

# MERIDIAN SOLAR FARM PEIR VOLUME I CHAPTER 12: SOCIO-ECONOMICS AND LAND USE

## 12. Socio-Economics and Land Use

### 12.1. Introduction

- 12.1.1. This chapter of the PEIR presents the findings of the assessment of the likely significant effects resulting from the Scheme in relation to Socio-Economics and Land Use. The assessment is based on the Scheme design as outlined within PEIR Volume I Chapter 2: The Scheme.
- 12.1.2. This chapter identifies and proposes measures to address the potential impacts and likely significant effects on Socio-Economics and Land Use during the construction, operational and decommissioning phases of the Scheme.
- 12.1.3. This chapter should be read in conjunction with PEIR Volume I Chapter 9: Agriculture and Soils which includes an assessment of the potential impacts on agricultural land quality and soils, and PEIR Volume I Chapter 13: Traffic and Access which includes an assessment of the potential impacts on severance, non-motorised user amenity and road vehicle driver and passenger delay, amongst other matters.
- 12.1.4. This chapter is supported by the following figures:
- PEIR Volume II Figure 12-1: District Boundaries;
  - PEIR Volume II Figure 12-2: Ward Boundaries;
  - PEIR Volume II Figure 12-3: Parish Boundaries;
  - PEIR Volume II Figure 12-4: Lower Layer Super Output Area Boundaries;
  - PEIR Volume II Figure 12-5: Residential Properties PV Area and Inter-Array Areas;
  - PEIR Volume II Figure 12-6: Residential Properties Grid Connection Corridor;
  - PEIR Volume II Figure 12-7: Community Land and Assets PV Area and Inter-Array Areas;
  - PEIR Volume II Figure 12-8: Community Land and Assets Grid Connection Corridor;
  - PEIR Volume II Figure 12-9: Business Premises PV Area and Inter-Array Areas; and
  - PEIR Volume II Figure 12-10: Business Premises Grid Connection Corridor.

### 12.2. Legislation, Policy and Guidance

- 12.2.1. The following legislation, policy and guidance has been identified as relevant to the assessment of Socio-Economics and Land Use.

#### Legislation

- 12.2.2. There is no legislation of direct relevance to the assessment of Socio-Economics and Land Use.

## National Policy

### Overarching National Policy Statement for Energy (EN-1)

- 12.2.3. Overarching National Policy Statement for Energy (EN-1) (January 2024)<sup>1</sup> outlines in paragraph 4.1.5 that, in deciding an application for an order granting development consent, in particular when weighing adverse impacts against its benefits, the Secretary of State should take into account potential benefits, including “*contribution to meeting the need for energy infrastructure, job creation, reduction of geographical disparities, environmental enhancements, and any long-term or wider benefits*”. Paragraph 4.1.6 continues that “*in this context, the Secretary of State should take into account environmental, social and economic benefits and adverse impacts, at national, regional and local levels.*”
- 12.2.4. Section 5.11 of EN-1 outlines the Land Use impacts considered by the Secretary of State in relation to deciding an application for an order granting development consent. Paragraph 5.11.8 outlines the need to “*identify existing and proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan.*”
- 12.2.5. Section 5.13 of EN-1 outlines the Socio-Economic impacts considered by the Secretary of State in relation to deciding an application for an order granting development consent. Paragraph 5.13.2 states that “*Where the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts as part of the ES*”.
- 12.2.6. Paragraph 5.13.4 states that “The applicant’s assessment should consider all relevant socio-economic impacts, which may include:
- *the creation of jobs and training opportunities. Applicants may wish to provide information on the sustainability of the jobs created, including where they will help to develop the skills needed for the UK’s transition to Net Zero*
  - *the contribution to the development of low-carbon industries at the local and regional level as well as nationally*
  - *the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities*
  - *any indirect beneficial impacts for the region hosting the infrastructure, in particular in relation to use of local support services and supply chains*
  - *effects (positive and negative) on tourism and other users of the area impacted*
  - *the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure. This could*

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<sup>1</sup> Department for Energy Security and Net Zero (2023) *Overarching National Policy Statement for energy (EN-1)* (E03028327). London: HMSO Available at: <https://assets.publishing.service.gov.uk/media/65bbfbd709fe1000f637052/overarching-nps-for-energy-en1.pdf>.

*change the local population dynamics and could alter the demand for services and facilities in the settlements nearest to the construction work (including community facilities and physical infrastructure such as energy, water, transport and waste). There could also be effects on social cohesion depending on how populations and service provision change as a result of the development*

- *cumulative effects – if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region.”*

12.2.7. Paragraph 5.13.11 states that in deciding an application for an order granting development consent, the Secretary of State should “*consider any relevant positive provisions the applicant has made or is proposing to make to mitigate impacts (for example through planning obligations) and any legacy benefits that may arise as well as any options for phasing development in relation to the socio-economic impacts.*”

### **National Policy Statement for Renewable Energy Infrastructure (EN-3)**

12.2.8. National Policy Statement for Renewable Energy Infrastructure (EN-3) (January 2024)<sup>2</sup> outlines in paragraph 2.10.69 that “*Applicants should set out what would be decommissioned and removed from the site at the end of the operational life of the generating station, considering instances [...] where there may be socio-economic benefits in retaining site infrastructure after the operational life, such as retaining pathways through the site or a site substation*”.

### **National Policy Statement for Electricity Networks Infrastructure (EN-5)**

12.2.9. National Policy Statement for Electricity Networks Infrastructure (EN-5) (January 2024)<sup>3</sup> outlines in paragraph 2.9.19 that in the context of siting substations and infrastructure associated with overhead lines in accordance with the Horlock Rules, applicants should “*consider the land use effects of the proposal when planning the siting of substations or extensions*” and; “*use space effectively to limit the area required for development consistent with appropriate mitigation measures and to minimise the adverse effects on existing land use and rights of way, whilst also having regard to future extension of the substation*”.

### **National Planning Policy Framework (NPPF)**

12.2.10. The National Planning Policy Framework (NPPF) (December 2024)<sup>4</sup> reiterates in that the purpose of the planning system is to contribute to sustainable development through interconnected economic, social, and environmental objectives.

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<sup>2</sup> Department for Energy Security and Net Zero (2023) *National Policy Statement for Renewable Energy Infrastructure (EN-3)* (E03028327). London: HMSO Available at: <https://assets.publishing.service.gov.uk/media/65a7889996a5ec000d731aba/nps-renewable-energy-infrastructure-en3.pdf>.

<sup>3</sup> Department for Energy Security and Net Zero (2023) *National Policy Statement for electricity networks infrastructure (EN-5)* (E03028327). London: HMSO Available at: <https://assets.publishing.service.gov.uk/media/65a78a5496a5ec000d731abb/nps-electricity-networks-infrastructure-en5.pdf>.

<sup>4</sup> Department for Levelling Up, Housing and Communities (2024) *National Planning Policy Framework*. Available at: <https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf>.

12.2.11. The NPPF emphasises the importance of building a “*strong, responsive, and competitive economy*” ensuring suitable land use availability. The policy context for social sustainability prioritises supporting “strong, vibrant, and healthy communities” by addressing housing needs and “*fostering well-designed, beautiful and safe places*”.

## Local Policy

### South East Lincolnshire Local Plan 2011-2036

12.2.12. The South East Lincolnshire Local Plan (SELLP) 2011-2036 (2019)<sup>5</sup> is centred on sustainable socio-economic growth, strategic development, and environmental stewardship. Socio-economic goals focus on meeting housing demand, enhancing employment opportunities, and addressing infrastructure needs. The plan supports economic diversification, particularly in agri-food, logistics, and tourism, while aiming to reduce deprivation and improve living standards.

12.2.13. The SELLP integrates economic growth with sustainability, focusing on housing, employment, infrastructure, and environmental resilience. Policies provide a framework for managed development, ensuring south east Lincolnshire remains a thriving, well-connected, and resilient region by 2036.

12.2.14. The adopted policies most relevant to the Socio-Economics and Land Use assessment are:

- Policy 1: Spatial Strategy;
- Policy 2: Development Management;
- Policy 3: Design of New Development;
- Policy 6: Developer Contributions;
- Policy 9: Promoting a Stronger Visitor Economy;
- Policy 28: The Natural Environment;
- Policy 31: Climate Change and Renewable and Low Carbon Energy; and
- Policy 32: Community, Health and Well-being.

## Guidance

### National Highways (2020) Design Manual for Roads and Bridges (DMRB), LA 112, Population and Human Health

12.2.15. National Highways ‘Design Manual for Roads and Bridges (DMRB), LA 112, Population and Human Health’ (2020)<sup>6</sup> provides guidance in relation to the assessment of land use, albeit in the context of linear road infrastructure projects though is considered relevant to the Scheme given its scale and nature.

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<sup>5</sup> South East Lincolnshire Joint Strategic Planning Committee (2019) *Local Plan 2011-2036*. Available at: <https://southeastlincslocalplan.org/article/20102/Adopted-Plan>.

<sup>6</sup> Highways England; Transport Scotland; Welsh Government; Department for Infrastructure (Northern Ireland) (2020) Design Manual for Roads and Bridges (DMRB): LA 112 Population and Human Health. Available at: <https://www.standardsforhighways.co.uk/tses/attachments/1e13d6ac-755e-4d60-9735-f976bf64580a?inline=true>.

### 12.3. Scoping Opinion and Additional Consultation

12.3.1. To establish the methodologies and approach to the assessment of the Scheme, a scoping exercise was completed in Spring 2024. The results of this were formally presented within the Scoping Report submitted to the Planning Inspectorate on 30 May 2024. A Scoping Opinion was received from the Planning Inspectorate on 10 July 2024. Comments from the Planning Inspectorate in relation to Socio-Economics and Land Use are summarised in Table 12-1 below.

**Table 12-1 Responses to EIA Scoping in relation to Socio-Economics and Land Use**

Consultee	Summary of Response to EIA Scoping	Response/Action
Planning Inspectorate	The Planning Inspectorate agreed with the proposal to scope out access to housing, education, childcare and healthcare given the Scheme is for electricity generation. However, the Scoping Report proposed to assess the impact on access to open space. No information on the proximity of the Proposed Development to community and leisure facilities or tourism and recreation facilities has been provided. Therefore, possible impacts in these areas cannot be scoped out.	As outlined within Table 12-2, access to housing, education, childcare, play space and healthcare has been scoped out of the Socio-Economics and Land Use assessment.  Access to open space, community and leisure facilities; tourism and recreation facilities have been considered as part of the Socio-Economics and Land Use assessment.
	The Planning Inspectorate stated that the definitions of receptor sensitivity and impact magnitude proposed for socio-economics have an element of subjectivity. The Planning Inspectorate also recognised there are three different approaches to assigning sensitivity identified in Table 4.8.3, Section 3.3 and Table 4.85 of the Scoping Report. As such, the Planning Inspectorate asks, for ease of understanding, that a common approach across these aspects is sought, given that they are to be assessed within a single chapter.	Since the Scoping process was undertaken, the Human Health assessment has been assigned a dedicated section within PEIR Volume I Chapter 14: Other Environmental Topics, to assist in ease of understanding. By virtue of the interrelationship between these EIA topics, cross references between baseline conditions have been included where relevant.

12.3.2. Incorporating comments from the Planning Inspectorate and other consultees, the following scope is proposed for the Socio-Economics and Land Use assessment as outlined in Table 12-2 below.

**Table 12-2 Scope of Assessment in Relation to Socio-Economics and Land Use**

Topic	Construction Phase	Operational Phase	Decommissioning Phase
Socio-Economics	<p><b>Scoped In</b></p> <p>The socio-economics assessment has considered the provision of temporary employment during construction, including gross value added. The assessment has also considered the impact of the Scheme on tourism activities.</p> <p><b>Scoped Out</b></p> <p>Access to housing, education, childcare, play space and healthcare.</p>	<p><b>Scoped In</b></p> <p>The socio-economics assessment has considered the provision of employment during operation, including gross value added and impacts on the local economy. The assessment has also considered the impact of the Scheme on tourism activities whilst the Scheme is in operation.</p> <p><b>Scoped Out</b></p> <p>Access to housing, education, childcare, play space and healthcare.</p>	<p><b>Scoped In</b></p> <p>The socio-economics assessment has considered the provision of temporary employment during decommissioning, alongside Gross Value Added (GVA) generation.</p> <p><b>Scoped Out</b></p> <p>Access to housing, education, childcare, play space and healthcare.</p>
Land Use	<p><b>Scoped In</b></p> <p>The assessment has considered potential change to land use utility and function in relation to residential properties, community land and assets, business premises, development land, and farm holdings.</p>		

### Additional Consultation

- 12.3.3. Additional consultation specific to Socio-Economics and Land Use has not been completed to date. However, by virtue of the interrelationship between EIA topics, the Socio-Economics and Land Use assessment has considered feedback received during consultation in relation to those topics which have the potential to result in significant intra-project cumulative effects. This has included Cultural Heritage; Ecology and Biodiversity; Agriculture and Soils; Landscape and Visual; Noise and Vibration; Traffic and Access; Human Health; and Glint and Glare.
- 12.3.4. Engagement with landowners within the PV Area has continued to be held since the Site selection stage. Discussions will continue in relation to how farm holdings within the PV Area can maintain land use function, where practical, during the construction, operational and decommissioning phases.
- 12.3.5. Engagement with landowners within the Inter-Array Areas and Grid Connection Corridor is at its early stages as the design of the Scheme continues to be refined. Discussions in relation to how the design of the Scheme can accommodate existing land use function, among other matters, will continue to be held as the project progresses.

## 12.4. Assessment Methodology

- 12.4.1. There is currently no standard best-practice guidance in relation to the assessment of Socio-Economics and Land Use. It is acknowledged that the approach adopted, notably in relation to Socio-Economics, can vary considerably<sup>7</sup>. This is further the case when considering guidance specific to electrical power generation and transmission development. The Socio-Economics and Land Use assessment methodology has therefore been developed following industry best practice and experience from schemes of a similar scale and nature.
- 12.4.2. Though applicable to linear infrastructure development, DMRB ‘LA 112, Population and Human Health’ (2021)<sup>6</sup> guidance has been referenced when considering the sensitivity and magnitude of impact criteria for potential Land Use receptors which are considered relevant to the Scheme.

### Study Area

- 12.4.3. The potential significant effects resulting from the Scheme in relation to Socio-Economics and Land Use have been considered at varying spatial extents depending on the individual nature of the effect assessed.
- 12.4.4. Table 12-3 below outlines the Study Area per receptor considered as part of the Socio-Economic and Land Use assessment.

**Table 12-3 Socio-Economics and Land Use Study Areas**

Receptor	Study Area	Justification
Local population	South Holland District	If any aspect of the Scheme enters a Ward area, due to their small geographical size, the local population could be impacted.
Local workforce	South Holland District	Professional judgement and the spatial nature of employment markets, as informed by other assessments.
Local economy and labour market	Lower Layer Super Output Areas (LSOAs) which the Site intersects or is within, and South Holland District.	Gross Value Added (GVA) is made up of small-scale economic activity at its core. LSOA level data reflects this and enables measurement at district level as well.
Community land and assets Tourism facilities	Within, and up to a 2km radius from the Site.	Professional judgement and location of sensitive receptors for impacts arising from the Scheme, as informed by other assessments.
Residential properties Business premises	Within, and up to a 500m radius from, the Site.	Professional judgement and location of sensitive receptors for impacts arising from the Scheme, as informed by other assessments.

<sup>7</sup> IEMA (2014) *Socio-economic assessment and improving EIA*. Available at: <https://web.archive.org/web/20211026210315/https://www.iema.net/articles/socio-economic-assessment-and-improving-eia#>.

Receptor	Study Area	Justification
Agricultural land holdings	Within the Site	Professional judgement and location of sensitive receptors for impacts arising from the Scheme, as informed by other assessments.

## Baseline Development

12.4.5. The following data sources have been used to establish the baseline in relation to Socio-Economics and Land Use:

- Office for National Statistics (ONS) Census Data 2021<sup>8</sup>;
- Ministry of Housing, Community and Local Government (2019) English Indices of Deprivation (2019)<sup>9</sup>;
- ONS (2022) Regional Gross Value Added (balanced) per head and income components<sup>10</sup>;
- ONS (2022) Regional Gross Value Added (balanced) by industry: local authorities by ITL1 region<sup>11</sup>
- ONS (2024) Claimant Count<sup>12</sup>;
- ONS (2023) UK Business Register and Employment Survey<sup>13</sup>;
- ONS (2024) Annual Population Survey (October 2023 – September 2024)<sup>14</sup>;
- ONS Mid-Year Population Estimates 2021 (2023)<sup>15</sup>;
- ONS Annual Survey of Hours and Earnings 2022 (2023)<sup>16</sup>;
- ONS Population Projections 2018-based Estimates (2024)<sup>17</sup>;

<sup>8</sup> Office for National Statistics (ONS) 2021 Census Data. Available via NOMIS: [https://www.nomisweb.co.uk/sources/census\\_2021](https://www.nomisweb.co.uk/sources/census_2021).

<sup>9</sup> Ministry of Housing Communities & Local Government (2019) English Indices of Deprivation 2019. Available at: <https://imd-by-postcode.opendatacommunities.org/imd/2019>.

<sup>10</sup> ONS (2024) Regional Gross Value Added (balanced) per head and income components. Available at: <https://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/uksmallareagvaestimates>.

<sup>11</sup> ONS (2024) Regional gross value added (balanced) by industry: local authorities by ITL1 region. Available at: <https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/regionalgrossvalueaddedbalancedbyindustrylocalauthoritiesbyitl1region>.

<sup>12</sup> ONS (2024) Claimant Count by unitary and local authority. Available at: <https://www.ons.gov.uk/employmentandlabourmarket/peoplenotinwork/unemployment/datasets/claimantcountbyunitaryandlocalauthorityexperimental>.

<sup>13</sup> ONS (2022) Business Register and Employment Survey. Available at: <https://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/businessregisterandemploymentsurvey>.

<sup>14</sup> ONS (2024) Annual Population Survey Jul 2023 – Jun 2024. Available via NOMIS: [https://www.nomisweb.co.uk/home/release\\_group.asp?g=16](https://www.nomisweb.co.uk/home/release_group.asp?g=16).

<sup>15</sup> ONS (2024) Population estimates for England and Wales: mid-2023. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/populationestimatesforenglandandwales/mid2023>.

<sup>16</sup> ONS (2023) Annual Survey of Earnings and Hours. Available at: [Nomis – Bulk Data Export – annual survey of hours and earnings – resident analysis](https://www.ons.gov.uk/economy/earningsandhours/datasets/annualsurveyofhoursandearnings-residentanalysis).

<sup>17</sup> ONS (2024) Population Projections for Local Authorities: 2018-Based Estimates. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/localauthoritiesinenglandtable2>.

- ONS Regional gross value added (balanced) per head and income components (2022)<sup>18</sup>;
- Global Tourism Solutions (2023) Greater Lincolnshire Final Scarborough Tourism Economic Activity Monitor (STEAM) Report<sup>19</sup>;
- South East Lincolnshire Local Plan 2011-2036<sup>5</sup>;
- South Holland District Council Public WebMaps<sup>20</sup>;
- Google Maps<sup>21</sup> and Google Earth<sup>22</sup>;
- OpenStreetMap<sup>23</sup>;
- Ordnance Survey Explorer Map<sup>24</sup>;
- Visit Britain<sup>25</sup>;
- Visit England<sup>26</sup>; and
- Visit Lincolnshire<sup>27</sup>.

12.4.6. The baseline will continue to be developed as the design of the Scheme is further refined. Details will be updated as appropriate within the ES.

## Assessment of Value

### Socio-Economics

12.4.7. The sensitivity of Socio-Economic receptors in relation to the Scheme have been determined in accordance with Table 12-4 below.

**Table 12-4 Receptor Sensitivity in Relation to Socio-Economics**

Sensitivity	Definition
High	Receptor is identified as a policy priority, there is evidence of significant socio-economic challenges, direct vulnerabilities in comparison to national and regional levels, or the receptor has little ability to absorb change.
Medium	Some evidence of socio-economic challenges and vulnerabilities compared to local, regional and national levels; or the receptor has moderate capacity to absorb change.

<sup>18</sup> ONS (2024) *Regional gross value added (balanced) per head and income components*. Available at: <https://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/nominalregionalgrossvalueaddedbalancedperheadandincomecomponents/current>.

<sup>19</sup> Global Tourism Solutions (2024) *Greater Lincolnshire Final STEAM Report 2016 – 2023*. Available at: <https://business.visitlincolnshire.com/insights/research-and-reports/>.

<sup>20</sup> South Holland District Council (2025) *SHDC Public WebMaps* Available at: [https://shdc.dynamicmaps.co.uk/MapThat\\_SHDC\\_Public/Default.aspx](https://shdc.dynamicmaps.co.uk/MapThat_SHDC_Public/Default.aspx).

<sup>21</sup> Google (2025) *Google Maps*. Available at: <https://www.google.com/maps>.

<sup>22</sup> Google (2025) *Google Earth*. Available at: <https://earth.google.com/web>.

<sup>23</sup> OpenStreetMap (2025) *OpenStreetMap*. Available at: <https://www.openstreetmap.org>.

<sup>24</sup> Ordnance Survey (2025) *Ordnance Survey Explorer Map*. Available at: <https://explore.osmaps.com>

<sup>25</sup> Visit Britain (2025) *Research and Insights*. Available at: <https://www.visitbritain.org/research-insights>.

<sup>26</sup> Visit England (2025) *Places to Visit in Lincolnshire*. Available at: <https://www.visitengland.com/trip-ideas/places-visit-lincolnshire>.

<sup>27</sup> Visit Lincolnshire (2025) *Destinations: Southern Countryside*. Available at: <https://www.visitlincolnshire.com/destinations/south-countryside>.

Sensitivity	Definition
Low	Receptor is not identified as a policy priority; the receptor is resilient and only faces minor socio-economic challenges that would not result in material changes.
Very Low	Receptor is highly unlikely to change or face any socio-economic challenges.

### Land Use

12.4.8. The sensitivity of Land Use receptors in relation to the Scheme have been determined in accordance with Table 12-5 below.

**Table 12-5 Receptor Sensitivity in Relation to Land Use**

Sensitivity	Definition
Very High	Asset or land resource is of high importance and rarity, the level of use is very frequent, with alternatives only available outside of the district. Farm holding is wholly reliant on the spatial relationship of land.
High	Asset or land resource is of high importance and rarity, the level of use is frequent, with limited alternatives or substitutions available. Farm holding is dependent on the spatial relationship of land.
Medium	Asset or land resource is of medium importance and rarity, the level of use is frequent, with a moderate amount of alternatives or substitutions available. Farm holding is partially dependent on the spatial relationship of land.
Low	Asset or land resource is of low importance and rarity, the level of use is infrequent, with alternatives or substitutions available. Area of land which the farm holding is not dependent on the spatial relationship of land.
Negligible	Asset or land resource is of very low importance and rarity, the level of use is very infrequent, with alternatives or substitutions available. Area of land which the farm holding uses infrequently on a non-commercial basis.

### Magnitude of Impact

#### Socio-Economics

12.4.9. Table 12-6 identifies the magnitude of impact criteria that has been used to inform the assessment of effects resulting from the Scheme in relation to Socio-Economics.

**Table 12-6 Magnitude of Impact in Relation to Socio-Economics**

Magnitude of Impact	Definition
Major	Total loss or major/substantial alteration to key elements. Features of the baseline (pre-development) conditions such that the post-development character/composition/attributes will be fundamentally changed.
Moderate	Loss or alteration to one or more key elements/features of the baseline conditions such that post-development character/composition/attributes of the baseline will be materially changed.
Minor	A minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible/detectable but not material. The underlying character/composition/attributes of the baseline condition will be similar to the pre-development circumstances/situation.
Negligible	Very little change from baseline conditions. Change barely distinguishable, approximating to a 'no change' situation.

## Land Use

12.4.10. Table 12-7 identifies the criteria for magnitude of impact used to inform the assessment of effects resulting from the Scheme in relation to Land Use.

**Table 12-7 Magnitude of Impact in Relation to Land Use**

Receptors	Magnitude	Magnitude Criteria
Residential properties	Major	Loss of resource and/or quality and integrity of resource, severe damage to key characteristics, features or elements; or an impact that enhances the value and quality of an asset or land use.
Community land and assets	Moderate	Partial loss of or damage to key characteristics, features or elements, compromising viability; or an impact that has a discernible beneficial impact on the asset or land resource.
Business premises	Minor	A discernible change in attributes, quality or vulnerability, minor loss of, or alteration to one or more key characteristics, features or elements that do not compromise overall viability; or an impact that has a slight beneficial impact on the asset or land resource.
Farm holdings	Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements not directly affecting viability; or an impact considered a very minor benefit on the asset or land resource compared to baseline conditions.
Development land	Major	A permanent impact that adversely affects the value of a development land resource, with recovery unfeasible; or an impact that enhances the value and quality of a development land resource.
	Moderate	An impact that adversely affects the value of a development land resource, but a recovery is feasible with no permanent impacts; or an impact that has a discernible beneficial impact on the development land resource.
	Minor	An impact that adversely affects the value of development land resource, temporary in nature, with a recovery is expected within the short-term and no change predicted to its key attributes; or an impact that has a slight beneficial impact on the development land resource attributes compared to baseline conditions.
	Negligible	An impact considered a very minor loss or benefit on the development land resource from baseline conditions.

Adapted from DMRB (2020) LA112 Population and Human Health<sup>6</sup>

## Significance of Effect

12.4.11. Socio-Economic and Land Use effects are a reflection of the relationship between the sensitivity of the affected receptor and the magnitude of the impact. Table 12-8 below shows how the assessment of the significance of effects has been considered in relation to Socio-Economics and in relation to Land Use (with the sensitivity and magnitude criteria adapted to appropriately reflect the relevant characteristics and considerations for each topic). Significant effects are identified by the shaded cells. Where two options are shown for the assessment of significance (e.g. minor/negligible), professional judgement has been used to determine which of the two options is appropriate.

**Table 12-8 Significance Matrix in Relation to Socio-Economics and Land Use**

Magnitude	Sensitivity of Receptor			
	High	Medium	Low	Negligible
Major	Major	Moderate	Moderate/minor	Minor/negligible
Moderate	Moderate	Moderate	Minor	Negligible
Minor	Moderate/minor	Minor	Minor	Negligible
Negligible	Minor/negligible	Minor/negligible	Minor/negligible	Negligible

### Confidence of Prediction of Likely Significant Effects

12.4.12. As described within PEIR Volume I Chapter 4: Overview of the EIA Process, due to the preliminary nature of the assessment and that some elements of the Scheme are still to be determined, a confidence rating has been provided where the significance of effects results from the Scheme has been determined. This has been applied for the assessment in relation to Socio-Economics and Land Use within section 12.8 of this chapter.

### Assessing Cumulative Effects

12.4.13. The assessment of inter-project cumulative effects in relation to Socio-Economics and Land Use has considered all committed developments outlined within PEIR Volume III Appendix 15-2: Short List of Other Developments located within 2km of the Site. The assessment has been completed in accordance with the methodology outlined in PEIR Volume I Chapter 4: Overview of the EIA Process.

12.4.14. Intra-project cumulative effects in relation to Socio-Economics and Land Use have been considered within PEIR Volume I Chapter 15: Cumulative Effects.

## 12.5. Assumptions and Limitations

12.5.1. The construction phase would last between 24 and 36 months for works within the PV Area and Inter-Array Areas, and between 18-24 months for works within the Grid Connection Corridor.

12.5.2. For the purposes of the Socio-Economics and Land Use assessment, it has been assumed the construction phase would take a minimum of 24 months for works within the PV Area and Inter-Area Areas and 18 months for works within the Grid Connection Corridor. These are assumed to begin in tandem as a worst-case assumption as combined with the shortest expected duration of works, this would result in a higher intensity of construction activity.

12.5.3. The assessment of likely significant Socio-Economic effects associated with the Scheme has been carried out against a benchmark of current Socio-Economic baseline data relevant to the Scheme, as far as is possible within the limitations of such a baseline dataset which is 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. Details within the ES will be updated where information cited as part of the development of the baseline has changed.

12.5.4. The preliminary Land Use assessment in relation to farm holdings has considered the potential effects on land owners. The assessment of potential effects on tenant farmers will be reviewed and updated within the ES as appropriate. Based on investigations to date, no tenant farmers have been identified within the PV Area. The extent of tenant farmers within the Inter-Array Areas and Grid Connection Corridor will be established as part of consultation with relevant land owners which is current in its early stages.

## 12.6. Baseline Conditions

### Current Baseline

12.6.1. The Site is located within the local authority district of South Holland as outlined within PEIR Volume II Figure 12-1: District Boundaries.

12.6.2. The Site is located within the following wards as outlined within PEIR Volume II Figure 12-2: Ward Boundaries:

- Spalding St Paul's Ward;
- Spalding St Mary's Ward;
- Moulton Ward;
- Weston and Cowbit Ward;
- Whaplode and Holbeach St John's Ward; and
- Fleet Ward.

12.6.3. The Site is located within the following parishes as outlined within PEIR Volume II Figure 12-3: Parish Boundaries:

- Cowbit Parish;
- Crowland Parish;
- Fleet Parish;
- Holbeach Parish;
- The Moultons Parish;
- Weston Parish; and
- Whaplode Parish.

12.6.4. The Site intersects, or is located within, ten Lower Layer Super Output Areas (LSOAs) as outlined in PEIR Volume II Figure 12-4: Lower Layer Super Output Area Boundaries.

### Population Size and Projected Growth

12.6.5. The most recent ONS Census 2021<sup>8</sup> (TS001) assessed a population of 95,122 within the district of South Holland. This represents approximately 12.38% of the population of Lincolnshire, 1.95% of the population of the East Midlands, and 0.17% of the population of England.

12.6.6. ONS population projections estimate that from 2021 up to the year 2027 (the earliest commencement of the construction phase), the population within South Holland is anticipated to grow by approximately 4.82% per annum. The growth rate per annum within South Holland is higher than that for Lincolnshire (+3.64%), the East Midlands (+3.89%) and England (+2.70%).

12.6.7. The Scheme would be decommissioned following its 40-year operational life. For the purposes of the assessment, the earliest the decommissioning phase would commence, is anticipated to be 2069. In the period from 2021 census data to 2069, the population of South Holland is estimated to grow by approximately 30.97%. This growth rate is higher than that of Lincolnshire (22.48%), the East Midlands (25.80%) and England (18.44%).

**Population Age Profile**

12.6.8. As of 2021, there is a greater proportion of children (ages 0-15) within South Holland (17%) when compared to Lincolnshire (16.7%), though both are lower than the average across the East Midlands (18.1%) and England (18.5%).

12.6.9. The average proportion of the population of a working age (16-64 years) was 59.3% within South Holland, lower than that assessed across Lincolnshire (59.8%), the East Midlands (62.5%) and England (63.0%)<sup>16</sup>.

12.6.10. The average proportion of the population aged 65+ across South Holland (23.9%) is higher than that of Lincolnshire (23.4%), the East Midlands (19.4%) and England as a whole (18.3%).

12.6.11. Baseline conditions in relation to age profile are outlined within Table 12-9 below.

**Table 12-9 Population by Age (%) (ONS Census 2021, TS007B)**

Area	0-15	16-64	65+
South Holland	17.0	59.3	23.9
Lincolnshire	16.7	59.8	23.4
East Midlands	18.1	62.5	19.4
England	18.5	63.0	18.3
Note percentage does not sum to 100% due to rounding			

12.6.12. Table 12-10 and Table 12-11 below outlines the projected changes to the age profile within South Holland at the earliest commencement of the construction (2027) and decommissioning (2069) phases. Table 12-12 presents the count of the population per age profile, while Table 12-11 outlines the relative proportions of the population per age profile.

**Table 12-10 Population Projections Percentage by Age Profile (ONS, 2018)**

Area	Percentage of the Population	2027	2069
South Holland	Aged 0 to 15 (%)	16.7	13.9
	Aged 16 to 64 (%)	58.2	54.2
	Aged 65+ (%)	25.1	31.9
Lincolnshire	Aged 0 to 15 (%)	16.0	14.0
	Aged 16 to 64 (%)	57.3	53.2

	Aged 65+ (%)	26.7	32.8
East Midlands	Aged 0 to 15 (%)	17.2	15.4
	Aged 16 to 64 (%)	60.0	56.3
	Aged 65+ (%)	22.8	28.3
England	Aged 0 to 15 (%)	17.7	13.2
	Aged 16 to 64 (%)	60.6	58.0
	Aged 65+ (%)	21.7	28.8

12.6.13. In all areas, the proportion of the population that children (0 to 15) account for is anticipated to reduce from current baseline level up until the construction phase, and further still when the decommissioning phase is anticipated to commence. While the size of this age profile (0 to 15) would increase, this would be to a lesser extent than those considered of working age (16 to 64) and 65+.

12.6.14. The proportion of the population that are children would remain larger than that identified within Lincolnshire, though remain lower than that seen across the East Midlands and England.

12.6.15. The proportion of the population that are considered of working age would remain lower than that projected across the East Midlands and England during both the construction and decommissioning phases. This proportion would, however, be higher than that identified within Lincolnshire across both phases.

12.6.16. The proportion of the population 65+ would continue to increase across all areas. While the proportion of the population within this age profile, and the projected growth would be higher than that identified across the East Midlands and England, this would be lower than that projected within Lincolnshire.

**Table 12-11 Population Projections Count by Age Profile (ONS, 2018)**

Area	Population Count	2027	2069
South Holland	Aged 0 to 15	16,275	17,621
	Aged 16 to 64	59,047	68,709
	Aged 65+	26,136	40,440
Lincolnshire	Aged 0 to 15	123,371	132,482
	Aged 16 to 64	458,637	503,431
	Aged 65+	218,679	310,386
East Midlands	Aged 0 to 15	845,522	952,699
	Aged 16 to 64	3,068,123	3,482,919
	Aged 65+	1,195,500	1,750,739
England	Aged 0 to 15	8,013,984	8,910,003
	Aged 16 to 64	35,462,918	39,150,013
	Aged 65+	15,050,821	19,440,007

### Qualification Attainment

- 12.6.17. As of 2021, 44.2% of residents within South Holland aged 16 years and over, had level 1, 2 or 3 qualifications<sup>14</sup>. These qualifications are equivalent to A-Levels or below, including vocational qualification equivalents. This is higher than that in Lincolnshire (44.1%), the East Midlands (42.6%) and England as a whole (39.9%).
- 12.6.18. Census data indicates that 24.6% of the population within South Holland held no qualifications, which is higher than the average within Lincolnshire (20.5%), the East Midlands (19.5%), and England as a whole (18.1%).
- 12.6.19. Of the population within South Holland, 20.1% hold level 4 qualifications or above (equivalent to an undergraduate degree), in contrast to the average throughout Lincolnshire (25.6%), the East Midlands (29.1) and England (33.9%).
- 12.6.20. Baseline conditions in relation to qualifications are outlined within Table 12-12 below.

**Table 12-12 Population by Qualifications Held (%) (ONS Census 2021, TS067)**

Qualifications Held	South Holland	Lincolnshire	East Midlands	England
No Qualifications	24.6	20.5	19.5	18.1
Level 1 and Entry Level Qualifications	12.5	10.9	10.4	9.7
Level 2 Qualifications	15.7	14.7	13.9	13.3
Level 3 Qualifications	16	18.5	18.3	16.9
Level 4 Qualifications or above	20.1	25.6	29.1	33.9
Note the percentage does not sum to 100% due to rounding and the removal of unnecessary categories				

### Deprivation

- 12.6.21. The English Indices of Deprivation<sup>9</sup> (IoD) measure relative deprivation in England. It is based on seven distinct domains of deprivation. These are income, employment, health deprivation and disability, education and skills training, crime, barriers to housing and services and living environment, which are combined and weighted to form an overall index.
- 12.6.22. The IoD is measured against approximately 32,844 Lower-Layer Super Output Areas (LSOAs) across England; these are small areas of similar population size (between approximately 1,500 residents or 650 households) used by the Office for National Statistics for neighbourhood size area analysis. For each deprivation metric, all LSOAs within England are ranked then divided into ten equal groups known as a 'Decile'. Decile 1 represents the 10% of most deprived areas, while Decile 10 represents the 10% of least deprived areas.
- 12.6.23. The Site intersects or is located within ten LSOAs as outlined within Table 12-13 below, and in PEIR Volume II Figure 12-3: Lower Layer Super Output Area Boundaries.
- 12.6.24. There are two LSOAs that intersect or are located within the Site that are ranked within the 30% most deprived areas and one LSOA ranked within the 30% least deprived areas. These LSOAs perform strongest in relation to crime (and the relative risk of personal and material victimisation at local level), and lowest in relation to education and skill (in relation to attainment and skills) and barriers to housing and services.

**Table 12-13 IMD Deciles Relating to the LSOAs that Intersect or are Located Within the Site**

LSOA Area	Overall Deprivation	Income	Employment	Education and Skills	Health Deprivation and Disparity	Crime	Housing and Services	Living Environment
South Holland 010A	4	4	4	4	5	9	2	6
South Holland 002A	3	4	4	2	5	9	1	3
South Holland 010B	5	7	6	3	7	9	1	3
South Holland 007C	3	3	4	1	7	7	6	6
South Holland 010C	4	4	4	4	5	8	2	3
South Holland 011C	6	6	6	4	6	10	2	6
South Holland 004B	6	4	5	3	6	10	6	7
South Holland 004A	7	9	7	4	7	8	4	6
South Holland 005A	5	6	7	3	8	10	1	4
South Holland 011A	6	6	6	3	6	4	9	4

### Human Health

12.6.25. Human Health baseline information is outlined within Section 14.3: Human Health within PEIR Volume I Chapter 14: Other Environmental Topics. The baseline information describes conditions in relation to physical health, mental health and wellbeing, and other associated health determinants.

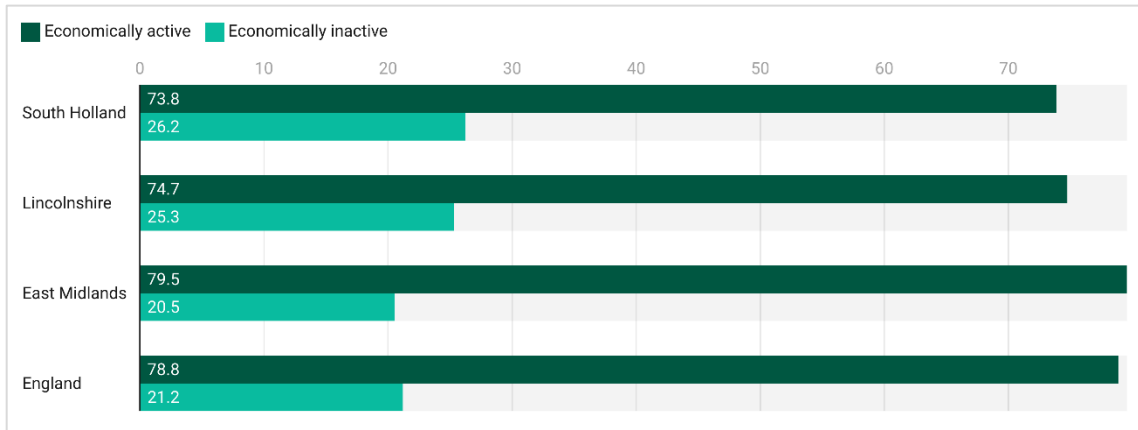
12.6.26. The population of South Holland is assessed as experiencing a moderate variation in health outcomes when compared to regional and national levels, demonstrating widening levels of health inequalities. As a result, the population within South Holland is considered to be of medium sensitivity to changes in Human Health demography.

### Employment

12.6.27. Plate 12-1 below outlines the economic activity rates within South Holland in comparison to regional and national averages. According to the latest Annual Population Survey (APS) data<sup>14</sup>, the proportion of the population in South Holland between 16-64 that are economically active is 76.4%. This is similar to that of Lincolnshire (75.2%) but less than the averages within the East Midlands (79.1%) and in England as a whole (78.7%).

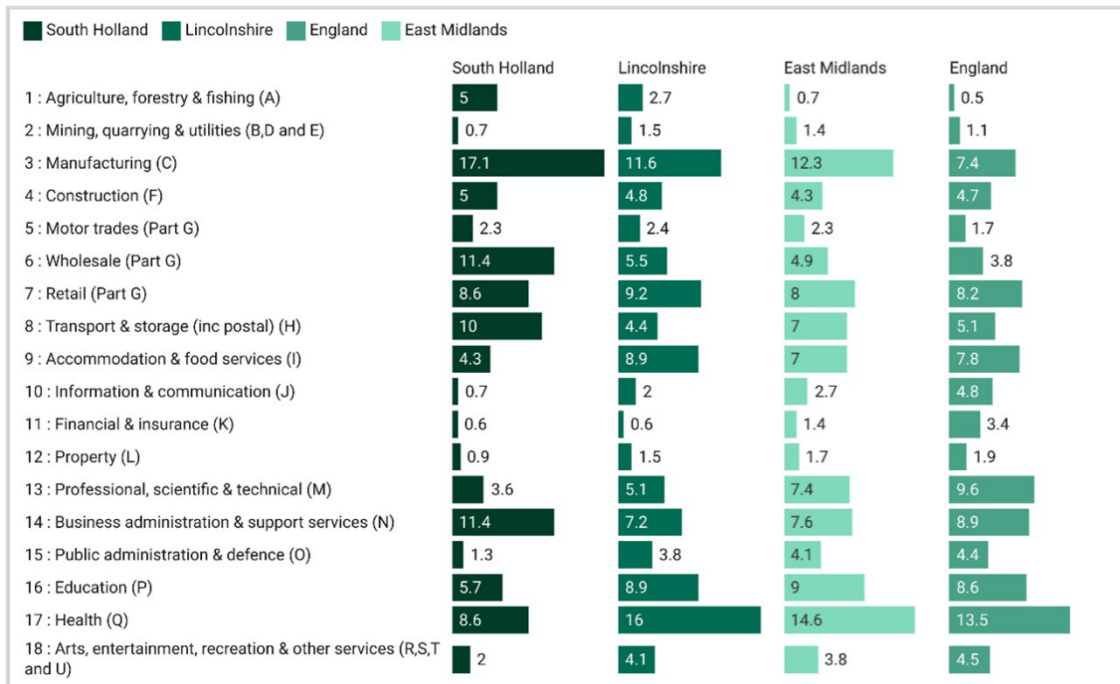
12.6.28. Within the proportion of the population identified as economically inactive (aged 16-64), the percentage that were unemployed is 3.9% within South Holland. This is lower rate when compared to the East Midlands (4.1%) but higher than the national average (3.8%).

Plate 12-1 Employment rates (%) (APS, September 2024, TO1)



12.6.29. The highest occupation type in South Holland identified within the latest Business Register and Employment Survey (BRES)<sup>13</sup> is in manufacturing (17.1%) as shown in Plate 12-2 below. Within South Holland, 5.0% of occupation type is accounted for by agriculture, forestry and fishing, which is considerably higher than the averages within the East Midlands (0.7%) and England as a whole (0.5%). Business administration professions are also considered an outlier, with occupation rates high at 11.4% compared to rates within Lincolnshire (7.2%), the East Midlands (7.6%) and England (8.9%) respectively.

Plate 12-2 Occupation Types (%) (BRES, 2023)



**Local Economy and Labour Market**

12.6.30. The overall GVA estimated within South Holland was £2,467.9 million as of 2022<sup>10</sup> (as is most recently available). This represents approximately 11.9% of the total GVA in Lincolnshire and 1.9% within the East Midlands.

12.6.31. Based on the 2021 census population figures, local authority GVA data<sup>11</sup> and regional GVA data<sup>10</sup>, GVA would equate to approximately £25,948 per head in South Holland compared to £23,379 in Lincolnshire, £26,099 in the East Midlands, and £33,227 per head within England as a whole.

12.6.32. In terms of the economic performance of various sectors, Table 12-14 shows the relative economic performance of specific subindustries which are of strategic importance to the Scheme. At a more detailed level, electric power generation contributes only marginally across all regions, though it is slightly more in the Study Area, Lincolnshire (0.17%)<sup>28</sup> than South Holland (0.10%).

**Table 12-14 Occupation Types by GVA generation (BRES,2023 and ONS, 2024)**

Industrial Sector	South Holland		Lincolnshire		East Midland		England	
	GVA (£m)	%	GVA (£m)	%	GVA (£m)	%	GVA (£m)	%
Total	2,467.9	100	20,738.3	100	128,794.6	100	1,940,267	100
<b>Industrial Sectors</b>								
1: Agriculture, forestry & fishing (A)	123.4	5.0	559.9	2.7	644.0	0.5	9,701	0.5
2: Mining, quarrying & utilities (B, D, E)	17.3	0.7	311.1	1.5	1,416.7	1.1	21,343	1.1
3: Manufacturing (C)	422.0	17.1	2,405.6	11.6	9,530.8	7.4	143,580	7.4
4: Construction (F)	123.4	5.0	9,95.4	4.8	6,053.3	4.7	91,193	4.7
5: Motor trades (Part G)	56.8	2.3	4,97.7	2.4	2,189.5	1.7	32,985	1.7
6: Wholesale (Part G)	281.3	11.4	1,140.6	5.5	4,894.2	3.8	73,730	3.8
7: Retail (Part G)	212.2	8.6	1,907.9	9.2	10,561.2	8.2	159,102	8.2
8: Transport & storage (inc postal) (H)	246.8	10.0	912.5	4.4	6,568.5	5.1	98,954	5.1
9: Accommodation & food services (I)	106.1	4.3	1,845.7	8.9	10,046.0	7.8	151,341	7.8
10: Information & communication (J)	17.3	0.7	414.8	2.0	6,182.1	4.8	93,133	4.8
11: Financial & insurance (K)	14.8	0.6	124.4	0.6	4,379.0	3.4	65,969	3.4
12: Property (L)	22.2	0.9	311.1	1.5	2,447.1	1.9	36,865	1.9
13: Professional, scientific & technical (M)	88.8	3.6	1,057.7	5.1	12,364.3	9.6	186,266	9.6
14: Business administration & support services (N)	281.3	11.4	1,493.2	7.2	11,462.7	8.9	172,684	8.9
15: Public administration & defence (O)	32.1	1.3	788.1	3.8	5,667.0	4.4	85,372	4.4
16: Education (P)	140.7	5.7	1,845.7	8.9	11,076.3	8.6	166,863	8.6
17: Health (Q)	212.2	8.6	3,318.1	16.0	17,387.3	13.5	261,936	13.5
18: Arts, entertainment, recreation & other services (R, S, T, U)	49.4	2.0	850.3	4.1	5,795.8	4.5	87,312	4.5
<b>Subindustry Relevant to the Socio-Economics Assessment</b>								
35.1: Electric power generation, transmission and distribution	2.5	0.1	41.5	0.2	386.4	0.3	5,821	0.3
Note that figures have been rounded								

<sup>28</sup> Rounded to 0.2% in Table 12-16.

## Tourism

- 12.6.33. In terms of the visitor economy and the tourism sector, the main source of information is from the Visit Lincolnshire and (now disbanded) Greater Lincolnshire Local Economic Partnership (LEP) organisations. To estimate the contributions of specific aspects of the tourism industry to South Holland's local economy, Table 12-15 uses tourism data covering the Greater Lincolnshire area (of which South Holland is a part of) from the Global Tourism Solutions STEAM model<sup>19</sup>.
- 12.6.34. The economic impact of tourism in South Holland is significantly smaller in absolute terms compared to the broader Greater Lincolnshire LEP, reflecting its smaller share of the overall visitor economy. The figures suggest that South Holland plays a moderate role within the region's tourism landscape, benefiting from visitor spending while operating at a smaller scale.
- 12.6.35. When examining the sectoral distribution of economic impact, South Holland mirrors the trends of Greater Lincolnshire but on a reduced scale. The highest contribution comes from shopping (£79.99 million), followed by food and drink (£63.37 million), accommodation (£29.18 million), transport (£31.94 million), and recreation (£24.66 million). This breakdown highlights the retail and hospitality sectors as primary drivers of tourism-related spending. The reliance on shopping and dining suggests that day visitors form a crucial component of South Holland's tourism economy.

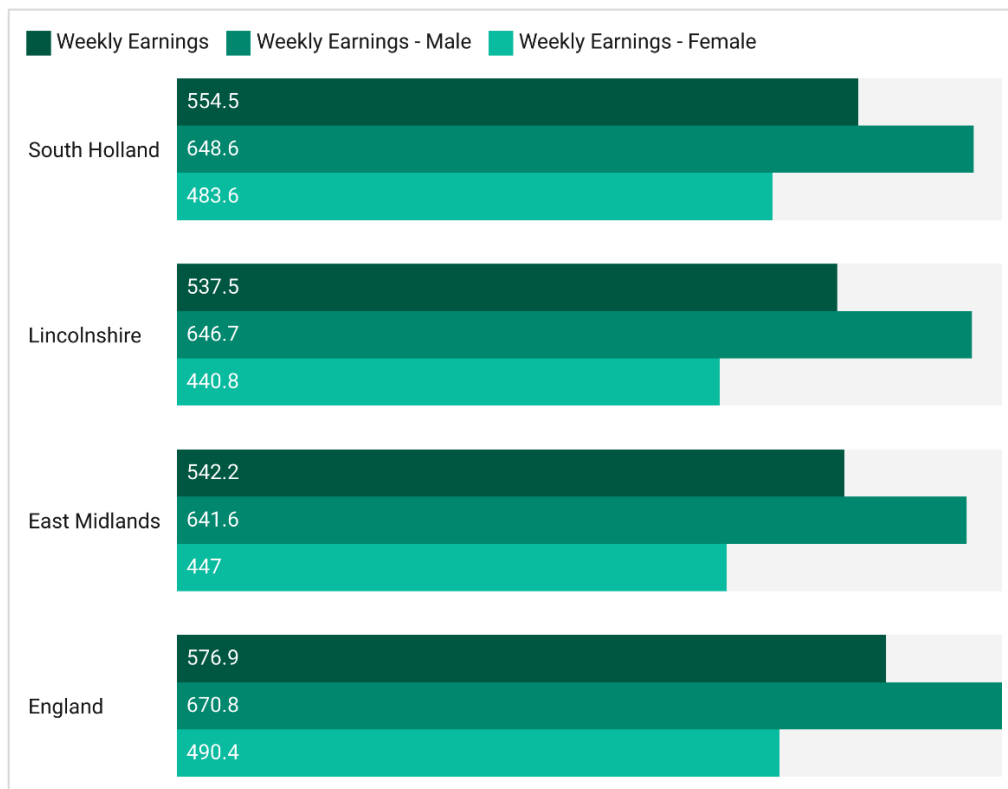
**Table 12-15 Tourism impact on South Holland local economy (GTS, 2023)**

Tourism Factor	South Holland	Greater Lincolnshire LEP*
<b>Total Economic Impact</b>		
Total Economic Impact (£ million)	313.76	2,926
<b>Visitor Type by Tourism Period</b>		
Visitors who stay overnight (million)	0.49	4.62
Day Visitors (million)	2.97	27.71
<b>Sectoral Distribution of Economic Impact</b>		
Accommodation (£ million)	29.18	272.00
Food and Drink (£ million)	63.37	591.00
Recreation (£ million)	24.66	230.00
Shopping (£ million)	79.99	746.00
Transport (£ million)	31.94	298.00
Note Greater Lincolnshire LEP includes two extra unitary authorities compared to Lincolnshire, however data only available for this geography.		

## Wages

- 12.6.36. Plate 12-3 shows average weekly earnings across South Holland, Lincolnshire, East Midlands and England. In terms of weekly earnings<sup>16</sup>, residents in South Holland on average experience weekly earnings of £554.5 per week. This is higher than both the Lincolnshire average (£537.5) and wider regional average of £542.2 but lower than the national average of £576.9.

Plate 12-3 Weekly earnings by gender (£) (NOMIS, 2022) District



### Residential Properties

- 12.6.37. Land surrounding the PV Area and Inter-Array Areas is predominantly rural and is characterised by arable farmland as described within PEIR Volume I Chapter 2: The Scheme. Spalding, a large market town, is located to the west of the Grid Connection Corridor. The town of Crowland is located to the south-west of the PV Area. Small clusters of residential properties can be found in various villages and hamlets scattered across the surrounding area. The most notable of these are Whaplode Drove and Shepeau Stow (located in the area surrounding the PV Area and Inter-Array Areas), Peak Hill (to the west of the southernmost point of the Grid Connection Corridor) and Weston (to the north of the Grid Connection Corridor).
- 12.6.38. Residential properties in relation to the PV Area and Inter-Array Areas are outlined within PEIR Volume II Figure 12-4: Residential Properties PV Area and Inter-Array Areas. The largest concentration is found adjacent to the Inter-Array Area between land parcels C and D, within and surrounding the village of Whaplode Drove, and the north area of Shepeau Stow. While there are none located within the PV Area, residential properties are sparsely distributed in the areas bordering each land parcel as well as along key roads such as the B1168, North Road and Eaugate Road.
- 12.6.39. Residential properties in relation to the Grid Connection Corridor are outlined within PEIR Volume II Figure 12-5: Residential Properties Grid Connection Corridor. Though none are located within the Grid Connection Corridor itself, a series of properties are surround by its boundaries, seen within Weston, Weston Hills along the B1165 (Austendyke Road), and east of Cowbit on the Moulton Chapel Road.

## Community Land and Assets

12.6.40. Community land and assets are properties or land that enhance the social wellbeing of the local community, such as parks, village halls and churches. Community land and assets within the Study Area are outlined within PEIR Volume II Figure 12-6: Community Land and Assets PV Area and Inter-Array Area, PEIR Volume II Figure 12-7: Community Land and Assets Grid Connection Corridor and in Table 12-16 below.

12.6.41. While none are located within the Site, concentrations of community land and assets are found within Whaplode Drove and the north of Holbeach Drove and Gedney Hill which are located between and below land parcels C and D. Further receptors are located within Cowbit, Moulton Chapel, Weston Hills, Weston, and Spalding which are within 2km of the Grid Connection Corridor.

**Table 12-16 Community and Recreational Facilities within 2km of the Site**

ID	Community/Recreational Facility	Description	Approximate Distance from the Site
<b>PV Area</b>			
CLA-01	Gedney Hill Golf Club	Golf club	Adjacent to PV Area
CLA-02	Church of the Holy Trinity, Gedney Hill	Church	1.3km from PV Area
CLA-03	Holbeach St Johns Village Hall	Village hall	1.6km from PV Area
CLA-04	The Parish Church of Saint John, Holbeach Fen	Church	1.6km from PV Area
<b>Inter-Array Area</b>			
CLA-05	Elizabethan Community Centre	Community Centre	Adjacent to Inter-Array Area
CLA-06	Whaplode Drove Playing Field	Recreational area	Adjacent to Inter-Array Area
CLA-07	St John's Baptist Church	Church	Adjacent to Inter-Array Area
<b>Grid Connection Corridor</b>			
CLA-08	Moulton Chapel Methodist Church	Church	730m from Grid Connection Corridor
CLA-09	St James Church, Moulton Chapel	Church	770m from Grid Connection Corridor
CLA-10	St Mary's Church, Weston	Church	770m from Grid Connection Corridor
CLA-11	Moulton Chapel Community Centre and Youth Hub	Community centre	800m from Grid Connection Corridor
CLA-12	St John the Evangelist, Weston Hills	Church	830m from Grid Connection Corridor
CLA-13	Weston Village Hall	Village hall	840m from Grid Connection Corridor
CLA-14	Cowbit Park	Recreational area	880m from Grid Connection Corridor
CLA-15	St Paul's Church, Spalding	Church	1.1km from Grid Connection Corridor
CLA-16	Moulton Chapel Playing Field	Recreational area	1.2km from Grid Connection Corridor
CLA-17	Cowbit Village Hall	Village hall	1.3km from Grid Connection Corridor
CLA-18	Cowbit St Mary's Church	Church	1.3km from Grid Connection Corridor

12.6.42. Table 12-17 below lists the educational facilities within 2km of the Site within Figure 12-6: Community Land and Assets PV Area and Inter-Array Area and PEIR Volume II Figure 12-7: Community Land and Assets Grid Connection Corridor.

**Table 12-17 Educational Facilities within 2km of the Site**

ID	Educational Facilities	Approximate Distance from the Site
<b>PV Area and Inter-Array Areas</b>		
EF-01	Shepeau Stow Primary School	300m from PV Area
EF-02	The Gedney Hill Church of England Primary School	1km from PV Area
EF-03	South View Community Primary School, Crowland	1.9km from PV Area
<b>Grid Connection Corridor</b>		
EF-04	Honeypot Day Nursery and Pre-School, Weston Hills	800m from Grid Connection Corridor
EF-05	Weston St Mary's Church of England Primary School	850m from Grid Connection Corridor
EF-06	Weston Hills Church of England Primary School	1km from Grid Connection Corridor
EF-07	The Cowbit St Mary's (Endowed) Church of England Primary School	1.3km from Grid Connection Corridor
EF-08	The John Harrox Primary School	1.4km from Grid Connection Corridor
EF-09	St Paul's Community Primary and Nursery School	1.5km from Grid Connection Corridor
EF-10	Moulton Chapel Primary School	1.6km from Grid Connection Corridor

**Business Premises**

12.6.43. Table 12-18 lists business premises within 500m of the Site, excluding farm holdings. Business premises are outlined within PEIR Volume II Figure 12-8: Business Premises PV Area and Inter-Array Area and PEIR Volume II Figure 12-9: Business Premises Grid Connection Corridor. These largely correlate to the villages and hamlets where higher concentrations of residential properties are identified. Several businesses are located in and around Baytree Garden Centre on the outskirts of Weston.

**Table 12-18 Business Premises within 500m of the Site**

ID	Business	Description	Approximate Distance from the Site
<b>PV Area</b>			
BP-01	Hunter's Bar and Grill	Restaurant	210m from PV Area
BP-02	The Pretty Parlour	Beauty salon	210m from PV Area
BP-03	Field for Paws	Dog park	280m from PV Area
BP-04	Bettaland Products	Wholesale nursery	290m from PV Area
BP-05	Material Change, Decoy Farm	Anaerobic digestion plant	300m from PV Area
BP-06	Peterborough & Spalding Gliding Club	Airfield	340m from PV Area
BP-07	Kay's Mucky Pups Dog Grooming	Pet groomer	380m from PV Area
BP-08	The Pantry at Gedney Hill	Café	500m from PV Area

ID	Business	Description	Approximate Distance from the Site
<b>Inter-Array Areas</b>			
BP-09	W J Webb & Co	Rubber moulding manufacturers	160m from Inter-Array Areas
BP-10	Ashleigh Lakes	Caravan park and fishing lakes	190m from Inter-Array Areas
BP-11	Whaplode Drove Post Office	Post office	310m from Inter-Array Areas
BP-12	WH Brand MG Spalding	Car dealership	480m from Inter-Array Areas
<b>Grid Connection Corridor</b>			
BP-13	Lucksbridge Horticulture Limited	Horticultural nursery	Adjacent to Grid Connection Corridor
BP-14	Fun Farm Spalding	Soft play centre	Adjacent to Grid Connection Corridor
BP-15	Oasis Pools & Spas	Swimming pools, hot tubs and spas shop	Adjacent to Grid Connection Corridor
BP-16	Wykeham Staff Services	Recruitment services	80m from Grid Connection Corridor
BP-17	Baytree Garden Centre	Garden centre	100m from Grid Connection Corridor
BP-18	Flamecraft	Wood Stove shop	130m from Grid Connection Corridor
BP-19	Strange Apparitions	Comic book shop	140m from Grid Connection Corridor
BP-20	Baytree Owl and Wildlife Centre	Wildlife centre	160m from Grid Connection Corridor
BP-21	The Edinburgh Woollen Mill	Clothing shop	160m from Grid Connection Corridor
BP-22	The Hair Pavilion	Hairdresser	210 from Grid Connection Corridor
BP-23	Cubit Electrical and Mechanical Engineering	Engineering services	220m from Grid Connection Corridor
BP-24	Moulton Bulb Co	Onion, garlic and shallot growing, packaging and processing.	260m from Grid Connection Corridor
BP-25	The Bell Inn, Weston Hills	Pub	270m from Grid Connection Corridor
BP-26	The Hunter's Lodge Caravan Site	Caravan site	310m from Grid Connection Corridor
BP-27	Redwood Bookkeeping Services	Bookkeeping services	320m from Grid Connection Corridor
BP-28	Rogersden	Antiques store	420m from Grid Connection Corridor

### Development Land

- 12.6.44. Other committed developments in relation to the Site are outlined within PEIR Volume I Figure 15-1: Location of Short List Committed Developments.
- 12.6.45. As of January 2024, the Grimsby to Walpole Nationally Significant Infrastructure Project (NSIP) is the only other proposed development within the Site as identified within PEIR Volume III Appendix 15-2: Short List of Other Developments.
- 12.6.46. The Outer Dowsing Offshore Wind (Generating Station) NSIP is located approximately 640m from the Site based on the boundaries provided by the project team.
- 12.6.47. A single planning application is located adjacent to the Site:

- H09-0501-23, the erection of an agricultural machinery assembly facility, research and training facility, ground mounted solar array.

12.6.48. A further four planning applications are identified within 500m of the Site:

- H23-0898-23, the erection of wooden shed, sauna with rest area, wooden gazebo and garage/workshop;
- H13-0684-20, the erection of a steel framed storage building;
- H13-0570-22, the demolition of straw bale building and erection of industrial units, and change of use of area of domestic garden to commercial use including areas of new concrete surfacing, palisade security fencing and gates; and
- H13-0190-23, the erection of a ground mounted solar array and associated infrastructure.

12.6.49. The following planning allocations are located within 500m of the Site:

- WSN029 (2.83ha, site capacity of 57 dwellings);
- WSN003 (6.11ha, site capacity of 135 dwellings); and
- WSN036 (reserve site).

12.6.50. There are no allocated mineral safeguarding areas within the Site or within 500m.

12.6.51. Policy SL3 of the Lincolnshire Minerals and Waste Local Plan<sup>29</sup> allocates sites for use as waste management facilities to meet identified gaps in capacity. There are no waste sites or areas in the Site or within 500m.

12.6.52. The nearest mineral site, MS27-SL Baston No.2 Quarry Phase 2, is located approximately 9.1km from the Site. It extends to 37 hectares, is allocated for sand and gravel, has a total mineral resource of 2.5 million tonnes and the timing of extraction commencement is set for 2025.

### Farm Holdings

12.6.53. PEIR Volume I Chapter 9: Agriculture and Soils assesses the likely significant effects resulting from the Scheme on agricultural land and soils; however:

- Likely significant effects to individual agricultural land holdings are assessed within the Land Use sections of this chapter; and
- Likely significant Socio-Economic effects on local agriculture are considered within the Socio-Economic sections of this chapter, as part of the wider baseline.

12.6.54. A total of four farm holdings are located within the PV Area, with each land parcel (A, B, C and D) corresponding to a different holding.

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<sup>29</sup> Lincolnshire County Council (2017) *Lincolnshire Minerals and Waste Local Plan: Site Locations*. Available at: <https://lincolnshire.moderngov.co.uk/documents/s20604/Appendix%20C%20-%20Site%20Location%20computer.pdf>.

12.6.55. The number of farm holdings affected by the Inter-Array Areas and the Grid Connection Corridor will be confirmed in the ES.

### Future Baseline

12.6.56. In the absence of the Scheme, the future Socio-Economics and Land Use baseline is anticipated to remain largely similar to the current baseline conditions. For the purposes of the assessment, the local economy, including employment and GVA, would be expected to expand in correlation with current population growth projections for the construction (2027), operational (2029) and decommissioning (2069) phases.

12.6.57. Land use patterns within the study area may change over time, including modifications to residential properties, business premises, and agricultural holdings, though significant deviations from the current baseline are not anticipated. While the projected increase in residents aged 65+ may drive demand for elderly care facilities and healthcare services, this is not expected to result in substantial changes to the local infrastructure baseline. This is similarly the case with development land, with the associated uncertainty meaning that, for the purposes of the assessment, the current baseline has been used.

## 12.7. Embedded Mitigation

### Measures Embedded into the Scheme Design

12.7.1. The Construction Environmental Management Plan (CEMP), Operational Environmental Management Plan (OEMP) and Decommissioning Environmental Management Plan (DEMP) would be secured by the DCO application and establish protocols to minimise impacts on the Land Use function and utility within the Site, where practicable, including:

- Implementation of proposed construction working hours, typically 07:00-19:00 Monday to Friday and 08:00-13:30 on Saturdays to reduce disturbance to nearby residents and agricultural operations. Hours are proposed to be similar during the operational phase when maintenance is performed, and during the decommissioning phase when equipment within the Site will be disassembled. Works within the Site that would be required to take place outside of these hours (as detailed in Chapter 2) will be agreed with South Holland District Council (SHDC) prior to activities taking place;
- Protective measures during the construction, operational and decommissioning phases, where practicable, to maintain access to agricultural land associated with farm holdings within the Site;
- Ongoing community engagement through a designated point of contact for queries or concerns; and
- Clear communication with local stakeholders regarding the construction and decommissioning programmes and timelines. This would also apply to activities during the operational phase, where considered necessary.

12.7.2. No embedded mitigation measures specific to Socio-Economics are proposed at this stage; however, this will be reviewed and updated during the ES stage, as necessary.

## 12.8. Preliminary Assessment of Likely Significant Effects

### Construction Phase

#### Socio-Economics

##### *Employment*

- 12.8.1. For the purposes of the assessment, it is assumed construction would commence at the earliest from 2027 and last up to 36 months. Therefore, likely employment impacts would be of a short-term, temporary nature. Whilst this form of employment as a result of the construction of the Scheme would be temporary, it would deliver positive economic benefits for a substantial period following both the direct and indirect creation of jobs.
- 12.8.2. It is anticipated that construction of the Scheme would require a peak workforce of up to approximately 900 Full Time Equivalent (FTE) staff per day (approximately 700 FTE for the PV Area and Inter-Array Connection, and approximately 200 FTE for the Grid Connection). This is a reasonable worst-case scenario given comparisons with other similar projects, variations in the size of the workforce during the construction programme and drawing on professional judgement.
- 12.8.3. Leakage effects (as per the *Additionality Guide*<sup>30</sup>) are those benefits which are experienced outside of South Holland. It is estimated that approximately 45% of the required construction staff can be sourced from South Holland based on schemes of a similar scale and nature. Given the specialised nature of some aspects of renewable energy infrastructure construction, 55% of the overall construction staff are likely to be based outside of South Holland. This is a reasonable assumption to make, benchmarking with similar projects and drawing on professional judgement. Therefore, whilst opportunities do remain for employment within South Holland, due to the highly specialised nature of construction activities and regional location of the Site, a considerable proportion of jobs will be taken by professionals likely to reside outside of the district.
- 12.8.4. Following an application of a 55% leakage figure to the 900 gross FTE figure, it is estimated that the Scheme would create up to approximately 405 FTE jobs per annum for residents in South Holland during the construction period.
- 12.8.5. Displacement refers to the extent to which the benefits of a Scheme are offset by reduced outputs elsewhere in the surrounding area. In this case, this might refer to other district areas beyond South Holland in the county region of Lincolnshire.
- 12.8.6. The *Additionality Guide*<sup>30</sup> offers standards (or 'ready reckoners') for displacement. For the purposes of the assessment, a low displacement factor for 25% is considered appropriate in respect of the *Additionality Guide*, given this rate is often used in renewable energy schemes, and the flexibility of the construction labour market.

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<sup>30</sup> Homes and Communities Agency (2014) *Additionality Guidance (fourth edition)*. Available at: [https://assets.publishing.service.gov.uk/media/5a7ec4b9e5274a2e87db1c92/additionality\\_guide\\_2014\\_full.pdf](https://assets.publishing.service.gov.uk/media/5a7ec4b9e5274a2e87db1c92/additionality_guide_2014_full.pdf)

- 12.8.7. An application of a displacement factor of 25% to the total gross direct average employment figure of 900 FTE results in a total net direct employment figure of approximately 675 FTE jobs per annum during the construction phase.
- 12.8.8. As well as direct employment generation resulting from the construction of the Scheme, a further increase in local employment would arise due to economic activity associated with additional local income, local supplier purchases and longer-term agglomeration effects. It is also assumed that a proportion of the income of construction workers and suppliers would be spent in the Study Area (South Holland).
- 12.8.9. Following the application of the Additionality Guide<sup>30</sup>, given the study area’s likely status of having ‘average’ supply linkages and the size of its economy, a conservative medium multiplier effect of 1.5 has been applied.
- 12.8.10. Table 12-19 shows the temporary annual employment which would be generated by the Scheme, whilst accounting for leakage, displacement and multiplier effects. The Scheme, on average, is estimated to have the capacity to deliver up to approximately 1,013 FTE jobs in total during the construction phase, with 456 FTE jobs being taken up by residents of the South Holland district area.

**Table 12-19 Net Construction Employment Considering Additionality**

	South Holland	Outside South Holland	Total
Gross Direct Employment	405	495	900
Displacement	-101	-124	-225
Net Direct Employment	304	371	675
Indirect Employment	152	186	338
<b>Total Net Employment</b>	<b>456</b>	<b>557</b>	<b>1,013</b>
Note does not sum to 100% due to rounding			

- 12.8.11. It should also be noted that the appointed contractors are likely to employ trainees and apprentices into the renewable energy sector; however, such apprenticeship schemes would not be delivered by the Applicant. This has subsequently not been factored into the assessment.
- 12.8.12. The sensitivity of the local workforce to employment changes is assessed as low, since the economic activity rates in South Holland are higher than those in Lincolnshire, suggesting a strong level of economic activity. The percentage of workers employed in the construction sector is again similar in both South Holland and Lincolnshire. The employment gains arising from construction of the Scheme would have a low magnitude of impact, resulting in a short-term temporary minor beneficial effect, which is considered not significant. This prediction is made with a moderate confidence rating.

### *Gross Value Added*

- 12.8.13. Applying the average GVA per construction worker in the wider Lincolnshire area to the total number of construction workers generated as a result of the Scheme, presents the total GVA arising from employment associated with the construction phase of the Scheme. In Lincolnshire, modelled estimates using ONS Census 2021<sup>8</sup> and ONS Regional GVA<sup>10</sup> comparators from 2022 reveal the average GVA per worker in the construction sector to be approximately £28,470 per head. Applying this figure to the number of direct construction workers generated by the Scheme, gives an estimated contribution of £19.21 million to the wider economy, with £8.65 million likely to be concentrated within South Holland. Using Lincolnshire's average GVA per head of £23,379 per head, and applying this figure to the indirect employment numbers resulting from the Scheme, results in an estimated contribution of £7.90 million to the wider economy, with £3.55 million of this likely to be directed in South Holland. This gives an estimated total GVA of the Scheme in the wider economy, of £27.2 million in relation to construction employment.
- 12.8.14. The sensitivity of the local economy and labour market is assessed as low since average weekly earnings are higher in South Holland than both Lincolnshire and the East Midlands.. Setting the GVA generated by the Scheme against the GVA for South Holland, the overall impact of the Scheme can be assessed as having a minor magnitude of impact, resulting in a minor beneficial effects, which is not significant. This prediction is made with a moderate confidence rating due to the level of detail understood in relation to construction activities at this stage.

### *Tourism*

- 12.8.15. The total economic value of the tourism sector within South Holland was estimated to be £313.76 million during 2023 (the most recently available data, as per Table 12-15). The most important tourism sub-sectors for South Holland are estimated to be shopping (£79.99 million) and food and drink (£63.37 million), both of which are outliers in comparison to accommodation (£29.18 million) and recreation (£24.66 million).
- 12.8.16. Since tourism is only responsible for around 12.7% of the economic output of South Holland, and the Scheme has a small footprint relative to South Holland overall, tourism is assessed as having a low level of sensitivity.
- 12.8.17. There are no major tourism attractions within 500m of the Site, including those in the key sub-sectors shopping and food and drink. Some attractions (shops and restaurants) may be found to the south-west of the Site in Crowland; however these have been considered as 'business premises'. These businesses may experience increased footfall with visits from construction workers. As such, the overall impact of the Scheme during its construction phase on tourism in South Holland, which is of low sensitivity, is assessed as having a low magnitude of impact and minor beneficial effect, which is not significant. The prediction is made with a moderate level of confidence.

## Land Use

### *Residential Properties*

#### **PV Area**

12.8.18. Though none are located within the PV Area, residential properties border roads adjacent to each land parcel. Residential properties are considered a medium sensitivity receptor. The severance impact from traffic generated as a result of construction activities within the PV Area has been assessed within PEIR Volume I Chapter 13: Traffic and Access. This has considered road links to the PV Area, many of which have residential properties located along them. A single road link (Link 6 along Stonegate and Backgate within Cowbit) was predicted to experience significant effects in relation to severance, albeit short-term temporary in nature. A Construction Traffic Management Plan (CTMP) would implement measures to further mitigate such effects. Due to the short-term nature of the effect, the magnitude of Land Use impacts in regard to residential properties is assessed as low. As a result, effects during the construction phase are considered minor adverse and therefore not significant. This prediction is made with a moderate confidence rating given the Scheme design will ensure the avoidance of direct impacts on these receptors.

#### **Inter-Array Areas**

12.8.19. While none are located within the Inter-Array Areas, a series of residential properties are located adjacent to the Inter-Array Area between land Parcel C and D. A single residential property is located adjacent to the Inter-Array Area to the east of land parcel D. These residential properties are assessed to be of medium sensitivity. The impact of traffic generated during the construction phase on severance has been assessed as part of PEIR Volume I Chapter 13: Traffic and Access. No roads that correspond to residential receptors within the Inter-Array Areas were predicted to experience significant effects in relation to severance during the construction phase, irrespective of the configuration of the Inter-Array Connection. Due to the short-term temporary nature of construction traffic, the magnitude of impact in regard to residential properties is assessed as low. As a result, effects during the construction phase are considered minor adverse and therefore not significant. This prediction is made with a low confidence given the configuration and route of the Inter-Array Areas are to be further refined.

12.8.20. The implication on severance impacts as a result of potential for road closures or diversions due to the installation of the Inter-Array Connection within local roads, notably in relation to the Inter-Array Area between land parcel C and D, will be assessed within the ES once the route of the Inter-Array Connection has been further defined.

#### **Grid Connection Corridor**

12.8.21. While none are located within the Grid Connection Corridor itself, a series of residential properties are surrounded by its boundaries, most notably on Broadgate Road (south of Weston) and Fengate Drove Road (east of Weston Hills). These residential properties are assessed to be of medium sensitivity. The severance impacts of traffic generated by the construction phase has been assessed as part of PEIR Volume I Chapter 13: Traffic and Access. No roads that correspond to the Grid Connection Corridor were predicted to experience significant effects in relation to severance during the construction phase. Due to the short-term temporary nature of construction traffic, the magnitude of impact to

residential properties is assessed as minor. As a result, effects during the construction phase are considered minor adverse and therefore not significant. This prediction is made with a moderate confidence given the Grid Connection Corridor is to be further refined.

### *Community Land and Assets*

#### **PV Area**

12.8.22. No community land or assets are located within the PV Area. The Parish Church of Saint John, Holbeach Fen, Holbeach St Johns Village Hall, and St James Church, Moulton Chapel are identified in relation to those road links likely to experience severance impacts due to traffic generated by construction activities within the PV Area, as assessed within PEIR Volume I Chapter 13: Traffic and Access. All community land or assets identified are considered of medium sensitivity. Due to the short-term temporary nature of construction traffic, the magnitude of impact is assessed as minor. As a result, effects during the construction phase are considered minor adverse and therefore not significant. This prediction is made with a moderate confidence.

#### **Inter-Array Areas**

12.8.23. While no community land or assets are identified within the Inter-Array Areas, St John's Baptist Church, Elizabethan Community Centre and Whaplode Drove Playing field are located adjacent to the Inter-Array Area between land parcel C and D. All community land or assets identified are considered of medium sensitivity. The assessment within PEIR Volume I Chapter 13: Traffic and Access of potential severance impacts resulting from construction traffic generation has identified no significant effects on these receptors with the magnitude of impact assessed as minor. As a result, effects during the construction phase are considered minor adverse and therefore not significant. This prediction is made with a low confidence given the configuration and route of the Inter-Array Areas are to be further refined.

12.8.24. The implication on severance impacts as a result of potential for road closures or diversions due to the installation of the Inter-Array Connection within local roads, notably in relation to the Inter-Array Area between land parcel C and D, will be assessed within the ES once the route of the Inter-Array Connection has been further defined.

#### **Grid Connection Corridor**

12.8.25. No community land or assets are identified within the Grid Connection Corridor or on or adjacent to the road links associated with it. As a result, a negligible magnitude of impact is predicted with effects in relation to community land and assets during the construction phase of the Scheme assessed as negligible and therefore not significant. This prediction is made with a moderate confidence level.

12.8.26. The Land Use impact on community land and assets during the construction phase will be reviewed within the ES where the design of the Grid Connection has been further developed.

### *Business Premises*

#### **PV Area**

12.8.27. While none are identified within the PV Area, a series of business premises are located on or adjacent to the road links considered for the routing of construction traffic to the PV Area. This includes Spalding Road north of Crowland and Peak Hill Road south of Cowbit. All business premises are assessed as of medium sensitivity. The assessment within PEIR Volume I Chapter 13: Traffic and Access identified neither road as likely to experience significant effects in relation to severance. Due to the short-term temporary nature of construction traffic, the magnitude of impact is assessed as minor. As a result, effects during the construction phase are considered minor adverse and therefore not significant. This prediction is made with a moderate confidence.

#### **Inter-Array Areas**

12.8.28. No business premises are identified within the Inter-Array Areas or on or adjacent to the road links associated with it. As a result, a negligible magnitude of impact is predicted with effects in relation to business premises during the construction phase of the Scheme assessed as negligible and therefore not significant. This prediction is made with a moderate confidence level.

12.8.29. The Land Use impact on community land and assets during the construction phase will be reviewed within the ES where the route and configuration of the Inter-Array Connection has been further developed.

#### **Grid Connection Corridor**

12.8.30. While none are identified within it, a series of business receptors are located on or adjacent to the road links considered for the routing of construction traffic to the Grid Connection Corridor, notably those identified on High Road (west of Weston), the B1165 (north of Weston Hills) and Roman Road (west of Moulton Chapel). The assessment within PEIR Volume I Chapter 13: Traffic and Access of the potential impacts in regard to severance resulting from construction traffic associated with the Grid Connection Corridor concluded no significant effects were likely to occur for those road links. Due to the short-term temporary nature of construction traffic, the magnitude of impact is assessed as minor. As a result, effects during the construction phase are considered minor adverse and therefore not significant. This prediction is made with a moderate confidence.

### *Development Land*

12.8.31. No local plan allocations are identified within the PV Area, Inter-Array Areas or Grid Connection Corridor. Two allocated sites and a reserve site have been identified within 500m of the Grid Connection Corridor to the west of Weston. The assessment of severance resulting from construction traffic within PEIR Volume I Chapter 13: Traffic and Access concluded there were no predicted significant effects on the road link these allocated sites are located. The indicative routing boundary of the Grimsby to Walpole overhead line NSIP project, currently at the pre-application stage, intersects the Scheme to the north of the Grid Connection Corridor and the north-west corner of land parcel D of the PV Area. The Applicant is in active engagement with National Grid to establish how both schemes would co-exist and function if development consents are granted.

Development land has been appraised as a receptor of low sensitivity and the impacts of construction phase traffic as minor adverse in magnitude. As a result, effects during the construction phase are assessed as negligible and not significant. This prediction is made with a moderate confidence rating given the Scheme design has sought to avoid development land.

### *Farm Holdings*

#### **PV Area**

12.8.32. The land owners of farm holdings within the PV Area would receive compensation for any loss of crop and short-term temporary use of land during the construction phase. As a result of these measures, the change of land use during the construction phase is not considered to result in changes that might compromise the overall viability of the farm holding. A minor impact is therefore predicted on farm holdings (medium sensitivity), resulting in a minor adverse effect, considered not significant. This prediction is made with moderate confidence.

#### **Inter-Array Areas**

12.8.33. Irrespective of configuration, the construction phase would result in a short-term temporary loss of land for farm holdings within the Inter-Array Areas. Temporary haul roads and access tracks would be required to install overhead lines or underground cabling. The land owners of farm holdings within the Inter-Array Areas would receive compensation for any loss of crop and short-term temporary use of land during the construction phase. As a result of these measures, the change of land use during the construction phase is not considered to result in changes that might compromise the overall viability of the farm holding. A minor impact is therefore predicted on farm holdings (medium sensitivity), resulting in a minor adverse effect, considered not significant.

12.8.34. All predictions in relation to the Inter-Array Areas have been made with moderate confidence given the configuration and route of the Inter-Array Areas are to be further refined, and discussions with landowners are at an early stage.

12.8.35. The potential effects on tenant farmers within the Inter-Array Areas during the construction phase will be assessed within the ES once further engagement with land owners has been conducted.

#### **Grid Connection Corridor**

12.8.36. The construction and erection of the Grid Connection would result in a short-term temporary loss of land during the construction phase, due to the requirement for temporary working areas, construction compounds, haul roads and access tracks. The land owners of farm holdings within the Grid Connection Corridor would receive compensation for any loss of crop and short-term temporary use of land during the construction phase. As a result of these measures, the change of land use during the construction phase is not considered to result in changes that might compromise the overall viability of the farm holding. A minor impact is therefore predicted on farm holdings (medium sensitivity), resulting in a minor adverse effect, considered not significant.

12.8.37. The prediction made in relation to the Grid Connection is made with moderate confidence given the Grid Connection Corridor is to be further refined and discussions with landowners are at an early stage.

12.8.38. The potential effects on tenant farmers within the Grid Connection Corridor during the construction phase will be assessed within the ES once further engagement with land owners has been conducted.

## Operational Phase

### Socio-Economics

#### *Employment*

12.8.39. Jobs would be generated in relation to the operation of the Scheme over its 40-year lifetime. Up to approximately 20 FTE employees would be required during the operational phase. This would account for routine Site maintenance and day-to-day operations.

12.8.40. Therefore, combining the sensitivity of the local workforce, which is assessed as low, with a negligible magnitude of impact, the effect is assessed as being negligible, beneficial and not significant. This prediction is made with a moderate confidence level.

#### *Local Economy and Labour Market*

12.8.41. The GVA per head for construction workers in Lincolnshire is assessed as being an appropriate proxy for the GVA per head for workers required during the operational phase. Therefore, an application of the figure of £28,470 per head to the estimated number of workers of 20 FTE, generates £569,400 per annum.

12.8.42. Given the sensitivity of the local workforce is assessed as low, in the context of GVA generated in the South Holland area, the magnitude of impact is assessed as negligible, beneficial and not significant. This prediction is made with a moderate confidence level.

#### *Tourism*

12.8.43. Once the Site is fully operational, it is not expected that it will deter from any tourism related activities within South Holland, given the arable nature of the land upon which the Site be based exist. The operational employment generated by the Site is not significant relative to the wider employment market in South Holland, so increases in shopping and food and drink demand will be negligible.

12.8.44. As such, since the sensitivity of South Holland is assessed as low in terms of tourism, and there will be no notable impacts on tourism given the low levels of operational employment and lack of nearby tourism attractions, the magnitude of impact is assessed as negligible. This results in a negligible effect, which is not significant. This prediction is made with a moderate confidence level.

## Land Use

### *Residential Properties*

12.8.45. No residential properties are located within the Site, however a series of properties are surrounded by the boundary of the Grid Connection Corridor. As the design of the Grid Connection is further developed, the routing process will continue to consider residential properties, ensuring an appropriate offset of infrastructure has been applied. As outlined within PEIR Volume I Chapter 13: Traffic and Access, an increase in traffic as a result of the operation of the Scheme is not considered to be to the degree where significant effects in relation to severance could occur. As a result, a negligible impact is predicted, with effects in relation to residential properties during the operational phase of the Scheme assessed as negligible and therefore not significant. This prediction is made with a moderate confidence level.

### *Community Land and Assets*

12.8.46. No community land and assets are identified within the Site. Traffic during the operational phase is not considered to be of a degree where an impact in relation to severance is likely to occur, including on road links where community land and assets are located or adjacent to. This results in a negligible magnitude of impact, with effects in relation to community land and assets (medium sensitivity) during the operational phase of the Scheme assessed as negligible and therefore not significant. This prediction is made with a moderate confidence level.

### *Business Premises*

12.8.47. No business premises are located within the Site. Traffic during the operational phase is not considered to be of a degree where an impact in relation to severance is likely to occur, including on road links where business premises are located or adjacent to. A negligible impact is therefore predicted with effects in relation to business premises (medium sensitivity) during the operational phase of the Scheme assessed as negligible and therefore not significant. This prediction is made with a moderate confidence level.

### *Development Land*

12.8.48. The selection of the PV Area, Inter-Array Areas and Grid Connection Corridor avoided allocated sites; therefore, no development land is located within the Site. Traffic during the operational phase is not considered to be of a degree where an impact in relation to severance is likely to occur, including on road links where development land is located. Ongoing discussions are taking place with National Grid regarding the interrelationship with the Grimsby to Walpole project. As a result, effects in relation to development land (medium sensitivity) during the operational phase of the Scheme are assessed as negligible and therefore not significant. This prediction is made with a moderate level of confidence.

### *Farm Holdings*

#### **PV Area**

- 12.8.49. The Scheme would be hosted on agricultural land within the PV Area with the prior agreement of relevant landowners. Whilst some limited agricultural use (such as sheep grazing) may be possible within the PV Area during the operational phase, for the purposes of assessment, on a precautionary basis, it is assumed that land in the PV Area will not be available for agricultural use from the commencement of the construction phase until after decommissioning of the Scheme.
- 12.8.50. The hosting of the Scheme will provide a diversified source of income for the land owners of farm holdings, and their voluntary co-operation with the Scheme indicates that this proposed change in Land Use would not compromise the financial viability of the farm holding for landowners. A minor beneficial impact is therefore predicted on farm holdings within the PV Area (medium sensitivity), resulting in a minor beneficial effect, considered not significant.

#### **Inter-Array Areas**

- 12.8.51. For an overhead line configuration, during the operational phase, the land use impact would be localised to the bases of wooden poles within the Inter-Array Areas. The Applicant will engage with landowners and will consider the land use implications during Inter-Array Connection routing where practicable to ensure that agricultural practices can continue to function in their current condition. A minor impact is therefore predicted on farm holdings (medium sensitivity), resulting in a minor adverse effect, considered not significant.
- 12.8.52. An underground cable configuration, once land is reinstated following installation during the construction phase can continue with previous function, albeit with the potential for minor restrictions to safeguard cabling. As a result, A minor impact is therefore predicted on farm holdings (medium sensitivity), resulting in a minor adverse effect, considered not significant.
- 12.8.53. Both predictions in relation to the Inter-Array Areas have been made with moderate confidence given the configuration and route of the Inter-Array Areas are to be further refined, and discussions with landowners are at an early stage.

#### **Grid Connection Corridor**

- 12.8.54. Once erected, land take within the Grid Connection Corridor would be reduced to a localised impact at pylon bases. The Applicant will engage with landowners and will consider the land use implications during Grid Connection routing where practicable to ensure that agricultural practices can continue to function in their current condition. On this basis, a minor impact is therefore predicted on farm holdings (medium sensitivity), resulting in a minor adverse effect, considered not significant.
- 12.8.55. The prediction in relation to the Grid Connection is made with moderate confidence given the Grid Connection Corridor is to be further refined and discussions with landowners are at an early stage.

## Decommissioning Phase

### Socio-Economics

12.8.56. The decommissioning phase of the Scheme would involve activities similar in nature to those that would occur during the construction phase, and therefore would have similar effects. These would include temporary employment generation, temporary GVA generation and temporary effects in terms of tourism. Population similarities would be the same, as the same geographic and economic context would apply as identified by the future baseline. The same mitigation principles would be applied, albeit through a Decommissioning Environmental Management Plan (DEMP), which would be secured by the DCO application. The significance of effects is anticipated to replicate those assessed for construction, generating minor beneficial effects for employment and GVA, which are not significant. This prediction is made with moderate confidence due to the uncertainty inherent to decommissioning effects.

### Land Use

12.8.57. Impacts on residential properties, community land and assets, business premises and development land during the decommissioning phase are anticipated to be similar, if not less than those assessed during the construction phase and are therefore predicted as not significant and are not considered further. This prediction is made with moderate confidence.

### Farm Holdings

#### PV Area

12.8.58. The effects to farm holdings during the decommissioning phase are anticipated to be similar, if not less than, the short-term temporary effects identified during the construction phase. Land within the PV Area would be reinstated to its original condition at the discretion of the landowner. Impacts on Land Use function and utility associated with the construction and operational phases would therefore be reversed during the decommissioning phase as above ground components of the Scheme are disassembled and removed. The land owners of farm holdings would receive compensation for any loss of crop and the use of land during construction. As a result of these measures, the change of land use during the decommissioning phase is not considered to result in changes that might compromise the overall viability of the farm holding. A negligible impact is therefore predicted, with a negligible effect in relation to farm holdings (medium sensitivity) during the decommissioning phase assessed. This prediction is made with a moderate level of confidence.

#### Inter-Array Areas

12.8.59. The decommissioning of the Scheme is likely to result in temporary loss of land due to the requirement for temporary access tracks to allow decommissioning of the Inter-Array Connection should it be via overhead lines. This is anticipated to lead to an impact similar, if not less than that assessed in relation to the construction of an overhead line within the Inter-Array Areas. As a result, as farm holdings are assessed as medium sensitivity, a minor impact would lead to a short-term temporary minor adverse effect, considered not significant.

12.8.60. Should the Inter-Array Connection be via underground cables, it is anticipated that these would be left *in situ*. Decommissioning activities would therefore be minimal within the Inter-Array Areas, with a negligible impact predicted. This would result in a negligible effect on farm holdings (medium sensitivity) within the Inter-Array Areas during the decommissioning phase, considered not significant.

12.8.61. Both predictions in relation to the Inter-Array Areas are made with a moderate level of confidence due to the inherent uncertainty associated with the decommissioning phase.

12.8.62. The potential effects on tenant farmers within the Inter-Array Areas during the decommissioning phase will be assessed within the ES once further engagement with land owners has been conducted.

#### **Grid Connection Corridor**

12.8.63. The decommissioning of the Grid Connection would result in a temporary loss of land due to the requirement for working areas to facilitate decommissioning works and temporary access tracks and to be constructed to allow for the decommissioning of the overhead lines. Impacts as a result of the decommissioning of the Grid Connection are anticipated to be similar to, if not less than, those assessed in relation to its construction. As a result, as farm holdings are assessed as medium sensitivity, a minor impact would lead to a short-term temporary minor adverse effect, considered not significant.

12.8.64. The potential effects on tenant farmers within the Grid Connection Corridor during the decommissioning phase will be assessed within the ES once further engagement with land owners has been conducted.

### **12.9. Additional Mitigation and Enhancement Measures**

12.9.1. No significant adverse Socio-Economics or Land Use effects are expected to arise from the Scheme; therefore, no further mitigation or enhancement measures are required.

### **12.10. Likely Significant Residual Effects**

12.10.1. No likely significant residual effects in relation to Socio-Economics or Land Use are anticipated to result from the Scheme during the construction, operational or decommissioning phases.

### **12.11. Cumulative Effects**

#### **Socio-Economics**

12.11.1. The committed developments within 2km of the Site outlined within PEIR Volume III Appendix 15-2: Short List of Other Developments highlight a mix of projects with varying potential for generating significant cumulative effects, in terms of employment and the local economy.

- 12.11.2. With respect to employment, all committed developments would generate construction employment. This would offer increased opportunities for employment (notwithstanding additionality) in South Holland. However, this would only result in the scale of impact being negligible beneficial due to the relatively small overall impact on employment markets in South Holland, and not significant.
- 12.11.3. In relation to the local economy and labour market, the committed developments outlined in PEIR Volume III Appendix 15-2: Short List of Other Developments which fall within 2km of the Site, would all generate economic benefits to the local economy, to some extent. However, committed developments such as Grimsby to Walpole NSIP (EN020036) with its overhead electricity lines and substations, and the onshore infrastructure associated with Outer Dowsing Offshore Wind Farm NSIP (EN010130), would both deliver noteworthy localised economic benefit in South Holland. Construction periods of both projects would possibly overlap with the Scheme. As such, given the larger level of economic benefit delivered by NSIP, the scale of impact on the local economy would be minor beneficial due to the overall nature of economic activity in South Holland, and not significant.
- 12.11.4. Table 12-19 below details the anticipated cumulative socio-economic effects in relation to the Scheme.

Table 12-19 Socio-Economics Inter-Project Cumulative Effects Assessment

ID and Application Reference	Applicant and Description	Distance from Site at Closest Point	Status	Overlap in Temporal Scope	Cumulative Effect in Relation to Socio-Economics
<b>Nationally Significant Infrastructure Projects</b>					
DCO-001	<p>EN020036</p> <p><b>Grimsby to Walpole</b></p> <p>The project will be a new c140km long 400kv overhead line and 5 new substations stretching from a new substation to the west of Grimsby in the north to a new substation at Walpole near Wisbech in the south. Three further substations will be built, two to the south-west of Mablethorpe and one to the north-east of Spalding.</p>	Within Grid Connection Corridor and PV Area	Pre-application, application expected Q2 2027	Yes. Assuming consent is granted, overlap in construction phase (2029-2033).	Potential significant beneficial cumulative effect on local employment through concurrent construction activities, creating demand for construction workers and supply chain businesses. Potential minor GVA improvements, not significant. Potential negative cumulative effects on local infrastructure and services due to simultaneous workforces being present. Possible temporary disruption to agricultural activities in overlapping areas affecting farm businesses.
DCO-002	<p>EN010130</p> <p><b>Outer Dowsing Offshore Wind (Generating Station)</b></p> <p>The Outer Dowsing Offshore Wind project comprises an offshore wind farm and associated offshore and onshore infrastructure including offshore and onshore high voltage electricity cables, onshore and offshore electricity substation(s), connection(s) to the National Grid and ancillary and temporary works.</p>	The project is in the Southern North Sea, approximately 640m north of the Grid Connection Corridor	Examination, expected to close 10-04-2025	Yes. Assuming consent is granted, overlap in construction phase (2026-2030).	Potential significant positive cumulative effects on local employment through concurrent construction activities leading to increased demand and supply chain benefits. Potential minor GVA improvements, not significant. Possible moderate significant cumulative effect on tourism, with increased demand for accommodation and food and drink for construction workers.
<b>Planning Applications</b>					

APP-SHDC-001	H09-0501-23 Erection of Agricultural Machinery Assembly Facility, Research and Training Facility, Ground Mounted Solar Array and Associated Infrastructure.	Adjacent to the PV area	Approved, decided 17-06-2024	Yes, assuming construction phase begins within 3 years of application approval (2024-2027). Duration of works not disclosed.	Minor beneficial cumulative effects in terms of construction employment and GVA generation, given the small and localised nature of the Scheme in question in comparison to wider Schemes in South Holland. Minor negligible cumulative effects in terms of tourism given location of Scheme in question, being located on agricultural land.
APP-SHDC-025	H20-1007-24 Construction and operation of a solar farm and battery energy storage system (BESS), vehicular access, internal access tracks, landscaping, boundary treatment, cabling and associated infrastructure.	Approximately 570m east of PV area	Undecided, decision due 14-05-2025	Yes, assuming overlapping construction phases if approved. Duration of works not disclosed.	Minor beneficial cumulative effect in terms of construction employment and associated GVA generation. Minor negligible impact in terms of tourism given agricultural nature of land and low tourism levels in South Holland.
APP-SHDC-007	H22-0415-22 Proposed Lined Reservoir.	Approximately 760m north of the Grid Connection Corridor	Approved, decided 09-05-2022	Yes, assuming construction phase begins within 5 years of application approval (2022-2027). Duration of works not disclosed.	Negligible cumulative effects in terms of construction employment, GVA generation and tourism effects given scope of associated works.
APP-SHDC-023	H22-0077-25 Rural exception site of 24 affordable homes.	Approximately 800m west of Grid Connection Corridor	Undecided, decision due 07-05-2025	Yes, assuming overlapping construction phases if approved. Duration of works not disclosed.	Minor beneficial cumulative effect in terms of construction employment and associated GVA generation. Minor beneficial cumulative effect in terms of spending associated with new residents once site is operational. Minor beneficial cumulative effect in relation to improved tourism outputs in South Holland from new residents once site is operational.

## Land Use

- 12.11.5. A review of the other committed developments outlined within PEIR Volume III Appendix 15-2: Short List of Other Developments within the 2km land use study area has identified several planning applications. This includes an agricultural machinery assembly facility adjacent to the PV Area. Additional developments include a residential shed and garage development approximately 30m from the Site at Chapel Gate, a steel framed storage building 60m from the Site at West Fen Farm, industrial units approximately 370m from the Site at Poplar Farm and a ground-mounted solar array 500m from the Site at Moulton Bulb Co. Details in relation to the potential effects of cumulative land take will be updated within the ES when the Applicant and appointed land agent have established the extent of agricultural land holdings within the Site. Cumulative indirect effects in relation to connectivity and accessibility are not anticipated due to the nature and scale of these developments.
- 12.11.6. The Grimsby to Walpole NSIP intersects the north of the Grid Connection Corridor and the north-east corner of land parcel D-1 in the PV Area. The Applicant will continue to engage with National Grid with details in relation to the anticipated interaction of the projects and this will be updated within the ES.

## 12.12. Conclusions and Next Steps

- 12.12.1. The information provided within the PEIR is preliminary, with the ES reporting the final assessment of likely significant effects. The preliminary assessment has been completed based on worse-case parameters against a series of assumptions and limitations. The final assessment within the ES will be refined in respect of any revision to the Scheme as a result of the ongoing design process, comments and information received through stakeholder engagement.

