



Tillbridge Solar

PEI Report Volume I Chapter 14: Socio-Economics and Land Use
April 2023

tillbridgesolar.com

@: info@tillbridgesolar.com T: 0800 046 9643

14. Socio-Economics and Land Use

14.1 Introduction

14.1.1 This chapter presents the findings of an assessment of the likely significant effects of the Scheme on socio-economics and land use. For more details about the Scheme, refer to **PEI Report Volume I Chapter 3: Scheme Description** of this PEI Report.

14.1.2 This chapter identifies the potential impacts of the Scheme and proposes mitigation measures to address the likely significant effects on socio-economics and land use, during the construction, operation, and decommissioning phases. This includes consideration of the potential for impacts arising with regard to:

- Local economy and employment;
- Local community severance;
- Public Rights of Way (PRoW);
- Best and Most Versatile (BMV) agricultural land and soils; and
- Local land use and amenity (agricultural land use, residential properties, local businesses, open space, community facilities, visitor attractions and development land).

14.1.3 This chapter is supported by the following appendix in **PEI Report Volume II**:

- **Appendix 14-1:** Socio-economics and Land Use Legislation and Policy; and
- **Appendix 14-2:** Agricultural Land Classification Survey Report.

14.2 Legislation and Planning Policy

14.2.1 Legislation, planning policy, and guidance relating to socio-economics and land use and pertinent to the Scheme comprises of those listed below. More detailed information regarding these policies can be found in **PEI Report Volume II Appendix 14-1**.

National Planning Policy

- Overarching National Policy Statement (NPS) for Energy (EN-1) (2011) (Ref. 14-1), with particular reference to paragraphs 4.1.3 and 4.1.4 and sections 4.2.2 and 5.12, which set out national planning policy with respect to socio-economic impacts in relation to energy development, including the requirements for any associated socio-economic impact assessment;
- Draft NPS EN-1 (2023) (Ref. 14-2);
- Draft NPS EN-3 (2023) (Ref. 14-3); and

- National Planning Policy Framework (NPPF) (2021) (Ref. 14-4), with particular reference to Section 8 in relation to building a strong, competitive economy, Section 8 which aims to promote healthy and safe communities, and Section 15 which addresses conserving and enhancing the natural environment.

National Guidance

- National Planning Practice Guidance (NPPG) (2021) (Ref. 14-5), which provides additional guidance to the NPPF and emphasises the need for local planning authorities to incorporate existing and potential future needs of the population into their planning and economic strategy.

Local Planning Policy

- Central Lincolnshire Adopted Local Plan (2023) (Ref. 14-8), with particular reference to Policy S5 which relates to development in the countryside, Policy S14 which relates to renewable energy, Policy S42 relating to sustainable urban tourism, Policy S48 which refers to walking and cycling infrastructure, Policy S50 which relates to community facilities, Policy S59 which focuses on blue and green infrastructure, Policy S65 which discusses open spaces and Policy S67 which refers to best and most versatile (MBV) land;
- Bassetlaw Adopted Core Strategy and Development Management Policies (2011) (Ref. 14-10), with particular reference to Policy DM1 relating to economic development in the countryside, Policy DM7 which relates to securing economic development in the district, Policy DM9 which relates to green infrastructure and open space, Policy DM10 that highlights the need for renewable and low carbon energy, and Policy DM11 which relates to developer contributions and infrastructure;
- Bassetlaw Local Plan Publication version (2022) (Ref. 14-11), with particular reference to Policy ST11 about proposals for economic growth, Policy ST39 which refers to green and blue infrastructure, Policy ST45 which relates to the protection and enhancement of community facilities, Policy ST47 relating to the promotion of sport and recreation, Policy ST48 which focuses on safeguarding the quality of life of residents and improving the environmental quality of the district and Policy ST51 which focuses on the promotion of renewable and low carbon energy forms;
- Bassetlaw Local Plan Schedule of Suggested Changes to the local Plan Publication Version and Policies Map (2022) (Ref. 14-12) which sets out a table of suggested changes to the Bassetlaw Local Plan Publication Version (August 2021);
- Central Lincolnshire Main Modifications (2023) (Ref. 14-13), which sets out the Central Lincolnshire Local Plan review and consultation responses;
- Corringham Neighbourhood Plan (Adopted January 2022) (Ref. 14-16), with particular reference to Policy CNP1 which sets out sustainable principles for development, Policy CNP10 which relates to existing open spaces and recreation facilities, Policy CNP14 which relates to

community facilities and Policy CNP16 which relates to transport and active travel;

- Glentworth Neighbourhood Plan (Adopted January 2019) (Ref. 14-17), with particular reference to Policy 4 which relates to community facilities and Policy 5 which emphasises the importance of green infrastructure;
- Draft Hemswell and Harpswell Neighbourhood Plan (2022) (Ref. 14-18), with particular reference to Policy 4 which relates to landscape character, Policy 8 which focuses on local green spaces, Policy 9 which discusses community facilities and Policy 10, which states that development proposals should contribute towards the protection and enhancement of PRow;
- Sturton by Stow Neighbourhood Plan (Adopted July 2022) (Ref. 14-19), with particular reference to Policy 1 which focuses on sustainability, Policy 8 which relates to community facilities and Policy 10 which refers to green infrastructure;
- Rampton and Woodbeck Neighbourhood Plan (Adopted May 2021) (Ref. 14-20), with particular reference to Policy 7 which sets out the designated local green spaces and their importance and Policy 9 which relates to the protection of local amenities; and
- Treswell and Cottam Neighbourhood Plan (Adopted February 2019) (Ref. 14-21), with particular reference to Policy 7 which relates to the protection of community facilities, Policy 9 which relates to local green spaces and Policy 10 which highlights the need for proposals to support local employment opportunities.

Local Guidance

- Protecting, Progressing, Prospering: Greater Lincolnshire Local Enterprise Partnership (LEP) Plan for Growth (2021) (Ref. 14-6), which was adopted as a strategy to help guide the Greater Lincolnshire area out of the Covid-19 pandemic, and in particular highlights energy as a priority area for growth;
- D2N2 LEP Recovery and Growth Strategy (2021) (Ref. 14-7), which repurposes the Local Industrial Strategy in light of the Covid-19 pandemic and focuses on three key propositions relating to low carbon growth, improving productivity and decarbonising growth
- West Lindsey Sustainability, Climate Change and Environment Strategy (2021) (Ref. 14-14) which discusses land use and green space and gives weight to developments that realise the potential for low carbon and renewable energy generation; and
- West Lindsey Visitor Economy Strategy (2022) (Ref. 14-15), which sets out objectives for adding value and stimulating the growth of the visitor economy.

14.3 Assessment Assumptions and Limitations

- 14.3.1 This chapter forms a preliminary assessment, which has been based on available information at the time of preparing this PEI Report. A final assessment will be undertaken as part of the EIA and will be reported in the ES that will be submitted with the DCO application.
- 14.3.2 The assessment of the significance of effects has been carried out against a benchmark of current socio-economic baseline conditions prevailing around the Scheme, as far as is possible within the limitations of such a dataset. The most recently available data sources have been used in this PEI Report, although it should be noted that baseline data can be subject to a time lag between collection and publication. As with any dataset, these conditions may be subject to change over time, which may influence the findings of the assessment.
- 14.3.3 Baseline Conditions reported in Section 14.6 regarding population, labour force and the local economy are based on the latest data available at the time of writing. Where more recent data is not available, some data used from pre-2020 is presented and as such current conditions for such indicators could be changed owing to the effect of the Covid-19 pandemic on the labour market, businesses and the economy. The assessment of effects reported in Section 14.8 is based on the conditions as reported. The data from pre-2020 provides context for the assessment of effects only and has not been used in the assessment of significance of effects. Where conditions are likely to have been influenced by the effects of Covid-19 or other wider trends, explanatory commentary is provided.
- 14.3.4 Currently only certain datasets of the 2021 Census relevant to the assessment are available. The assessment uses 2021 Census data, where available, and only uses 2011 Census data where no other more recent data is available.
- 14.3.5 Effects on agricultural land use have taken into consideration the agricultural land classification (ALC) of the areas of the Scheme which are known at this time. **PEI Report Volume II Appendix 14-2** provides the interim Agricultural Land Classification Survey Report. Additional analysis of climate data, soil investigation pits and soil laboratory analysis of samples results is being undertaken and will be reported within the final report submitted with the ES. As such, effects are subject to change pending this and will be reported in the ES. Also, as the precise alignment of the Cable Route Corridor is yet to be determined, the ALC within this area is also not known and any effects on this will be reported in the ES when the ALC will be known.
- 14.3.6 Effects on PRow during the construction, operation and decommissioning phases are assessed in this PEI Report. At PEI Report stage, it is not possible to confirm with certainty the length of time any PRow will be closed or diverted. At this stage, no permanent PRow closures or diversions are expected, however, temporary PRow diversions are assessed as a worst-case assumption.
- 14.3.7 Effects on local amenities and land use during the construction, operation and decommissioning phases are based on preliminary assessments taking into consideration the results from the relevant environmental studies that can act

in-combination to cause effects to occur. These studies comprise the transport and access, noise and vibration, landscape and visual amenity, and air quality assessments. Where any two of these topics or more each record a significant effect on a receptor or group of receptors, it will be assumed as a worst-case that the effect could occur at the same time. These will be further investigated in the ES that will be submitted with the DCO application.

- 14.3.8 As noted in **PEI Report Volume I Chapter 3: Scheme Description**, the construction period is expected to be a minimum of 24 months. This is expected to be a realistic worst-case assumption for the socio-economic and land use assessment, as it represents the expected minimum build time and therefore the most intense activity onsite (and therefore greatest impacts associated with traffic, noise, dust, visual, etc). This approach may mean the maximum number of jobs during peak construction has been overestimated; however, the overall amount of construction activity and therefore the associated employment and spending benefits of the Scheme would remain unchanged.

14.4 Assessment Methodology

Study Area

- 14.4.1 The impacts of the Scheme with respect to socio-economics and land use are considered at varying spatial levels according to the likely spatial extent of the effect under consideration. This approach is consistent with the Homes and Communities Agency (HCA), now known as Homes England, guidance entitled 'Additionality Guide, A Standard Approach to Assessing the Additional Impacts of Projects, 4th Edition' (Ref. 14-22).
- 14.4.2 Table 14-1 presents the different components of the socio-economics and land use effects assessment for the PEI Report, the geographical scale at which each component is assessed and the rationale behind these geographical scales.

Local Economy and Employment

- 14.4.3 Impacts on the economy and employment will be considered within West Lindsey District and Bassetlaw District, which are the Local Planning Authorities that the Scheme falls within, and the wider East Midlands region. This will provide an understanding of the likely labour market effects within the authorities the Scheme is located in, as well as the likely wider regional effect. Due to the scale of the Scheme and its associated employment, relative to the national economy, it is unlikely that there would be any considerable national impacts and therefore the local economy and employment impacts have only been considered relative to the local and regional area.

Local community severance

- 14.4.4 The study area for local communities that could be affected by community severance will consider communities that may potentially be directly and indirectly affected by the Scheme. These will include communities directly connected by recreational routes and PRoW. The communities that could be impacted are within 1km of the Scheme Boundary.

PRoW

14.4.5 Impacts on users of recreational routes and PRoW will consider impacts on routes and PRoW likely to be affected by alterations in their use during the construction, operation and decommissioning phases of the Scheme. This will include all routes located within 500m of the Scheme Boundary.

BMV Agricultural Land and Soils and Agricultural Land Use

14.4.6 Impacts on Best and Most Versatile (BMV) agricultural land and soils, and consideration of impacts on agricultural land use will consider land that falls within the Scheme Boundary. This land will be directly impacted by the Scheme during its construction and operational phases.

Local Land Use and Amenity (residential properties, local businesses, open space, community facilities, visitor attractions and development land)

14.4.7 The study area for land use and amenity impacts on agricultural land use, residential properties, local businesses, open space, community facilities, visitor attractions and development land will consider receptors that could be directly or indirectly affected by the Scheme. The receptors that could be impacted are within 500m of the Scheme Boundary.

14.4.8 Where relevant, amenity impacts on local amenities will also be considered with reference to the geographical scale of impacts identified by related assessments (based on the findings of other assessments presented in **PEI Report Volume I Chapter 6: Air Quality, PEI Report Volume I Chapter 12: Landscape and Visual Amenity, PEI Report Volume I Chapter 13: Noise and Vibration** and **PEI Report Volume I Chapter 15: Transport and Access**).

14.4.9 Table 14-1 presents a summary of the different components of the socio-economics and land use assessment and the geographical scale at which each component is assessed.

Table 14-1: Summary of Socio-Economics and Land Use Impacts by Geographical Scale

Impact	Geographical Area of Impact	Rationale for Impact Area
Employment generation during construction phase, operational phase and decommissioning phase (direct, indirect and induced impacts)	45-minute drive time Study Area, Local Authority area (West Lindsey and Bassetlaw), and regional impact (East Midlands).	Professional judgment and experience from other Schemes in England.
Gross Value Added (GVA) during construction phase		
Local community severance	Within 1km of the Scheme Boundary and connected by PRoW.	Professional judgement and location of sensitive receptors for impacts arising from the Scheme, as informed by other assessments.

Impact	Geographical Area of Impact	Rationale for Impact Area
PRoW	Within 500m of the Scheme Boundary.	Professional judgment and experience from other schemes in England, considering routes likely to be impacted by the Scheme.
BMV agricultural land and soils and agricultural land use	The Scheme Boundary.	Professional judgement and experience from other schemes in England.
Local land use and amenity impacts – Residential Properties, Local Businesses, Open Space, Community Facilities, Visitor Attractions, Development Land	Within 500m of the Scheme Boundary, and with consideration to the spatial scale of impacts identified by related assessments (PEI Report Volume I Chapter 6: Air Quality, PEI Report Volume I Chapter 12: Landscape and Visual Amenity, PEI Report Volume I Chapter 13: Noise and Vibration and PEI Report Volume I Chapter 15: Transport and Access).	Professional judgement and location of sensitive receptors for impacts arising from the Scheme as informed by other assessments.

Sources of Information

14.4.10 The assessment seeks to establish the potential social, economic, and land use effects of the Scheme and assesses these against the current baseline conditions within the Scheme Boundary and in the surrounding area.

Desktop Survey

14.4.11 Baseline data illustrating the existing conditions surrounding the Scheme Boundary has been collected through a desk-based research exercise using publicly available sources, documents, and web-based applications. These sources are listed below. It is important to note that Census 2011 data has only been used in the absence of more recent statistics at the relevant geography.

14.4.12 Currently only certain datasets of the 2021 Census relevant to the assessment are available. The assessment uses 2021 Census data, where available, and only uses 2011 Census data where no other more recent data is available.

14.4.13 Sources of information include:

- English Indices of Deprivation (2019) (Ref. 14-23);
- Office for National Statistics (ONS) (2011) Census Data (Ref. 14-24);
- ONS (2022) 2021 Census Data (Ref. 14-25);

- ONS (2017) Gross Value Added (Income Approach) (Ref. 14-26);
- ONS (2021 UK Business Register and Employment Survey (Ref. 14-27);
- Annual Population Survey (2021) (Ref. 14-28);
- ONS Mid-year Population Estimates 2020 (2021) (Ref. 14-29);
- ONS, (2021), Claimant count by sex and age (October 2022) (Ref. 14-31);
- Lincolnshire PRoW map (electronic version) (Ref. 14-32);
- Nottinghamshire PRoW Non-Definitive map (Ref. 14-33);
- Central Lincolnshire Local Plan Adopted and Proposed Policies Map (Ref. 14-34);
- Bassetlaw Local Plan Adopted and Proposed Policies Map (Ref. 14-35);
and
- Planning applications portals for West Lindsey and Bassetlaw.

Agricultural Land Classification (ALC) Survey

14.4.14 Natural England 'Technical Information Note 049 – Agricultural Land: protecting the best and most versatile agricultural land (TIN049)' provides guidance on agricultural land quality assessment for development planning (Ref. 14-36). A provisional ALC is available from the Defra mapping service found at: magic.defra.gov.uk. This plan shows land grades across the whole of England. However, TIN049 advises that it is of limited value for assessing land quality of large sites. ALC site sampling has therefore been undertaken across the majority of the Principal Site, and the interim report is appended at **PEI Report Volume II Appendix 14-2**. An ALC survey of the Cable Route Corridor is not currently proposed. Instead, at ES stage ALC along the Cable Route Corridor will be mapped through reliance on secondary data sets, which is considered adequate based on the guidance provided by the Draft NPS EN-3 and that impacts will comprise permanent below ground works, with land returned to its original agriculture use following installation. Engagement with Natural England will be carried out to agree this point to inform the Environmental Statement. Any impact on BMV land within the Cable Route Corridor will therefore be minor and temporary, and will be mitigated through implementation of a soil management plan.

Landowner Survey for Agricultural Land Use

14.4.15 A survey is being carried out with landowners within the Principal Site boundary to understand existing agricultural land uses, how uses would be affected by the Scheme, employment levels and potential to reinstate land to its existing use following the decommissioning phase. An agricultural land use survey of the Cable Route Corridor is not currently proposed. As above, any impacts will comprise permanent below ground works, with land returned to its original agriculture use following installation. Any impact on agricultural land use within the Cable Route Corridor will therefore be minor and temporary and will be mitigated through implementation of a soil management plan.

Impact Assessment Methodology

Assessment Criteria

14.4.16 There is currently no statutory guidance on the methodology for undertaking assessments of socio-economic and land use effects. The assessment follows best practice methodology and professional judgement from other assessments undertaken on comparable energy infrastructure schemes.

14.4.17 Where possible, socio-economic impacts have been appraised against relevant national standards. Where relevant standards do not exist, professional experience and expert judgement have been used to assess the likely scale, permanence and significance of the effects of the Scheme on baseline socio-economic and land-use receptors. The potential cumulative socio-economic and land-use impacts of the Scheme in interaction with other planned projects within the surrounding area has been assessed in **PEI Report Volume I Chapter 17: Cumulative Effects**.

14.4.18 The assessment aims to be objective and quantifies effects as far as possible. However, some effects can only be evaluated on a qualitative basis. Effects are defined as follows:

- **Beneficial** classifications of significance indicate an advantageous or beneficial effect on an area, which may be minor, moderate or major in effect;
- **Adverse** classifications of significance indicate a disadvantageous or adverse effect on an area, which may be minor, moderate or major in effect;
- **Negligible** classifications of significance indicate imperceptible effects on an area; and
- **No effect** classifications of significance indicate that there are no effects on an area.

14.4.19 The geographical scales considered to assess significance are described in Table 14-1, and are organised around the following:

- **National** levels are associated with effects that impact on England;
- **Regional** levels are associated with effects that impact on the East Midlands;
- **District** levels are associated with effects that impact on West Lindsey and Bassetlaw; and
- **Local** levels are associated with effects that impact on the Scheme Boundary and neighbouring area.

14.4.20 Duration of effect is also considered, with more weight given to longer-term or permanent changes than to shorter-term or temporary ones.

14.4.21 As set out in **PEI Report Volume I Chapter 5: EIA Methodology**, timescales associated with enduring effects are as follows:

- **Short term** – endures for up to 12 months;

- **Medium term** – endures for 1-5 years;
- **Long term** – endures for more than 5 years;
- **Reversible Long term effects** – long-term effects which endure throughout the lifetime of the Scheme, but which cease once the Scheme has been decommissioned; and
- **Permanent effects** – effect which cannot be reversed following decommissioning.

14.4.22 For socio-economics and land use there is no accepted definition of what constitutes a significant (or not significant) effect. It is, however, recognised that effects are categorised based upon the relationship between the scale (or magnitude) of effect and the sensitivity (or value) of the affected resource or receptor. As such the significance criteria of socio-economic effects has been assessed based on expert judgment and professional experience of the author, and relies on the following considerations:

- **Sensitivity of resources/receptors:** specific values in terms of sensitivity are not attributed to socio-economic resources / receptors due to their diverse nature and scale; however, the assessment takes account of the qualitative (rather than quantitative) 'sensitivity' of each receptor and, in particular, their ability to respond to change based on recent rates of change and turnover (if appropriate);
- **Magnitude of impact:** this entails consideration of the size of the impact on socio-economic and land-use receptors in the context of the area in which effects will be experienced; and
- **Scope for adjustment:** the socio-economic and land-use assessment is concerned in part with economies. These adjust themselves continually to changes in supply and demand, and the scope for the changes brought about by the Scheme to be accommodated by market adjustment will therefore be a criterion in assessing significance.

14.4.23 Criteria for receptor sensitivity and impact magnitude have been set out below (although specific sensitivity values are not attributed to socio-economics receptors as explained above), which have been grouped as follows: economic impacts, local amenities and land use impacts, and tourism impacts. The significance of effect matrix has been provided following the receptor sensitivity and impact magnitude criteria.

Sensitivity of Receptor

Local Economy and Employment Impacts

14.4.24 Table 14-2 identifies the sensitivity criteria that have been used to inform the assessment of local economy and employment impacts and impacts on local accommodation facilities.

Table 14-2: Receptor Sensitivity Criteria – Local Economy, Employment and Local Accommodation facilities Impact

Sensitivity	Description
High	Businesses, workers or residents who have little or no capacity to experience the impact without incurring an economic loss or have capacity to experience an economic gain.
Medium	Businesses, workers or residents that have a moderate or average capacity to experience the impact without incurring a change on their economic well-being.
Low	Businesses, workers or residents that generally have adequate capacity to experience impacts without incurring a change on their economic well-being.
Very Low	Businesses, workers or residents that are unlikely to experience impacts on their economic well-being.

Local Community Severance and PRoW

14.4.25 Table 14-3 identifies the sensitivity criteria that have been used to inform the assessment of impacts on local community severance and PRoW users. The sensitivity criteria focus on the impact of severance of existing routes and the resulting changes in journey lengths and times and local travel patterns.

Table 14-3: Receptor Sensitivity Criteria – Public Rights of Way

Sensitivity	Description
High	PRoW of high importance such as designated National Trails or National Cycle Routes with no potential to substitute with other route options of equivalent distance to access with the wider network or community infrastructure.
Medium	PRoW of medium importance such as named recreational walking or cycling routes with limited potential to substitute with other route options of similar distance to access with the wider network or community infrastructure.
Low	PRoW of low importance with moderate potential to substitute with alternative route options of equivalent distance to access the wider network or community infrastructure.
Very Low	PRoW of very low importance with high potential to substitute with alternative route options of equivalent distance to access the wider network or community infrastructure.

BMV Agricultural Land

14.4.26 The sensitivity of agricultural land is assessed according to its ALC grade, as set out in Table 14-4.

14.4.27 BMV agricultural land is a strategic national resource with longstanding policy to prevent the unnecessary loss of such land to non-agricultural development. As set out in TIN049 (Ref. 14-36), land in ALC Grades 1, 2 and 3a are considered to be the nation's best and most versatile land. The current NPS

EN-1, Draft NPS EN-1 and Draft NPS EN-3 directs that planning should consider the economic and other benefits of BMV agricultural land. TIN049 and national planning policy do not seek to enforce continuity of agricultural production or any specific agricultural management.

14.4.28 For the agricultural land resource, the presence of BMV land and the grade of that land determine sensitivity, with Grades 1 and 2 land being of higher sensitivity than land in Grade 3a.

14.4.29 This criteria set out in Table 14-4 takes into account the above guidance in respect of the economic and other benefits of the BMV and gives little weight to the loss of land in Grades 3b, 4 and 5.

Table 14-4: Receptor Sensitivity Criteria – BMV Agricultural Land

Sensitivity Agricultural Land

High	Agricultural land predominantly in Grades 1 and 2.
Medium	Agricultural land predominantly in Grade 3a or containing some Grade 1 and 2.
Low	Agricultural land containing some Grade 3a.
Very low	Agricultural land all Grade 3b or lower.

Local Land Use and Amenity – Agricultural Land Use, Residential Properties, Local Businesses, Open Space, Community Facilities, Visitor Attractions and Development Land

14.4.30 Table 14-5 identifies the sensitivity criteria that have been used to inform the assessment of effects relating to local land uses.

Table 14-5: Receptor Sensitivity Criteria – Local Land Use and Amenity

Sensitivity Description

High	Land use is of high local importance with limited potential for substitution or access to alternatives.
Medium	Land use is of medium local importance with moderate potential for substitution or access to alternatives.
Low	Land use is of low local importance with alternatives available.
Very Low	Land use is of very low importance with alternatives available.

Magnitude of Impact

Local Economy, Employment and Local Accommodation Facilities Impacts

14.4.31 Table 14-6 identifies the magnitude of impact criteria that have been used to assess the socio-economic receptors relating to employment, GVA and the accommodation sector.

**Table 14-6: Local Economy, Employment and Accommodation sector
Magnitude Impact Criteria**

Magnitude	Description
High	An impact that is expected to have considerable adverse or beneficial socio-economics effects. Such impacts will typically affect large numbers of businesses, workers or residents.
Medium	An impact that will typically have a noticeable effect of a moderate number of businesses, workers or residents, and will lead to a small change to the study area’s baseline socio-economic conditions.
Low	An impact that is expected to affect a small number of businesses, workers or residents or an impact that may affect a larger number of receptors but does not materially alter the study area’s baseline socio-economic conditions.
Very Low	An impact which has very little change from baseline conditions where the change is barely distinguishable, approximating to a “no change” situation.

Local Community Severance and PRoW

14.4.32 Table 14-7 identifies the magnitude of impact criteria which have been used to assess the impacts on local community severance and PRoW.

Table 14-7: Local Community Severance and PRoW Magnitude Impact Criteria

Magnitude	Description
High	Substantial increase/decrease in journey length and/or travel patterns and increased/decreased opportunities for users to access the wider network and/or community infrastructure.
Medium	Noticeable increase/decrease in journey length and/or travel patterns and increased/decreased opportunities for users to access the wider network and/or community infrastructure.
Low	Slight increase/decrease in journey length and/or travel patterns and increased/decreased opportunities for users to access the wider network and/or community infrastructure.
Very Low	No increase or decrease in journey length and/or travel patterns and no increase or decrease in opportunities for users to access the wider network and/or community infrastructure

BMV Agricultural Land

14.4.33 This section outlines the criteria that have been set to assess the magnitude of impact on BMV agricultural land.

14.4.34 The thresholds for the magnitude of impact adopted in this assessment are based on a threshold of the permanent change of 20 ha of BMV agricultural land, taken from Article 18(1), paragraph (y) of the Table in Schedule 4 to the Town and Country Planning (Development Management Procedure) Order 2015 (S.I. No 2015/595) (Ref. 14-43). The magnitude of change criteria is

therefore based on the extent of BMV land lost, with the area of 20 hectares (ha) referred to below being derived from the threshold contained within the former MAFF guidance (Ref. 14-37) and maintained by Natural England when informing their consultation on projects. As this is the area of BMV change that triggers a requirement to consult with Natural England, it implies that this is also the point at which the change is no longer considered to be ‘not significant’. Therefore, for the purposes of this assessment:

- Total permanent loss/gain of BMV land which exceeds 20 ha is considered significant;
- A loss of BMV which is either temporary and reversible after construction, or which falls below the 20 ha threshold, is considered as being not significant; and
- A loss of non-BMV land is considered as being not significant.

Local Land Use and Amenity

14.4.35 The magnitude of change on local land use and amenity (agricultural land use, residential properties, local businesses, open space, community facilities, visitor attractions and development land) is assessed by appraising the level of impact on the receptor and the permanence of change arising from the Scheme. Table 14-8 identifies the magnitude of impact criteria which have been used to assess the impacts on local land use and amenity.

Table 14-8: Local Land Use and Amenity Magnitude Impact Criteria

Magnitude	Description
High	An impact that permanently affects the integrity and value of a land use; or an impact that considerably enhances the value and quality of the land use.
Medium	An impact that negatively affects the value of land use, but a recovery is possible with no permanent impacts; or an impact that improves key characteristics and features of the land use.
Low	An impact that negatively affects the value of land use, but a recovery is expected in the short-term with no change to its integrity; or an impact that has some beneficial impact on the attributes of the land use.
Very Low	An impact which is a very minor loss or benefit from baseline conditions where the change is barely distinguishable, approximating to a “no change” situation.

14.4.36 For development land, an assessment has been undertaken of the effects on development land within the study area as identified from a review of planning applications which have received planning permission, or which are under consideration and allocated sites.

Significance of Effects

14.4.37 Socio-economic and land-use effects reflect the relationship between the sensitivity of the affected receptor, and the magnitude of the impact. Table 14-9 below shows how the assessment of the significance of effects is determined.

Table 14-9: Impact Assessment and Significance

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

14.4.38 In accordance with the methodology set out within **PEI Report Volume I Chapter 5: EIA Methodology**, the following criteria is applied:

- ‘Moderate’ or ‘Major’ effects are classed ‘**significant**’;
- ‘Minor’ effects are classed as ‘**not significant**’, although they may be a matter of local concern; and
- ‘Negligible’ effects are classed as ‘**not significant**’, although they may be a matter of local concern.

14.5 Stakeholder Engagement

14.5.1 A request for an EIA Scoping Opinion (**PEI Report Volume II Appendix 1-2**) was sought from the Secretary of State through the Planning Inspectorate in 2022 as part of the EIA Scoping Process. Consultation responses in relation to socio-economics and land-use, to date, are presented in Table 14-10 below.

14.5.2 Further consultation will be undertaken and input into the socio-economic and land-use assessment chapter within the Environmental Statement.

Table 14-10: Engagement Undertaken

Consultee	Summary of main matter raised	How has the matter been addressed?	Location of response in the chapter
Planning Inspectorate (ID 3.9.2)	The ES should set out and quantify baseline agricultural land uses across the study area and address the likely change in agricultural uses that arise from commercial agreements for land between the Applicant and landowners.	A survey of landowners has been undertaken to understand baseline existing agricultural land uses within the Principal Site boundary and any changes in agricultural uses likely to arise from the Scheme.	Section 14.8.
Planning Inspectorate (ID 3.9.3)	The ES should include clear justification as to how study areas for socio-economic and land-use	Definitions of socio-economic and land-use study areas, and justification for how they	Section 14.4

Consultee	Summary of main matter raised	How has the matter been addressed?	Location of response in the chapter
	effects have been chosen, and study areas should be depicted on a corresponding figure.	were chosen are set out in this chapter.	
Planning Inspectorate (ID 3.9.4)	The ALC survey should be carried out in line with relevant guidance and cover the Principal Site and Cabling Route Corridor. Potential for cumulative effects at the regional scale should be considered and the methods of returning land to its original use following decommissioning set out.	The ALC survey of the Principal Site is appended to this Chapter. An assessment of impacts on ALC land during the decommissioning phase is set out in this chapter. An ALC survey of the Cable Route Corridor is not currently proposed. Instead, ALC along the Cable Route Corridor will be mapped based on secondary data sets, which is considered adequate given impacts will comprise permanent below ground works, with land returned to its original agriculture use following installation. Any impact on BMV land within the Cable Route Corridor will therefore be minor and temporary, and will be mitigated through implementation of a soil management plan.	PEI Report Volume II Appendix 14-2; Section 14.8; PEI Report Volume I Chapter 17 Cumulative Effects.
Planning Inspectorate (ID 3.9.5)	The ES should set out the specific guidance material used to inform the assessment.	There is currently no statutory guidance on the methodology for undertaking assessments of socio-economic and land use effects. This assessment follows best practice methodology and professional experience applied in other energy infrastructure schemes. The methodology is set out in Section 14.4.	Section 14.4.
Fillingham Parish Council	The ES should address how the Scheme aligns with or impacts local planning policies that seek	The assessment of the economic and employment impacts of the Scheme set out in this chapter is made	Section 14.8.

Consultee	Summary of main matter raised	How has the matter been addressed?	Location of response in the chapter
	to address local employment and labour market challenges.	with reference to local economic and labour market policies.	
Glentworth Parish Council	The ES should address how the land use proposed is efficient in the wider picture, compared to other energy generating technologies.	The case for solar energy is made within the Government's National Policy Statement for Energy, and the PEI Report or ES do not seek to address this issue. Assessment of alternative technologies can be found in PEI Report Volume I Chapter 4: Alternatives and Design Evolution	N/a.
Natural England	The ES should set out: the quantity and quality of BMV agricultural land that will be impacted by the Scheme; details of how any adverse impacts on BMV agricultural land can be avoided or minimised through design; details of any agricultural use of the Scheme Boundary during operation; and, details of intended restoration following decommissioning.	An assessment on likely impacts on BMV agricultural land, details of agricultural land across the Principal Site and details of intended restoration of agricultural land following decommissioning are set out in this Chapter. Any impact on BMV land within the Cable Route Corridor will be limited to during construction, with no effect on agricultural land use here during operation.	Section 14.6; and Section 14.8.
West Lindsey District Council	Study areas for impacts on local land uses require justification. The use of a 500m buffer for PRoW network requires explanation. The ES should capture the effects of the loss of around 1400ha of arable land (4000Ha with the three other solar project NSIPs) upon the local population, economy and West Lindsey as a tourist destination.	A justification for the chosen socio-economic and land-use study areas is set out in this Chapter, including the 500m PRoW Study Area The cumulative effect of this Scheme in combination with other solar projects is assessed in PEI Report Volume I Chapter 17: Cumulative Effects . The effects of the Scheme on the local population and economy are set out in this chapter and will be further detailed in the ES. The effect of the Scheme on	Section 14.4 and Section 14.8.

Consultee	Summary of main matter raised	How has the matter been addressed?	Location of response in the chapter
		<p>landscape and visual amenity (which may be important with regard to tourism) are assessed in PEI Report Volume I Chapter 12: Landscape and Visual Amenity. Mitigation measures to minimise potential negative impacts are detailed in PEI Report Volume II Appendix 3-1: Framework CEMP.</p>	

14.6 Baseline Conditions

14.6.1 **PEI Report Volume I Chapter 2: Scheme Location** contains a detailed description of existing conditions within and surrounding the Scheme Boundary. This section describes the baseline environmental characteristics of relevance to socio-economics and land-use.

Existing Baseline

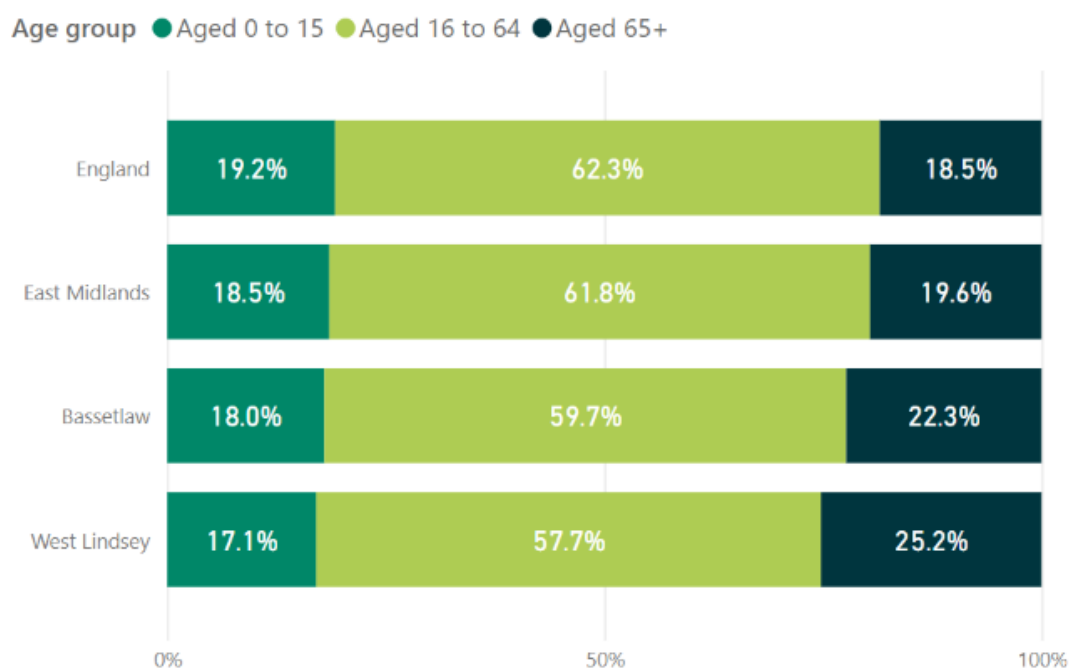
Principal Site and Cable Route Corridor – Population, Local Economy and Employment

14.6.2 The existing population, local economy and employment baseline is common to the Principal Site and the Cable Route Corridor since the study area covers the local district administrative areas of Bassetlaw and West Lindsey, which the Principal Site and Cable Route Corridor fall within. Most of the Scheme Boundary falls within West Lindsey, with a small area of the Cable Route Corridor falling within Bassetlaw to the west.

14.6.3 According to 2021 Census (Ref. 14-25) data, the residential population in West Lindsey in 2021 was 95,156, representing a 6.6% increase from 89,250 in 2011. Bassetlaw had a population of 117,804 in 2021, representing a 4.4% increase from 112,863 in 2011. This is compared to a growth rate of 7.7% across the same period in the East Midlands, and 6.6% in England as a whole.

14.6.4 As shown in Plate 14-1, in 2020, 55,540 (57.7%) residents in West Lindsey were of working age (defined by ONS as men and women aged 16 to 64). In Bassetlaw, 70,610 residents (59.7%) were of working age. These rates are slightly lower than the rates recorded for the East Midlands (61.8%) and England as a whole (62.3%). Higher proportions of the populations of West Lindsey (25.2%) and Bassetlaw (22.3%) are aged 65+, compared to averages across the East Midlands (19.6%) and England (18.5%).

Plate 14-1: Age Breakdown of Population



Source: ONS (2020)

- 14.6.5 Annual Population Survey (2021) data (Ref. 14-28) shows the proportions of working-age residents with a degree-level qualification or higher is lower in West Lindsey (25.6%) and Bassetlaw (20.1%), compared to the averages across the East Midlands (28.6%) and England (36.8%). The proportion of residents holding no formal qualifications is higher in West Lindsey (9.3%) and lower in Bassetlaw (4.9%) than averages across the East Midlands (7.5%) and England (6.4%).
- 14.6.6 Indices of Multiple Deprivation (IMD) data (2019) (Ref. 14-23) shows West Lindsey is ranked 146th most deprived out of England's 317 Local Planning Authority areas. In West Lindsey, 8% of Lower Layer Super Output Areas (LSOAs) are within the 10% most deprived LSOAs in England, 13% are within the 20% most deprived LSOAs and 23% are within the 30% most deprived LSOAs in England. Bassetlaw is the 108th most deprived of England's 317 Local Planning Authority areas, with 7% of its LSOAs within the 10% most deprived LSOAs in England, 21% of its LSOAs within the 20% most deprived and 37% of its LSOAs within the 30% most deprived.
- 14.6.7 With respect to the sub-domains of deprivation, West Lindsey is the 96th most deprived local authority with respect to employment deprivation, and Bassetlaw is the 72nd most deprived.
- 14.6.8 In 2021, the economic activity rate among working-age residents (16-64 year-olds) was 73.7% in West Lindsey and 70.8% in Bassetlaw (Ref. 14-28). These rates are lower than the averages of 77.7% in the East Midlands and 78.8% in England.
- 14.6.9 In 2020, the unemployment rate for working-age residents was 4.9% in West Lindsey and 5.2% in Bassetlaw, which is higher than the average rates across the East Midlands (4.5%) and England (4.6%). Claimant count data shows the

proportion of residents aged 16-64 claiming Jobseeker’s Allowance and the number of Universal Credit claimants placed in the ‘Searching for Work’ conditionality group. The most recent data recorded in October 2022, showed the claimant count was 3.1% in West Lindsey and 3.0% in Bassetlaw, lower than the rates across the East Midlands (3.2%) and England (3.7%). Across all areas, the latest Claimant Count data is higher than the rates reported in January 2020, prior to the Covid-19 pandemic. These are 3.0% in West Lindsey, 2.8% in Bassetlaw, 2.6% across the East Midlands and 2.9% across England.

14.6.10 The most recent recorded GVA per head data (income approach) (Ref. 14-26) indicates a lower GVA per head in Lincolnshire (£18,959) and North Nottinghamshire (£18,816) compared to the averages across the East Midlands (£21,845) and England (£27,949). Data is not available at local authority level.

14.6.11 Table 14-11 presents a breakdown of employment by broad industrial group across West Lindsey and Bassetlaw and East Midlands and England comparators, based on the most recently available data (2021) (Ref. 14-27). The largest employment sectors in West Lindsey are the Health (12.9%) and Manufacturing (11.3%) sectors. These two sectors are also the largest in Bassetlaw, where Manufacturing makes up 19.2% of employment, followed by Health, 13.5%, and Retail, 11.5%. This is also echoed in the East Midlands as a whole where Health comprises 13.3% of employment and Manufacturing 11.6%. Across England, the Health sector comprises 13.1% of employment, however the Manufacturing sector is smaller at 7.3%.

14.6.12 The Mining, Quarrying and Utilities broad industrial group (which includes employment from the generation of energy) comprises 1.1% of employment in West Lindsey and 0.9% in Bassetlaw. This is lower than the proportion across the East Midlands (1.5%), and broadly in line with the proportion across England (1.1%).

14.6.13 Employment in the construction industry comprises 7.3% of all employment in West Lindsey, 4.8% in Bassetlaw, and 4.9% across both the East Midlands and England as a whole.

Table 14-11: Employment by Sector

Industry	West Lindsey (%)	Bassetlaw (%)	East Midlands (%)	England (%)
Agriculture, Forestry & Fishing	8.1	2.4	1.7	1.3
Mining, Quarrying & Utilities	1.1	0.9	1.5	1.1
Manufacturing	11.3	19.2	11.6	7.3
Construction	7.3	4.8	4.9	4.9
Motor Trades	2.6	2.4	2.5	1.7
Wholesale	3.2	2.9	4.3	3.6

Industry	West Lindsey (%)	Bassetlaw (%)	East Midlands (%)	England (%)
Retail	8.1	11.5	9.4	9.0
Transport & Storage (inc. postal)	4.0	6.7	6.4	5.2
Accommodation & Food Services	5.6	5.8	6.6	7.4
Information & Communication	1.5	2.4	2.9	4.5
Financial & Insurance	0.6	1.2	1.8	3.6
Property	3.2	0.9	1.5	2.0
Professional, Scientific & Technical	5.6	5.8	7.0	9.3
Business Administration & Support Services	6.5	4.3	7.9	8.9
Public Administration & Defence	4.0	3.8	3.9	4.1
Education	8.1	6.7	8.5	8.5
Health	12.9	13.5	13.3	13.1
Arts, Entertainment, Recreation & Other	4.8	3.8	4.4	4.3

Source: BRES (2021). Note that figures may not equal 100 due to rounding.

Principal Site – Local Communities and PRow

14.6.14 A number of communities lie close to the Principal Site Boundary (within 1km). These include: Hemswell approximately 700m to the north; Harpswell adjacent to the north; Hemswell Cliff approximately 700m to the east; Glentworth adjacent to the east; Heapham approximately 700m to the west; and Springthorpe approximately 800m to the west.

14.6.15 There is one PRow located within the Principal Site Boundary: an approximately 500m stretch of Gltw/85/1, (which is the prolongation of Fill/85/1, Fill/85/2 and Fill/767/1). These PRowS connect Willingham Road to Kexby Road.

14.6.16 There are also a number of PRowS located within 500m of the Principal Site Boundary, including:

- Approximately 400m of Harp/92/1 (footpath) – north of the Site, connecting Common Lane to Harpswell Lane;
- Approximately 250m stretches of Hems/19/1 and Hems/19/2 (footpaths) – north of the Site, connecting Harpswell Lane to Weldon Road; and
- Approximately 200m stretches of Hems/788/1, Hems/787/1 and Hems/787/2 (footpaths) – north of the Site, connecting Harpswell Lane with the B1398.

Principal Site – BMV Agricultural Land

14.6.17 The Principal Site comprises predominantly agricultural land with some small woodland areas.

14.6.18 In terms of ALC, the Principal Site has been assessed, as set out in the interim report in **PEI Report Volume II Appendix 14-2**. The interim report concludes that the land within the Principal Site is predominantly ALC Grade 3b (moderate quality agricultural land) with some Grade 3a (good quality agricultural land). Table 14-12: sets out the land grades and area occupied by each, including the extent of land area not yet surveyed.

Table 14-12: Agricultural Land Classification

Agricultural Land Class	Total Area (Ha)	Proportion of Principal Site (%)
1	0	-
2	0	-
3a	68	4
3b	1,142	82
4	0	
5	0	
Land not yet surveyed	Approx. 200	14
Total	Approx. 1,400	100.00

Principal Site – Local Land Use and Amenity

Residential Properties

14.6.19 There are no residential properties within the Principal Site Boundary.

14.6.20 Larger groups of residential properties are located within the 500m study area in the settlements of Harpswell and Glentworth. There are also some isolated residential and farm properties within 500m of the Principal Site Boundary.

Local Businesses

14.6.21 There are no local businesses within the Principal Site Boundary.

14.6.22 There are a number of businesses within 500m of the Principal Site, including within the settlements of Harpswell and Glentworth, and a number of isolated businesses. These businesses include visitor accommodation, a café, florists, dog grooming and breeding businesses and agricultural businesses.

Open Space

14.6.23 There is no designated open space within the Principal Site Boundary.

14.6.24 There are four designated Local Green Spaces (Central Lincolnshire Local Plan) within 500m of the Principal Site Boundary in Glentworth.

Community Facilities

14.6.25 There are no community facilities within the Principal Site Boundary.

14.6.26 Glentworth Village Hall is within 500m of the Principal Site Boundary. There are no other community facilities within 500m of the Principal Site Boundary.

14.6.27 The next closest facilities are further afield in Hemswell, Heapham, Springthorpe and Corringham.

Visitor Attractions

14.6.28 There are no visitor attractions within the Principal Site Boundary or the 500m study area.

Development Land

14.6.29 There are no allocated development sites, or sites subject to planning applications or permissions within the Principal Site Boundary, or within the 500m study area.

Cable Route Corridor – Local Communities and PRow

14.6.30 The Cable Route Corridor Boundary comprises predominantly agricultural land. However a number of communities lie within 1km. These include: Cottam (adjacent to the Cable Route Corridor Boundary); Rampton (approximately 500m to the west); Stow (approximately 200m to the south); Marton (adjacent to the north); and Willingham by Stow (approximately 200m to the north-west).

14.6.31 There are eight PRowWs that are within or run across the Cable Route Corridor Boundary:

- An approximately 175m stretch of 7934 that runs south along the River Trent west of Marton and Brampton;
- An approximately 125mm stretch of footpath 3723 that runs south from Trent Port Road to Bram/66/1;
- An approximately 400m stretch of Bram/66/1 that runs from footpath 3723 to the A156;
- An approximately 450m stretch of footpath 7917 that runs from the River Trent to Headstead Bank;
- An approximately 250m stretch of footpath 7923 that connects Broad Lane with Outgang Lane;
- An approximately 200m stretch of footpath 7934 that runs along the westside of the River Trent;
- An approximately 200m stretch of footpath 7924 that runs north from Cottam Road;
- An approximately 250m stretch of footpath 7927 that runs north east from Torksey Ferry Road by Cottam Substation;
- An approximately 500m stretch of footpath 7926 that runs from Outgang Lane to Torksey Ferry Road by Cottam Substation; and
- An approximately 900m stretch of footpath 7928 that runs along Torksey Ferry Road by Cottam Substation.

14.6.32 There are also a number of PRowWs within 500m of the Cable Route Corridor boundary:

- An approximately 430m stretch of footpath 7930 that runs south from Cottam Road;
- An approximately 450m stretch of footpath 7927 that runs from footpath 7926 towards Torksey Ferry Road;
- An approximately 500m stretch of footpath 7926 that connects Outgang Lane to Torksey Ferry Road;
- An approximately 500m stretch of footpath 7928 that runs along Torksey Ferry Road;
- An approximately 400m stretch of footpath 7919 that runs along the west side of the River Trent towards Cottam;
- An approximately 400m stretch of footpath 7935 that runs south from Torksey Ferry Road;
- An approximately 400m stretch of footpath 7932 that runs south from Torksey Ferry Road;
- An approximately 900m stretch of footpath 7931 that runs west from Shortleys Road;
- An approximately 500m stretch of footpath 7920 that runs along Carr Drain;
- An approximately 230m stretch of footpath 7921 that runs from footpath 7920 to the River Trent;
- An approximately 500m stretch of footpath 7923 that runs from Broad Lane to Outgang Lane;
- An approximately 400m stretch of footpath 3273 that runs south from Trent Port Road;
- An approximately 500m stretch of Mton/68/1 that connects Stow Park Road and Marton high Street;
- An approximately 500m stretch of footpath 5310 that runs south from Marton Road; and
- An approximately 500m stretch of Stow/71/2 that connects Stow Park Road and Sturton Road.

Cable Route Corridor – Local Land Use and Amenity

Agricultural Land Use

14.6.33 An ALC survey of the Cable Route Corridor is not currently proposed. Instead, at ES stage ALC along the Cable Route Corridor will be mapped based on secondary data sets, which is considered adequate given impacts will comprise permanent below ground works, with land returned to its original agriculture use following installation.

14.6.34 An agricultural land use survey of the Cable Route Corridor is also not currently proposed. As above, any impacts will comprise permanent below ground works, with land returned to its original agriculture use following installation.

Residential Properties

14.6.35 There are no residential properties within the Cable Corridor Route Boundary.

14.6.36 A number of residential properties are located within 500m of the Cable Route Corridor in the settlements of Cottam, Rampton, Stow, Marton, and Willingham by Stow, as well as a number of isolated residential and farm properties.

Local Businesses

14.6.37 There are no local businesses within the Cable Route Corridor Boundary.

14.6.38 There are a large number of businesses within 500m of the Cable Route Corridor, including within the settlements of Cottam, Rampton, Stow, Marton, and Willingham by Stow, as well as a number of isolated business properties. These include pubs and retail premises.

Open Space

14.6.39 There is no designated open space within the Cable Route Corridor Boundary.

14.6.40 There are a number of Central Lincolnshire Local Plan designated open spaces within 500m of the Cable Route Corridor Boundary, including an Important Open Space in Willingham by Stow, two Important Open Spaces in Stow, two Important Open Spaces in Marton, and Bassetlaw Local Plan designated Locally Important Open Spaces in Cottam and Rampton.

Community Facilities

14.6.41 There are no community facilities within the Cable Route Corridor Boundary.

14.6.42 The following community facilities are within 500m of the Cable Route Corridor Boundary:

- The Ingleby Arms Pub, Marton;
- Willingham Village Hall, Willingham by Stow;
- Fox and Hounds Pub, Willingham by Stow;
- The Cross Keys Stow Gastro Pub, Stow;
- Ingleby Arms Pub, Marton;
- Marton and Gate Burton Village Hall, Marton; and
- Eyre Arms Pub; Rampton.

Visitor Attractions

14.6.43 There are no visitor attractions within the Cable Route Corridor Boundary or the 500m study area.

Development Land

14.6.44 The Cable Route Corridor currently encompasses parts of proposed cable routes for other solar projects. The exact route of the cable route for the Scheme will be developed so as not to impact these routes, and where possible will take advantage of opportunities for co-location with these routes to minimise disruption to land use.

14.6.45 The following allocated sites are within 500m of the Site Boundary:

- L144540 – Proposed barn conversions to form 4 new dwellings in Normanby by Stow;
- L144010 – Proposed housing allocation (2 dwellings) in Stow; and
- L245517 – Proposed structure housing electrical substation in Marton.

14.6.46 The Cottam Power Station site is identified as being a Priority Regeneration Area within the emerging Bassetlaw Local Plan (Ref. 14-35), however, the site is not currently allocated for any alternative uses. Bassetlaw District Council has recognised the significant regeneration that will need to be undertaken at this site in the long term, which could include some form of zero carbon energy generation, but no specific plans have yet been confirmed.

Future Baseline

14.6.47 The future baseline scenarios are set out in **PEI Report Volume I Chapter 5: EIA Methodology**.

14.6.48 The population of West Lindsey is expected to increase from 96,186 in 2020 to 102,249 in 2040, which represents an increase of 6.3% (Ref. 14-30). The population of Bassetlaw is projected to increase from 118,280 in 2020 to 131,199 in 2040, which represents a larger increase of 10.9%. In the East Midlands and England as a whole, there are expected to be population increases of 11.5% and 8.1%, respectively.

14.6.49 Table 14-13: sets out population projections data broken down by age group. It shows that by 2040, both the 0-15-year-old and the 16-64-year-old population will make up a lower proportions of the total population across all study area geographies. There is projected to be an increase in the proportion of residents aged 65 and over across all study area geographies.

Table 14-13: Population Projections by Age Breakdown

Area	Age	2020	2040
West Lindsey	Aged 0 to 15 (%)	17.6	15.1
	Aged 16 to 64 (%)	57.7	52.9
	Aged 65+ (%)	25.2	32.0
Bassetlaw	Aged 0 to 15 (%)	18.0	16.8
	Aged 16 to 64 (%)	59.7	55.1
	Aged 65+ (%)	22.3	28.2
East Midlands	Aged 0 to 15 (%)	18.5	16.9
	Aged 16 to 64 (%)	61.8	58.4
	Aged 65+ (%)	19.6	24.8
England	Aged 0 to 15 (%)	19.2	17.1
	Aged 16 to 64 (%)	62.3	59.1
	Aged 65+ (%)	18.5	23.8

Source: ONS (2020). Note that totals may not sum to 100 due to rounding.

14.6.50 In terms of the local economy and employment, the East of England Forecasting Model (Ref. 14-38) provides an estimate of employment and GVA per capital across the East Midlands region, and the UK (data is not available for West Lindsey and Bassetlaw district areas). This shows that total employment in the East Midlands is expected to increase from 2,353,400 to 2,521,500 between 2020-2040 in the East Midlands, representing a 7.1% increase. GVA per capita is expected to increase from £22,000 (2016 prices) to £26,100 (2016 prices), over the same time period, which represents a 18.6% increase.

14.6.51 There is a high level of uncertainty with respect to the future baseline of existing local land uses, other than where future planned uses are known (such as future developments, where planning applications, permissions and local plan allocations have been considered). Therefore, for the purposes of this assessment, the future baseline with respect to local land uses (including agricultural land, residential properties, local businesses, open space, community facilities, visitor attractions and development land) is expected to be in line with the existing baseline conditions set out above.

14.7 Embedded Design Mitigation

14.7.1 This section contains the mitigation measures relevant to this chapter that are already incorporated into the Scheme design (refer also to **PEI Report Volume I Chapter 3: Scheme Description**), to reduce construction, operational and decommissioning phase impacts on sensitive receptors. Further details of specific measures are set out in relevant chapters of this PEI Report, including the following of relevance to amenity effects (**PEI Report Volume I Chapter 6: Air Quality**, **PEI Report Volume I Chapter 12: Landscape and Visual Amenity**, **PEI Report Volume I Chapter 13: Noise and Vibration**, and **PEI Report Volume I Chapter 15: Transport and Access**).

14.7.2 The Scheme has also been designed to take into account sensitive receptors, such as by positioning infrastructure to avoid receptors such as BMV land and PRowS, as far as possible (as set out in **PEI Report Volume I Chapter 4: Alternatives and Design Evolution**).

Framework Construction Environmental Management Plan (CEMP)

14.7.3 A Framework CEMP has been prepared as part of the PEI Report (**PEI Report Volume II Appendix 3-1**). The Framework CEMP sets out measures to reduce amenity impacts on sensitive receptors during the construction phase (such as noise, air quality, transport and landscape), which in turn will mitigate the effects on the local community and existing facilities from a socio-economic and land use perspective.

14.7.4 An updated Framework CEMP will be produced at ES stage which will further set out measures to mitigate effects on agricultural land and PRowS.

14.7.5 Agricultural soils will be managed, preserved, retained and reinstated in accordance with Department for Environmental and Rural Affairs (Defra) guidance.

14.7.6 Any temporary diversions of PRowS during the construction phase put in place will be monitored to ensure that they are suitable and well-maintained for use. All diversions would be sign-posted accordingly, and advertised in advance.

Framework Operational Environmental Management Plan (OEMP) and Framework Decommissioning Environmental Management Plan (DEMP)

14.7.7 A Framework OEMP and Framework DEMP will be prepared and submitted at ES stage. The Framework OEMP and Framework DEMP will set out measures to reduce amenity impacts on sensitive receptors during the operational and decommissioning phases, respectively.

14.7.8 The Framework DEMP will also include measures that will ensure the restoration of agricultural land and soils to its existing use, following decommissioning.

Soil Management Plan (SMP)

14.7.9 Prior to the commencement of works, a Soil Resource Management Plan (SRMP) will be prepared. The site-specific SRMP will detail the site-specific mitigation measures that will be required to follow good practice when working with soils, in order to minimise the risk of damage to soil structure.

14.7.10 The SRMP will include:

- The management of soil on areas such as temporary working compounds, temporary and permanent tracks and sites of temporary and permanent buildings;
- Details of topsoil and subsoil stripping depths;
- How and where soils will be stored;
- Conditions under which soil stripping and reinstatement will be carried out; and
- How reinstatement will be carried out.

14.8 Assessment of Likely Impacts and Effects

14.8.1 The Scheme as outlined in **PEI Report Volume I Chapter 3: Scheme Description** has been considered in assessing the likely socio-economic and land use impacts and effects of the Scheme, whilst considering the embedded mitigation described in the previous section.

14.8.2 The likely socio-economic and land use effects (both beneficial and adverse) associated with the construction, operation and decommissioning of the Scheme are outlined in the sections below.

Construction (2025 to 2027)

Principal Site and Cable Route Corridor – Employment and Local Economic Impacts

Construction Employment

14.8.3 The construction period is expected to take a minimum of 24 months, with the construction of the Principal Site taking the full 24 months, and construction of the Cable Route Corridor taking 6 months.

14.8.4 Based on previous experience and benchmarking against other submitted solar schemes, the Applicant estimates that the Scheme will require a peak of 1,250 full-time equivalent (FTE) jobs, and an average of between approximately 500 gross direct FTE jobs on-site over the 24 month construction period, although in practice the number will vary across the period.

Leakage

14.8.5 Leakage with respect to construction employment, is the employment impact expected outside of the Study Area, defined as a 45-minute drive time radius from Site.

14.8.6 Based on professional experience and other comparable solar schemes, it is estimated that 15% of construction staff could be sourced from within the 45-minute drive time Study Area. This will be subject to labour availability and take-up at the time of construction, however it is considered to be a reasonable assumption on which to base this assessment. As such, 85% of staff would be likely to reside outside the Study Area. This indicates that while some employment opportunities will be retained in the Study Area, a noticeable number of jobs will be taken up by people living outside of the Study Area. Whilst it is not a specific consideration of the assessment, it is noted that a larger proportion of the jobs taken up by people living outside the area will likely be in more specialised solar PV professions owing to the scarcity of such resources within localised areas compared with less skilled professions.

14.8.7 An adjustment of 85% has therefore been applied to the estimated 500 gross direct construction jobs on-site on average during the construction period to estimate the jobs created within the Study Area.

Displacement

14.8.8 Displacement measures the extent to which the benefits of a development are offset by reductions in output or employment elsewhere. In the local context this is important given other projects in the area and is considered in **PEI Report Volume I Chapter 17: Cumulative Effects**. Any additional demand for labour cannot simply be treated as a net benefit since it has the potential to displace workers from other positions and the net benefit is reduced to the extent that this occurs.

14.8.9 Construction workers typically move between construction projects when delays occur or to help the workforce meet construction deadlines. Due to the flexibility of the labour market, construction labour force displacement has been assumed to be low.

14.8.10 The HCA Additionality Guide (Ref. 14-22) provides standards (or ‘ready reckoners’) for displacement. Within the context of a construction project in the study area, a low displacement factor for 25% is considered appropriate according to the HCA Additionality Guide. This level of displacement reflects that there are expected to be some displacement effects, although these are only to a limited extent. This displacement level is considered accurate based on professional judgement and other solar schemes.. This factor is a best practice approach in the absence of specific local information that might provide a defensible justification for a different level of displacement being used.

Multiplier Effect

14.8.11 In addition to the direct employment generated by the construction of the Scheme, there will be an increase in local employment arising from indirect and induced effects of the construction activity. Employment growth will be likely to arise locally through manufacturing services and suppliers to the construction process (indirect or supply linkage multipliers). Additionally, it is assumed that part of the income of the construction workers and suppliers will be spent in the study area, generating further employment (in terms of induced or income multipliers).

14.8.12 The effect of the multiplier depends on the size of the geographical area that is being considered, the local supply linkages and income leakage from the area. The HCA Additionality Guide provides ‘ready reckoner’ composite multipliers (the combined effect of indirect and induced multipliers) to account for this. This is a best practice approach in the absence of specific information that might provide a defensible justification for another multiplier effect level being used, appropriate to the sectors concerned. The economic market area for the West Lindsey and Bassetlaw study area is likely to have ‘average’ supply linkages and induced effects, based on the scale of its economy, and therefore, a medium multiplier effect of 1.5 has been considered appropriate, as has been applied to other solar NSIP schemes in the consenting process.

Net Construction Employment

14.8.13 Based on above, Table 14-14: presents the temporary annual employment generated by the Scheme, accounting for leakage, displacement, and multiplier effects. The Scheme will support, on average, 563 net additional jobs during the construction period. Of these, 84 jobs per annum will be expected to be taken-up by residents within the 45-minute drive time Study Area, and 478 by residents outside this Study Area.

Table 14-14: Average Net Additional Construction Employment

	45 minute drive time Study Area	Outside of Study Area	Total
Gross Direct Employment	75	425	500
Displacement	19	106	125
Net Direct Employment	56	319	375

	45 minute drive time Study Area	Outside of Study Area	Total
Indirect & Induced Employment	28	159	188
Average Net Additional Employment¹	84	478	563

Source: AECOM Calculations 2022. Please note figures may not sum due to rounding.

14.8.14 Given the slightly higher levels of unemployment in West Lindsey and Bassetlaw districts, and the higher Claimant Count at all geographies compared to before the Covid-19 pandemic, the local labour force in West Lindsey and Bassetlaw is assessed to be of medium sensitivity due to its capacity to benefit from additional employment opportunities. The labour force at the East Midlands level is assessed to be low sensitivity.

14.8.15 The magnitude of the impact of the direct, indirect, and induced employment, generated by the construction phase of Scheme is assessed in the context of the labour pool of construction workers in the study areas. West Lindsey and Bassetlaw currently have around 5,125 jobs in the construction sector, and the East Midlands, 107,000 jobs. Some of the jobs required for the construction phase of the Scheme are likely to be taken by residents in the West Lindsey and Bassetlaw study area. However, the employment will be temporary in nature. Overall, the likely impact is assessed to be of low magnitude in the West Lindsey and Bassetlaw study area, and very low at the East Midlands level.

14.8.16 Given the **medium** sensitivity of receptor and **low to very low** magnitude of impact as set out above, the likely temporary impact of construction employment generation is assessed as **minor beneficial (not significant) effect** at the local scale, and a **negligible (not significant) effect** at the regional scale.

Local Accommodation Facilities

14.8.17 Analysis of the local hotel, bed & breakfast and inns and private rented accommodation sectors has been undertaken to assess the likely capacity against the demand from the potential construction workforce.

14.8.18 The private rented homes sector is considered to be the principal sector for accommodating demand for housing from non-local (i.e. from outside of the 45-minute Study Area) construction workers. When last estimated in 2021, there were 15,444 private rented properties in West Lindsey and Bassetlaw (14-44). National data recorded in the English Housing Survey 2020 (14-45) indicates that 10% of properties are vacant, although not all would be available for occupancy. With no more local data available, applying this to the private rented stock in the local area, and taking a cautious approach and assuming that only half are available, there were an estimated 772 private rented properties within West Lindsey and Bassetlaw in 2021 that could potentially be available to construction workers.

¹ Sum of Net Direct Employment and Indirect & Induced Employment

14.8.19 In addition to the private rented homes that are likely to be available to construction workers, data on room occupancy in hotel, bed and breakfast and inns accommodation within the 45-minute Study Area has been sourced from CoStar, a property resource website. As of 2022, there are approximately 2,981 rooms in local hotel, bed and breakfast and inns accommodation within the 45-minute Study Area. This number has been adjusted in Table 14-15 below to reflect typical availability based on seasonal occupancy rates from 2022 as reported by CoStar.

14.8.20 The analysis of the available accommodation indicates that, considering existing seasonal demand and typical occupancy, capacity is sufficient, and that the 478 average non-local workers could be accommodated within existing provision of hotel, bed and breakfast and inns accommodation within the 45-minute Study Area or the private rented sector within West Lindsey and Bassetlaw. This is shown in Table 14-15 below.

Table 14-15: Local Accommodation Capacity

Month	Inventory Rooms (hotel, bed and breakfast and inns accommodation)	Rooms (hotel, bed and breakfast and inns accommodation) typically available after existing demand	Rooms (hotel, bed and breakfast and inns accommodation) available after existing demand plus available private rented accommodation	Total net workers from outside the Study Area	Rooms available after total net workers from outside the Study Area
Jan	2,981	1,177	1,949	478	1,471
Feb	2,891	739	1,511	478	1,033
March	2,891	739	1,511	478	1,033
April	2,891	629	1,401	478	923
May	2,891	623	1,395	478	917
June	2,891	617	1,389	478	911
July	2,891	465	1,237	478	759
Aug	2,891	516	1,288	478	810
Sept	2,891	543	1,315	478	837
Oct	2,891	587	1,359	478	881
Nov	2,891	653	1,425	478	947
Dec	2,891	969	1,741	478	1,263

Source: CoStar (2023), ONS (2023)

14.8.21 Using 2022 occupancy levels for hotel, bed and breakfast and inns accommodation and English Housing Survey 2020 for private rented dwellings, assuming that all 478 non-local workers need accommodation, there would still be approximately 20.2% spare capacity during peak occupancy (July). Given this, there would likely be **no effect** on the local accommodation sector arising from the Scheme. Occupancy arising from the Scheme during quieter months could also provide a benefit to the hotels, bed & breakfast and inns sector.

Gross Value Added (GVA)

14.8.22 ONS data shows that GVA per construction worker in the East Midlands was approximately £71,100 in 2017 (Ref. 14-39 (Ref. 14-40)). Applying this figure to employment generated from the construction phase, it is estimated that between £46.3m and £48.3m will be generated from the Scheme per year, of which approximately between £33.3m and £34.7m will be within West Lindsey and Bassetlaw districts, and £40.3 and £42.1m within the East Midlands as a whole, as shown in Table 14-16.

Table 14-16: Gross Direct Value Added per annum from the Scheme during the Construction Phase

	West Lindsey and Bassetlaw	East Midlands	Total
GVA (£)	£33.3m – £34.7m	£40.3m – £42.1m	£46.3m – £48.3m

14.8.23 Given its lower than regional and national average performance, the local economy in West Lindsey and Bassetlaw is assessed to be of medium sensitivity due to its capacity to benefit from beneficial economic effects. The wider regional economy is assessed to be of low sensitivity.

14.8.24 In the context of the size of the overall local economy, the magnitude of the impact of the construction phase of the Scheme on West Lindsey and Bassetlaw's overall GVA is assessed to be low. At the regional level the magnitude of the impact is assessed to be very low.

14.8.25 Given the **low** sensitivity of receptor and **very low** magnitude of impact as set out above, the likely impact of the temporary construction phase GVA generation arising from the Scheme on the local economy in West Lindsey and Bassetlaw is therefore assessed to be a **Minor beneficial** effect. At the regional level the impact would be **negligible**.

Principal Site – Local Communities and PRow

14.8.26 As set out above, the communities of Hemswell, Harpswell, Hemswell Cliff, Glentworth, Heapham and Springthorpe are located within 1km of the Principal Site Boundary. There are also a number of PRow close to the Principal Site Boundary, and one PRow (an approximately 500m stretch of Gltw/85/1) falls within the Principal Site Boundary.

14.8.27 No permanent closures to PRow are expected during the construction (or operation or decommissioning phases) of the Scheme. In a worst-case scenario, there may be a small number of diversions or temporary closures required. Where temporary closures are needed, there will be a diversion

around the works and these diversions managed through traffic management measures.

14.8.28 Due to their limited scale, the impacts upon PRowS and local community severance are assessed to be very low adverse. There would therefore be a **very low adverse effect** on local communities arising from potential severance, and **very low adverse effects** on users of PRow arising from the construction (or operational and decommissioning phases) of the Principal Site. The likely effect of the Scheme on PRowS and local community severance is therefore assessed to be **negligible (not significant)**.

Principal Site – BMV Agricultural Land

14.8.29 From the construction phase, temporary and permanent use of agricultural land will occur. The Scheme has been designed to take into account the quality of agricultural land, such as positioning the permanent infrastructure, to avoid BMV land as far as possible.

Temporary use

14.8.30 Land temporarily used is defined as the area of agricultural land required from construction and throughout operation of the Scheme, which would be returned to use for farming upon decommissioning. This comprises approximately 747ha as shown in Table 14-17. Note that the below numbers do not include the land not surveyed at this stage, but will be updated at ES stage.

Table 14-17: Agricultural Land temporarily required arising from the Construction of the Scheme and returned to previous use following Decommissioning of the Scheme

Agricultural Land Class	Area required during construction (ha)
Subgrade 3a	57
Subgrade 3b	690
Total	747

14.8.31 Construction work will involve relatively little displacement of the soil material, with the dominant impact being the trafficking over land with delivery and construction vehicles and the soil compaction this might cause, although measures can be adopted to minimise impacts.

14.8.32 The area of BMV land comprises approximately 57ha of BMV land, all grade 3a. As the loss of the entire area of BMV agricultural land is reversible (after operation upon completion of decommissioning), the temporary effect of the Scheme on the use of BMV agricultural land is assessed to be **not significant**. This land will also be able to be used for sheep farming during operation, but not arable farming.

Permanent use

14.8.33 Land permanently used is defined as the area of agricultural land disturbed during construction which is permanently required for the Scheme. This would comprise approximately 463ha as shown in Table 14-18. This land is expected

to be established habitats that will be left in situ on decommissioning for landowners to determine whether it is retained in each instance.

Table 14-18: Agricultural Land permanently required arising from the Construction of the Scheme and not returned to previous use following Decommissioning of the Scheme

Agricultural Land Class	Area required during construction (ha)
Subgrade 3a	11
Subgrade 3b	452
Total	463

14.8.34 Approximately 11ha of BMV land, i.e. that classified in Grade 3a, would be lost permanently. Given the loss of the entire area of BMV agricultural land is less than 20ha the permanent effect of the Scheme on the use of BMV agricultural land is assessed to be **not significant**.

14.8.35 The permanent loss of agricultural land due to the construction and operation of the Scheme may be reduced through design changes on the basis of statutory consultation with an updated assessment presented in the ES.

Principal Site – Local Land Use and Amenity

Residential Properties, Local Businesses, Open Space, Community Facilities, Visitor Attractions and Development Land

14.8.36 There are no residential properties, local businesses, open spaces, community facilities, visitor attractions or development land within the Principal Site Boundary, and therefore no land use impacts are expected.

14.8.37 As set out above, there are a number of residential properties within 500m of the Principal Site Boundary, including within the communities of Harpswell and Glentworth, and further isolated residential and farm buildings.

14.8.38 There are also a number of businesses located within these communities, and within a number of isolated buildings close to the Principal Site Boundary.

14.8.39 There are four Central Lincolnshire Local Plan designated Local Green Spaces in Glentworth.

14.8.40 There is potential for noise, air quality, visual and traffic effects arising from construction of the Scheme to impact on the amenity of residents, businesses, users of open spaces within 500m of the Principal Site Boundary.

14.8.41 Taking into account the residual effect assessment results of the air quality, noise/vibration, traffic and transport and visual assessments relating to the construction activities, there are no receptors that would experience a significant effect on their amenity during construction, and as such there would be **no effect**.

Cable Route Corridor – Local Communities and PRoW

14.8.42 As set out above, there are a number of local communities within 1km of the Cable Route Corridor Boundary, including Cottam, Rampton, Stow, Marton and Willingham by Stow.

14.8.43 A number of PRow dissect the Cable Route Corridor Boundary, or are located within 500m.

14.8.44 No permanent closures of PRow are expected within the Cable Route Corridor during the construction (or operation or decommissioning phases) of the Scheme. In a worst-case scenario, there may be a small number of diversions or temporary closures required. Where temporary closures are needed, there will be a diversion around the works and, where necessary, these diversions will be managed through traffic management measures.

14.8.45 Due to their limited scale, the impacts upon PRow and local community severance are assessed to be very low adverse. The likely effect of the Scheme on PRow and local community severance in the Cable Route Corridor is therefore assessed to be **negligible (not significant)**.

Cable Route Corridor – BMV Agricultural Land and Agricultural Land Use

14.8.46 The nature of the works for the Cable Route Corridor (cable burial and restatement) mean that temporary impacts only are anticipated on land within the Cable Route Corridor Boundary and any impacts to soils will be managed through a Soil Management Plan.

14.8.47 As set out above, the likely impact on BMV agricultural land and agricultural land use within the Cable Route Corridor will be assessed at ES stage.

Cable Route Corridor – Local Land Use and Amenity

Residential Properties, Local Businesses, Community Facilities, Open Space, Visitor Attractions, and Development Land

14.8.48 As set out above, there are residential properties within 500m of the Cable Route Corridor Route, including in Cottam, Rampton, Stow, Marton, and Willingham by Stow, as well as a number of isolated residential and farm properties. There are also a number of local businesses, community facilities, designated open spaces and allocated development sites within 500m of the Cable Route Corridor Route (as detailed above).

14.8.49 There is potential for noise, air quality, visual and traffic effects arising from construction of the Scheme to impact on the amenity of residents, businesses, development sites, and users of open spaces and community facilities within 500 m of the Cable Route Corridor Boundary.

14.8.50 Taking into account the residual effect assessment results of the air quality, noise/vibration, traffic and transport and visual assessments relating to the construction activities, there are no receptors that would experience a significant effect on their amenity during construction, and as such there would be **no effect**.

Summary of Effects

14.8.51 No significant effects are considered likely arise from construction of the Principal Site. Effects arising from construction in the Cable Route Corridor will be assessed in full in the ES.

Operation

Principal Site – Employment and Local Economic Impacts

14.8.52 The Scheme will generate an estimated 10-12 FTE long-term jobs during the operational phase. In estimating operational employment generation, it is important to consider not just the gross effects of the Scheme, but also net effects considering leakage, displacement, and multiplier effects.

Existing Employment

14.8.53 The Principal Site consists of agricultural land, and the Applicant has estimated that there are around 10 existing jobs supported by agricultural activities on the Principal Site. This is being confirmed through the ongoing landowner survey.

Total Net Operational Employment

14.8.54 The Applicant has estimated that there will be a gross number of 10 jobs generated by the Scheme once operational.

14.8.55 Assuming a leakage of 85% outside the 45-minute drive time Study Area, displacement of 25% and a 1.5 multiplier, it is estimated that the Scheme will result in a gross creation of an estimated 11 jobs, of which at least 2 are within the 45-minute drive time Study Area. Accounting for the existing employment effects outlined above, the total net employment of the Scheme would be 0 jobs. This is presented in Table 14-19:.

Table 14-19: Total Net Employment during Operation of the Scheme

	45- minute drive time Study Area	East Midlands	Total
Existing Employment			
Gross Direct Employment	2	9	10
Displacement	0	2	3
Net Direct Employment	1	6	8
Indirect and Induced Employment	1	3	4
Total	2	10	11
New Employment			
Gross Direct Employment	2	9	10
Displacement	0	2	3
Net Direct Employment	1	6	8
Indirect and Induced Employment	1	3	4
Existing Employment	2	10	11

	45- minute drive time Study Area	East Midlands	Total
Total Net Employment (Existing Employment – New Employment)	0	0	0

Source: AECOM calculations. Note that figures have been rounded to the nearest whole number.

14.8.56 As the total net employment of the Scheme would be 0 jobs once existing employment is accounted for and employment levels in the economy would not change, the magnitude of impact of operational employment generation is assessed to be of very low magnitude in the West Lindsey and Bassetlaw study area, and very low at the East Midlands level.

14.8.57 Given the medium sensitivity of receptor and very low magnitude of impact as set out above, the likely temporary impact of construction employment generation is assessed as **negligible (not significant)** effect at the local scale, and a **negligible (not significant)** effect at the regional scale.

14.8.58 Given this, there will be **no effect** with regard to operational employment.

Principal Site – Local Communities and PRoW

14.8.59 Any PRoWs located within the Scheme Boundary that are required to temporarily close or be diverted will be re-opened during the operation phase. There will therefore be **no effect** on local community severance or users of PRoW arising from the Scheme.

Principal Site – BMV Agricultural Land

14.8.60 Effects on BMV agricultural land would occur as long-term effects arising from the construction of the Scheme and hence have been assessed in the construction phase assessment. There are no new potential or additional impacts on agricultural land during the operation of the Scheme, with the temporary and permanent construction phase effects persisting during operation. The land use can be returned to farming after the Scheme is complete and the land is available for some forms of farming – such as sheep farming – during operation. There would be **no effects** additional to the effects arising from construction described above.

Principal Site – Local Land Use and Amenity

Residential Properties, Local Businesses, Open Space, Community Facilities, Visitor Attractions and Development Land

14.8.61 There is potential for noise, air quality, and visual effects arising from the operation of the Scheme which could impact on the amenity of residents, businesses and users of open space within 500m of the Principal Site Boundary.

14.8.62 Taking into account the residual effect assessment results of the air quality, noise/vibration, traffic and transport and visual assessments relating to the operational activities, there are no receptors that would experience a significant effect on their amenity during operation, and as such there would be **no effect**.

Cable Route Corridor

14.8.63 No socio-economic or land use impacts are anticipated associated with the Cable Route Corridor Route during the operational phase. There may be occasional requirements for maintenance to cabling, however, this would not be expected to impact socio-economic and land use receptors.

Summary of Effects

14.8.64 There are no significant effects expected during the operational phase of the Scheme.

Decommissioning

Principal Site and Cable Route Corridor - Employment and Local Economic Impacts

Employment

14.8.65 At the end of its operational life, the most likely scenario is that the Scheme would be shut down and most infrastructure removed. It can be expected that employment will be generated to carry out the removal of the infrastructure from the Scheme Boundary.

14.8.66 Although jobs generated by the decommissioning phase are temporary, they represent a positive economic effect for a substantial period that can be estimated as the function of the scale and type of activities required to decommission the Scheme Boundary.

14.8.67 It is assumed based on the activities taking place that a similar number of jobs required for constructing the Scheme will be needed to carry out the activities required to remove the infrastructure from the Scheme Boundary.

14.8.68 The likely temporary impact of decommissioning employment generation is assessed as **minor beneficial** effect at the West Lindsey and Bassetlaw scale, and a **negligible** effect at the regional and national scale. The effect would not be significant.

Principal Site and Cable Route Corridor – Local Communities and PRoW

14.8.69 The impacts on local communities and PRoW during the decommissioning phase would be expected to be in line with the impacts assessed during the construction phase.

14.8.70 There would therefore be **no effect** on local communities arising from potential severance, and **no effect** on users of PRoW arising from the decommissioning phase.

Principal Site – BMV Agricultural Land

14.8.71 An increase in soil organic matter content may occur during the lifetime of the Principal Site. The land will therefore be in the same or better condition than it currently is, as a result of the expected natural enhancement through being set aside for a long period of time. However, this is likely to be temporary and subject to good agricultural land management practices being adopted after decommissioning.

- 14.8.72 Ground physical infrastructure will be removed and the Scheme Boundary returned to landowners in the condition as at the end of operation including seeded and grassed land, and drainage systems reinstated if grass/drainage is disturbed during decommissioning works.
- 14.8.73 Areas within the Scheme Boundary that have been designated for habitat and biodiversity mitigation and enhancement and delivered as part of the Scheme could remain in place following decommissioning. The effect arising from the use of these areas is assessed above as an effect arising permanently from construction.
- 14.8.74 The Principal Site will not be available for farming during decommissioning activities, while works are taking place on site, leading to a temporary sterilisation of the land. However, as long as it is safe to do so, farming will be allowed in fields cleared of solar PV panels and associated infrastructure while decommissioning activities occur in other fields. This sterilisation may therefore only be a few weeks or months duration in each field.
- 14.8.75 Overall, given the short time frame of any disruption to farming activities during decommissioning activities and the return of the Principal Site to solely farming practices following completion of the decommissioning, the magnitude of change during the decommissioning phase is considered to be low and the significance of effect therefore **not significant**.

Principal Site – Local Land Use and Amenity

Residential Properties, Local Businesses, Open Space, Community Facilities, Visitor Attractions and Development Land

- 14.8.76 Taking into account the residual effect assessment results of the air quality, noise/vibration, traffic and transport and visual assessments relating to the construction activities, there are no receptors that would experience a significant effect on their amenity during decommissioning activities either, and as such there would be **no effect**.

Cable Route Corridor

- 14.8.77 There will be very limited disruption to the Cable Route Corridor during the decommissioning phase. In a worst-case scenario, the Cable Route Corridor Infrastructure will require removal of cables from manholes and vehicles accessing the Site to retrieve them. No open excavation or ground disturbance is likely.

Summary of Effects

- 14.8.78 There are no significant effects expecting during the decommissioning phase of the Scheme.

14.9 Additional Mitigation and Enhancements

Additional Mitigation

- 14.9.1 No additional mitigation is required with respect to socio-economic and land use effects arising from the Scheme.

Enhancements

14.9.2 No additional enhancements are required with respect to socio-economic and land use effects arising from the Scheme.

14.10 Residual Effects

14.10.1 This section summarises the residual effects of the Scheme on socio-economic and land use receptors following the implementation of embedded and additional mitigation.

14.10.2 No significant residual effects are anticipated to occur during construction, operation or decommissioning of the Scheme.

14.11 Cumulative Effects

14.11.1 An assessment of cumulative effects is provided in **PEI Report Volume I Chapter 17: Cumulative Effects**.

14.12 References

- Ref. 14-1. Department of Energy and Climate Change (DECC) (2011) National Policy Statement for Energy (EN-1). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf.
- Ref. 14-2. Department of Energy Security and Net Zero (2023) Draft Overarching NPS for Energy (EN-1).
- Ref. 14-3. Department of Energy Security and Net Zero (2023) Draft NPS for Renewable Energy Infrastructure (EN-3).
- Ref. 14-4. Department for Levelling Up, Housing and Communities (DLHC) (2021) National Planning Policy Framework (NPPF). Available at: [National Planning Policy Framework \(publishing.service.gov.uk\)](#).
- Ref. 14-5. DLHC and Ministry of Housing, Communities & Local Government (MHCLG) (2021) National Planning Practice Guidance (NPPG). Available at: [Planning practice guidance - GOV.UK \(www.gov.uk\)](#).
- Ref. 14-6. Greater Lincolnshire Local Enterprise Partnership (LEP) (2021) Plan for Growth. Available at: [2875_GL_LEP_Revival_Plan_ART_-_No_logos_page.pdf \(greaterlincolnshirelep.co.uk\)](#).
- Ref. 14-7. Derby, Derbyshire, Nottingham and Nottinghamshire (D2N2) LEP (2021) Recovery and Growth Strategy. Available at: [Recovery-Strategy-2020_V4_190121-compressed.pdf \(d2n2lep.org\)](#).
- Ref. 14-8. Central Lincolnshire Joint Strategic Committee (20123) Adopted Central Lincolnshire Local Plan. Available at: <https://www.n-kesteven.gov.uk/sites/default/files/2023-04/Local%20Plan%20for%20adoption%20Approved%20by%20Committee.pdf><https://www.n-kesteven.gov.uk/central-lincolnshire/>
- Ref. 14-9. City of Lincoln, North Kesteven District and West Lindsey District Councils (2022) Consultation Draft New Central Lincolnshire Local Plan. Available at: [Proposed Submission Local Plan for Reg 19 Consultation - FINAL March 2022 \(2\).pdf](#).
- Ref. 14-10. Bassetlaw District Council (2017) Adopted Bassetlaw Core Strategy. Available at: <https://www.bassetlaw.gov.uk/media/6527/local-plan-publication-version-2020-2037.pdf>
- Ref. 14-11. Bassetlaw District Council (2022) Publication Draft Bassetlaw Local Plan Addendum. Available at: [Bassetlaw Local Plan 2020-2037: Publication Version Addendum, January 2022](#)
- Ref. 14-12. [Bassetlaw District Council \(2022\) Bassetlaw Schedule of Suggested Changes to the Local Plan Publication Version and Policies Map.](#)
- Ref. 14-13. [Central Lincolnshire \(2023\) Central Lincolnshire Main Modifications.](#)

- Ref. 14-14. West Lindsey District Council (2021) Sustainability, Climate Change and Environment Strategy. Available at: [Sustainability, Climate Change and Environment | West Lindsey District Council \(west-lindsey.gov.uk\)](https://www.west-lindsey.gov.uk/sustainability-climate-change-and-environment)
- Ref. 14-15. West Lindsey District Council (2022) Visitor Economy Strategy. Available at: [Visitor Economy Strategy 2022 \(west-lindsey.gov.uk\)](https://www.west-lindsey.gov.uk/visitor-economy-strategy-2022).
- Ref. 14-16. Corringham Neighbourhood Forum (2022) Adopted Corringham Neighbourhood Plan. Available at: [Corringham Neighbourhood Plan - Referendum Version \(west-lindsey.gov.uk\)](https://www.west-lindsey.gov.uk/corryingham-neighbourhood-plan-referendum-version).
- Ref. 14-17. Glentworth Neighbourhood Forum (2019) Adopted Glentworth Neighbourhood Plan. Available at: [Glentworth Neighbourhood Plan \(Approved Plan\) Rev 1.1 \(for publication\).pdf \(west-lindsey.gov.uk\)](https://www.west-lindsey.gov.uk/glentworth-neighbourhood-plan-approved-plan-rev-1.1-for-publication.pdf).
- Ref. 14-18. Hemswell and Harpswell Neighbourhood Forum (2022) Draft Hemswell and Harpswell Neighbourhood Plan. Available at: [Hemswell and Harpswell Neighbourhood Plan \(west-lindsey.gov.uk\)](https://www.west-lindsey.gov.uk/hemswell-and-harpswell-neighbourhood-plan).
- Ref. 14-19. Sturton by Stow Neighbourhood Forum (2022) Adopted Sturton by Stow Neighbourhood Plan. Available at: [Sturton by Stow and Stow Neighbourhood Plan \(west-lindsey.gov.uk\)](https://www.west-lindsey.gov.uk/sturton-by-stow-and-stow-neighbourhood-plan).
- Ref. 14-20. Rampton and Woodbeck Neighbourhood Forum (2021) Adopted Rampton and Woodbeck Neighbourhood Plan. Available at: [Rampton & Woodbeck Neighbourhood Plan \(Final\) \(bassetlaw.gov.uk\)](https://www.bassetlaw.gov.uk/rampton-woodbeck-neighbourhood-plan-final).
- Ref. 14-21. Treswell and Cottam Neighbourhood Plan Group (2019) Adopted Treswell and Cottam Neighbourhood Plan. Available at: [Treswell and Cottam Neighbourhood Plan \(Bassetlaw.gov.uk\)](https://www.bassetlaw.gov.uk/treswell-and-cottam-neighbourhood-plan).
- Ref. 14-22. Homes and Communities Agency (HCA), (2014); Additionality Guide: A Standard Approach to Assessing the Additional Effect of Projects: 4th Edition, HCA. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/378177/additionality_guide_2014_full.pdf
- Ref. 14-23. DCLG, (2019); Indices of Multiple Deprivation. DCLG. Available at: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019>.
- Ref. 14-24. Office of National Statistics (ONS) Census 2011. ONS. Available at: <https://www.ons.gov.uk/census/2011census>
- Ref. 14-25. Office of National Statistics (ONS) Census 2021. ONS. Available at: <https://census.gov.uk/census-2021-results>
- Ref. 14-26. ONS (2017) Gross Value Added (Income Approach) 2016. Available at: <https://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/regional-grossvalueaddedincomeapproach>.
- Ref. 14-27. ONS (2020) Business Register and Employment Survey 2019. Available at: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/empl>

[oymentandemployeetypes/bulletins/businessregisterandemploymentsurveybresprovisionalresults/previousReleases](#).

- Ref. 14-28. ONS (2022) Annual Population Survey (January 2021 – December 2021). Available at: [Population estimates for the UK, England and Wales, Scotland and Northern Ireland - Office for National Statistics \(ons.gov.uk\)](#).
- Ref. 14-29. ONS, (2022); Mid-Year Population Estimates 2021. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/timeseries/ukpop/pop>.
- Ref. 14-30. ONS (2022); Population Projections. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections>
- Ref. 14-31. ONS, (2022); Claimant count by sex and age (May 2022)
- Ref. 14-32. LCC, (live document), Non-definitive PRoW Map. Accessed July 2022: <http://lincs.locationcentre.co.uk/internet/internet.aspx?articleid=L4h7HM4AmHM~&preview=true>
- Ref. 14-33. NCC, (live document), Non-definitive PRoW Map. Accessed July 2022: <https://www.nottinghamshire.gov.uk/planning-and-environment/walking-cycling-and-rights-of-way/rights-of-way/definitive-map-statement>
- Ref. 14-34. Central Lincolnshire, (2021). Adopted and Proposed Policies Map, accessed July 2022: <https://wlnk.statmap.co.uk/map/Aurora.svc/run?script=%5CShared%20Services%5CJPU%5C5%20Maps%5CLocalPlan%5CJPUAurora.AuroraScript%24&resize=always>
- Ref. 14-35. Bassetlaw District Council, (2021). Publication Version Local Plan Policies Map, accessed July 2022: <https://www.bassetlaw.gov.uk/planning-and-building/the-draft-bassetlaw-local-plan/bassetlaw-local-plan-2020-2037-publication-version-august-2021/publication-version-policies-map-august-2021/>
- Ref. 14-36. Natural England, (2012); Technical Information Note TIN049. Agricultural Land Classification: protecting the best and most versatile agricultural land.
- Ref. 14-37. MAFF, (1988); 'Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land' HMSO.
- Ref. 14-38. Cambridgeshire Insight. (2019) East of England Forecasting Model.
- Ref. 14-39. ONS, (2017); Regional Gross Value Added (Income Approach).
- Ref. 14-40. ONS, (2017); Business Register and Employment Survey.
- Ref. 14-41. ONS (2023). Research outputs: alternative estimates of subnational dwelling stock by tenure, England and Wales 2021.

Ref. 14-42. Department for Levelling Up, Housing and Communities (2021). English Housing Survey 2020 to 2021: headline report.

Ref. 14-43. GOV.UK (2015). The Town and Country Planning (Development Management Procedure) (England) Order 2015. Available at:
<https://www.legislation.gov.uk/uksi/2015/595/article/18/made>