Green Hill Solar Farm
EN010170

Environmental Statement
Chapter 18: Human Health

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Contents

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Report Prepared for: Green Hill Solar Farm
DCO Submission

Environmental Statement Chapter 18: Human Health

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18 Human Health

18.1 Introduction

18.1.1 This chapter presents the findings of the Environmental Impact Assessment (EIA) concerning the potential human health impacts of the Scheme during the construction, operation and maintenance, and decommissioning phases.

18.1.2 The following aspects will be considered within the human health assessment process:

- Impacts on the social environment, including access and use of leisure and recreation facilities;
- Impacts on the economic environment, primarily in regard to education and employment;
- Impacts on the bio-physical environment; and
- Impacts on the institutional and built environment.

18.1.3 The assessment as set out in this chapter takes into consideration the assessments from other environmental topics. Those assessments which assess likely significant impacts on human receptors, and health and wellbeing infrastructure include:

- **Chapter 7: Climate Change;**
- **Chapter 8: Landscape and Visual Impact;**
- **Chapter 10: Hydrology, Flood Risk and Drainage;**
- **Chapter 13: Transport and Access;**
- **Chapter 14: Noise and Vibration;**
- **Chapter 16: Air Quality;**
- **Chapter 17: Socio-Economics, Tourism and Recreation;**
- **Chapter 21: Electromagnetic Fields;**
- **Chapter 22: Ground Conditions and Contamination;** and
- **Chapter 23: Major Accidents and Disasters.**

18.1.4 Regulation 5(2) of the EIA Regulations 2017 (Ref 18.1) require the direct and indirect significant effects of the Scheme on population and human health factors to be identified, described, and assessed. The assessment of human health impacts will further be assessed in the local and national planning policy context relevant to NSIPs and the DCO process.

18.1.5 The assessment will be undertaken in accordance with EIA guidance as published by the Institute of Environmental Management and Assessment (IEMA) in November 2022 (Ref 18.2, Ref 18.3).

18.1.6 For project description details, please refer to Chapter 4: Scheme Description [**EN010170/APP/GH6.2.4**] of this Environmental Statement (ES).

18.1.7 This chapter have been prepared by Lanpro Services (see Statement of Competence **[EN010170/APP/GH6.3.1.1]**).

Appendices and Figures

18.1.8 This chapter is supported by the following appendices:

- Appendix 18.1: Human Health Legislation, Policy, and Guidance **[EN010170/APP/GH6.3.18.1]**.

18.1.9 This chapter is supported by the following standalone figures:

- Figure 18.1: Study Areas for Human Health **[EN010170/APP/GH6.4.18.1]**;
- Figure 18.2: Location of Health and Social Care Facilities **[EN010170/APP/GH6.4.18.2]**; and
- Figure 18.3: Location of Hospitals and Emergency Healthcare Facilities **[EN010170/APP/GH6.4.18.3]**.

18.1.10 This chapter is supported by the following tables:

- **Table 18.1: Relevant Scoping Opinion Comments**
- **Table 18.2: Statutory Consultation Comments**
- **Table 18.3: Targeted Consultation Comments**
- **Table 18.4: Study Area (2 km ZOI) Data Areas**
- **Table 18.5: Source to Receptor Pathway Links for Health Determinants**
- **Table 18.6: Sensitivity and Importance of the Identified Socio-Economic Receptor**
- **Table 18.7: Magnitude of Change for the Identified Environmental Receptor**
- **Table 18.8: Criteria for Assessing the Significance of Effects**
- **Table 18.9: Proportion of LSOAs in Deprivation**
- **Table 18.10: General Health Profile of Local Authority Areas and England**
- **Table 18.11: Detailed Health Profile of Wards in the 2 km ZOI**
- **Table 18.12: Cumulative Projects Assessed for Human Health Effects**
- **Table 18.13: Summary of Residual Effects for Human Health**

18.1.11 This chapter is supported by the following in-text images:

- **Plate 18.1: Determinants of Health in Individuals (Ref 18.48)**
- **Plate 18.2: Determinants of Health in Neighbourhoods (Ref 18.49)**
- **Plate 18.3: Age Groups by Proportion of Population**
- **Plate 18.4: Self-assessment of General Health**

- **Plate 18.5: Self-assessment of Disability**

18.2 Consultation

Scoping Opinion

18.2.1 An EIA Scoping Report was submitted to the Planning Inspectorate (PINS) in July 2024 (Ref 18.4), with a formal request for a Scoping Opinion. PINS subsequently issued the Scoping Opinion on 30 August 2024 (Ref 18.5).

Table 18.1: Relevant Scoping Opinion Comments

Consultee and Date	Comment	How has the comment been addressed	Location of response in chapter
The Planning Inspectorate Scoping Opinion: 3.14.1 30 Aug 2024	Health related behaviour (all phases) – physical activity, risk raking behaviour and diet and nutrition: The Applicant proposes to scope out an assessment of physical activity from the ES on the basis that this will be considered under other matters within the Human Health ES chapter. On this basis the Inspectorate is content to scope this matter out of further assessment. The Applicant proposes to scope out an assessment of risk-taking behaviours on the basis that all on-site personnel would be professional workers and all contractors and operators on-site would have strict health and safety protocols enforced. The Inspectorate is content to scope out of further assessment. The Applicant proposes to scope out an assessment of impacts from diet and nutrition, including access to healthy affordable food... On the basis that any impacts on Best Most Versatile (BMV) agricultural land are assessed in the Agriculture Circumstances ES chapter,	The Applicant notes this comment and has no further action with regard to physical activity and risk-taking behaviour. The Applicant confirms that assessment of the impacts on Best Most Versatile (BMV) agricultural land has been undertaken in ES Chapter 20: Agricultural Circumstances.	ES Chapter 20: Agricultural Circumstances **[EN010170/APP/GH6.2.20]**

Consultee and Date	Comment	How has the comment been addressed	Location of response in chapter
	the Inspectorate is content to scope this mater out of further assessment.		
The Planning Inspectorate Scoping Opinion: 3.14.2 30 Aug 2024	Social environment – housing (operation), relocation (all phases), community safety (all phases) and social participation, interaction and support (all phases): The Applicant proposes to scope out an assessment of impacts on the social environment. The Scoping Report states that the Proposed Development will not result in the loss of any dwellings, and the majority of the operational workforce are expected to already be residents within the ZoI. It is stated that the Proposed Development does not involve any population displacement or relocation and would not require compulsory purchase of homes or community facilities. Health and safety measures are proposed to be in place which would limit the potential for impacts on community safety, including from crime. These are proposed to be secured through a CEMP. There are no predicted impacts to social or community facilities, with any indirect impacts considered under scoped in elements of the Human Health ES Chapter. The Inspectorate agrees that	The Applicant notes this comment and confirms an overview of proposed security and crime prevention measures is provided in the Scheme Description within the ES. Additional details of crime prevention measures are set out in the Outline Construction Environmental Management Plan and Outline Operational Environmental Management Plan, both secured by requirement in the draft DCO.	Chapter 4: Scheme Description **[EN010170/APP/GH6.2.4]**; Outline Construction Environmental Management Plan **[EN010170/APP/GH7.1]**; and Outline Operational Environmental Management Plan **[EN010170/APP/GH7.2]**.

Consultee and Date	Comment	How has the comment been addressed	Location of response in chapter
	[social environment] can be scoped out of further assessment.		
The Planning Inspectorate Scoping Opinion: 3.14.3 30 Aug 2024	Bio-physical environment – climate change mitigation and adaptation (construction and decommissioning), radiation (EMFs) all phases): The Scoping Report proposes to scope out climate change mitigation and adaptation during construction and decommissioning, on the basis that the impacts of construction activities are not expected to be of the scale to have significant health effects during these temporary phases. The Inspectorate is content to scope this matter out of the Human Health ES Chapter as these matters are considered within the Climate Change and Air Quality ES Chapters. The Human Health ES Chapter should provide clear cross-referencing to where the relevant impacts on human health are considered within the Climate Change and Air Quality ES Chapters. The Applicant proposes to scope out an assessment of effects from EMF. The Scoping Report states that long-standing exposure limit and health protection guidelines for EMF have	The Applicant confirms that cross-referencing is made to where the relevant impacts on human health are considered within the Climate Change and Air Quality ES Chapters. The Applicant confirms the assessment of human health effect from electromagnetic fields (EMFs) within of the Cable Corridor during construction and operation are set out in this assessment under the subheadings “Radiation (Electromagnetic fields)” and is assessed on the basis of the information provided in ES Chapter 21. The assessment considers risks to human health arising from EMFs in the context of existing infrastructure. The ES demonstrates the design measures taken to avoid the potential for EMF effects on receptors.	Section 18.6; Section 18.7; Section 18.8; and ES Chapter 21: Electromagnetic Fields **[EN010170/APP/GH6.2.21]**

Consultee and Date	Comment	How has the comment been addressed	Location of response in chapter
	been developed by ICNIRP and these have a high safety margin. It is stated that the Proposed Development will comply with these guidelines. It is noted (in Table 19.6) that impacts of EMF radiation can cause community anxieties; this is proposed to be addressed through community engagement. The Inspectorate agrees to scope out the effect of EMFs from all sources and phases, with the exception of the Cable Corridor during construction and operation, in accordance with the proposed approach set out in the EMF ES Chapter and agreed by the Inspectorate. As noted in ID 3.11.4 above, the voltage of the on-site and export cables has not yet been determined, and cables above 132kV have the potential to cause EMF effects. Given the uncertainty surrounding cabling design and proximity to receptors, the Inspectorate is unable to agree to scope EMFs out for the Cable Corridor for the construction and operational phases. The ES should address the risks to human health arising from EMFs, including cumulatively with existing infrastructure,		

Consultee and Date	Comment	How has the comment been addressed	Location of response in chapter
	taking into account relevant technical guidance. The Inspectorate considers that the ES should demonstrate the design measures taken to avoid the potential for EMF effects on receptors.		
The Planning Inspectorate Scoping Opinion: 3.14.4 30 Aug 2024	Institutional and built environment - health and social care services (operation), built environment (all phases), wider societal infrastructure and resources (construction and decommissioning) The Applicant proposes to scope out an operational assessment of health and social care services on the basis that the Proposed Development is anticipated to utilise local workers within the ZoI during operation. The Inspectorate agrees that this matter can be scoped out of further assessment on this basis. It is stated that impacts on the built environment during construction and decommissioning will be mitigated through construction techniques and the use of a CEMP. The Inspectorate considers that this matter can be scoped out. For the operational stage the Applicant states that impacts to the natural	The Applicant notes this comment and confirms that embedded mitigation measures to minimise adverse impacts on the built environment during construction and decommissioning are set out in the Outline Construction Environmental Management Plan and Outline Decommissioning Statement, both secured by requirement in the draft DCO. The Applicant has also re-included an operational assessment of healthcare services specifically for the peak replacement scenario, to ensure a robust assessment is presented.	Outline Construction Environmental Management Plan **[EN010170/APP/GH7.1]**; and Outline Decommissioning Statement **[EN010170/APP/GH7.3]**.

Consultee and Date	Comment	How has the comment been addressed	Location of response in chapter
	environment will be considered in the Landscape and Visual ES Chapter, and that community response to landscape change will be dealt with elsewhere in the Human Health ES Chapter. This approach is deemed acceptable, and this matter can be scoped out of the ES. The Scoping Report proposes to scope out health effects related to wider societal infrastructure and resources for the construction and decommissioning phase of the Proposed Development, as it is not projected to generate public health benefits, nor adversities. The economic development elements will be discussed under other heath effect matters. The Inspectorate is content to scope this matter out of further assessment.		
Bedford Borough Council Scoping Opinion 21 Aug 2024	10.3 (§10.9.1) In light of BESS / lithium battery fires being an evolving understanding, it is suggested the 'cumulative effects to human health' should be stated as an unknown. 17.1 (§17.4.25) (Table 17.5) BBC (Bedford Borough Council) note the inclusion ('scoping in') of an assessment of a potential fire at the BESS facility; this assessment is welcomed. This	Potential for groundwater contamination as a result of firewater runoff from BESS fire events has been considered in ES Chapter 22, and is referred to assessment of resultant human health effects in this chapter. The Applicant confirms that this chapter includes as assessment of resultant human health effects from air quality effects due to BESS fire events.	Section 18.4; Figure 18.1: Study Areas for Human Health **[EN010170/APP/ GH6.4.18.1]** Section 18.6; Section 18.7; and Section 18.8.

Consultee and Date	Comment	How has the comment been addressed	Location of response in chapter
	should be read against public health and safety matters (Chp. 19: Table 19.5 Air Quality as noted by Applicant), and environmental (Ramsar site) concerns. 19.1 In general, BBC is in agreement regarding this aspect's approach as set out by the Applicant and makes limited comment in this regard. 19.2 (§19.1.1) For clarity, it would be useful if the Applicant states the extent of the ZoI to be used in this Chapter. 19.3 (Table 19.5) Water quality: this health effect should address / make reference to the potential discharge of contaminated fire water into the ground water and River Nene water course.	A description and justification of the selection of the ZOI and Study Area for this chapter is set out Section 18.4 below. This is supported by Figure 18.1. The Applicant confirms diffuse pollution from water discharge from battery fires is assessed under the subheadings "Water quality or availability" at various sections in this chapter.	
Milton Keynes City Council: Public Health Scoping Opinion 30 Aug 2024	The scoping report identifies and includes air quality, noise, transport (including public rights of way), and socioeconomics, all of which can influence human health. A dedicated human health chapter is also proposed, which we support. The scope for this chapter has identified each of the authorities Joint Strategic Needs Assessments (JSNA) at 19.3.2, however it is also important that each of the authorities' Joint Health and Wellbeing Strategies are also	The Applicant confirms that the authorities' Joint Health and Wellbeing Strategies have been referenced in this assessment. The data therein has been used to determine the sensitivity of population groups. Direct consultation between the Applicant team and MKCC Public Health was initiated prior to PEIR in relation to the topics of assessment scope and methodology up to DCO submission. The Applicant confirms that consideration of the potential impacts of the Scheme on the	Appendix 18.1: Human Health Legislation, Policy, and Guidance **[EN010170/APP/GH6.3.18.1]**; Section 18.6; and Section 18.8.

Consultee and Date	Comment	How has the comment been addressed	Location of response in chapter
	considered. These are statutory documents to be read alongside the JSNAs and are therefore relevant to the ES. We welcome the applicant's commitment at 19.4.8 to engage with public health on their baseline assessment ahead of producing the ES. Table 19.2 presents a range of indicators that would be used to assess receptor sensitivity. It would be helpful to be upfront with exactly which indicators are going to be used to form this assessment and where these will be drawn from. Perhaps when the applicant is engaging with Public Health teams these can be agreed at this stage. It will be important to sensitively consider the mental health and mental wellbeing implications of the proposed development on existing resident population. We support that this is scoped into the assessment.	mental health and wellbeing of the existing resident population has been included in the assessment of human health effects.	
Earls Barton Parish Council Scoping Opinion 15 Aug 2024	Earls Barton Parish Council would request that anything affecting the A4500, The Wickets estate or the parish of Earls Barton as a whole is scoped into the report. This includes, but is not	The Applicant confirms that human health and wellbeing effects are scoped into this assessment as agreed by PINS, and that the parish of Earls Barton falls within the 2 km ZOI for human health.	Section 18.4; and Figure 18.1: Study Areas for Human Health **[EN010170/APP/ GH6.4.18.1]**.

Consultee and Date	Comment	How has the comment been addressed	Location of response in chapter
	limited to: … human health and wellbeing.		
Grendon Parish Council Scoping Opinion 30 Aug 2024	Summary of scoping: we request the following items be moved to in scope: … Human HEALTH: Bio-Physical Environment - Radiation.	The Applicant confirms the assessment of human health effect from EMFs within of the Cable Corridor during construction and operation are set out in this assessment under the subheadings "Radiation (Electromagnetic fields)" and is assessed on the basis of the information provided in Chapter 21: Electromagnetic Fields **[EN010170/APP/GH6.2.21]**. This scope is agreed by PINS in their Scoping Opinion (3.14.3).	Section 18.6; Section 18.7; and Section 18.8.
Holcot Parish Council Scoping Opinion 20 Aug 2024	pages 351-352 human health – community safety impacts from risk of fire and contamination (and radiation) should be assessed (see further below).	The Applicant confirms human health impacts as a result of fire – be it from smoke, contamination of watercourses, and EMF are assessed under the subheadings "Air quality", "Water quality or availability", and "Radiation" at various sections in this chapter.	Section 18.6; Section 18.7; and Section 18.8.
Mears Ashby Parish Council Scoping Opinion 21 Aug 2024	The recent amendment is that 'Battery Energy Storage Systems' are to be considered in areas 'C' Wood Lodge Farm, and 'E' the central Mears Ashby area of 550 acres. Battery Storage Systems are notoriously unsafe, liable to catch fire and require hundreds of gallons of water to extinguish. Run-off from such a fire contains significant amounts of pollutants and can	The Applicant confirms human health impacts as a result of fire – be it from smoke, or contamination of watercourses, are assessed under the subheadings "Air quality" and "Water quality or availability" at various sections in this chapter. The Northamptonshire Fire and Rescue Service are to be consulted as statutory consultees to the Scheme, and as targeted	Section 18.6; Section 18.7; and Section 18.8.

Consultee and Date	Comment	How has the comment been addressed	Location of response in chapter
	contaminate watercourses. Both areas are close to water courses that eventually run into Sywell reservoir at the Country Park. Water pressure throughout the parish is 'Low' and often unreliable due to antiquated, inefficient water tower and associated pipework. There has been occasions throughout recent times when the village has suffered a number of water supply outages due to the inadequate infrastructure. Full consideration must be given to the local services ability to effectively deal with these potential accidents or disasters.	consultees for the agreement of the Outline Battery Fire Safety Management Plan. NFRS can advise on firewater provision in the Mears Ashby area so that suitable alternative firewater provision can be sought if required.	
North Northamptonshire Council Scoping Opinion 22 Aug 2024	Human Health is a material consideration and North Northamptonshire Council consider that given the detail of the cable corridor routing and the siting of the BESS, substations, transformers, and Photo Voltaic inverters have not been finalised, this should be scoped in. It is agreed that elements of this section will be covered in both a section of its own and touched on within other sections within the Environmental Statement such as landscape and visual impact, climate change or transport and	The Applicant confirms the assessment of human health effect from electromagnetic fields (EMFs) within of the Cable Corridor during construction and operation are set out in this assessment under the subheadings “Radiation (Electromagnetic fields)” and is assessed on the basis of the information provided in Chapter 21: Electromagnetic Fields **[EN010170/APP/GH6.2.21]**. This scope is agreed by PINS in their Scoping Opinion (3.14.3). With regard to battery fire impacts, the Applicant seeks to confirm that this is assessed in Chapter 16: Air Quality	Section 18.6; Section 18.7; and Section 18.8.

Consultee and Date	Comment	How has the comment been addressed	Location of response in chapter
	access. Table 19.5 of the scoping report (Health Effects to be scoped in) is considered reasonable and accepted. Table 19.6 of the scoping report (Health Effects to be scoped out) is considered reasonable and accepted. Major Accidents and Disasters The scope for this topic is agreed however the risk of battery fire/explosion should be clearly addressed within the Environmental Statement. It is noted that this is picked up in the Air Quality and Socio-Economic chapters.	**[EN010170/APP/GH6.2.16]**, and under the subheading "air quality" at various sections in this chapter.	
Scaldwell Parish Council Scoping Opinion 22 Aug 2024	The Parish Council is concerned regarding the radiation produced by the proposed solar farm. Studies have shown that this can have an impact on people and it is important that this be sufficiently considered, especially given the proximity of the solar farm to settlements	The Applicant confirms the assessment of human health effect from electromagnetic fields (EMFs) within of the Cable Corridor during construction and operation are set out in this assessment under the subheadings "Radiation (Electromagnetic fields)" and is assessed on the basis of the information provided in Chapter 21: Electromagnetic Fields **[EN010170/APP/GH6.2.21]**. This scope is agreed by PINS in their Scoping Opinion (3.14.3).	Section 18.6; Section 18.7; and Section 18.8.
United Kingdom Health Security Agency / Office for	Our position is that pollutants associated with road traffic or combustion, particularly particulate matter and oxides of nitrogen are non-threshold; i.e., an exposed population is	The Applicant confirms that potential human health impacts due to pollutants from vehicular traffic/combustion have been assessed under the subheading "Air quality" in relevant sections of this chapter and are	Section 18.6; Section 18.7; and Section 18.8.

Consultee and Date	Comment	How has the comment been addressed	Location of response in chapter
Health Improvement and Disparities Scoping Opinion 19 Aug 2024	likely to be subject to potential harm at any level and that reducing public exposure to non-threshold pollutants (such as particulate matter and nitrogen dioxide) below air quality standards will have potential public health benefits. We support approaches which minimise or mitigate public exposure to non-threshold air pollutants, address inequalities (in exposure) and maximise co-benefits (such as physical exercise). We encourage their consideration during development design, environmental and health impact assessment, and development consent. UKHSA notes the intention to include an assessment of the potential impact of electromagnetic fields pertaining to the Cable Corridor in the Environmental Statement for the construction and operation of the scheme (section 16.5 of the Scoping Report). Further details on performing the assessment are available in the UKHSA reference document - Advice on the content of Environmental Statements accompanying an application under the Nationally Significant Infrastructure Planning Regime.	assessed on the basis of the information provided in Chapter 16: Air Quality **[EN010170/APP/GH6.2.16]**. Measures to address inequalities and maximise co-benefits are explored where practicable. The Applicant confirms the assessment of human health effect from electromagnetic fields (EMFs) within of the Cable Corridor during construction and operation are set out in this assessment under the subheadings “Radiation (Electromagnetic fields)” and is assessed on the basis of the information provided in Chapter 21: Electromagnetic Fields **[EN010170/APP/GH6.2.21]**. The Applicant confirms that the baseline data in Section 18.6 below has been undertaken to ward level to determine baseline conditions in the 2 km ZOI. The Applicant furthermore confirms that consultation with local authority public health teams has been initiated prior to PEIR and will continue to ensure the in relation to the assessment scope and methodology up to DCO submission. The Applicant has used the statutory consultation period to understand public engagement with matters of human health and wellbeing so that concerns can be discussed, understood, and suitable mitigation measures put in place where required. The scope of consultation was agreed with the host local authorities	

Consultee and Date	Comment	How has the comment been addressed	Location of response in chapter
	Advice should also be sought from the local public health team on additional local data. The baseline data should include mental health and wellbeing data. When estimating community anxiety and stress in particular, a qualitative assessment may be most appropriate. This may involve conducting resident surveys but also information received through public consultations, including community engagement exercises. Robust and meaningful consultation with the local community will be an important mitigation measure, in addition to informing the assessment and subsequent mitigation measures. Health baseline data should be reported at appropriate geographic scale to represent local communities, e.g. at least ward level or LSOA data where available.	through the Statement of Community Consultation, with any additional required consultation being undertaken following statutory consultation and prior to DCO submission.	
West Northamptonshire Council Scoping Opinion 22 Aug 2024	As with Socio-Economic, Tourism and Recreation, the impact on the potential degradation of PRoWs should be considered	The Applicant confirms health impacts resulting from impacts on public rights of way (PRoWs) are assessed under the sub-heading “open space, leisure and play” for their recreational use, and “transport modes, access and connections” for their functional use.	Section 18.6; Section 18.7; and Section 18.8.

Consultee and Date	Comment	How has the comment been addressed	Location of response in chapter
West Northamptonshire Council: Environmental Health Office 13 August 2024	Thank you for your email and apologies for the delay in responding. There was some uncertainty as requests such as these should go through the planning department. This is because the planners are the decision makers and Environmental Health is not a statutory consultee. They of course may choose to consult us and If so we offer advice in relation to environmental protection matters (noise, land quality, air quality, construction phase, light). You may find the information on the following page helpful: Planning and noise guidance | West Northamptonshire Council (westnorthants.gov.uk)	The Applicant notes this comment. The Applicant is in contact with West Northamptonshire Council's Planning Team, and will continue to engage with them through statutory consultation and during the DCO submission process. Any requests for inputs from the Environmental Health team will be made through the Council's planning team from this point forward.	n/a
United Kingdom Health Security Agency / Office for Health Improvement and Disparities 13 September 2024	OHID would be happy to meet prior to the PEIR if this would be useful, but any meeting should be attended by OHID and the local public health team. We expect the PEIR to provide a statement of competency to conform compliance with guidance issued by IEMA – Ref - Pyper, R., Birley, M., Buroni, A., Gibson, G., Day, L., Waples, H., Beard, C., Dellafiora, S., Salder, J.,	The Applicant has reached out to OHID and the local authority public health teams following receipt of comments from the statutory consultation, inviting consultees to engage directly with the Applicant team on any matters not addressed at PEIR. No request for a meeting was made by public health teams at any of the host local authorities.	ES Appendix 1.1: Statement of Competence **[EN010170/APP/GH6.3.1.1]**

Consultee and Date	Comment	How has the comment been addressed	Location of response in chapter
	Netherton, A., Green, L., Purdy, J., Douglas, M. (2024) IEMA Guide: Competent Expert for Health Impact Assessment including Health in Environmental Assessments.	A statement of competency is provided at ES Appendix 1.1.	
North Northamptonshire Council Public Heath 1 October 2024	Thanks for the contact, I have followed up with a member of the team to compile a list of data sources. Do you have any current links to the NHS Northamptonshire ICB, for information on local health services? This may be a useful connection we can make.	The Applicant awaits further information from the local authority public health team. The Applicant has informed North Northamptonshire Council Public Health that contact with NHS Northamptonshire ICB has not been returned, but that the ICB website has been used as a desk-based source to corroborate data from other sources.	n/a
North Northamptonshire Council: Environmental Health Office	Outgoing correspondence made 5 August 2024 to initiate engagement between the consultee and the Scheme – no response received.	n/a	n/a
Bedford, Luton, Milton Keynes Integrated Care Board	Outgoing correspondence made 10 September 2024 to initiate engagement between the consultee and the Scheme – no response received.	n/a	n/a
East Midlands Ambulance Service NHS Trust	Outgoing correspondence made 10 September 2024 to initiate engagement between the consultee and the Scheme – no response received.	n/a	n/a

Consultee and Date	Comment	How has the comment been addressed	Location of response in chapter
East of England Ambulance Service NHS Trust	Outgoing correspondence made 10 September 2024 to initiate engagement between the consultee and the Scheme – no response received.	n/a	n/a
NHS England	Outgoing correspondence made 10 September 2024 to initiate engagement between the consultee and the Scheme – no response received.	n/a	n/a
Northamptonshire Integrated Care Board	Outgoing correspondence made 10 September 2024 to initiate engagement between the consultee and the Scheme – no response received.	n/a	n/a
South Central Ambulance Service NHS Foundation Trust	Outgoing correspondence made 10 September 2024 to initiate engagement between the consultee and the Scheme – no response received.	n/a	n/a

Statutory Consultation

18.2.2 Further consultation in response to formal pre-application engagement was undertaken through the Preliminary Environmental Information Report (PEIR). **Table 18.2** outlines the statutory consultation responses relating to human health and how these have been addressed through the ES.

18.2.3 Responses to the Statutory Consultation are outlined in the Consultation Report [**EN010170/APP/GH5.1**].

Table 18.2: Statutory Consultation Comments

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
West Northamptonshire Council 5 December 2024	West Northamptonshire Council has made specific comments on the following matters that relate to human health: Road safety considerations due to increased HGV movements; Public rights of way being affected by traffic, closures, and disruption; Flood risk management; Nighttime noise; and General construction recommendations with regard to environmental health.	All comments with regard to human health in relation to other technical topics within the ES are addressed therein. This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Environmental Statement **[EN010170/APP/GH6.2]**; Section 18.6; Section 18.7; and Section 18.8.
Mears Ashby Parish Council 12 December 2024	You advise that the lifetime of the development will be 60 years. This equates to in excess of three generations, affecting local children and grandchildren. The council is therefore most concerned to ensure that the right decision is made on this development proposal.	The Applicant is aware of the implication of the lifetime of the Scheme on multiple generations of residents in its ZOI. Therefore, the Scheme is assessed for effects at construction, during its operational lifetime, and at decommissioning.	Section 18.8
	Mears Ashby Parish Council state that should consent be given, the Scheme must mitigate the loss of the countryside and to protect residents and road users from the adverse traffic impacts, seek improved connectivity, set-aside Suitable Alternative Natural Green Space, and seek that	The Applicant has committed to a broad range of mitigation measures to minimise impacts from the Scheme on all matters identified by the Parish Council. These are controlled and secured through the documents that support the DCO submission.	Section 18.7; Section 18.8; Section 18.9; and Outline control documents **[EN010170/APP/GH7.1-7.10]**

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
	measures to mitigate noise and landscape impacts.		
	Mears Ashby Parish Council has also made specific comments on the following matters that relate to human health: Changes to the enjoyment of PRoWs and potential for a hostile environment for users and wildlife; Concern that there will be no opportunities for local employment; Impacts on landscape and visual environment; Road safety due to HGVs on poor quality roads; Impacts on local amenity and businesses; and BESS safety impacts in relation to fire and EMF.	All comments with regard to human health in relation to other technical topics within the ES are addressed therein. This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Environmental Statement **[EN010170/APP/GH6.2]**; Section 18.6; Section 18.7; and Section 18.8.
Holcot Parish Council 17 December 2024	The project will dominate the local landscape, with substantial adverse visual affects at all stages of its life. Your proposals give rise to substantial impacts on rurality, visual and activity amenity – people choose to live in rural settings and your proposals will fundamentally change so many people's lives. There is little in your proposals that suggests that you want to ameliorate those impacts, with	The Applicant confirms impacts on the landscape character and visual impacts from the Scheme are assessed in ES Chapter 8: Landscape and Visual Impact. The Applicant furthermore confirms that the effects of the Scheme on human health and wellbeing, including on community identity, culture, resilience and influence are assessed in this chapter, with any required mitigation measures to	Section 18.7; Section 18.8; Section 18.9; and ES Chapter 8: Landscape and Visual Impact **[EN010170/APP/GH6.2.8]**.

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
	comments about what might be done, rather than what would be done.	reduce impacts set out in the supporting mitigation control documents.	
	There is not a sense from the documentation that minimising impacts on local people would be high up your priority list if a DCO is approved.	The Applicant confirms mitigation of impacts on local people and communities is a Scheme priority, and are set out in this chapter. All mitigation measures presented are controlled and secured through the documents that support the DCO submission.	Section 18.7; Section 18.9; and Outline control documents **[EN010170/APP/GH7.1-7.10]**
Bedford Borough Council 18 December 2024	BBC raise concerns regarding BESS safety and particularly in regard to breaching and/or potential leaching of contaminated fire water into the surrounding ground water and water courses. Discussions around storage tanks are welcomed. 'While it is acknowledged that battery/ BESS fires are considered by the industry as rare, their occurrence should they occur should be seen as severe in terms of their impact on human health and potential environmental damage.	The Applicant confirms that containment of contaminated firewater has been integrated into the Scheme design and embedded mitigation measures. The Applicant also confirms assessment of water contamination risk in both Chapter 10: Hydrology, Flood Risk and Drainage, and Chapter 22: Ground Conditions and Contamination. Resultant human health effects are then also discussed in this chapter.	Section 18.8; ES Chapter 10: Hydrology Flood Risk and Drainage **[EN010170/APP/GH6.2.10]**; ES Chapter 22: Ground Conditions and Contamination **[EN010170/APP/GH6.2.22]**; and Outline Battery Storage Safety Management Plan **[EN010170/APP/GH7.7]**.
	BBC has also made specific comments on the following matters that relate to human health: BESS safety impacts in relation to fire and air pollution from smoke and firewater runoff;	All comments with regard to human health in relation to other technical topics within the ES are addressed therein. This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Environmental Statement **[EN010170/APP/GH6.2]**; Section 18.6; Section 18.7; and Section 18.8.

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
	Contamination from the degradation of underground ducting if left in-situ post-decommissioning; Commitments to travel plans for workers and overlapping construction traffic; Assessment of low frequency noise; Assessment scope for air quality; Seeking greater clarification on groundwater contamination monitoring; Concern that fire impacts on urban locations have not been assessed for major accidents; and Expanded measures to enhance the PRoW network. .		
Milton Keynes City Council 18 December 2024	Milton Keynes City Council has made specific comments on the following matters that relate to human health: Impacts on key landscape qualities relative to the Ouse Valley; Quality of land for drainage and water quality, and design buffers to watercourses; and Buffers to PRoW and network enhancement opportunities.	All comments with regard to human health in relation to other technical topics within the ES are addressed therein. This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Environmental Statement **[EN010170/APP/GH6.2]**; Section 18.6; Section 18.7; and Section 18.8.

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
Sywell Aerodrome 18 December 2024	Sywell Aerodrome has raised concerns over health and safety risks as a result of potential for aircraft making emergency landings or overshooting the nearest runway colliding with the Solar Arrays.	The Applicant confirms that direct conversation with Sywell Aerodrome has been held following statutory consultation to determine the most suitable approach to pilot safety concerns. As a result, fields CF1 and CF2 were removed from the solar PV array area to allow for a safe emergency landing area immediately northeast of grass runway 05/23.	Illustrative Layout / Works Plans **[EN010170/APP/GH2.4]**
	Sywell Aerodrome has also made specific comments on the following matters that relate to human health: Glint and glare impacts on safe aviation and air traffic control; and Visual impact for recreational users of the airfield and visitors to the museum or airshows.	All comments with regard to human health in relation to other technical topics within the ES are addressed therein. This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Environmental Statement **[EN010170/APP/GH6.2]**; Section 18.6; Section 18.7; and Section 18.8.
Earls Barton Parish Council 19 December 2024	Earls Barton Parish Council has made specific comments on the following matters that relate to human health: BESS safety with respect to flood risk, emergency access, fire, and contamination; Road safety and condition from additional HGV use; Impact on the use and appreciation of PRoWs; and The provision of community benefits.	All comments with regard to human health in relation to other technical topics within the ES are addressed therein. This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Environmental Statement **[EN010170/APP/GH6.2]**; Section 18.6; Section 18.7; and Section 18.8.

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
Irchester Parish Council 19 December 2024	The overall impact on our agricultural land, landscape and views, and people's health and wellbeing will have a massive impact that will forever change our area for generations to come. The Scheme will have deep impacts on the communities and visitors alike who enjoy the countryside.	The Applicant confirms impacts on the landscape character and visual impacts from the Scheme are assessed in ES Chapter 8: Landscape and Visual Impact. The Applicant furthermore confirms that the effects of the Scheme on human health and wellbeing, including on community identity, culture, resilience and influence are assessed in this chapter, with any required mitigation measures to reduce impacts set out in the supporting mitigation control documents.	Section 18.7; Section 18.8; Section 18.9; and ES Chapter 8: Landscape and Visual Impact **[EN010170/APP/GH6.2.8]**.
	Irchester Parish Council has also made specific comments on the following matters that relate to human health: The impact of the Scheme on landscape and views; Flood risk from site runoff; BESS fire and contamination risks; Road safety due to HGVs on narrow roads,	All comments with regard to human health in relation to other technical topics within the ES are addressed therein. This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Environmental Statement **[EN010170/APP/GH6.2]**; Section 18.6; Section 18.7; and Section 18.8.
United Kingdom Health Security Agency 5 January 2025	We have considered the submitted documentation and can confirm that we are satisfied with the approach taken in preparing the Environmental Impact Assessment (EIA) and the conclusions drawn. We note the Applicant will consider potential impacts from a fire in the Battery Energy Storage System, which should not	The Applicant confirms impacts from BESS on air quality and drinking water are assessed in ES Chapter 10: Hydrology, Flood Risk and Drainage, ES Chapter 16: Air Quality and Chapter 22: Ground Conditions and Contamination. Resultant human health effects are assessed in this chapter.	Section 18.7; Section 18.8; Section 18.9; ES Chapter 10: Hydrology, Flood Risk and Drainage **[EN010170/APP/GH6.2.10]**;

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
	only consider emissions to air but also any impacts on drinking water supplies from fire water runoff.		ES Chapter 16: Air Quality **[EN010170/APP/GH6.2.16]**; and ES Chapter 22: Ground Conditions and Contamination **[EN010170/APP/GH6.2.22].**
	UKHSA notes the conclusions regarding possible EMF public health impacts. Reference may also be made to the voluntary code of practice which sets out the key principles for complying with the ICNIRP guidelines. Please also note that the Electromagnetic Compatibility Directive 2014/30/EU limits electromagnetic emissions from equipment to ensure that, when used as intended, such equipment does not disturb radio and telecommunication, as well as other equipment. It is not meant for the protection from biophysical effects caused by electromagnetic fields. National Grid has issued general EMF compliance certificates for various electricity infrastructures.	The Applicant confirms impacts from EMF, and any specific policy or mitigation requirements are assessed in ES Chapter 21: Electromagnetic Fields. Resultant human health effects are assessed in this chapter.	Section 18.7; Section 18.8; Section 18.9; and ES Chapter 21: Electromagnetic Fields **[EN010170/APP/GH6.2.21].**
Bozeat Parish Council December 2024	The health assessment in the PEIR is only really relevant during construction and does not consider impacts over the 60 years of operation which is the majority of a lifetime.	All comments with regard to human health in relation to other technical topics within the ES are addressed therein. This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Environmental Statement **[EN010170/APP/GH6.2]**; Section 18.6; Section 18.7; and Section 18.8.

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
	The deterioration in the nature of the local PRoW network and country roads is likely to change behaviours and reduce their use for taking exercise, reducing the level of healthy exercise taken by residents.	The Applicant confirms that access to open space, leisure and play is assessed in this chapter, with the health and wellbeing impacts of changes to the use of PRoWs included as part of the assessment. The Scheme is designed to minimise adverse effects to the aspect and visual surroundings of PRoWs and country lanes, while the physical conditions of PRoWs will be controlled through the OPRoWMP, which includes remediation works of any damage to PRoW surfaces.	Section 18.7; Section 18.8; Section 18.9; and Outline Public Rights of Way Management Plan **[EN010170/APP/GH7.10].**
	Bozeat Parish Council has also made specific comments on the following matters that relate to human health: Concerns relating to HGV traffic along roads used for recreation; Noise nuisance in residential areas and modelling for PRoW users; Glint and glare impacts on road and PRoW users; Air quality impacts from traffic and BESS fires; Agricultural and equestrian employment loss, and impacts on enjoyment of tourism and recreational features in the countryside; and	All comments with regard to human health in relation to other technical topics within the ES are addressed therein. This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Environmental Statement **[EN010170/APP/GH6.2]**; Section 18.6; Section 18.7; and Section 18.8.

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
	Emergency response to major BESS fires		
Lavendon Parish Council December 2024	Lavendon raised multiple concerns about resident appreciation of the area including for recreation, views, and in regard to the loss of established hedgerows on the site throughout recent history.	The Applicant confirms impacts on the landscape character and visual impacts from the Scheme are assessed in ES Chapter 8: Landscape and Visual Impact. This is also supported by landscape mitigation and management documents that seek to minimise adverse effects on existing hedgerows and enhance and support them where feasible. The Applicant furthermore confirms that the effects of the Scheme on human health and wellbeing, including on access to open space and leisure, and on community identity, culture, resilience and influence, are assessed in this chapter, with any required mitigation measures to reduce impacts set out in the supporting mitigation control documents.	Section 18.7; Section 18.8; Section 18.9; and ES Chapter 8: Landscape and Visual Impact **[EN010170/APP/GH6.2.8]**.
	Lavendon Parish Council has also made specific comments on the following matters that relate to human health: Changes to landscape and visual character; Response to major flooding events in Lavendon; and Use of PRoWs for recreation.	All comments with regard to human health in relation to other technical topics within the ES are addressed therein. This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Environmental Statement **[EN010170/APP/GH6.2]**; Section 18.6; Section 18.7; and Section 18.8.

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
North Northamptonshire Council December 2024	Energy production has the potential to impact on the health and well-being of the population. Access to energy is clearly beneficial to society and to our health as a whole. However, the production, distribution and use of energy may have negative impacts on some people's health	The Applicant notes these comments, and has assessed both the positive and negative human health effects from the Scheme in this chapter.	Section 18.7; Section 18.8; and Section 18.9.
	The Scheme has the potential to affect human health during all stages of development as detailed in the PEIR. Mitigation measures include buffers from roads, PRoW and neighbouring buildings, and various mitigation measures that are covered under other chapters.	The Applicant confirms this approach and presents mitigation measures for human health in this chapter, or signposts to other chapters where relevant.	Section 18.7; Section 18.8; and Section 18.9.
	The ES should assess human health effects for each element of the Scheme in full detail, identifying any adverse health impacts, and identifying measures to avoid, reduce or compensate for these impacts as appropriate. The impacts of more than one development may affect people simultaneously, so the cumulative impact on health should continue to be considered.	The Applicant notes these comments, and has assessed both the positive and negative human health effects from the Scheme in this chapter. Cumulative effects on human health are also assessed in this chapter.	Section 18.7; Section 18.8; Section 18.9; and Section 18.11.
	It is not clear whether any substantial increase in CCTV and surveillance infrastructure will be included in this assessment in terms of amenity and loss of privacy.	Site security measures are described in ES Chapter 4: Scheme Description and are secured through the OCEMP, OOEMP, and ODS for each relevant stage of the Scheme's lifetime. Impacts on amenity and loss of privacy were not included within the scope of	Section 18.8; ES Chapter 4: Scheme Description **[EN010170/APP/GH6.2.4]**;

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
		assessment at PEIR, however the Applicant confirms that this is considered at NNC's request under the heading "community identity, culture, resilience, and influence".	Outline Construction Environmental Management Plan **[EN010170/APP/GH7.1]**; Outline Operational Environmental Management Plan **[EN010170/APP/GH7.2]**; and Outline Decommissioning Statement **[EN010170/APP/GH7.3]**.
	With the measures adopted as part of the Scheme in place, the majority of scoped human health impacts result in adverse effects but are not significant and are temporary. There are also several beneficial effects on human health that have been identified.	The Applicant notes these comments, and has assessed both the positive and negative human health effects from the Scheme in this chapter.	Section 18.7; Section 18.8; and Section 18.9.
	NNC support measures to improve the health and wellbeing of communities including increasing the PRoW network within and around the development Sites.	The Applicant notes these comments, and has committed to improving connectivity and active travel options through the provision of permissive paths where feasible and appropriate to meet stakeholder requests. These are assessed in greater detail in ES Chapter 17: Socio-Economics, Tourism and Recreation.	Section 18.7; Section 18.8; Section 18.9; and ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**
	NNC Parish Council has also made specific comments on the following matters that relate to human health:	All comments with regard to human health in relation to other technical topics within the ES are addressed therein.	Environmental Statement [**EN010170/APP/GH6.2]**;

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
	Approach to landscape and visual assessment and landscape and ecological enhancement measures; Provision of full flood modelling and flood risk management strategy; Commitments to PRoWs, permissive paths and network enhancement; Clarification of traffic modelling and management strategies; Noise surveys and attenuation measures; Level of assessment for glint and glare for tracker panels; Impacts of crime and changes to employment; EMF surveying; and Fire and major accident prevention and mitigation.	This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Section 18.6; Section 18.7; and Section 18.8.
Bedford, Luton, Milton Keynes Integrated Care Board	Outgoing correspondence made 12 December 2024 to request any response to statutory consultation – no response received.	As no response was received, the Applicant confirms no further engagement was made following statutory consultation.	n/a
East Midlands Ambulance Service NHS Trust	Outgoing correspondence made 10 September 2024 to request any response to statutory consultation – no response received.	As no response was received, the Applicant confirms no further engagement was made following statutory consultation.	n/a

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
East of England Ambulance Service NHS Trust	Outgoing correspondence made 12 December 2024 to request any response to statutory consultation – no response received.	As no response was received, the Applicant confirms no further engagement was made following statutory consultation.	n/a
NHS England	Outgoing correspondence made 12 December 2024 to request any response to statutory consultation – no response received.	As no response was received, the Applicant confirms no further engagement was made following statutory consultation.	n/a
Northamptonshire Integrated Care Board	Outgoing correspondence made 12 December 2024 to request any response to statutory consultation – no response received.	As no response was received, the Applicant confirms no further engagement was made following statutory consultation.	n/a
South Central Ambulance Service NHS Foundation Trust	Outgoing correspondence made 12 December 2024 to request any response to statutory consultation – no response received.	As no response was received, the Applicant confirms no further engagement was made following statutory consultation.	n/a

18.2.4 Additional correspondence was made with West Northamptonshire Council's Public Health Team on 27 January 2025, following closure of the statutory consultation period, to provide an opportunity for dialogue between the Public Health and Applicant teams to expand upon any matters raised in the Council's consultation comments. This correspondence included the provision to the Applicant team of Local area health profiles for the areas in West Northamptonshire within 2 km of the Scheme's Order Limits. These health profiles have been used as part of the collation of baseline health and wellbeing information in Section 18.6 below.

18.2.5 During statutory consultation, comments from members of the public were collated and summarised for the Applicant team to prepare responses to the matters raised. Matters relating to human health were commented upon widely by the public, covering a substantial range of topics, anxieties, and requests for further information. This included commentary on the sufficiency of the consultation events, published materials, and transparency of the information provided, with a number of respondents showing a notable level of distrust in the intentions of the Applicant with regard to making sufficient information available, or being accurate to future outcomes. Construction impacts, including physical and psychological impacts to health and wellbeing were raised by

a significant proportion of commentors, demonstrating the importance of the assessment of health and wellbeing outcomes to alleviate community concerns. Long-term health and wellbeing impacts were also raised in many of the public responses to the consultation, most notably in regard to safety risks from BESS fire and smoke, and the wellbeing impacts of a long-term change to the landscape and visual setting of the areas surrounding the communities closest to the Scheme.

Targeted Consultation

18.2.6 As a result of changes to the Order Limits made between Section 42 statutory consultation and DCO submission that included land not previously consulted upon, a targeted consultation period was opened from 13 March 2025 to 10 April 2025. This provided opportunity for statutory consultees and relevant stakeholders and members of the public to make specific commentary on the 25no. changes made to the Scheme Order Limits. **Table 18.3** outlines the targeted consultation responses relating to human health from statutory bodies and how these have been addressed through the ES.

Table 18.3: Targeted Consultation Comments

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
Health and Safety Executive 4 April 2025	The Health and Safety Executive has made specific comments on the following matters that relate to human health: Recommendations for safe working practice in respect of major accident pipelines and infrastructure.	All comments with regard to human health in relation to other technical topics within the ES are addressed therein. This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Environmental Statement **[EN010170/APP/GH6.2]**; Section 18.6; Section 18.7; and Section 18.8.
Mears Ashby Parish Council 4 April 2025	Mears Ashby Parish Council has made specific comments on the following matters that relate to human health:	All comments with regard to human health in relation to other technical topics within the ES are addressed therein. This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Environmental Statement **[EN010170/APP/GH6.2]**; Section 18.6; Section 18.7; Section 18.8;

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
	Increased transport impacts on roads approaching Mears Ashby; Impacts on road safety for pedestrians, and air and noise pollution from HGVs; and Impacts on PRoW users and recreational non-vehicular road users.	The Applicant confirms that a permissive footpath parallel to Mears Ashby Road, from Washbrook Lane to Footpath NN|TN|1, has been included in the Scheme, for the provision of increased accessibility and connectivity for the benefit of local users, for the duration of the Scheme's lifetime. Where this crosses the proposed site access, during construction and peak replacement activity, this crossing will be manned to ensure conflicts between HGVs and pedestrians are minimised.	Outline Construction Traffic Management Plan **[EN010170/APP/GH7.9]**; and Outline Public Rights of Way and Permissive Paths Management Plan **[EN010170/APP/GH7.10]**.
North Northamptonshire Council 7 April 2025	North Northamptonshire Council has made specific comments on the following matters that relate to human health: Increased transport impacts may have knock-on landscape and PRoW impacts.	All comments with regard to human health in relation to other technical topics within the ES are addressed therein. This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Environmental Statement **[EN010170/APP/GH6.2]**; Section 18.6; Section 18.7; and Section 18.8.
Bozeat Parish Council 10 April 2025	Bozeat Parish Council has made specific comments on the following matters that relate to human health: Increased transport impacts on residential roads within Bozeat village.	All comments with regard to human health in relation to other technical topics within the ES are addressed therein. This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Environmental Statement **[EN010170/APP/GH6.2]**; Section 18.6; Section 18.7; and Section 18.8.
Earls Barton Parish Council	Earls Barton Parish Council has made specific comments	All comments with regard to human health in relation to other technical topics within the ES are addressed therein.	Environmental Statement **[EN010170/APP/GH6.2]**;

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
16 April 2025	on the following matters that relate to human health: Impacts on recreational users where PRoWs are proposed for site access; and Suitability of the local road network due to low structural strength, flooding, and width for passing users.	This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Section 18.6; Section 18.7; and Section 18.8.
Easton Maudit Parish Meeting 17 April 2025	Easton Maudit Parish Meeting has made specific comments on the following matters that relate to human health: Impact to the community of traffic disruption and access to main roads; and Impact of access location on road safety.	All comments with regard to human health in relation to other technical topics within the ES are addressed therein. This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Environmental Statement **[EN010170/APP/GH6.2]**; Section 18.6; Section 18.7; and Section 18.8.
Grendon Parish Council 17 April 2025	Grendon Parish Council has made specific comments on the following matters that relate to human health: The use of the local road network for HGV traffic; Impacts on recreational use of the road network and indirect impacts on PRoW users; and	All comments with regard to human health in relation to other technical topics within the ES are addressed therein. This human health chapter cross-refers to each of the technical chapters relevant to the topic raised by the consultee.	Environmental Statement **[EN010170/APP/GH6.2]**; Section 18.6; Section 18.7; and Section 18.8.

Consultee and Date	Comments	How has this comment been addressed	Location of response in the ES
	Suitability of the local road network due to low structural strength, flooding, and width for passing users.		

18.3 Legislation, Planning Policy and Guidance

18.3.1 This section provides an overview of the legislation, planning policy and guidance against which the Scheme will be considered for human health. A more detailed list of policy and guidance considerations from these documents is set out in Appendix 18.1: Human Health Legislation, Policy, and Guidance **[EN010170/APP/GH6.3.18.1]**.

Legislation

18.3.2 The following legislation is relevant to the assessment of human health:

- Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Ref 18.1);
- Planning Act 2008 (Ref 18.6);
- Equality Act 2010 (Ref 18.7); and
- Health and Care Act 2022 (Ref 18.8).

Planning Policy

National Planning Policy

18.3.3 National Policy Statements (NPS) set out the policy basis for NSIPs including for ground mounted solar developments. The NPSs that are relevant to the Scheme are EN-1, EN-3 and EN-5, which came into force on 17 January 2024. The Scheme therefore has had regard to them along with any other relevant and important national and local planning policies. Those policies therein that pertain directly to human health are summarised as follows.

18.3.4 Those policies therein that pertain directly to human health matters are summarised as follows.

- Overarching National Policy Statement for Energy (EN-1) (Ref 18.9);
    - Specifically, Section 4.4 which sets out the assessment principles for health and certain sections of Part 5 which consider the generic impacts that arise from the development of all types of energy infrastructure covered by the energy NPSs;
- National Policy Statement for Renewable Energy Infrastructure (EN-3) (Ref 18.10);
    - Specifically, Section 2.10 which provides the primary policy basis for decisions on renewable energy DCO applications in relation to solar photovoltaic energy generation; and
- National Policy Statement for Electricity Networks Infrastructure (EN-5) (Ref 18.11);
    - Specifically, Sections 2.9, 2.10 and 2.11 in respect of human health impacts from electromagnetic fields (EMF).

National Planning Policy Framework

18.3.5 The National Planning Policy Framework, amended December 2024 and February 2025 (Ref 18.12), provides policy context at chapter 8 for the support and promotion of healthy and safe communities, at chapter 12 for achieving well-designed and beautiful places, and chapter 15 for conserving and enhancing the natural environment.

Local Planning Policy

18.3.6 The Local Planning Policy is set out in the host local authorities adopted policy documents, including made neighbourhood planning policies:

North Northamptonshire Council

- North Northamptonshire Council Joint Strategic Needs Assessment (Ref 18.13);
- North Northamptonshire Joint Core Strategy 2011 to 2031 (adopted July 2016) (Ref 18.14);
- Wellingborough Local Plan (Part 2), adopted February 2019 (Ref 18.15);
- Earls Barton Neighbourhood Plan 2011-2031 (Final), adopted January 2016 (Ref 18.16); and
- Ecton Neighbourhood Development Plan 2016-2031, adopted May 2021 (Ref 18.17).

West Northamptonshire Council

- West Northamptonshire Council Joint Strategic Needs Assessment (Ref 18.14);
- West Northamptonshire Joint Health and Wellbeing Strategy 2023-2028 (Ref 18.19);
- West Northamptonshire Joint Core Strategy Local Plan (Part 1), adopted December 2014 (Ref 18.20);
- Settlements and Countryside Local Plan (Part 2) for Daventry District 2011-2029, adopted February 2020 (Ref 18.21);
- South Northamptonshire Local Plan (Part 2) 2011-2029, adopted July 2020 (Ref 18.22);
- Moulton Neighbourhood Development Plan 2014-2029, adopted December 2016 (Ref 18.23); and
- Overstone Neighbourhood Development Plan 2019-2029, adopted December 2021 (Ref 18.24).

Milton Keynes City Council

- Milton Keynes Joint Strategic Needs Assessment (Ref 18.25);
- Milton Keynes Health and Wellbeing Strategy – Lifelong Wellbeing (Ref 18.26);

- Plan:MK 2016-2031, adopted March 2019 (Ref 18.27); and
- Lavendon Neighbourhood Plan 2019 to 2031, adopted November 2019 (Ref 18.28).

Bedford Borough Council

18.3.7 Although not one of the host authorities, Bedford Borough is likely to experience some level of change to the human health environment as a result of the Scheme, even if limited to socio-economic derived effects, such as employment and income, and education and skills. As such, the following is also considered:

- Bedford Borough Joint Strategic Needs Assessment (Ref 18.29); and
- Bedford Borough Joint Local Health and Wellbeing Strategy 2024-2027 (Ref 18.30).

Emerging Policies

18.3.8 In addition to adopted policy documents, relevant emerging policy documents are considered as part of the local planning policy context, where such emerging policies are in a relatively progressed stage, and are unlikely to change considerably prior to adoption. Their status has been kept under review through drafting of the ES ahead of DCO submission to ensure the most up-to-date position is considered.

18.3.9 The emerging North Northamptonshire Strategic Plan (Ref 18.31) is a proposed strategic planning document to replace the existing North Northamptonshire Joint Core Strategy. The emerging plan is proposed to also take on some non-strategic planning policies from the Part 2 development management plans that form part of the Local Development Plan for North Northamptonshire. The emerging plan is in early draft and is due for publication consultation in early 2026. Emerging policies deemed to be of most relevance to human health factors will be monitored as they are published.

18.3.10 Similarly, West Northamptonshire Council is currently preparing their New Local Plan for West Northamptonshire (Ref 18.32) which will once published replace the current adopted West Northamptonshire Joint Core Strategy Local Plan (Part 1) and the Part 2 Local Plans. The emerging plan is in early draft and is due for publication consultation in October 2025. Emerging policies deemed to be of most relevance to human health factors will be monitored as they are published.

18.3.11 Milton Keynes City Council have in Autumn 2024 consulted upon their emerging draft Milton Keynes City Plan 2050 (Ref 18.33), which will replace their existing Plan:MK document upon adoption. This document will provide strategic and development management policies for the Milton Keynes City area. Notably, the draft plan contains specific policy strategies for the location of solar PV installations. The accompanying draft policy maps demonstrate that Green Hill G is located within the draft “Solar Farm Area of Search” (Ref 18.34).

Guidance

18.3.12 The following national and industry guidance has been reviewed and is relevant to the assessment of potential health impacts associated with the Scheme.

- National Planning Practice Guidance (NPPG), updated February 2024 (Ref 18.35);
- Institute of Environmental Management and Assessment (IEMA) Guide to: Effective Scoping of Human Health in EIA (2022) (Ref 18.2);
- Institute of Environmental Management and Assessment (IEMA) Guide to: Determining Significance for Human Health in Environmental Impact Assessment (2022) (Ref 18.3);
- NHS London Healthy Urban Development Unit (HUDU) Rapid Health Impact Assessment (HIA) Tool, Fourth Edition (2019) (Ref 18.36);
- PHE guidance, Spatial Planning for Health: An evidence resource for designing healthier places (2017) (Ref 18.37);
- Public Health England (PHE) guidance, Health Impact Assessment in spatial planning: A guide for local authority public health and planning teams (2020) (Ref 18.38);
- PHE Strategy 2020 to 2025 (2019) (Ref 18.39);
- Wales Health Impact Assessment Support Unit (WHIASU), Health Impact Assessment. A practical guide to HIA (2012) (Ref 18.40);
- Marmot et al., Fair Society Healthy Lives: The Marmot Review: strategic review of health inequalities in England post-2010 (2010) (Ref 18.41);
- Institute of Health Equity, Health Equity in England: The Marmot Review 10 Years On (2020) (Ref 18.42);
- The Health Foundation and the Institute of Health Equity, Build Back Fairer – the Covid-19 Marmot Review: The Pandemic, Socioeconomic and Health Inequalities in England (2020) (Ref 18.43);
- NHS, The NHS Long-Term Plan (January 2019) (Ref 18.44);
- Milton Keynes Health Impact Assessment Supplementary Planning Document, March 2021 (Ref 18.45); and
- Suffolk County Council, Energy and Climate Adaptive Infrastructure Policy: Community Engagement and Wellbeing Supplementary Guidance Document (2024) (Ref 18.46).

18.4 Assessment Methodology and Significance Criteria

18.4.1 The methodologies described in the following section have been developed in line with the relevant planning policy and appropriate industry guidance for assessing likely effects of the Scheme on human health.

18.4.2 The assessment of health cross refers to the technical assessments undertaken for the other technical disciplines in the ES, highlighting any conclusions reached which are relevant to human health. A health ‘lens’ has been applied to these conclusions to determine the extent to which these conclusions have any effect (or not) upon the health of the local population or specific population groups

therein. A clear pathway between the anticipated impact and the resultant health effects has been determined to understand the significance of any effects to human health, including for direct and less obvious indirect effects. The assessment has also been informed by available topic-specific literature, and where appropriate, engagement with health and wellbeing stakeholders and statutory bodies.

18.4.3 The assessment of human health is undertaken on the understanding that as defined by the Constitution of the World Health Organization (WHO) in 1948, *"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity"* (Ref 18.47). As such, the health and wellbeing of individuals and communities is based on a broad range of determinants of health, which have been modelled by Dahlgreen and Whitehead (1991), and Barton and Green (2006) respectively, as shown in **Plate 18.1** and **Plate 18.2** below.

Plate 18.1: Determinants of Health in Individuals (Ref 18.48)

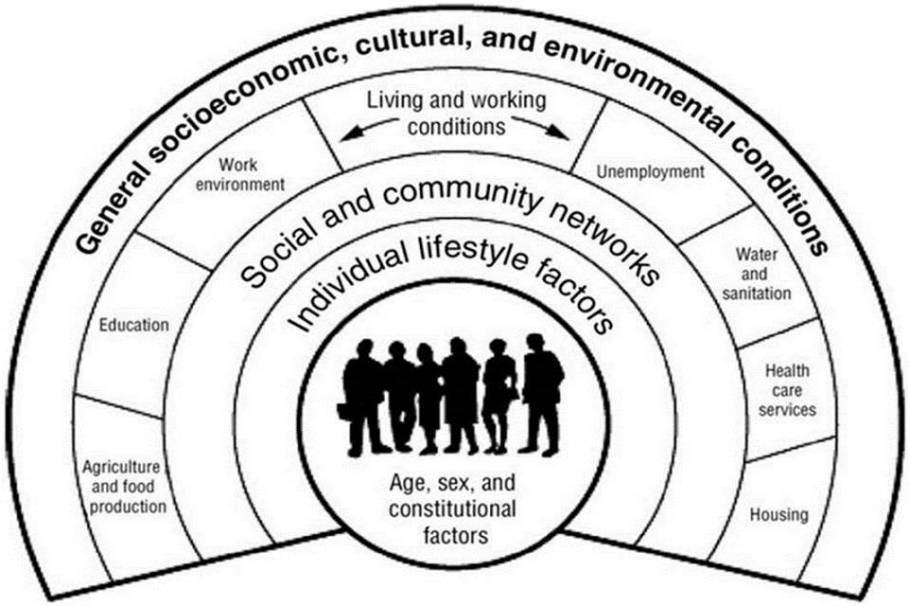
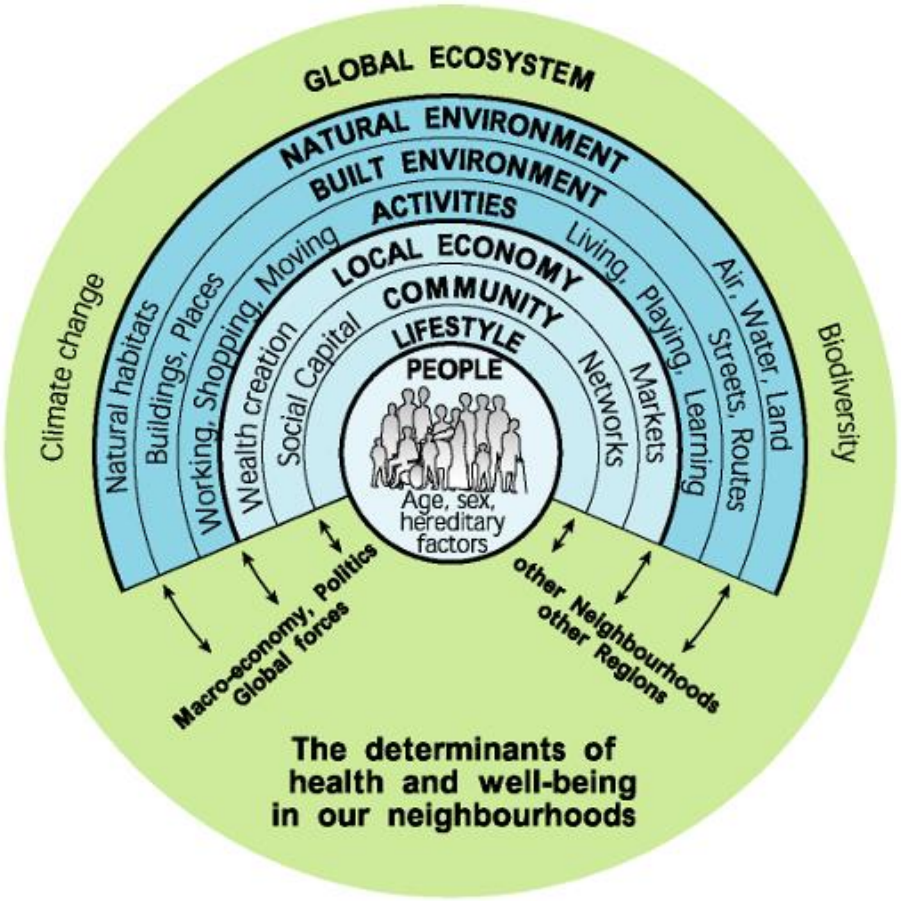


Plate 18.2: Determinants of Health in Neighbourhoods (Ref 18.49)



18.4.4 These models illustrate the range of factors that contribute to health and wellbeing, from largely fixed personal factors (such as age, sex, and hereditary factors) to broader determinants of health based on individual lifestyle, social community and network based determinants, to wider environmental and economic factors, all of which are characterised by their interdependency in how they contribute to health living.

Study Area

18.4.5 The boundaries of the Sites (Green Hill A to G and BESS Site), the Cable Route Corridor, and any areas for highway improvements together define the extents of the Scheme known as the 'the Order Limits'. These are shown in the Location Plan **[EN010170/APP/GH2.1]**.

18.4.6 The Study Area for determining baseline conditions for human health is based on Zones of Influence (ZOIs) surrounding, and all areas located within, the outermost extent of the Order Limits. The primary ZOI for direct physical and mental health impacts is set at 2 km. This has been selected as the largest ZOI for which most of the scoped in determinants of health (see Table 19.5 in the EIA Scoping Report submitted to the Secretary of State on 24 July 2024 (Ref 18.4)) are likely to be significantly affected. The determinants of health likely to be experienced up to 2 km from the Scheme are: open space, leisure and play; and community identity,

culture, resilience and influence (as defined in IEMA's Guide to: Effective Scoping of Human Health in Environmental Impact Assessment (Ref 18.2)). Open space, leisure and play is based on the Study Area for locally important recreational facilities and venues including PRoWs as defined in Section 17.4 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**. In the case of this Scheme, the Study Area for community identity, culture, resilience and influence is largely determined by landscape and visual impacts, and as such the relevant ZOI or Study Area has been guided by Section 8.4 of ES Chapter 8: Landscape and Visual **[EN010170/APP/GH6.2.8]**, which sets out that beyond 2 km from the Scheme, visual impacts are not anticipated to be significant, while professional judgement is applied in the consideration that landscape impacts at a distance of more than 2 km from the Scheme are not likely to induce significant human health effects.

18.4.7 Baseline data will be collected across census Lower Super Output Area (LSOA) level that fall wholly or partially within the 2 km ZOI. Where data is unavailable at the LSOA level, electoral ward, and authority-level data has been used from the relevant local authorities: Bedford, Milton Keynes, North Northamptonshire, and West Northamptonshire, hereafter collectively referred to as the "Wider Baseline Study Area". Due to the predominantly rural aspect of the Order Limits, and the resultant requirement for residents to travel greater distances to access healthcare services, an additional 5 km ZOI is used solely for assessing provision of primary health services, while education and employment baseline conditions are measures at the Wider Baseline Study Area level. These areas are shown on Figure 18.1: Study Areas for Human Health **[EN010170/APP/GH6.4.18.1]** which supports this chapter. Local-level data will also be compared against data for the Wider Baseline Study Area, and national data to determine likely sensitivity of populations in the 2 km ZOI.

18.4.8 **Table 18.4** below sets out the names of each data area considered as part of the 2 km ZOI.

Table 18.4: Study Area (2 km ZOI) Data Areas

Lower Super Output Area (pre-2021)	Lower Super Output Area (post-2021)	Ward	Local Authority
Bedford 002D	Bedford 002D	Harrold	Bedford
Milton Keynes 001C	Milton Keynes 001C	Olney	Milton Keynes
Milton Keynes 001E	Milton Keynes 001E		
Kettering 011F	N. Northants. 020C	Burton and Broughton	North Northamptonshire
Kettering 011G	N. Northants. 020B	Rothwell and Mawsley	
Kettering 011H	N. Northants. 020A		
Kettering 011I	N. Northants. 020D		

Lower Super Output Area (pre-2021)	Lower Super Output Area (post-2021)	Ward	Local Authority
Wellingborough 001D	N. Northants. 026D	Earls Barton	
Wellingborough 009A	N. Northants. 038A		
Wellingborough 009B	N. Northants. 038B		
Wellingborough 009C	N. Northants. 038C		
Wellingborough 009D	N. Northants. 038D		
Wellingborough 009E	N. Northants. 038E		
Wellingborough 009F	N. Northants. 038F		
Wellingborough 003D	N. Northants. 029D	Hatton Park	
Wellingborough 003E	N. Northants. 029E		
Wellingborough 005A	N. Northants. 031A	Brickhill and Queensway	
Wellingborough 005B	N. Northants. 031A		
Wellingborough 005C	N. Northants. 031B		
Wellingborough 005D	N. Northants. 031C		
Wellingborough 006C	N. Northants. 031D		
Wellingborough 007A	N. Northants. 032B		
Wellingborough 007B	N. Northants. 033A		
Wellingborough 007D	N. Northants. 033B		
Wellingborough 008C	N. Northants. 036C	Croyland and Swanspool	
Wellingborough 008E	N. Northants. 036E		
Wellingborough 010D	N. Northants. 040D	Irchester	
Wellingborough 010E	N. Northants. 040E		
Daventry 002C	W. Northants. 002C	Brixworth	West Northamptonshire
Daventry 005B	W. Northants. 003A	Moulton	
Daventry 005C	W. Northants. 003B		
Daventry 005D	W. Northants. 003C		

Lower Super Output Area (pre-2021)	Lower Super Output Area (post-2021)	Ward	Local Authority
Daventry 005E	W. Northants. 003D		
S. Northants. 002C	W. Northants. 043C	Hackleton and Grange Park	
S. Northants. 002D	W. Northants. 043D		

18.4.9 The Study Areas for human health impacts have been largely influenced by the relevant technical assessment in the rest of the ES. For example, where noise and vibration impacts are defined within a given Study Area of the Scheme, this same Study Area is considered when assessing the health impacts associated with the changes in noise and vibration identified.

Sources of Information

18.4.10 For assessment of baseline conditions with respect to human health, data has been gathered from a number of data sources to provide a holistic understanding of the baseline conditions in the Study Area. Where this relies on baseline data collected in other topic chapters in the ES, these have been identified and summarised. Information sources to be used specifically for human health, and not derived from other topic chapters, have been sourced from the below locations:

- Office for National Statistics (ONS) – 2021;
- Department for Communities and Local Government (DCLG): Indices of Multiple Deprivation Map App – 2019;
- Office for Health Improvement and Disparities (OHID): Fingertips Public Health Data web tool – 2016-2024;
- Department for Work and Pensions (DWP) Stat-Xplore web tool – 2024-2025; and
- Joint Strategic Needs Assessments and Joint Health and Wellbeing Strategies;
    - North Northamptonshire (JSNA only);
    - West Northamptonshire;
    - Milton Keynes City;
    - Bedford Borough.

Impact Assessment Methodology

18.4.11 The assessment scenarios that are being considered for the purposes of the EIA are:

- Existing Baseline 2023-2025;
- Construction 2027-2029. This is based on the earliest possible construction commencement of the Scheme. The assessment will consider the full construction period of 2 years, and a “worst-case” peak month;
- Operation 2029-2089. It has been assumed for the purposes of the EIA that the Scheme will be operational by the start of Q3 2029. The assessment will consider the full operation period, and the greatest likely peak of activity attributed to replacement of infrastructure. For the purpose of this assessment, a worst-case, a 24-month period for the replacement of all Solar PV Panels is considered in the assessment in Section 18.8 below as this is likely to generate the greatest significance of effects. Replacement of BESS infrastructure, inverters, or ad hoc replacement of broken and defective Solar PV panels throughout the Scheme’s operational lifetime are not assessed separately as the magnitude of impacts from these replacement events is anticipated to be lower than the peak replacement scenario;
- Decommissioning 2089. This would be the year when decommissioning of the Scheme would commence and has been based on an up to 60-year operational lifetime for solar projects. It has therefore been assumed for the purposes of the EIA that the Scheme will be decommissioned no later than 2089; and
- A future baseline scenario wherein the Scheme does not go ahead.

18.4.12 The assessment of human health effects will therefore be grouped by assessment scenario in Section 18.8 to set out likely significant effects during construction, operation, and decommissioning.

Assessment Scope

18.4.13 The scope of assessment is defined by that set out in Chapter 19: Human Health in the Environmental Impact Assessment Scoping Report submitted to the Secretary of State on 24 July 2024 (Ref 18.4) **[EN010170/APP/GH6.3.2.1]** and as defined by the Planning Inspectorate in their Scoping Opinion, 30 August 2024 (Ref 18.5) **[EN010170/APP/GH6.3.2.2]**.

18.4.14 Matters scoped into this assessment therefore comprise:

- Housing; open space, leisure and play; health and social care services (construction and decommissioning);
- Climate change mitigation and adaptation; electromagnetic fields; wider societal infrastructure and resources (operation); and
- Transport modes, access and connections; community identity, culture, resilience and influence; education and training; employment and income; air quality; water quality or availability; land quality; noise and vibration; at all stages of the project lifetime (construction, operation, and decommissioning).

18.4.15 Matters scoped out are those set out in the Scoping Opinion (Ref 18.5) **[EN010170/APP/GH6.3.2.2]**.

18.4.16 The preliminary assessment of health and wellbeing impacts was applied to the general population, and to identified vulnerable groups as identified through baseline conditions analysis. Consideration of vulnerable groups was utilised to effectively determine sensitivity of the population as a whole and identify what impacts the Scheme may have on health inequalities. Vulnerable sub-population groups as identified in Table 9.2 of IEMA Guide to: Effective Scoping of Human Health in Environmental Impact Assessment (2022) (Ref 18.2) include the following groups:

- Age related groups: children, young people, older people;
- Income related groups: people on low income or with poor job security, economically inactive and unemployed people, people in poverty or experiencing homelessness, those unable to work due to poor health;
- Health inequality or disadvantage: people with long-term physical disabilities, long-term mental disabilities, and learning or neurological disabilities, and those providing care to people with disabilities;
- Social disadvantage: people experiencing social isolation, persons experiencing discrimination (including specifically based on race or religion), as necessary any other protected characteristic as defined by the Equality Act 2010 (Ref 18.7) (age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, sexual orientation), gypsy and traveller groups, refugee and/or asylum seekers, non-English speakers, and those with low literacy or numeracy; and
- Geographic factors: people experiencing barriers in access to services or service provision, amenities, or facilities, people living in areas of high deprivation, and differences in urban versus rural challenges to access to services.

18.4.17 The preliminary health assessment also considered sensitive receptors such as schools, care homes, and healthcare facilities, which may be particularly vulnerable to change as a result of their occupants or users, and has resultantly been used to set out the sensitivity of population groups in this human health assessment. The identification of these vulnerable groups and locations was furthermore supported by the technical assessments of other ES chapters as appropriate.

18.4.18 Drawing on the EIA Scoping report, the following determinants of health, scoped into this assessment, and the relevant source to receptor pathway are set out in **Table 18.5** below:

Table 18.5: Source to Receptor Pathway Links for Health Determinants

Source	Pathway	Receptor	Project Stage
Potential temporary changes in access to temporary and rental accommodation	Likely adverse effects on suitable access to housing or temporary accommodation	People reliant on rental or temporary accommodation,	Construction, Decommissioning

Source	Pathway	Receptor	Project Stage
arising from the need to accommodate incoming temporary construction and decommissioning workforce		or at risk of homelessness	
Potential temporary or permanent closures, diversions or amenity impacts on PRoWs or impacts on the local road network which impact cycling, equestrian or pedestrian users	Likely adverse effects on active travel journeys, and on recreation, including from fear and intimidation both of which could impact physical and mental health and wellbeing	People using PRoWs and the local road network for commuting, travel, and recreation	Construction, Operation, Decommissioning
Potential temporary or permanent reduction in accessibility to, or amenity impacts on the use and enjoyment of, open spaces and established leisure and recreation facilities	Likely adverse effects on physical activity and enjoyment of recreational facilities which could impact physical and mental health and wellbeing	People accessing open spaces and using leisure and recreation facilities	Construction, Operation, Decommissioning
Potential temporary or permanent increases in traffic on the local road network	Likely adverse impacts on road safety, which could impact human health	Vehicular users of the local road network	Construction, Operation, Decommissioning
Potential temporary or permanent changes to community identity as a result of landscape and visual impacts on surroundings	Likely adverse effects on visual amenity and enjoyment of the surroundings and environment, which could impact wellbeing	People living in communities nearby to the Scheme	Construction, Operation, Decommissioning
Potential temporary or permanent increase in employment and training opportunities, directly related to the Scheme, or	Likely beneficial personal and economic effects arising from employment, training and income opportunities for those working on	People who could potentially benefit from direct employment and skills training opportunities generated by the Scheme, or	Construction, Operation, Decommissioning

Source	Pathway	Receptor	Project Stage
within the wider supply chain	the Scheme, or within the wider supply chain, which could impact human health	through the wider supply chain	
Potential permanent changes to Greenhouse Gas (GHG) emissions	Likely beneficial human health effects as a result of reduced GHG emissions over lifetime of Scheme	All people	Operation
Potential temporary changes in local air quality including increased dust and particulate matter emissions arising from construction, potential fires during operation, and from decommissioning activities relating to the Scheme	Likely adverse human health effects arising from increased exposure to dust and particulate matter emissions arising from the Scheme	People at risk of direct and indirect air quality impacts, including those with respiratory illnesses	Construction, Operation, Decommissioning
Potential temporary changes to water quality due to runoff or contamination from onsite activities	Likely adverse human health effects arising from reduced water quality, cleanliness, or as a result of contaminants entering the drinking water supply	People likely to be at risk of possible contamination to drinking water	Construction, Operation, Decommissioning
Potential acute or long-term exposure to contaminants whether from previous site uses, or from the Scheme	Likely adverse human health effects arising from contact with contaminants associated with the Sites or Scheme	People likely to be at risk of contact with onsite contaminants, including site workers and vulnerable future users	Construction, Operation, Decommissioning
Potential temporary or permanent changes in noise and vibration levels arising from the Scheme	Likely adverse physical and mental human health effects arising from increased exposure to noise and	People at risk of direct and indirect noise and vibration impacts, including those with sensory disabilities	Construction, Operation, Decommissioning

Source	Pathway	Receptor	Project Stage
	vibration arising from the Scheme		
Potential temporary or permanent changes in EMF levels arising from the Scheme	Likely adverse physical human health effects arising from acute high magnitude or prolonged low-level exposure to EMF from the Scheme, from high voltage cables and substations	People at risk of direct exposure to EMFs from the Scheme	Operation
Potential temporary changes in access to health and social care services arising from incoming temporary construction and decommissioning workforce	Likely adverse effects on accessibility of primary and social healthcare services as a result of increased demand, which could impact on physical and mental health and wellbeing	People using healthcare services likely to be affected by incoming temporary workers	Construction, Decommissioning
Potential temporary changes to wider societal infrastructure and resources	Likely beneficial effects on human health as a result of the Scheme's contributions towards economic development, climate change mitigation, and protection or enhancement of the natural environment, which could impact on physical and mental health and wellbeing	All people	Operation

18.4.19 The effects of the Scheme on these determinants of human health are assessed using professional judgement, good practice, and drawing on other assessments within the ES. The assessment of human health effects is made with respect of residual effects to receptors as identified in other assessments in the ES and are referenced accordingly.

Sensitivity of Receptors

18.4.20 The sensitivity of all identified environmental receptors are described as high, medium, low, or very low, whilst the magnitude of impact on those receptors are described as high, medium, low, or negligible. Where an effect is identified, the likely duration, location and significance has been presented. The health effects have been assessed in the context of the baseline position, as well as the nature and context of the effect, taking account of the sensitivity of the identified receptor (i.e. the existing population and identified vulnerable/ priority groups).

18.4.21 The sensitivity of the receptors identified in this chapter are assessed by understanding measurable indicators of the receptor's present characteristics and considering this alongside the weighted importance of the receptor in local, regional, and national policy or strategic requirements together with professional judgement. To ensure a consistent approach across the human health receptors identified in this assessment, each receptor has been assessed against the criteria as set out in **Table 18.6** to determine its sensitivity. This determination has been based on statistical analysis where appropriate or based on professional judgement of the qualitative aspects of the criteria being assessed.

Table 18.6: Sensitivity and Importance of the Identified Socio-Economic Receptor

Sensitivity	Definition
High	Population or population groups with high levels of deprivation (including pockets of deprivation); reliance on shared resources (between the population and the project); existing wide inequalities between the most and least healthy; a community whose outlook is predominantly anxiety or concern; people who are prevented from undertaking daily activities; dependants; people with very poor health status; and/or people with a very low capacity to adapt.
Medium	Population or population groups with moderate levels of deprivation; few alternatives to shared resources; existing widening inequalities between the most and least healthy; a community whose outlook is predominantly uncertainty with some concern; people who are highly limited from undertaking daily activities; people providing or requiring a lot of care; people with poor health status; and/or people with a limited capacity to adapt.
Low	Population or population groups with low levels of deprivation; many alternatives to shared resources; existing narrowing inequalities between the most and least healthy; a community whose outlook is predominantly ambivalence with some concern; people who are slightly limited from undertaking daily activities; people providing or requiring some care; people with fair health status; and/or people with a high capacity to adapt.
Very Low	Population or population groups with very low levels of deprivation; no shared resources; existing narrow inequalities between the most and least healthy; a community 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);

Sensitivity	Definition
	people with good health status; and/or people with a very high capacity to adapt.

Magnitude of Impacts

18.4.22 The methodology for determining the impact magnitude is described below and is based on the residual impacts of the Scheme post-mitigation. The magnitude of change has been used for either beneficial or adverse impacts. As there is no standard methodology for determining how magnitude of impacts is calculated, professional judgement has been used to determine the criteria set out in **Table 18.7**.

Table 18.7: Magnitude of Change for the Identified Environmental Receptor

Sensitivity	Definition
High	High exposure or scale; long-term duration; continuous frequency; severity predominantly related to mortality or changes in morbidity (physical or mental health) for very severe illness/injury outcomes; majority of population affected; permanent change; substantial service quality implications.
Medium	Low exposure or medium scale; medium-term duration; frequent events; severity predominantly related to moderate changes in morbidity or major change in quality-of-life; large minority of population affected; gradual reversal; small service quality implications.
Low	Very low exposure or small scale; short-term duration; occasional events; severity predominantly related to minor change in morbidity or moderate change in quality-of-life; small minority of population affected; rapid reversal; slight service quality implications.
Negligible	Negligible exposure or scale; very short-term duration; one-off frequency; severity predominantly relates to a minor change in quality-of-life; very few people affected; immediate reversal once activity complete; no service quality implication.

Assessment of Significance

18.4.23 The degree of significance of effects, in respect of human health, is determined using the matrix below in

18.4.24 **Table 18.8**, taking into consideration both receptor sensitivity to change and magnitude of impact to baseline conditions.

18.4.25 Effects that are major, major/moderate, moderate or moderate/minor are significant in terms of EIA as in accordance with IEMA guidance (Ref 18.3).

Table 18.8: Criteria for Assessing the Significance of Effects

Sensitivity / Magnitude	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
Negligible	Minor/negligible	Minor/negligible	Negligible	Negligible

18.4.26 The degree of significance of an effect can be described either as beneficial or adverse in nature, or neutral if there is no anticipated impact. Temporally, effects are described as being of short-, medium-, or long-term. These together with the level of significance should be used to determine which likely significant effects from the Scheme require additional mitigation measures to be implemented in the design, construction, operation, and decommissioning phases of the Scheme.

18.5 Assessment Assumptions and Limitations

18.5.1 This assessment is based on baseline information available at the time of writing this chapter and the Scheme design as submitted for this DCO Application.

18.5.2 The methodology for human health has considered the following assumptions:

- Reporting of baseline conditions is based on the most up-to-date publicly available datasets for each category. Where data relies on the 2021 Census, the potential impact upon the socio-demographic environments as result of the COVID-19 pandemic and associated national lockdowns have been identified;
- The assessment of effects on human health from the Scheme is based on professional judgement as directed by the industry policy and guidance as set out in Section 18.3 above and Appendix 18.1: Human Health Legislation, Policy, and Guidance **[EN010170/APP/GH6.3.18.1]**. This assessment considers beneficial and adverse effects to human health in the Scheme's ZOIs;
- Effects on human health during the construction, operation and decommissioning phases are assessed in this ES, drawing upon the assessment throughout the ES of relevance to human health and its wider determinants. Where reporting on effects is included, human health effects are assessed against residual effects as reported in other chapters within the ES The relevant chapters of the ES comprise:
  - Chapter 7: Climate Change **[EN010170/APP/GH6.2.7];**
  - Chapter 8: Landscape and Visual Impact **[EN010170/APP/GH6.2.8];**
  - Chapter 10: Hydrology, Flood Risk and Drainage **[EN010170/APP/GH6.2.10];**
  - Chapter 13: Transport and Access **[EN010170/APP/GH6.2.13];**

- Chapter 14: Noise and Vibration **[EN010170/APP/GH6.2.14];**
- Chapter 16: Air Quality **[EN010170/APP/GH6.2.16];**
- Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17];**
- Chapter 21: Electromagnetic Fields **[EN010170/APP/GH6.2.21];**
- Chapter 22: Ground Conditions and Contamination **[EN010170/APP/GH6.2.22]; and**
- Chapter 23: Major Accidents and Disasters **[EN010170/APP/GH6.2.23];**

- Where this assessment of human health effects relies upon information from other chapters within the ES, the topic-specific assumptions and limitations set out in the respective chapters also apply to this chapter and are signposted as necessary; and
- In-combination effects during the construction, operation and decommissioning phases are based on assessments reporting on all matters relevant to human health within the ES. Where any of these topics record a likely significant effect on a receptor or group of receptors that have a likely pathway to have in-combination effects with regard to human health, it is assumed as a worst-case that the effect could occur at the same time.

18.6 Baseline Conditions

18.6.1 This section describes the baseline environmental characteristics for the Scheme's ZOIs and Wider Baseline Study Areas with specific reference to human health.

18.6.2 The existing baseline conditions for population health reporting and service provision are derived from desk-based studies. Additional topic-specific information based on field-studies has been referred to, where presented in other chapters in the ES as listed at paragraph 18.5.2 above.

Existing Baseline

Human Environment

18.6.3 The 2021 Census (Ref 18.50) identifies a total population in the 2 km ZOI of approximately 62,200. The proportion of residents in the 2 km ZOI aged up to 15 years old is 19.0%. This is lower than each of the four authorities in the Wider Baseline Study Area, which range from 19.3-21.7%, but is comparable to the England and Wales average of 18.5%.

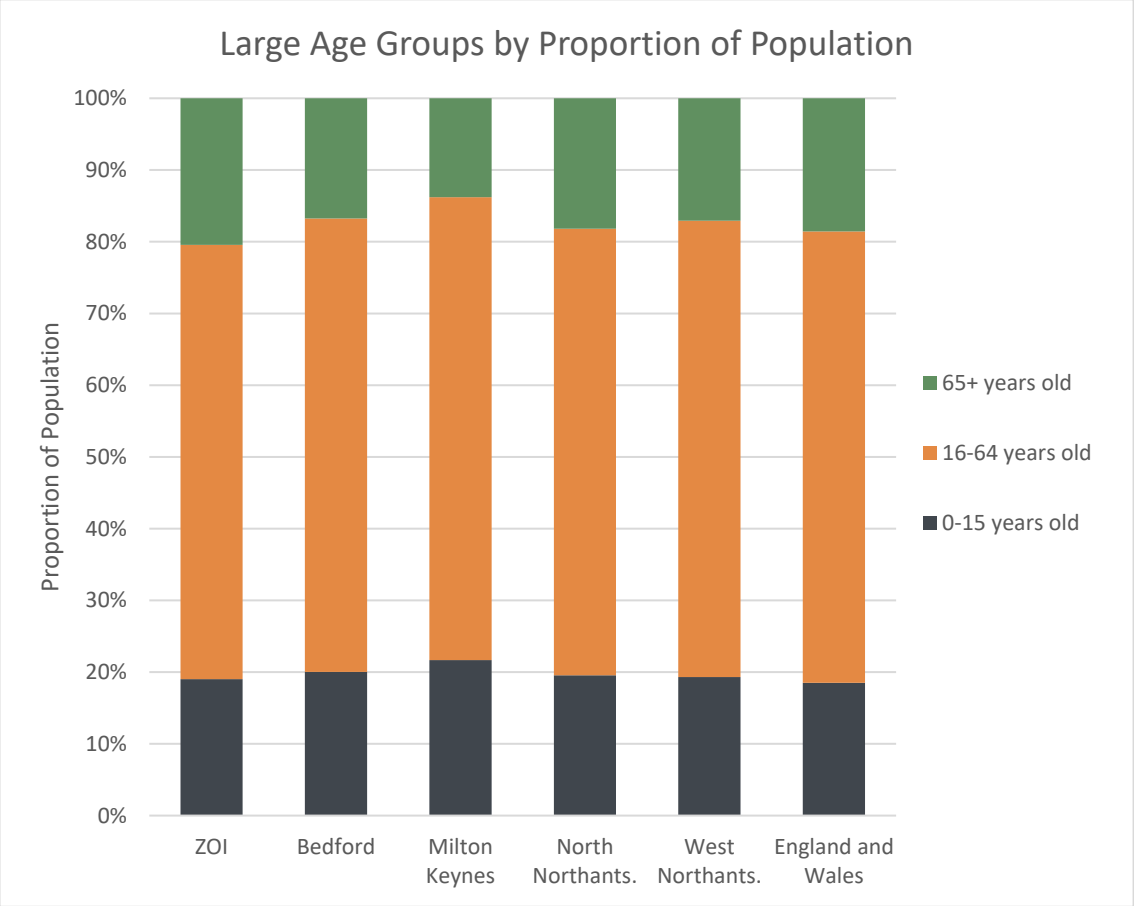
18.6.4 The proportion of the population of working age (16-64 years old) in the 2 km ZOI is 60.5%. This is comparatively lower than the Wider Baseline Study Area (ranging from 62.3-64.5%), and is similarly lower than the national average for England and Wales of 62.9%.

18.6.5 Consequently, the remaining population, those aged 65 or above, form a larger contingent in the 2 km ZOI (20.4%) than any of the four authority areas in the

Wider Baseline Study Area (13.8-18.2%). The population of the 2 km ZOI is also comparatively older than the national rate of 18.6% of the population aged 65 and over.

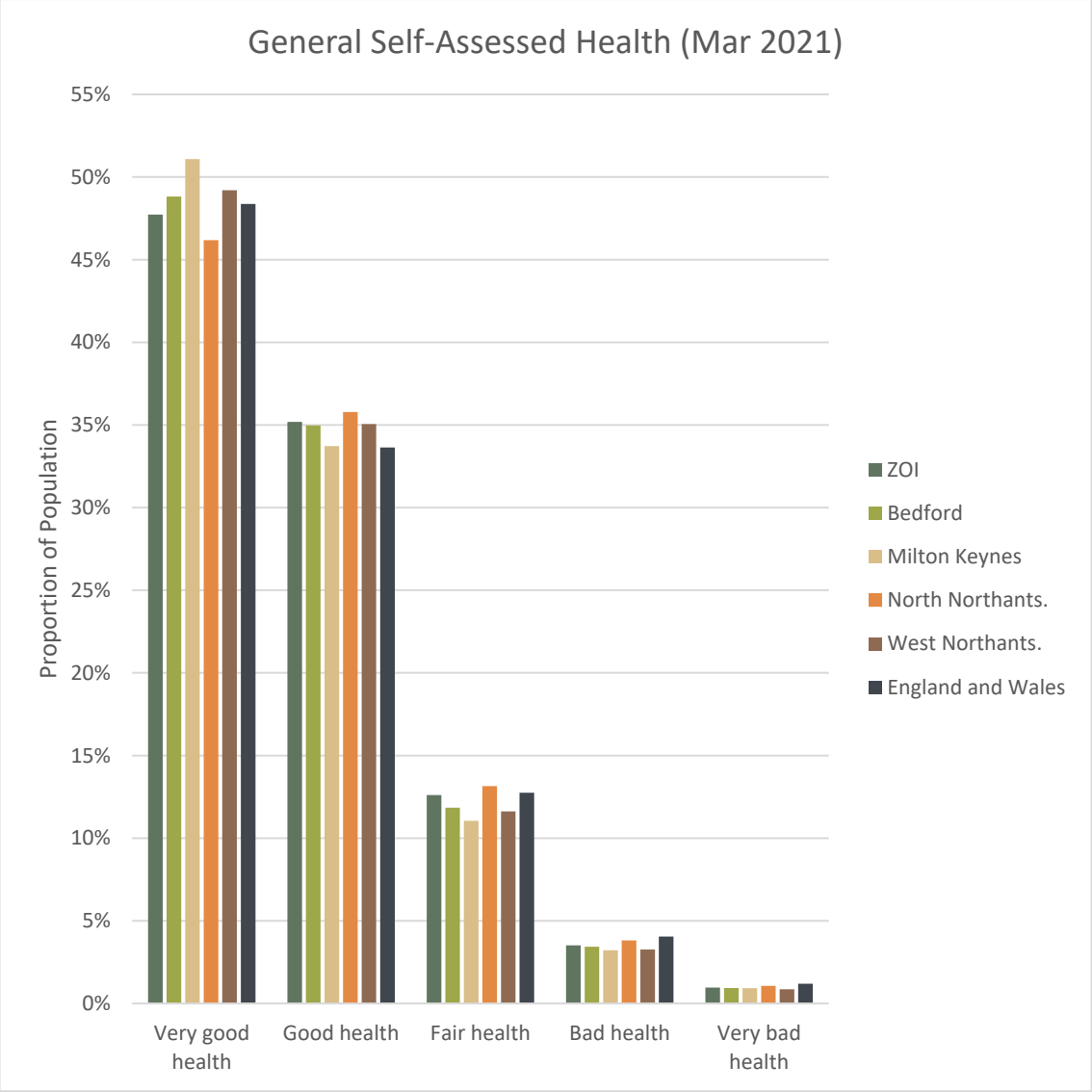
18.6.6 This is set out graphically in **Plate 18.3** below.

Plate 18.3: Age Groups by Proportion of Population



18.6.7 As part of the Census 2021, participants were asked to declare a self-assessment of their own health. At all geographic levels, participants were most likely to answer “very good”, followed by “good” health. The combined proportion of the population in the 2 km ZOI declaring they had “bad” or “very bad” health was 4.5%. This is consistent with the authorities in the Wider Baseline Study Area (ranging from 4.1-4.9%), but notably lower than the proportion for England and Wales overall, of 5.2% (Ref 18.51). This is shown in full in **Plate 18.4** below.

Plate 18.4: Self-assessment of General Health

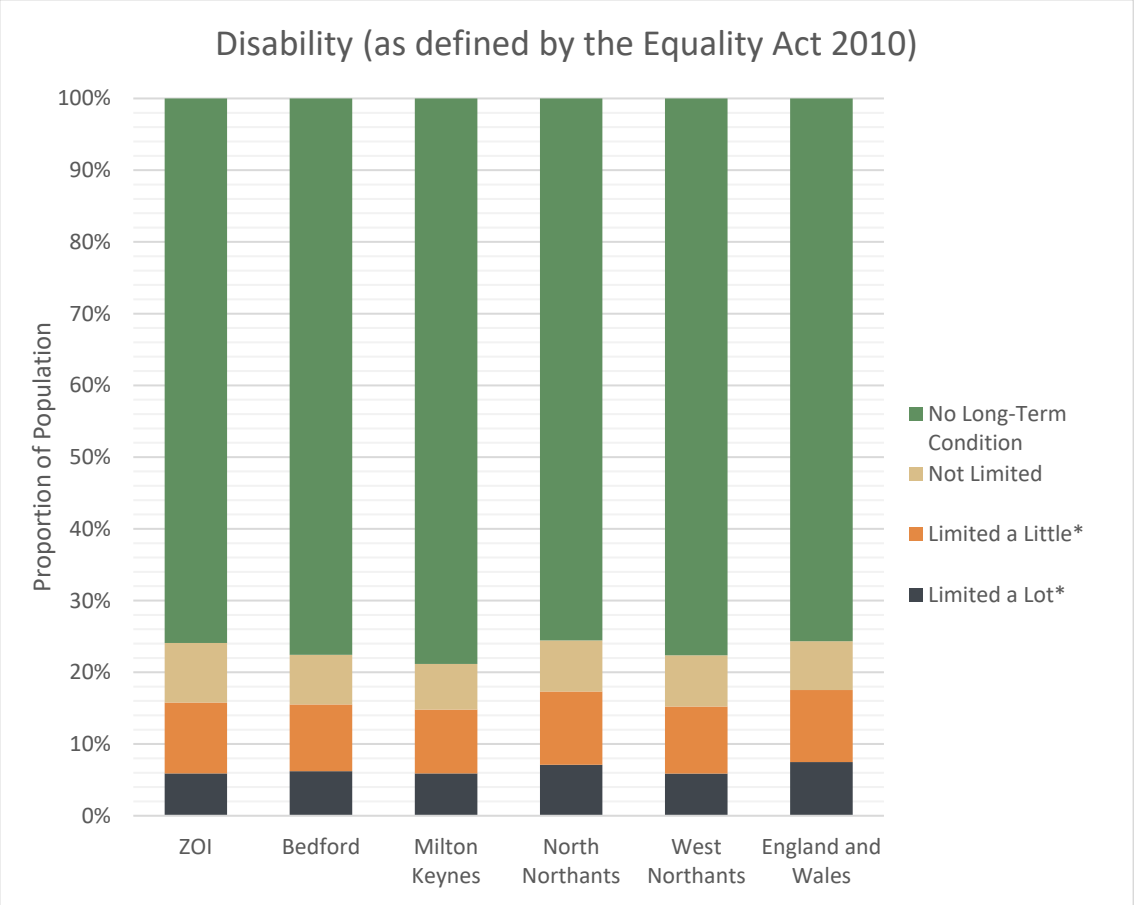


18.6.8 In addition to a self-assessment of general health, Census 2021 respondents were asked to self-assess or declare long-term health conditions or disabilities. The response categories considered as "not disabled" under the Equality Act 2010 (Ref 18.7) were: "No long term physical or mental health conditions", and "Has long term physical or mental health condition but day-to-day activities are not limited". For those who would qualify as disabled under the Equality Act 2010, the available responses were "Day-to-day activities limited a little" and "Day-to-day activities limited a lot".

18.6.9 As presented in **Plate 18.5** below, the proportion of the population in the 2 km ZOI self-assessing that their day-to-day activities are limited a little or a lot by a long-term health condition or disability is 16.6% (Ref 18.52). This is comparable although higher than three of the four authority areas in the Wider Baseline Study Area, which range from 14.8%-15.5%, with only North Northamptonshire having a greater proportion at 17.3%. This however compared favourably to the national

trend across England and Wales, where a total of 17.5% of the population have declared limitations to their day-to-day activities that would qualify as a disability as defined by the Equality Act 2010.

Plate 18.5: Self-assessment of Disability



18.6.10 The proportion of the working age population (age 16-64) who are entitled to Personal Independence Payment (PIP) is published on a monthly basis by the Department for Work and Pensions, demonstrating the number of people who are eligible for financial support to improve quality of life and ability to work where limited by short and long-term illnesses and disabilities. The most recent data, for January 2025 (Ref 18.53), demonstrates that 8.6% of the working age population in the 2 km ZOI around the Scheme are eligible for PIP. This is within the average range across the Wider Baseline Study Area (7.4-9.5%) but is substantially lower than the eligibility rate across England and Wales at 9.7%.

Deprivation

18.6.11 The most recent data available on deprivation experienced in England is the Index of Multiple Deprivation (IMD) study from 2019, which provides information at a local authority, and Lower Super Output Area level for a range of assessed deprivation measures, known as “domains”. Each area is ranked according to its score associated with each domain of deprivation, with the index providing a

measure of relative deprivation across England at each measured level. (Ref 18.54, Ref 18.55)

18.6.12 The 2 km ZOI covers a total of 35 LSOAs across four local authorities (six at the time of indexing in 2019). As such, there is large degree variance across the 2 km ZOI. Overall deprivation in the 2 km ZOI is low, with nine of 25 LSOAs being in the 50% most deprived areas in England. However, one of these (North Northamptonshire 33B, formerly Wellingborough 007B), is in the 10% most deprived areas.

18.6.13 With regard to domains of deprivation, those interrogated further are:

- Health Deprivation and Disability, which measures the risk of premature death and the impairment of quality of life through poor physical or mental health;
- Barriers to Housing and Services, which measures the physical (geographic) and financial accessibility of housing and local services; and
- Living Environment Deprivation, which measures the quality of the local environment. The indicators fall into two sub-domains. The 'indoors' living environment measures the quality of housing; while the 'outdoors' living environment contains measures of air quality and road traffic accidents.

18.6.14 Similar to overall deprivation, the 2 km ZOI performs well in regard to health deprivation and disability, with 10 of the 35 LSOAs in the 50% most deprived areas in England. As with the overall metric, only one is within the 10% most deprived neighbourhood areas in England, although this is LSOA North Northamptonshire 031D (formerly Wellingborough 005D).

18.6.15 The index of barriers to housing and services demonstrates that the 2 km ZOI performs somewhat worse than national trends, with the spread of LSOAs in each decile being somewhat weighted towards those that are most deprived. This demonstrates significant variance in access to housing and services in the 2 km ZOI. That notwithstanding, only two LSOAs, North Northamptonshire 036E (formerly Wellingborough 008E) and West Northamptonshire 003D (formerly Daventry 005E) are within the most deprived 10% of neighbourhoods in England, largely due to distance to local services. A total of seven of the LSOAs fall within the most deprived 20% of areas.

18.6.16 The LSOAs across the 2 km ZOI generally perform well with regard to living environment, with no LSOA falling within the 20% most deprived areas in England, and only nine of the 35 LSOAs falling within the 50% most deprived areas. As a generalisation, this indicates housing quality is average to good, as is the quality of the outdoor environment in these areas. Rural aspect, low traffic volumes, and relatively good air quality away from major transport corridors such as the A45 are likely to contribute to this.

18.6.17 A detailed breakdown by area of the proportion of LSOAs in the most deprived decile (10%), most deprived quintile (20%) and most deprived half (50%) of neighbourhood areas in England are set out in **Table 18.9** below. Text in green demonstrates areas will substantially lower levels of deprivation, black text shows

levels in the expected range, while red text shows substantial greater levels of deprivation than the expected range.

Table 18.9: Proportion of LSOAs in Deprivation

Area Proportion of LSOAs	2 km ZOI	Bedford	Milton Keynes	North Northants.	West Northants.
Overall Index of Multiple Deprivation (IMD)					
10% most deprived	2.9%	3.9%	5.3%	5.7%	5.7%
20% most deprived	17.1%	13.6%	11.8%	15.5%	14.0%
50% most deprived	25.7%	45.6%	36.8%	44.8%	36.4%
Health Deprivation and Disability					
10% most deprived	2.9%	6.8%	2.6%	7.2%	5.3%
20% most deprived	8.6%	11.7%	6.6%	19.6%	16.7%
50% most deprived	28.6%	39.8%	36.8%	49.0%	45.6%
Barriers to Housing and Services					
10% most deprived	5.7%	13.6%	18.4%	6.2%	7.0%
20% most deprived	20.0%	28.2%	50.7%	14.9%	20.2%
50% most deprived	62.9%	67.0%	88.2%	49.5%	61.8%
Living Environment					
10% most deprived	0.0%	1.9%	0.7%	1.0%	3.5%
20% most deprived	0.0%	16.5%	2.0%	4.6%	11.8%
50% most deprived	25.7%	43.7%	9.2%	24.2%	34.6%

Health Profile and Strategic Priorities

18.6.18 Data on a number of health indicators is available at the local authority level, and ward level from the Office of Health Inequalities and Disparities (OHID) through

their online public access data tools. A summary of key findings is presented in the section below.

18.6.19 General health indicators at the local authority level demonstrate that the four authorities in the Wider Baseline Study Area perform at or similarly to the national level with respect of life expectancy, and under-75 mortality. Notable exceptions, as shown in **Table 18.10** below are the consistently lower than average life expectancy inequality rates for both males and females, but a greater than average suicide rate and emergency hospital admissions for intentional self-harm per 100,000 people across the Wider Baseline Study Area (Ref 18.56). Life expectancy inequality is based on the Slope Index of Inequality.

Table 18.10: General Health Profile of Local Authority Areas and England

Health Indicator	Data period	Bedford	Milton Keynes	North Northants	West Northants	England
Male life expectancy	2021-2023	78.7	79.9	78.7	79.4	79.1
Female life expectancy	2021-2023	83.1	82.5	82.2	83.4	83.1
Inequality in life expectancy at birth (Male) (years)	2018-2020	8.9	8.4	9.0	9.0	9.7
Inequality in life expectancy at birth (Female) (years)	2018-2020	7.8	7.2	7.4	7.7	7.9
Under-75 mortality rate from all causes (per 100,000)	2023	329.1	319.5	380.2	349.3	341.6
Suicide rate (per 100,000)	2021-2023	13.4	10.4	12.4	9.7	10.7
Emergency hospital admissions for intentional self-harm (per 100,000)	2023/ 2024	97.9	101.5	122.4	170.7	117.0

18.6.20 At the ward level, OHID provides more detailed information, of which key health indicators have been selected for wards that cover the 2 km ZOI (Ref 18.57). It

should be noted that the date this data was collected is often older than that for the local authorities and so should be read in that context. Wards falling within the 2 km ZOI have also been summarised to show the minimum, median, and maximum values within the 2 km ZOI overall, to account for large variations in population baseline conditions therein. This information has been supplemented by Local Insights Reports (Ref 18.58-Ref 18.61) for each ward in the 2 km ZOI, as available through the respective Council's JSNA dashboards (Ref 18.13, Ref 18.18, Ref 18.25, Ref 18.29)

18.6.21 Data for deaths and hospital admissions is based on standardised mortality rate (SMR), a ratio of the number of deaths observed in a population over a given period to the number that would be expected over the same period if the study population had the same age-specific rates as the standard (England national) population.

18.6.22 Generally, life expectancy at birth for both males and females in the 2 km ZOI is higher (median life expectancy of 80.9 for males, and 84.0 for females) than the national average for England (79.5 for male, 83.2 for female). The only exceptions to this are in Croyland and Swanspool ward (76.1 for male, 79.5 for female), Brickhill and Queensway (77.8 for male, 81.1 for female), and Moulton (82.2 for female).

18.6.23 Similarly, the 2 km ZOI overall performs well against the national average with lower deaths of all causes for under-75s, lower deaths from respiratory diseases at all ages, and lower deaths from causes considered preventable, when considered against the expect age-related rates for the population. Exceptions to this are Croyland and Swanspool, and Brickhill and Queensway wards for all three categories, and Burton and Broughton and Irchester wards for deaths from respiratory diseases at all ages, which are higher than the expected rates. For these areas, there is a high likelihood that proximity to the A14, A43 and A45 are a contributing factor due to increased exposure to vehicle emissions.

18.6.24 The estimated prevalence of depression (in the year 2022-2023) among the population in the 2 km ZOI ranges from 11.5%-18.7% by ward, with a median rate of 14.3%. This is slightly higher than the average for England (13.4%) and is a higher range than across the Wider Baseline Study Area (10.9%-15.9%). This indicates that there are potentially greater rates of poor mental health among communities in the 2 km ZOI than would be expected. Only four wards (Hackleton and Grange Park, Harrold, Moulton, and Olney) are estimated to have lower than national average prevalence of depression.

18.6.25 Related to rates of depression, rates of emergency hospital admissions for intentional self-harm across the 2 km ZOI vary considerably from 38.1 (SMR) in Olney to 211.5 (SMR) in Croyland and Swanspool, indicating significant variance in mental health prevalence and access to support and care. Overall, the 2 km ZOI performs only slightly worse (105.3 (SMR)) than the national rates, which is consistent with the slightly greater estimated rates of depression in the population. A similar disparity base on geographic area can also be seen at the local authority level.

18.6.26 Modelled estimates for prevalence of regular smoking in 15 year olds, available through OHID based on 2014 estimates, indicate the 2 km ZOI performs worse

than the national average of (5.4%) of the 15 year old population engaging in regular smoking. Values in the 2 km ZOI range from 4.5-9.7%, with a median average of 6.9%, with only Brickhill and Queensway ward (at 4.5%) having a lower than national average proportion. This trend is also seen at the local authority level with all four of the authorities in the Wider Baseline Study Area having higher than average modelled rates of prevalence of smoking in 15 year olds (5.7-6.7%). An alternative dataset from NHS England (Ref 18.62) identifies a higher national prevalence of regular smoking in 15 year olds of 7.7% in 2014, which has dropped to 3.3% in 2021. Subnational data is not available in this dataset; however, it can be assumed that the smoking rate in the 2 km ZOI and Wider Baseline Study Area remains somewhat higher than the national average.

18.6.27 As with some other health determinants, the prevalence of child obesity in children in Year 6, as measured across a 3-year reference period, is overall lower (19.7%) across the 2 km ZOI than the four authority areas (20.2-24.1%) and the national average rates (22.7%). That notwithstanding, there is significant variance across the 2 km ZOI, with the lowest rate of obesity in Year 6 children of 11.1% in Brixworth ward being close to a third of the rate in Croyland and Swanspool ward (30.9%).

18.6.28 The Local Insights service records the Community Needs Index Score, based on a total of 21 receptors in three categories: community assets, which measures sport, leisure and community-owned assets; connectivity, which measures access to green and blue space, access to services, and loneliness; and active and engaged community, which measures civic participation, cohesion, trust, and population turnover. Together, the scoring of these provides a way of determining how close, healthy, and satisfied a community is. Within the 2 km ZOI, the Community Needs Index Score ranges significantly from 38.2 (Harrold ward) to 112.2 (Burton and Broughton) – where a higher score shows a greater level of need for community wellbeing. While this range shows significant diversity in community wellbeing across the 2 km ZOI, the median score of 65.2 is only slightly higher than the average score for England of 64.2.

Table 18.11: Detailed Health Profile of Wards in the 2 km ZOI

Area	Life expectancy at birth (Male) 2016-2020	Life expectancy at birth (Female) 2016-2020	Deaths from all causes, under-75 years (SMR) 2016-2020	Deaths from respiratory diseases, all ages (SMR) 2016-2020	Deaths from causes considered preventable, under-75 years (SMR) 2016-2020	Estimated prevalence of Depression (% population) 2022-2023	Emergency hospital admissions for intentional self-harm (SMR) 2016/17-2020/21	Smoking prevalence at age 15 (regular users) (% population) 2014	Year 6 prevalence of obesity (including severe obesity) (% population) 2021/22-2023/24	Community Needs Index Score 2023
Brickhill and Queensway	77.8	81.1	114.4	145.1	120.3	18.7	147.8	4.5	28.8	103.0
Brixworth	81.2	84.9	73.3	84.6	61.7	14.1	84.7	6.9	11.1	79.5
Burton and Broughton	80.6	84.1	98.3	118.3	89.6	16.3	102.7	6.9	22.4	112.2
Croyland and Swanspool	76.1	79.5	138.7	185.9	138.4	16.3	211.5	4.7	30.9	71.2
Earls Barton	81.4	83.7	89.1	80.0	75.3	14.0	136.9	8.7	19.1	41.9
Hackleton and Grange Park	81.5	85.1	73.3	90.4	67.3	11.7	92.1	6.1	16.3	70.0
Harrold	82.4	85.3	97.7	94.7	85.6	12.8	88.6	7.8	20.0	38.2
Hatton Park	80.3	84.5	88.0	90.8	87.0	16.2	129.0	6.9	25.5	43.1
Irchester	80.0	83.5	95.9	115.4	89.5	14.6	103.2	8.4	20.0	55.9
Moulton	82.3	82.1	73.7	95.1	70.9	12.9	107.3	7.2	14.1	42.9

Area	Life expectancy at birth (Male) 2016-2020	Life expectancy at birth (Female) 2016-2020	Deaths from all causes, under-75 years (SMR) 2016-2020	Deaths from respiratory diseases, all ages (SMR) 2016-2020	Deaths from causes considered preventable, under-75 years (SMR) 2016-2020	Estimated prevalence of Depression (% population) 2022-2023	Emergency hospital admissions for intentional self-harm (SMR) 2016/17-2020/21	Smoking prevalence at age 15 (regular users) (% population) 2014	Year 6 prevalence of obesity (including severe obesity) (% population) 2021/22-2023/24	Community Needs Index Score 2023
Olney	81.9	86.5	62.7	91.8	55.2	11.5	38.7	9.7	16.3	60.5
Rothwell and Mawsley	80.6	83.9	82.4	90.8	86.8	18.2	164.6	6.3	19.4	70.3
ZOI Minimum	76.1	79.5	62.7	80.0	55.2	11.5	38.7	4.5	11.1	38.2
ZOI Median	80.9	84.0	88.6	93.3	86.2	14.3	105.3	6.9	19.7	65.2
ZOI Maximum	82.4	86.5	138.7	185.9	138.4	18.7	211.5	9.7	30.9	112.2
Bedford	79.6	83.3	98.4	90.1	95.6	13.4	100.8	5.7	22.4	54.2
Milton Keynes	79.2	83.2	100.2	103.0	100.7	10.9	70.4	6.7	23.3	63.4
North Northants.	79.2	82.4	100.5	121.5	101.3	15.9	137.3	6.2	24.1	87.1
West Northamptonshire	79.8	82.9	99.8	101.3	96.4	13.7	169.4	6.2	20.2	64.1
England	79.5	83.2	100.0	100.0	100.0	13.4	100.0	5.4	22.7	64.4

18.6.29 Local health priorities are assessed and defined in the Joint Strategic Needs Assessments and Joint Health and Wellbeing Strategies for each of the four authority areas in the Wider Baseline Study Area. These have been identified and introduced in Section 18.3 and the accompanying Appendix 18.1: Human Health Legislation, Policy, and Guidance **[EN010170/APP/GH6.3.18.1]**.

18.6.30 In Bedford, the Joint Local Health and Wellbeing Strategy 2024 – 2027 (Ref 18.30) sets out the relevant priorities for Bedford Borough, which they refer to as their "key building blocks of health". These involve supporting, fostering and actioning:

- Inclusive employment, lifelong education, and workplace health;
- Sustainable built and natural environment;
- Healthy homes;
- The best start in life; and
- Strong communities.

18.6.31 In Milton Keynes, the priorities as set out in the Lifelong Wellbeing: Our Ten Year Health and Wellbeing Strategy document (Ref 18.26) include:

- Supporting starting well, by stopping abuse and neglect, providing mental health and special educational support to children, and improving diet and access to green spaces for children;
- Supporting living well, by stopping domestic abuse and exploitation, improving healthcare for adults with mental health problems and learning disabilities such as autism, reducing homelessness, and improving housing quality; and
- Supporting aging well, by maintaining healthcare and social care for an aging population, and promoting specialist support for dementia, end of life care, and social isolation.

18.6.32 The Joint Health and Wellbeing Strategy for North Northamptonshire is currently subject to further consultation and engagement and therefore is not published. That notwithstanding, the Joint Strategic Needs Assessment (Ref 18.13) identifies indicates that areas of key challenges and focus for North Northamptonshire are improving health and wellbeing outcomes in relation to physical activity, good food and healthy eating, healthy weight, and improving and supporting mental health in adults.

18.6.33 West Northamptonshire's Joint Health and Wellbeing Strategy 2023-2028 (Ref 18.19) sets out five key approaches to shape strategic health and wellbeing ambitions in the local authority area. These key approaches are prevention as a priority, tackling health and wellbeing inequalities, putting importance on 'place' and local assets, using an evidence-based and community insight led approach, and utilising co-production of the strategy.

Social Environment

Housing and Accommodation

18.6.34 The existing baseline conditions relating to housing and accommodation are set out in Section 17.6 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**. A summary of the baseline conditions relevant to human health are set out below.

- As of 2023, the Wider Baseline Study Area has an affordability ratio (between median average house value and the average (median) workplace-based full-time earnings) in the range of 7.33 to 8.30 across the four authority areas therein. This is generally consistent with the national average for England and Wales of 7.71, and substantively greater than the affordability threshold of 5.0;
- Across the Wider Baseline Study Area, there is a suitable supply of land for new housing, although this includes a significant projected undersupply in West Northamptonshire;
- An estimated 19.3% of households in the Wider Baseline Study Area are in private rental accommodation. Applying a conservative estimate of likely vacancy and availability for occupation, 5.2% of private rental properties – some 180 in the 2 km ZOI and 5,100 in the Wider Baseline Study Area – may be available for temporary occupation by construction workers; and
- In addition to rental accommodation, the Wider Baseline Study Area hosts an estimated 13,500 serviced accommodation rooms, of which a minimum of 14% (1,890) are estimated to be available for use by construction workers.

18.6.35 Sectors of the population most sensitive to changes to the housing and accommodation environment are those living in locations where access to suitable housing is poorest, and sub-population groups including those in unsuitable, cramped and/or temporary accommodation, and people experiencing long-term homelessness.

Open Space, Leisure and Play

18.6.36 The existing baseline conditions relating to open space, leisure and play are set out in Section 17.6 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**. A summary of the baseline conditions relevant to human health are set out below.

18.6.37 The 2 km ZOI is host to a well-connected network of PRoWs and permissive recreational routes, which are important for both connectivity, and personal activity and wellbeing. A substantial number of these PRoWs and one permissive footpath cross the Scheme's Order Limits. The 2 km ZOI also boasts a good number of leisure and recreation facilities including navigable waterways, formal sports recreation grounds, recreational aviation facilities, equestrian centres, and a small number of recreational play and informal sport areas in local villages and settlements for children.

18.6.38 Overall open space, leisure and play facilities in the 2 km ZOI provide a range of opportunities and recreation activities, catering for a large range of ages and levels of mobility and fitness.

18.6.39 Sectors of the population most sensitive to changes to conditions relating to open space, leisure and play are young people, and adults who experience limited activity either as a result of lifestyle, or as a result of a long-term disability.

Transport Modes, Access and Connections

18.6.40 The existing baseline conditions relating to transport modes, access and connections are set out in Section 13.6 of ES Chapter 13: Transport and Access **[EN010170/APP/GH6.2.13]**. A summary of the baseline conditions relevant to human health are set out below. The Study Area for Transport and Access is defined by the Scheme extents, and the local and strategic highway networks likely to be used for construction, operational, and decommissioning vehicle movements, as shown in Figure 13.1 in Chapter 13: Transport and Access **[EN010170/APP/GH6.3.13.1]**.

18.6.41 A large number of PRoWs and permissive recreational routes lie adjacent to or cross the Scheme Order Limits. A total of 70 PRoWs and permissive recreational routes are tabulated in Table 2.3 in ES Appendix 17.1: Tourism and Recreation Receptor Tables **[EN010170/APP/GH6.3.17.1]**. The density of PRoWs and permissive recreational routes in the Study Area (for Transport and Access) provides good levels of connectivity between communities, and provide a good level of access to the countryside and between settlements for non-vehicular travel. Roadside footpaths, cycle paths, and on-road cycle infrastructure is limited in the Study Area (for Transport and Access), particularly outside built-up areas. Inter-settlement infrastructure is limited to:

- Footpath along Old Rd/Walgrave Rd between the village of Old and Walgrave, predominantly on the northern side of the road, but crosses to the south side for a total of 600 m to service the hamlet of Cherry Hill;
- Shared foot and cycle path roadside along the A43 from Kettering to the junction with Kettering Road, Hannington (total of 6 km), includes un-signalled at-grade crossings of the A14/A43 Broughton Interchange, and “Mawsley” roundabout;
- Narrow footpath along Mears Ashby Road, Earls Barton from the A4500 junction to the junction with Washbrook Lane. Crossings at the A4500 junction are only partially signalled for pedestrian users: an un-signalled crossing is required for pedestrian connectivity to Earls Barton village;
- Footpath along B573 between the village of Earls Barton and Great Doddington, predominantly on the southern side of the road; and
- Footpath along Grendon Road from the A45/Station Road underpass to the southern side of the River Nene.

18.6.42 No part of the Scheme lies more than 10 miles (16 km) from the nearest railway station, at Kettering, Wellingborough, or Northampton as set out in Section 13.6 of ES Chapter 13: Transport and Access **[EN010170/APP/GH6.2.13]**. All stations

have direct services connecting to London, Birmingham, Nottingham, Corby, Bedford, Luton as well as other nearby settlements.

18.6.43 The communities nearest the Scheme also host a number of bus services operated by Stagecoach Midlands and by the Cogenhoe and Whiston Parish Council Village Hopper Bus. Services to smaller villages are less frequent, while Earls Barton benefits from up to five buses per hour between Northampton and Wellingborough during weekdays. Mears Ashby is the largest settlement in the Study Area (for Transport and Access) with no bus services.

18.6.44 An assessment of road and pedestrian safety within the Study Area (for Transport and Access) has been undertaken as set out in ES Chapter 13: Transport and Access **[EN010170/APP/GH6.2.13]**, and has identified that generally, accidents are spread throughout the Study Area. Across principal A-roads, the number of accidents is higher than for local roads as would be expected given the nature of these roads, the level of traffic that they accommodate and the extents they cover within the Study Area.

Community Identity, Culture, Resilience and Influence

18.6.45 The 2 km ZOI covers a number of settlements, and as such a number of localised communities. Many of these communities are centred around villages with a historic core with key community buildings or spaces such as churches or areas of greenery and parkland that provide a community focal point, even where gradual population growth, and built development has increased the sizes of these settlements. Community culture is also likely to be influenced by access and connection to the countryside as a result of the semi-agricultural landscape and provision of PRoWs to access it, particularly in the context of the 2 km ZOI's proximity to large urban areas. The existing baseline conditions relating to landscape and visual impacts are set out in ES Chapter 8: Landscape and Visual Impact **[EN010170/APP/GH6.2.8]**. As such, the sensitivity of the villages and immediate surroundings to Mears Ashby, Earls Barton, Grendon, Easton Maudit, and Bozeat are likely to be of greatest sensitivity. This is due to their proximity to the Scheme, and the perception of changes to their landscape setting and visual identity.

18.6.46 The 2 km ZOI is host to only a small number of existing solar PV developments, notably at Sywell Park and in Warrington. A small number of other solar farms are located in the surrounding areas, including at Irchester. Other grid infrastructure is primarily defined by the National Grid substation at Grendon and overhead transmission lines radiating away from it. Large scale energy infrastructure is therefore relatively novel in this area and as such the local population is likely to be of a heightened sensitivity to changes in their perception of resilience and influence as a result of the Scheme, due to fewer of them having prior experience of the DCO process and how they can participate in the decision-making process. The level of engagement with the communities ahead of DCO submission has been set out in the Consultation Report **[EN010170/APP/GH5.1]** and its supporting appendices. This demonstrates that the Applicant has sought to ensure communities have been engaged and have had a directive role in shaping the Scheme through their contributions to early design workshopping events and providing direct design and procedural comments during statutory

consultation that have been incorporated into the DCO submission. The level of engagement across the communities affected is naturally likely to vary considerably, and a result, the level of sensitivity to further changes in resilience and influence is likely to be no less than medium.

Economic Environment

Education and Training

18.6.47 The existing baseline conditions relating to education and training are set out in ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**. A summary of the baseline conditions relevant to human health are set out below.

18.6.48 The proportion of the population between the ages 16-64 years old achieving no qualifications in the Wider Baseline Study Area varies significantly by authority area from 3.6-7.7%, with a resultant rate in the Wider Baseline Study Area of 6.0%. This is consistent with, albeit slightly lower than, the national rates for England (6.2%) and the UK (6.6%).

18.6.49 Attainment of the equivalent of a national vocational qualification (NVQ) Level 4 and higher qualifications is also widely varied across the Wider Baseline Study Area, ranging from 27.9-53.0% by authority area. Across the Wider Baseline Study Area, the overall rate of Level 4 and higher qualifications stands at about 42.0%, compared to 46.7% in England, and 47.1% across the UK.

18.6.50 The population of the Wider Baseline Study Area is also identified as more likely than the national average to be deprived of access to suitable education and skills attainment, although this is of greatest concern in the former districts or Corby, Wellingborough, and Northampton.

18.6.51 Members of the population with poor qualification attainment will be most sensitive to changes the provision of education and training.

Employment and Income

18.6.52 The existing baseline conditions relating to employment and income are set out in Section 17.6 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**. A summary of the baseline conditions relevant to human health are set out below.

- As of September 2024, the Wider Baseline Study Area has an economic activity rate within members of the working age (16-64-year-old) population of 81.5%. This is substantially higher than the national average for England (78.8%) and the UK (78.4%);
- For the year up to September 2024, the unemployment rate in the Wider Baseline Study Area was 2.9%, substantially lower than the national average for England (3.9%) and the UK (3.7%). Data for the Wider Baseline Study Area shows the overall trend from 2014-2024 for the Wider Baseline Study Area largely follows the national trend but shows far more exaggerated year-on-year fluctuations, but is generally lower than national rates;

- For residents within the Wider Baseline Study Area, the approximated median annual gross salary for full-time workers (in 2024) was £38,000. This is marginally higher than the median of England, at £37,600, and the UK median, at £37,400. For workers within the Wider Baseline Study Area, the approximated median annual gross salary for full-time employment (in 2024) was £37,600. This is marginally lower than the median for residents, but is very consistent with that of workers across England and the UK median.

18.6.53 As of February 2025, the proportion of 16-64 year olds claiming either Jobseekers Allowance (Ref 18.63) or Universal Credit where in the "searching for work" conditionality group (Ref 18.64, Ref 18.65) in the 2 km ZOI was 2.9-3.1%. This is substantially lower than the claimant rate across the Wider Baseline Study Area (3.7-4.0%, ranging from 3.3-4.8% dependent on authority area and proportion of Jobseekers Allowance versus Universal Credit claimants), and significantly lower than the national rate for England and Wales (4.2-4.4%).

18.6.54 Changes to baseline conditions relating to employment and income are most likely to affect sub-populations who are deprived of access to suitable employment opportunities and to suitable wages, and those who are unemployed.

Bio-physical Environment

Climate Change Mitigation and Adaptation

18.6.55 The existing baseline conditions relating to climate change, mitigation, and adaptation are set out in Chapter 7: Climate Change [**EN010170/APP/GH6.2.7]**. A summary of the baseline conditions relevant to human health are set out below:

- The current use of the Sites and the Cable Corridor predominantly consists of arable land, managed trees and hedgerows. The baseline agricultural greenhouse gas (GHG) emissions are dependent on the soil and vegetation types present, and the fuel used for the operation of any plant and machinery on the Sites. As a conservative approach, the baseline activities on site will be assumed to be generating zero emissions of CO_2e;
- The most recent available and completed historic climate data acquired by the Met Office from the closest Met Office Station to the Scheme (Oxford) for the 30-year climate period of 1981 – 2010 will provide the current baseline for the Climate Change Risk Review;
- It is anticipated that the future baseline will be different from the current present-day baseline, due to changes in climate. For this assessment, UK Climate Projections 2018 probabilistic projections have been provided for 30-year periods from 2020 – 2099; and
- In the absence of the Scheme, it is considered there will be no change to the future baseline for climate change. The baseline details (including the energy generated by fossil fuels) are not anticipated to change in the absence of the Scheme.

18.6.56 Vulnerable populations to climate change include those with long-term cardiovascular and respiratory illnesses or disabilities who are at greater risk due

to reduced air quality, elderly and very young children who are at greater risk of heatstroke, people living in poor quality housing, and people living in locations susceptible to natural disasters, such as floods and landslips exacerbated by climate change.

Air Quality

18.6.57 The existing baseline conditions relating to air quality are set out in Section 16.6 of ES Chapter 16: Air Quality **[EN010170/APP/GH6.2.16]**. A summary of the baseline conditions relevant to human health are set out below. The Study Area for Air Quality is defined in Section 16.4 of Chapter 16: Air Quality as up to 250m from, the boundary of the Sites and the Cable Route Corridor and site entrances, and up to 50m of the route(s) used by construction vehicles on the public highway:

- The 2024 Air Quality Annual Status Report produced by North Northamptonshire Council stated that during 2023, none of its 123 diffusion tube monitoring sites exceeded the annual mean Air Quality Strategy (AQS) objective for NO_2 or hourly mean air quality objective for NO_2;
- There are seven Air Quality Management Area (AQMAs) in West Northamptonshire all of which were declared for exceedance of the NO_2 annual mean AQS Objective. Northampton AQMA No. 4 is the closest AQMA to the Scheme, located approximately 5.7km from the Order Limits and is situated along the A5095, to the north of the city of Northampton. Monitoring data recorded across 143 diffusion tube sites recorded one exceedance of the NO_2 annual mean AQS Objective in Northampton town centre;
- The Olney AQMA, within the administrative boundary of Milton Keynes City Council was revoked in 2024 following several years of monitored NO_2 concentrations being below the annual mean AQS Objective. Monitoring at 39 sites reported no exceedances of the annual mean NO_2 AQS Objective in the year 2023;
- North Northamptonshire Council, West Northamptonshire Council and Milton Keynes City Council collectively have 50 passive monitoring sites within 5 km of the Order Limits. In the past five years there was one exceedance in the NO_2 annual mean AQS Objective at W1 in 2019. This site is located in the centre of Wellingborough approximately 3.5 km east of the Order Limits. 2023 data shows most of the sites are well below the AQS NO_2 annual mean Objective of 40 µg/m^3 with the highest measurement being monitoring site W17 (approximately 3.6 km east of the Order Limits, in Wellingborough High Street) where the annual mean concentration was 36.0 µg/m^3; and
- A review of background pollutant concentrations for the Sites has been carried out using Defra predicted annual mean background maps for 2025, which presents the highest predicted background NO_2, PM_{10} and $PM_{2.5}$ concentrations for each Site within the Scheme. The predicted background concentrations are well below the relevant AQS objectives for each pollutant.

18.6.58 Sub-population groups living in areas with higher background concentrations of air pollutants are of greatest vulnerability to any increased pollution arising as a result of the Scheme. This applies predominantly to babies and young children, elderly people, and anyone with long-term respiratory illnesses.

Water Quality or Availability

18.6.59 The existing baseline conditions relating to water quality or availability are set out in Section 10.6 of ES Chapter 10: Hydrology, Flood Risk and Drainage **[EN010170/APP/GH6.2.10]**. A summary of the baseline conditions relevant to human health are set out below. The Study Area for hydrological environment (which is being applied for this section) is the Sites, Cable Route Corridor, and any immediately adjacent watercourses and water bodies as defined in Section 10.4 of ES Chapter 10 and shown in ES Appendix 10.1: Flood Risk Assessment and Drainage Strategy **[EN010170/APP/GH6.3.10.1]**.

18.6.60 The baseline assessment of fluvial (river) and pluvial (surface water) flood risk identifies that the majority of the Sites are at low risk of flooding, with the exception of Green Hill F, which is low to moderate risk of fluvial flooding, and Green Hill BESS which is of moderate risk of fluvial flooding.

18.6.61 The Cable Route Corridor is predominantly at low risk of fluvial (river) and very low risk of pluvial (surface water) flooding, but contains specific location of increased risk. These are between Green Hill E and F and the BESS Site, where it crosses and lies in the vicinity of the River Nene and its tributaries.

18.6.62 In absence of the Scheme, it is considered there will be no significant change to the future baseline conditions of the Study Area. However, the potential increase in flood risk due to climate change, particularly in relation to increased rainfall, is assessed.

18.6.63 With regard to human health, the level of risk of fluvial and pluvial flooding is also conservatively applied to risk to on-site workers and to mobilisation of pollutants from the Sites to watercourses.

18.6.64 Parts of the population reliant on groundwater or reservoir water for consumption and bathing are most likely to be vulnerable to reduced water quality as a result of pollutants or runoff from the Scheme.

Land Quality

18.6.65 The existing baseline conditions relating to land quality (including ground contamination) are set out in Section 22.6 of ES Chapter 22: Ground Conditions and Contamination **[EN010170/APP/GH6.2.22]** and its supporting appendices. The Study Area for ground conditions is defined as the Sites and Cable Route Corridor. A summary of the baseline conditions relevant to human health are set out below.

- There are no licensed groundwater abstractions for potable water within 500m of any of the Sites, or along the Cable Route Corridor. Non-potable water groundwater abstractions and surface water abstractions have been identified in proximity to all Sites except Green Hill D for agricultural and domestic use.

- Ceased mining activity for sand and gravel extraction has been recorded at, or in close proximity to Green Hill A, E, F, and on the Cable Route Corridor. Ongoing sand and gravel extraction is in close proximity to Green Hill BESS and the Cable Route Corridor. Historic iron ore mining has been identified adjacent to Green Hill C.
- Risk of unexploded ordnance (UXO) is recorded as low across the Scheme, with the exception of Green Hill G where this risk is up to high as a result of potential UXO remaining in deep soil from WWII explosives deactivation and demolition works.
- In absence of the Scheme, it is considered there will be no change to the on-site future baseline conditions of the Study Area. Off-site conditions adjacent to Green Hill F may change as a result of potential quarrying works at Bozeat Quarry, however no planning application for extraction has been submitted to date.

18.6.66 As a result of standard procedures and good practice measures, it is considered that both construction workers and members of the public are of medium sensitivity to changes in land quality and ground conditions.

Noise and Vibration

18.6.67 The existing baseline conditions relating to noise and vibrations are set out in Section 14.6 of ES Chapter 14: Noise and Vibration **[EN010170/APP/GH6.2.14]**. A summary of the baseline conditions relevant to human health are set out below. The Study Area for noise and vibration is defined as the Order Limits, and any noise and vibration sensitive receptors within 500 m of the Order Limits.

18.6.68 The baseline noise environment has been established following noise surveys undertaken at a total of 25 monitoring stations across Green Hill A-G and Green Hill BESS.

18.6.69 A number of subsections of the population may be more vulnerable to noise and vibration, principally those living closest to noise sources, those where the contrast between existing baseline and projected noise and vibrations is greatest, but additionally those with sensory sensitivities and impairments to whom additional noise impacts would have a disproportionate effect on amenity.

Radiation (Electromagnetic Fields)

18.6.70 The existing baseline conditions relating to radiation – specifically EMF are set out in Section 21.6 of ES Chapter 21: Electromagnetic Fields **[EN010170/APP/GH6.2.21]**. The Study Area for EMF is defined as the Cable Route Search Area and its immediate vicinity. A summary of the baseline conditions relevant to human health are set out below.

- There are existing cable routes and electrical infrastructure within the Sites and surrounding areas. These will have associated electromagnetic fields. The Scheme does not use any existing electrical infrastructure, up to its Point of Connection at the National Grid substation at Grendon.
- In absence of the Scheme, it is considered there will be no change to the future baseline conditions of the Study Area.

18.6.71 The greatest risk to human health from EMF is as a result of prolonged exposure to high-strength electromagnetic fields. In addition, concerns and anxiety regarding exposure from major electrical infrastructure may manifest as mental health and wellbeing effects. Vulnerable sub-populations therefore include those living, working, and studying in close proximity to electrical infrastructure, or those who have underlying fears or anxieties about EMF exposure. These sub-populations are likely to be small, and as such the likely sensitivity of the overall population to EMF is low.

Institutional and Built Environment

Health and Social Care Services

18.6.72 The 5 km ZOI (for assessing primary health services) contains 12 General Practice (GP) healthcare facilities, which provide the primary level of healthcare to the general population (Ref 18.66). These are located at:

- Brook Medical Centre, Billing;
- Brookside Medical Centre, Bozeat – part of Woodsend Medical group;
- Cobbs Garden Surgery; Olney;
- Denton Village Surgery;
- Earls Barton Medical Centre;
- Harrold Medical Practice;
- Mawsley Village Surgery – part of Weavers Medical;
- Moulton Surgery;
- The Redwell Medical Centre, Wellingborough;
- Queensway Medical Centre, Wellingborough;
- Woodview Medical Centre, Northampton; and
- Wollaston Surgery – part of Woodsend Medical group.

18.6.73 As of January 2025, the identified GP facilities have a total patient list of approximately 140,000 patients. This includes patients from practice groups that extend to include parts of Kettering (Weavers Medical) and Corby (Woodsend Medical group). Serving these patients are a total of 57.2 FTE GPs, giving as estimated ratio of 2,443 patients per FTE GP (Ref 18.67). This is higher than the national average for England of 2,258 patients per FTE GP, with six of the 12 GP surgeries identifies having significantly higher numbers of patients per GP than the national average.

18.6.74 A number of other GP surgeries can be found within the urban areas of Northampton and Wellingborough, however only those closest to the Scheme have been recorded for the purpose of this assessment. Additional healthcare facilities include three dental clinics and a number of supporting or dedicated pharmacies located within larger urban areas in the 5 km ZOI.

18.6.75 The 2 km ZOI also contains at least ten specialist care facilities, with facilities ranging from supported living, to elderly care, and to those that provide specialist

residential care for adults with learning disabilities who require full time care. These are located at:

- Bilton Court, Wellingborough;
- Charles Robinson Court, Wellingborough;
- Dukes Court, Wellingborough;
- Ecton Brook House, Billing;
- Grangefield, Earls Barton;
- Langdale Court, Wellingborough;
- Moulton Grosvenor House, Moulton;
- Oakfield, Easton Maudit;
- Oakfield Yardley Hastings; and
- Olney Meadows Care Home, Olney.

18.6.76 The location of Oakfield, Easton Maudit is directly adjacent to the Scheme at Site F. As such, this facility is likely to be extremely sensitive to changes in its surroundings, particularly during the construction phase.

18.6.77 The Acorn Centre, which hosts The Seeds of Change, is a dedicated equine care and therapy centre for children and young people facing barriers in their learning and ability to function healthily in current education systems (Ref 18.68). This is located immediately to the south of Green Hill A.

18.6.78 A small number of hospitals with specialist services and Accident and Emergency Departments can be found in major settlements in the Wider Baseline Study Area. The four nearest to the Scheme, and covering the Wider Baseline Study Area can be accessed at the Bedford Hospital, Kettering General Hospital, Milton Keynes University Hospital, and Northampton General Hospital (Ref 18.66).

18.6.79 Provision Accident and Emergency Care data from January 2025 indicated that the Accident and Emergency (A&E) (or Urgent Care) departments at hospitals in the Wider Baseline Study Area largely operate at a similar quality to the average expectations for England. Median waiting times for treatment from point of arrival range from 41-90 minutes, compared to the average of 60 minutes in England, while the median average time from arrival to departure (upon transferral to other services, or discharge from A&E) ranges from 140-223 minutes, compared to 170 minutes on average in England. No specific hospital listed above performs significantly greater or worse than the others by the indicators assessed.(Ref 18.69)

Future Baseline

18.6.80 This section considers changes to the baseline conditions, described above, that might occur in the absence of the Scheme and during the time period over which the Scheme would be in place. The future baseline scenarios are set out in ES Chapter 2: EIA Process and Methodology **[EN010170/APP/GH6.2.2]**.

18.6.81 The sensitivity of the population to changes to community resilience and influence is likely to remain high in the absence of the Scheme as there would not be the community experience of the DCO process or as great a level of understanding of the level to which the community can influence the outcomes of the DCO decision making process and eventual implementation of a large-scale infrastructure project. As such, it is important to define that the baseline scenario for the assessment of community resilience and influence at the point of the Scheme's construction will be informed to a large extent by the scope of pre-application consultation and ongoing engagement being undertaken as part of the DCO process. Whilst this does not explicitly form part of the assessment, good standards of consultation (as set out in the Statement of Community Consultation **[EN010170/APP/GH5.6]**) will have helped give the community sufficient opportunity to engage with the Scheme's design, mitigation requirements, and their eventual implementation. This therefore sets the future baseline level for how informed, resilient and influential the community perceives itself ahead of the construction, operation and decommissioning of the Scheme. As a result, it is anticipated that the sensitivity of the population to future changes in resilience and influence will be medium.

18.6.82 In the absence of the Scheme, it is considered that with projected population increase, there is likely to be a demographic shift towards an aging population, which is anticipated to bring forward human health impacts as a result of increased age-related illnesses, greater health and social care requirements, and a proportional reduction in working-age people to support and maintain societal infrastructure. These factors are likely to result in a future population baseline in the assessment timeframe for the Scheme's decommissioning phase that is of greater sensitivity to changes to human health conditions. Therefore, the future baseline will be considered in assessing the sensitivity of future human health receptors conditions during the Scheme's operational and decommissioning phases.

18.7 Embedded Mitigation Measures

18.7.1 The way that likely significant environmental effects have been or will be avoided, minimised, mitigated, or offset to reduce their level of significance to a minimum, either through design or management of the Scheme, is outlined in this section. These measures form part of the assessment of the likely significant effects. Proposed environmental enhancements are also described where relevant.

18.7.2 The following relevant embedded mitigation measures for construction, operation and maintenance, and decommissioning have been incorporated into the Scheme design, with outline proposals and locations to be submitted with the DCO application. These measures are proposed to be secured through requirements in the draft DCO **[EN010170/APP/GH3.1]**with reference to the following documents:

- Outline Construction Environmental Management Plan (OCEMP) **[EN010170/APP/GH7.1];**
- Outline Skills, Supply Chain and Employment Plan (OSSCEP) [**EN010170/APP/GH7.8];**
- Outline Construction Traffic Management Plan (OCTMP) **[EN010170/APP/GH7.9];**
- Outline Public Rights of Way and Permissive Paths Management Plan (**OPRoWMP) [EN010170/APP/GH7.10];**
- Outline Landscape and Ecological Management Plan (OLEMP) **[EN010170/APP/GH7.4];**
- Outline Operational Environmental Management Plan (OOEMP) [**EN010170/APP/GH7.2]; and**
- Outline Decommissioning Statement (ODS) **[EN010170/APP/GH7.3].**

Construction

Embedded Human Health Mitigation

18.7.3 The layout and configuration of the Scheme have been designed to include measures to minimise likely significant effects on human health receptors during the Scheme's construction phase.

18.7.4 Construction is anticipated to take place across an approximate two-year period. The OCEMP **[EN010170/APP/GH7.1]** includes an all-encompassing mitigation measure for the construction schedule for the Scheme to retain appropriate flexibility to be phased and staggered across the Sites and Cable Corridor to reduce impacts on environmental receptors. With specific regard to human health receptors, the embedded flexibility in the construction timescale of the Scheme is therefore able to reduce the intensity of peak construction activities on the Scheme, and redistribute where activities are taking place to minimise peak human health impacts in any single location.

18.7.5 The embedded visual mitigation includes designing the layout of the Sites to provide suitable buffers from roads, PRoWs, recreation facilities, and neighbouring buildings and land uses. These measures seek to reduce the likely effects on the desirability of these receptors for leisure and play, and local perceptions of community identity.

18.7.6 During construction, the OCEMP **[EN010170/APP/GH7.1]** commits to providing a Community Liaison Manager, to whom any comments, concerns or complaints about the development of the Scheme can be raised, either directly by members of the public, or via elected representatives on parish or town councils, councillors, and Members of Parliament. This role will be used to continue open channels of communication between the community and the operators of the Scheme as set up during the application and DCO process, and through the discharge of requirements process. In doing so, this will mitigate impacts on community identity and influence by allowing the community to continue to be

involved in the development of their local environment as the Scheme is constructed.

Mitigation Directed by Other Technical Disciplines

18.7.7 The Scheme also includes a number of topic specific embedded mitigation measures relevant to human health as set out in other chapters of the ES, and are set out through the OCEMP **[EN010170/APP/GH7.1]**, secured by requirement in the draft DCO **[EN010170/APP/GH3.1]**:

- Section 7.7 of ES Chapter 7: Climate Change **[EN010170/APP/GH6.2.7]**;
- Section 8.7 of ES Chapter 8: Landscape and Visual Impact **[EN010170/APP/GH6.2.8]**;
- Section 10.9 and 10.10 of ES Chapter 10: Hydrology, Flood Risk and Drainage **[EN010170/APP/GH6.2.10]**;
- Section 13.9 of ES Chapter 13: Transport and Access **[EN010170/APP/GH6.2.13]**;
- Section 14.7 of ES Chapter 14: Noise and Vibration **[EN010170/APP/GH6.2.14]**;
- Section 16.7 of ES Chapter 16: Air Quality **[EN010170/APP/GH6.2.16]**;
- Section 17.7 and 17.9 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**;
- Section 21.7 of ES Chapter 21: Electromagnetic Fields **[EN010170/APP/GH6.2.21]**;
- Section 22.7 and 22.9 of ES Chapter 22: Ground Conditions and Contamination **[EN010170/APP/GH6.2.22]**; and
- Section 23.7 of ES Chapter 23: Major Accidents and Disasters **[EN010170/APP/GH6.2.23]**.

Enhancement Measures

18.7.8 As set out in Section 17.9 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**, the implementation of enhancement measures will help to improve the level of local education and skills uplifting, skills and qualification attainment, and increase local recruitment, procurement and employment, including through additional potential targeted measures for agricultural workers to be supported inmoving to diversified agricultural practices, to be set out through the OSSCEP **[EN010170/APP/GH7.8]**.

Operation

Embedded Human Health Mitigation

18.7.9 As during construction, the embedded visual mitigation includes designing the layout of the Sites to include suitable buffers from roads, PRoWs, recreational facilities and neighbouring buildings. Furthermore, proposed landscaping planting is likely to mature over the lifetime of the Scheme, which will go some

way to enhance the enjoyment of the landscape for residents and visitors to the area. These measures seek to reduce the effects on the desirability of these receptors for leisure and play, and local perceptions of community identity.

18.7.10 Furthermore, the appointment of a Community Liaison Manager shall be implemented through the OOEMP **[EN010170/APP/GH7.2]** to provide a dedicated community contact to the Scheme's operators during peak operational and maintenance activities such as BESS and PV infrastructure replacements. A full-time member of the Scheme's operational team should also be in position as a dedicated community contact to ensure community concerns are heard, responded to and suitably addressed throughout the duration of the Scheme's operational phase. Details of the community contact within the operational team should be made available to members of the public through elected representatives or online, and kept up-to-date at all times. This will therefore reduce the likely significance of effect on human health in the communities most affected by the Scheme

Mitigation Directed by Other Technical Disciplines

18.7.11 The Scheme also includes a number of topic specific embedded mitigation measures relevant to human health as set out in other chapters of the ES, and are set out through the OOEMP **[EN010170/APP/GH7.2]**, secured by requirement in the draft DCO **[EN010170/APP/GH3.1]**:

- Section 7.7 of ES Chapter 7: Climate Change **[EN010170/APP/GH6.2.7]**;
- Section 8.7 of ES Chapter 8: Landscape and Visual Impact **[EN010170/APP/GH6.2.8]**;
- Section 10.9 and 10.10 of ES Chapter 10: Hydrology, Flood Risk and Drainage **[EN010170/APP/GH6.2.10]**;
- Section 13.9 of ES Chapter 13: Transport and Access **[EN010170/APP/GH6.2.13]**:
- Section 14.7 of ES Chapter 14: Noise and Vibration **[EN010170/APP/GH6.2.14]**;
- Section 16.7 of ES Chapter 16: Air Quality **[EN010170/APP/GH6.2.16]**;
- Section 17.7 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**;
- Section 21.7 of ES Chapter 21: Electromagnetic Fields **[EN010170/APP/GH6.2.21]**;
- Section 22.7 and 22.9 of ES Chapter 22: Ground Conditions and Contamination **[EN010170/APP/GH6.2.22]**; and
- Section 23.7 of ES Chapter 23: Major Accidents and Disasters **[EN010170/APP/GH6.2.23]**.

Enhancement Measures

18.7.12 The Scheme features enhancements to existing PRoWs and the provision of new non-vehicular permissive paths where it has been shown that there is a local need or appetite for such a route to be included as part of the Scheme. The opportunity for members of the public to comment on potential connections they wished to see added or improved was made available through the statutory consultation process. Those that have been implemented as part of the Scheme design will enhance connectivity in the local area and are anticipated to help to improve recreation in the immediate vicinity, secondarily benefitting local population health and wellbeing in the long-term. These enhancement measures include the ability for the removal of existing barriers such as stiles and gates to provide better access to users. PRoWs and permissive paths will also be planted with wildflower and native grass mixes, with hedgerows encouraged to grow and fill out thin or gapped section. Whilst primarily this is for ecological and landscape improvements, these measures also seek to enhance the user experience along these routes, contributing to improved health and wellbeing benefit to their use.

18.7.13 As set out in Section 17.9 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**, the implementation of long-term enhancement measures throughout the operational lifetime of the Scheme to improve the level of local education and skills uplifting, skills and qualification attainment, and increase local recruitment, procurement and employment, including continuing measures for agricultural workers to be supported in moving to diversified agricultural practices, is to be set out through the OSSCEP **[EN010170/APP/GH7.8]**. This will also include for periods of onsite infrastructure replacement.

Decommissioning

Embedded Human Health Mitigation

18.7.14 As during construction, the implementation of a dedicated Community Liaison Officer is secured through the ODS **[EN010170/APP/GH7.3]** to provide a community contact to address and respond to concerns, anxieties, or complaints by the community.

Mitigation Directed by Other Technical Disciplines

18.7.15 The Scheme also includes a number of topic specific embedded mitigation measures relevant to human health as set out in other chapters of the ES, and are secured by requirement in the draft DCO **[EN010170/APP/GH3.1]** in reference to the ODS **[EN010170/APP/GH7.3]**:

- Section 7.7 of ES Chapter 7: Climate Change **[EN010170/APP/GH6.2.7]**;
- Section 10.9 and 10.10 of ES Chapter 10: Hydrology, Flood Risk and Drainage **[EN010170/APP/GH6.2.10]**;
- Section 14.7 of ES Chapter 14: Noise and Vibration **[EN010170/APP/GH6.2.14]**;
- Section 17.7 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**;

- Section 22.7 and 22.9 of ES Chapter 22: Ground Conditions and Contamination **[EN010170/APP/GH6.2.22]**; and
- Section 23.7 of ES Chapter 23: Major Accidents and Disasters **[EN010170/APP/GH6.2.23]**.

Enhancement Measures

18.7.16 As set out in Section 17.9 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**, the implementation of enhancement measures (as described for during construction) will help to improve the level of local education and skills uplifting, skills and qualification attainment, and increase local recruitment, procurement and employment during the Scheme's decommissioning. These measures are set out through the OSSCEP **[EN010170/APP/GH7.8]** and ODS **[EN010170/APP/GH7.3]**.

18.8 Assessment of Impacts and Effects

18.8.1 Taking into account the embedded mitigation measures as detailed in Section 18.7, the potential for the Scheme to have likely significant effects on human health was assessed using the methodology as detailed in Section 18.4 of this Chapter. In the sections below, effects during the construction, operation and decommissioning phases of the Scheme are discussed.

Construction Phase

18.8.2 The construction of the Scheme is estimated for the purpose of EIA to be undertaken over a two-year period. Subject to the grant of consent of the DCO, the earliest construction is anticipated to start is Q1 2027 and will run until approximately the end of 2029. The Scheme retains flexibility for construction across the Sites and Cable Corridor to be undertaken in parallel or as a phased development. To ensure the robustness of this assessment in evaluating the worst-case scenario, the construction of all Sites and Cable Corridor in parallel has been assessed.

Social Environment

Housing

18.8.3 Effects of the Scheme on access to housing and accommodation during construction have been considered in Section 17.8 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**. Paragraphs 17.8.17-18 therein identify that construction workers are most likely to be housed in temporary accommodation, primarily vacant private rental properties. This therefore ensures no effect on access to permanent housing, and up to a potential short- to medium-term temporary minor adverse effect on access to temporary accommodation to accommodate the peak inbound construction workforce requiring accommodation in the Wider Baseline Study Area.

18.8.4 Access to appropriate housing is a determinant of health across both physical health, and mental health and wellbeing. Physical health may be affected by having suitable quality housing, potential overcrowding, and lack of access to suitable outdoor space. These then also impact upon mental health and the ability

for people to maintain a suitable quality of life. Access to affordable housing is also a key determinant as this is a key pathway for people to improve their quality of life by being able to afford suitable accommodation. As a result, those most vulnerable to changes to the availability of housing are those currently in unsuitable (such as overcrowding or unsafe) housing, and those in or at risk of homelessness. Section 17.8 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** identifies that the overall population is of **medium** sensitivity to changes in access to housing as a result of existing barriers to accessing housing, in the context of a greater than 5 years supply of housing land demonstrated by the authority in the Wider Baseline Study Area.

18.8.5 For assessing the likely magnitude of impact on human health, a worst-case assumption is that a negligible negative impact on access to accommodation will have a resultant negligible negative impact on human health. Therefore, the effect on human health with regard to access to housing is anticipated to be a medium-term temporary **minor adverse effect**. This is not a significant effect.

Open Space, Leisure and Play

18.8.6 Likely effects on open space, leisure and play during construction have been considered in Section 17.8 and 17.9 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** and individually assessed in Section 3 of ES Appendix 17.1: Tourism and Recreation Receptor Tables **[EN010170/APP/GH6.3.17.1]**. Subject to implementation of additional topic-specific mitigation and enhancement measures, the following residual effects have been identified: up to moderate-minor adverse effects on the recreational use of PRoWs and permissive recreational routes, and moderate adverse effects on the recreational use of some high sensitivity long-distance recreational routes. Effects identified on recreational use of water bodies peak at moderate-minor adverse effects, based on traffic and visual impacts on their accessibility and recreational use and enjoyment. Assessment of the impacts on formal recreation and leisure facilities identify up to medium-term temporary moderate-minor adverse effects on recreational use at some facilities, while minor adverse effects on the accessibility of recreational facilities for children and youth groups are anticipated as a result of impacts on access and enjoyment of play spaces and youth sports facilities.

18.8.7 Impacts on open space, leisure and play as determinants of health are driven by reduced activity affecting physical health, while reduced enjoyment of recreational facilities (as a result of visual impact, or disruption to use) can reduce the mental health benefits associated with leisure and play. This impact is additive where multiple leisure and play receptors are affected in a similar area. Overall, the magnitude of impact to open space, leisure and play is considered to be low, and negative.

18.8.8 Children, and adults with limited activity are most vulnerable to changes to open space, leisure and play and therefore are of a high sensitivity. Existing baseline conditions demonstrate the 2 km ZOI population contains a similar proportion of children to the Wider Baseline Study Area (para. 18.6.3), children (at Year 6) are less likely to be obese (an indicator of poor activity) than in the Wider Baseline Study Area (para. 18.6.27), and self-assessment of disability (as defined by the

Equality Act 2010) is comparable with the Wider Baseline Study Area (para.18.6.9). Therefore, whilst these vulnerable groups are more sensitive to change, the overall population is not considered to be disproportionately more sensitive than the Wider Baseline Study Area or national expectation. As such, the sensitivity of the overall population to changes to open space, leisure and play is **low**.

18.8.9 Resultantly, the impact on human health with regard to open space, leisure and play is therefore anticipated to be a medium-term temporary **minor adverse effect** (not significant).

Transport Modes, Access and Connections

18.8.10 The ability of people to access public transport, and move around the Study Area is related to health and wellbeing primarily through ability to access healthcare, services and employment, and to ensure social connections and isolation are not adversely affected.

18.8.11 The transport assessment set out in ES Chapter 13: Transport and Access **[EN010170/APP/GH6.2.13]** demonstrated that the only access road likely to experience a greater than 10% increase in HGV construction traffic is Highfield Road, Mears Ashby. This is largely due to its existing baseline use being very low. The functional use of all other local access roads and PRoWs are not anticipated to be impacted by more than a low magnitude, and as such there are not anticipated to be significant effects to human health as a result of reduced levels of access to transport and connections arising from the Scheme.

18.8.12 On Highfield Road, combined construction traffic from both Green Hill Sites D and E is likely to contribute to a substantial increase in HGV traffic, also due to the low existing levels of HGV movements. Highfield Road, whilst having a number of properties along it does not provide access to any notable destinations for visitors, nor does it provide a unique link from Mears Ashby to any nearby destination or settlement. Therefore, impacts to human health are likely to be extremely limited to those who reside on Highfield Road. As the road does not have any footpath or cycle track associated with it, non-vehicular users are of a **medium** sensitivity to changes. The greatest magnitude effects to non-vehicular users are no greater than medium-term minor impacts to amenity, road user or pedestrian safety, or as a result of fear and intimidation on and by road users. This may therefore contribute towards perceptions of threat to physical safety, and an increased perception of isolation from the nearest settlement, Mears Ashby. As a result, residents and therefore users of Highfield Road are likely to experience up to a **minor adverse effect** (not significant) on human health.

18.8.13 Highfield Road is not a public transport route, nor does increased traffic on Highfield Road prejudice against users of public transport or access to public transport links. As such, there is no further anticipated effect on human health as a result of changes to access to public transport.

Community Identity, Culture, Resilience and Influence

18.8.14 Sense of community is a multi-faceted wider determinant of human health and is influenced by a number of factors that primarily impact upon mental health and wellbeing.

18.8.15 Community identity and culture with respect to people, and sense of place is likely to be of an overall **low** sensitivity to change across the 2 km ZOI. This is as a result of the 2 km ZOI consisting of a range of communities from rural hamlets up to suburbs of large towns across a diverse socio-economic and demographic spectrum. Those areas particularly sensitive to change due to the more rural character of the settlements and surroundings, and their more immediate proximity to the Scheme, as set out in paragraph 18.6.45, are of **medium** sensitivity.

18.8.16 The construction of the Scheme is anticipated to have a neutral impact on resident population, and an anticipated short-term temporary minor beneficial effect to resident age and health demographics across the Wider Baseline Study Area, as set out in Section 17.8 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**. The respective level of effect to community identity with respect to localised net migration during construction is therefore considered to be a temporary short-term **negligible adverse effect** in any of the affected communities (not significant).

18.8.17 The likely effect on community identity and culture is based not only on direct visual impacts within the settlements themselves, but on surrounding PRoWs and transport routes as experienced by users, and the perception of changes to the immediate character of the land surrounding these identified settlements as a result of the Scheme's construction. Based on the likely landscape and visual impacts set out in ES Chapter 8: Landscape and Visual Impact **[EN010170/APP/GH6.2.8]**, and the importance of the rurality of the area to members of the public as demonstrated in their responses to pre-application consultations, the impact of the Scheme on community identity and culture and thus on the mental wellbeing of the population is likely to be negative and low in magnitude.

18.8.18 The level of sensitivity in the community's resilience and influence has been governed by the scope of consultation held with affected communities during the pre-application process (see the Consultation Report **[EN010170/APP/GH5.1]** and its appendices **[EN010170/APP/GH5.2-5.13]**), and the availability for further influence and engagement through the DCO process, as set out in paragraph 18.6.46. Resultantly, the sensitivity of the population to changes in resilience and influence is no less than **medium**.

18.8.19 A communities' distance from the Scheme, and the part of the Scheme which impacts upon a community most, will vary the amount to which communities perceive the level to which their resilience and influence is being affected during the progression of construction works. Information on the construction programme will be made available to affected communities ahead of construction commencing. The Community Liaison Manager will also be available for community dialogue throughout the construction process, as defined in paragraph 18.7.6. These measures will mitigate the extent to which the Scheme's construction adversely affects the communities' ongoing perception of their own resilience to and influence on further changes throughout the construction phase. This is secured by way of requirements in the draft DCO **[EN010170/APP/GH3.1]** in respect of the OCEMP **[EN010170/APP/GH7.1]**. Whilst community anxieties about the Scheme may still be present throughout the construction phase, there

is likely to be no more than a low magnitude impact to community resilience and influence within the 2 km ZOI and thus on population mental health and wellbeing.

18.8.20 As a result of the medium sensitivity of this receptor, the likely human health effect as a result of changes to community identity, culture, resilience and influence is a medium-term temporary **minor adverse effect** overall including within the communities most immediately affected. This is not a significant effect.

Economic Environment

Education and Training

18.8.21 Likely effects on education and training during construction have been considered in Section 17.8 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** with residual effects subject to additional mitigation and enhancement measures set out in Section 17.9 therein. Paragraph 17.9.11 therein identifies that enhancement measures can lead to a medium-term temporary moderate-minor beneficial effect on skills and qualification attainment in the Wider Baseline Study Area.

18.8.22 Education and training are considered as determinants of health due to the beneficial impact on both physical and mental health and wellbeing as a result of direct ability to find and sustain work, and indirectly to improved socio-economic status and quality of life associated with access to better income as a result of suitable education and training. Overall, the magnitude of impact to education and training resulting from the Scheme is considered to be low, and positive**.**

18.8.23 People with existing limitations in access to suitable education and training are of a high sensitivity to changes in access to education and training. Existing baseline conditions demonstrate that geographically, this is most pertinent in the urban areas of Corby, Wellingborough and Northampton (para. 18.6.50). Across the population in the Wider Baseline Study Area, are less likely to have no qualifications (para. 18.6.48), but also less likely to have NVQ Level 4 or higher qualifications (para. 18.6.49) than the national proportion. As such, the sensitivity of the overall population to changes in access to education and training is **medium**.

18.8.24 Resultantly, the impact on human health with regard to education and training during construction is anticipated to be a medium-term temporary **minor beneficial effect** (not significant).

Employment and Income

18.8.25 Likely effects on employment and income during construction have been assessed in Section 17.8 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**. Paragraphs 17.8.27-17.8.28 therein identify a medium-term temporary minor beneficial effect on the labour force, and resultantly on economic prosperity and income in the Wider Baseline Study Area.

18.8.26 Employment and income are considered as determinants of health due to the beneficial impact on both physical and mental health and wellbeing as a result of sustain and improved socio-economic status and quality of life associated with suitable access to employment and income. Overall, the magnitude of the impact

of the Scheme on employment and income is considered to be negligible, and positive**.**

18.8.27 People with existing limitations in access to suitable employment and income are of a medium sensitivity to changes to these determinants. Existing baseline conditions demonstrate that in the Wider Baseline Study Area, the levels of economic activity and unemployment are favourable compared to national trends, albeit income is slightly lower than national levels. Although there are geographic pockets within the Wider Baseline Study Area within which access to employment and income is greater, and therefore these populations may be more vulnerable, the sensitivity of the overall population is **low**.

18.8.28 Resultantly, the impact on human health with regard to employment and income during construction is anticipated to be a no greater than a medium-term temporary **negligible beneficial effect** (not significant).

Bio-physical Environment

Climate Change Mitigation and Adaptation

18.8.29 The Scheme is not anticipated to induce significant adverse effects on human health during construction in respect of climate change mitigation and resilience. This will be ensured through protection of onsite construction workers through embedded flood risk management and climate change resilience mitigation (such as to protect workers from extreme temperature), and protection of wider human health through minimisation of construction greenhouse gas emissions and minimisation of waste. These measures are secured by way of requirements in the draft DCO **[EN010170/APP/GH3.1]** in respect of the OCEMP **[EN010170/APP/GH7.1]**.

Air Quality

18.8.30 Section 16.8 of ES Chapter 16: Air Quality **[EN010170/APP/GH6.2.16]** sets out the assessment of the likely effects on air quality as a result of the construction of the Scheme, and identifies that the effects from construction dust, construction vehicle emissions, and emissions from on-site plant are not anticipated to be significant.

18.8.31 Effects on air quality are most likely to impact children, and adults with preexisting cardiovascular diseases or long-term disabilities impacting breathing (such as asthma). Furthermore, those nearest the Sites and Cable Corridor, construction access points, and construction routes are most likely to experience effects. Table 18.11 above demonstrates that deaths due to respiratory illnesses are lower in the 2 km ZOI than the national average, although there are some wards within the 2 km ZOI of higher rates. This indicates that due to the presence of substantial inequalities, the health profile of the 2 km ZOI is at least of **medium** sensitivity to air quality impacts.

18.8.32 As a result of embedded dust and emissions mitigation measures to minimise air quality impacts on human health, the construction of the Scheme is likely to have no greater than a low negative magnitude impact on human health. As a result of the population's sensitivity to air quality impacts, this is therefore likely to result in no more than a medium-term **minor adverse effect** (not significant).

Water Quality or Availability

18.8.33 Section 10.10 of ES Chapter 10: Hydrology, Flood Risk and Drainage **[EN010170/APP/GH6.2.10]** sets out the likely impacts on the hydrological environment as a result of the Scheme subject to implementation of embedded design and additional flood risk and hydrology specific mitigation measures. For construction, the most likely impacts relevant to human health relate to a temporary increase in impermeable area, silt-laden runoff, and spillage and leaks of pollutants from construction activities. These impacts have the potential to impact on-site workers, people living downstream of the Sites next to affected watercourses, and people using affected water bodies for recreation and bathing (such as Sywell Reservoir).

18.8.34 Onsite workers are anticipated to be of **medium** sensitivity to hydrological risks as they will be suitably trained for these events but most likely to be directly affected. Health effects on residents or offsite receptors are anticipated to be as a result of flooding risk, and contamination of potable water supplies and recreational bathing locations. Residents reliant on groundwater for potable water are likely to be of greatest sensitivity to effects, with the overall sensitivity of the population to adverse health effects anticipated to be **medium**.

18.8.35 Subject to implementation of embedded and additional mitigation measures to protect both onsite workers and offsite receptors from flooding and water quality impacts, the magnitude of impacts on human health is anticipated to be negligible. As such, the overall anticipated effect on human health as a result of changes to water quality is a medium-term temporary **minor/negligible adverse effect**.

Land Quality

18.8.36 Section 22.10 of ES Chapter 22: Ground Conditions and Contamination **[EN010170/APP/GH6.2.22]** identifies tha, subject to implementation of mitigation, that the residual effects experienced by construction workers are likely to be up to low magnitude negative impacts, primarily due to the UXO risk at Green Hill G, and risks from contamination during construction activities on the Scheme. As **medium** sensitivity receptors, this is likely to induce up to a medium-term **temporary minor adverse effect** on construction workers.

18.8.37 With regard to human health in the general population, the key risks associated with contamination are dermal contact, ingestion and inhalation risks to physical health to those immediately adjacent to the Sites and Cable Corridor, while contamination of controlled waters is a substantial risk for nearby residents reliant on groundwater abstraction for potable water. However, as no such groundwater abstractions for potable water are present within 500m of the Sites or within the Cable Route Corridor, the sensitivity of the overall population to human health risks from contamination is considered **medium**. As the risk of contamination to both nearby residents or users in the built environment is considered to be of up to a low magnitude, the potential effects to human health from changes to ground conditions and contamination during construction are considered to be a long-term **minor adverse effect**.

Noise and Vibration

18.8.38 Noise and vibration effects associated with the Scheme's construction activities are likely to be localised to individual receptors nearest to noise and vibration sources on the Scheme's Sites, Cable Route Corridor and access routes. When considering the overall effect of noise and vibration across the entire Study Area (for Noise and Vibration), there is unlikely to be more than a resultant **negligible adverse effect** to human health overall . That notwithstanding, Section 14.8 of ES Chapter 14: Noise and Vibration **[EN010170/APP/GH6.2.14]** sets out that individual receptors may experience up to low levels of construction noise and negligible levels of vibrations from construction works. Individual receptors – notably residential dwellings - are identified to be of high sensitivity to noise and vibration, with vulnerable people such as those with sensory impairments, mental disabilities, and those less able to move around or leave their properties being of **high** sensitivity to these impacts resulting in distress, anxiety, and longer-term impacts on wellbeing. As a result of Section 14.11 of ES Chapter 14: Noise and Vibration **[EN010170/APP/GH6.2.14]** identifying no significant effects, the resultant effect to human health for those at highest risk is anticipated to be up to a short- to medium-term **minor/negligible adverse effect** (not significant) on their health and wellbeing.

Radiation (Electromagnetic Fields)

18.8.39 High-level electromagnetic fields along the Cable Route Corridor are not anticipated to be generated from the Scheme during construction as no generation, import or exportation of electricity to or from the National Grid is to occur prior to completion of the Scheme's commissioning, with the exception of testing events. This is reported in Section 21.8 of ES Chapter 21: Electromagnetic Fields **[EN010170/APP/GH6.2.21]**. The physical impact to human health is therefore neutral during this time, although the mental health impact as a result of anticipation of the Scheme may have an overall, medium-term temporary **negligible adverse effect** (not significant) on the population living closest to Scheme.

Institutional and Built Environment

Health and Social Care Services

18.8.40 Paragraph 17.8.14 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** identifies that the likely inbound temporary workforce is anticipated to have a negligible magnitude impact on the resident population. This is likely therefore to bring a respective negligible magnitude impact as a result of increased demand for healthcare services across the Wider Baseline Study Area. This impact is likely to be dispersed across the Wider Baseline Study Area based on where workers are living (anticipated to be in temporary accommodation and requiring registration with local GP practices), however there may be some level of concentration of effect on primary and emergency care services nearest the Scheme as a result of increased of workplace illness and injury. Applying a conservative approach, the greatest level of impact within the 5 km ZOI for primary health services may be up to a short-term peak low magnitude impact on primary and emergency care access.

18.8.41 Members of the population most reliant on healthcare services due to long-term illnesses, disabilities, and age-related illnesses are of a high sensitivity to changes to availability of access to healthcare services as a result of increased demand. Table 18.10 and **Table 18.11** above identifies that for most health determinants, the 5 km ZOI and the Wider Baseline Study Area perform better than or at the same level as national expectations. However, provision of primary healthcare facilities is somewhat constrained in the 5 km ZOI as a result of a significantly higher than average ratio of patients to GPs than the national average. Furthermore, emergency healthcare in the Wider Baseline Study Area operates within national average expectations. As a result, whilst the population themselves show they are likely resilient to changes in healthcare access, the healthcare system itself is more vulnerable to increased demand, therefore demonstrating an overall **medium** sensitivity to changes to healthcare access.

18.8.42 As a worst case scenario, the greatest level of induced impact on healthcare services is likely therefore to have a **minor adverse effect** (not significant) on human health as a result of increased demand on healthcare services and subsequent decrease in accessibility to existing service users during the construction period.

18.8.43 As set out in paragraph 18.6.75, the 2 km ZOI contains specialist care facilities, providing on site residential care for elderly and disabled residents, supported living to those with additional care needs, and equine-based therapy for children. Residents and patrons at these locations are therefore going to be of high sensitivity to changes in provision of care and care quality. As the Scheme is unlikely to increase the number of people requiring social care, there is no likely effect on demand for social care. The existing patrons of social care facilities are also likely to be of heightened (medium) sensitivity to their surrounding environment, and as such to changes to their community identity, culture, resilience and influence (see paragraphs 18.8.14-18.8.20). Of particular note is Oakfield, Easton Maudit, which due to its proximity to Site F is likely to experience up to peak medium magnitude impacts on its surroundings, and potentially on the quality of care the facility can provide to its residents. As such, this is likely to have a peak medium-term temporary **moderate adverse effect**. This is therefore a **significant effect** to this specific receptor. Although located similarly closely to Green Hill A, the users of the Acorn Centre are not anticipated to experience a significant effect (no greater than a minor adverse effect) on human health due to embedded design and procedural arrangements: the removal of field AF11 from the solar array areas, the provision of enhanced landscape planting to screen views from the Scheme, the siting of the substation at Green Hill A to field AF24 away from its previously proposed position in field AF28, and the restriction on construction traffic using Newland Road.

Wider Societal Infrastructure and Resources

18.8.44 The Scheme is not anticipated to provide any substantial wider societal infrastructure or resources during its construction phase, save for those related to employment and economic development as identified in paragraphs 18.8.21 to 18.8.28. Furthermore, ES Chapter 23: Major Accidents and Disasters **[EN010170/APP/GH6.2.23]** does not identify any significant adverse effects as a result of potential damage to or cutting off of telecommunication and utilities, nor

from invasive vegetation, pests, and disease. As such, no anticipated human health effects relating to wider societal infrastructure and resources have been assessed.

Operational Phase

18.8.45 For the purposes of assessment, it has been assumed that the Scheme will commence operation at the end of 2029. The operational life of the Scheme is anticipated to be no more than 60 years and decommissioning is therefore estimated to be no later than 2089. A peak replacement scenario, consisting of the replacement of all onsite Solar PV Panels and BESS infrastructure during the Scheme's operational lifetime, over a worst-case two-year working period, has been assessed as a discrete event representing a worst-case scenario. Replacement of other onsite infrastructure, including ad hoc replacement of broken panels has therefore not been assessed separately.

Social Environment

Housing

18.8.46 The operational workforce for the Scheme outside the peak replacement scenario is not likely to be permanently located onsite, resulting in no long-term demand for accommodation space within the Wider Baseline Study Area. During peak replacement works, the inbound temporary workforce peak is anticipated to be approximately 40% of that during construction. This therefore limits the potential for any likely displacement of residents, or excessive competition for permanent accommodation during the operational lifetime of the Scheme, including during infrastructure replacement periods. As a result, no significant effects to human health regarding housing are anticipated during the Scheme's operational lifetime.

Open Space, Leisure and Play

18.8.47 Likely effects on open space, leisure and play during the operation of the Scheme have been considered in Section 17.8 and 17.9 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** and individually assessed in Section 3 of ES Appendix 17.1: Tourism and Recreation Receptor Tables **[EN010170/APP/GH6.3.17.1]**. As during construction, impacts on open space, leisure and play during the Scheme's operation are subject to implementation of additional topic-specific mitigation and enhancement measures. During the operational lifetime of the Scheme, this includes the enhancement of the PRoW network and access to the countryside through the provision of new permissive paths across six of the eight solar array Sites, as shown on ES Figure 4.22: Indicative Permissive Paths **[EN010170/APP/GH6.4.4.22]**. Resultantly, the following residual effects have been identified: up to moderate-minor adverse effects on the recreational use of some PRoWs and permissive recreational routes with a long-term negligible adverse effect overall on the network, including up to moderate-minor adverse effects on the recreational use of some high sensitivity long-distance recreational routes due to the long-term nature of these effects. Effects identified on recreational use of water bodies, recreational facilities, and youth play and sports facilities range from negligible to moderate-minor long-term adverse effects,

based on visual impacts on their recreational use and enjoyment. However, the overall effects on recreational facilities are long-term negligible to minor adverse effects.

18.8.48 Impacts on open space, leisure and play as determinants of health are driven by reduced activity affecting physical health, while reduced enjoyment of recreational facilities (as a result of visual impact, or disruption to use) can reduce the mental health benefits associated with leisure and play. The Scheme may generate additive impacts, particularly where multiple leisure and play receptors are affected in a similar area. Overall, the magnitude of impact to open space, leisure and play is considered to be low and adverse, with this impact being long-term.

18.8.49 Children, and adults with limited activity are most vulnerable to changes to the benefits of open space, leisure and play and therefore are of a high sensitivity. Existing baseline conditions, as summarised in para. 18.8.8, demonstrate the overall population is not considered to be disproportionately more sensitive than the Wider Baseline Study Area or national expectation. As such, the sensitivity of the overall population to changes is **low**.

18.8.50 Resultantly, the impact on human health with regard to open space, leisure and play is therefore anticipated to be a long-term **minor adverse effect**. The peak replacement scenario may cause greater impacts on some individual open spaces, and leisure and play facilities, however this is a short-term impact and is not anticipated to increase the overall effect on open space, leisure and play in the 2 km ZOI for human health. Therefore, the effect during the peak replacement scenario is also a **minor adverse effect**. This is therefore not a significant effect on human health at any point during the Scheme's operation.

Transport Modes, Access and Connections

18.8.51 Predicted traffic associated with the Scheme's operation and peak replacement scenario is less than that anticipated during construction, and as such, has not been assessed separately in ES Chapter 13: Transport and Access **[EN010170/APP/GH6.2.13]**. As the Scheme is designed to ensure PRoWs and permissive recreational routes across the Sites are kept open during the operational lifetime of the Scheme, there is no more than a negligible impact on the functional connectivity of the off-road access network. Peak operational impacts as a result of PV or BESS replacement regimes are not anticipated to be as extensive as during construction. As such, the level of impact on amenity, road user or pedestrian safety, as a result of fear and intimidation on and by road users, or functional connectivity and access on the local road network is also likely to be a negligible impact, as is the level of impact on public transport access and use. As a result, there is anticipated to be no greater than a long-term **minor/negligible adverse effect** to human health in the Study Area (for Transport and Access) with no more than a peak short-term **minor adverse effect** to human health during replacement activity. Neither of these effects are significant.

Community Identity, Culture, Resilience and Influence

18.8.52 As stated for construction, the sensitivity of communities to changes in the character of their surroundings and impacts on their sense of community is **low** across the 2 km ZOI and up to **medium** sensitivity in Mears Ashby, Earls Barton, Grendon, Easton Maudit, and Bozeat due to the expanse of the Scheme's infrastructure (and replacement works) visible from these villages.

18.8.53 The operation of the Scheme is anticipated to bring no greater than a peak short-term negligible impact magnitude in any of the affected communities solely as a result of temporary inbound workers required during the peak replacement scenario. Based on the likely residual landscape and visual effects set out in ES Chapter 8: Landscape and Visual Impact **[EN010170/APP/GH6.2.8]**, the Scheme is likely to generate up to a low negative magnitude of impact on community identity and culture, including in respect of feelings of the attractiveness of the area and community pride in its place, and thus on the mental wellbeing of the population. This is anticipated to reduce towards negligible during the lifetime of the Scheme as mitigation planting matures, the use of onsite permissive paths become more widespread, and as ecological mitigation becomes more obvious in its biodiversity gains. These changes are likely to help the Scheme become a greater part of the community sense of place for a gradually increasing proportion of the population. The resultant effect on community identity and culture during the operational lifetime of the Scheme is therefore anticipated to be a temporary medium- to long-term **minor adverse effect** initially, before reducing to a long-term **minor/negligible adverse effect** in the communities closest to the Scheme, and a long-term **negligible adverse effect** elsewhere in the 2 km ZOI. The replacement of infrastructure on the Scheme is not anticipated to create any additional short or medium-term effects of any greater significance than the long-term effects on community identity and culture. None of these assessed effects are significant in nature.

18.8.54 The level of sensitivity in the community's resilience and influence is governed by the availability for further influence and engagement through operational lifetime of the Scheme and is therefore no less than **medium**. During the Scheme's operational lifetime, the continued availability of a community contact (and during peak activities a dedicated Community Liaison Manager) will mitigate community anxieties by providing a continued dialogue between communities and the Scheme's operators. This is set out in the OOEMP **[EN010170/APP/GH7.2]**, secured by requirement in the draft DCO **[EN010170/APP/GH3.1]**. Communities located closest to Scheme, specifically the Solar PV Sites, BESS Area and substations, are most likely to perceive effects on their resilience and influence. Effects are also likely to be greatest at the start of the operational lifetime of the Scheme, and during replacement activities, where changes to onsite conditions and procedures may result in perception of reduced ability for community stakeholders to influence or engage with site operators. As a result, the magnitude of impact on community resilience and influence over the lifetime of the Scheme is likely to be negligible overall with short- to medium-term peaks of no greater than low magnitude impact. Therefore, the likely effect on human health from changes to community resilience and influence is a long-term **minor/negligible adverse effect**, with short to medium-term temporary **minor**

adverse effects (not significant) at the beginning of the operational lifetime of the Scheme and during peak replacement activities.

Economic Environment

Education and Training

18.8.55 Likely effects on education and training during operation have been assessed in Section 17.8 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**. Paragraph 17.8.55 therein identifies no more than a long-term minor beneficial effect on skills and qualification attainment in the Wider Baseline Study Area, with additional enhancement measures (as set out in paragraph 17.9.16) likely to improve this but not change the significance of this effect, even during peak replacement activities.

18.8.56 Overall, the magnitude of impact to education and training is considered to be negligible, and positive, with this impact being long-term. People with existing limitations in access to suitable education and training are of a high sensitivity. Existing baseline conditions, as summarised in para. 18.8.23 demonstrate that the sensitivity of the overall population to changes is **medium**.

18.8.57 Resultantly, the impact on human health with regard to education and training during operation is anticipated to be a long-term **minor/negligible beneficial effect** (not significant).

Employment and Income

18.8.58 Likely effects on employment and income during operation have been assessed in ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**. Paragraph 17.9.14 therein identifies that with additional enhancement to be set out in the OSSCEP **[EN010170/APP/GH7.8]**, an overall long-term minor adverse effect on the labour force, but a resultant long-term minor beneficial effect on economic prosperity and income are anticipated in the Wider Baseline Study Area as a result of changes to the long-term employment profile.

18.8.59 As there are both beneficial and adverse contributing factors towards employment and income in the Wider Baseline Study Area, the overall effect on human health is likely to be neutral. Notwithstanding this, the worst-case effect will be to those who are likely to experience loss of employment as a result of the Scheme, potentially with reduced access to employment over the lifetime of the Scheme. These people are of a **medium** sensitivity to change, and as a result may experience a worst case long-term **minor adverse effect** (not significant) to human health.

Bio-physical Environment

Climate Change Mitigation and Adaptation

18.8.60 ES Chapter 7: Climate Change **[EN010170/APP/GH6.2.7]** estimates that over the operational lifetime of the Scheme, the quantum of electricity generated is approximated to be 533,000-670,000MWh per annum. The Scheme is likely to substantially reduce the quantum of greenhouse gas emissions associated with energy production. The assessment of significance in Section 7.8 of 18.8.60 ES

Chapter 7: Climate Change anticipates that this is likely to have a long-term significant beneficial effect.

18.8.61 With regard to human health, the Scheme is likely to benefit human health as a result of decreasing risk from future climate change events, and increasing the national adaptability to climate change going forward. The Scheme alone is not likely to make a significant direct contribution to improving human health outcomes, and instead should be seen as part of a wider movement to improve health outcomes from improved climate change mitigation and resilience. Although there are vulnerable sections of the population to climate change impacts, particularly from heat and increased flooding, the overall population sensitivity is likely to be **low**, due to existing baseline health conditions and access to suitable resilience measures. As a result, the Scheme is anticipated to contribute a long-term **negligible beneficial effect** to human health outcomes with respect to climate change mitigation and adaptation.

Air Quality

18.8.62 Section 16.8 of ES Chapter 16: Air Quality **[EN010170/APP/GH6.2.16]** sets out the likely effects on air quality as a result of the operation and maintenance of the Scheme, and identifies operation and maintenance vehicle emissions during the operational lifetime of the Scheme, and during the peak replacement scenario are minimal. Emissions from any instances of fire at Green Hill BESS are likely to be the main sources of air quality impacts during the Scheme's operational lifetime. The assessment of BESS fire emissions demonstrates the receptor most greatly affected by a BESS fire would be the bridleway Mears Ashby TN7, albeit the risk of occurrence (including the occurrence of an easterly wind) is very low. While a specific magnitude has not been designated, the likely effect is considered to be not significant. As a result, the greatest level of effect to human health is anticipated to be a short-term **minor adverse effect**, in the event of a BESS fire.

Water Quality or Availability

18.8.63 Sections 10.9 and 10.10 of ES Chapter 10: Hydrology, Flood Risk and Drainage **[EN010170/APP/GH6.2.10]** together set out the likely impacts on the hydrological environment as a result of the Scheme's operation subject to implementation of embedded design and additional flood risk and hydrology specific mitigation measures. During operation, the impacts relevant to human health include diffuse pollution resulting from fire, and increased runoff to watercourses from a permanent increase in impermeable areas, both of which are determined to have a residual negligible significant effect. Resultant risks to human health from both these sources are considered to be negligible in magnitude as a result of additional on-site mitigation measures, and as such the overall anticipated effect on human health as a result of changes to water quality is a long-term **minor/negligible adverse effect**.

Land Quality

18.8.64 During the Scheme's operational lifetime, the assessment in Section 22.8 of ES Chapter 22: Ground Conditions and Contamination **[EN010170/APP/GH6.2.22]** identifies that onsite workers are likely only no greater than low magnitude

impacts from contamination, UXO, and radon gas during operation and maintenance activities on the Scheme, including during peak activities related to replacement of infrastructure. As such, the anticipated effect on onsite workers is anticipated to be a long-term **minor adverse effect**, which is not significant.

18.8.65 During the operational lifetime of the Scheme, the key risks associated with contamination are as a result of contamination of controlled waters due to potential spillages or leakages of temporary fuels and chemicals stored on site, or as a result of contaminated firewater from controlling potential BESS fires. These therefore are the greatest risks present for residents, and those in the built environment surrounding the Scheme. Overall, the sensitivity of the population to human health risks from contamination is considered **medium**. As the residual risk of contamination to the general population is considered to be of no greater than a low magnitude, subject to implantation of pollutant controls, the likely effects to human health during operation are considered to be a long-term **minor adverse effect** (not significant).

Noise and Vibration

18.8.66 Section 14.8 of ES Chapter 14: Noise and Vibration **[EN010170/APP/GH6.2.14]** sets out that no individual receptors are anticipated to experience any greater than negligible magnitude changes in levels of noise during the operational lifetime of the Scheme as a result of noise from electrical infrastructure onsite. This includes receptors that are in the context of extremely low existing background noise levels. Where individual receptors are exposed to noise, these are likely only to cause health and wellbeing impacts where residents or affected dwellings are most vulnerable to changes in their sensory environment. As such, a maximum negligible level change in noise levels is likely to induce no more than a negligible magnitude impact on health and wellbeing, and as such those at highest risk may experience up to a long-term **minor/negligible adverse effect**, while the overall effect across the Study Area is anticipated to be a **negligible adverse effect.** These are not considered to be significant effects. It is pertinent to consider the time duration of exposure, as prolonged exposure to noise may lead to the level of significance being perceived as increased nuisance over the lifetime of the Scheme or the occupational lifetime of the residents of affected dwellings. As the Scheme is anticipated to produce no greater than a minor/negligible adverse effect, this is not anticipated to cause any long-term nuisance or increased perception of adverse effects on human health over the lifetime of the Scheme.

18.8.67 During the peak replacement scenario, the magnitude of noise and vibration impacts from solar PV and BESS infrastructure replacement activities are likely to be similar as those during construction. No large-scale replacement works are anticipated along the Cable Route Corridor, and as such only receptors adjacent to the Sites are anticipated to experience noise and vibration impacts up to a maximum low magnitude, with a negligible magnitude impact overall. As these impacts are anticipated to short- to medium-term, it is not expected that these will have any more than a resultant negligible magnitude impact on human health for any receptor. As such, the resultant human health effect on high sensitivity receptors is likely to be up to a temporary short- to medium-term **minor/negligible adverse effect**, with the overall population in the Study Area

(for Noise and Vibration) experiencing a temporary short- to medium-term **negligible adverse effect** to human health. These are not significant effects.

Radiation (Electromagnetic Fields)

18.8.68 The primary source of radiation from the Scheme is electromagnetic fields generated along the cable routes between the Sites, and the grid connection cable. Those operating at more than 132 kV are to be assessed for their potential maximum electromagnetic field strength. Section 21.8 of ES Chapter 21: Electromagnetic Fields **[EN010170/APP/GH6.2.21]** identifies that a single 400 kV cable buried at 0.9 m is likely to generate a peak EMF of 96.17 µT, which is below the ICNIRP reference level of 100 µT.

18.8.69 The electrical design is considering the possibility of up to four high-voltage cables within a single trench along sections of the cable route. As such, there is potential for the ICNIRP reference level to be exceeded along the cable route. The highest estimated field strength of the configurations of high-voltage cable is 102.18 µT. Therefore, a minimum 5 m setback distance is implemented between the high-voltage cables and any residential or business property to ensure ICNIRP reference levels are not exceeded within residential or business properties.

18.8.70 EMF has potential to impact upon human health where the EMF is very strong, or where exposure to EMF is experienced over significant periods of time. The ICNIRP reference level is set for long-term exposure at locations such as dwellings, schools, or employment locations where these levels would be experienced for months or years. Transient movements, such as walking on roads, PRoWs, or working in fields with cables buried beneath are not likely to induce human health impact as the exposure times are short, and as such, there are no anticipated population human health effects.

18.8.71 Applying the embedded mitigation in the design of the Scheme, the cable routes are to be set back by a conservative amount to ensure maximum levels of electromagnetic radiation received at existing receptor sites from the proposed cable routes during operation will be below ICNIRP reference levels. As such, physical human health impacts from EMF are negligible in magnitude, as will long-term mental wellbeing impacts to those who retain anxieties about the risks of EMF. As the population is of a low sensitivity to EMF impacts, the likely significance of effect is a long-term **negligible adverse effect** (not significant).

Institutional and Built Environment

Health and Social Care Services

18.8.72 The operation of the Scheme is anticipated to have a neutral long-term effect on resident population and demographic profile. As such, there is anticipated to be a long-term **neutral effect** on human health as a result of changes to healthcare service access.

18.8.73 During the peak replacement scenario, inbound temporary workers are anticipated to generate no greater than a short-term temporary negligible magnitude impact on resident population and demographic profile across the Wider Baseline Study Area, as reported in ES Chapter 17: Socio-Economics,

Tourism and Recreation **[EN010170/APP/GH6.2.17]**. The level of impact within the 5 km ZOI for primary healthcare provision is therefore considered not to be greater than a negligible magnitude impact on primary and emergency care access. While members of the population most reliant on healthcare services due to long-term illnesses, disabilities, and age-related illnesses are of a high sensitivity to changes to availability of access to healthcare services as a result of increased demand, the general population across the 5 km ZOI for primary healthcare provision is likely to be of **medium** sensitivity to changes to healthcare access, based on the likely continuation of current conditions relating to the provision of primary and emergency healthcare remaining. Therefore, the impact on healthcare services is likely to have a short-term temporary **minor/negligible adverse effect** on human health as a result of increased demand on healthcare services and subsequent decrease in accessibility to existing service users.

18.8.74 The operation of the Scheme is not anticipated to generate any direct impacts on provision of social and residential care. However, those already in social and residential care, such as those in the identified specialist care facilities in paragraph 18.6.75 will be sensitive to changes in their sense of place and community identity, culture, resilience and influence but are not anticipated to be affected beyond those effects experienced by the population overall. Therefore, refer to paragraphs 18.8.52-18.8.54.

Wider Societal Infrastructure and Resources

18.8.75 The Scheme in its operational lifetime is valuable both for national energy security but also helps supply electricity for the benefit of people's lives and livelihoods while contributing to improving the country's climate change resilience. The ability for the Scheme to contribute towards these goals is likely to lead to a long-term **minor beneficial effect** on human health within the Wider Baseline Study Area. This is as a result of the Scheme contributing to the electricity demands of continued and improved way of life, and helping to reduce community anxieties about climate change through demonstrating the Study Area's contribution to meeting the national net zero carbon emission goals.

18.8.76 Furthermore, adverse impacts on societal infrastructure, such as telecommunications and utilities, and impacts from pests and diseases are not anticipated to be generated through the operational lifetime of the Scheme, subject to proper implementation of mitigatory and management measures, as set out in ES Chapter 23: Major Accidents and Disasters **[EN010170/APP/GH6.2.23]**.

Decommissioning Phase

Social Environment

Housing

18.8.77 As set out in paragraphs 18.8.3 to 18.8.5 above, effects of the Scheme on access to housing during construction have assessed to be a medium-term temporary minor adverse effect, which is not significant. As identified in Section 17.8 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**, the decommissioning of the Scheme is likely to generate an estimated 75-80% of the level of employment of the construction

phase, and thus a proportional requirement for accommodating decommissioning workers. Whilst the availability of housing at the point of decommissioning cannot be determined at this point, the level of effect on human health as a result of reduced access to housing is likely to be similar to that during construction. Therefore, it can be assumed that there will be a medium-term temporary **minor adverse effect** (not significant) on human health resulting from impacts on housing as a result of the decommissioning of the Scheme.

Open Space, Leisure and Play

18.8.78 Likely effects on open space, leisure and play during decommissioning are likely to be similar to those experienced during construction, subject to changes to the future baseline as a result of the passage of time and early projections of population demographics.

18.8.79 Overall, the magnitude of impact to open space, leisure and play is considered to be low, and adverse, as anticipated during construction, albeit with fewer impacts expected along the Cable Route Corridor as a result of less labour intensive works being required. This is set out in Section 17.8 and 17.9 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** and in Section 3 of ES Appendix 17.1: Tourism and Recreation Receptor Tables **[EN010170/APP/GH6.3.17.1]**.

18.8.80 Children, and adults with limited activity are most vulnerable to changes to open space, leisure and play and therefore are of a high sensitivity. Future baseline conditions in the 2 km ZOI are not known due to 60-year interim, however it can be assumed that the population of over-65 year olds, and thus proportionally, the rate of people with limited activity may be higher than the existing baseline. As a result, the sensitivity of the overall population to changes is considered to be up to **medium**.

18.8.81 Resultantly, the impact on human health with regard to open space, leisure and play during decommissioning is anticipated to be a medium-term temporary **minor adverse effect** (not significant).

Transport Modes, Access and Connections

18.8.82 Impacts from decommissioning upon the ability for members of the public to access public transport, access and receive services on the local highway network, and functionally use the local highway and PRoW network as non-vehicular users are likely to be no greater than those experienced during construction. As such, the effect on human health and wellbeing is anticipated to be no more than a medium-term temporary **minor adverse effect** (not significant).

Community Identity, Culture, Resilience and Influence

18.8.83 Towards the point of decommissioning, the sensitivity of these communities to changes in the character of their surroundings and impacts on their sense of community is likely to be overall low across the 2 km ZOI, including in the areas closest to the Scheme. This is because, at the point of decommissioning, the Scheme will be up to 60 years old and have been present at its location for the majority of most people's lives and is anticipated to have established a significant beneficial effect with respect to landscape fabric as a result of improved trees,

hedgerows, and areas of ground cover planting (as reported in Section 8.13 of ES Chapter 8: Landscape and Visual Impact **[EN010170/APP/GH6.2.8]**).

18.8.84 As during construction, the decommissioning of the Scheme is anticipated to bring no greater than a negligible negative impact magnitude in any of the affected communities as a result of localised net migration due to inbound decommissioning workers. With respect to sense of place, the decommissioning of the Scheme is likely to have up to a low magnitude positive impact on community identity and culture, as a result of the land being returned to agricultural use. Given the up to 60 year age of the Scheme at the point of decommissioning, this change is likely to have a mixed positive and negative response. Considering a worst-case scenario where this is more negative than positive, this would therefore constitute a medium-term temporary **minor adverse effect** (not significant) during decommissioning, before returning to **neutral** following restoration of the land to agricultural use.

18.8.85 With respect of resilience and influence, communities closest to the Scheme are likely to be of medium sensitivity to changes in resilience and influence, as these communities are likely to experience the greatest level of change to their sense of place during decommissioning, and thus are likely to seek greater influence or control of what decommissioning and restoration works will mean for their communities. The Community Liaison Manager will be reestablished during decommissioning activities onsite to assist in this, and thus minimise the magnitude of negative impacts on community resilience and influence during the Scheme's decommissioning. This role is defined in the ODS **[EN010170/APP/GH7.3]**, which is secured by requirement in the draft DCO **[EN010170/APP/GH3.1]**. Whilst community anxieties about decommissioning activities may still be present, these are likely to be no more than of a negligible magnitude impact to community resilience and influence and thus on population mental health and wellbeing during decommissioning and restoration works. As a result, the likely human health effect as a result of changes to community resilience and influence during decommissioning is no greater than a medium-term temporary **minor/negligible adverse effect** (not significant).

Economic Environment

Education and Training

18.8.86 Likely effects on education and training during decommissioning are likely to be similar to those experienced during construction, with commitments made to enhancement of education and skills uplifting opportunity set out in Section 17.9 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**, secured by requirement in the draft DCO **[EN010170/APP/GH3.1]** with respect to the OSSCEP **[EN010170/APP/GH7.8]**. Resultantly, this is assessed as having a non-significant medium-term temporary minor beneficial effect.

18.8.87 People with limitations in access to suitable education and training are of a high sensitivity. The current level of sensitivity of the overall population to changes in access to education and training is medium. Future baseline conditions in relation to education and training are not able to be forecasted with any reasonable

accuracy, therefore the sensitivity of the overall population to changes is considered to be **medium**.

18.8.88 Resultantly, a negligible positive impact on human health with regard to education and training during decommissioning is anticipated to generate a medium-term temporary **minor/negligible beneficial effect** (not significant).

Employment and Income

18.8.89 Section 17.8 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** demonstrates at paragraphs 17.8.91-17.8.93 that the effects on employment and income as a result of the Scheme's decommissioning will be similar to those experienced during construction. While the sensitivity of the population is not able to be assessed with great certainty, the likely socio-demographic shift towards an aging population may reduce the proportion of the population at working-age, thus creating greater competition in labour markets, and increasing importance on suitable income to maintain good quality of life. As a result, the wider population is likely to be of at least **medium** sensitivity to change during the Scheme's decommissioning.

18.8.90 Resultantly, a negligible magnitude increase to employment and income, including with the provision of additional enhancement measures to improve localisation of employment and economic benefits, is likely to induce a medium-term temporary **minor/negligible beneficial effect** (not significant) on human health with regard to employment and income during decommissioning.

Bio-physical Environment

Climate Change Mitigation and Adaptation

18.8.91 The Scheme is not anticipated to induce significant adverse effects on human health during decommissioning in respect of climate change mitigation and resilience. This will be ensured through protection of onsite workers through embedded flood risk management and climate change resilience mitigation (such as to protect workers from extreme temperature), and protection of wider human health through minimisation of construction greenhouse gas emissions and minimisation of waste. These measures are set out in the ODS **[EN010170/APP/GH7.3]**, which is secured by requirement in the draft DCO **[EN010170/APP/GH3.1]**.

Air Quality

18.8.92 There is the potential for fugitive dust emissions, vehicle emissions and NRMM emissions during the decommissioning phase. These potential effects are likely to be similar to those identified during the construction phase, as set out in Section 16.8 of ES Chapter 16: Air Quality **[EN010170/APP/GH6.2.16]**. As a result of the **medium** sensitivity of the resident population to air quality impacts, and the decommissioning of the Scheme likely to have no greater than a low negative magnitude impact on human health, the resultant human health effect is no more than a medium-term **minor adverse effect (**not significant).

Water Quality or Availability

18.8.93 For decommissioning effects, sections 10.8 and 10.9 of ES Chapter 10: Hydrology, Flood Risk and Drainage **[EN010170/APP/GH6.2.10]** set out the likely impacts on the hydrological environment as a result of the Scheme subject to implementation of embedded design and additional flood risk and hydrology specific mitigation measures. The most likely impacts relevant to human health are similar to those during construction, and thus relate to temporary increase in impermeable area, silt-laden runoff, and spillage and leaks of pollutants from decommissioning activities. Residual risks to human health, both of onsite workers and offsite receptors, from these sources are considered to be negligible as a result of on-site mitigation measures. This also accounts for potential increased in rainfall and flooding events as a result of future climate change. As such, the overall anticipated effect on human health as a result of changes to water quality is a medium-term temporary **minor/negligible adverse effect** (not significant).

Land Quality

18.8.94 Section 22.10 of ES Chapter 22: Ground Conditions and Contamination **[EN010170/APP/GH6.2.22]** identifies that during decommissioning, residual effects from ground contamination from onsite works and UXO are likely to be similar to those experienced during construction. As such, onsite decommissioning workers are anticipated to experience up to low magnitude negative impacts due to the UXO risk at Green Hill G, and risks from contamination during decommissioning activities on the Scheme are anticipated to be low in magnitude. As **medium** sensitivity receptors, this is likely to induce up to a medium-term temporary **minor adverse effect** (not significant) on decommissioning workers.

18.8.95 Subject to full implementation of mitigation to mitigate against contamination of land and water supplies, the risk of contamination to both nearby residents and users in the built environment is considered to be of a no greater than low magnitude. Therefore, the potential effects to human health from changes to ground conditions and contamination during decommissioning are considered to be a long-term **minor adverse effect** (not significant).

Noise and Vibration

18.8.96 As during construction, noise and vibration impacts associated with the Scheme's decommissioning are likely to be localised to individual receptors nearest to noise and vibration sources on the Scheme's Sites and access routes.. Across the Study Area (for Noise and Vibration), there is therefore unlikely to be more than a **negligible adverse effect** to human health as a result of noise and vibration from the Scheme's decommissioning. That notwithstanding, individual receptors – notably residential dwellings – are identified to be of high sensitivity to noise and vibration. As a result of Section 14.11 of ES Chapter 14: Noise and Vibration **[EN010170/APP/GH6.2.14]** identifying no significant noise and vibration effects to any specific receptor during decommissioning, the resultant effect to human health for those at highest risk is anticipated to be up to a short- to medium-term temporary **minor/negligible adverse effect** (not significant) on health and wellbeing.

Radiation (Electromagnetic Fields)

18.8.97 High-level electromagnetic fields along the Cable Route Corridor are not anticipated to be generated from the Scheme during the Scheme's decommissioning as no generation, import or exportation of electricity to or from the National Grid is to occur following the termination of the Scheme's operational lifetime. The resultant effect is therefore a **neutral effect** to human health.

Institutional and Built Environment

Health and Social Care Services

18.8.98 The decommissioning of the Scheme is anticipated to bring no greater impacts on resident population or on demographic profile across the Wider Baseline Study Area as during construction. Applying the magnitude of impact at construction (as set out in paragraph 18.8.40), the inbound workforce during decommissioning is anticipated to generate up to a low magnitude impact on primary and emergency care access for existing residents or users.

18.8.99 Members of the population most reliant on healthcare services due to long-term illnesses, disabilities, and age-related illnesses are of a high sensitivity to changes to availability of access to healthcare services as a result of increased demand. Future baseline conditions cannot be accurately predicted, however age-related illnesses are likely to be of greater concern in future. Furthermore, predictions of the level of provision and accessibility of primary healthcare services in the future also cannot reasonably be determined. This indicates that the general population across the 5 km ZOI for primary healthcare provision and Wider Baseline Study Area are likely to be of **medium** sensitivity to changes to healthcare access.

18.8.100 Applying these considerations, the greatest level of induced impact on primary and emergency care services is likely to have a short- to medium-term temporary **minor adverse effect** (not significant) on human health as a result of increased demand on healthcare services and subsequent decrease in accessibility to existing service users.

18.8.101 Whether or not the specialist care facilities identified in paragraph 18.6.75 will still be in use during the Scheme's decommissioning cannot be predicted. That notwithstanding, it can be assumed that any social care or residential care facilities in the 2 km ZOI at the future baseline stage are going to be of **high** sensitivity to changes to their surrounding environment. As the Scheme's decommissioning is unlikely to increase the number of people requiring residential social care, there is no further effect to this receptor. Future users of these facilities are likely to experience similar impacts during decommissioning as during construction. As a population group of medium sensitivity to changes to their community identity, culture, resilience and influence, (refer to paragraph 18.8.85) these receptors are not anticipated to experience any greater than a medium-term temporary **minor adverse effect** (not significant) during decommissioning.

Wider Societal Infrastructure and Resources

18.8.102 The Scheme is not anticipated to provide any substantial wider societal infrastructure or resources during its decommissioning phase, save for those related to employment and economic development. Furthermore, the Scheme is not anticipated to generate any significant adverse effects as a result of damage to utilities or as a result of pests and diseases during its decommissioning phase, as a result of the measures set out in ES Chapter 23: Major Accidents and Disasters **[EN010170/APP/GH6.2.23]**. As such, there are no anticipated human health effects considered apart from those identified in paragraphs 18.8.86-18.8.90.

18.9 Additional Mitigation Measures

18.9.1 The following additional mitigation measures are considered as the assessment in Section 18.8 concludes that the Scheme will have a likely significant adverse effect on human health receptors (health and social care services, during construction).

18.9.2 The mitigation measures set out in this section would allow the design, construction, operation, and management of the Scheme to be adapted where feasible to manage adverse likely significant effects of the Scheme on the relevant receptors. These mitigation measures furthermore aim to reduce the impacts of the Scheme when considered cumulatively with other developments being built out over a similar timeframe in the same area.

18.9.3 Similarly, where beneficial effects are anticipated, enhancement measures can be introduced where feasible to ensure the greatest beneficial effects can be generated and secured.

18.9.4 Where additional mitigation and enhancement measures are proposed, these relate to managing likely significant effects and any effects for which the significance can be improved beyond the extent controlled by the embedded measures set out in Section 18.7 above. Additional mitigation and enhancement measures are therefore to be secured by requirements in the **draft DCO [EN010170/APP/GH3.1]** with reference to the **OCEMP [EN010170/APP/GH7.1]**, **OCTMP [EN010170/APP/GH7.9]**, **OPRoWMP [EN010170/APP/GH7.10]**, **OLEMP [EN010170/APP/GH7.4]**, **OOEMP [EN010170/APP/GH7.2]**, **OSSCEP [EN010170/APP/GH7.8]**, and **ODS [EN010170/APP/GH7.3]**.

Construction

Health and Social Care Services

18.9.5 To reduce the level of impact on primary healthcare services within the 5 km ZOI for primary healthcare provision, the OCEMP **[EN010170/APP/GH7.1]** contains specific mitigation designed to support to construction workers to find and register with GPs across the Wider Baseline Study Area in reasonable proximity to their temporary or full-time accommodation and where such GP surgeries have reasonable capacity to take on additional patients. This will help to reduce the concentration of effect in any given area, and as such reduce the magnitude of impact to negligible in the 5 km ZOI. This post-additional mitigation impact on healthcare services is likely to result in a residual short- to medium-term temporary **minor/negligible adverse effect** on human health (not significant) as

a result of negligibly increased demand on healthcare services and subsequent decrease in accessibility to existing service users.

18.9.6 Section 18.8 above identifies users of residential care homes to be of increased sensitivity to changes in their environment. Oakfield in Easton Maudit is highlighted specifically due to its proximity to the Scheme and vulnerability of its residents to changes in human health determinants that would result in a significant adverse effect to its residents and patrons. To mitigate these measures beyond those embedded measures defined in the Scheme design, the OCEMP **[EN010170/APP/GH7.1]** will include location specific measures to reduce construction impacts. These will include keeping in direct contact with the operators of the care home during construction, and subject to agreement, minimising working hours within 100m of the residential home property boundary, avoiding using any part of the Sites and Cable Route Corridor within 100m of the residential home for storage of materials, and implementing landscape works within 50m of the residential home as early as possible in the construction programme. With these additional measures in place, the magnitude of impacts on residents at Oakfield can be reduced to low – equivalent to other vulnerable groups in the 2 km ZOI for community identity, culture, resilience and influence. The resultant human health effect to residents at this specific receptor is a medium-term temporary **minor adverse effect**. This is therefore not a significant residual effect.

Operation

Health and Social Care Services

18.9.7 During peak operational activities associated with the replacement of PV and BESS infrastructure, additional mitigation measures with respect of identifying healthcare facilities with the greatest capacity for inbound workers, and restrictive working conditions in proximity to locations of highest sensitivity (such as Oakfield residential home) should be implemented as proposed for construction, and secured as required in the OOEMP **[EN010170/APP/GH7.2]**. These measures ensure the significance of effects during the peak replacement scenario do not exceed a short-to medium-term **minor/negligible adverse effect**. This is therefore not a significant residual effect.

Decommissioning

Health and Social Care Services

18.9.8 As set out for construction, impacts on primary healthcare services within the 5 km ZOI for primary healthcare provision will be reduced through the ODS **[EN010170/APP/GH7.3]**, which will support decommissioning workers to find and register with GPs across the Wider Baseline Study Area in reasonable proximity to their temporary or permanent accommodation and where such GP surgeries have reasonable capacity to take on additional patients. The post-additional mitigation impact on healthcare services is likely to result in a short- to medium-term temporary **minor/negligible adverse effect** on human health (not significant).

18.9.9 The ODS **[EN010170/APP/GH7.3]**also includes requirement for location-specific mitigation to be provided at the point of drafting and implementation of the final

Decommissioning Statement, ahead of Scheme decommissioning. This will include a requirement to identify residential care homes and institutions that may be of specific vulnerability to impacts from decommissioning activities, and provide targeted mitigation measures in response to, and in consultation with, any identified receptors. Subject to these additional mitigation measures being implemented, the human health impacts on vulnerable populations in residential care are anticipated to be no greater than **minor/negligible adverse effects** (not significant) in any location across the 2 km ZOI.

Monitoring

18.9.10 There are no specific monitoring requirements for additional mitigation measures for human health.

18.10 Residual Effects

18.10.1 This section summarises the residual significant effects of the Scheme on human health following the implementation of embedded and additional mitigation and enhancement measures.

18.10.2 Following the implementation of the appropriate site-specific mitigation measures identified during the construction, operation and decommissioning phases, the residual likely significant effects on human health receptors range between minor beneficial effects and minor adverse effects. A full list of residual socio-economics, tourism and recreation effects is set out in **Table 18.13: Summary of Residual Effects for Human Health**.

18.10.3 The assessment of residual effects identifies that the Scheme is not anticipated to generate any significant residual effects to human health.

18.11 Cumulative Effects

18.11.1 A list of cumulative projects can be found in Appendix 25.1 **[EN010170/APP/GH6.3.25.1]** of the ES. A summary of cumulative effects is listed within ES Chapter 25: Cumulative Effects **[EN010170/APP/GH6.2.25]** of this ES.

Cumulative effects

18.11.2 Cumulative effects have been assessed in each of the supporting ES chapters in relation to the interaction between the Scheme and identified projects within the zone of influence for each topic. For specific human health effects, cumulative effects within the 2 km ZOI have been assessed.

18.11.3 Those developments considered relevant in the assessment of cumulative effects are set out in **Table 18.12** below. These include developments under construction, approved, in scoping, and that are strategic developments for local development plans, as defined in Section 25.7 of ES Chapter 25: Cumulative Effects and Effects Interaction **[EN010170/APP/GH6.2.25]**.

Table 18.12: Cumulative Projects Assessed for Human Health Effects

Development Name / Reference	Description	Quantum of Development	Likely Human Health Receptors
Glenvale Park Phase 2, Wellingborough (Ref 18.70) ID [3]: NW/24/00138/OUT	Urban extension – mixed use Under construction	1,000 dwellings >26,000 m^2 business and employment space	Economic Environment Built Environment
Niort Way, Wellingborough (Ref 18.71) ID [4]: NW/22/00904/FUL	Residential development Permitted	250 dwellings	Economic Environment Built Environment
Grendon Lakes BESS (Ref 18.72) ID [8]: NW/23/00360/FUL	BESS development Application submitted	~50 MWh BESS	Social Environment Economic Environment Air Quality Built Environment
Wellingborough East SUE (Ref 18.73) ID [10]: WP/2004/0600	Urban extension – mixed use Under construction	3,200 dwellings 67.5 ha business and employment land	Economic Environment
Park Farm Way, Wellingborough (Ref 18.74) ID [11]: WP/15/00727/OUT	Residential development Under construction	600 dwellings	Social Environment Economic Environment Built Environment
Isham Bypass (Ref 18.75) ID [12]: NW/24/00418/FUL	Road scheme Application submitted	3.5 km dual-carriageway with associated infrastructure	Economic Environment
Kettering Energy Park (Ref 18.76) ID [13]: NK/2025/0167	Energy infrastructure and business and employment development Application submitted	302,000 m^2 business and employment space	Economic Environment

Development Name / Reference	Description	Quantum of Development	Likely Human Health Receptors
Nunnery Farm, Rothwell (Ref 18.77) ID [14]: NK/2024/0717	Business and employment development Application submitted	170,000 m^2 business and employment space	Economic Environment
Mulberry Desborough (Ref 18.78) ID [15]: NK/2022/0613	Business and employment development Under construction	32,516 m^2 business and employment space	Economic Environment
Kettering South (Ref 18.79) ID [16]: KET/2018/0965	Business and employment development Under construction	214,606 m^2 business and employment space	Economic Environment
East Kettering SUE (Ref 18.80) ID [18]: KET/2019/0628	Residential development Under construction	5,500 dwellings	Economic Environment
Desborough North SUE (Ref 18.81) ID [21]: NK/2021/0356	Urban extension – mixed use Under construction	700 dwellings 400 m^2 retail space	Economic Environment
South and East of Grange Park, Northampton (Ref 18.82) ID [26]: 2023/5978/EIA	Urban extension – mixed use Application submitted	900 dwellings 600 m^2 retail and community space	Economic Environment
Courteenhall AD (Ref 18.83) ID [27]: WNS/2022/2402/EIA	Energy infrastructure Under construction	Anaerobic Digester complex	Economic Environment
Overstone Leys (Ref 18.84) ID [28]: DA/2013/0850	Urban extension – mixed use Under construction	2,000 dwellings 8,000 m^2 business and employment space	Social Environment Economic Environment Built Environment
North Overstone (Ref 18.85) ID [29]: DA/2020/0001	Urban extension – mixed use Application submitted	1,600 dwellings 10,685 m^2 retail and business space	Social Environment Economic Environment Built Environment

Development Name / Reference	Description	Quantum of Development	Likely Human Health Receptors
Great Houghton (Ref 18.86) ID [32]: 2025/0069/EIA	Urban extension – mixed use Application submitted	650 dwellings 750 m^2 business and employment space	Economic Environment
Rushden East (Ref 18.87) ID [37]: 20/01453/OUT	Urban extension – mixed use Application submitted	2,200 dwellings 110,000 m^2 retail and business space	Economic Environment

18.11.4 There are no anticipated cumulative effects anticipated to be related to climate change mitigation and adaptation; transport modes, access and connections (following construction); ground contamination, land quality, water quality, and unexploded ordnance; noise and vibration; and radiation (specifically electromagnetic fields), as assessed in each of the respective technical topic chapters in this ES. As a result, none of these topics are therefore anticipated to have residual significant cumulative effects on human health.

Cumulative Construction Phase

18.11.5 Section 17.11 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** assesses the likely cumulative construction impacts of the accommodation needs of inbound workers required to build out the developments listed in **Table 18.12** above. Whilst there is an uplift in temporary accommodation need for inbound workers, this is likely to be accommodated within available vacant private rental properties without changing the significance of effect on access to housing and the private rental market. As a result, the cumulative effect on human health as a result of changes to access to suitable housing is of no greater significance than the Scheme assessed in isolation.

18.11.6 Cumulative impacts upon open space, leisure and play facilities during the likely cumulative construction phase are assessed in Section 17.11 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**. Therein, significant cumulative effects have been identified for specific receptors, including some PRoWs, and one sports facility. While this may create additional significant effects for types of recreational facilities, this is not anticipated to increase the overall magnitude of impact on human health in the 2 km ZOI with respect to access to open space, leisure and play. As a result, the cumulative effect on human health is of no greater significance than the Scheme assessed in isolation.

18.11.7 Cumulative impacts upon transport modes, access and connections during the likely cumulative construction phase are assessed in Section 13.13 of ES Chapter 13: Transport and Access **[EN010170/APP/GH6.2.13]**. Assessment of likely HGV traffic generated by cumulatively assessed developments has identified that there is not anticipated to be significant additional HGV movements on the road network, and therefore no further impact on vehicular and non-vehicular safety,

fear and intimidation, or impacts on public transport and connectivity. As a result, the cumulative effect on human health is of no greater significance than the Scheme assessed in isolation.

18.11.8 The 2 km ZOI for human health is host to only the Scheme, and the developments at Grendon Lakes BESS, Park Farm Way, Overstone Leys, and North Overstone. Whilst these collectively are likely to generate an increase in population in the Wider Baseline Study Area as a result of inbound construction workers, this is not anticipated to be concentrated within the 2 km ZOI due to the spread of suitable accommodation beyond the ZOI. Furthermore, while the cumulatively assessed developments are anticipated to bring about a level of change to the community perception of the urbanisation of their surroundings during the cumulative construction phase, it is anticipated that this will have no more than a low magnitude impact on community identity and culture to the communities within the 2 km due the geographic spread of both the Scheme and identified cumulative development sites. As a result, the cumulative effect on human health is of no greater significance than the Scheme assessed in isolation.

18.11.9 With respect to resilience and influence, the communities affected by multiple developments will likely be much more familiar with the Town and Country Planning Act planning application process, and therefore have a better understanding of how they can influence planning decision making. As such, the cumulative impact is also likely to be no greater than low in magnitude ahead of and during the cumulative construction phase. As the affected communities are likely of **medium** sensitivity to these changes, this is likely to induce a cumulative medium-term temporary **minor adverse effect** to human health. This is also no greater than for the Scheme in isolation, and is not significant.

18.11.10 Cumulative impacts on skills and qualification attainment in the Wider Baseline Study Area are likely to be somewhat greater during the cumulative construction phase than assessed for the Scheme in isolation as assessed in Section 17.11 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**. However, the level of significance of the effect is likely to remain the same as the Scheme in isolation, and therefore, the respective human health effect as a result of improved access to education and training opportunities and thus on quality of life, is also likely to be the same level of significance as the Scheme assessed in isolation.

18.11.11 With regard to employment and income, Section 17.11 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** identifies a significant beneficial effect with respect to employment and economic prosperity in the Wider Baseline Study Area as a result of the cumulative construction phases of the Scheme and identified cumulative developments. As employment and income are considered as determinants of health due to improvements in quality of life with suitable income and employment availability and security, there is likely to be a cumulative medium magnitude positive impact on human health. This, due to the **low** sensitivity of the population, is likely to have a cumulative medium-term temporary **minor beneficial effect**. This is however not a significant effect.

18.11.12 Cumulative effects with regard to air quality have been considered in ES Chapter 16: Air Quality **[EN010170/APP/GH6.2.16]**, and have identified Grendon Lakes BESS as the only likely development likely to induce any cumulative construction impacts, although these are not anticipated to be significant. With respect to human health, this is unlikely to change the significance of effect from a medium-term temporary **minor adverse effect**. This is therefore not a significant cumulative effect and is no greater significance than for the Scheme in isolation.

18.11.13 As with impacts on accommodation and housing, the cumulative requirement for primary health services during the cumulative construction phase is anticipated to experience a substantial uplift as a result of inbound temporary construction workers. However, due to the geographic spread of identified cumulative developments, the concentration of additional healthcare service need within the 5 km ZOI of the Scheme for primary healthcare provision is not anticipated to be of a greater level of significance (a medium-term **minor adverse effect**) than the Scheme as assessed in isolation. This is therefore not a significant effect. Furthermore, social care services are unlikely to experience any significant cumulative effects as construction employees are unlikely to require social or residential care, and there is not anticipated to be any cumulative impact on specific social and residential care facilities or services of a greater level of significance (also a medium-term **minor adverse effect**) than the Scheme as assessed in isolation.

Cumulative Operational Phase

18.11.14 Cumulative impacts upon open space, leisure and play facilities during the operational phase are not anticipated to create any greater level of significance of effects, as assessed in Section 17.11 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**. Although the cumulatively assessed developments are largely to be developed on agricultural land, the spread of their locations is unlikely to create any concentrated effects with respect to loss of access to countryside spaces, particularly within the 2 km ZOI of the Scheme. This therefore demonstrates that the cumulative effect on human health during the operational lifetime of the Scheme is of no greater significance than the Scheme assessed in isolation. This includes during the peak replacement scenario, which due to its short- to medium-term nature is not anticipated to generate any additional significant effects.

18.11.15 Community identity and culture within the 2 km ZOI for human health is likely to be affected in the long-term by the operational and occupational lifetime of the cumulative developments identified. However, as a result of the geographic spread of the developments, and the majority residential nature of the developments within the 2 km ZOI, this change is likely to be no more than negligible in magnitude. Community resilience and influence with respect to the cumulative developments is likely to be no more than negligibly impacted as a result of minimal significant changes to the cumulative developments throughout their operational and occupational lifetimes. Resultantly, the cumulative effect on community identity, culture, resilience and influence is anticipated to be no more than a long-term **minor/negligible adverse effect**. This is not significant, and is no greater than for the Scheme in isolation.

18.11.16 Section 17.11 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** identifies that the quantum of employment likely to be generated by the cumulative developments assessed will likely induce a substantial uplift in apprenticeships, training opportunities, and the requirement for specialist skills training. These opportunities are likely to directly benefit local access to education and training, with the potential for investment to be made in supporting industry-specific skillsets within the 2 km ZOI for human health. A cumulative low magnitude impact to a **medium** sensitivity receptor is therefore anticipated to generate a cumulative long-term **minor beneficial effect** on human health. This is not a significant effect.

18.11.17 Whilst the Scheme in isolation is likely to cause a negligible decrease in employment during its operational lifetime, it is anticipated to generate a negligible benefit in economic performance in the Wider Baseline Study Area. That notwithstanding, Section 17.11 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** identifies that the cumulative developments assessed will likely induce a substantial uplift in employment and therefore income and prosperity, of up to medium magnitude across the Wider Baseline Study Area. Whilst existing provision of employment and suitable income to human health means the population are of **low** sensitivity to changes, a medium magnitude improvement to employment and income is anticipated to generate a cumulative long-term **minor beneficial effect** on human health. Whilst beneficial, this is not a significant effect.

18.11.18 As set out in ES Chapter 16: Air Quality **[EN010170/APP/GH6.2.16]**, the likelihood for cumulative effects from air quality impacts during the operational lifetime of the Scheme is extremely low. Whilst the Grendon Lakes BESS development is located near to the Green Hill BESS site, protective mitigation measures at both BESS schemes will ensure that the likelihood of a fire occurring at both sites simultaneously is extremely low. As such, this is not anticipated to generate more than a short-term **minor adverse effect**. This is therefore not a significant cumulative effect and is no greater significance than the Scheme assessed in isolation.

18.11.19 The cumulative operational and occupational lifetimes of the identified developments are likely to result in a substantial increase in resident and workday population within the Wider Baseline Study Area. By virtue of its semi-urban environment, the location of cumulative developments, and the location of identified primary healthcare services, the 5 km ZOI for primary healthcare provision is also likely to see a proportionally substantial increase in demand for healthcare services. That notwithstanding, the developments assessed also have some provision for their own healthcare facilities, minimising the proportional increase in demand for existing facilities to a low overall magnitude of impact. Resultantly, it can be estimate that there is likely to be a cumulative long-term **minor adverse effect** on access to primary healthcare. This is not significant. An increase in resident population is also likely to induce increased demand for social services, including long-term social and residential care facilities. While some provision is to be included within the cumulatively assessed developments, it is likely that there will be some level of increased demand to existing facilities will also be low in magnitude. Resultantly, it can be estimate that there is also

likely to be a cumulative long-term **minor adverse effect** on access to social and residential care. This is also not a significant effect.

18.11.20 The cumulatively assessed Schemes are anticipated to have some level of beneficial impact on wider societal infrastructure through the provision of new play spaces, utilities, retail, and healthcare infrastructure associated with large-scale residential developments. Although these pieces of infrastructure are much more likely to benefit residents in these new-build areas rather than in existing communities, the overall impact in the 2 km ZOI for human health is anticipated to be positive even if no more than low in magnitude. This is therefore likely to induce a cumulative long-term **minor beneficial effect**, which is the same significance as for the Scheme assessed in isolation.

Cumulative Decommissioning Phase

18.11.21 The decommissioning of the Scheme is anticipated to take place no later than 2089-2091 after a maximum 60-year operational lifetime. Of the assessed cumulative developments, only the Courteenhall Anaerobic Digester and Grendon Lakes BESS developments are assessed as having finite operational lifetimes of 25 and 35 years respectively. As these are substantially shorter than the assessed operational lifetime of the Scheme, it is unlikely the respective decommissioning periods for these developments will overlap.

18.11.22 With respect to: access to housing; provision of open space, leisure and play; community identity, culture, resilience and influence; changes to education and training provision; air quality; and access to and provision of health and social care services, cumulative effects to human health as a result of cumulative decommissioning activities are not anticipated due to the differing operational periods and therefore likely decommissioning period (if anticipated to occur) of the developments assessed.

18.11.23 The decommissioning of the Scheme is anticipated to bring some level of employment and income uplift to the future working population, with the identified cumulative developments (where in employment uses) anticipated to maintain a steady number of jobs and economic performance. That notwithstanding, the level of cumulative effect on human health during the decommissioning period is not anticipated to be substantial greater than assessed for the Scheme in isolation, largely due to the level of uncertainty in future working and employment market conditions.

In-combination effects

18.11.24 The Scheme has potential to incur combined effects with regard to human health with other topics assessed within this ES. In compliance with paragraph 5(2)(a) to (d) of the EIA Regulations (Ref 18.1), the following interactions are considered:

- The combination of individual effects, for example, the combined effects of noise, dust and visual effects on a particular receptor;
- The combination of individual topics, for example, the combined effects of climate change on ground conditions;

- The combination of different works of the Scheme on a particular receptor for example, the in-combination effects of the construction of the Cable Route Corridor and the energy storage at the same time; and
- The combined effects of the three generating stations.

18.11.25 By virtue of the numerous interdependent factors assessed within this human health assessment, in-combination effects are intrinsic to the understanding of the relationship between the Scheme's impacts as assessed across the ES. Those identified in this chapter demonstrate in-combination effects of climate change, landscape, flooding, ground contamination, transport and access, noise and vibration, air quality, electromagnetic fields, and socio-economics, tourism and recreation. In the assessment of each of these individual topic areas, in-combination effects have not been identified that are anticipated to increase the significance of effect to any receptor above the level of significance assessed in Section 18.8 above.

18.11.26 The conclusions of this assessment should be read in conjunction with those in ES Chapter 23: Major Accidents and Disasters **[EN010170/APP/GH6.2.23]**, which draws parallels to the assessment of human health impacts, albeit focussing on acute and high magnitude impacts to physical health and the risk of injury and death. As such, it is likely that there will be in-combination effects with Major Accidents and Disasters. Section 23.8 and Section 23.10 of ES Chapter 23: Major Accidents and Disasters do not identify any significant likely or residual effects. The effects of greatest significance are minor adverse effects from BESS fires during operation, UXO during construction, and glint and glare to highway users. As a result, it is anticipated there would be an additional in-combination effect on human health that would be no greater than a long-term **minor adverse effect**. This is not significant.

18.12 Summary

18.12.1 Table 18.13 sets out a summary of the human health and wellbeing environmental effects.

Table 18.13: Summary of Residual Effects for Human Health

Receptor	Description of Impact	Sensitivity of Receptor	Magnitude of Impact	Embedded Mitigation	Significance of Effect (with embedded mitigation)	Additional Mitigation Measures	Residual Effect (with additional mitigation)	Cumulative Effects
Construction Phase								
Housing	Changes to quality of life due to access to suitable housing and temporary accommodation	Medium	Negligible – negative	Construction contractors to find lowest-impact locations for accommodating construction workers.	Medium-term temporary minor adverse	None required.	Medium-term temporary minor adverse	No greater significance
Open Space, Leisure and Play	Change to levels of physical activity, levels of mental benefit from activity, and levels of enjoyment of leisure and play	Low	Low – negative	Embedded design measures to remove array areas and offset from PRoWs and highways. Use of construction traffic management to control HGV routing and numbers.	Medium-term temporary minor adverse	None required.	Medium-term temporary minor adverse	No greater significance
Transport Modes, Access and Connections	Changes to access to public transport, ease of access to and from services, and connectivity of receptors to other receptors, contributing to perceptions of road safety and isolation	Medium	Low – negative	Embedded transport management measures to control HGV movement frequency and routing	Medium-term temporary minor adverse	None required.	Medium-term temporary minor adverse	No greater significance
Community Identity, Culture, Resilience and Influence	Change to sense of community identity, culture, and sense of place	Low-Medium	Low – negative	Embedded design measures to remove array areas and offset from PRoWs and highways, and location of construction compounds away from the most sensitive receptors.	Medium-term temporary minor adverse	None required.	Medium-term temporary minor adverse	No greater significance
	Changes to sense of control or feeling of inclusion in controlling of environment and surroundings	Medium	Low – negative	Use targeted consultation upon request for members of the public who are most directly affected by the Scheme, and maintaining an open line of contact to the Applicant team during the application process and post-consent; provide a Community Liaison Manager during construction.	Medium-term temporary minor adverse	None required.	Medium-term temporary minor adverse	No greater significance
Education and Training	Changes to availability, quality, and relevance of education and training, and secondary changes to quality of life as a result of level of education	Medium	Low – positive	Promotion of local education and skills uplifting, and apprenticeship and training schemes.	Medium-term temporary minor beneficial	None required.	Medium-term temporary minor beneficial	No greater significance
Employment and Income	Changes to availability of employment and income, and secondary changes to quality of life as a result of level of income	Low	Negligible – positive	Investment in local recruitment and procurement to increase proportion of construction workforce from within the Wider Baseline Study Area.	Medium-term temporary negligible beneficial	None required.	Medium-term temporary negligible beneficial	Medium-term temporary minor beneficial

Receptor	Description of Impact	Sensitivity of Receptor	Magnitude of Impact	Embedded Mitigation	Significance of Effect (with embedded mitigation)	Additional Mitigation Measures	Residual Effect (with additional mitigation)	Cumulative Effects
Air Quality	Changes to air quality, and associated risks of increased respiratory diseases	Medium	Undefined – up to low	Embedded dust management and vehicular emission controls.	Medium-term temporary minor adverse	None required.	Medium-term temporary minor adverse	No greater significance
Water Quality or Availability	Changes to flood risk, and changes to water quality for drinking and bathing	Medium	Negligible - negative	Embedded and additional measures to prevent flooding and water quality impacts to onsite and offsite receptors.	Medium-term temporary minor/negligible adverse	None required.	Medium-term temporary minor/negligible adverse	None identified
Land Quality	Risks of direct contact, ingestion, or inhalation of contaminants, injury from unexploded ordnance, and changes to safety of groundwater for potable use	Medium	Low – negative (workers)	Embedded standard good working practices including health and safety protocols, Discovery Strategy, HDD, monitoring and containment of potential contaminants. Additional UXO, radon, and unstable ground mitigation measures.	Medium-term temporary minor adverse	None required.	Medium-term temporary minor adverse	None identified
			Low – negative (population)		Long-term minor adverse		Long-term minor adverse	
Noise and Vibration	Changes to sensory environment due to noise and vibration, and associate decrease in amenity and mental wellbeing	Low (overall)	Negligible – negative	Embedded noise control measures for construction works, equipment, and offsetting from sensitive receptors. Time limits on noisy work and provisions to minimise construction vibrations.	Medium-term temporary negligible adverse	None required.	Medium-term temporary negligible adverse	None identified
		High (residential)			Short- to medium-term temporary minor/negligible adverse		Short- to medium-term temporary minor/negligible adverse	
Radiation (Electromagnetic Fields)	Changes to perception of risk of EMF	Low	Negligible – negative	Design of cable routes to be a conservative minimum setback from sensitive receptors (residences, workplaces, schools); and provision of information on EMFs to residents who want to understand more about potential impacts.	Medium-term temporary negligible adverse	None required.	Medium-term temporary negligible adverse	None identified
Health and Social Care Services	Changes to the level of access to primary and emergency healthcare	Medium	Low – negative (peak)	Investment in local recruitment and procurement to increase proportion of construction workforce from within the Study Area.	Medium-term temporary minor adverse	Direct construction workers to find and register with GPs across the Wider Baseline Study Area in reasonable proximity to their temporary or permanent accommodation and where such GP surgeries have reasonable capacity to take on additional patients.	Medium-term temporary minor/negligible adverse	No greater significance
	Changes to access to social care services for existing service users, and secondary impacts on the quality of care provided	Medium	Low – negative (overall)	Use targeted consultation upon request for members of the public who are most directly affected by the Scheme, and maintaining an open line of contact to the Applicant team during the application process and post-	Medium-term temporary minor adverse	Directly engaging with social care providers to minimise impacts on residents in full-time care.	Medium-term temporary minor adverse	None identified

Receptor	Description of Impact	Sensitivity of Receptor	Magnitude of Impact	Embedded Mitigation	Significance of Effect (with embedded mitigation)	Additional Mitigation Measures	Residual Effect (with additional mitigation)	Cumulative Effects
				consent; provide a Community Liaison Manager during construction.				
			Medium – negative (Oakfield)	Embedded design measures to offset from field boundaries and adjacent properties.	**Peak medium-term temporary moderate adverse**	Additional offsetting from residential care facilities and restrictions on construction activity permitted within 100 m.		
Operational Phase								
Open Space, Leisure and Play	Change to levels of physical activity, levels of mental benefit from activity, and levels of enjoyment of leisure and play	Low	Low – negative	Embedded design measures to remove array areas and offset from PRoWs and highways. Embedded and additional landscape screening planting. Provision of permissive paths to enhance PRoW network.	Long-term minor adverse	None required.	Long-term minor adverse	No greater significance
Transport Modes, Access and Connections	Changes to access to public transport, ease of access to and from services, and connectivity of receptors to other receptors, contributing to perceptions of road safety and isolation	Medium	Negligible – negative (overall)	Embedded transport management measures to control HGV movement frequency and routing	Long-term negligible-minor/negligible adverse	None required.	Long-term negligible-minor/negligible adverse	None identified
			Low – negative (peak)		Short-term temporary minor adverse	None required.	Short-term temporary minor adverse	
Community Identity, Culture, Resilience and Influence	Change to sense of community identity, culture, and sense of place	Low-Medium	Low – negative (initial)	Embedded design measures to remove array areas and offset from PRoWs and highways. Embedded and additional landscape screening planting.	Long-term temporary minor adverse	None required.	Long-term temporary minor adverse	No greater significance
			Negligible – negative (later stages)		Long-term negligible-minor/negligible adverse	None required.	Long-term negligible-minor/negligible adverse	
	Changes to sense of control or feeling of inclusion in controlling of environment and surroundings	Medium	Negligible – negative (overall)	Use targeted consultation upon request for members of the public who are most directly affected by the Scheme, and maintaining an open line of contact to the Applicant team during the application process and post-consent; maintain a community contact during the operational lifetime of Scheme.	Long-term negligible-minor/negligible adverse	None required.	Long-term negligible-minor/negligible adverse	
			Low – negative (peak)		Short- to medium-term temporary minor adverse	None required.	Short- to medium-term temporary minor adverse	
Education and Training	Changes to availability, quality, and relevance of education and training, and secondary changes to quality	Medium	Negligible – positive	Promotion of local education and skills uplifting, and apprenticeship and training schemes.	Long-term minor/negligible beneficial	None required.	Long-term minor/negligible beneficial	Long-term minor beneficial

Receptor	Description of Impact	Sensitivity of Receptor	Magnitude of Impact	Embedded Mitigation	Significance of Effect (with embedded mitigation)	Additional Mitigation Measures	Residual Effect (with additional mitigation)	Cumulative Effects
	of life as a result of level of education							
Employment and Income	Changes to availability of employment and income, and secondary changes to quality of life as a result of level of income	Low (overall) Medium (directly impacted)	Neutral Negligible – negative	Investment in local recruitment and procurement to increase proportion of construction workforce from within the Wider Baseline Study Area.	Neutral Long-term minor adverse	None required. None required.	Neutral Long-term minor adverse	Long-term minor beneficial
Climate Change Mitigation and Adaptation	Exposure to flood risk and dangerous weather as a result of climate change, and secondary impacts such as drought and natural disasters	Low	Negligible	Embedded improvement to climate resilience as a result of the Scheme intrinsically reducing the UK Grid carbon intensity	Long-term negligible effect	None identified	Long-term negligible effect	None identified
Air Quality	Changes to air quality, and associated risks of increased respiratory diseases	Medium	Undefined – up to low	Embedded dust management and vehicular emission controls. Battery fire safety management protocols.	Short-term temporary minor adverse	None required.	Short-term temporary minor adverse	No greater significance
Water Quality or Availability	Changes to flood risk, and changes to water quality for drinking and bathing	Medium	Negligible	Embedded and additional measures to prevent flooding and water quality impacts to onsite and offsite receptors.	Long-term minor/negligible adverse	None required.	Long-term minor/negligible adverse	None identified
Land Quality	Risks of direct contact, ingestion, or inhalation of contaminants, injury from unexploded ordnance, and changes to safety of groundwater for potable use	Medium	Low – negative (workers) Low – negative (population)	Embedded standard good working practices including health and safety protocols, Discovery Strategy, HDD, monitoring and containment of potential contaminants. Additional UXO, radon, and unstable ground mitigation measures.	Long-term minor adverse	None required.	Long-term minor adverse	None identified
Noise and Vibration	Changes to sensory environment due to noise and vibration, and associate decrease in amenity and mental wellbeing	Low (overall) High (residential)	Negligible – negative	Embedded offsets from noise-producing onsite equipment to sensitive receptors.	Long-term negligible adverse Long-term minor/negligible adverse	None required.	Long-term negligible adverse Long-term minor/negligible adverse	None identified
Radiation (Electromagnetic Fields)	Bio-physical impacts of EMF on the body, and changes to perception of risk of EMF	Low	Negligible – negative	Design of cable routes to be a conservative minimum setback from sensitive receptors (residences, workplaces, schools); and provision of information on EMFs to residents who want to understand more about potential impacts.	Long-term negligible adverse	None required.	Long-term negligible adverse	None identified
		Medium	Neutral	None required.	Neutral		Neutral	

Receptor	Description of Impact	Sensitivity of Receptor	Magnitude of Impact	Embedded Mitigation	Significance of Effect (with embedded mitigation)	Additional Mitigation Measures	Residual Effect (with additional mitigation)	Cumulative Effects
Health and Social Care Services	Changes to the level of access to primary and emergency healthcare		Negligible – negative (peak)	Investment in local recruitment and procurement to increase proportion of operational workforce from within the Study Area.	Short-term temporary minor/negligible adverse	Direct workers to find and register with GPs across the Wider Baseline Study Area in reasonable proximity to their temporary or permanent accommodation and where such GP surgeries have reasonable capacity to take on additional patients.	Short-term temporary minor/negligible adverse	Long-term minor adverse
	Changes to access to social care services for existing service users, and secondary impacts on the quality of care provided	Medium	Low	Embedded design measures to offset from field boundaries and adjacent properties.	Long-term minor adverse	Additional offsetting from residential care facilities and restrictions on construction activity permitted within 100 m.	Long-term minor/negligible adverse	Long-term minor adverse
Wider Societal Infrastructure and Resources	Changes to level of energy available for continued and improved quality of life and to perceptions of local and national contributions to fighting climate change. Changes to access to utilities and safety from biohazards.	Low	Low – positive	None required.	Long-term minor beneficial	None required.	Long-term minor beneficial	No greater significance
Decommissioning Phase								
Housing	Changes to quality of life due to access to suitable housing and temporary accommodation	Medium	Negligible – negative	Decommissioning contractors to find lowest-impact locations for accommodating workers.	Medium-term temporary minor adverse	None required.	Medium-term temporary minor adverse	None identified
Open Space, Leisure and Play	Change to levels of physical activity, levels of mental benefit from activity, and levels of enjoyment of leisure and play	Medium	Low – negative	Embedded design measures to remove array areas and offset from PRoWs and highways. Use of traffic management to control HGV routing and numbers.	Medium-term temporary minor adverse	None required.	Medium-term temporary minor adverse	None identified
Transport Modes, Access and Connections	Changes to access to public transport, ease of access to and from services, and connectivity of receptors to other receptors, contributing to perceptions of road safety and isolation	Medium	Low – negative	Embedded transport management measures to control HGV movement frequency and routing	Medium-term temporary minor adverse	None required.	Medium-term temporary minor adverse	None identified
Community Identity, Culture, Resilience and Influence	Change to sense of community identity, culture, and sense of place	Low-Medium	Low – negative	Embedded design measures to remove array areas and offset from PRoWs and highways, and location of decommissioning compounds away from the most sensitive receptors.	Medium-term temporary minor adverse	None required.	Medium-term temporary minor adverse	None identified

Receptor	Description of Impact	Sensitivity of Receptor	Magnitude of Impact	Embedded Mitigation	Significance of Effect (with embedded mitigation)	Additional Mitigation Measures	Residual Effect (with additional mitigation)	Cumulative Effects
	Changes to sense of control or feeling of inclusion in controlling of environment and surroundings	Medium	Negligible – negative	Provision of a Community Liaison Manager ahead of and during decommissioning.	Medium-term temporary minor/negligible adverse	None required.	Medium-term temporary minor/negligible adverse	None identified
Education and Training	Changes to availability, quality, and relevance of education and training, and secondary changes to quality of life as a result of level of education	Medium	Negligible – positive	Promotion of local education and skills uplifting, and apprenticeship and training schemes.	Medium-term temporary minor/negligible beneficial	None required.	Medium-term temporary minor/negligible beneficial	None identified
Employment and Income	Changes to availability of employment and income, and secondary changes to quality of life as a result of level of income	Medium	Negligible – positive	Investment in local recruitment and procurement to increase proportion of construction workforce from within the Wider Baseline Study Area.	Medium-term temporary minor/negligible beneficial	None required.	Medium-term temporary minor/negligible beneficial	No greater significance
Air Quality	Changes to air quality, and associated risks of increased respiratory diseases	Medium	Undefined – up to low	Embedded dust management and vehicular emission controls.	Medium-term temporary minor adverse	None required.	Medium-term temporary minor adverse	None identified
Water Quality or Availability	Changes to flood risk, and changes to water quality for drinking and bathing	Medium	Negligible	Embedded and additional measures to prevent flooding and water quality impacts to onsite and offsite receptors.	Medium-term temporary minor/negligible adverse	None required.	Medium-term temporary minor/negligible adverse	None identified
Land Quality	Risks of direct contact, ingestion, or inhalation of contaminants, injury from unexploded ordnance, and changes to safety of groundwater for potable use	Medium	Low – negative (workers) Low – negative (population)	Embedded standard good working practices including health and safety protocols, Discovery Strategy, HDD, monitoring and containment of potential contaminants. Additional UXO, radon, and unstable ground mitigation measures.	Medium-term temporary minor adverse Long-term minor adverse	None required.	Medium-term temporary minor adverse Long-term minor adverse	None identified
Noise and Vibration	Changes to sensory environment due to noise and vibration, and associate decrease in amenity and mental wellbeing	Low (overall) High (residential)	Negligible – negative	Embedded noise control measures for decommissioning works, equipment, and offsetting from sensitive receptors. Time limits on noisy work and provisions to minimise vibrations.	Medium-term temporary negligible adverse Short- to medium-term temporary minor/negligible adverse	None required.	Medium-term temporary negligible adverse Short- to medium-term temporary minor/negligible adverse	None identified
Radiation (Electromagnetic Fields)	Bio-physical impacts of EMF on the body, and changes to perception of risk of EMF	Low	Neutral	None required.	Neutral	None required.	Neutral	None identified
Health and Social Care Services	Changes to the level of access to primary and emergency healthcare	Medium	Low – negative (peak)	Investment in local recruitment and procurement to increase proportion of operational workforce from within the Study Area.	Medium-term temporary minor adverse	Direct workers to find and register with GPs across the Wider Baseline Study Area in reasonable proximity to their	Short- to medium-term temporary minor/negligible adverse	None identified

Receptor	Description of Impact	Sensitivity of Receptor	Magnitude of Impact	Embedded Mitigation	Significance of Effect (with embedded mitigation)	Additional Mitigation Measures	Residual Effect (with additional mitigation)	Cumulative Effects
						temporary or permanent accommodation and where such GP surgeries have reasonable capacity to take on additional patients.		
	Changes to access to social care services for existing service users, and secondary impacts on the quality of care provided	Medium	Low – negative	Provision of a Community Liaison Manager ahead of and during decommissioning.	Medium-term temporary minor adverse	Additional offsetting from residential care facilities and restrictions on construction activity permitted within 100 m.	Medium-term temporary minor/negligible adverse	None identified

References

Ref 18.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, 2017 No.572. (as amended)

Ref 18.2 IEMA (2022). Institute of Environmental Management and Assessment (IEMA) Guide to: Effective Scoping of Human Health in Environmental Impact Assessment. London: Institute of Environmental Management and Assessment. Available at [redacted]

Ref 18.3 IEMA (2022). Institute of Environmental Management and Assessment (IEMA) Guide to: Determining Significance For Human Health In Environmental Impact Assessment. London: Institute of Environmental Management and Assessment. Available at [redacted]

Ref 18.4 Green Hill Solar Farm (2024) Green Hill Solar Farm Environmental Impact Assessment Scoping Report: Revision A. Available at: national-infrastructure-consenting.planninginspectorate.gov.uk/ projects/EN010170/documents

Ref 18.5 PINS (2024) Scoping Opinion: Proposed Green Hill Solar Farm: Case Reference: EN010170. The Planning Inspectorate: Bristol. Available at national-infrastructure-consenting.planninginspectorate.gov.uk/projects/EN010170/ documents

Ref 18.6 Planning Act 2008, 2008 c.29. *(as amended)*

Ref 18.7 Equality Act 2010, 2010 c.15. *(as amended)*

Ref 18.8 Health and Care Act 2022, 2022 c.31. *(as amended)*

Ref 18.9 Department of Energy Security & Net Zero (2023). Overarching National Policy Statement for Energy (EN-1). London: The Stationery Office. Available at www.gov.uk/government/collections/national-policy-statements-for-energy-infrastructure

Ref 18.10 Department of Energy Security & Net Zero (2023). National Policy Statement for Renewable Energy Infrastructure (EN-3). London: The Stationery Office. Available at www.gov.uk/government/collections/national-policy-statements-for-energy-infrastructure

Ref 18.11 Department of Energy Security & Net Zero (2023). National Policy Statement for Electricity Networks Infrastructure (EN-5). London: The Stationery Office. Available at www.gov.uk/government/collections/national-policy-statements-for-energy-infrastructure

Ref 18.12 Ministry of Housing, Communities and Local Government (2025). National Planning Policy Framework. London: The Stationery Office. Available at www.gov.uk/government/publications/ national-planning-policy-framework--2

Ref 18.13 North Northamptonshire Council (2024). Joint Strategic Needs Assessment. Available at https://www.northnorthants.gov.uk/health-and-wellbeing-board/ reports-and-assessments

Ref 18.14 North Northamptonshire Joint Planning Unit (2016). North Northamptonshire Joint Core Strategy 2011-2031. Corby: North Northamptonshire Joint Committee. Available at www.northnorthants.gov.uk/planning-strategies-and-plans

Ref 18.15 Borough Council of Wellingborough (2019). The Plan for the Borough of Wellingborough. Wellingborough: Borough Council of Wellingborough. Available at www.northnorthants.gov.uk/planning-strategies-and-plans

Ref 18.16 Earls Barton Parish Council (2016). Earls Barton Neighbourhood Plan 2011-2031 (Final). Corby: North Northamptonshire Council. Available at www.northnorthants.gov.uk/planning-strategies-and-plans/neighbourhood-planning/neighbourhood-planning-activity-north

Ref 18.17 Ecton Parish Council (2021). Ecton Neighbourhood Development Plan 2016-2031. Corby: North Northamptonshire Council. Available at [redacted]

Ref 18.18 West Northamptonshire Council (2024). Joint Strategic Needs Assessment. Available at https://www.westnorthants.gov.uk/health-and-wellbeing-board/joint-strategic-needs-assessment-jsna

Ref 18.19 West Northamptonshire Health and Wellbeing Board (2023). Joint Health and Wellbeing Strategy. Available at https://www.westnorthants.gov.uk/health-and-wellbeing-board

Ref 18.20 West Northamptonshire Joint Planning Unit (2014). West Northamptonshire Joint Core Strategy Local Plan (Part 1). Northampton: West Northamptonshire Joint Committee. Available at www.westnorthants.gov.uk/planning-policy

Ref 18.21 Daventry District Council (2020). Settlements and Countryside Local Plan (Part 2) For Daventry District 2011-2029. Daventry. Daventry District Council. Available at www.westnorthants.gov.uk/planning-policy

Ref 18.22 South Northamptonshire District Council (2020). South Northamptonshire Local Plan (Part 2) 2011-2029. Towcester. South Northamptonshire District Council. Available at www.westnorthants.gov.uk/planning-policy

Ref 18.23 Moulton Neighbourhood Plan Steering Group (2016). Moulton Neighbourhood Development Plan 2014-2029. Northampton: West Northamptonshire Council. Available at www.westnorthants.gov.uk/neighbourhood-planning/neighbourhood-plans/neighbourhood-planning-activity-west-northamptonshire

Ref 18.24 Overstone Neighbourhood Plan Steering Group and Overstone Parish Council (2021). Overstone Neighbourhood Development Plan 2019-2029. Northampton: West Northamptonshire Council. Available at www.westnorthants.gov.uk/neighbourhood-planning/neighbourhood-plans/neighbourhood-planning-activity-west-northamptonshire

Ref 18.25 Milton Keynes City Council (2024). Joint Strategic Needs Assessment. Available at [redacted]

Ref 18.26 Milton Keynes City Council (2018). Lifelong Wellbeing: Our Ten Year Health and Wellbeing Strategy. Available at www.milton-keynes.gov.uk/health-and-wellbeing-strategy-2018-2028

Ref 18.27 Milton Keynes Council (2019). Plan:MK 2016-2031. Milton Keynes. Milton Keynes City Council. Available at www.milton-keynes.gov.uk/planning-and-building/developingmk/planmk

Ref 18.28 Lavendon Parish Council (2019). Lavendon Neighbourhood Plan 2019 to 2031. Milton Keynes: Milton Keynes City Council. Available at www.milton-keynes.gov.uk/planning-and-building/planning-policy/neighbourhood-planning/neighbourhood-plans-milton-keynes

Ref 18.29 Bedford Borough Council (2024). Joint Strategic Needs Assessment. Available at [redacted]

Ref 18.30 Bedford Borough Council (2024). Bedford Borough Joint Local Health & Wellbeing Strategy 2024 – 2027. Available at www.bedford.gov.uk/social-care-and-health/health-and-wellbeing-board

Ref 18.31 North Northamptonshire Council (2024). North Northamptonshire Local Plan review. Available at https://www.northnorthants.gov.uk/planning-strategies-and-plans/north-northamptonshire-local-plan

Ref 18.32 West Northamptonshire Council (2024). New Local Plan for West Northamptonshire. Available at https://www.westnorthants.gov.uk/planning-policy/new-local-plan-west-northamptonshire

Ref 18.33 Milton Keynes City Council (2024). MK City Plan 2050 Regulation 18 (July 2024). Milton Keynes: Milton Keynes City Council. Available at www.milton-keynes.gov.uk/planning-and-building/planning-policy/mk-city-plan-2050/other-consultation-documents

Ref 18.34 Milton Keynes City Council (2024). Policy Maps: Milton Keynes City Plan 2050. Milton Keynes: Milton Keynes City Council. Available at www.milton-keynes.gov.uk/planning-and-building/planning-policy/mk-city-plan-2050/other-consultation-documents

Ref 18.35 MHCLG (2024). Planning practice guidance. Ministry of Housing, Communities and Local Government. Available at www.gov.uk/government/collections/planning-practice-guidance

Ref 18.36 NHS (2019). HUDU Planning for Health: Rapid Health Impact Assessment Tool. London Healthy Urban Development Unit. Available at [redacted]

Ref 18.37 PHE (2017). Spatial planning for health: an evidence resource for planning and designing healthier places. Public Health England. Available at www.gov.uk/government/publications/spatial-planning-for-health-evidence-review

Ref 18.38 PHE (2020). Health Impact Assessment in spatial planning. Public Health England. Available at www.gov.uk/government/publications/health-impact-assessment-in-spatial-planning

Ref 18.39 PHE (2019). PHE Strategy 2020 to 2025. Public Health England. Available at www.gov.uk/government/publications/phe-strategy-2020-to-2025

Ref 18.40 WHIASU (2012) Health Impact Assessment. A practical guide to HIA. Wales Health Impact Assessment Support Unit. Available at [redacted]

Ref 18.41 Marmot, M., Allen, A., Goldblatt, P., Boyce, T., McNeish, D., Grady, M., Geddes, I (2010). Fair Society, Healthy Lives: The Marmot Review. London: Institute of Health Equity. Available at [redacted]

Ref 18.42 Institute of Health Equity (2020). Health Equity in England: The Marmot Review 10 Years On. Available at [redacted]

Ref 18.43 The Health Foundation, Institute of Health Equity (2020). Build Back Fairer: The COVID-19 Marmot Review: The Pandemic, Socioeconomic and Health Inequalities in England. London: Institute of Health Equity. Available at [redacted]

Ref 18.44 NHS (2019). The NHS Long Term Plan. Available at www.longtermplan.nhs.uk

Ref 18.45 Milton Keynes Council (2021). Health Impact Assessment Supplementary Planning Document. Milton Keynes. Milton Keynes City Council. Available at www.milton-keynes.gov.uk/planning-and-building/planning-policy/health-impact-assessment-spd-2021

Ref 18.46 Suffolk County Council (2024). Energy and Climate Adaptive Infrastructure Policy: Community Engagement and Wellbeing Supplementary Guidance Document. Suffolk County Council: Ipswich. Available at www.suffolk.gov.uk/asset-library/community-engagement-and-wellbeing-policy.pdf

Ref 18.47 WHO (1948). Constitution of the World Health Organization. Geneva: World Health Organization. Available at: www.who.int/about/governance/constitution

Ref 18.48 Dahlgen, G. and Whitehead, M., (1991). Policies and strategies to promote social equity in health. Background document to WHO - Strategy paper for Europe. Stockholm: Institute for Futures Studies.

Ref 18.49 Barton, H. and Grant, M., (2006) A health map for the local human habitat, Journal of the Royal Society for the Promotion of Public Health, 126 (6) pp252-261.

Ref 18.50 ONS (2022). Census 2021: RM121 – Sex by age (2021). Available at [redacted]

Ref 18.51 ONS (2022). Census 2021: TS037 - General health (2021). Available at [redacted]

Ref 18.52 ONS (2022). Census 2021: TS038 - Disability (2021). Available at [redacted]

Ref 18.53 DWP (2025). PIP Cases with Entitlement: January 2025 (Table 5 Caseload by Local Authority). Available at DWP Stat-Xplore.

Ref 18.54 MHCLG (2019). IoD2019 Interactive Dashboard – Local Authority Focus. Available at www.gov.uk

Ref 18.55 MHCLG (2019). Indices of Deprivation: 2019 and 2015 Mapping Browser. Available at dclgapps.communities.gov.uk

Ref 18.56 Office for Health Improvement & Disparities (2024). Public health profiles. Available at [redacted]

Ref 18.57 Office for Health Improvement & Disparities (2024). Local Health, public health data for small geographic areas. Available at [redacted]

Ref 18.58 OSCI, Local Insight (2025). Local Insight England Summary Report: Harrold Ward: Bedford Borough Council. Available at bedfordboroughcommunity.localinsight.org/

Ref 18.59 OSCI, Local Insight (2025). Local Insight England Summary Report: Olney: Milton Keynes City Council. Available at [redacted]

Ref 18.60 OSCI, Local Insight (2025). Local Insight England: North Northamptonshire Council Dashboard. Available at northnorthants.localinsight.org/#/dashboard

Ref 18.61 OSCI, Local Insight (2025). Local Insight England: West Northamptonshire Council Dashboard. Available at [redacted]

Ref 18.62 NHS (2022). Smoking, Drinking and Drug Use among Young People in England, 2021: Data tables. Available at: [redacted]

Ref 18.63 DWP (2024). Jobseekers Allowance: August 2024 (Table JSA 4 Local Authority). Available at DWP Stat-Xplore.

Ref 18.64 DWP (2024). People on Universal Credit: August 2024. Available at DWP Stat-Xplore.

Ref 18.65 DWP (2025). People on Universal Credit: January 2025. Available at DWP Stat-Xplore.

Ref 18.66 NHS (2024). NHS: Find services near you. Available at www.nhs.uk/nhs-services/services-near-you/

Ref 18.67 NHS (2025). General Practice Workforce, 31 January 2025: Selected Sub-ICB Location Information. Available at digital.nhs.uk/data-and-information/publications/statistical/general-and-personal-medical-services/31-january-2025

Ref 18.68 The Seeds of Change (2025). The Seeds of Change: Personal development & growth in an equine environment. Available at [redacted]

Ref 18.69 NHS (2025). Provisional Accident and Emergency Quality Indicators for England, January 2025, by provider. Available at [redacted]

Ref 18.70 David Lock Associates (2024). Glenvale Park LLP Environmental Statement Volume 1: Main Text Chapter 15: Socio Economic Effects. Available at publicaccess.wellingborough.gov.uk/online-applications/ [Reference NW/24/00138/OUT]

Ref 18.71 Taylor Wimpey (2023). Land north of Niort Way & West of Bunnet Road, Wellingborough: Design & Access Statement. Available at publicaccess.wellingborough.gov.uk/online-applications/ [Reference NW/22/00904/FUL]

Ref 18.72 RPS Group (2024). Grendon Lakes Battery Storage Facility: Environmental Statement Volume 1: Main Text. Available at publicaccess.wellingborough.gov.uk/online-applications/ [Reference NW/23/00360/FUL]

Ref 18.73 Lovejoy (2012). Wellingborough East Environmental Statement 17. Socio Economic Assessment. Available at publicaccess.wellingborough.gov.uk/online-applications/ [Reference WP/2004/0600]

Ref 18.74 CSA Environmental (2015). Land between Park Farm Way & Shelley Road, Wellingborough: Illustrative Masterplan. Available at publicaccess.wellingborough.gov.uk/online-applications/ [Reference WP/15/00727/OUT]

Ref 18.75 WSP (2024). A509 Isham Bypass Environmental Statement Volume II: Written Statement – Chapter 13: Population and Health. Available at publicaccess.wellingborough.gov.uk/online-applications/ [Reference NW/24/00418/FUL]

Ref 18.76 First Renewable Developments (2025). Kettering Energy Park Economic Impact Assessment – March 2025. Available at www.kettering.gov.uk/ planningApplication/search [Reference NK/2025/0167]

Ref 18.77 Pegasus Group (2024). Economics Benefit Statement: Land at Nunnery Farm, Rothwell. Available at www.kettering.gov.uk/planningApplication/search [Reference NK/2024/0717]

Ref 18.78 Iceni Projects (2022). Economic Benefits of Development: Mulberry 350, Harborough Road, Desborough. Available at www.kettering.gov.uk/ planningApplication/search [Reference NK/2022/0613]

Ref 18.79 Peter Brett Associates LLP (2018). Symmetry Park, Kettering: Environmental Statement – 2018 Addendum. Available at www.kettering.gov.uk/ planningApplication/search [Reference KET/2018/0965]

Ref 18.80 David Lock Associates (2019). Hanwood Park (East Kettering Sustainable Urban Extension): EIA Scoping Report. Available at www.kettering.gov.uk/ planningApplication/search [Reference KET/2019/0628]

Ref 18.81 JPP Consulting (2016). Proposed Residential Development: Desborough North, Desborough, Northamptonshire: Transport Assessment. Available at www.kettering.gov.uk/planningApplication/search [Reference NK/2021/0356]

Ref 18.82 Stantec (2023). Land to the South and East of Grange Park, Northampton: Environmental Statement 6.0 Population and Human Health. Available at wnc.planning-register.co.uk [Reference 2023/5978/EIA]

Ref 18.83 SLR Consulting (2023). Proposed Anaerobic Digestion Facility at Horse Close Green Power, Courteenhall, Northamptonshire: Environmental Statement. Available at wnc.planning-register.co.uk [Reference WNS/2022/2402/EIA]

Ref 18.84 Pegasus Planning (2013). Planning Statement: Barratt Developments Land at Overstone Leys. Available at wnc.planning-register.co.uk [Reference DA/2013/0850]

Ref 18.85 Pegasus Group (2020). North Overstone Environmental Statement Volume 1: Main Text and Figures – 6 Socio-Economics. Available at wnc.planning-register.co.uk [Reference DA/2020/0001]

Ref 18.86 Stantec (2024). Environmental Statement Volume 1: Main Report: Wymersley Green, Great Houghton. Available at wnc.planning-register.co.uk [Reference 2025/0069/EIA]

Ref 18.87 Taylor Wimpey UK Limited and BDW Trading Limited (2023). High Hayden Garden Community: Environmental Statement Addendum 2023. Available at

publicaccess.east-northamptonshire.gov.uk/online-applications/
[Reference 20/01453/OUT]