyapsqmi>

¹⁷ Office for National Statistics (2022) Business Register and Employment Survey. Available: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologies/annualpopulationsurveyapsqmi>

¹⁸ Office for National Statistics (2024) Nomis. Available: <https://www.nomisweb.co.uk/>

¹⁹ Department for Environment, Food and Rural Affairs (2022) Structure of the agricultural industry in England and the UK at June 1 2022. Available: <https://assets.publishing.service.gov.uk/media/62c40b06e90e077485f509d5/structure-june-eng-localauthority-05jul22.ods>

- > English Indices of Deprivation²⁰;
- > Ordnance Survey accessed through FootPathMap²¹ ;and
- > Great Britain Tourism Survey²².

17.3.6 In addition to the above publicly available sources, a project specific Landowner Survey (of the owners of agricultural property within the Order Limits) was undertaken to determine the number and nature of the current employment on site. Specifically, all owners of agricultural property within the Order Limits were asked how many acres of land they own within the Order Limits, how many people are employed (either part time or full time), how many hours do they work and in what capacity. Further details of the questions and responses are presented in **ES Volume 3, Appendix 17.2: Landowner Survey [EN010159/APP/6.21]** and the assumptions and limitations are discussed further in paragraph 17.3.40²³.

17.3.7 Recreational and community facilities considered in this assessment include village halls, churches and pubs. Tourism sites and visitor amenities include caravan and campsites. PRow have been used as a proxy for outdoor recreation and access to green space. Establishing a baseline for recreational and community facilities and tourist sites in the Local Area has been limited to the use of satellite and street view imagery to identify sensitive locations (i.e. the aforementioned facilities and spaces), where members of the public making use of these locations may be affected by the construction, operation and maintenance and decommissioning of the Proposed Development. Quantitative data on the current usage of these facilities and spaces are not available for the Local Area. Similarly, the usage data for PRow are unavailable and, as discussed in paragraph 17.3.25, were deemed to be unreliable.

Future Baseline

17.3.8 Future baseline socio-economic conditions within the study area have also been considered. Future population projections have been sourced from the ONS²⁴

²⁰ Ministry of Housing, Communities and Local Government (2019) English Indices of Deprivation. Available: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019>

²¹ FootPathMap (2025) Available: <https://footpathmap.co.uk/help/>

²² Visit England (2024) Great Britain Tourism Survey. Available: <https://www.visitbritain.org/media/2973/download?attachment>

²³ As acknowledged above for tourism and leisure, baseline data on the usage of PRow are not readily available for the Local Area. It has been assumed that they are heavily used to ensure the assessment of potential effects is sufficiently robust.

²⁴ Office for National Statistics (2020) Population projections for local authorities: Table 2. Available: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/localauthoritiesinenglandtable2>

and future significant developments in the Local Area via examination of the relevant local plans^{25 26 27}.

Identifying Receptors and Receptor Sensitivity

Employment and Local Economy

- 17.3.9 In this chapter, effects are categorised based upon the relationship between the impact and the “receptors” (i.e. populations at the different spatial scales) in question. Based on baseline data, the sensitivity of the population(s) in question is considered, with reference to the type, scale and duration of effect. For example, in an area with higher than average unemployment, the population may be more sensitive to net losses of employment than elsewhere. Given socio-economic characteristics are dynamic and change over time, where relevant effects have been compared against prevailing trends and the scale of change has been examined in comparison with what that population has experienced before.
- 17.3.10 The effects of the Proposed Development may include effects on businesses and hence the local economy. The focus of this analysis is socio-economics, where the receptors are people. So, in this chapter we examine changes in terms of jobs to employers (i.e. business owners) as well as employees within the labour catchment area of the Proposed Development.
- 17.3.11 The labour catchment area represents the area within which those employed for the Proposed Development are likely to live. At the same time businesses and their employees in all areas may benefit directly or indirectly from the expenditure and additional business opportunities along the supply chain associated with the investment the Proposed Development represents. They may benefit where there is an overall increase in demand and employment opportunities associated with the Proposed Development and may be adversely affected by any losses in demand and employment.
- 17.3.12 Sensitivity to changes in employment have been assessed with regard to sectoral employment trends and labour market data. The baseline assessment (as presented in Section 17.4) indicates that employment growth in the three districts was similar to the regional rates of growth between 2015-2022). Unemployment rates in the Local Area are low and relatively stable (see **ES Volume 3, Figure 17.3: Claimant Count Unemployment Trends (2010 to 2024) (Absolute**

²⁵ Bassetlaw District Council (2014) Bassetlaw Site Allocations Preferred Options. Available: <https://www.bassetlaw.gov.uk/media/2034/sapo.pdf>

²⁶ Newark & Sherwood District Council (2013) Allocations & Development Management Development Plan Document (DPD). Available: <https://www.newark-sherwooddc.gov.uk/media/newark-and-sherwood/images-and-files/planning-policy/pdfs/allocations-development-management-options-report/20161205AdoptedAllocationsDevelopmentManagementDPD.pdf>

²⁷ Central Lincolnshire Joint Strategic Planning Committee (2023) Adopted Central Lincolnshire Local Plan. Available: <https://www.n-kesteven.gov.uk/central-lincolnshire/adopted-policies-map-interactive-map>

Numbers) [EN010159/APP/6.20]), with unemployment rates in the three Districts lower than regional and national patterns (although we note there is evidence, that unemployment increased slightly at the end of 2023). Of the jobs in the Local Area, agriculture represents only a small proportion (0.6%) and although the data is more uncertain appears to have remained relatively stable in recent years (see **Table 17.12**), suggesting that demand for agricultural workers is not notably increasing. At the district level, agricultural jobs increased 10% between 2015 and 2022, which is greater than the all-sector average of 6.9%, suggesting some increase in jobs demand at the district level. Overall, given low unemployment rates, a relatively small proportion of the workforce employed in agriculture locally– but growth at the District level , receptor sensitivity is rated as low to moderate.

Public Rights of Way

- 17.3.13 The receptors in this case are likely primarily local residents who use the PRoW and cycling route for leisure and recreation. A proportion of users may travel into the Local Area for this purpose, to walk, cycle or use leisure craft on the River Trent, although baseline data to quantify this are unavailable.
- 17.3.14 As presented in **ES Volume 3, Figure 17.9: Public Rights of Way [EN010159/APP/6.20]**, the baseline assessment indicates that there are numerous PRoW in the Local Area and at the district level. Specifically, as estimated using **ES Volume 3, Figure 17.9: Public Rights of Way [EN010159/APP/6.20]**, approximately 2.5 km of the National Cycle Network Route 647 passes through both the eastern and western parts of the Order Limits and there are riverside footpaths lining both banks of the River Trent, which passes through the whole site from north to south. Additionally, a number of other footpaths pass through or close to the Order Limits. Overall, approximately 7.5 km of footpaths pass through the Order Limits. Receptor sensitivity to this potential effect is thus rated as low.

Tourism and Leisure

- 17.3.15 The receptors in the case of tourism are primarily visitors to attractions/facilities, such as caravan/campsites. With regards to leisure, receptors are primarily thought to be local residents and users of facilities such as pubs, churches and village halls.
- 17.3.16 The baseline assessment indicates that there are a number of such facilities in the Local Area and they are judged to be of medium sensitivity to potential effects on amenity, principally visual amenity. These effects are assessed in **ES Volume 2, Chapter 11: Landscape and Visual [EN010159/APP/6.11]** and discussed further in the assessment of significant effects below.

Assessment Methodology

- 17.3.17 There is no published guidance to define the significance of socio-economics effects in EIA, but there are more general best practice and guidance documents that the assessment refers to, including the Additionality Guide⁹. This provides specific guidance on how to assess impact – particularly economic and employment effects of a policy intervention (or a private sector investment) on the local, regional and national economy. Additionality is the “*extent to which something happens as a result of an intervention that would have not occurred in the absence of intervention*”.

Employment and Local Economy

- 17.3.18 This assessment addresses direct and indirect employment and economic effects arising at different stages of the Proposed Development and at different spatial scales. It comprises several components.
- 17.3.19 Firstly, temporary construction work will be created over the course of the two year construction period. This is based on both an estimate of “peak” construction jobs and the average monthly full-time jobs throughout the construction period.
- 17.3.20 Secondly, once operational the Proposed Development will create new direct long term employment over the course of its 60 year operational life. These new jobs are expected to comprise land management and maintenance roles (for example regular grass cutting, module cleans or hedgerow maintenance) as well as technicians, engineers, site/process managers and administration roles, at a range of skill levels. These include specialist, skilled roles given the high voltage requirements of the infrastructure required for the Proposed Development.
- 17.3.21 At the same time, existing agricultural employment on the Order Limits will be affected, in line with changes in land use. Effects, specifically on employment, have been further contextualised by a Landowner Survey (as described in paragraph 17.3.6) to determine the current on-site agricultural employment.
- 17.3.22 Similarly, there is a risk that there may be some adverse effects to other local employment, for example in visitor related activities in the Local Area. Consideration of such risks are included, in line with standard approaches to such assessment but estimates are by definition associated with some uncertainties. These are referred to in the Additionality Guide as ‘displacement effects’ and are subtracted from new jobs created by the Proposed Development.
- 17.3.23 Thirdly, the Proposed Development represents a significant investment in the local economy, both at construction and operational stages. As well as direct benefits, there are expected to be further knock-on impacts for local, regional, national – and potentially international supply chains. These wider ‘indirect and included’ effects are estimated using economic multipliers, which is a common

and accepted method of calculating these effects. Two types of multiplier effect are identified in the additional guide, for example:

- > a supply linkage (or indirect) multiplier. This reflects additional purchases made as a result of the Proposed Development, and the associated purchase along supply chains (for example purchases of fencing, or metal supports for the modules and the associated materials for these); and
- > an income (or induced) multiplier. This reflects local expenditure as a result of those who derive their incomes, directly and indirectly from the Proposed Development (for example via food and accommodation).

17.3.24 Additional construction employment will be supported at decommissioning stage, although no attempt to quantify those jobs are included in the current assessment. This is to occur 60 years in the future and making assumptions of the exact required workforce for a temporary activity would be difficult to undertake resulting in too many uncertainties in the assessment. Similarly, information is not currently available on whether operational jobs would be lost at that point, or whether they would be retained and be relocated to an alternative site(s).

Public Rights of Way

17.3.25 There are several PRoWs which pass through or are close to the Order Limits, along with Route 647 of the National Cycle network (the Sustrans route). A usage survey of the existing PRoWs has not been undertaken as part of the baseline, as such surveys pose several methodological challenges which may mean the usage data may not be reliable. The results reflect prevailing weather conditions, time of year, whether they are undertaken during school holidays etc. In addition, the highways officers at the County Councils, as well as Sustran's (who operate the Fledborough viaduct cycle route) do not hold any PRoW data for this area.

17.3.26 As such the assessment in **ES Volume 2, Chapter 12: Transport and Access [EN010159/APP/6.12]** adopted reasonable worst-case assumptions on usage, that all footpaths are regularly used (daily) by a high volume of local residents. For the Sustrans route, it has been assumed that in addition transient tourists (i.e. cyclists/ramblers) also utilise the path.

Tourism and Recreation

17.3.27 There are a number of recreation facilities and tourist attractions, such as caravan/campsites and pubs, in the study area but none within the Order Limits. Baseline data on the usage of these facilities is not available and specific surveys have not been undertaken for this assessment as, similar to PRoW, such surveys are often unreliable due to seasonal and meteorological conditions.

17.3.28 The assessment has therefore adopted the reasonable worst-case assumption that all facilities and attractions are regularly used including by visitors to the area.

Significance Criteria

17.3.29 The significance of the effects of the Proposed Development on baseline conditions will be determined by considering the following (which is in line with that described in **ES Volume 1, Chapter 2: EIA Methodology [EN010159/APP/6.2]**):

- > The likely scale and duration of impacts of the Proposed Development (Cumulative effects are considered in **ES Volume 2, Chapter 18: Cumulative Effects [EN010159/APP/6.18]**); and
- > The sensitivity of receptors to the impacts.

Magnitude of Impact

17.3.30 The magnitude of impacts of the Proposed Development will be assessed in both quantitative and qualitative terms. Quantitatively, the scale of the change compared to the baseline is considered, as well as the nature of the effect to the relevant receptors considering the number affected and the extent and duration of any change on a qualitative basis.

Defining the Effect

17.3.31 The assessment aims to quantify effects where possible, although where this is not possible some effects have been assessed qualitatively. Effects are defined in **Table 17.3**.

Table 17.3: Defining Effects

Effect	Definition
Beneficial	Beneficial effects indicate an advantageous or positive effect on the defined receptors within the study area(s).
Negligible	Negligible effects indicate no perceived effects on the defined receptors within the study area(s).
Adverse	Adverse effects indicate a disadvantageous or negative effect on the defined receptors within the study area(s).
No effect	No effect indicates that there are no changes to baseline conditions(s).

17.3.32 Based on consideration of the above, where an effect is assessed as being adverse or beneficial, the scale of the effect has been categorised using the criteria in **Table 17.4**. Effects which are found to be moderate or major, whether adverse or beneficial, are considered to be 'significant'. In the absence of specific published technical guidance for the assessment of the significance of socio-economic effects, professional judgement has ultimately been used to assign effects to the categories in **Table 17.4**, with appropriate data and reasoning provided in each case.

Table 17.4: Defining Effects

Scale	Definition
Minor	The Proposed Development will cause a minor change in existing baseline conditions absolute terms and/or a small number of receptors will be affected.
Moderate	The Proposed Development will cause a noticeable change in existing baseline conditions and/or a moderate number of receptors will be affected.
Major	The Proposed Development will cause a large change in existing baseline conditions and/or the majority of receptors will be affected.

Consultation

- 17.3.33 As set out in **ES Volume 1, Chapter 2: EIA Methodology [EN010159/APP/6.2]**, a number of consultation activities have been undertaken. **ES Volume 3, Appendix 2.2: ES Response to PINs Scoping Opinion [EN010159/APP/6.21]** summarises the EIA Scoping Opinion for the Proposed Development and where elements have been agreed to be scoped out of the EIA.
- 17.3.34 Any consultation elements which have been raised and addressed post-scoping, are detailed within the **Consultation Report [EN010159/APP/5.1]**.
- 17.3.35 No further specific technical consultations have been undertaken, which have informed the technical assessment as presented in this Chapter.

Assumptions, Exclusions and Limitations

- 17.3.36 As agreed in the Scoping Opinion, the effects of the Proposed Development on school places and health services have been scoped out of the assessment. Additionally, the effects on severance have been scoped out as the Applicant and owners of land within the Order Limits have signed a confidential Heads of Terms agreement for all land to be included within the Order Limits, which ensures no severance of land not included will occur. For clarity, the Proposed Development will be constructed entirely within existing land parcels. For this assessment, severance is defined as the restriction of access to a whole or part of a land parcel.
- 17.3.37 The effects on land use and agricultural land supply are assessed in **ES Volume 2, Chapter 8: Land and Soils [EN010159/APP/6.8]**. Specifically, this assessment considers the effects on the availability of agricultural land with very high, high and medium sensitivity soils. In this assessment the reduction in available agricultural land during the operational life of the Proposed Development is considered to be temporary, as the land condition will be unaffected. The effects on medium and high sensitivity soils were determined to be not significant, while the effects on the availability of very high sensitivity soils were judged to be significant, and will therefore be managed through and Soil

Management Plan (SMP) secured as a requirement to the Development Consent Order (DCO). An assessment of the significance of the cumulative effects of the Proposed Development and other cumulative schemes on agricultural land supply is presented in **ES Volume 2, Chapter 18: Cumulative Effects [EN010159/APP/6.18]**; the effects were judged to be not significant. They have not been considered further in this chapter.

- 17.3.38 Socio-economic effects may result from direct or indirect impacts of the Proposed Development. With regards to the impact on local employment, the applicant has estimated that the construction phase will support an average of 554 full time jobs over the two-year construction phase, with a peak of up to 750 workers at any one time. The Full Time Equivalent (FTE) job creation during operation is estimated by the Applicant to be 15 jobs. FTE is a standardised unit, calculated by dividing the number of hours worked by an employee by the number worked by a typical employee (as defined for this assessment in paragraph 17.3.40). These estimates are based on the best available information at the time of writing, but it should be noted that exact numbers of jobs during both construction and operation may differ.
- 17.3.39 Published research from Centre for Economics and Business Research (CEBR) estimates impacts of solar projects on jobs, presented in paragraph 17.6.4, are now somewhat dated and include all employment effects across the entire value chain, from manufacture of the solar modules themselves, to subsequent coatings/treatments of the modules as well as transmission and distribution. The estimates are presented for context but have not been used in the assessment of significance of effects.
- 17.3.40 As set out in paragraph 17.3.6, the Landowner Survey was carried out to inform an accurate baseline of employment within the Order Limits. Whilst specific, targeted questions were developed, some ambiguity remained in the responses due to the different employment arrangements by different landowners (for example, relatives of landowners working part time, or the number of seasonal workers varying from year to year). Consequently, it was necessary to interpret the responses and estimate the number of part time and full time equivalent (FTE) jobs (survey details, including questions, responses and assumptions are presented in **ES Volume 3, Appendix 17.2: Landowner Survey [EN010159/APP/6.21]**). Whilst a conservative approach was adopted, likely resulting in a slight overestimate of the FTE, the following specific assumptions were made:
- > The ten landowners were excluded from the baseline employment statistics presented below (even if they currently work on site). The Proposed Development will involve the renting of land within the Order Limits by the applicant to install and operate the solar farm for a fixed period, and landowners (who will receive an agreed rent) have been heavily consulted on this throughout the design process; thus it is not considered appropriate to include landowners in the baseline employment statistics on site;

- > One FTE is assumed to be equal to 1,762.5 hours per year (37.5 hour per week, 47 weeks per year); and
- > As set out in **ES Volume 3, Appendix 17.2: Landowner Survey [EN010159/APP/6.21]**, the number of hours worked annually by each employee was requested as part of the Landowner Survey. Based on the responses, the total number of hours worked annually by all employees on site was calculated and then divided by 1,762.5 hours per year to yield the total FTE (taking into account full time, part time and seasonal workers). This was then rounded to the nearest 0.25 for this assessment.

17.3.41 As described above, due to the absence of any specific published guidance on the assessment of the socio-economic impacts of solar developments, professional judgement has been used, supported by quantitative information where available.

17.4 Baseline Conditions

Current Baseline Conditions

Dwellings and Population

17.4.1 **Table 17.5** shows the number of dwellings at each spatial level in the current baseline, according to the 2021 Census.

Table 17.5 Number of Dwellings^a

Area	Number of Dwellings
LSOAs	2,581
Bassetlaw	51,460
Newark and Sherwood	53,333
West Lindsey	42,345
Combined Districts	147,138
East Midlands	2,037,334
England	23,436,086

^a 2021 Census dataset TS003 – Household composition. Total: All households.

17.4.2 **Table 17.6** below presents data on the usual place of residence of those whose place of work is the four LSOAs i.e. it shows where those who work locally live. The numbers relate to those aged 16 and over in employment the week before the census. The data is derived from the 2011 Census, which is the latest year of available data (the 2021 Census does not include this particular data).

17.4.3 Overall, it shows just over 2,000 people may be working in the Local Area. Of these, most live in the District of Bassetlaw (32%), a further 27% live in Newark and Sherwood and a further 10% in West Lindsey. Smaller numbers of these workers reside in the districts of Lincoln, North Kesteven and Mansfield. Together this area is referred to as the labour catchment area. Whilst the precise location of employees will differ based on the specific skills needs and labour supply (and more specialist roles may be required from further afield), it is likely that most employees would be drawn from within this area.

Table 17.6 Labour catchment area ^a

Currently residing in	Number	Percentage	Cumulative %
Bassetlaw	649	32%	32%
Newark and Sherwood	569	27%	59%
West Lindsey	198	10%	69%
Lincoln	96	5%	74%
North Kesteven	85	4%	78%
Mansfield	84	4%	82%
Total resident employees	2,055		100%

^a WF01BEW – Location of usual residence and place of work 2011 Census

17.4.4 The baseline resident population of the different areas (see **Table 17.6**) according to the 2011 and 2021 Census, along with changes, are presented in **Table 17.7**. The total population of the Local Area (note this is a much larger area than the Order Limits itself) comprised just under 6,000 people in 2021, a 5% increase over 2011. This comprised of approximately 2% of the combined District population, which amounted to just over 340,000 in 2021. The population of the Local Area grew at a slower rate than the three Districts, the regional or national averages between 2011 and 2021.

Table 17.7 Population at Different Spatial Levels

Area	2011 Population ^a	2021 Population ^b	Change
Combined LSOAs	5,631 (2% of combined District population)	5,911 (2% of combined District population)	+5.0%
Bassetlaw	112,863 (3% of combined East Midland population)	119,533 (2% of combined East Midland population)	+5.9%
Newark and Sherwood	114,817 (3% of combined East Midland population)	124,452 (3% of combined East Midland population)	+8.4%

Area	2011 Population ^a	2021 Population ^b	Change
West Lindsey	89,250 (2% of combined East Midland population)	96,405 (2% of combined East Midland population)	+8.0%
Combined District Population	316,930 (7% of East Midland population)	340,390 (7% of East Midland population)	+7.4%
East Midlands	4,533,222 (9% of England population)	4,882,232 (9% of England population)	+7.7%
England	53,012,456	56,989,570	+7.5%

^a 2011 Census dataset KS101EW – Usual resident population.

^b 2021 Census dataset TS001 – Number of usual residents in households and communal establishments.

17.4.5 **Table 17.8** provides a more granular breakdown of the local population by age. It shows the population in the Local Area is generally older than the regional and national average.

Table 17.8 Age of Population 2021 ^a

Area	0-19 years old	20-64 years old	65+ years old
Combined LSOAs	1,077 (18.3%)	3,150 (53.3%)	1,694 (28.7%)
Bassetlaw	24,921 (20.8%)	66,802 (55.9%)	26,081 (21.8%)
Newark and Sherwood	25,934 (20.8%)	69,355 (55.7%)	27,668 (22.2%)
West Lindsey	19,654 (20.4%)	51,514 (53.4%)	23,985 (24.9%)
Combined District Population	70,509 (20.7%)	187,671 (55.1%)	77,734 (22.8%)
East Midlands	1,114,116 (22.8%)	2,814,160 (57.6%)	951,775 (19.5%)
England	13,057,870 (22.9%)	33,030,875 (58.0%)	10,401,303 (18.3%)

^a 2021 Census dataset TS007 – Age by single year.

17.4.6 **Table 17.9** summarises 2021 Census data on the self-reported general health of the population.

Table 17.9 General Health of Population in 2021 ^a

Area	Very Good Health (%)	Good Health	Fair Health	Bad Health	Very Bad Health
Combined LSOAs	2,673 (45.2%)	2,115 (35.9%)	795 (13.5%)	252 (4.2%)	77 (1.3%)
Bassetlaw	51,679 (43.9%)	40,938 (34.8%)	17,862 (15.2%)	5,618 (4.8%)	1,707 (1.4%)
Newark and Sherwood	54,954 (44.7%)	43,072 (35%)	17,806 (14.5%)	5,553 (4.5%)	1,571 (1.3%)
West Lindsey	41,693 (43.8%)	34,181 (35.9%)	13,948 (14.7%)	4,227 (4.4%)	1,104 (1.2%)
Combined District Population	148,326 (44.1%)	118,191 (35.2%)	49,616 (14.8%)	15,398 (4.6%)	4,382 (1.3%)
East Midlands	2,256,798 (46.2%)	1,699,659 (34.8%)	662,825 (13.6%)	202,774 (4.2%)	57,998 (1.2%)
England	27,390,829 (48.5%)	19,040,735 (33.7%)	7,147,346 (12.7%)	2,248,255 (4.0%)	662,881 (1.2%)

^a 2021 Census dataset T037 – General Health of all usual residents. Note the percentages are unweighted averages of the rates in each of the four LSOAs/ three districts.

17.4.7 As shown in **Table 17.9**, 45.2% of the Local Area population had very good health, marginally above the rates in the three Districts, but slightly below the regional and national rate. Rates of those reporting good health in the Local Area were very similar to the three Districts but slightly above regional and national rates. Rates of those in bad health locally were marginally below the combined District rates, but similar to regional and marginally above national. Rates of those in very bad health were low and similar in all areas.

Labour Market and Economy

17.4.8 Labour market statistics are presented in **Table 17.10**.

Table 17.10 Working Age Population and Economic Activity (2021) ^{a b}

Area	All usual residents age 16 and over	Economically Active	Economically Active (Unemployed)	Economically Inactive
Combined LSOAs	5,063	2,820 (55.6%)	<100 (1.9%)	2,159 (42.9%)
Bassetlaw	97,370	55,821 (57.3%)	2,044 (2.1%)	40,088 (41.2%)

Area	All usual residents age 16 and over	Economically Active	Economically Active (Unemployed)	Economically Inactive
Newark and Sherwood	101,968	58,015 (56.9%)	2,115 (2.1%)	42,406 (41.6%)
West Lindsey	79,120	43,080 (54.4%)	1,754 (2.2%)	34,961 (44.2%)
Three Districts	278,458	156,916 (56.2%)	5,913 (2.1%)	117,455 (42.3%)
East Midlands	3,998,047	2,300,518 (57.5%)	96,090 (2.4%)	1,604,166 (40.1%)
England	46,006,957	29,945,252 (57.5%)	1,312, 729 (2.9%)	18,005,455 (39.1%)

^a 2021 Census dataset TS066 – Economic activity status. Unemployed excludes full time students

^b Note the percentages are unweighted averages of the rates in each of the four LSOAs/ three districts

17.4.9 **Table 17.10** shows the economically active population in the Local Area, at around 56%, is marginally below the overall average for three Districts as well as the regional and national rates. The same patterns are reflected in economic inactivity rates. The table also shows data on those who are economically active but unemployed. Note this is a different measure of unemployment to the claimant count data shown below as it includes all those looking for work but not necessarily in receipt of unemployment social security benefits, hence the number is typically larger. Overall, this data suggest local unemployment rates were low in 2021 at less than 2%, similar to the three districts, but somewhat lower than regional and national unemployment rates.

17.4.10 In terms of skill levels, in 2021 the resident population of the Local Area had a similar proportion with no formal qualifications (an average of 19.4%), compared to the three districts (an average of 19.6%) and the region (19.5%). This compares to 18.1% across England. Conversely, an average of 30.6% held qualifications at level 4 or above in the Local Area. This compares to an average of 27.9% in the three Districts, 29.1% in the region and 33.9% across England.

17.4.11 **ES Volume 3, Figure 17.3: Claimant Count Unemployment Trends (2010 to 2024) (Absolute Numbers) [EN010159/APP/6.20]** presents time series claimant count unemployment data between February 2013 and September 2024 for the Local Area and Districts. These data show numbers who are unemployed and in receipt of social security benefit. Overall Local Area unemployment is relatively low and stable, typically remaining under 100 people, with the number having increased over 2021 and 2022 as it did elsewhere, reflecting the disruption associated with COVID-19. The most recent data presented in **ES Volume 3, Figure 17.3: Claimant Count Unemployment Trends (2010 to 2024)**

(Absolute Numbers) [EN010159/APP/6.20] suggest that unemployment rates increased at the end of 2023 (in Bassetlaw and Newark and Sherwood), and a similar pattern is evident nationally. Numbers have remained stable in West Lindsey, which reflects the picture in the region.

- 17.4.12 Claimant count rates are not available for the Local Area, but rates in the three Districts over the same period mirror national patterns. These show a steadily decreasing rate of unemployment to 2019, before increasing sharply over 2020 and 2021, declining thereafter. As of September 2024 claimant rates in the three districts stood at between 3.1% to 3.6%, which is lower than national (4.4%) and regional (3.8%) rates.
- 17.4.13 **ES Volume 3, Figure 17.4: Claimant Count Seasonal Trends (2023) (Absolute Numbers) [EN010159/APP/6.20]** shows the same data, but over the course of a single year. This indicates the extent of seasonal unemployment (i.e. in some sectors, typically those with greater reliance on visitor expenditure such as food, accommodation or retail, unemployment tends to increase in the winter months and decrease in the summer). Employment in agriculture also often exhibits such seasonality around harvesting activity. The data suggest limited, if any, trends in the Local Area and only modest changes in one District (Bassetlaw), which may reflect the wider economic context rather than any seasonal change in employment demand.
- 17.4.14 As presented in **ES Volume 3, Figure 17.5: Benefit Claimants (% of population) [EN010159/APP/6.20]**, the benefit claimant rate (i.e. percentage of people aged 16 and over who claim benefits) for the Local Area (based on LSOA boundaries) is only available for the year 2020 to 2021 and suggest somewhat higher rates than at the district, regional and national levels. The overall patterns mirror those for claimant unemployment described above.
- 17.4.15 **Tables 17.11 and 17.12** set out data on employment by sector, taken from the Business Register and Employment Survey (BRES). **Table 17.11** shows data by sector for 2022 (latest data) in the Local Area, the three Districts, the region and nationally.

Table 17.11 Employment by sector (2022) ^{a b}

Sector	Local Area		Districts		East Midlands		England	
	Number	%	Number	%	Number	%	Number	%
Agriculture, forestry & fishing	15	0.6%	5,500	4.0%	40,000	1.8%	362,000	1.3%
Mining, quarrying & utilities	30	1.1%	1,800	1.3%	31,000	1.4%	308,000	1.1%

Sector	Local Area		Districts		East Midlands		England	
	Number	%	Number	%	Number	%	Number	%
Manufacturing	530	19.9%	17,500	12.8%	246,000	11.0%	2,057,000	7.4%
Construction	395	14.8%	10,000	7.3%	126,000	5.6%	1,381,000	4.9%
Motor trades	145	5.5%	3,900	2.9%	63,000	2.8%	497,000	1.8%
Wholesale	180	6.8%	4,750	3.5%	98,000	4.4%	1,057,000	3.8%
Retail	45	1.7%	11,500	8.4%	185,000	8.3%	2,358,000	8.4%
Transport & storage (inc postal)	290	10.9%	9,800	7.2%	144,000	6.4%	1,423,000	5.1%
Accommodation & food services	155	5.8%	12,500	9.2%	168,000	7.5%	2,198,000	7.9%
Information & communication	45	1.7%	3,000	2.2%	60,000	2.7%	1,306,000	4.7%
Financial & insurance	0	0.0%	1,325	1.0%	36,000	1.6%	919,000	3.3%
Property	60	2.3%	2,300	1.7%	37,000	1.7%	571,000	2.0%
Professional, scientific & technical	130	4.9%	7,500	5.5%	154,000	6.9%	2,642,000	9.5%
Business administration & support services	250	9.4%	8,000	5.9%	196,000	8.7%	2,529,000	9.0%
Public administration & defence	0	0.0%	4,750	3.5%	87,000	3.9%	1,173,000	4.2%
Education	280	10.5%	9,000	6.6%	186,000	8.3%	2,322,000	8.3%
Health	75	2.8%	18,000	13.2%	299,000	13.3%	3,616,000	12.9%
Arts, entertainment, recreation & other services	35	1.3%	5,250	3.8%	85,000	3.8%	1,234,000	4.4%
Total	2,660	100%	136,375	100%	2,241,000	100%	27,953,000	100%

^a Business Register and Employment Survey – Open access. Employment Count and Percentage. Note the Local Area comprises 2011 rather than 2021 LSOA Boundaries. A visual inspection of the boundaries suggests no substantive differences between the two that would impact the conclusions of this assessment.

17.4.16 **Table 17.11** shows in 2022 there were some 2,660 people in employment in the Local Area. Of these, the largest industry was Manufacturing (19.9%), followed by Construction (14.8%), Transport and Storage (10.9%) and Education (10.5%) respectively. Whilst Local Area data is only approximate, the data suggest Agriculture employs only a small number in the Local Area (0.6%).

17.4.17 **Table 17.12** shows the same employment data but captures change between 2015 and 2022.

Table 17.12 Employment change by sector (2015-2022) ^a

Sector	Local Area	Districts		East Midlands		England	
	Change	Change	%	Change	%	Change	%
Agriculture, forestry & fishing	5	500	10.0	2,000	5.3	20,000	5.8
Mining, quarrying & utilities	30	-900	-33.3	-6,000	-16.2	31,000	11.2
Manufacturing	-205	0	0.0	-24,000	-8.9	-4,000	-0.2
Construction	120	1,500	17.6	18,000	16.7	186,000	15.6
Motor trades	80	1,150	41.8	19,000	43.2	19,000	4.0
Wholesale	-55	250	5.6	5,000	5.4	1,000	0.1
Retail	-115	-4,500	-28.1	-35,000	-15.9	-191,000	-7.5
Transport & storage (inc postal)	-55	3,550	56.8	40,000	38.5	213,000	17.6
Accommodation & food services	50	3,250	35.1	46,000	37.7	356,000	19.3
Information & communication	30	825	37.9	15,000	33.3	189,000	16.9
Financial & insurance	0	175	15.2	0	0.0	7,000	0.8
Property	-30	300	15.0	10,000	37.0	82,000	16.8
Professional, scientific & technical	60	500	7.1	25,000	19.4	350,000	15.3
Business administration & support services	75	-750	-8.6	-17,000	-8.0	179,000	7.6

Sector	Local Area	Districts		East Midlands		England	
	Change	Change	%	Change	%	Change	%
Public administration & defence	0	750	18.8	12,000	16.0	144,000	14.0
Education	10	-1,000	-10.0	-3,000	-1.6	20,000	0.9
Health	35	3,500	24.1	43,000	16.8	379,000	11.7
Arts, entertainment, recreation & other services	-15	-250	-4.5	0	0.0	40,000	3.4
Total	20	8,850	6.9	150,000	7.2	2,021,000	7.8

^a Business Register and Employment Survey – Open access. Employment Count and Percentage. Note the Local Area comprises 2011 rather than 2021 LSOA Boundaries. A visual inspection of the boundaries suggests no substantive differences between the two that would impact the conclusions of this assessment.

17.4.18 As shown in **Table 17.12**, employment in the Local Area increased by a small amount (20) in that time, which is less than 1% of the total employment (2,660) locally. This compared to growth of just under 7% in the three Districts, just over that in the region and 7.8% nationally. Percentage change by sector in the Local Area is not shown as data for smaller areas are prone to greater levels of error and may be misleading, however the numbers suggest growth in construction, accommodation and food services and declines in manufacturing and retail, which would mirror wider trends.

17.4.19 Trends between 2015 and 2022 (the most recent year for which data is available) in numbers employed in agriculture, construction and energy, gas, steam and air conditioning supply (energy), accommodation and food industries are shown in greater detail in **ES Volume 3, Figure 17.6: Employment Trends 2015 – 2022 by Industry [EN010159/APP/6.20]**, given these have the potential to be more directly affected by the Proposed Development. The figure shows that the number of people employed in the agriculture and energy industries have remained generally stable since 2015 at all spatial levels, and these represent smaller industries in terms of overall employment numbers than construction and accommodation. At the local level, construction is the largest industry of the four, whereas at district, regional and national levels accommodation and food is larger. At all spatial levels, employment numbers in both construction, and accommodation and food have been increasing in recent years.

17.4.20 The results of the site-specific Landowner Survey on agricultural employment that was undertaken for the Proposed Development are summarised in **Table 17.13** and their geographical distribution across the Order Limits is illustrated in **ES Volume 3, Figure 17.7: Distribution of Current Employment within the**

Order Limits [EN010159/APP/6.20]. The Landowner Survey aimed to establish a baseline of the number of jobs and the FTE currently within the Order Limits, against which the effects of the Proposed Development on jobs could be assessed. More detail on the Landowner Survey responses is provided in **ES Volume 3, Appendix 17.2: Landowner Survey [EN010159/APP/6.21]**. Based on the Landowner Survey responses and assumptions set out in paragraph 17.3.40, the total number of current jobs within the Order Limits have been estimated, along with the FTE (rounded to the nearest 0.25 FTE).

Table 17.13 Employment within the Order Limits

Landowner	Total Number of Jobs	FTE
Landowner 1	2	1.25
Landowner 2	2	1
Landowner 3	2	0.25
Landowner 4	1	0
Landowner 5	0	0
Landowner 6	3	0.5
Landowner 7	2	1
Landowner 8	5	2.75
Landowner 9	0	0
Landowner 10	1	0.5
Landowner 11	2	0.5
Total	20	7.75

17.4.21 As presented above, although there are estimated to be 20 individual jobs within the Order Limits at present, many of these are part time or seasonal jobs that have a much smaller contribution to the overall FTE. It should be noted that, although a further ten landowners currently work on site, these have not been included in this baseline estimate of current employment on site as they will be compensated (i.e. receive a pre-agreed rent) for the use of their land by the Proposed Development, and have been involved in the design process from an early stage²⁸. Several of the landowners own further land outside of the Order Limits that will continue to be used for agriculture, so it may be possible to

²⁸ Landowners volunteered their land for use in the Proposed Development, having made a judgement knowing the financial implications of their land being exclusively used by the Proposed Development for the duration of its operation. It is therefore not considered appropriate to consider the landowners no longer working in an agricultural capacity on their land to be "lost" jobs.

relocate or retain employees that currently work within the Order Limits, and therefore the jobs on each land parcel may be affected in different ways. It is not known, however, which landowners are in this position and which jobs may be retained as a consequence, so to be conservative it has been assumed that all jobs within the Order Limits will be lost as a result of the Proposed Development. Full details of the Landowner Survey questions, results and assumptions are set out in **ES Volume 3, Appendix 17.2: Landowner Survey [EN010159/APP/6.21]**.

17.4.22 **Table 17.14** shows the total Gross Value Added (GVA) per head in 2021. GVA is metric which measures the contribution of an individual, company, or economic sector to the economy. On average in 2021 GVA per head was lower in the three Districts than regional and national levels.

Table 17.14 Gross Value Added Per Head^a

Area	GVA (£m)	GVA Per Head
Bassetlaw	2,505,000	£20,957
Newark and Sherwood	2,676,000	£21,502
West Lindsey	1,723,000	£17,873
Combined Districts	6,904,000	£20,283
East Midlands	118,398,000	£24,251
England	1,760,438,000	£30,891

^a UK small area gross value added estimates disaggregated from the UK National Accounts. Total GVA for the district, region and national levels were divided by the populations from the 2021 Census (see **Table 17.8**).

Socio-economic Deprivation

17.4.23 **ES Volume 3, Figure 17.8: Index of Multiple Deprivation (2019) [EN010159/APP/6.20]** presents data from the Index of Multiple Deprivation (IMD)²⁹ in the vicinity of the Order Limits. The IMD is the official measure of relative deprivation in England. It defines deprivation to encompass a range of an individual's living conditions. The assessment is determined through a weighted combination of seven factors:

> Income;

²⁹ Ministry of Housing, Communities and Local Government (2019) The English Indices of Deprivation. Available: https://assets.publishing.service.gov.uk/media/5d8e26f6ed915d5570c6cc55/loD2019_Statistical_Release.pdf

- > Employment;
- > Education, Skills and Training;
- > Health Deprivation and Disability;
- > Crime;
- > Barriers to Housing and Services; and
- > Living Environment Deprivation.

17.4.24 The areas in the vicinity of the Order Limits generally fall within the 5th and 6th decile, indicating that the population experiences a level of deprivation that is approximately in line with the national average. According to the Index, Bassetlaw is the 108th most deprived out of the 316 national districts (3rd decile); Newark and Sherwood is the 148th most deprived (4th decile); and West Lindsey is the 146th (4th decile).

Public Rights of Way

17.4.25 There are a number of PRowWs which pass through or are within 500 m of the Order Limits, as illustrated in **ES Volume 3, Figure 17.9: Public Rights of Way [EN010159/APP/6.20]**. From this figure, it was estimated that approximately 7.5 km of footpath passes through the Order Limits, with approximately 2.5 km of the National Cycle Route 247 also within the Order Limits. These include routes along both the eastern and western banks of the River Trent, extending to the north of North Clifton, as well as several other, shorter routes that pass either through or close to the Order Limits.

17.4.26 Route 647 on the National Cycle Network (part of the Sustrans route) follows the route of the disused Lancashire, Derbyshire and East Coast Railway and passes from east to west across the Order Limits, crossing the River Trent at the Fledborough Viaduct and following the northern boundary of the former High Marnham Power Station.

Tourism

17.4.27 The Culture and Sport Evidence (CASE) Programme provides regional statistics on cultural and sporting attractions, use and visits. The 2010 report on the East Midlands notes that the regional “CASE economy” employs 119,000 people in 9,800 businesses. It contributed £2.3 billion in GVA and £1.1 billion per year in spend from domestic tourists. The region was the destination for 13% of domestic tourist trips in 2008 and 4% of overseas visitors, who spent a total £386 million, some 3% of national expenditure³⁰.

³⁰ Department for Culture, Media and Sport (2010) CASE Programme. Available: https://assets.publishing.service.gov.uk/media/5a756a1440f0b6360e473ef5/CASE-RREast_Midlands.pdf

- 17.4.28 Data from the Great Britain Tourism Survey provides further estimates of the volume and value of overnight trips taken by British residents in Great Britain. The latest data relates to Q3 2023. The East Midlands received 2.8 million visits in Q3 2022, which decreased to 2.2 million by Q3 2023. This comprised 8% of the total share of visits in England. Total spend from these visits amounted to £646 million, which had decreased to £459 million in Q3 2023. This comprised 6% of the total share of spend for England as a whole²².
- 17.4.29 No published data on visitor accommodation or vacancy rates in the Local Area have been identified. However, data in **Table 17.15** indicates some 155 employees in the Local Area were in the accommodation and food services sector in 2022, which provides an approximate indication. UK Business Count data¹⁷ also shows the numbers of hotels/guest houses businesses. These data are not available for the Local Area but are available for slightly larger “*middle level*” super output areas (MSOAs)³¹. This suggests there may be some 55 business in the accommodation and food services sector as of 2023 in the three MSOAs that intersect the Order Limits. The same data suggests 285 business in Bassetlaw; 300 in Newark and Sherwood and 210 in West Lindsey³²
- 17.4.30 The main uses in the vicinity of the Order Limits are agricultural, with a small number of visitor facilities, as set out in **ES Volume 3, Figure 17.10: Local Amenities and Tourist Attractions [EN010159/APP/6.20]** and **Table 17.15**. These have been identified using online mapping therefore does not represent an exhaustive list of all relevant receptors. For each, its location and proximity to the Order Limits is described.

Table 17.15 Visitor Facilities

Receptor	Description	Approximate distance from Site Boundary and Proposed Use
Hall Farm	Campsite	Located on Southmoor Road. The field to the south will be used for solar modules (approx. 50 m away) as well as landscape mitigation (i.e. grassland and wildflower meadows). There is an existing barrier of vegetation between the campsite and the proposed solar modules which will provide visual screening.
Wildwood	Caravan park	Located on Moor Lane. The field to the north across Moor Lane (approx. 50 m) will be used for solar modules. However, the caravan park is surrounded by existing trees which would minimise visual impacts.

³¹ The three 2011 MSOAs are E02005849: Bassetlaw 015; E02005896 : Newark and Sherwood 004 and E02005498 : West Lindsey 007. MSOAs are typically made up of four or five LSOAs and are another spatial level for which baseline data (such as census data) are available).

³² Source UK Business Counts - enterprises by industry and employment size band (2023)
<https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?opt=3&theme=&subgrp=>

Receptor	Description	Approximate distance from Site Boundary and Proposed Use
Woodlands	Holiday homes	Located off Church Lane in South Clifton. The fields immediately bordering existing properties in South Clifton will not be developed or used for solar modules, with the nearest located approx. 550 m to the east of the holiday homes on the opposite side of existing woodland.
Marnham Meadows	Caravan park	Located off Hollowgate Lane in High Marnham. The field immediately to the north (<5 m) will be used for underground cabling, not for solar modules; thus the operational development will not be visible above ground. The nearest solar modules will be located over 900 m to the west.
Sparrow Lane	Holiday homes	Located off Hollowgate Lane in High Marnham. The field that surrounds the northern section of this site (<5 m away) will be used for underground cabling, not for solar modules; thus the operational development will not be visible above ground. The nearest solar modules will be located over 800 m to the west.

17.4.31 As presented in **ES Volume 3, Figure 17.10: Local Amenities and Tourist Attractions [EN010159/APP/6.20]**, there are only a small number of visitor amenities in proximity to the Order Limits, the largest and closest of which are caravan/campsites and holiday homes located close to the southern (Marnham Meadows and Sparrow Lane) and northern (Hall Farm) boundaries of the Order Limits. As discussed in **Table 17.15**, most of the amenities are located closest to parts of the Order Limits where solar modules are not expected to be installed, with land instead being used for underground cabling, landscaping mitigation and/or biodiversity enhancements. The exception is Hall Farm campsite, which is located adjacent to a field to be used for solar modules, although there is existing mature green infrastructure on both field edges which provides visual screening.

Leisure and Local Amenity

17.4.32 In addition to the visitor facilities, there are a small number of other community facilities set out in **ES Volume 3, Figure 17.10: Local Amenities and Tourist Attractions [EN010159/APP/6.20]** and **Table 17.16**. These are a number of churches, a pub and a village hall. Like the tourist facilities, these have the potential to be affected by visual amenity impacts during all phases of the Proposed Development. However, as detailed in **Table 17.16**, they are expected to be less impacted than some of those set out in **Table 17.15** for varying location-specific reasons.

Table 17.16 Community Facilities

Receptor	Description	Approximate distance from Site Boundary and Proposed Use
Newton on Trent Wesleyan Church	Church	Located on Dunham Road in the centre of Newton on Trent. The field across the A57 to the south west (approx. 200 m) will be used for landscape mitigation (i.e. grassland and wildflower meadows), with the nearest solar modules located approx. 483 m to the south east but obscured by numerous existing properties.
Newton on Trent C of E Church	Church	Located on High Street in Newton on Trent. The field across the A57 to the south (approx. 430 m) will be used for solar modules but is obscured by numerous existing properties.
St Helen's Church	Church	Located on Main Street in Thorney. The nearest field to the west within the Order Limits (approx. 100 m) will be used for landscape mitigation (i.e. grassland and wildflower meadows), with the nearest solar modules located approx. 930 to the west and obscured by existing trees.
St Gregory's Church	Church	Located on Hollow Gate Lane in Fledborough. The field across Hollow Gate Lane to the west (<10 m) will be used for landscape mitigation (i.e. grassland and wildflower meadows), with the nearest solar modules located beyond this (approx. 150 m).
St George the Martyr	Church	Located on Church Lane. The fields to the north (approx. 50 m) will be used for landscape mitigation (i.e. grassland and wildflower meadows), with the nearest solar modules located approx. 850 m to the east.
Brownlow Arms	Pub	Located on Hollowgate Lane on the eastern edge of village of High Marnham near to the western bank of the River Trent. The field immediately to the north is potentially to be used for underground cabling, not for solar modules; thus the operational development will not be visible above ground.
South Clifton Coronation Hall	Community centre	Located on Moor Lane. The fields immediately bordering existing properties in South Clifton will not be developed or used for solar modules, with the nearest located approx. 450 m to the east of the community centre

Sensitive Receptors

17.4.33 The “receptors” in this assessment are people and communities; “populations” at different geographical levels. The sensitivity of these to specific effects differ based on numerous factors. In this assessment effects are considered at an aggregate level, i.e. effect of changes in employment opportunities on the economically inactive population in the local labour market etc. On this basis the likely sensitivity of receptors depends on the characteristics of specific groups

within the geographical areas assessed and the nature of the effect. These are examined under each impact category later in this chapter.

Future Baseline Conditions

Population

- 17.4.34 The projected population in the current baseline year (2024), at anticipated start year of construction (2027) and expected year the Proposed Development will be operational (2029) are provided in **Table 17.17**, along with the percentage changes. These data are not published for the Local Area.

Table 17.17 Projected Population Changes

Area	2024 Population	2027 Population	2029 Population	2024-2029 % Change	2027-2029 %Change
Bassetlaw	121,951	124,055	125,335	+2.8	+1.0
Newark and Sherwood	127,064	129,346	130,720	+2.9	+1.1
West Lindsey	97,782	98,906	99,571	+1.8	+0.7
Nottinghamshire	861,494	877,006	886,461	+2.9	+1.1
Lincolnshire	787,372	800,687	808,585	+2.7	+1.0
East Midlands	5,017,013	5,109,145	5,165,842	+3.0	+1.1
England	57,816,890	58,527,723	58,969,496	+2.0	+0.8

- 17.4.35 Overall trends (2024 to 2029) in population growth in Bassetlaw, and Newark and Sherwood are expected to be similar to regional levels, whilst West Lindsey is expected to be closer to national levels (i.e. a slightly lower increase).
- 17.4.36 An examination of the relevant district local plans^{25 26 27} identified that the largest site allocated for residential development in the Local Area is located in Tuxford, approximately 3.5 km to the west of the Order Limits, and is allocated for up to 244 dwellings. Although the timescales for the development of the Tuxford site are not known, the scale of this development (and other, smaller allocated sites) is not expected to significantly alter the socio-economic baseline set out above. Note this is considered in more detail in **ES Volume 2, Chapter 18: Cumulative Effects [EN010159/APP/6.18]**.

17.5 Environmental Measures

- 17.5.1 Consideration of good design principles and feedback from consultation and engagement with stakeholders, including the local community, has sought to ensure that benefits are maximised. The following specific environmental

measures relevant to Socio-Economics have been identified and have been considered as part of the assessment:

- > Employment opportunities for trades and associated supply chains during construction. Measures are set out in an **Outline Skills, Supply Chain and Employment Plan [EN010159/APP/7.8]**;
- > Employment opportunities during the operation and maintenance and its decommissioning. Measures are set out in an **Outline Skills, Supply Chain and Employment Plan [EN010159/APP/7.8]**;
- > Educational opportunities through apprenticeships and training, at construction, operation (including maintenance) and decommissioning stages (the Applicant is committed to and working with local educational institutions to identify how the Proposed Development can support and provide suitable skilled training opportunities) Measures are set out in an **Outline Skills, Supply Chain and Employment Plan [EN010159/APP/7.8]**;
- > New permissive paths through the Order Limits, creating routes connecting the villages; this includes approximately 2.5 km on the east of the River Trent and approximately 3.6 km on the west of the River Trent (see the **Outline Landscape and Ecology Management Plan [EN010159/APP/7.7]** for further details on the permissive paths;
- > Local amenity enhancement, including provision of land for new grassland, wildflower meadow, hedgerow and tree planting as detailed in the **Outline Landscape and Ecology Management Plan [EN010159/APP/7.7]**;
- > The diversification of revenue for landowners; and
- > An increase in renewable energy production and resultant contributions towards achieving net zero targets reduction of GHG emissions and energy security.

17.6 Assessment of Likely Significant Effects

Construction

Local Economy

- 17.6.1 The cost of constructing the Proposed Development represents a sizeable investment and is estimated by the Applicant to be approximately £1 billion³³.
- 17.6.2 CEBR estimated in a 2014 assessment that the average UK solar farm installation was 62% reliant on British components, operations and expertise. At

³³ This estimated was provided by the Applicant.

the time, this was expected to increase to 71% by 2030³⁴. This in turn suggests substantial economic opportunities in the supply chain a proportion of which is likely to benefit, local, regional and national companies. As highlighted in paragraph 17.3.37, this study is somewhat dated and the estimates approximate, so this information is provided for context only and is not used for the determination of significance of effects.

- 17.6.3 The CEBR assessment also examined economic and employment impacts, and estimated that 14,000 full-time equivalent (FTE) direct and indirect jobs were supported in the UK's solar sector in 2013. This reflected – at that time - a jobs intensity of around 7 FTEs/MW for “large scale” solar farms³⁵. They estimated this may decrease to around 5.6 FTE jobs per MW by 2030³⁶. Note, it is assumed this figure relates to the entire value chain, rather than just construction/installation and operation, which is the focus of this assessment.
- 17.6.4 Using the CEBR estimates, based on an assumed installed capacity of 740 MW, the Proposed Development could support up to 4,000 FTE jobs across the whole value chain. These estimates are now somewhat dated and include all economic effects across the entire value chain, from manufacture of the solar modules themselves, to subsequent coatings/treatments of the modules as well as transmission and distribution. Hence not all is likely to benefit UK companies, as noted above. Given the uncertainties associated with these estimates, this does not form part of the EIA assessment, but they do indicate that, a national level at least, the Proposed Development has the potential to support thousands of jobs along the total supply chain.

Employment

- 17.6.5 Temporary construction employees are estimated to peak at 750 over the course of the two year construction period; the average is expected to be 554 full time jobs. These jobs will include a range of trades and require different skill levels. For scale, an addition of 554 employment opportunities via the Proposed Development will constitute an increase of 140% in 2022 construction employment in the Local Area and an increase of 21% of *total employment* in the Local Area. Across the three districts, it will comprise an increase of 6% of employment in the construction sector. In practice, it is expected construction labour will be drawn from the existing labour catchment area, likely comprising the three Districts, as well as others based on transport connections and the degree of specialism necessary to undertake specific construction work. Across the labour catchment area, the additional jobs would constitute an increase of 2.9% in construction employment and 0.2% in total employment. On this basis,

³⁴ See CEBR (2014a). <https://cebr.com/reports/solar-powered-growth-in-the-uk/>

³⁵ Whilst this terminology is used in the CEBR study, ‘large scale’ solar farms is not specifically defined.

³⁶ CEBR 2014 (Page 25). See also <https://www.edf-re.uk/wp-content/uploads/2022/07/East-Stour-Socio-Economic-and-Sustainability-Statement.pdf>

direct, short-term, local effects of moderate, beneficial significance are likely.

- 17.6.6 Further indirect jobs will be supported along supply chains. CEBR³⁷ estimate the employment multiplier from large scale solar PV investments to be 2.33. This means that for every additional direct Full Time Equivalent (FTE) job, a further 1.33 FTE jobs are generated along supply chains via indirect (0.78 of an FTE) and induced (0.55 of an FTE) effects. For context, the ONS publishes United Kingdom Input-Output Analytical Tables (IOATs) analytical tables³⁸, which includes a “type 1” multiplier³⁹ for the construction sector of 2.656 (in 2020, which is the most recent data available). Using the CEBR multiplier of 2.33 is therefore more conservative, as it suggests that less indirect jobs will be supported by the Proposed Development. Combining these with the 554 temporary direct FTE jobs estimated above suggests a further 737 indirect temporary FTE jobs may be generated, or some 1,291 jobs in total. It is likely that these indirect jobs will be supported over a wider area. A further 737 jobs would constitute an increase in employment at the three District level, for example, of 7% and an increase in the region of less than 1%. Overall, whilst the precise distribution of jobs is uncertain there are likely **indirect, short-term effects** that would be of **minor, beneficial significance** at the District level but of negligible significance at the regional or national level.

Public Rights of Way

- 17.6.7 All PRoW will be retained, although there may be the need for temporary diversions around construction activity where works may cross a PRoW, but this is anticipated to be for a short-duration and will be minimised as much as possible (as discussed in section 17.5). Details of which PRoW will be affected and the management of these are included in the **Outline Public Rights of Way Management Plan [EN010159/APP/7.14]**.
- 17.6.8 The construction period is 2 years and activity will move across the Order Limits within that time. The impacts on users of the PRoW in terms of changes to views

³⁷ CEBR (2014) Solar powered growth in the UK, The macroeconomic benefits for the UK of investment in solar PV Report for the Solar Trade Association, September 2014. Figure 20. Downloaded via <https://docplayer.net/7445226-Solar-powered-growth-in-the-uk-the-macroeconomic-benefits-for-the-uk-of-investment-in-solar-pv.html> <https://docplayer.net/7445226-Solar-powered-growth-in-the-uk-the-macroeconomic-benefits-for-the-uk-of-investment-in-solar-pv.html> Figure 20.

³⁸ ONS (2020) Input-Output Analytical Tables, Type I multipliers, Compensation of employees (D1). Available at: <https://www.ons.gov.uk/economy/nationalaccounts/supplyandusetables/datasets/ukinputoutputanalyticaltablesindustrybyindustry>

³⁹ Effects and multipliers published by the ONS are referred to as Type 1. They include the impact on production of a change in final use (direct impact) and the supply chain impacts stemming from the initial change in final use (indirect impact). <https://www.ons.gov.uk/economy/nationalaccounts/supplyandusetables/articles/inputoutputanalyticaltables/guidanceforuse>

and the landscape is considered in **ES Volume 2, Chapter 11: Landscape and Visual [EN010159/APP/6.11]**. Mitigation measures included within the Proposed Development include the minimisation of temporary closures of existing PRoW (see the **Outline Public Rights of Way Management Plan [EN010159/APP/7.14]**). Overall, **direct, short-term, local effects of negligible significance** are likely.

Tourism

- 17.6.9 The construction of the Proposed Development has the potential to temporarily affect local amenity, and consequently tourism. This is a more uncertain effect, because of the various reasons visitors are attracted to the area, their activities, the time of year, whether they are repeat visitors, the very localised construction activity and its duration, taking into account the role of perception in visitor decisions.
- 17.6.10 As set out in **Table 17.15**, a number of potentially sensitive receptors to these effects have been identified. The majority of these are at least several hundred metres away from the Order Limits and are located closest to parts of the Order Limits that will be used for landscape mitigation, specifically grassland and wildflower meadows. The significance of visual, noise and dust amenity effects are assessed in more detail in **ES Volume 2, Chapter 11: Landscape and Visual [EN010159/APP/6.11]**, **ES Volume 2, Chapter 15: Noise and Vibration [EN010159/APP/6.15]** and **ES Volume 2, Chapter 13: Air Quality [EN010159/APP/6.13]**. Key conclusions from those assessments are discussed below.
- 17.6.11 As described in paragraph **Error! Reference source not found.**, the Marnham Meadows and Sparrow Lane sites, close to the south-western boundary of the Order Limits, and the Hall Farm site, close to the northern boundary of the Order Limits, have increased potential to be affected by the construction of the Proposed Development in terms of amenity. Of these sites, the former two are located adjacent to an area of the Order Limits that will be used for underground cabling, therefore the works to install these could impact amenity at these sites and consequently the number of visitors. Users of the Hall Farm site could also experience amenity impacts during the construction works. These potential effects, however, would be temporary.
- 17.6.12 Specific potential air quality, visual and noise amenity effects are assessed in more detail in the relevant technical chapters, as mentioned above. **ES Volume 2, Chapter 13: Air Quality [EN010159/APP/6.13]** concludes that any construction dust impacts on amenity will be not significant following the implementation of appropriate mitigation measures secured through the **Outline Construction Environmental Management Plan [EN010159/APP/7.4]**. **ES Volume 2, Chapter 15: Noise and Vibration [EN010159/APP/6.15]** similarly concluded that noise and vibration from construction activities on-site, such as piling, would not result in any significant affects on amenity, given the short duration of activities in proximity to sensitive receptors. With regards to visual

amenity impacts on the Marnham Meadows and Sparrow Lane sites, **ES Volume 2, Chapter 11: Landscape and Visual [EN010159/APP/6.11]** states that due to the distance to the construction works, rising landform, hedgerows and visibility of existing energy infrastructure (e.g. pylons), there will be no significant effects. Whilst the impacts on Hall Farm are not assessed specifically, visual impacts from the nearby A57 are expected to result in moderate adverse, albeit temporary, effects during construction works, given the lack of existing energy infrastructure and proximity to the works.

- 17.6.13 Considering the above conclusions on amenity from other technical chapters, overall the potential for significant knock on effects on tourism is considered to be relatively low and limited to a small number of specific locations. Whilst it is possible that the temporary visual amenity effects at Hall Farm may have some impact on visitor numbers during construction, at a wider level increased demand for accommodation from construction workers (554 full-time average and a peak of 750 workers over two years) is likely to offset this. Occupancy rates and visitor numbers are not available for the Local Area or district level, but the East Midlands region received 2.2 million visits in Q3 of 2023 (the most recent data available – see paragraph 17.4.28). As set out in **Table 17.15**, there are numerous other visitor accommodation facilities in the Local Area; thus, these **indirect, short-term** effects at the **local** level would likely be of **negligible significance**.

Operational and Maintenance

Employment

- 17.6.14 Further employment effects are expected once the Proposed Development becomes operational. These changes are shown in FTE below, given that a number of existing jobs in agriculture are temporary/seasonal in nature. Firstly, existing employment in agriculture may be affected in line with changes in land use. As set out in **Table 17.18**, there are estimated to be around 20 jobs, including temporary/seasonal work (equating to 7.75 FTE) currently within the Order Limits with a further 10 landowners who will receive rent not included in these numbers. Secondly, additional employment is expected to arise from management, maintenance and oversight of the Proposed Development once operational. This number is estimated by the applicant to be 15 full time, jobs on site for the duration of the operational life (assumed to be 15 FTE). Note this excludes further non-local jobs in the developer companies (such as administrative roles including HR and Health and Safety) that are supported from the income from the Proposed Development.
- 17.6.15 Finally, as above, further indirect jobs will be supported along supply chains. Using the same multiplier above suggests a further 1.33 FTE jobs may be generated along supply chains via indirect and induced effects for every direct job; this amounts to a further 9.75 FTE jobs. Taken together, the net additional FTE jobs expected to arise from the Proposed Development, once operational, is estimated at 17 FTE.

Table 17.18: Net additional employment estimates

	FTE
Direct Employment (Proposed Development)	15
Potential Displacement (Existing Employment)	7.75
Net Direct Employment	7.25
Indirect Employment (Proposed Development)	9.75
Net additional Direct and Indirect Employment	17

- 17.6.16 For scale, a direct net increase of around seven FTE jobs on site would constitute an increase of 0.3% of total employment in the Local Area, but a 23% increase in local employment in the mining, quarrying and utilities group (which includes electricity generation). In reality, however, the labour for these new jobs would likely be drawn from the whole labour catchment area and likely from several sectors. Across this area, the Proposed Development will represent an increase of 0.1% in sector specific jobs and 0.002% in total jobs. On this basis, these **direct, long-term** effects at the **local** level would be of **negligible significance**.
- 17.6.17 As discussed in paragraph 17.4.20, the distribution of the existing jobs within the Order Limits is presented in **ES Volume 3, Figure 17.7: Distribution of Current Employment within the Order Limits [EN010159/APP/6.20]** and it is not known to what extent these jobs will be retained on land outside of the Order Limits (either by the same owners who have additional plots or other farms/businesses during the operation of the Proposed Development. It has, therefore, been assumed for the purposes of this assessment that all existing employment on site will be lost as a worst case.

Public Rights of Way

- 17.6.18 Once operational, the Proposed Development will include various enhancement measures including permissive paths to create new routes connecting the villages. At this stage approximately 6 km of permissive paths are proposed within the Order Limits. The permissive paths will be managed by a Landscape and Ecology Management Plan, which will ensure the paths remain accessible for users (an outline LEMP is included in the submission documents (see the **Outline Landscape and Ecology Management Plan [EN010159/APP/7.7]**).
- 17.6.19 As discussed, when considering the potential local amenity and tourism effects, **ES Volume 2, Chapter 11: Landscape and Visual [EN010159/APP/6.11]** also assessed the visual amenity impacts on users of PRow within and close to the Order Limits. During operation, moderate adverse effects are identified at a number of locations on PRow, but effects at most locations assessed are

expected to be not significant. As the mitigation planting matures during the operational life of the Proposed Development, these effects are expected to further reduce.

- 17.6.20 Consequently, considering the maintaining of all existing PRoW, the enhancement measures such as permissive paths, but the impacts on PRoW users to visual amenity effects, the **direct, long-term** effects of the operation of the Proposed Development on PRoW at the **local** level are expected to be of **negligible significance**.
- 17.6.21 More detail on the PRoW and permissive path management can be found in the **Outline Public Rights of Way Management Plan [EN010159/APP/7.14]**

Local Amenity and Tourism

- 17.6.22 The operation of the Proposed Development also has the potential to effect local amenity, primarily through visual impacts and knock-on effects on tourism. As discussed in paragraph 17.6.11, the potential effects on visual amenity are likely to impact a small number of caravan/campsites and holiday homes that are close to the Order Limits.
- 17.6.23 The Marnham Meadows and Sparrow Lane sites are located adjacent to an area of the Order Limits which will be used for underground cabling, therefore during operation there will be no amenity impacts from these adjacent fields, and therefore it is assumed no knock-on impacts on tourism.
- 17.6.24 The only identified receptor located close to a part of the Order Limits that will be occupied by solar modules is the Hall Farm campsite. Currently there is existing boundary planting between the campsite and the Order Limits. As part of the landscape strategy this vegetation will be retained and planting of new vegetation will be undertaken to provide further screening from the campsite to the areas of solar modules. It is also noted that the solar modules will be located away from the boundary edge, to allow for the proposed landscaping to take effect and reduce visual effects. The significance of visual effects specifically are assessed in more detail in **ES Volume 2, Chapter 11: Landscape and Visual [EN010159/APP/6.11]**.
- 17.6.25 The relationship between the presence of a solar farm and an individual's desire to visit an area and the enjoyment of that visit is complex and to a degree, subjective. A 2013 study of the 'Impact of Renewable Energy Farms on Visitors to Cornwall'⁴⁰ for example identified specific examples where solar and wind farms have not had a negative impact on local visitor numbers, and may even

⁴⁰ The South West Research Company Ltd (2013) The Impact of Renewable Energy Farms on Visitors to Cornwall. Available: <https://www.deg.wales/wp-content/uploads/2015/09/Theimpactofrenewableenergyfarmsonvisitors Cornwall-FINALREPORT-November13.pdf>

have positively impacted visitor numbers. It should be noted that this study does not consider the impacts at the local level, and therefore insufficient data are available to be able to quantify these effects in the context of the Local Area. It would therefore be unreasonable to lend too much weight to the suggestion that there may be a positive impact on the Local Area; thus, it has been concluded that the **indirect, long-term** effects of the operation of the Proposed Development on tourism at the **local** level are likely of **negligible significance**. This conclusion is supported by those set out in **ES Volume 2, Chapter 11: Landscape and Visual [EN010159/APP/6.11]**, as discussed above.

Decommissioning

Employment

- 17.6.26 Further construction jobs will be supported at decommissioning stage. Quantitative estimates of employment are not available, but it is assumed that whilst the quantum of labour required may be a similar order of magnitude, it will be lower than at construction stage with fewer indirect jobs supported. The existing operational jobs would then be lost, or moved to another site, although new jobs may be supported (such as agricultural jobs, when the land is returned to the landowners). On this basis, during decommissioning the likely **direct, short-term** effects at the **local** level are considered to be of **minor beneficial significance**.

Public Rights of Way

- 17.6.27 As is the case for employment, the impacts of decommissioning on PRow might be expected to be similar to those during construction. The decommissioning works will be managed by a decommissioning management plan to ensure the PRow are appropriately managed, which would be agreed prior to decommissioning works (see the **Outline Decommissioning Environmental Management Plan [EN010159/APP/7.6]**). On this basis, the **direct, short-term** effects at the **local** level are considered to be of **negligible significance**.

Local Amenity and Tourism

- 17.6.28 For local amenity and tourism, the impacts of decommissioning might be expected to be similar to those during construction. The decommissioning works will be managed by a decommissioning environmental management plan to ensure the effects on local amenity and tourism are appropriately managed, which would be agreed prior to decommissioning works (see the **Outline Decommissioning Environmental Management Plan [EN010159/APP/7.6]**). On this basis, the likely **direct, short-term** effects at the **local** level are considered to be of **negligible significance**.

17.7 Summary

- 17.7.1 **Table 17.19** sets out a summary of the likely significant environmental effects considered.





Table 17.19 Summary of Significant Environmental Effects

Receptor	Environmental Measures	Description of the Effect	Direct / Indirect	Duration	Geographic Scale	Nature of Effect	Significant / Not Significant	Next Steps
Construction								
Existing Employees within the Order Limits	Skills, Supply Chain and Employment Plan	Employment	Direct and In-direct	Short-Term	Local and Regional/National	Moderate and Minor Beneficial	Significant	Contractor to agree CEMP with LPA
Existing Users of PRoW	CEMP	PRoW	Direct	Short-Term	Local	Negligible	Not Significant	Contractor to agree Public Rights of Way Management Plan with LPA
Visitors to the Local Area	...	Tourism	In-direct	Short-Term	Local	Negligible	Not Significant	...
Operation								
Existing Employees within the Order Limits	Skills, Supply Chain and Employment Plan	Employment	Direct	Long-Term	Local	Negligible	Not Significant	...



Receptor	Environmental Measures	Description of the Effect	Direct / Indirect	Duration	Geographic Scale	Nature of Effect	Significant / Not Significant	Next Steps
Existing Users of PRoW	Approximately 6 km of new permissive paths	PRoW	Direct	Long-Term	Local	Negligible	Not Significant	Contractor to agree oEMP with LPA
Visitors to the Local Area	...	Tourism	In-direct	Long-Term	Local	Negligible	Not Significant	...
Decommissioning								
Existing Employees within the Order Limits	Skills, Supply Chain and Employment Plan	Employment	Direct	Short-Term	Local	Moderate Beneficial	Significant	...
Existing Users of PRoW	Approximately 6 km of new permissive paths	PRoW	Direct	Short-Term	Local	Negligible	Not Significant	Contractor to agree DEMP with LPA
Visitors to the Local Area	...	Tourism	Direct	Short-Term	Local	Negligible	Not Significant	Contractor to agree DEMP with LPA



one earth
solar farm