Meridian Solar Farm

EN010169

Volume 6

Environmental Statement

6.1 ES Chapter 10: Human Health

APFP Regulation 5(2)(a)

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

March 2026

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10. Human Health

10.1. Introduction

10.1.1. This chapter of the Environmental Statement (ES) presents the findings of an assessment of the likely significant effects on human health as a result of the Scheme. For more details about the Scheme, refer to **ES Chapter 2: The Scheme** (Doc Ref. 6.1).

10.1.2. This chapter identifies and proposes measures to address the potential impacts and likely significant effects of the Scheme on human health, during the construction, operation and decommissioning phases.

10.1.3. The following aspects of human health have been scoped in and are presented within this chapter:

- Air quality, dust and odour;
- Electric and magnetic fields (EMFs);
- Employment and training opportunities;
- Landscape and visual;
- Noise and vibration;
- Access to Public Rights of Way (PRoW) and active travel;
- Traffic and access;
- Social infrastructure (including healthcare and education facilities and open space); and
- Mental health.

10.1.4. This chapter is supported by, and should be read in conjunction with, the following chapters:

- **ES Chapter 2: The Scheme** (Doc Ref. 6.1);
- **ES Chapter 4: Overview of the EIA Process** (Doc Ref. 6.1);
- **ES Chapter 6: Air Quality** (Doc Ref. 6.1);
- **ES Chapter 12: Landscape and Visual** (Doc Ref. 6.1);
- **ES Chapter 13: Noise and Vibration** (Doc Ref. 6.1);
- **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1);
- **ES Chapter 15: Traffic and Access** (Doc Ref. 6.1);

- **ES Chapter 16: Other Environmental Topics** (Doc Ref. 6.1); and
- **ES Chapter 17: Effect Interactions** (Doc Ref. 6.1).

10.1.5. This chapter is supported by the following figures:

- **ES Figure 14-1: Residential Properties in the Vicinity of Solar Development Areas and Inter-Array Connections** (Doc Ref. 6.2);
- **ES Figure 14-2: Residential Properties in the Vicinity of Grid Connection Route** (Doc Ref. 6.2);
- **ES Figure 14-3: Community Land and Assets in the Vicinity of Solar Development Areas and Inter-Array Connections** (Doc Ref. 6.2);
- **ES Figure 14-4: Community Land and Assets in the Vicinity of Grid Connection Route** (Doc Ref. 6.2);
- **ES Figure 14-5: Business Premises in the Vicinity of Solar Development Areas and Inter-Array Connections** (Doc Ref. 6.2);
- **ES Figure 14-6: Business Premises in the Vicinity of Grid Connection Route** (Doc Ref. 6.2); and
- **ES Figure 15-2: Existing Walking and Cycling Network** (Doc Ref. 6.2)

10.1.6. This chapter is supported by the following appendices:

- **ES Appendix 10-1: Human Health Legislation, Policy and Guidance** (Doc Ref. 6.3).

10.1.7. This chapter is supported by the following documents that have also been submitted as part of the DCO application:

- **Outline Construction Environmental Management Plan** (CEMP) (Doc Ref. 7.10);
- **Outline Operational Environmental Management Plan** (OEMP) (Doc Ref. 7.11);
- **Outline Decommissioning Environmental Management Plan** (DEMP) (Doc. Ref.7.12);
- **Outline Construction Traffic Management Plan** (CTMP) (Doc. Ref.7.13);
- **Outline Public Rights of Way Management Plan** (PRoW-MP) (Doc. Ref.7.15); and
- **Outline Landscape and Ecology Management Plan** (LEMP) (Doc. Ref.7.16).

10.2. Legislation and Planning Policy

10.2.1. Legislation, policy, and guidance relating to Human Health and pertinent to the Scheme are provided in **ES Appendix 10-1: Human Health Legislation, Policy and Guidance** (Doc Ref 6.3).

10.3. Stakeholder Engagement

10.3.1. A request for an EIA Scoping Opinion, provided in **ES Appendix 1-1: EIA Scoping Report** (Doc Ref 6.3), was sought from the Secretary of State through the Planning Inspectorate in 2024 as part of the EIA Scoping Process. A summary of consultation responses in relation to Human Health is presented in Table 10-1.

Table 10-1: Scoping Opinion responses in relation to Human Health

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
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 Scheme to community and leisure facilities or tourism and recreation facilities has been provided. Therefore, possible impacts in these areas cannot be scoped out.	The following matters have been scoped out of the human health chapter: • Access to housing, education, childcare, play space, and healthcare. As per the Planning Inspectorate's comments, the following matters have been scoped into the human health chapter: • Access to open space; and • Access to community and leisure facilities. Assessment of the impact of the Scheme on tourism and recreation facilities is covered in **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1).	Section 10.8 of **ES Chapter 10: Human Health** (Doc Ref. 6.1) assesses the effects on human health resulting from the Scheme, including access to open space, and access to community and leisure facilities.
Planning Inspectorate	The definitions of receptor sensitivity and impact magnitude proposed for socio-economics have an element of subjectivity. The ES should justify the levels of	The assessment methodology for human health follows a single consistent framework based on the ISEP Guide to Determining Significance for Human Health in	Section 10.4 of **ES Chapter 10: Human Health** (Doc Ref. 6.1) outlines the methodology for the

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	sensitivity/ magnitude identified in the ES and the Applicant should seek to agree these with South Holland District Council and Lincolnshire County Council. Table 4.8.3 identifies three levels of sensitivity for socio-economic receptors; this differs from the five levels identified in the overarching methodology in Section 3.3 (which details how significance is determined using five levels of receptor sensitivity). Similarly, Table 4.85 identifies four levels of sensitivity for human health receptors. The ES should detail how significance is to be determined for these aspects. For ease of understanding, a common approach across these aspects should be sought, given that they are to be assessed within a single ES chapter.	Environmental Impact Assessment[1]. Socio-economics sensitivity (Table 4.8.3 of the Scoping Report) and Health sensitivity (Table 4.8.5 of the Scoping Report) were presented as a combined assessment, whereas they form separate assessments in this ES. This responds directly to the Planning Inspectorate's comments regarding the need for a common approach across these interrelated topics. While professional judgement is inherently required in the ES, the ISEP framework provides a structured and evidence-based approach to determining significance. The methodology requires clear justification for sensitivity and magnitude classifications, supported by	assessment of human health.

[1] IEMA -Guide to Determining Significance For Human Health in Environmental Impact Assessment (2022). Available at: https://www.iema.net/media/yljb2nbs/iema-eia-guide-to-determining-significance-for-human-health-nov-2022.pdf [Accessed November 2025].

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
		quantitative data where available and qualitative evidence where appropriate. This helps to minimise subjectivity in the assessment process. To address the Planning Inspectorate's comment regarding different approaches to sensitivity, the sensitivity and magnitude definitions have been standardised while maintaining topic-specific descriptions that reflect the distinct nature of each receptor type. The assessment methodology, including sensitivity and magnitude, is consistent with similar solar proposals.	
Planning Inspectorate	The Planning Inspectorate asserted that the ES should assess impacts on non-residential receptors such as occupants of nearby dwellings, hotels, offices, and shops in proximity to the Scheme, since this is identified in the Air Quality chapter. These should be covered in the Human Health chapter.	Non-residential receptors have been included in the Human Health assessment.	Section 10.6 of **ES Chapter 10: Human Health** (Doc Ref. 6.1) sets out the baseline conditions, including non-residential receptors with the potential to be impacted by the Scheme.

10.3.2. Further pre-application engagement was undertaken through the publication of the Preliminary Environmental Information Report (PEIR) as part of the statutory consultation. Table 10-2 outlines the key matters raised by prescribed or statutory consultees relating to Human Health and how these have been addressed through the ES. No further comments from statutory stakeholders requiring response were received as part of the targeted consultations which ran from 24 September 2025 to 22 October 2025, and from 8 January to 5 February 2026.

Table 10-2: Key matters raised by prescribed or statutory consultees in relation to Human Health

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
Lincolnshire County Council	As with all solar farm proposals, renewable energy production is of long-term benefit to public health but not withstanding the Council's overarching objection to the loss of productive agricultural farmland. Growing healthy and nutritious food is of immediate benefit to public health. It appears that the developer has only left fields having Grade 1 soil free of solar array infrastructure so that it can continue to be farmed. Where lower grade fields (i.e., Grade 3 and below) are used for solar arrays, potential dual use as grazing pasture for appropriate animals should be considered or wildflower meadows and improved species' habitats created.	Government policy does not specifically require dual use of land used for solar energy production to support food production. Currently, solar farms occupy less than 0.1% of the UK's land. To meet the government's net zero target, the Climate Change Committee estimates that 0.6% of UK land will be required for solar farms (less than the amount currently occupied by golf courses). The UK Government Food Security Report, published in December 2021, confirms that solar farms do not in any way present a risk to the UK's food security; and, in fact, solar farms contribute to addressing the biggest medium to long term risk to the UK's domestic food production: climate change. While noting the above, the application still recognises the potential for the land around the solar panels to remain in agricultural use for sheep grazing,	n/a

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
		although this will depend on local availability/expertise in doing so.	
Lincolnshire County Council	The Council welcomes the separate human health chapter in the final ES to bring all aspects of the development that impact on human physical and mental health in both a negative and positive way together in one place. The current PEIR largely achieves this.	**ES Chapter 10: Human Health** (Doc Ref 6.1) assesses potential effects of the Scheme on the health and wellbeing of local residents. The assessment takes a holistic approach to health and considers a wide range of health determinants, considering elements that could affect mental health and physical health.	Section 10.8 of **ES Chapter 10: Human Health** (Doc Ref 6.1) assesses the potential physical and mental health effects arising from the Scheme.
Lincolnshire County Council	It is accepted that there is likely to be minimal negative impact on human physical health during the operational phase. However, the impact on long-term human mental health and wellbeing has not been adequately addressed in the PEIR, to include the cumulative impact of this and other existing and proposed significant infrastructure projects in the area. Mental health is mentioned in relation to the short-term construction activities, and there are references to stress and anxiety, but not the impact of living alongside this large scheme for	**ES Chapter 10: Human Health** (Doc Ref 6.1) assesses potential effects of the Scheme on the health and wellbeing of local residents. The assessment takes a holistic approach to health and considers a wide range of health determinants which are relevant to quality of life and amenity. The assessment considers elements of the Scheme which could affect mental health (for example, changes in landscape and visual amenity, noise, access to open space and employment) as well as physical health. It is	Section 10.8 of **ES Chapter 10: Human Health** (Doc Ref 6.1) assesses the potential physical and mental health effects arising from the Scheme.

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	many years. It is welcome that new woodland creation is proposed in the Landscape and Visual Assessment chapter of the PEIR, however, the impact that the loss of vistas across open fields can have on people's mental health should be considered.	acknowledged that negative impacts on landscape and visual amenity have the potential to reduce resident's enjoyment of their environment, in particular their perception of tranquillity and rurality, impacting mental health. The ES assesses potential impacts on mental health and wellbeing across all project phases, including operation. This includes consideration of the visual impacts outlined in **ES Chapter 12: Landscape and Visual** (Doc Ref 6.1).	
Lincolnshire County Council	It is noted that Council officers have been unable to meet with the developers at scoping and would welcome the opportunity meet if the application for development consent progresses. However, the publicly available health data (i.e. Public Health England (PHE Fingertips data tool) is sufficient on which to base impact assessments. However, the PEIR presents this at district, county, regional, and national level whereas ward level data, noting that the development	The baseline assessment of the ES considers ward-level data where available and considers available information on agricultural workers, armed forces personnel and veterans. The ES considers local health priorities set out in the Joint Health and Wellbeing Strategy for Lincolnshire (set out in **ES Appendix 10-1: Human Health Legislation, Policy and Guidance** (Doc Ref. 6.3)), with	Section 10.6 of **ES Chapter 10: Human Health** (Doc Ref 6.1) sets out the baseline conditions. Section 10.2 of **ES Chapter 10: Human Health** (Doc Ref 6.1) sets out the relevant legislation and planning policy.

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	spans five wards, should be used where it is available. Locally, in Lincolnshire agricultural workers and armed forces personnel and veterans are also considered priority cohorts for inclusion health (access to healthcare services). Strategic health priorities for the local area are set out in the Joint Health and Wellbeing Strategy for Lincolnshire, with mental health, healthy weight, and physical activity being the priority themes of relevance to this development. The local Public Health team at the Council would also like the regional UK Health Security Agency (UKHSA) team and the Lincolnshire Rural Support Network (LRSN) to be consulted on the ES. South Holland District Council's Environmental Protection team should comment on matters such as noise and air quality.	reference to mental health, healthy weight, and physical activity. Engagement with UKHSA, LRSN, and South Holland District Council's Environmental Protection team has formed part of the ES process.	Section 10.3 of **ES Chapter 10: Human Health** (Doc Ref 6.1) sets out the relevant stakeholder engagement conducted to inform the ES.
Lincolnshire County Council	The Council is not satisfied that it is "assumed the potential effects of the Scheme in relation to EMFs, through appropriate design, are not likely to be significant." (paragraph 14.3.40). Whilst it	The potential effects of the Scheme in relation to EMFs, including from overlapping infrastructure, have been fully assessed in accordance with relevant safety standards. The	An **EMF Compliance Report** (Doc Ref. 7.8) has been prepared and is summarised within **ES Chapter 16:**

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	is accepted that the scheme would be constructed and operated in line with relevant stipulated safety guidelines, the Council wish to see the further assessment provided within the ES, including EMFs from 'overlapping' infrastructure and in relation to the grid connection. It needs to be demonstrated that potential actual exposure to radiation (which includes electromagnetic fields) will comply with exposure limits developed by the International Commission on Non–Ionizing Radiation Protection. Evidence on potential exposure to radiation must be considered. To minimise EMFs and landscape and visual impacts the Council would prefer to see an underground cable connection to the grid/substation. The cable corridors could then provide opportunities for linear green spaces or corridors to increase biodiversity and possibly create footpaths or cycle routes.	assessment demonstrates that potential exposure will comply with the exposure limits set by the International Commission on Non-Ionizing Radiation Protection (ICNIRP). The Scheme will be designed and operated in line with these guidelines, ensuring EMF levels remain well within acceptable limits for public health. The Grid Connection Route comprises of a 400kV overhead line to the planned National Grid Weston Marsh B Substation, with one undergrounded section. **ES Chapter 16: Other Environmental Topics** (Doc Ref. 6.1) identifies no significant effects as a result of EMFs from the Scheme's overhead lines, underground cables and other electrical infrastructure. **ES Chapter 3: Alternatives and Design Evolution** (Doc Ref. 6.1) explains the reasoning behind the selection of an overhead line instead of an underground cable for the Grid Connection Route and the Overhead	**Other Environmental Topics** (Doc Ref 6.1).

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
		Inter-Array Connection. As set out in **ES Chapter 12: Landscape and Visual** (Doc Ref. 6.1), Figure 1 Outline Landscape Masterplans of the **OLEMP** (Doc Ref. 7.16) illustrates the landscape mitigation proposals, including shrub and tree planting.	
Lincolnshire County Council	It is not clear what the statement "It is anticipated that in the absence of the Scheme, PRoW [Public Rights of Way] within the surrounding area would continue to be used" is trying to convey. It is possible that existing footpaths, and bridleways, etc. would be used less following the development and so how this is to be mitigated and how the network might be improved is important to draw out. The Council would like to see engagement with local rambling and horse-riding groups as well as the Council's Environmental team, including active travel officers, to determine how the PRoW network might be best retained and enhanced such as through the	The statement appears in the Future Baseline section of the Human Health section of Chapter 14: Other Environmental Topics of the PEIR. It indicates that, without the Scheme, there would be no substantial expected future change in the current use of PRoWs within the surrounding area. The British Horse Society (East Midlands), Byways and Bridleways Trust, and Ramblers were consulted on how the Scheme may affect the health and wellbeing of the local population, with a focus on access to PRoWs as well as the proposed new permissive path through the development.	Section 10.6 of **ES Chapter 10: Human Health** (Doc Ref 6.1) sets out the baseline conditions, including the future baseline. Section 10.3 of **ES Chapter 10: Human Health** (Doc Ref 6.1) sets out the relevant stakeholder engagement conducted to inform the ES.

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	introduction of concessionary routes to better connect people and places.		
Lincolnshire County Council	The following comments would be applicable should the Secretary of State be minded granting consent: • Noise and vibration during construction must be kept to a minimum and only be generated at appropriate times to minimise the effect on human health and wellbeing. Due to the nature of much employment in the area, attention should be paid to shift work that requires people to sleep during the day. • Using existing vegetation for screening is welcome. Where new screening vegetation is required, this must be planted early in the development phase to allow it to become established prior to operation. Consideration should be given to new woodland creation. It is welcome that this is proposed in the landscape and visual assessment chapter of the	**ES Chapter 13: Noise and Vibration** (Doc Ref 6.1) assesses the impact of noise and vibration on human receptors. Details are provided in the **Outline Construction CEMP** (Doc Ref 7.10) on how noise and vibration emissions will be minimised as far as reasonably practicable. The impact of noise and vibration on shift workers is considered in Section 10.8 of **ES Chapter 10: Human Health** (Doc Ref 6.1), within the assessment of vulnerable groups, including residents at home during the day. It is acknowledged that negative impacts on landscape and visual amenity have the potential to reduce resident's enjoyment of their environment, in particular their perception of tranquillity and rurality, adversely affecting mental health and quality of life. It is recognised that regular maintenance of landscaping and	**ES Chapter 13: Noise and Vibration** (Doc Ref 6.1) assesses the impact of noise and vibration on human receptors. **ES Chapter 12: Landscape and Visual** (Doc Ref 6.1) assesses the impact of landscape and visual on human receptors and sets out relevant mitigation, including screening vegetation. Section 10.8 of **ES Chapter 10: Human Health** (Doc Ref 6.1) assesses the potential physical and mental health effects arising

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	PEIR. However, the impact that loss of vistas across open fields can have on people's mental health should be considered. • Several mitigation measures are proposed during the operational phase: ○ Regular maintenance of landscaping and screening features should also enhance local amenity value (e.g., rewilding, increasing accessible open space and play spaces, allotments, and community growing). ○ The Site Security Plan must ensure that fencing and monitoring systems do not create a feeling of enclosure to impacted residents. ○ Continued community engagement is welcomed. It should be confirmed that decommissioning includes substructure,	screening vegetation can improve visual amenity, likely benefitting mental health. The impact on mental health from changes in landscape and visual amenity has been assessed in the ES across construction, operation and maintenance, and decommissioning phases. Security and site fencing is described in Section 2.9 of the **Outline OEMP** (Doc Ref 7.11) which outlines that a 2m 'deer fence' will secure the operational areas of the Solar Development Area and has been designed to minimise feelings of enclosure. **ES Chapter 2: The Scheme** (Doc Ref. 6.1) identifies periodic fence inspection during the operational phase and notes that the maintenance and safety inspections would be carried out by the Applicant or an appointed contractor. Security monitoring requirements will be included within the Detailed OEMP. As outlined in **ES Chapter 2: The Scheme** (Doc Ref 6.1), the	from the Scheme, including the impacts of landscape, visual, noise and vibration. Section 10.7 of **ES Chapter 10: Human Health** (Doc Ref 6.1) sets out the embedded mitigation relevant to human health. Section 10.9 of **ES Chapter 10: Human Health** (Doc Ref 6.1) sets out the additional monitoring, mitigation and enhancement measures relevant to human health. **ES Chapter 10: Human Health** (Doc Ref 6.1) draws on mitigation measures relevant to human health set out in

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	including any underground cabling or overhead powerlines and pylons are to be removed in addition to solar arrays such that the land could be returned to arable farming, but that all environmental improvements that are well established by that time would be retained.	decommissioning phase includes removing physical infrastructure from the Solar Development Areas, Inter-Array Connections, and Grid Connection Route. This would include the removal of all PV Panels, mounting poles, solar stations, substations, Battery Energy Storage System (BESS), 400kV overhead line and pylons, Cabling Sealing End Compounds (CSECs), 132kV overhead line and poles, including the concrete foundations to these elements to a depth agreed with the relevant landowner. Land within the Site would be returned to the relevant landowners following completion of decommissioning, including any land where the agricultural resource has been maintained (and potentially improved) during operation, alongside any established habitats. Post-decommissioning, the landowner may return land to arable use.	relevant chapters, including **ES Chapter 6: Air Quality**, **ES Chapter 12: Landscape and Visual**, **ES Chapter 13: Noise and Vibration**, **ES Chapter 14: Socio-Economics and Land Use**, and **ES Chapter 15: Traffic and Access** (Doc Ref 6.1). **ES Chapter 2: The Scheme** (Doc Ref 6.1) sets out the details of the decommissioning phase.

10.3.3. Table 10-3 provides a summary of further meetings held and key correspondence with relevant stakeholders for Human Health.

Table 10-3: Stakeholder engagement relating to Human Health

Engagement Date	Attendees (Organisation)	Summary of Discussion
11/08/25	South Holland District Council, Lincolnshire County Council, Office for Health Improvement and Disparities (OHID), UKHSA.	Outlined the approach to the assessment of human health and wellbeing in the construction, operation, and decommissioning phases. Reviewed the PEIR assessment results and proposed mitigation. Discussed the statutory consultation comments received from Lincolnshire County Council. Discussed the air quality and EMF assessment and fire safety risks.
24/09/2025	Ramblers (Spalding)	Started engagement at statutory consultation: • Received consultation newsletter and s47 consultee letter; and • No consultation feedback submitted. Personal invitation for further engagement: • Received email invitation to engage; • No response received.
24/09/2025	British Horse Society – East Midlands	Started engagement at statutory consultation: • Received consultation newsletter and s47 consultee letter; and • No consultation feedback submitted. Personal invitation for further engagement: • Received email invitation to engage; • No response received.
24/09/2025	Byways and Bridleways Trust	Started engagement at statutory consultation: • Received consultation newsletter and s47 consultee letter at statutory consultation; and • No consultation feedback submitted.

Engagement Date	Attendees (Organisation)	Summary of Discussion
		Personal invitation for further engagement: • Received email invitation to engage; • No response received.
13/08/25	LRSN	Started engagement at statutory consultation: • Received consultation newsletter and s47 consultee letter at statutory consultation; and • No consultation feedback submitted. Personal invitation for further engagement: • Received email invitation to engage; • No response received.

10.4. Assessment Methodology

Study Area

10.4.1. The study areas for the assessment of potential likely significant Human Health effects have been defined to include human populations likely to be at risk from the possible direct and indirect health impact that might arise from the Scheme. The study areas for human health are therefore based both on the extent and characteristics of the Scheme, and the populations assessed to be likely directly and indirectly affected by it. Therefore, the study areas for the health assessment vary by the type of impact being assessed.

10.4.2. For the assessment of Human Health effects, a study area extending 500m from the Site represents the area within which direct and indirect Human Health effects are most likely to be experienced. For the statistical baseline assessment, this area is defined by the wards falling within 500m of the Order Limits.

10.4.3. For health and wellbeing effects influenced by the assessments reported in other technical chapters, the study area may vary and may be influenced by the geographic extent of the relevant technical chapters. For those, the relevant study areas are set out in the relevant chapters, including:

- **ES Chapter 6: Air Quality** (Doc Ref 6.1);
- **ES Chapter 12: Landscape and Visual** (Doc Ref 6.1);
- **ES Chapter 13: Noise and Vibration** (Doc Ref 6.1);
- **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref 6.1); and
- **ES Chapter 15: Traffic and Access** (Doc Ref 6.1).

10.4.4. For the assessment of cumulative effects, a wider 2km zone of influence has been applied to capture potential interactions with other developments that could collectively impact community health and wellbeing. This expanded cumulative assessment study area accounts for the possibility of overlapping impact zones from multiple developments affecting the same receptors, particularly for health determinants related to access to services, community cohesion, and traffic impacts which operate at a broader spatial scale.

10.4.5. Table 10-4 presents the different components of the Human Health effects assessment, the geographical scale at which each component is assessed, and the rationale behind these geographical scales.

Table 10-4: Human Health Study Areas

Determinant	Study Area	Justification
Air quality, dust, and odour	Up to 250m from the Site and Site access points, and 50m from routes used by construction vehicles	As set out in **ES Chapter 6: Air Quality** (Doc Ref 6.1), and based on Institute of Air Quality Management (IAQM) guidance which indicates that construction dust impacts can affect sensitive human receptors up to 250m from the Site, as well as 50m from routes utilised by construction vehicles on the public highway, and up to 250m from Site access points.
EMF	Up to 500m from the Site	Professional judgment and location of sensitive receptors for impacts arising from the Scheme, as informed by previous similar solar proposals.

Determinant	Study Area	Justification
Employment and training	60-Minute Drive Time Area	As set out in **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref 6.1), the 60-Minute Drive Time Area is based on research by the Chartered Institute of Personnel and Development (CIPD). It includes human receptors that could benefit from potential local economic and employment impacts.
Landscape and visual	Up to 10 km from the Site (5 km from the Solar Development Areas and Inter-Array Connections, and 10 km from the Grid Connection Route)	As set out in **ES Chapter 12: Landscape and Visual** (Doc Ref 6.1), professional judgment based on the scale of the development and potential visibility within the predominantly flat, open landscape character of the area.
Noise and vibration	Up to 300 m from the Site	As set out in **ES Chapter 13: Noise and Vibration** (Doc Ref 6.1), construction noise effects are typically considered significant within 300m of activities, as supported by industry guidance and previous similar solar proposals.
Access to PRoW and active travel	Up to 500 m from the Site	Professional judgment and location of sensitive receptors for impacts arising from the Scheme, as informed by previous similar solar proposals.
Traffic and access	Link and junction receptors agreed with consultees	Based on **ES Chapter 15: Traffic and Access** (Doc Ref 6.1).

Determinant	Study Area	Justification
Social infrastructure	Up to 2km from the Site	Based on **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref 6.1).
Mental health	Informed by other relevant determinant study areas and assessments, including employment and training (60 - Minute Drive Time Area), landscape and visual (up to 10 km), noise and vibration (up to 300 m), access to PRoW and active travel (up to 500 m), and traffic and access (link and junction receptors agreed with consultees).	Professional judgment and location of sensitive receptors for impacts arising from the Scheme, as informed by other determinant assessments.
Cumulative effects	Up to 2 km from the Site	Professional judgement regarding the wider zone within which multiple developments could collectively impact community health and wellbeing, particularly for health determinants related to access to services, community cohesion, and traffic impacts which operate at a broader spatial scale.

Baseline Methodology

10.4.6. The human health baseline comprises the following five wards falling within 500m of the Order Limits:

- Fleet;
- Moulton, Weston and Cowbit;
- Spalding St Mary's;
- Spalding St Paul's; and

- Whaplode and Holbeach St John's.

10.4.7. Data for South Holland District, Lincolnshire, East Midlands and England have been identified as comparator areas where available. Where baseline data is not available at the ward level data, local authority level data (South Holland district) is used instead to inform this baseline.

10.4.8. To assess the potential human health impacts of the Scheme, it is necessary to determine the baseline conditions. The baseline conditions are the current (at the time of writing the ES) conditions of the Site and surroundings within the defined study area. The current baseline has been determined through a desk study, drawing on information from the following sources:

- Office for National Statistics (ONS) (2022) 2021 Census[2];
- ONS (2025) Annual Population Survey: January-December 2024[3];
- ONS (2025) Claimant Count: May 2025[4];
- Ministry of Housing, Communities and Local Government (2025) English Indices of Deprivation[5];
- Department of Health & Social Care (2025) Local Authority Health Profiles[6];
- ONS (2025) Population projections (2022-based) – local authority based by single year of age[7]; and
- Publicly available mapping and online satellite imagery.

Assessment Methodology

10.4.9. The following assessment seeks to establish the potential human health effects and assesses these against the current baseline conditions at the Site and in the surrounding area. The health and wellbeing assessment follows the general assessment methodology set out in **ES Chapter 4: Overview of the EIA Process**

[2] ONS (2025) Census 2021. Available at: https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=93 [Accessed 10 November 2025]
[3] ONS (2025) Annual Population Survey. Available at: https://www.nomisweb.co.uk/datasets/apsnew [Accessed 10 November 2025]
[4] ONS (2025) Claimant Count – May 2025. Available at: https://www.nomisweb.co.uk/datasets/ucjsa [Accessed 10 November 2025]
[5] Ministry of Housing, Communities and Local Government (2025) English Indices of Deprivation 2025. Available at: https://www.gov.uk/government/collections/english-indices-of-deprivation [Accessed 10 November 2025]
[6] Department of Health & Social Care (2025) Local Authority Health Profiles. Available at: https://fingertips.phe.org.uk/profile/health-profiles [Accessed 10 November 2025]
[7] ONS (2025) Subnational population projections for England: 2022-based – local authority based by single year of age.

(Doc Ref 6.1). However, the specific magnitude and impact sensitivity criteria for this assessment have been set out in this section.

10.4.10. Baseline data illustrating existing conditions surrounding the Site has been collected through a desk-based research exercise using publicly available sources, documents, and web-based applications. This includes data sources outlined in paragraph 10.4.8 as well as a review of local policy documents including the South East Lincolnshire Local Plan[8], produced jointly with Boston Borough Council and Lincolnshire County Council.

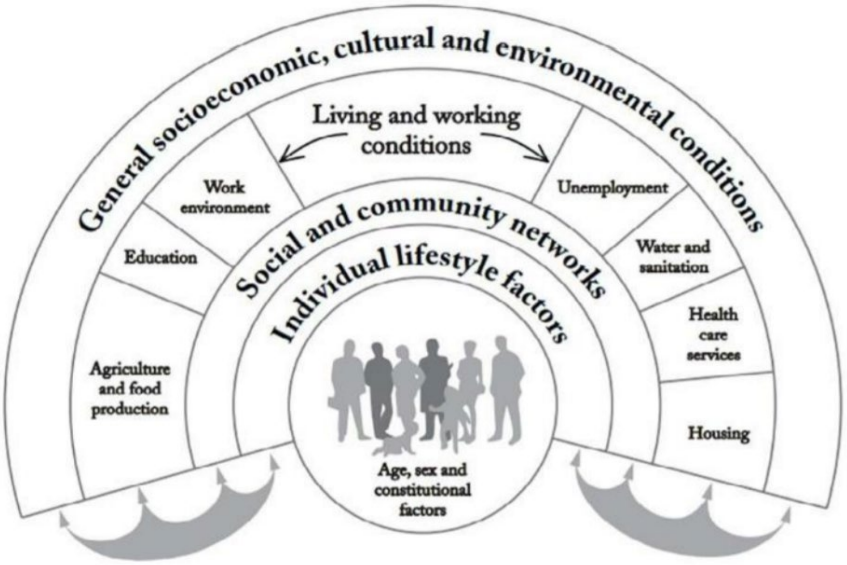
10.4.11. The World Health Organisation (WHO) Europe defines health as a "*state of complete physical, mental and social wellbeing not merely the absence of infirmity*"[9]. Public health therefore encompasses general wellbeing, not just the absence of illness.

10.4.12. The health and wellbeing of individuals is determined by a broad range of individual constitutional and behavioural factors (or 'determinants'), as well as broader environmental, social and economic factors. Some factors are direct and obvious, others are indirect.

10.4.13. Dahlgreen and Whitehead's model of the main determinants of health illustrates the breadth of possible influences on health, as shown in Plate 10-1. At the centre of the illustration are factors that are largely fixed, including individual age, sex, constitutional and genetic factors. Outside of this are factors generally described as the wider or broader determinants of health. The model emphasises interactions between the layers. Moving outwards from the centre, individual lifestyle choices are embedded in social norms and community networks, and in living and working conditions, which in turn are shaped by and related to the wider socio-economic and cultural environment.

[8] South Holland District Council (2019) South East Lincolnshire Local Plan 2011-2036. Available at: https://southeastlincslocalplan.org/article/20102/Adopted-Plan [Accessed 10 November 2025]
[9] World Health Organisation (1946) Constitution of the World Health Organisation.

Plate 10- 1: Determinants of Health

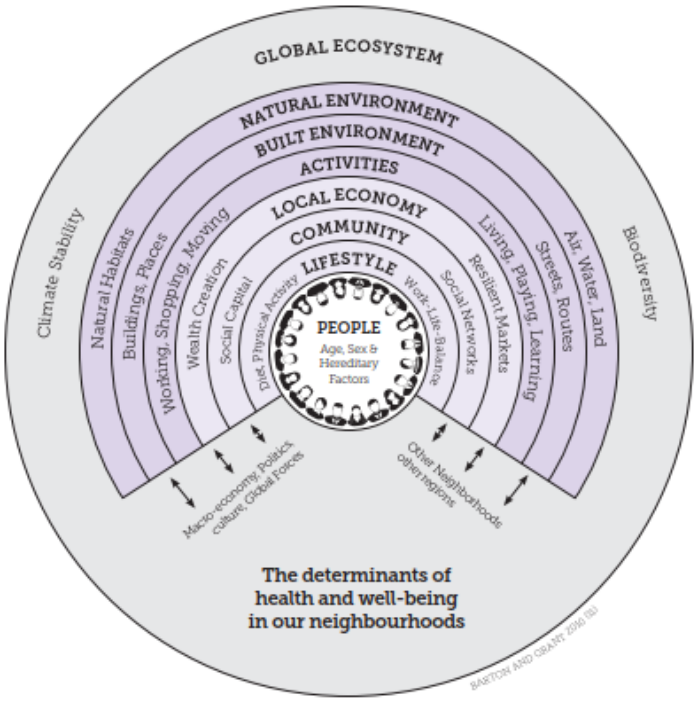


Source: Dahlgreen and Whitehead (1993)[10]

10.4.14. This model has been developed to show elements of the built environment and communities that are the key determinants of health, as shown in Plate 10- 2.

[10] Public Health England (2017) Dahlgreen and Whitehead (1991) in Health profile for England 2017. Chapter 6: Social determinants of health. Available at: https://www.gov.uk/government/publications/health-profile-for-england/chapter-6-social-determinants-of-health [Accessed 10 November 2025]

Plate 10- 2: Determinants of Health in Neighbourhoods



Source: Barton and Grant (2006)[11]

10.4.15. Within a population there can also be health inequalities, defined by the WHO as "differences in health status or in the distribution of health determinants between different population groups. For example, differences in mobility between elderly people and younger populations or differences in mortality rates between people from different social classes"[12].

10.4.16. The assessment has considered the potential consequences for health and wellbeing from construction, operation, and decommissioning phases of the Scheme and draws upon the information and conclusions reported within the air quality (**ES Chapter 6: Air Quality** (Doc Ref 6.1)), landscape and visual (**ES Chapter 12: Landscape and Visual**), noise and vibration (**ES Chapter 13: Noise and Vibration** (Doc Ref 6.1)), socio-economic and land use (**ES Chapter 14: Socio-Economics and Land Use** (Doc Ref 6.1)), traffic and access (**ES Chapter**

[11] Barton, H. and Grant, M. (2006) A health map for the local human habit. The Journal of Royal Society for the Promotion of Health.

[12] World Health Organisation (WHO) (2018) Health inequalities and their causes. Available at: https://www.who.int/news-room/facts-in-pictures/detail/health-inequities-and-their-causes [Accessed: 28/07/25].

15: Traffic and Access (Doc Ref 6.1)) and other environmental topics (**ES Chapter 16: Other Environmental Topics** (Doc Ref 6.1)) assessments.

10.4.17. A qualitative assessment of human health has been undertaken, with evidence provided to support the conclusions. The assessment of human health effects describes the likely qualitative health outcomes. When describing the impact of each health determinant, where possible, we identify the duration of the change and the population exposed to this.

10.4.18. The significance of health effects is determined as a function of receptor sensitivity and magnitude of impact, following best practice principles provided in the following guidance:

- ISEP (2022) Guide to Determining Significance for Human Health in Environmental Impact Assessment[13]; and
- ISEP (2022) Guide to Effective Scoping of Human Health in Environmental Impact Assessment[14].
- Design Manual for Roads and Bridges (DMRB Document LA 112: Population and Human Health[15].

Sensitivity of Receptors

10.4.19. This assessment considers the qualitative sensitivity of receptors, including general populations and potentially vulnerable sub-populations, and their ability to respond to change.

10.4.20. Table 10-5 identifies the sensitivity criteria that have been used to inform the assessment of effects relating to human health and is based on guidance set out by ISEP[13].

[13] IEMA (2022) Guide to: Determining Significance for Human Health in Environmental Impact Assessment. Available at: https://www.iema.net/media/yljb2nbs/iema-eia-guide-to-determining-significance-for-human-health-nov-2022.pdf [Accessed: 28/07/25].

[14] IEMA (2022) Guide to: Effective Scoping of Human Health in Environmental Impact Assessment. Available at: https://www.iema.net/media/s35fughe/iema-eia-guide-to-effective-scoping-of-human-health-nov-2022.pdf [Accessed: 28/07/25].

[15] Standards for Highways (2020) Design Manual for Roads and Bridges. LA 112 Population and human health. Available at: https://assets.publishing.service.gov.uk/media/5b59b090e5274a3ff828c70c/spatial_planning_for_health.pdf [Accessed: 28/07/25].

Table 10-5: Human Health Impact Sensitivity Criteria

Sensitivity	Description
High	Population or sub-populations who experience high levels of deprivation; are reliant on shared resources; within which there are wide inequalities between the most and the least healthy; whose outlook is predominantly anxiety or concern; who are prevented from undertaking daily activities; dependents; people with very poor health status; and/or people with a very low capacity to adapt.
Medium	Population or sub-populations who experience moderate levels of deprivation; have few alternatives to shared resources; experience widening inequalities between the most and the least healthy; whose outlook is predominantly uncertainty with some concern; who are highly limited from undertaking daily activities; who provide or require a lot of care; those with fair health status; and/or people with a limited capacity to adapt.
Low	Population or sub-populations who experience low levels of deprivation; have many alternatives to shared resources; experience narrowing inequalities between the most and least healthy; whose outlook is predominantly ambivalence with some concern; those who are slightly limited from undertaking daily activities; those who provide or require some care; those with fair health status; and/or people with a high capacity to adapt.
Very Low	Populations or sub-populations who experience very low levels of deprivation; rely on no shared resources; whose outlook is predominantly support with some concern; people who are not limited from undertaking daily activities; people who are independent (not a carer or dependant); people with good health status; and/or people with a very high capacity to adapt.

Magnitude of Impact

10.4.21. This assessment considers the size of the effect on people or receptors in the context of the area in which effects will be experienced and based on ISEP guidance.

10.4.22. Magnitude of impact is determined considering a number of factors, including the length of duration of effect (long-term duration is one factor that is used to justify a high magnitude, medium-term duration for medium magnitude, short-term duration for low magnitude and very short-term for very low

magnitude). Other factors considered include population exposure, frequency, severity related to mortality, the proportion of the population affected, the reversibility or permanence of the effect and the associated service quality implications. These factors are considered when determining the magnitude of impact within the human health assessment.

10.4.23. Table 10-6 identifies the magnitude of impact criteria which have been used to assess the impacts on human health.

Table 10-6: Human Health Impact Magnitude Criteria

Magnitude	Description
High	An impact that is large in scale or a population has high exposure to; long-term in duration; continuous in frequency; its severity is predominantly related to mortality or changes in morbidity (physical or mental health) for very severe illness/injury outcomes; where the majority of a population is affected; that results in a permanent change; and/or has substantial service quality implications.
Medium	An impact that is moderate in scale or that a population has low exposure to; has a medium-term duration; is frequent; its severity is predominantly related to moderate changes in morbidity or major change in quality-of-life; that affects a large majority of the population; can be gradually reversed; and/or has small service quality implications.
Low	An impact that is small in scale or a population has very low exposure to; is short-term in duration; due to occasional events; its severity predominantly relates to a minor change in morbidity or moderate change in quality-of-life; that affects a small minority of the population; can be rapidly reversed; and/or has slight service quality implications.
Very Low	An impact that is negligible in scale or a population has negligible exposure to; is very short-term in duration; its severity predominantly relates to a minor change in quality-of-life; that affects very few people; that can be immediately reversed once the activity is completed; and/or that has no service quality implication.

Significance of Effect

10.4.24. The significance of effect in relation to human health has been assessed in accordance with the criteria set out in Table 10-7, based on the intersection of sensitivity and magnitude of impact assessments. Where two options are shown for the classification of effect (e.g. Minor/Negligible), professional judgement will be used to determine which of the two options is most appropriate. The approach is considered appropriate, as it is in accordance with ISEP guidance.

Table 10-7: Significance Matrix

Magnitude of Impact	Sensitivity or Value			
	High	Medium	Low	Very Low
High	**Major**	**Major / Moderate**	**Moderate** / Minor	Minor / Negligible
Medium	**Major / Moderate**	**Moderate**	Minor	Minor / Negligible
Low	**Moderate** / Minor	Minor	Minor	Negligible
Very low	Minor / Negligible	Minor / Negligible	Negligible	Negligible

10.4.25. In accordance with the methodology set out in **ES Chapter 4: Overview of the EIA Process** (Doc Ref 6.1), the following criteria is then applied to determine the significance of the effect:

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

10.4.26. The potential human health effects during construction, operation, and decommissioning are described as 'beneficial', or 'adverse'. Where an impact is identified, actions have been proposed to mitigate any negative impact on human health, or to realise opportunities to create health benefits. It should be noted that in many cases, mitigation is embedded within the Scheme.

10.5. Assessment Assumptions and Limitations

10.5.1. The assessment is based on the Scheme design set out in ES Chapter 2: The Scheme (Doc Ref. 6.1) and shown on **ES Figure 2-2: Illustrative Solar Development Area and Inter-Array Connections Layout Plan** (Doc Ref. 6.2) and **ES Figure 2-4: Illustrative Grid Connection Route Layout Plan** (Doc Ref. 6.2). .

10.5.2. The assessment of the significance of human health effects has been carried out against a benchmark of current human health baseline conditions prevailing around the Scheme, as far as is practicable within the limitations of human health-related data. Baseline data 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. Baseline conditions regarding human health are derived from the latest data available at the time of writing.

10.5.3. The assessment of likely human health effects arising from the Scheme is based on professional judgement, drawing on relevant guidance as set out in **ES Appendix 10-1: Human Health Legislation, Policy and Guidance** (Doc Ref 6.3). It considers both the potential beneficial and adverse impacts that the Scheme is likely to have on human health.

10.5.4. Effects on human health during construction, operation, and decommissioning phases are based on a range of related assessments, taking into consideration the results from the relevant environmental studies, including **ES Chapter 6: Air Quality, ES Chapter 12: Landscape and Visual, ES Chapter 13: Noise and Vibration, ES Chapter 14: Socio-Economics and Land Use, ES Chapter 15: Traffic and Access, and ES Chapter 16: Other Environmental Topics (**Doc Ref 6.1). Relevant assumptions and limitations within these chapters also apply to the Human Health assessment.

10.5.5. As noted in **ES Chapter 2: The Scheme** (Doc Ref 6.1), the construction period is anticipated to take up to four years. For the purposes of this assessment, the peak construction year is anticipated to be 2031; this assumes construction commences in 2029. This is considered to be a realistic worst-case assumption for this assessment, as it represents the expected minimum build time and therefore the most intense activity onsite (and therefore greatest impacts associated with traffic, noise, dust, visual etc). Should the build period be a longer duration, the intensity would be less and the impact on the community therefore the same or lower. This approach may mean the maximum number of jobs during peak construction has been overestimated, it should not affect

the average number presented in this chapter or the associated spending benefits attributed to this phase of the Scheme.

10.5.6. Decommissioning is assessed as occurring after the date of final commissioning. It is currently anticipated that the Scheme will begin the operational phase in 2033 and therefore decommissioning is estimated to commence in 2073. Decommissioning is anticipated to take up to approximately 24 months. Should parts of the Scheme be decommissioned in advance of the main decommissioning phase, the predicted effects would be the same or less than those outlined in this chapter. Similar to the construction period, the assessment of the decommissioning period lasting for 24 months and taking place after the date of final commissioning therefore represents a realistic worst case.

10.5.7. Two cumulative assessment scenarios are set out in **ES Chapter 4: Overview of the EIA Process** (Doc Ref. 6.1) which are considered to capture the worst-case cumulative effects. For this chapter, the below scenario is considered to result in a worst-case assessment in relation to the cumulative schemes assessment:

- Scenario 1: Construction periods and the peak construction of the Scheme and the Grimsby to Walpole DCO, Outer Dowsing Offshore Wind Farm DCO, the Weston Marsh to East Leicestershire Project (WMEL) DCO and Ossian Wind Farm DCO overlap in 2031.

10.5.8. This is because in this scenario, the magnitude of cumulative impacts would be the greatest.

10.6. Baseline Conditions

10.6.1. This section describes the baseline environmental characteristics for the Scheme and surrounding areas with specific reference to human health. This section sets out the demographic and health profile of the local population as well as outlining existing local infrastructure relevant to the health assessment, including residential properties, community facilities and recreational routes.

10.6.2. The human health baseline will comprise the 'study area', comprising of the five wards most likely to experience potential direct and indirect impacts from construction, operation, and decommissioning, as identified in Section 10.4.

10.6.3. Where ward level data is not available, data for South Holland District is used. This data, where available, is compared to South Holland District Council, Lincolnshire County Council, East Midlands, and England data.

Current Baseline

Demographic Profile

10.6.4. The 2021 Census identified the population of the study area as 24,276, comprising of Spalding St Mary's (4,605), Spalding St Paul's (5,597), Moulton, Weston and Cowbit (7,295), Whaplode and Holbeach St John's (4,324) and Fleet (2,455). The study area represents 25.5% of the population of South Holland, 3.2% of Lincolnshire, 0.5% of the East Midlands, and 0.04% of England. The population of each comparator area is outlined in Table 10-8.

Table 10-8: Population[16]

Area	Population
Study Area	24,277
South Holland	95,119
Lincolnshire	768,364
East Midlands	4,880,056
England	56,490,045

10.6.5. The baseline conditions in relation to age profile are outlined in Table 10-9. There is a lower proportion of children (ages 0 to 15) within the study area (16.2%) when compared to all other comparator areas, including South Holland (17.0%) and England (18.5%). Furthermore, the proportion of the working age population (ages 16 to 64) in the study area is comparable to, but slightly lower than, South Holland (59.3%) and Lincolnshire (59.8%), but lower than the East Midlands (62.5%) and England (63.0%). The proportion of residents in the study area aged over 65 (24.9%) is greater than all comparator areas.

[16] ONS (2025) 2021 Census.

Table 10-9: Age Profile[17]

Area	0-15 years (%)	16-64 years (%)	65+ years (%)
Study Area	16.2	59.0	24.9
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

10.6.6. In terms of ethnicity, Table 10-10 shows that the study area, South Holland, Lincolnshire and the East Midlands have a higher proportion of White residents and a lower proportion of Asian, Black, Mixed and Other residents compared to national averages. For example, 96.3% of the study area and South Holland are White, compared to 81.0% nationally. In addition, 1.2% of the study area are Asian, 0.6% Black, 1.3% Mixed and 0.5% Other compared to England, 9.6%, 4.2%, 3.0% and 2.2% respectively.

Table 10-10: Ethnicity[18]

Area	White (%)	Asian (%)	Black (%)	Mixed (%)	Other (%)
Study Area	96.3	1.2	0.6	1.3	0.5
South Holland	96.3	1.2	0.5	1.3	0.6
Lincolnshire	96.0	1.6	0.6	1.3	0.6
East Midlands	85.7	8.0	2.7	2.4	1.3
England	81.0	9.6	4.2	3.0	2.2

10.6.7. The English Indices of Deprivation measure relative deprivation in England, based on seven domains, comprising of income, employment, health deprivation and disability, education and skills training, crime, barriers to housing and services, and living environment[19]. These are combined to form an overall index.

[17] ONS (2025) 2021 Census.
[18] ONS (2025) 2021 Census.
[19] Ministry of Housing, Communities and Local Government (2025) English Indices of Deprivation 2025. Available at: https://www.gov.uk/government/collections/english-indices-of-deprivation [Accessed 10 November 2025]

10.6.8. In 2025, South Holland is in the top 50% most deprived local authorities in England, ranked 100th out of 296 local authorities (where 1 is most deprived).

10.6.9. The Site intersects or is located within ten 2021 Lower Super Output Areas (LSOAs): South Holland 010A, South Holland 002A, South Holland 010B, South Holland, 007C, South Holland 010C, South Holland 011C, South Holland 004B, South Holland 004A, South Holland 005A, and South Holland 011A.

10.6.10. In the 2025 English Indices of Deprivation:

- Three LSOAs are ranked within the 30% most deprived areas;
- Three LSOAs are ranked within the 40% most deprived areas;
- Two LSOAs are ranked within the 50% most deprived areas;
- One LSOA is ranked within the 30% least deprived areas; and
- One additional LSOA is ranked within the 40% least deprived areas.

10.6.11. In terms of health deprivation in the 2025 English Indices of Deprivation:

- One LSOA is ranked within the 40% most deprived areas;
- Two LSOAs are ranked within the 50% most deprived areas;
- One LSOA is ranked within the 20% least deprived areas;
- Three LSOAs are ranked within the 30% least deprived areas; and
- Three LSOAs are ranked within the 40% least deprived areas.

10.6.12. According to the Annual Population Survey, as outlined in Table 10-11, in 2024 the economic activity rate (amongst 16 to 64 year olds) was 78.9% in South Holland, which is comparable to the East Midlands (78.9%) and England (79.1%) but greater than Lincolnshire (74.3%).

Table 10-11: Economic activity rate[20]

Area	Economic activity rate (aged 16-64) (%)
Study Area	n/a
South Holland	78.9
Lincolnshire	74.3
East Midlands	78.9
England	79.1

10.6.13. As outlined in **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1), the 2023 Business Register and Employment Survey (BRES)[21] identifies the proportion of residents employed in each industry, classifying industries by their Standard Industrial Classification (SIC), as shown in Table 10-12. At 16.4% of the working population, the largest industry in the study area (defined here as a 60 minute drive time of the Site) by employment was wholesale and retail trade; this proportion was higher than the regional and national average (15.2% and 13.7%), but lower than the proportion in Lincolnshire and South Holland (17.1% and 22.9%, respectively).

10.6.14. The study area has the lowest proportion of workers in the agriculture, forestry and fishing industry (0.3%), considerably smaller than South Holland (5.0%) and Lincolnshire (2.7%).

10.6.15. In the economic study area (60 minute drive time), 4.8% of the working population worked in the construction sector. This is slightly higher than the proportion in East Midlands (4.3%), and England as a whole (4.7%), but lower than the 5% reported in South Holland.

[20] ONS (2024) Annual Population Survey Jan 2024-Dec 2024.
[21] ONS (2023) Business Register and Employment Survey 2023.

Table 10-12: Employment by Industry[22]

	Study Area (60-Minute Drive Time Area)	South Holland	Lincolnshire	East Midlands	England
A : Agriculture, forestry and fishing (%)	0.3	5.0	2.7	0.7	0.5
B : Mining and quarrying (%)	0.1	0.0	0.1	0.2	0.1
C : Manufacturing (%)	11.6	17.1	11.6	12.3	7.4
D : Electricity, gas, steam and air conditioning supply (%)	0.2	0.1	0.2	0.5	0.3
E : Water supply; sewerage, waste management and remediation activities (%)	1.1	0.5	1.2	0.7	0.7
F : Construction (%)	4.8	5.0	4.8	4.3	4.7
G : Wholesale and retail trade; repair of motor vehicles and motorcycles (%)	16.4	22.9	17.1	15.2	13.7
H : Transportation and storage (%)	6.3	10.0	4.4	7.0	5.1
I : Accommodation and food service activities (%)	6.8	4.3	8.9	7.0	7.8
J : Information and communication (%)	3.5	0.7	2.0	2.7	4.8
K : Financial and insurance activities (%)	1.2	0.6	0.6	1.4	3.4
L : Real estate activities (%)	2.0	0.9	1.5	1.7	1.9

[22] ONS (2023) Business Register and Employment Survey 2023.

	Study Area (60-Minute Drive Time Area)	South Holland	Lincolnshire	East Midlands	England
M : Professional, scientific and technical activities (%)	7.3	3.6	5.1	7.4	9.6
N : Administrative and support service activities (%)	7.6	11.4	7.2	7.6	8.9
O : Public administration and defence; compulsory social security (%)	3.1	1.3	3.8	4.1	4.4
P : Education (%)	9.7	5.7	8.9	9.0	8.6
Q : Human health and social work activities (%)	13.5	8.6	16.0	14.6	13.5
R, S, T, U : Other (%)	4.2	2.0	4.2	3.8	4.6

10.6.16. The Claimant Count for May 2025[23] as a proportion of residents aged 16-64 in South Holland is 3.1%, in line with Lincolnshire (3.1%) and the East Midlands (3.6%), and lower than England (4.2%).

Health Profile

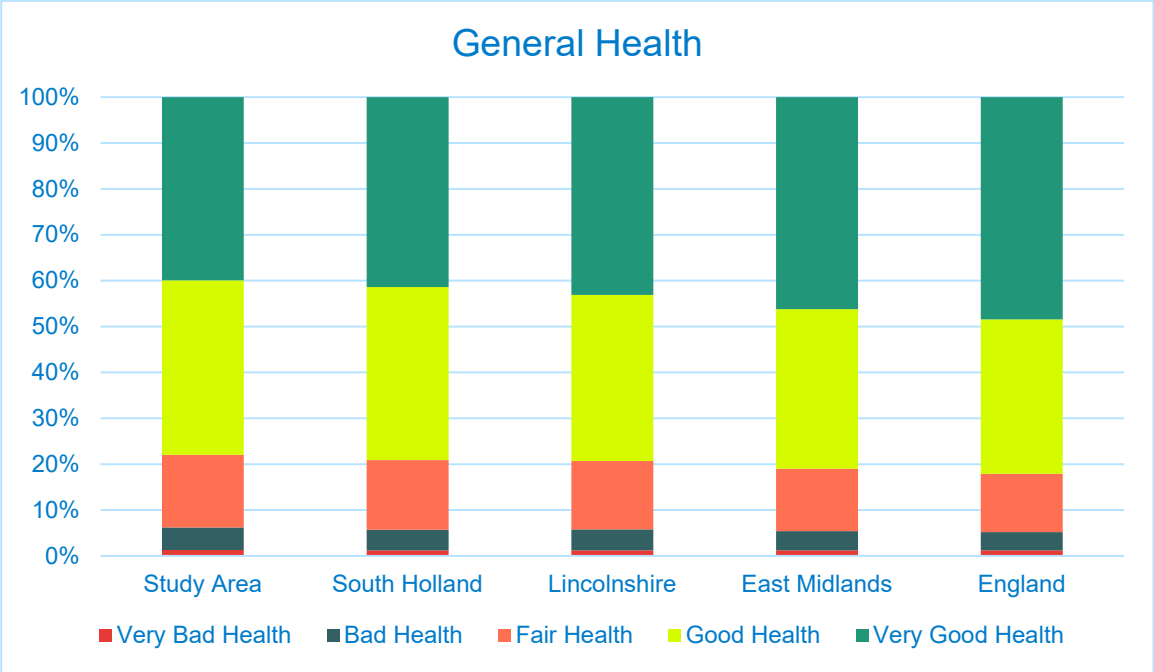
10.6.17. This section provides a human health profile of the study area, focusing on key determinants of health relevant to the assessment criteria provided within ISEP guidance[24]. This local health baseline will be used to assess potential health effects of the Scheme.

10.6.18. The 2021 Census provides information based on a self-assessment of health, as shown in Plate 10- 3. The study area has a lower proportion of residents in 'Very Good' health (39.9%) compared to South Holland (41.4%), Lincolnshire (43.1%), the East Midlands (46.2%) and England (48.5%). The proportion of

[23] ONS (2025) Claimant Count May 2025.
[24] IEMA (2022) Guide to: Effective Scoping of Human Health in Environmental Impact Assessment. Available at: https://www.iema.net/media/s35fughe/iema-eia-guide-to-effective-scoping-of-human-health-nov-2022.pdf

residents of the study area in 'Very Bad' health (1.3%) is in line with comparator areas (1.2% for South Holland, Lincolnshire, East Midlands and England).

Plate 10- 3: General Health[25]



10.6.19. ONS (2023) provides data on national wellbeing, as per the Annual Population Survey, broken down by region, as shown in Table 10-13. Indicators of wellbeing in the East Midlands generally align with national averages. In Q4 2022, 34.9% reported 'very low' anxiety in the East Midlands, slightly higher than the 33.3% in England. Long-term mental well-being (2018-2019) in the East Midlands and England both scored 24.3 out of 35. The proportion of people with signs of depression or anxiety between January 2020 and December 2021 was 23.4% in the East Midlands, slightly below the England average of 23.8%.

[25] ONS (2022) 2021 Census.

Table 10-13: Mental Health (Oct-December 2022)[26]

	East Midlands (%)	England (%)
People rating their life satisfaction as 'very high' (Q4 2022)	26.5	23.2
People rating their happiness yesterday as 'very high' (Q4 2022)	28.1	29.2
People rating their anxiety yesterday as 'very low' (Q4 2022)	34.9	33.3
Average rating of mental well-being (score out of 35) (Jan 2018-Dec 2019)	24.3	24.3
People with some evidence indicating depression or anxiety (Jan 2020-Dec 2021)	23.4	23.8

10.6.20. In addition, Table 10-14 illustrates a self-assessment of long-term health or disability. The proportion of residents within the study area that experience limitations to their daily activities either a little or a lot is 19.9%. This is higher than South Holland (18.8%), the East Midlands (18.4%) and England (17.3%), but lower than Lincolnshire (20.2%).

Table 10-14: Disability[27]

Area	Day-to-day activities not limited (%)	Day-to-day activities limited a little (%)	Day-to-day activities limited a lot (%)
Study Area	80.1	11.4	8.5
South Holland	81.2	10.9	7.9
Lincolnshire	79.9	11.8	8.4
East Midlands	81.7	10.7	7.7
England	82.7	10.0	7.3

[26] ONS (2023) Measuring national well-being: Domains and measures. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/datasets/measuringnationalwellbeingdomainsandmeasures [Accessed 10 November 2025]
[27] ONS (2022) 2021 Census.

10.6.21. Wider determinants of health can also give insight into the health profile of an area. The following indicators are compared to local, regional and national figures to illustrate how the study area performs[28]:

- **Life expectancy:** ONS data states that the average life expectancy at birth for males in the study area is 79.0 years. This is comparable to the average for South Holland (79.7 years), Lincolnshire (79.2 years) and England (79.7 years). The life expectancy for females in the study area is 82.6 years, which is slightly lower than the averages for South Holland (83.2 years), Lincolnshire (82.8 years) and England (83.2 years);
- **Childhood obesity:** The average proportion of children in Year 6 (aged 10 to 11) who are obese in the study area is 25.0%. This is higher than the rates for South Holland (24.5%), Lincolnshire (23.2%), the East Midlands (22.1%) and England (22.1%);
- **Smoking prevalence:** The prevalence of regular smokers at age 15 in the study area is 5.2%. This is lower than the proportions in South Holland (5.6%), Lincolnshire (5.6%) and England (5.4%). Data was not available for the East Midlands;
- **Deaths from respiratory diseases (standardised mortality ratio (SMR)):** The average SMR for this indicator in the study area is 84.6 deaths per 100,000, which is lower (i.e. better) than the national average for England (100). An SMR below 100 indicates fewer than expected deaths, whilst an SMR above 100 indicates that there are excess deaths. South Holland (93.6) and Lincolnshire (97.2) similarly have fewer than expected deaths compared to national averages but more deaths than the study area;
- **Suicide rate:** The suicide rate per 100,000 in South Holland is 18.1, higher than Lincolnshire (14.0), and considerably higher than the East Midlands (11.3) and England (10.7);
- **Physically active adults:** Data from the Department of Health and Social Care identifies that 59.8% of adults in South Holland are physically active, lower than Lincolnshire (64.2%), the East Midlands (66.7%), and England (67.4%);

[28] Department of Health & Social Care (2020) Local Authority Health Profiles. Available at: https://fingertips.phe.org.uk/profile/health-profiles [Accessed 10 November 2025]

- **Under 75 mortality rate:** The under 75 mortality rate from all causes per 100,000 in South Holland is 384.0, higher than Lincolnshire (382.9), and considerably higher than the East Midlands (357.3) and England (341.6); and
- **Inequality of life expectancy:** The inequality of life expectancy at birth, measured by the Slope Index of Inequality, is 4.9 years for males and 3.6 years for females in South Holland. This increases to 8.8 years (males) and 6.6 years (females) in Lincolnshire, 10.1 years (males) and 7.9 years (females) in the East Midlands, and 10.5 years (males) and 8.3 years (females) in England.

Vulnerable Groups

10.6.22. In line with ISEP guidance, this ES identifies the following groups as particularly vulnerable to human health impacts. These groups identify a population with multiple vulnerabilities which could affect their resilience to environmental change and ability to adapt to disruption, affecting sensitivity to the Scheme.

- Elderly residents – 24.9% of the study area population (aged 65+);
- People with limiting long-term illnesses and disabilities – 19.9% of the study area population;
- People with mental health conditions;
- Children and young people – particularly given the high childhood (Year 6) obesity rate of 25.0%;
- Residents in areas of high deprivation – particularly in central Spalding E01026258, Holbeach Park E01026248, and Sutton St. Edmund E01026280;
- People in 'bad' or 'very bad' health – 6.2% of the study area population;
- Agricultural workers – 5.8% of the study area population;
- Armed forces personnel – BRES data does not identify any armed forces personnel working in the study area[29]. No detailed data is available in regard to the number of armed forces personnel living within the study area. ONS data[30] indicates that 364 persons living in the study area work in the Public Administration and Defence industry. BRES[29] data

[29] Business Register and Employment Survey (2025)
[30] ONS (2025) 2021 Census

indicates that 0% of workers in Public Administration and Defence work in Defence Activities specifically, and that this proportion is 2.1% across the East Midlands. It is therefore possible to estimate that 0 to 8 persons living in the study area could be part of the armed forces.

- Veterans – 1.8% of the study area population, based on ONS data as set out in Table 10-15 below.

10.6.23. Table 10-15 outlines the number of veterans in the comparator areas and veterans as a proportion of the total population. As of the 2021 Census, there are 439 veterans in the study area, comprising 1.8% of the total population. Similarly, veterans comprise 1.8% of the population of South Holland, increasing to 2.5% in Lincolnshire. The study area, South Holland, and Lincolnshire have a greater proportion of veterans compared to the East Midlands (1.5%) and England (1.3%).

Table 10-15: Veterans[31]

Area	Number of veterans	Veterans as a proportion of total population (%)
Study Area	439	1.8
South Holland	1,714	1.8
Lincolnshire	18,858	2.5
East Midlands	72,147	1.5
England	708,103	1.3

Note: Veteran defined as someone who has served in the regular forces, reserves, or both in the UK armed forces.

Local Receptors

Residential Properties

10.6.24. There are no residential buildings located within the Order Limits of the Solar Development Areas and Inter-Array Connections, or within the Grid Connection Route.

10.6.25. There are a small number of residential properties which are surrounded by the Site; however, these are not included within the Order Limits, except where elements of their accessways or gardens may be required for access to utilities for the construction of the Scheme. These residential properties are

[31] ONS (2022) 2021 Census.

shown on **ES Figure 14-1: Residential Properties in the Vicinity of Solar Development Areas and Inter-Array Connections** (Doc Ref 6.2) and **ES Figure 14-2: Residential Properties in the Vicinity of Grid Connection Route** (Doc Ref 6.2).

10.6.26. The area surrounding the Site is largely rural, comprising of agricultural land and small villages. The following villages with residential receptors are located within 500m of the Site:

- Gedney Hill;
- Cowbit;
- Shepeau Stow;
- Whaplode Drove;
- Holbeach Drove;
- Weston;
- Weston Hills; and
- Low Fulney.

10.6.27. The Scheme is located near the towns of Spalding and Crowland, located approximately 1.1km and 1.9km from the Site respectively.

Business Properties

10.6.28. As outlined in **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref 6.1), there are no businesses within the Order Limits, however there are 51 businesses located within 500m of the Order Limits. Of these, 16 are within 500m of the Solar Development Areas, 10 are within 500m of the Inter-Array Connections, and 25 are within 500m of the Grid Connection Route. These are listed in Table 10-16 and can be seen on **ES Figure 14-5: Business Premises in the Vicinity of Solar Development Areas and Inter-Array Connections** (Doc Ref 6.2) and **ES Figure 14-6: Business Premises in the Vicinity of Grid Connection Route** (Doc Ref 6.2)).

Table 10-16: Business Properties within 500 m of the Site

Receptor ID	Business Name	Location	Distance from Site
Solar Development Areas			

Receptor ID	Business Name	Location	Distance from Site
BP-01	Kay's Mucky Pups Dog Grooming	Peak Hill	400m
BP-02	Bettaland Products	Crowland	275m
BP-03	Material Change, Decoy Farm	Crowland	275m
BP-04	SA Grab Services	Crowland	275m
BP-05	Peterborough and Spalding Gliding Club	Crowland	480m
BP-06	Claypack Ltd	Crowland	480m
BP-07	Fenland Tractors Ltd	Shepaeu Stow	60m
BP-08	YouGarden	Holbeach Drove	50m
BP-09	Fabric Paper Scissors Studio	Holbeach Drove	75m
BP-10	Homestead Equine Saddlery	Holbeach Drove	180m
BP-11	JM Bespoke Needlework	Gedney Hill	60m
BP-12	Hunters Bar and Restaurant	Gedney Hill	215m
BP-13	The Pretty Parlour	Gedney Hill	215m
BP-14	North View Lakes Caravan Park	Gedney Hill	250m
BP-15	Springfield farm Campsite	Gedney Hill	480m

Receptor ID	Business Name	Location	Distance from Site
BP-16	The Pantry at Gedney Hill	Gedney Hill	480m
Inter-Array Connections			
BP-17	Johnson P & S M Ltd	Whaplode Drove	Adjacent
BP-18	Brass Care Repair Shop	Whaplode Drove	120m
BP-19	Childminding in Spalding	Whaplode Drove	300m
BP-20	Fennite Metalworks	Whaplode Drove	300m
BP-21	WJ Webb and Co Ltd	Whaplode Drove	320m
BP-22	Ashleigh Lakes Caravan Park	Whaplode Drove	330m
BP-23	WH Brand MG Spalding	Whaplode Drove	400m
BP-24	Holbeach Drove Store and Filling Station	Holbeach Drove	Adjacent
BP-25	Canine Pregnancy Scanning Lincolnshire	Holbeach Drove	440m
BP-26	Carrington Groomers Dog Grooming	Holbeach Drove	450m
Grid Connection Route			
BP-27	Myton Horticultural Spalding	East Spalding	Adjacent

Receptor ID	Business Name	Location	Distance from Site
BP-28	GT4 Auto Repair Services	Weston	Adjacent
BP-29	Mulini Exhibition Displays and Services	Weston	Adjacent
BP-30	Baytree Hand Car Wash	Weston	50m
BP-31	Oasis Pools and Spas	Weston	70m
BP-32	Flamecraft Stove Shop	Weston	120m
BP-33	Baytree Owl and Wildlife Centre	Weston	140m
BP-34	Strange Apparitions Shop	Weston	150m
BP-35	Uptown Vinyl Records	Weston	150m
BP-36	Baytree Garden Centre	Weston	200m
BP-37	The Hair Pavilion	Weston	230m
BP-38	The Edinburgh Woollen Mill	Weston	250m
BP-39	Fun Farm Car Boots Market	Weston	250m
BP-40	Fun Farm Spalding	Weston	250m
BP-41	Bloom and Wild Florist	Weston	480m
BP-42	Longfield Commercials	Weston Hills	Adjacent

Receptor ID	Business Name	Location	Distance from Site
BP-43	Cubit Electrical & Mechanical Engineering	Weston Hills	200m
BP-44	Myers Poplar Farm	Weston Hills	200m
BP-45	Bassodon Boarding Cattery	Weston Hills	360m
BP-46	Lucksbridge Horticulture Limited	Cowbit	Adjacent
BP-47	JW Tyrell and Sons Farm	Cowbit	220m
BP-48	Hunters Lodge Caravan Site	Cowbit	410m
BP-49	Kinder Garden Plants	Spalding	Adjacent
BP-50	Education Quizzes	Spalding	Adjacent
BP-51	Michal Czamara MC Electrical Services	Weston	50m

Healthcare Facilities

10.6.29. The reporting of the baseline primary healthcare provision is made with reference to guidance from the Royal College of General Practitioners[32] which recommends a GP:Patient ratio of 1:1,800.

10.6.30. There is one GP surgery located within 2km of the Site, Moulton Medical Centre, located approximately 1.7km to the east of the Site. As of 2025, there

[32] Royal College of General Practitioners (2005); Information Paper.

are 3.3 FTE GPs[33] and 5,615 patients[34] at Moulton Medical Centre, and therefore a 1:1,702 GP:patient ratio. This suggests that the provision of GPs in the area is below (i.e. better than) the recommended provision.

10.6.31. The nearest hospital (with an accident and emergency department) to the Site is Pilgrim Hospital in Boston, located approximately 14km to the north-east of the Site.

Community Facilities and Open Space

10.6.32. Community facilities provide essential services and social connection opportunities for local residents, including open spaces and schools. There are no community facilities located within the Order Limits.

10.6.33. There are 36 community facilities within 2km of the Order Limits, eight of which are located within 2km of the Solar Development Areas, five are within 2 km of the Inter-Array Connections, and 23 are within 2km from the Grid Connection Route.

10.6.34. There are 18 open spaces within 2 km of the Site Boundary. Four of these are within 2 km of the Solar Development Areas, one is within 2km of the Inter-Array Connections, and 13 are within 2 km of the Grid Connection Route.

10.6.35. These community facilities and open spaces are identified in Table 10-17 and visible in **ES Figure 14-3: Community Land and Assets in the Vicinity of Solar Development Areas and Inter-Array Connections** (Doc Ref 6.2) and **ES Figure 14-3: Community Land and Assets in the Vicinity of Grid Connection Route** (Doc Ref 6.2).

Table 10-17: Community Facilities and Open Spaces within 2 km of the Site

Receptor ID	Receptor Name	Location	Distance from Site
Solar Development Areas			
CP-01	Gedney Hill Golf Club	Gedney Hill	Adjacent
CP-02	Church of the Holy Trinity	Gedney Hill	620m

[33] NHS England Digital (2025) General Practice Workforce, 31 January 2025. Available at: https://digital.nhs.uk/data-and-information/publications/statistical/general-and-personal-medical-services/31-january-2025 [Accessed 10 November 2025]
[34] NHS England Digital (2025) Patients Registered at a GP Practice, May 2025. Available at: https://digital.nhs.uk/data-and-information/publications/statistical/patients-registered-at-a-gp-practice/may-2025 [Accessed 10 November 2025]

Receptor ID	Receptor Name	Location	Distance from Site
CP-03	Gedney Hill Post Office	Gedney Hill	620m
CP-04	Gedney Hill CofE Primary School	Gedney Hill	680m
CP-05	Crowland Airfield	Crowland	450m
CP-06	Normanton Road Play Area	Crowland	1.7km
CP-07	South View Community Primary School	Crowland	1.8km
CP-08	Country Kids Holbeach Drove Nursery	Holbeach Drove	120m
CP-09	Shepeau Stow Primary School	Shepeau Stow	50m
CP-10	Shepeau Stow Allotments	Shepeau Stow	80m
CP-11	Parish Church of Saint John Holbeach Fen	Holbeach St Johns	1.5km
CP-12	Holbeach St Johns Village Hall	Holbeach St Johns	1.5km
Inter-Array Connections			
CP-13	St John the Baptist Parish Church	Whaplode Drove	165m
CP-14	Elizabethan Centre	Whaplode Drove	250m
CP-15	Whaplode Drove Rovers FC	Whaplode Drove	250m
CP-16	Whaplode Drove Badminton Club	Whaplode Drove	250m
CP-17	Whaplode Drove Post Office	Whaplode Drove	300m
CP-18	Whaplode Drove Churchroom	Whaplode Drove	300m

Receptor ID	Receptor Name	Location	Distance from Site
Grid Connection Route			
CP-19	Sunflower Lodge Childcare Nursery	Spalding	1.1km
CP-20	St Paul's Church	Spalding	1km
CP-21	St Paul's Community Primary School and Nursery	Spalding	1.5km
CP-22	Tulip Academy Waterside Campus	Spalding	1.7km
CP-23	Spalding Academy	Spalding	1.8km
CP-24	Spalding Bowling Green	Spalding	1.9km
CP-25	Atton Avenue Park and Playspace	Spalding	1.25km
CP-26	Spalding Skate Park	Spalding	1.3km
CP-27	Springfields Festival Gardens	Spalding	550m
CP-28	Low Fulney Allotments	Low Fulney	850m
CP-29	Berry Grove Childcare Nursery	Low Fulney	900m
CP-30	Honeypot Day Nursery	Weston Hills	900m
CP-31	Weston Hills CofE Primary School	Weston Hills	1.1km
CP-32	St John the Evangelist Church	Weston Hills	950m
CP-33	Cowbit Park	Cowbit	650m
CP-34	Cowbit St Mary's CofE Primary School	Cowbit	1.1km
CP-35	St Mary's Church	Cowbit	1.1km
CP-36	Cowbit Post Office	Cowbit	950m

Receptor ID	Receptor Name	Location	Distance from Site
CP-37	St James Church	Moulton Chapel	850m
CP-38	Moulton Chapel Community Centre	Moulton Chapel	875m
CP-39	Moulton Chapel Methodist Church	Moulton Chapel	875m
CP-40	Moulton Chapel Primary School	Moulton Chapel	1.7km
CP-41	Moulton Chapel Post Office	Moulton Chapel	1km
CP-42	Wiles Avenue Playspace	Moulton Chapel	1km
CP-43	Moulton Chapel Playing Fields	Moulton Chapel	1.4km
CP-44	Delgate Bank Allotments	Weston	500m
CP-45	St Mary's Church	Cowbit	1.1km
CP-46	Weston Village Hall	Weston	600m
CP-47	Weston St Mary's CofE Primary School	Weston	550m
CP-48	John Harrox Primary School	Moulton	1.9km
CP-49	Moulton Parish Cemetery	Moulton	1.7km
CP-50	Moulton Harrox Sports Field	Moulton	1.9km
CP-51	Spalding Golf Club	Spalding	1km
CP-52	Cowbit Village Hall	Cowbit	1km
CP-53	Momotaro Garden at Springfields Festival Gardens	Spalding	550m

Receptor ID	Receptor Name	Location	Distance from Site
CP-54	Warren Free Memorial Garden	Spalding	1.25km

Public Rights of Way (PRoW)

10.6.36. As shown in **ES Figure 15-2: Existing Walking and Cycling Network** (Doc Ref. 6.2), there are 12 PRoWs crossing the Solar Development Areas and Inter-Array Connections and one area of Common Land:

- Crow/7/1;
- Crow/17/1;
- Crow/17/2;
- Crow/11/1;
- Flee/6/1;
- Flee/7/1;
- Flee/8/1;
- Flee/8/2;
- Holb/14/1;
- Holb/15/1;
- Crow/12/1;
- Whap/1/1; andMartins Road Common Land.

10.6.37. There is one PRoW located within the Grid Connection Route: Wstn/3/1. Therefore, there are a total of 13 PRoWs located within the Order Limits.

10.6.38. There are a further 19 PRoWs located within 500m of the Site, however, these do not enter the Order Limits. These include the following:

- Cowb/1/2;
- Cowb/1/3;
- Cowb/9/3;
- Cowb/9/4;
- Crow/7/1;
- Crow/13/1;
- DeeN/5/1;
- Crow/11/2;
- GedH/4/1;
- Holb/14/2;
- Holb/15/2;
- Holb/15/3;
- SuSJ/2/3;
- Spal/1064/1;

- Spal/986/1;
- Cowb/2/2;
- Cowb/2/3;
- Cowb/7/1;
- Cowb/8/1.

Future Baseline

10.6.39. In absence of the Scheme, the future baseline would remain largely similar as the current baseline for human health. It is assumed that population growth would occur, as illustrated in Table 10-18.

Table 10-18: Population projections in 2043[35]

Area	Total Population	0-15 years (%)	16-64 years (%)	65+ years (%)
Study Area	n/a	n/a	n/a	n/a
South Holland	114,097	13.7	56.7	29.6
Lincolnshire	853,721	12.8	57.5	29.8
East Midlands	5,498,684	14.7	61.5	23.8
England	63,494,469	15.2	62.3	22.5

10.7. Embedded Mitigation

10.7.1. This section contains the mitigation measures relevant to this chapter that are already incorporated into the Scheme design and the management plans submitted with the DCO application, as described in **ES Chapter 2: The Scheme** (Doc Ref. 6.1).

10.7.2. Mitigation measures set out in ES Chapter 6: Air Quality (Doc Ref 6.1), ES Chapter 12: Landscape and Visual (Doc Ref 6.1), ES Chapter 13: Noise and Vibration (Doc Ref 6.1), ES Chapter 14: Socio-Economics and Land Use (Doc Ref 6.1), and ES Chapter 15: Traffic and Access (Doc Ref 6.1) are also relevant for minimising effects on local receptors associated with health and wellbeing.

10.7.3. As described in **ES Chapter 16: Other Environmental Topics** (Doc Ref 6.1), all phases of the Scheme will be designed and managed to be fully compliant with guidelines and limits pertaining to EMFs. The Scheme will comply with the UK public exposure limits for EMFs. The effects of EMFs on workers will be

[35] ONS Subnational population projections for England: 2022-based – local authority based by single year of age

controlled and mitigated to acceptable levels through the legislative framework, The Control of Electromagnetic Fields at Work Regulations 2016[36]. Further information is provided within the **EMF Compliance Assessment** (Doc Ref 7.8).

Outline Construction Environmental Management Plan (CEMP) and Outline Decommissioning Environmental Management Plan (DEMP)

10.7.4. An **Outline CEMP** (Doc Ref. 7.10) and **Outline DEMP** (Doc Ref. 7.12) have been prepared alongside the DCO Application. The **Outline CEMP** (Doc Ref. 7.10) sets out measures to reduce amenity impacts on sensitive receptors during the construction phase (such as noise, air quality, transport, and landscape), which will in turn mitigate the effects on receptors from a human health and wellbeing perspective. The **Outline DEMP** (Doc Ref. 7.12) includes similar measures set out in the **Outline CEMP** (Doc Ref. 7.10). These include, but are not limited to, the following:

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on-site;
- A Community Liaison Group will be set up in accordance with the relevant DCO requirement prior to construction and will continue through until final commissioning of the Scheme as a formal forum for local issues to be raised. A Community Liaison Officer will be appointed to lead discussions with local communities and also act as the primary point of contact should there be any queries or complaints;
- Environmental monitoring of the Scheme and its impacts throughout the construction phase. The Principal Contractor will allocate a designated Environment Manager, who will observe site activities and report any deviations from the detailed CEMP(s) at the earliest opportunity;
- Core construction working hours on-site of 07:00 to 19:00 on Monday to Friday and 08:00 to 13:30 on Saturday;

[36] UK Government (2016) The Control of Electromagnetic Fields at Work Regulations 2016. Available at: https://www.legislation.gov.uk/uksi/2016/588/contents [Accessed: 28/07/25].

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken;
- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible;
- Ensuring that all appropriate processes, procedures and measures are in place to minimise noise before works begin and throughout the construction programme;
- Use of modern plant, complying with applicable UK noise emission requirements;
- Use of screening locally around significant noise producing plant and activities;
- Temporary site lighting during construction required to enable safe working during construction in hours of darkness will be designed as far as reasonably practical so as not to cause a nuisance outside of the Order Limits.

Outline Operational Environmental Management Plan (OEMP)

10.7.5. An **Outline OEMP** (Doc Ref. 7.11) (Doc. Ref.7.12) has been prepared alongside the DCO Application and set out measures to reduce amenity impacts on sensitive receptors during the operational and decommissioning phases respectively.

10.7.6. As outlined in the **Outline OEMP** (Doc Ref. 7.11), primary mitigation measures are embedded within the Scheme to reduce operational effects (such as noise, air quality, transport, and landscape) which will in turn mitigate the effects on the local community and existing facilities from a human health and wellbeing perspective. These include, but are not limited to, the following:

- The specification of plant machinery with low noise emission and properly attenuated supply and extract terminations to help minimise noise emissions during the operational phase. The use of enclosures, local screening, mufflers, and silencers will also be used as appropriate;
- Prioritising waste prevention, followed by preparing for reuse, recycling and recovery and lastly disposal to landfill as per the waste hierarchy. All management of waste will be in accordance with the relevant regulations and waste will be transported by licensed waste hauliers to

waste management sites which hold the necessary regulatory authorisation and/or permits for those wastes consigned to them;

- Ensuring vehicles entering and leaving sites are covered to prevent escape of materials during transport;
- Use of appropriate site control measures to minimise the migration of contaminated dusts and soils from the Site to adjacent areas;
- An emergency spillage action plan will be produced, which staff will be required to have read and understood prior to commencement of work, and provisions made to contain any leak/spill.

Outline Construction Traffic Management Plan (CTMP)

10.7.7. An **Outline CTMP** (Doc Ref. 7.13) is submitted alongside the DCO Application. This document details measures to regulate construction traffic and will be agreed with the Local Highway Authority prior to starting the construction phase.

Outline Public Rights of Way Management Plan (PRoW-MP)

10.7.8. The **Outline Public Rights of Way Management Plan (PRoW-MP)** (Doc. Ref.7.15) details the design and mitigation measures incorporated into the Scheme to avoid and mitigate adverse effects on PRoW users, and to maximise opportunities to improve the PRoW network, during the construction, operational and decommissioning phases of the scheme.

Outline Landscape and Ecology Management Plan (LEMP)

10.7.9. The **Outline Landscape and Ecology Management Plan (LEMP)** (Doc. Ref.7.16) sets out how adverse effects on landscape and ecology will be mitigated and how opportunities to enhance associated assets will be implemented. It also sets out the illustrative landscape masterplan for the Scheme and provides design principles for the provision of mitigation planting to screen views and to enhance habitats.

10.7.10. As set out in the **Outline LEMP** (Doc Ref. 7.16), a permissive path will be secured provided connecting PRoWs between Queens Bank and Shepeau Stow, following the boundary of the Settlement of Cate's Cove Corner Scheduled Monument. The permissive path will be located within a corridor that measures approximately 20m in width. The permissive path will be suitable for pedestrians, cyclists and horse riders and provide information boards on the historic and natural environment. The indicative alignment of the permissive path is shown on **ES Figure 2-2: Illustrative Solar Development**

Area and Inter-Array Connections Layout Plan (Doc Ref. 6.2). This figure shows the indicative location of the permissive path only, with the final location being subject to landowner agreement. The design and implementation of the permissive path proposed will be secured through a requirement of the **Draft DCO** (Doc Ref. 3.1) and in accordance with the **Outline LEMP** (Doc Ref. 7.16).

10.8. Assessment of Potential Impacts and Likely Significant Effects

10.8.1. The Scheme as outlined in **ES Chapter 2: The Scheme** (Doc Ref. 6.1) has been considered in assessing the potential impacts and likely significant effects of the Scheme, whilst considering the embedded mitigation described within Section 10.7.

Construction Phase

10.8.2. Construction phase effects are those that result from activities during enabling works, construction and commissioning activities. The construction period of the Scheme is expected to be up to four years in duration. The assessment assesses a worst-case scenario, in which construction related effects last the length of the construction period, although this is not considered to be likely for many of the effects considered. By their nature, construction impacts will be temporary and reversible. Due to this, and in combination with the fact that many construction-related effects will not last the duration of the construction phase, this human health assessment considers construction impacts to be short-term and temporary.

Air quality, dust, and odour

10.8.3. The construction activities associated with the Scheme have the potential to reduce air quality, which could potentially lead to adverse health effects on local communities. Air quality impacts have the potential to affect health and wellbeing through respiratory irritation and exacerbation of existing conditions (i.e. asthma), cardiovascular effects from fine particulate matter, stress and anxiety related to perceived pollution risks, and reduced enjoyment of outdoor spaces due to dust soiling.

10.8.4. In line with **ES Chapter 6: Air Quality** (Doc Ref. 6.1), the receptor sensitivity is considered high at locations where members of the public are exposed over a longer time period, including residential receptors. Potentially vulnerable population to air quality impacts include elderly residents, deprived populations, and population of higher rates of health conditions including respiratory conditions. These vulnerable groups have high sensitivity to air quality impacts due to a greater proportion of time typically spent at home, existing respiratory and cardiovascular conditions, reduced physiological and cardiovascular capacity to compensate for additional respiratory stress, and increased susceptibility to stress and disease from environmental changes. As outlined in Section 10.6, the average standardised mortality ratio for respiratory diseases in the study area was lower (i.e. better) than South

Holland, Lincolnshire, and the national average. Given this, the sensitivity of the general population within the study area is considered medium, with the sensitivity of vulnerable groups (i.e. those with respiratory conditions and poor health) within the study area considered high.

10.8.5. **Chapter 6: Air Quality** (Doc Ref. 6.1) assesses the risk of air quality, dust and odour impacts during the construction phase. It considers the impact on human health due to emissions of air pollutants, including dust and vehicle exhaust emissions from construction activities. The air quality impacts arising from the construction phase of the Scheme would be temporary over the construction period.

10.8.6. As set out in **Chapter 6: Air Quality** (Doc Ref. 6.1), based on guidance from the Institute of Air Quality Management (IAQM), the change in annual mean NO_2, PM_{10}, and $PM_{2.5}$ concentrations associated with the construction of the Scheme is very low at all sensitive receptors. Following good practice measures outlined in IAQM guidance and mitigation measures in the **Outline CEMP** (Doc Ref 7.10), any impacts relating to dust soiling or human health from construction dust would not be significant. The magnitude of impact on air quality, dust and odour is therefore considered to be very low.

10.8.7. Overall, the likely effect on human health arising from impacts on air quality during the construction phase of the Scheme is assessed to be **negligible adverse (not significant)** for the general population and **minor adverse (not significant)** for the vulnerable population.

Electric and Magnetic Fields (EMFs)

10.8.8. As outlined in **ES Chapter 16: Other Environmental Topics** (Doc Ref. 6.1), all electrical equipment emits EMFs. Human exposure to such fields can cause health problems if they are persistent and/or they are of high strength. At low frequencies and field strengths typically encountered in everyday environments, such as near power lines or AC cables, the induced currents are generally too small to produce these effects.

10.8.9. Therefore, the magnitude of impact is dependent on both the field strength and the exposure time. Potential sources of EMFs include overhead lines, underground cables, PV inverters, and transformer stations located within solar stations across the Scheme, BESS Compound, and On-Site Substation Compounds.

10.8.10. The **EMF Compliance Assessment** (Doc Ref. 7.8) considers the potential EMFs generated by the Scheme's electrical equipment. As outlined in **ES Chapter 16: Other Environmental Topics** (Doc Ref. 6.1), all phases of the Scheme will be

designed and managed to be fully compliant with guidelines and limits pertaining to EMFs. The Scheme will comply with the UK public exposure limits for EMFs. The effects of EMFs on construction workers will be controlled and mitigated to acceptable levels compliance with The Control of Electromagnetic Fields at Work Regulations 2016[37].

10.8.11. During construction and prior to energisation, transmission equipment would not produce any significant EMFs. Therefore, construction effects are not considered further.

10.8.12. **ES Chapter 16: Other Environmental Topics** (Doc Ref. 6.1) identified no potential significant effects in the assessment. Therefore, it is considered that EMFs will have **no effect** on human health during the construction phase.

Employment and training opportunities

10.8.13. Construction activities associated with the Scheme will provide access to employment and training opportunities, which will provide a beneficial health impact to these workers. There is evidence that employment matters to health, not only from an economic perspective, but also in terms of quality of life and mental health. Good quality work protects against social exclusion through the provision of income, social interaction, identity, and purpose, and ultimately resulting in improved local mental health.

10.8.14. An assessment of the number of jobs created during the construction phase is provided in **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1). The Scheme will directly support, on average, approximately 184 on-site full-time equivalent (FTE) construction jobs per annum. The employment opportunities generated would be predominantly within the renewable energy sector, focusing on solar installation and electricity infrastructure. Such roles would contribute to developing skills for the UK's transition to net zero. Due to the specialised nature of certain construction activities, an estimated 60% of construction staff would likely be sourced from outside the study area. Taking into account additionality assumptions (displacement and multiplier effects), it is estimated that the Scheme will generate a net total of 207 FTE jobs per annum, 83 of which are likely to be within the study area (60-minute travel area).

[37] UK Government (2016) The Control of Electromagnetic Fields at Work Regulations 2016. Available at: https://www.legislation.gov.uk/uksi/2016/588/contents [Accessed 10 November 2025]

10.8.15. The **OSSCEP** (Doc Ref. 7.17) sets out a variety of interventions which the Applicant may pursue post-consent to maximise the economic benefits of the Scheme, for example promoting local employment, apprenticeships, and education. The production of a final Skills, Supply Chain and Employment Plan, which will be subject to approval by South Holland District Council, will be secured through the **Draft DCO** (Doc Ref. 3.1). This is likely to provide training and education opportunities for local communities during construction, contributing to positive health effects, as outlined above.

10.8.16. The sensitivity of the local workforce to employment changes has been assessed as medium, given unemployment rates in the area. The study area has a slightly higher unemployment than South Holland District, but a slightly lower unemployment rate than Lincolnshire, the East Midlands, and England. The 'medium' sensitivity is appropriate for both the general population and vulnerable groups, as it considers unemployment in the area, and both groups have access to the opportunities generated by the Scheme.

10.8.17. As the employment requirements associated with the Scheme's construction are relatively small compared to the labour pool of construction workers in the area (approximately 44,000[38]), the magnitude of impact of construction employment generation in the study area has been assessed as temporary low beneficial.

10.8.18. This results in a short-term temporary **minor beneficial effect** for both the general population and vulnerable groups which is considered **not significant**.

Landscape and visual

10.8.19. The Scheme has the potential to reduce the scenic beauty, sense of place, and other amenity benefits which people derive from looking at the surrounding environment, adversely affecting their mental health. If resulting in anxiety and depression, the perceived changes could also indirectly impact physical health.

10.8.20. The sensitivity of the general population with respect to human health effects as a result of visual changes and changes to the landscape is assessed as medium. Vulnerable groups such as elderly residents are likely to be more sensitive to changes in landscape and visual effects, and therefore, the sensitivity of vulnerable groups is assessed as high.

[38] ONS (2023) Business Register and Employment Survey (BRES).

10.8.21. An assessment of the likely impact of the construction phase on the Scheme on landscape and visual amenity is provided in **ES Chapter 12: Landscape and Visual** (Doc Ref. 6.1).

10.8.22. The **Outline LEMP** (Doc Ref. 7.16) and **Outline CEMP** (Doc Ref. 7.10) set out the measures proposed to mitigate potential effects on landscape, and to enhance the landscape value. Mitigation measures include protecting and retaining existing trees and vegetations via construction exclusion zones.

10.8.23. During the construction phase, significant adverse visual effects may arise at up to 22 of the 42 viewpoints assessed within **ES Chapter 12: Landscape and Visual** (Doc Ref. 6.1). Visual effects as a result of the Scheme at other viewpoints are not considered to be significant. Receptors experiencing likely significant residual visual effects during the construction period include residential and PRoW receptors up to 5 km from the Scheme, and recreational, road, and employment receptors within and adjacent to the Scheme.

10.8.24. There would be no likely significant residual visual effects on receptors beyond 5 km from the Scheme. This is due to the distance at which any changes would be perceived, alongside intervening screening from scattered settlement and vegetation, as well as the proportion of the view likely to be altered.

10.8.25. The number of receptors experiencing significant adverse effects represents a small minority of the study area population overall. Effects would also be short-term and reversible. The magnitude of impact is therefore assessed to be low.

10.8.26. Overall, the likely effect on health arising from landscape and visual effects during the construction phase of the Scheme is assessed to be short-term temporary **minor adverse (not significant)** for both the general population and vulnerable groups.

Noise and vibration

10.8.27. The construction activities associated with the Scheme have the potential to produce noise and vibration impacts which could potentially lead to adverse health effects on residents within the study area. Noise and vibration have the potential to affect both physical health and mental health through disturbance and annoyance, interference with daily activities, fear and perception of change, impacts on the enjoyment of outdoor spaces and the stress and anxiety which may result.

10.8.28. An assessment of the potential for noise and vibration impacts during the construction phase is provided in **ES Chapter 13: Noise and Vibration** (Doc Ref

6.1). The chapter assesses potential direct effects due to construction noise and vibration emissions, and indirect effects due to construction traffic noise.

10.8.29. **ES Chapter 13: Noise and Vibration** (Doc Ref 6.1) outlines that construction activities are likely to result in moderate adverse significant residual effects at RG53 (residential receptors at Broad Gate) during night-time (23:00 – 07:00) Horizontal Directional Drilling (HDD) construction activity (if these works are required) and construction traffic noise effects at receptors along Langary Gate Road (residential receptors). The **Outline CTMP** (Doc Ref. 7.13) sets out proportionate and practicable means of managing construction traffic and associated effects. Despite these measures, residual effects in relation to noise are predicted to remain significant at Langary Gate Road receptors due to the proximity of the Site access and the intensity of temporary construction traffic flows during peak periods of activity.

10.8.30. Construction activities are anticipated to result in negligible or minor adverse (not significant) effects at all other receptors.

10.8.31. **ES Chapter 13: Noise and Vibration** (Doc Ref 6.1) outlines that construction vibration effects are considered not significant for all receptors in all construction phases.

10.8.32. **ES Chapter 13: Noise and Vibration** (Doc Ref 6.1) provides an assessment of effects on PRoW users and recognises that short-term exposure to noise can cause disturbance to PRoW users and result in adverse noise effects, impacting quality of life and health. Given the linear nature of PRoWs, the range of noise impacts along them that forms the ambient noise environment, and the transient usage of a PRoW, a material change in the experience of using the PRoW as a whole as a result of noise emissions from the Scheme, which could affect PRoW users' health or quality of life, is not anticipated. The **Outline CEMP** (Doc Ref 7.10) outlines effective measures to minimise the effects of noise on PRoW users. As such, construction noise and vibration effects on PRoW users are identified as not significant.

10.8.33. The sensitivity of the general population to noise effects is considered to be medium. However, groups vulnerable to noise and vibration impacts include night shift workers (including those working on the Scheme), elderly residents, populations with higher levels of deprivation, unemployed residents, and those with health conditions limiting daily activities. These vulnerable groups are likely to have a high sensitivity to noise impacts due to a greater proportion of time typically spent at home, existing health conditions, reduced ability to

adapt to environmental changes, higher risk of sleep disturbance, and increased susceptibility to stress from environmental changes.

10.8.34. The residential receptors at which significant noise adverse effects are identified represent 16 homes out of the 460 homes which fall into the study area set out within **ES Chapter 13: Noise and Vibration** (Doc Ref 6.1). Therefore, a small minority of the study area population will be affected, and the magnitude of impact on human health associated with noise and vibration during construction is assessed to be low.

10.8.35. Overall, the likely effect on health arising from noise and vibration effects during the construction phase of the Scheme is assessed to be short-term temporary **minor adverse (not significant)** for the general population and vulnerable groups.

Access to PRoW and active travel

10.8.36. The Scheme has the potential to impact accessibility and safety of PRoW and active travel networks where construction activities intersect with or affect these routes. Temporary closures and diversions to PRoW during the construction phase could influence physical activity levels and recreational opportunities for the local population. Local residents may experience increased journey times for active travel and reduced accessibility to open spaces and recreational areas. The temporary loss of circular walking and cycling routes could potentially discourage physical activity if alternative routes are perceived as less convenient or attractive.

10.8.37. As outlined in **ES Chapter 15: Traffic and Access** (Doc Ref. 6.1), impacts on PRoW receptors during the construction of the Scheme have been determined through consideration of severance, pedestrian delay, pedestrian and cyclist amenity, and fear and intimidation.

10.8.38. The sensitivity of receptors varies across different population groups. The general population is considered to have low sensitivity to changes in active travel routes, based on their ability to adapt to alternative routes when available. However, vulnerable groups demonstrate higher sensitivity and require specific consideration. Vulnerable groups include the elderly, those with mobility impairments, families with young children, people without access to private vehicles or public transport, populations with health conditions, and deprived populations. Many vulnerable individuals have a greater reliance on walking for transport and may have limited ability to utilise longer or steeper diversions. Changes to familiar walking routes can cause particular difficulties for those with reduced confidence in navigation or those requiring regular rest

stops. The potential for increased social isolation is also a key consideration if routes become inaccessible to vulnerable users. Therefore, vulnerable groups are considered to have medium sensitivity to changes in active travel routes.

10.8.39. **ES Chapter 15: Traffic and Access** (Doc Ref. 6.1) sets out that no PRoW will be subject to permanent diversions. It is anticipated that no PRoW within the Order Limits of the Scheme will require temporary closure or diversions, with the exception of PRoW Wstn/3/1 and PRoW Crow/12/1. As set out in the **Outline PRoW Management Plan (MP)** (Doc Ref. 7.15), PRoW Wstn/3/1 and PRoW Crow/12/1 are footpaths located within the Grid Connection Route and the Overhead Inter-Array Connection respectively and, if required, may be closed for 4-8 weeks during construction to enable stringing activities. In addition, a temporary diversion corridor has been identified for the Common Land on Martins Road to facilitate construction activities.

10.8.40. The Scheme will further minimise construction impacts through implementation of an **Outline CTMP** (Doc. Ref. 7.13) and **Outline CEMP** (Doc. Ref. 7.10). Mitigation includes maintaining access to PRoW or otherwise providing temporary PRoW diversion routes where necessary to avoid any PRoW closures or potential conflicts with the Scheme where possible. The diversion routes will be agreed with the local authorities prior to construction. Where necessary, sufficient protection/separation between existing PRoW and construction routes will be provided. Therefore, impacts on the Scheme at all PRoW receptors and the Common Land on Martins Road have been assessed as very low.

10.8.41. Therefore, the overall effect on PRoW and active travel routes as a result of the Scheme is considered **negligible adverse** for all PRoW and the Common Land on Martins Road for both the general population and vulnerable groups, both of which are considered **not significant**.

Traffic and access

10.8.42. The Scheme has the potential to impact accessibility, amenity, and safety of the road network where construction activities intersect with or affect these routes. Local residents may experience increased journey times, reduced accessibility, and safety risks, impacting both mental health (due to stress) and physical health. The sensitivity of receptors is considered to be medium for both population groups.

10.8.43. As outlined in **ES Chapter 15: Traffic and Access** (Doc Ref. 6.1) and the **Outline CTMP** (Doc Ref. 7.13), temporary partial or full road closures may be required in some locations to complete the works associated with the Scheme, including

construction of new access points, improvements to existing access, and any other street works. Any road closures are expected to be for a short duration to minimise impacts on the local highway network. Full closures are only required, where and when necessary, on narrow roads where retaining public access is not feasible. Where possible, access for emergency vehicles, pedestrians and cyclists will be maintained during the temporary closures. Advance warning will be provided in line with local highway authority guidance and diversion routes will be put in place. No permanent road closures will be required. Management measures will be set out in the detailed CTMPs.

10.8.44. **ES Chapter 15: Traffic and Access** (Doc Ref. 6.1) assesses the impact on severance for all link and junction receptors. Temporary full closures are only anticipated to be required on minor unclassified roads with relatively low traffic flows, and it is not expected that there would be multiple closures at the same time or in close proximity to each other.

10.8.45. Given the temporary closures will be for very short periods within the construction phase with alternative routes provided and mitigation measures set out in the **Outline CTMP** (Doc Ref. 7.13) and **Outline CEMP** (Doc. Ref. 7.10), all transport and access effects in the construction phase are considered to generate a low magnitude of impact.

10.8.46. Therefore, the likely effect is considered to be **minor adverse (not significant)**. This includes effects on driver and passenger delay, severance, non-motorised user amenity, fear and intimidation, road safety, and large loads.

Social infrastructure

10.8.47. The construction phase has the potential to affect local social infrastructure through temporary increases in population from the construction workforce. As outlined in **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1), it is estimated that on average the construction phase will generate on-site direct employment of 138 FTE jobs per annum, while the peak construction workforce is estimated at 855 FTE staff per day. It is assumed that 60% of the workforce will live outside of the study area (60-Minute Drive Time Area) and therefore stay in temporary accommodation during the working week (potentially creating demand for local services and facilities), returning to their permanent residences during the weekends.

10.8.48. However, as set out in **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1), it is expected that construction workers will be housed within large visitor accommodation establishments in nearby towns and cities with good public transport access to London and other metropolitan areas, rather than

within smaller establishments within the more rural settlements of South Holland which are more local to the Site. This accommodation strategy would allow the contractor to efficiently transport workers via shuttle bus to the Site. **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1) considers a worst-case scenario of peak workforce employment of 855 FTE staff and typical seasonal occupancy levels. It finds that 100% of the Scheme's construction workers could be accommodated in major hotels within 60-minutes' drive of the Scheme. Major hotels have been defined as hotels with over 50 rooms and classed as either 'economy' or 'midscale' by CoStar[39], a property resource website there are no such hotels in South Holland.

10.8.49. The closest primary healthcare centre is Moulton Medical Centre, a GP practice located within 2km of the Scheme. Baseline data indicates that at present the number of patients per GP is slightly below (i.e. better than) the national target of 1:1,800. The nearest hospital, Pilgrim Hospital, is located 14km to the north east of the Scheme in Boston. The construction workers required to build the Scheme could place additional demand on local healthcare services. However, an estimated 40% of construction workers would reside locally already and would be able to attend their registered practice near their home. It is also likely that construction workers not local to the area will remain registered with the GP surgery near their permanent home, or utilise health services near to their place of temporary accommodation which, as set out above, is unlikely to be in the immediate local area.

10.8.50. There are five schools located within 2km of the Site. An estimated 40% of workers would already live within the local area. It is not anticipated that non-local workers would move to the local area with their families for the duration of the four year construction period and put pressure on local schools; rather, it is anticipated that these workers would stay in temporary accommodation during the week and return home at the weekend.

10.8.51. There are a number of other open spaces, and community and leisure assets, within proximity to the Scheme. **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1) identifies no adverse effects on these receptors as a result of increased demand from workers, land take or severance impacts.

10.8.52. Activities related to the construction of the Scheme may restrict, or create severance to, the accessibility of social infrastructure. However, **ES Chapter**

[39] CoStar (2025) Available at: https://www.costar.com/news/gb [Accessed: 02/12/25].

15: Traffic and Access (Doc Ref. 6.1) outlines that no significant severance effects were identified as a result of the construction of the Scheme. Eight road links and four junctions were assessed to experience minor adverse effects (not significant) due to construction, with all other tested road links and junctions expected to experience negligible adverse effects (not significant). Temporary PRoW closures will be for very short periods within the construction phase with alternative routes provided and mitigation measures set out in the **Outline CTMP** (Doc Ref. 7.13).

10.8.53. For the general population, sensitivity to changes in social infrastructure availability and accessibility is considered to be medium. The potential impact on social infrastructure availability and accessibility is assessed as being of very low magnitude. This results in a **negligible adverse** effect, which is **not significant**. This assessment reflects the temporary nature of impacts, the likely distribution of workers across the area, and the tendency for construction workers to maintain limited interaction with local social infrastructure.

10.8.54. For vulnerable groups including elderly residents, families with young children, and those with specific healthcare needs, the sensitivity to changes in social infrastructure availability and accessibility is considered high. However, given the pattern of workforce demand and the temporary nature of impacts, the magnitude of impact remains very low, resulting in a **minor adverse effect**, which is **not significant**.

Mental health

10.8.55. The construction phase has potential to affect mental health and wellbeing through various impact pathways. The introduction of construction activities represents a substantial change to this predominantly rural area that could impact mental wellbeing through environmental disruption, changes to familiar landscapes, and temporary effects on social cohesion.

10.8.56. The sensitivity of the general population, defined as those without mental health conditions, is considered to be medium. Vulnerable groups include those with existing mental health conditions, populations with limiting disabilities and long-term illnesses, deprived groups, and populations vulnerable to social isolation, including the elderly. The sensitivity of vulnerable groups to mental health effects is considered high.

10.8.57. Potential adverse mental health effects during construction relate to noise and vibration, access to PRoW and active travel, traffic and access, landscape and visual, and social infrastructure impacts. The discussion above has set out that adverse effects relating to these determinants are considered not significant,

apart from moderate adverse significant noise effects on residential receptors at Langary Gate Road and Broad Gate. Likely significant landscape and visual effects are identified, impacting the scenic beauty, sense of place, and amenity benefits from the landscape and visual environment. This has the potential to adversely impact mental health.

10.8.58. Conversely, beneficial mental health effects would be associated with the employment and training opportunities created by the Scheme, due the increased income, sense of purpose and community associated with these opportunities, as outlined in the **OSSCEP** (Doc Ref. 7.17).

10.8.59. It is acknowledged that the potential for environmental changes associated with the Scheme are likely to create uncertainty and anxiety for local people who might anticipate that they will be adversely affected. For this reason, the Applicant has undertaken a comprehensive and robust Environmental Impact Assessment to identify and as far as practicable mitigate any potential adverse effects. The Applicant is committed to meaningful engagement with local people and feedback gathered to date has informed the evolution of the Scheme. As set out in the **Outline CEMP** (Doc Ref. 7.10), prior to construction and continuing through until final commissioning of the Scheme, a Community Liaison Group will be set up in accordance with the relevant DCO requirement, acting as a formal forum for local issues to be raised. A Community Liaison Officer will be appointed to lead discussions with local communities and also act as the primary point of contact should there be any queries or complaints.

10.8.60. It is not anticipated that there will be any effects on social cohesion resulting from the Scheme. As set out above, it is anticipated that non-local workers will be temporarily accommodated in larger settlements, and will not therefore place pressure on social infrastructure or change the profile and dynamics of the local community. There is no evidence that the Scheme will adversely affect social connections by creating physical or perceived barriers between communities or altering patterns of community interaction, due to mitigation measures outlined in the **Outline CTMP** (Doc Ref. 7.13).

10.8.61. Overall, the Scheme's impact on mental health is considered to be low, when considering the overall balance of adverse and beneficial effects. It is considered that the Scheme will have **minor adverse** effects on both the general population and on vulnerable groups. These are considered **not significant**.

Operational Phase

10.8.62. The operational requirements of the Scheme are limited to routine maintenance and monitoring activities.

10.8.63. Operational effects are those effects associated with operational and maintenance activities during the generating lifetime of the Scheme. Timescales associated with these effects can be categorised by the following:

- Short-term: up to 12 months after construction;
- Medium-term: 1-5 years after construction;
- Reversible long-term effects: effects which last throughout the lifetime of the Scheme, but ease once the Scheme has been decommissioned; and
- Permanent effects: effects which cannot be reversed following decommissioning.

Air quality, dusty and odour

10.8.64. As set out in **ES Chapter 6: Air Quality** (Doc Ref. 6.1), due to the nature of the Scheme, a significant change to traffic flow is not anticipated to occur during the operating and maintenance phase of the Scheme. Dust emissions during operation will be managed, as set out in the **Outline OEMP** (Doc Ref. 7.11), including ensuring vehicles entering and leaving sites are covered to prevent the escape of materials during transport. Therefore, there are no likely significant residual air quality impacts predicted during operation and maintenance. A detailed assessment of emissions from operational road traffic and the subsequent impact on local air quality has therefore been scoped out from further assessment.

10.8.65. Therefore, it is considered likely that there will be **no effect** on health due to air quality, dusty and odour impacts during the Scheme's operation.

Electric and Magnetic Fields (EMFs)

10.8.66. As outlined in **ES Chapter 16: Other Environmental Topics** (Doc Ref. 6.1), all electrical equipment emits EMFs. Human exposure to such fields can cause health problems if they are persistent and/or they are of high strength. At low frequencies and field strengths typically encountered in everyday environments, such as near power lines or AC cables, the induced currents are generally too small to produce these effects. Therefore, the magnitude of impact is dependent on both the field strength and the exposure time. Potential sources of EMFs include overhead lines, underground cables, PV

inverters, and transformer stations located within solar stations across the Scheme, BESS Compound, and On-Site Substation Compounds.

10.8.67. The **EMF Compliance Assessment** (Doc Ref. 7.8) considers the potential EMFs generated by the Scheme's electrical equipment. As outlined in **ES Chapter 16: Other Environmental Topics** (Doc Ref. 6.1), all phases of the Scheme will be designed and managed to be fully compliant with guidelines and limits pertaining to EMFs. The Scheme will comply with the UK public exposure limits for EMFs.

10.8.68. As outlined in **ES Chapter 16: Other Environmental Topics** (Doc Ref. 6.1) and the **EMF Compliance Assessment** (Doc Ref. 7.8), typical magnetic and electric field levels for the Inter-Array and Grid Connection 400kV overhead line are below the reference level for the public exposure limits in UK policy.

10.8.69. As outlined **in ES Chapter 16: Other Environmental Topics**, for users of PRoWs, any EMF effects are expected to be minimal and **not significant** due to their transient exposure.

10.8.70. **ES Chapter 16: Other Environmental Topics** (Doc Ref. 6.1) identified no potential significant effects in the assessment. Therefore, it is considered that EMFs will have **no effect** on human health during the operational phase.

Employment and training opportunities

10.8.71. As set out in **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1), the Scheme will generate an estimated 10 FTE net direct jobs during operation. The jobs created will be in the renewable energy sector, assisting in the UK's transition to net zero. Accounting for additionality assumptions, it is estimated that there would be a net gain of 11 FTE jobs supported by activities on Site as a result of the Scheme, five of which are likely to be from within the study area.

10.8.72. As discussed, the sensitivity of the local workforce to employment changes has been assessed as medium, given unemployment rates in the study area. Vulnerable groups are defined as unemployed residents within the study area. The 'medium' sensitivity is appropriate for both the general population and vulnerable groups, as it considers unemployment in the area, and both groups have access to the opportunities generated by the Scheme.

10.8.73. These additional jobs generated by the Scheme would contribute to local job growth. However, the overall change would be very small in the context of the total number of jobs locally. Therefore, the magnitude of impact is considered very low.

10.8.74. The **OSSCEP** (Doc Ref. 7.17) sets out a variety of interventions which the Applicant may pursue post-consent to maximise the economic benefits of the Scheme, for example promoting local employment, apprenticeships, and education. The production of a final Skills, Supply Chain and Employment Plan, which will be subject to approval by South Holland District Council, will be secured through the **Draft DCO** (Doc Ref. 3.1). This is likely to provide training and education opportunities for local communities during operation, contributing to positive health effects, as outlined above.

10.8.75. Overall, operational employment as a result of the Scheme has been considered a long-term **negligible beneficial effect (not significant)**.

Landscape and visual

10.8.76. An assessment of the likely impact of the operational phase on the Scheme on the landscape and visual amenity is provided in **ES Chapter 12: Landscape and Visual** (Doc Ref. 6.1). Likely significant residual effects have been considered following the implementation of additional mitigation measures at operational phase Year 15 to allow for the establishment of replacement and additional planting. It is therefore considered that at Year 15, vegetation would have established, and some adverse effects would be reduced due to being partially screened or filtered. The effects associated with mitigation planting described within the **Outline LEMP** (Doc Ref. 7.16) have been assumed to be permanent for a worst-case assessment of landscape change.

10.8.77. The **Outline LEMP** (Doc Ref. 7.16) and **Outline OEMP** (Doc Ref. 7.11) set out the measures proposed to mitigate potential landscape and visual effects.

10.8.78. During the operation phase (Year 1 winter), significant visual effects may arise at 21 viewpoints out of the 42 assessed, as outlined in **ES Chapter 12: Landscape and Visual** (Doc Ref. 6.1). During the operation phase (Year 15 summer), significant visual effects may arise at 18 viewpoints. Visual effects as a result of the Scheme at other viewpoint locations are not considered to be significant. Receptors experiencing likely significant residual visual effects during the operational phase include residential and PRoW receptors up to 5 km from the Scheme, and recreational, road, and employment receptors within and adjacent to the Scheme.

10.8.79. As discussed, the sensitivity of the general population to landscape and visual effects has been assessed as medium, with vulnerable populations assessed as high.

10.8.80. The number of receptors experiencing significant adverse effects represents a small minority of the study area population overall. Based on this, the magnitude of impact is assessed to be low.

10.8.81. Overall, the likely effect on health arising from landscape and visual effects during the operational phase of the Scheme is assessed to be long-term reversible **minor adverse (not significant)**.

Noise and vibration

10.8.82. An assessment of the impact of operation on noise levels is provided in **ES Chapter 13: Noise and Vibration** (Doc Ref. 6.1). No likely significant residual effects are identified during the operational phase.

10.8.83. **ES Chapter 13: Noise and Vibration** (Doc Ref. 6.1) provides an assessment on operational noise effects on PRoW users. As discussed, given the linear nature of PRoWs, the range of noise impacts along them that forms the ambient noise environment, and the transient usage of a PRoW, a material change in the experience of using the PRoW as a whole as a result of noise emissions from the Scheme, which could affect PRoW users' health or quality of life, is not anticipated.

10.8.84. As discussed, the sensitivity of the general population to noise effects is considered to be medium for the general population, and high for vulnerable groups.

10.8.85. Furthermore, mitigation measures set out in the **Outline OEMP** (Doc Ref. 7.11) to minimise the effects of noise on PRoW users will be undertaken. As such, operational noise effects on PRoW users are identified as **not significant**.

10.8.86. Therefore, the magnitude of impact of operational direct and indirect noise and vibration effects is considered very low.

10.8.87. Overall, the likely effect on health arising from impacts on noise during the operational phase of the Scheme is assessed to be long-term **minor adverse** for both the general population and vulnerable groups, which is considered **not significant**.

Access to PRoW and active travel

10.8.88. As outlined in **ES Chapter 15: Traffic and Access** (Doc Ref. 6.1), the Scheme has been designed to ensure that there is no requirement for diversions or closures to PRoW during operation. All PRoW temporarily affected during construction would be fully reinstated to their permanent alignments for the operational phase, as set out in **Outline PRoW MP** (Doc Ref. 7.15).

10.8.89. As discussed, the sensitivity of the general population to access to PRoW and active travel effects is assessed to be low for the general population, and medium for vulnerable groups.

10.8.90. As outlined in Section 10.7, a permissive path will be provided connecting PRoWs between Queens Bank and Shepeau Stow, following the boundary of the Settlement of Cate's Cove Corner Scheduled Monument. The permissive path will be located within a corridor that measures approximately 20m in width and will be suitable for pedestrians, cyclists and horse riders, also providing information boards on the historic and natural environment. The design and implementation of the permissive paths proposed will be secured through a requirement of the **Draft DCO** (Doc Ref. 3.1) and in accordance with the **Outline LEMP** (Doc Ref. 7.16).

10.8.91. Overall, the magnitude of impact on access to PRoW and active travel effects during operation is considered to be low beneficial.

10.8.92. Overall, it is considered that there will be a long-term **minor beneficial effect (not significant)** on the access to PRoW and active travel for the general population and vulnerable groups as a result of the Scheme's operation.

Traffic and access

10.8.93. As outlined in **ES Chapter 15: Traffic and Access** (Doc Ref. 6.1), the Scheme is expected to generate a low level of vehicle trips during operation. A worst-case scenario suggests up to 10 staff vehicles per day and five visitors per week during maintenance periods, the majority of which will be four-wheel drive vehicles and vans.

10.8.94. As discussed, the sensitivity of receptors to traffic and access effects is assessed to be medium for both populations.

10.8.95. During the proposed 40-year operational life of the Scheme, site-wide replacement of the solar PV panels, inverters, batteries and other equipment may be required in line with the design life of these components. Full replacement of infrastructure is expected to generate up to a maximum of 40 HGVs (or 80 two-way HGV movements) per day, and up to 75 staff car trips (150 two-way movements) per day. With fewer than 10 vehicle movements for any given hour, operational traffic and access will have a negligible magnitude of change for all assessment categories, with no potential for significant effects expected. As set out in the **Outline OEMP** (Doc Ref. 7.11), no specific mitigation measures or monitoring requirements are required during operation. Therefore, traffic and access impacts are assessed to have a very low magnitude of impact.

10.8.96. Overall, effects on health as a result of transport and access are considered **negligible adverse** (**not significant**) for all populations.

Social infrastructure

10.8.97. The operational phase has the potential to affect local social infrastructure through a permanent increase in population from the operational workforce.

10.8.98. As discussed, the sensitivity to effects on social infrastructure is assessed to be medium for the general population and high for vulnerable groups.

10.8.99. However, as outlined in **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1), the operation phase will generate a gross direct employment figure of 11 on-site FTE jobs per annum. This limited operational presence would not create any measurable demand on local social infrastructure. **ES Chapter 15: Traffic and Access** (Doc Ref. 6.1) outlines that all transport and access effects in the operational phase are considered not significant. It is therefore assessed that impacts on social infrastructure are very low.

10.8.100. Given the limited number of operational workers likely to be generated from outside the study area, alongside the not significant traffic and access impacts, it is assessed that the Scheme will have **no effect** on the general population and vulnerable groups.

Mental health

10.8.101. As discussed, the sensitivity to mental health effects is assessed to be medium for the general population and high for vulnerable groups.

10.8.102. Potential adverse mental health effects during operation relate to noise and vibration, access to PRoW and active travel, traffic and access, and social infrastructure impacts and have been mitigated through measures set out in the **Outline OEMP** (Doc Ref. 7.11). The discussion above has set out that adverse effects relating to these determinants are considered not significant.

10.8.103. Potential adverse mental health effects during operation also relate to landscape and visual impacts. Likely significant residual landscape and visual effects are identified, impacting the scenic beauty, sense of place, and amenity benefits from the landscape and visual environment. This has the potential to adversely impact mental health.

10.8.104. Beneficial mental health effects associated with the employment and training opportunities are likely to be created by the Scheme during the operational phase due the increased income, sense of purpose and community associated with these opportunities, as outlined in the **OSSCEP** (Doc Ref. 7.17). However,

employment and training effects on human health are not considered to be significant.

10.8.105. It is not anticipated that there will be any effects on social cohesion resulting from the Scheme. The number of workers will be relatively low and therefore will not put pressure on social infrastructure or change the profile and dynamics of the local community. There is no evidence that the Scheme will adversely affect social connections by creating physical or perceived barriers between communities or altering patterns of community interaction.

10.8.106. Overall, the Scheme's impact on mental health during the operational phase is considered to be low. It is considered that the Scheme will have **minor adverse** effects on both the general population and on vulnerable groups. These are considered **not significant**.

Decommissioning Phase

10.8.107. At the end of its operational life, the likely scenario is that the Scheme would be decommissioned, and infrastructure removed. The decommissioning phase of the Scheme would involve similar types of activities to the construction phase, including the use of heavy machinery, vehicle movements, and temporary disruption to local access routes. Therefore, the potential Human Health effects during the decommissioning phase are expected to be comparable to those identified for the construction phase. Comprehensive management measures that will be implemented through the **Outline DEMP** (Doc Ref. 7.12). These include restricted working hours, use of best available techniques, noise monitoring, and good communication with residents.

Air quality, dust and odour

10.8.108. As set out in **ES Chapter 6: Air Quality** (Doc Ref. 6.1), decommissioning air quality, dust and odour effects are anticipated to be similar to those identified during the construction phase.

10.8.109. As discussed, the sensitivity to air quality, dust and odour effects is assessed to be medium for the general population and high for vulnerable groups.

10.8.110. As set out in the **Outline DEMP** (Doc Ref. 7.12), a dust risk assessment will be prepared and Dust Management Plan agreed with the Local Authority prior to decommissioning. Appropriate standard and best practice control measures will be implemented.

10.8.111. Therefore, as outlined, the likely effect on human health arising from impacts on air quality during the decommissioning phase of the Scheme is assessed to

be **negligible adverse (not significant)** for the general population and **minor adverse (not significant)** for the vulnerable population.

Electric and magnetic fields (EMFs)

10.8.112. Transmission equipment would not produce any significant EMFs at the decommissioning stage, given there would be no solar farm from which to transmit energy from. Decommissioning effects are not assessed further and there is considered to be **no effect**.

Employment and training opportunities

10.8.113. As outlined in **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1), it is anticipated that employment would be generated to carry out decommissioning work. Although jobs generated by the decommissioning phase are temporary, they represent a positive economic effect for a substantial period, given the scale and nature of the decommissioning activities.

10.8.114. As discussed, the sensitivity to employment and training opportunities is assessed to be medium for both the general population and vulnerable groups.

10.8.115. It is assumed based on the activities taking place that the same number of jobs required for constructing the Scheme would be needed to carry out the activities required to remove the infrastructure from the Site. Taking into account additionality assumptions, the Scheme would support, on average, 207 total net jobs per annum during the decommissioning phase. Of these, 83 jobs per annum would be expected to be taken up by residents within the study area.

10.8.116. The **OSSCEP** (Doc Ref. 7.17) sets out a variety of interventions which the Applicant may pursue post-consent to maximise the economic benefits of the Scheme, for example promoting local employment, apprenticeships, and education. The production of a final Skills, Supply Chain and Employment Plan, which will be subject to approval by South Holland District Council, will be secured through the **Draft DCO** (Doc Ref. 3.1). This is likely to provide training and education opportunities for local communities during decommissioning, contributing to positive health effects, as outlined above.

10.8.117. Overall, the likely impact of decommissioning employment generation is assessed as a temporary beneficial **minor effect** for both the general population and vulnerable groups, which is considered **not significant**.

Landscape and visual

10.8.118. As discussed, the Scheme has the potential to reduce the scenic beauty, sense of place, and other amenity benefits which people derive from looking at the surrounding environment, adversely affecting their mental health. If resulting in anxiety and depression, the perceived changes could also indirectly impact physical health.

10.8.119. As discussed, the sensitivity to landscape and visual effects is assessed to be medium for the general population and high for vulnerable groups.

10.8.120. An assessment of the likely impact of the decommissioning phase on the Scheme on the landscape and visual amenity is provided in **ES Chapter 12: Landscape and Visual** (Doc Ref. 6.1).

10.8.121. The **Outline LEMP** (Doc Ref. 7.16) and **Outline DEMP** (Doc Ref. 7.12) set out the measures proposed to mitigate potential effects on landscape, and to enhance the landscape value. For example, temporary site lighting during decommissioning to enable safe working in hours of darkness will be designed as far as reasonably practical so as not to cause a nuisance outside of the Order Limits. Standard best practice measures will be employed to minimise light spill.

10.8.122. As outlined in **ES Chapter 12: Landscape and Visual** (Doc Ref. 6.1), effects during decommissioning are likely to be similar to construction, however, these would be partially screened by the landscape mitigating planting introduced by the Scheme.

10.8.123. During the decommissioning phase, significant visual effects may arise for up to 17 viewpoints out of the 42 assessed, as outlined in **ES Chapter 12: Landscape and Visual** (Doc Ref. 6.1). Any other visual effects as a result of the Scheme are not considered to be significant. Receptors experiencing likely significant residual visual effects during the operation phase include residential and PRoW receptors up to 5 km from the Scheme, and recreational, road, and employment receptors within and adjacent to the Scheme.

10.8.124. The number of receptors experiencing significant adverse effects represents a small minority of the study area population overall. Also, effects would be short-term and reversible. The magnitude of impact is therefore assessed to be low.

10.8.125. Overall, the likely effect on health arising from landscape and visual effects during the decommissioning phase of the Scheme is assessed to be short-term temporary **minor adverse (not significant)** for the receptors identified in **ES Chapter 12: Landscape and Visual** (Doc Ref. 6.1).

Noise and vibration

10.8.126. As set out in **ES Chapter 13: Noise and Vibration** (Doc Ref. 6.1), noise effects during the decommissioning phase are expected to be similar to, or lower than, those identified for the construction phase.

10.8.127. As discussed, the sensitivity to noise effects is assessed to be medium for the general population and high for vulnerable groups.

10.8.128. As outlined in the **Outline DEMP** (Doc Ref. 7.12), mitigation measures will be implemented to ensure noise and vibration associated with the decommissioning phase is minimised at all times. Best Practicable Means (BPM) will be applied, as far as reasonably practicable, including for neighbouring residential properties.

10.8.129. Likely significant residual effects during the decommissioning phase are identified at receptors along Langary Gate Road as a result of decommissioning traffic noise. As decommissioning phase traffic noise is likely to be similar to construction phase traffic noise, no practicable mitigation can be applied to reduce the significance of the effect and therefore remain significant.

10.8.130. The residential receptors along Langary Gate Road represent 13 homes out of 460 homes included within the study area set out within **ES Chapter 13: Noise and Vibration** (Doc Ref. 6.1). While the significant adverse effects are identified would apply to these homes, all other effects are not significant. Overall, therefore, the magnitude of impact on human health associated with noise and vibration during decommissioning is assessed to be low.

10.8.131. Overall, the likely effect on health arising from noise and vibration effects during the decommissioning phase of the Scheme is assessed to be short-term temporary **minor adverse (not significant)** for the general population and vulnerable groups.

Access to PRoW and active travel

10.8.132. As outlined in the **Outline PRoW MP** (Doc Ref. 7.15) and **ES Chapter 15: Traffic and Access** (Ref Doc. 6.1), it is anticipated that during the decommissioning phase, PRoW will be managed in a similar manner to the construction phase. No permanent PRoW closures will be required, but it is possible that some temporary closures will be required to provide safe access across the Site whilst decommissioning activities are taking place. These closures are expected to be similar in nature and duration to those proposed for the construction phase. PRoW Wstn/3/1 and PRoW Crow/12/1 are footpaths located within the Grid Connection Route and Overhead Inter-Array

Connection respectively, and if required, may be closed for 4-8 weeks during decommissioning. In addition, a temporary diversion corridor has been identified for the Common Land on Martins Road.

10.8.133. As discussed, the sensitivity to access to PRoW and active travel effects is assessed to be low for the general population and medium for vulnerable groups.

10.8.134. As set out in the **Outline PRoW MP** (Doc Ref. 7.15), the Detailed PRoW MP will confirm PRoW affected and management measures in consultation with the Local Authority. Mitigation includes maintaining access to PRoW or otherwise providing temporary PRoW diversion routes where necessary to avoid any PRoW closures or potential conflicts with the Scheme where practicable. The diversion routes will be agreed with the local authorities prior to decommissioning. Where necessary, sufficient protection/separation between existing PRoW and decommissioning traffic routes will be provided. Therefore, impacts on the Scheme at all PRoW receptors have been assessed as low.

10.8.135. Therefore, the overall effect on PRoW and active travel routes as a result of the Scheme is considered **negligible adverse** for PRoW and the Common Land at Martins Road for both the general population and vulnerable groups, which is considered **not significant**.

Traffic and access

10.8.136. As outlined in **ES Chapter 15: Traffic and Access** (Doc Ref. 6.1), the assessment of the construction phase has been used to determine the anticipated impact of the Scheme during its decommissioning. It is recognised that this is likely an overestimation, as the decommissioning phase is expected to be shorter in duration and have fewer road trips.

10.8.137. As discussed, the sensitivity to traffic and access effects is assessed to be medium for both population groups.

10.8.138. The **Outline DEMP** (Doc Ref. 7.12) sets out how mitigation measures will be implemented during decommissioning.

10.8.139. As discussed, temporary closures will be for very short periods within the decommissioning phase with alternative routes provided. Therefore, all transport and access effects in the decommissioning phase are considered not significant and are assessed to have a low magnitude of impact.

10.8.140. Overall, effects on health as a result of transport and access are considered **minor adverse** (not significant) for all populations.

Social infrastructure

10.8.141. **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1) outlines that decommissioning effects are considered similar to the construction phase. Therefore, decommissioning has the potential to affect local social infrastructure through temporary increases in population from the decommissioning workforce.

10.8.142. As discussed, the sensitivity to effects on social infrastructure is assessed to be medium for the general population and high for vulnerable groups.

10.8.143. As discussed, it is assessed that the Scheme will have **negligible adverse** effects on the general population and **minor adverse** effects on vulnerable groups. These are considered **not significant**.

Mental health

10.8.144. As outlined, the decommissioning phase has potential to affect mental health and wellbeing through various impact pathways. This assessment considers the determinants outlined in the construction phase above.

10.8.145. As discussed, the sensitivity to mental health effects is assessed to be medium for the general population and high for vulnerable groups.

10.8.146. Potential adverse mental health effects during decommissioning relate to landscape and visual, noise and vibration, access to PRoW and active travel, traffic and access, and social infrastructure impacts. The discussion above has set out that adverse effects relating to these determinants are considered not significant, apart from Moderate adverse significant noise effects on residential receptors at Langary Gate Road Likely significant landscape and visual effects are also identified, impacting the scenic beauty, sense of place, and amenity benefits from the landscape and visual environment. This has the potential to adversely impact mental health.

10.8.147. Beneficial mental health effects associated with the employment and training opportunities are likely to be created by the Scheme during the decommissioning phase due the increased income, sense of purpose and community associated with these opportunities, as outlined in the **OSSCEP** (Doc Ref. 7.17). However, employment and training effects on human health are not considered to be significant.

10.8.148. The potential for environmental changes associated with decommissioning of the Scheme may create uncertainty and anxiety for local people who might anticipate that they will be adversely affected. As set out in the **Outline DEMP** (Doc Ref. 7.10), prior to decommissioning and continuing through until final

commissioning of the Scheme, a Community Liaison Officer will be appointed to lead discussions with local communities and also act as the primary point of contact should there be any queries or complaints.

10.8.149. In line with the construction phase, given the similar activities expected, the sensitivity of the general population, defined as those without mental health conditions, is considered to be medium. Vulnerable groups include those with existing mental health conditions, populations with limiting disabilities and long-term illnesses, deprived groups, and populations vulnerable to social isolation, including the elderly. The sensitivity of vulnerable groups to mental health effects is considered high.

10.8.150. Overall, the Scheme's impact on mental health during decommissioning is considered to be low. It is considered that the Scheme will have a **minor adverse** effect on the general population and vulnerable groups. These are considered **not significant**.

10.9. Additional Monitoring, Mitigation and Enhancement Measures

10.9.1. Where significant adverse effects remain after embedded mitigation, additional mitigation or enhancement measures should be considered, where practicable and available. The Human Health assessment is based on the residual effects identified in other relevant chapters of the ES, i.e. after additional monitoring, mitigation and enhancement measures have been applied.

10.9.2. The **Outline Skills, Supply Chain and Employment Plan (OSSCEP)** (Doc Ref 7.17) sets out measures to maximise benefits for local residents and businesses, including any proposed employment or skills schemes. Potential opportunities that the Applicant could take forward post-consent include apprenticeships, other workforce training, STEM education and careers, local recruitment, maximising diversity of the workforce, business support and procurement strategy, and ethical procurement policy.

10.10. Residual Effects

10.10.1. The residual effects of the Scheme during the construction, operational and decommissioning phases are outlined within Table 10-19.

Table 10-19: Summary of Residual Effects in relation to Human Health

Receptor	Description of Impact	Embedded Mitigation	Significance of Effect Without Additional Mitigation	Additional Mitigation/ Enhancement Measure	Residual Effect
Construction phase					
Human health	Adverse physical health effects due to air quality, dust, and odour.	**Outline CEMP** (Doc Ref. 7.10)	Negligible adverse (Not Significant) – General population Minor adverse (Not Significant) – Vulnerable groups	None	Negligible adverse (Not Significant) – General population Minor adverse (Not Significant) – Vulnerable groups
Human health	Beneficial health effects due to employment and income, and training and education impacts.	None	Minor beneficial (Not Significant)	**OSSCEP** (Doc Ref 7.17)	Minor beneficial (Not Significant)
Human health	Landscape and visual effects, impacting health through scenic beauty, sense of place, and other amenity effects.	**Outline LEMP** (Doc Ref. 7.16) and **Outline CEMP** (Doc Ref. 7.10).	Minor adverse (Not Significant)	None	Minor adverse (Not Significant)

Receptor	Description of Impact	Embedded Mitigation	Significance of Effect Without Additional Mitigation	Additional Mitigation/ Enhancement Measure	Residual Effect
Human health	Direct noise and vibration effects from construction activities, and indirect noise and vibration effects from construction traffic.	**Outline CEMP** (Doc Ref. 7.10) and **Outline CTMP** (Doc Ref. 7.13).	Minor adverse (Not Significant)	None	Minor adverse (Not Significant)
Human health	Health effects of accessibility and safety of PRoW and active travel networks.	**Outline CEMP** (Doc Ref. 7.10), **Outline CTMP** (Doc Ref. 7.13), and **Outline PRoW MP** (Doc Ref. 7.15).	Negligible adverse (Not Significant) – PRoW and Common Land on Martins Road	None	Negligible adverse (Not Significant) – PRoW and Common Land on Martins Road
Human health	Health effects of accessibility, and safety of the road network.	**Outline CEMP** (Doc Ref. 7.10) and **Outline CTMP** (Doc Ref. 7.13)	Minor Adverse (Not Significant)	None	Minor Adverse (Not Significant)

Receptor	Description of Impact	Embedded Mitigation	Significance of Effect Without Additional Mitigation	Additional Mitigation/ Enhancement Measure	Residual Effect
Human health	Health effects of access to social infrastructure.	**Outline CTMP** (Doc Ref. 7.13)	Negligible adverse (Not Significant) – General population Minor adverse (Not Significant) – Vulnerable groups	None	Negligible adverse (Not Significant) – General population Minor adverse (Not Significant) – Vulnerable groups
Human health	Mental health effects.	**Outline CEMP** (Doc Ref. 7.10) and **Outline CTMP** (Doc Ref. 7.13)	Minor adverse (Not Significant)	**OSSCEP** (Doc Ref. 7.17)	Minor adverse (Not Significant)
Operational phase					
Human health	Adverse physical health effects due to air quality, dust, and odour.	**Outline OEMP** (Doc Ref. 7.11)	No effect	None	No effect
Human health	Adverse physical health effects due to EMFs.	Compliance with The Control of Electromagnetic Fields at Work Regulations 2016	No effect	None	No effect

Receptor	Description of Impact	Embedded Mitigation	Significance of Effect Without Additional Mitigation	Additional Mitigation/ Enhancement Measure	Residual Effect
Human health	Beneficial health effects due to employment and income, and training and education impacts.	None	Negligible beneficial (Not Significant)	**OSSCEP** (Doc Ref 7.17)	Negligible beneficial (Not Significant)
Human health	Landscape and visual effects, impacting health through scenic beauty, sense of place, and other amenity effects.	**Outline LEMP** (Doc Ref. 7.16) and **Outline OEMP** (Doc Ref. 7.11).	Minor Adverse (Not Significant)	None	Minor Adverse (Not Significant)
Human health	Direct noise and vibration effects from construction activities, and indirect noise and vibration effects from construction traffic.	**Outline OEMP** (Doc Ref. 7.11).	Minor adverse (Not Significant)	None	Minor adverse (Not Significant)

Receptor	Description of Impact	Embedded Mitigation	Significance of Effect Without Additional Mitigation	Additional Mitigation/ Enhancement Measure	Residual Effect
Human health	Health effects of accessibility and safety of PRoW and active travel networks.	**Outline OEMP** (Doc Ref. 7.11) and **Outline PRoW MP** (Doc Ref. 7.15).	Minor beneficial (Not Significant)	None	Minor beneficial (Not Significant)
Human health	Health effects of accessibility, and safety of the road network.	**Outline OEMP** (Doc Ref. 7.11).	Negligible adverse (Not Significant)	None	Negligible adverse (Not Significant)
Human health	Health effects of access to social infrastructure.	**Outline OEMP** (Doc Ref. 7.11).	No effect	None	No effect
Human health	Mental health effects.	**Outline OEMP.** (Doc Ref. 7.11)	Minor adverse (Not Significant)	**OSSCEP** (Doc Ref 7.17)	Minor adverse (Not Significant)
Decommissioning phase					
Human health	Adverse physical health effects due to air quality, dust, and odour.	**Outline DEMP** (Doc Ref. 7.12)	Negligible adverse (Not Significant) - General population Minor adverse (Not Significant) – Vulnerable groups	None	Negligible adverse (Not Significant) - General population Minor adverse (Not Significant) – Vulnerable groups

Receptor	Description of Impact	Embedded Mitigation	Significance of Effect Without Additional Mitigation	Additional Mitigation/ Enhancement Measure	Residual Effect
Human health	Beneficial health effects due to employment and income, and training and education impacts.	None	Minor beneficial (Not Significant)	**OSSCEP** (Doc Ref 7.17)	Minor beneficial (Not Significant)
Human health	Landscape and visual effects, impacting health through scenic beauty, sense of place, and other amenity effects.	**Outline LEMP** (Doc Ref. 7.16) and **Outline DEMP** (Doc Ref. 7.12)	Minor Adverse (Not Significant)	None	Minor Adverse (Not Significant)
Human health	Direct noise and vibration effects from construction activities, and indirect noise and vibration effects from construction traffic.	**Outline DEMP** (Doc Ref. 7.12).	Minor adverse (Not Significant)	None	Minor adverse (Not Significant)

Receptor	Description of Impact	Embedded Mitigation	Significance of Effect Without Additional Mitigation	Additional Mitigation/ Enhancement Measure	Residual Effect
Human health	Health effects of accessibility and safety of PRoW and active travel networks.	**Outline DEMP** (Doc Ref. 7.12), and **Outline PRoW MP** (Doc Ref. 7.15).	Negligible adverse (Not Significant) – PRoW and Common Land on Martins Road	None	Negligible adverse (Not Significant) – PRoW and Common Land on Martins Road
Human health	Health effects of accessibility, and safety of the road network.	**Outline DEMP** (Doc Ref. 7.12).	Minor Adverse (Not Significant)	None	Minor Adverse (Not Significant)
Human health	Health effects of access to social infrastructure.	**Outline DEMP** (Doc Ref. 7.12).	Negligible adverse (Not Significant) – General population Minor adverse (Not Significant) – Vulnerable groups	None	Negligible adverse (Not Significant) – General population Minor adverse (Not Significant) – Vulnerable groups
Human health	Mental health effects.	**Outline DEMP** (Doc Ref. 7.12).	Minor adverse (Not Significant)	**OSSCEP** (Doc Ref. 7.17)	Minor adverse (Not Significant)

10.11. Cumulative Effects

10.11.1. Cumulative effects are the combined effects of several development schemes (in conjunction with the Scheme) which may, on an individual basis be insignificant but, cumulatively, have a significant effect. Cumulative effects with other development schemes are also referred to as inter-project cumulative effects. An assessment of the likely significant inter-project cumulative effects in relation to human health is provided below.

10.11.2. The assessment of cumulative effects has considered other committed developments outlined within **ES Appendix 4-1: List of Cumulative Schemes** (Doc Ref. 6.3).

10.11.3. The assessment has been made with reference to the methodology and guidance set out in **ES Chapter 4: Overview of the EIA Process** (Doc Ref. 6.1).

10.11.4. The Zone of Influence (ZoI) for the consideration of cumulative effects with other NSIPs for Human Health comprises the following, in line with the relevant chapters:

- Air quality – 250m;
- Landscape and visual – 10km;
- Noise and vibration – 300m;
- Socio-economics and Land Use –30km (all NSIPs) for employment and 30km (solar and electrical infrastructure NSIPs only) for visitor accommodation;
- Traffic and access – 5km.

10.11.5. The ZoI for the consideration of cumulative effects with Town and Country Planning Act schemes for Human Health comprises the following, in line with the relevant chapters:

- Air quality – 250m;
- Landscape and visual – 10km;
- Noise and vibration – 300m;
- Socio-economics and Land Use – 2km; and
- Traffic and access – 5km.

10.11.6. Cumulative schemes within the ZoI for Human Health are listed within Table 10-20Table 10-20 below. An assessment of cumulative effects is provided within Table 10-21 below.

10.11.7. **ES Chapter 6: Air Quality** (Doc Ref. 6.1) states that any concentration changes from construction and decommissioning traffic would not materially change the magnitude of impact and would remain well below IAQM thresholds. Any effects from construction and decommissioning dust would be mitigated through the **Outline CEMP** (Doc Ref. 7.10), **Outline DEMP** (Doc Ref. 7.12) and equivalent plans of the cumulative schemes. Therefore, cumulative effects are considered to be negligible effect (not significant) for the general population and minor adverse (not significant) for vulnerable groups during construction and decommissioning.

10.11.8. As outlined in **ES Chapter 16: Other Environmental Topics** (Doc Ref. 6.1), a worst-case cumulative assessment, combining the EMFs of two overhead lines (the Scheme's 400kV overhead line and National Grid's proposed Grimsby to Walpole's 400kV or Weston Marsh to East Leicestershire 400kV overhead line) was undertaken. The exposure limits would be within the specified clearance distance and therefore no significant cumulative effects were identified.

10.11.9. For access to employment and training, **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1) states that the construction phases of the Scheme and other cumulative developments would be expected to generate beneficial effects with regards to employment. The data on the average employment generated by the cumulative schemes are not available. However, it is expected that there would be a cumulative temporary minor beneficial effect on construction related employment within the study area, which is considered not significant.

10.11.10. As set out in **ES Chapter 12: Landscape and Visual** (Doc Ref. 6.1), the assessment identified moderate adverse (significant) cumulative visual effects on residential receptors at the edges of Spalding, Moulton, and Weston up to 2km from the Scheme during construction and operation , when considering the totality of effects from the Scheme and the cumulative schemes. Significant cumulative effects are likely at four viewpoints, representing only a small proportion of residential receptors. In addition, **ES Chapter 12: Landscape and Visual** (Doc Ref. 6.1) identified significant cumulative effects on some recreational users of PRoW and public open space during construction and operation. Significant cumulative effects are considered likely at five viewpoints during construction and four viewpoints during operation,

affecting a limited proportion of recreational receptors. These findings represent a worst-case scenario. The additional effects of the Scheme (i.e. within the context of the cumulative schemes, the additional effect of the Scheme) is assessed to be not significant for all receptors as it is considered that the Scheme will add to the overall quantity of energy infrastructure, but not introduce new or different effects. Overall, the cumulative effect on human health is assessed as minor adverse (not significant).

10.11.11. **ES Chapter 13: Noise and Vibration** (Doc Ref. 6.1) states that it is not expected that cumulative schemes would elevate any of the residual effects identified.

10.11.12. As outlined in the assessment and **ES Chapter 15: Traffic and Access** (Doc Ref. 6.1), a negligible effect on all PRoW during the construction phase is determined. A negligible adverse effect is also expected at the Common Land on Martins Road. Therefore, it is considered that there is no potential for the Scheme to generate any cumulative significant effects on PRoW or active travel routes.

10.11.13. As set out in **ES Chapter 15: Traffic and Access** (Doc Ref. 6.1), the severance impacts from the cumulative schemes on Traffic and Access receptors during construction are predicted to be either minor adverse or negligible, with the exception of the road safety impacts on three roads (A151 Holbeach Road, A16 South of Crowland, Hull's Drove (East) and A16 North of Peterborough which are expected to have potential significant effects predominantly as a result of the cumulative schemes. The **Outline CTMP** (Doc Ref. 7.13) and the **Draft DCO** (Doc Ref. 3.1) enable additional management to be applied, if necessary, to mitigate these effects on human health. Overall, it is considered that a **minor adverse (not significant)** cumulative effect on human health is likely to result.

10.11.14. The assessment of potential effects on access to social infrastructure considers changes to additional service demand and severance from traffic related to construction. The scale of employment generated from cumulative schemes cannot be readily quantified, as set out in **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1). **ES Chapter 15: Traffic and Access** (Doc Ref. 6.1) outlines that the impacts from the cumulative schemes on traffic and access receptors during construction are predicted to be either minor adverse or negligible and therefore not significant.

10.11.15. The assessment of mental health considers the cumulative assessment results of the relevant determinants. As outlined in this chapter, significant adverse cumulative effects are not anticipated for air quality and noise and vibration.

Potential significant adverse cumulative effects are identified for visual effects for a small proportion of residential receptors. Therefore, the cumulative effects of the schemes have the potential to result in adverse mental health effects. However, beneficial cumulative effects have also been identified for employment and training. It is assumed that, like the Scheme, the cumulative schemes will put in place community liaison arrangements to help identify and resolve any community concerns arising during the construction phase. Overall, it is considered that a **minor adverse (not significant)** cumulative effect on mental health is likely to result.

Table 10-20: Cumulative Effects in relation to Human Health

ID and Application Reference	Location	Application and Description	Distance from Scheme	Potential overlap in Temporal Scope?	Potential for Cumulative Effects?
EN020036	Between Grimsby and Walpole (near Wisbech)	Grimsby to Walpole 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.	0km	Potential - Construction dates unknown. Overlap is assumed for worst case assessment. If consent is granted, construction could begin in 2029.	Yes – Air quality, landscape and visual, noise and vibration, employment and training opportunities, and traffic and access cumulative effects.
EN0210006	Between Wisbech and Alford, then offshore	Ossian Wind Farm Ossian Offshore Wind Farm Ltd (“the Applicant”) is intending to develop transmission infrastructure to connect the Ossian Offshore Wind Farm Array (located in Scottish waters and subject to application for consent under section 36 of the Electricity Act	0km	Potential - Unknown. Overlap is assumed for worst case assessment.	Yes - Air quality, landscape and visual, noise and vibration, employment and training opportunities, and traffic and access cumulative effects.

ID and Application Reference	Location	Application and Description	Distance from Scheme	Potential overlap in Temporal Scope?	Potential for Cumulative Effects?
		1989) to National Grid at substations in Lincolnshire. The Proposed Development comprises the installation of high voltage direct current offshore export cables (to the extent that these are located in English waters), landfall structures, HVDC onshore export cables and onshore converter stations, and all other development integral to the construction, operation and maintenance of the Proposed Development, including access. It is proposed that the lifetime of the Proposed Development will be 35 years, at which point the Proposed Development will be decommissioned.			
H09-0501-23	Land off Holbeach Drove Gate Holbeach Drove Spalding	Erection of Agricultural Machinery Assembly Facility, Research and Training Facility,	0km	Temporal overlap assumed for worst case assessment.	Yes – Air quality, landscape and visual, noise and vibration,

ID and Application Reference	Location	Application and Description	Distance from Scheme	Potential overlap in Temporal Scope?	Potential for Cumulative Effects?
		Ground Mounted Solar Array and Associated Infrastructure.			employment and training opportunities, and traffic and access cumulative effects.
H02-0875-22	Decoy Farm Spalding Road Crowland Peterborough	King Prawn Hatchery, Grow Out and Processing Facility.	0km	Temporal overlap assumed for worst case assessment.	Yes – Air quality, landscape and visual, noise and vibration, employment and training opportunities, and traffic and access cumulative effects.
EN0210007	Lincolnshire County Council	National Grid Scheme - Weston Marsh to East Leicestershire A new circa 60 kilometre 400kV overhead electricity transmission line which connects into the Weston Marsh substation infrastructure (to be constructed under the	0km	Potential - Unknown - Application expected March 2028. Overlap is assumed for worst case assessment.	Yes – Air quality, landscape and visual, employment and training opportunities, and traffic and access.

ID and Application Reference	Location	Application and Description	Distance from Scheme	Potential overlap in Temporal Scope?	Potential for Cumulative Effects?
		Grimsby to Walpole Project), in the Spalding region of Lincolnshire, and runs west to a new 400kV transmission substation (WMEL-B) near Wartnaby in Leicestershire, via a new 400kV transmission substation (WMEL-A) near Corby Glen in Lincolnshire.			
EN010130	Lincolnshire County Council, Boston Borough Council, East Lindsey District Council, and South Holland District Council.	Outer Dowsing Offshore Wind 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.	1.3km	Potential - construction could begin in 2027. Overlap is assumed for worst case assessment.	Yes – Landscape and visual, employment and training opportunities, and traffic and access cumulative effects.

ID and Application Reference	Location	Application and Description	Distance from Scheme	Potential overlap in Temporal Scope?	Potential for Cumulative Effects?
EN010110	Fenland District Council	Medworth Energy from Waste Combined Heat and Power Facility. An Energy from Waste combined heat and power facility with a maximum gross capacity of 58MW.	13km	Potential - according to the ES for this scheme construction was predicted across 2023-2026. Based on the scheme not gaining consent until 2024, however this is assumed to shift from an earliest construction commencement of 2025-2028. However, overlap is assumed for worst case assessment.	Yes –Employment and training cumulative effects.
EN010095	Boston Borough Council and Lincolnshire County Council	Boston Alternative Energy Facility 102MWe gross (80MWe exportable) energy from waste facility with light weight aggregates facility, wharf,	13km	Unlikely - Construction will take place 2022-2026. Overlap is assumed for worst case assessment.	Yes - Employment and training cumulative effects.

ID and Application Reference	Location	Application and Description	Distance from Scheme	Potential overlap in Temporal Scope?	Potential for Cumulative Effects?
		waste reception and storage facility and grid connection.			
EN010151	Sleaford, Lincolnshire	Beacon Fen Energy Park A 400MW solar photovoltaic farm incorporating up to 600MVA Battery Energy Storage System and on-site substation and electrical connection, including solar PV panels up to 4.5m in height; single stacked BESS units up to 4.5m in height; security perimeter fencing; hedgerow improvements; ecological enhancements; above and/or below ground electrical cable connection at up to 400kV; associated development and ancillary works.	14km	Potential - Construction to start in 2027, lasting 2.5 - 5 years. Overlap is assumed for worst case assessment.	Yes –Employment and training opportunities.

ID and Application Reference	Location	Application and Description	Distance from Scheme	Potential overlap in Temporal Scope?	Potential for Cumulative Effects?
WA010003	Lincolnshire County Council, Boston Borough Council	Lincolnshire Reservoir Reservoir exceeding 30 million cubic metres of water storage, together with associated development including water transfer pipelines, abstraction facilities, pumping stations, treatment works, renewable energy generation, access roads, parking, wildlife and environmental areas, leisure and recreation and education facilities.	15km	Potential - Construction to start 2031/32. Overlap is assumed for worst case assessment.	Yes –Employment and training opportunities.
EN010123	Heckington, Lincolnshire	Heckington Fen Solar Park The Proposed Development will comprise the construction, operation and decommissioning of a solar photovoltaic (PV) electricity generating facility exceeding 50 megawatt (MW) output capacity, together with associated energy storage. The	15km	Potential - At the earliest construction will start Spring 2025.Overlap is assumed for worst case assessment.	Yes –Employment and training opportunities.

ID and Application Reference	Location	Application and Description	Distance from Scheme	Potential overlap in Temporal Scope?	Potential for Cumulative Effects?
		installed capacity of the solar generation is expected to be in the order of 500MW.			
EN010127	Rutland County Council and South Kesteven District Council	Mallard Pass Solar Project Solar photovoltaic array and electrical storage and connection infrastructure, with a generation capacity of greater than 50 MW.	16km	Potential - The earliest construction would start is 2026, lasting 24 months. Overlap is assumed for worst case assessment.	Yes –Employment and training cumulative effects.
EN0210003	Between Walpole area, Norfolk, and East Lindsay area, Lincolnshire	Eastern Green Link 3 and 4 Eastern Green Link 3 (EGL3) comprises a converter station in the Walpole area of Norfolk along with associated development. Eastern Green Link 4 (EGL4) comprises a converter station in the Walpole area of Norfolk alone or together with a switching station and a	4km	Potential - Construction is due to start in early 2028, lasting 6 years. Overlap is assumed for worst case assessment.	Yes – Landscape and visual, employment and training opportunities, and traffic and access cumulative effects.

ID and Application Reference	Location	Application and Description	Distance from Scheme	Potential overlap in Temporal Scope?	Potential for Cumulative Effects?
		converter station in the East Lindsey area of Lincolnshire, along with associated development.			
EIA/11/24	Land to the East of Surfleet Bank and West of Woad Farm, Spalding	For a proposed anaerobic digester operation and associated infrastructure	1km	Temporal overlap assumed for worst case assessment.	Yes – Landscape and visual, employment and training opportunities, and traffic and access cumulative effects.
H16-0871-24	Fields South of Pilgrim's Pride Ltd, Fulney Lane, Spalding.	The Development is for a Solar photovoltaic (PV) Array with a maximum generating capacity of 3.5 MW and an onsite connection to the existing Pilgrim factory. Alongside the Solar PV Array, associated infrastructure and equipment would include: fencing, security cameras, cabling and access track. Biodiversity enhancement will also be integrated into the site design	1km	Temporal overlap assumed for worst case assessment.	Yes – Landscape and visual, employment and training opportunities, and traffic and access cumulative effects.

ID and Application Reference	Location	Application and Description	Distance from Scheme	Potential overlap in Temporal Scope?	Potential for Cumulative Effects?
		and will be informed through a Biodiversity Net Gain Assessment.			
H13-0190-23	Land at Moulton Bulb Co. Ltd Long Lane Moulton Spalding PE12 6PP	Erection of a ground mounted solar array with associated infrastructure.	1km	Temporal overlap assumed for worst case assessment.	Yes – Landscape and visual, employment and training opportunities, and traffic and access cumulative effects.
WA010004	North Kesteven District Council	Fens Reservoir Reservoir exceeding 30 million cubic metres of water storage, together with associated development including water transfer pipelines, abstraction facilities, pumping stations, treatment works, renewable energy generation, access roads, parking, wildlife and environmental areas, leisure and recreation and education facilities.	24km	Potential - Construction dates unknown. Overlap is assumed for worst case assessment.	Yes –Employment and training cumulative effects.

ID and Application Reference	Location	Application and Description	Distance from Scheme	Potential overlap in Temporal Scope?	Potential for Cumulative Effects?
WS010005	North Northamptonshire Council	East Northants Resource Management Facility Western Extension The alteration of existing and the construction of new facilities for the recovery, treatment and disposal of hazardous waste and disposal of low-level radioactive waste at the East Northants Resource Management Facility, Stamford Road, Northamptonshire.	26km	Potential - Unknown. Overlap is assumed for worst case assessment.	Yes –Employment and training opportunities.

10.11.16.

Table 10-21: Cumulative Effects in relation to Human Health

Determinants	Residual effect of the Scheme alone	Assessment of cumulative effects with other developments listed within Table 10-20	Proposed additional mitigation applicable to the Scheme including any apportionment	Residual cumulative effects
Construction				
Air quality, dust and odour	Negligible (Not Significant) – General population Minor adverse (Not Significant) – Vulnerable groups	As outlined in **ES Chapter 6: Air Quality** (Doc Ref. 6.1), it is anticipated that good practice dust control measures will be implemented by cumulative schemes in accordance with IAQM guidance. The **Outline CEMP** (Doc Ref. 7.10) set out the requirement to hold regular liaison meetings with other high risk construction sites within 250m of the Site boundary, to ensure plans are co-ordinated and emissions are minimised.	None.	Negligible (Not Significant) – General population Minor adverse (Not Significant) – Vulnerable groups
Employment and training opportunities	Negligible beneficial (Not Significant)	As set out in **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1), the combined effect of the construction of the cumulative developments and the Scheme will bring considerable additional employment to the study area based on the scale of development taking place. However, the scale of the construction employment generated cannot be	None	Minor beneficial (Not Significant)

Determinants	Residual effect of the Scheme alone	Assessment of cumulative effects with other developments listed within Table 10-20	Proposed additional mitigation applicable to the Scheme including any apportionment	Residual cumulative effects
		readily quantified as for some schemes this information is commercially sensitive and not publicly available. The programmes for the proposed developments and their overlap with the Scheme is also inherently uncertain. Overall, a temporary cumulative Minor beneficial (not significant) effect is likely to result.		
Landscape and visual	Minor Adverse (Not Significant)	As set out in **ES Chapter 12: Landscape and Visual** (Doc Ref. 6.1), significant cumulative visual effects are identified at a limited number of residential and recreational (including PRoW and open space) receptors.	None	Minor adverse (Not Significant)
Noise and vibration	Minor adverse (Not Significant)	**ES Chapter 13: Noise and Vibration** (Doc Ref. 6.1) states that it is not expected that cumulative schemes would elevate any of the residual effects identified.	None	Minor adverse (Not Significant)
Access to PRoW and active travel	Negligible adverse (Not Significant)	As outlined in **ES Chapter 15: Traffic and Access (Doc Ref. 6.1)** a negligible effect on all PRoW and Common Land on Martins Road during the construction phase is determined. Therefore, it is considered that there is no potential for the Scheme	None	Negligible adverse (Not Significant) Minor adverse (Not Significant)

Determinants	Residual effect of the Scheme alone	Assessment of cumulative effects with other developments listed within Table 10-20	Proposed additional mitigation applicable to the Scheme including any apportionment	Residual cumulative effects
	Minor adverse (Not Significant)	to generate any cumulative significant effects on PRoW or active travel routes.		
Traffic and access	Minor adverse (Not Significant)	As set out in **ES Chapter 15: Traffic and Access** (Doc Ref. 6.1), the impacts from the cumulative schemes on Traffic and Access receptors during construction are predicted to be either minor adverse or negligible, with the exception of the road safety impacts on three roads which are expected to have a significant effect.	Additional traffic management measures set in **Outline Construction Traffic Management Plan** (Doc Ref. 7.13) if necessary.	Minor adverse (Not Significant)
Social infrastructure	Negligible adverse (Not Significant) – General population Minor adverse (Not Significant)	As set out in **ES Chapter 15: Traffic and Access** (Doc Ref. 6.1), the severance impacts from the cumulative schemes on Traffic and Access receptors during construction are predicted to be either minor adverse or negligible.	None	Minor/Negligible adverse (Not Significant)

Determinants	Residual effect of the Scheme alone	Assessment of cumulative effects with other developments listed within Table 10-20	Proposed additional mitigation applicable to the Scheme including any apportionment	Residual cumulative effects
	– Vulnerable groups			
Mentall health	Minor adverse (Not Significant)	The cumulative effects of the schemes have the potential to result in adverse mental health effects. Beneficial cumulative effects have also been identified for employment and training; however, these are not considered to be significant. It is assumed that, like the Scheme, the cumulative schemes will put in place community liaison arrangements to help identify and resolve any community concerns arising during the construction phase.	None	Minor adverse (Not Significant)
Operation				
Air quality, dust and odour	No effect	As outlined in **ES Chapter 6: Air Quality** (Doc Ref. 6.1), other developments may marginally increase pollutant levels; however, baseline air quality is good, and combined changes remain insignificant.	None	No effect
EMF	No effect	As outlined in **ES Chapter 16: Other Environmental Topics** (Doc Ref. 6.1), a worst-case cumulative assessment, combining the EMFs of two overhead	None	No effect

Determinants	Residual effect of the Scheme alone	Assessment of cumulative effects with other developments listed within Table 10-20	Proposed additional mitigation applicable to the Scheme including any apportionment	Residual cumulative effects
		lines (the Scheme's Grid Connection Route 400kV overhead line and National Grid's proposed Grimsby to Walpole's 400kV or Weston Marsh to East Leicestershire's 400kV overhead line) was undertaken. The exposure limits would be within the specified clearance distance and therefore no significant cumulative effects were identified.		
Employment and training opportunities	Negligible beneficial (Not Significant)	As set out in **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1), potential effects on employment during operation have been assessed as not significant. Therefore, effects to employment during operation the Scheme would not make a meaningful contribution to any cumulative effect which may occur from other developments in the area.	None	Negligible (Not Significant)
Landscape and visual	Minor Adverse (Not Significant)	As set out in **ES Chapter 12: Landscape and Visual** (Doc Ref. 6.1), significant cumulative visual effects are identified at a limited number of residential and recreational (including PRoW and open space) receptors.	None	Minor Adverse (Not Significant)

Determinants	Residual effect of the Scheme alone	Assessment of cumulative effects with other developments listed within Table 10-20	Proposed additional mitigation applicable to the Scheme including any apportionment	Residual cumulative effects
Noise and vibration	Minor adverse (Not Significant)	**ES Chapter 13: Noise and Vibration** (Doc Ref. 6.1) states that it is not expected that cumulative schemes would elevate any of the residual effects identified. Therefore, cumulative effects are anticipated to be not significant.	None	Minor adverse (Not Significant)
Access to PRoW and active travel	Minor beneficial (Not Significant)	As set out in **ES Chapter 15: Traffic and Access** (Ref Doc. 6.1), cumulative effects during the operational phase of the Scheme have been scoped out of this assessment as the number of trips associated with the operational phase of the Scheme is expected to be minimal, with negligible effects. This is therefore not expected to result in the potential for any cumulative effects when combined with any cumulative schemes. Minor beneficial effects from the provision of the permissive path would remain.	None	Minor beneficial (Not Significant)
Traffic and access	Negligible adverse (Not Significant)	As set out in **ES Chapter 15: Traffic and Access** (Ref Doc. 6.1), cumulative effects during the operational phase of the Scheme have been scoped out of this assessment as the number of trips associated with the operational phase of the Scheme is expected to be minimal, with negligible effects. This is therefore not expected to result in the potential for any	None	Negligible adverse (Not Significant)

Determinants	Residual effect of the Scheme alone	Assessment of cumulative effects with other developments listed within Table 10-20	Proposed additional mitigation applicable to the Scheme including any apportionment	Residual cumulative effects
		cumulative effects when combined with any cumulative schemes.		
Social infrastructure	No effect	As set out in **ES Chapter 15: Traffic and Access** (Ref Doc. 6.1), cumulative effects during the operational phase of the Scheme have been scoped out of this assessment as the number of operational employees associated with the operational phase of the Scheme is expected to be minimal, with no effect on access to social infrastructure. This is therefore not expected to result in the potential for any cumulative effects when combined with any cumulative schemes.	None	No effect
Mental health	Minor adverse (Not Significant)	Significant cumulative visual effects are identified at a limited number of residential and recreational (including PRoW and open space) receptors. Beneficial cumulative effects have also been identified for employment and training; however, these are not considered to be significant.	None	Minor adverse (Not Significant)
Decommissioning				

Determinants	Residual effect of the Scheme alone	Assessment of cumulative effects with other developments listed within Table 10-20	Proposed additional mitigation applicable to the Scheme including any apportionment	Residual cumulative effects
Air quality, dust, and odour	Negligible (Not Significant) – General population Minor adverse – Vulnerable groups	As outlined in **ES Chapter 6: Air Quality** (Doc Ref. 6.1), it is anticipated that good practice dust control measures will be implemented by cumulative schemes in accordance with IAQM guidance. The **Outline DEMP** (Doc Ref. 7.12) set out the requirement to hold regular liaison meetings with other high risk construction sites within 250m of the Site boundary, to ensure plans are co-ordinated and emissions are minimised.	None.	Negligible (Not Significant) – General population Minor adverse (Not Significant) – Vulnerable groups
Employment and training opportunities	Minor beneficial (Not Significant)	As set out in **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1), the combined effect of the decommissioning of the cumulative developments and the Scheme will bring considerable additional employment to the study area based on the scale of development taking place. However, the scale of the decommissioning employment generated cannot be readily quantified as for some schemes this information is commercially sensitive and not publicly available. The programmes for which development is proposed overlapping with the Scheme is also inherently uncertain. Overall impact is	None	Minor beneficial (Not Significant)

Determinants	Residual effect of the Scheme alone	Assessment of cumulative effects with other developments listed within Table 10-20	Proposed additional mitigation applicable to the Scheme including any apportionment	Residual cumulative effects
		likely to equate to a temporary cumulative minor beneficial (not significant) effect.		
Landscape and visual	Minor (Not Significant)	It is assumed that cumulative effects would be in line with the construction phase. Therefore, as set out in **ES Chapter 12: Landscape and Visual** (Doc Ref. 6.1), significant cumulative visual effects are identified at a limited number of residential and recreational (including PRoW and open space) receptors.	None	Minor adverse (Not Significant)
Noise and vibration	Minor adverse (Not Significant)	**ES Chapter 13: Noise and Vibration** (Doc Ref. 6.1) states that it is not expected that cumulative schemes would elevate any of the residual effects identified.	None	Minor adverse (Not Significant)
Access to PRoW and active travel	Negligible adverse (Not Significant)	As outlined in **ES Chapter 15: Traffic and Access (**Doc Ref. 6.1) a negligible effect on all PRoW and Common Land on Martins Road during the decommissioning phase is determined. Therefore, it is considered that there is no potential for the Scheme to generate any cumulative significant effects on PRoW or active travel routes.	None	Negligible adverse (Not Significant)
Traffic and access	Minor adverse	As outlined in **ES Chapter 15: Traffic and Access** (Doc Ref. 6.1), since the Scheme has an estimated	None	Minor adverse (Not Significant)

Determinants	Residual effect of the Scheme alone	Assessment of cumulative effects with other developments listed within Table 10-20	Proposed additional mitigation applicable to the Scheme including any apportionment	Residual cumulative effects
	(Not Significant)	operational life of 40 years, it is not possible to predict which potential developments may need to be considered (e.g. those under construction, recently completed and operational or in the process of being decommissioned) at the same time as the Scheme is being decommissioned. Broadly, however, the effects of decommissioning are likely to be similar to and no worse than those identified during construction.		
Social infrastructure	Negligible adverse (Not Significant) – General population Minor adverse (Not Significant) –	As outlined in **ES Chapter 15: Traffic and Access** (Doc Ref. 6.1), decommissioning effects are predicted to be either minor adverse or negligible.	None	Minor/Negligible adverse (Not Significant)

Determinants	Residual effect of the Scheme alone	Assessment of cumulative effects with other developments listed within Table 10-20	Proposed additional mitigation applicable to the Scheme including any apportionment	Residual cumulative effects
	Vulnerable groups			
Mentall health	Minor adverse (Not Significant)	The cumulative effects of the schemes have the potential to result in adverse mental health effects, given the noise and vibration, traffic and access, visual and social infrastructure effects. Beneficial cumulative effects have also been identified for employment and training; however, these are not considered to be significant. It is assumed that, like the Scheme, the cumulative schemes will put in place community liaison arrangements to help identify and resolve any community concerns arising during the works.	None	Minor adverse (Not Significant)