West Burton Solar Project

Environmental Statement

Chapter 18: Socio-Economics and Tourism and Recreation

Prepared by: Lanpro Services

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West Burton
SOLAR PROJECT

Contents

Issue Sheet

Report Prepared for: West Burton Solar Project Ltd.
DCO Submission

Environmental Statement Chapter 18:
Socio-Economics and Tourism and Recreation

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18 Socio-Economics and Tourism and Recreation

18.1 Introduction

18.1.1 This chapter of the Environmental Statement (ES) will describe and identify environmental effects arising as a result of the Scheme, in relation to:

- Population demography;
- Population health;
- Population skill level and qualification attainment;
- Indices of deprivation;
- Economic activity and performance;
- Business profiles, sector shares and classification;
- Tourism as an economic sector; and
- Accessibility to and desirability of tourism and recreational facilities.

18.1.2 Regulation 5(2) of the EIA Regulations 2017 (Ref.1) requires the direct and indirect significant effects of the proposed development on population and human health factors to be identified, described, and assessed. As such, this chapter assesses the potential impacts of the Scheme on the population and socio-economic environment, during the construction, operational and maintenance, and decommissioning phases.

18.1.3 This socio-economic assessment has been undertaken by Lanpro Services (see **Statement of Competence [EN010132/APP/WB6.3.1.1]**).

Assessment Scope

18.1.4 The scope of assessment for Socio-economics, Tourism and Recreation proposed by the Applicant at Scoping in January 2022 is presented at section 21.4 of the **EIA Scoping Report [EN010132/APP/WB6.3.2.1]**. Therein, the following specific matters were requested to be scoped into the EIA:

- Socio-economic impacts during construction. There is potential for the Scheme to give rise to socio-economic effects on the local and regional impact areas. The likely effects are considered to be increased access to employment opportunities, increased workplace population, and increased direct and indirect economic activity, many of which are anticipated to be positive.
- Socio-economic impacts during operation. This will be limited to impacts on the agricultural industry through taking the land out of production for the lifetime of the Scheme.
- Impacts on tourism and recreation during construction and operation. Effects on tourism and recreation are likely to be limited to those facilities immediately impacted by the development, which are Public Rights of Way and heritage assets within close proximity to the development areas. Impacts on

the local tourism economy and on other recreational points of interest will be investigated.

18.1.5 In its **EIA Scoping Opinion [EN010132/APP/WB6.3.2.2]** in March 2022, the Planning Inspectorate (PINS) raised no comment nor objection to the scope of assessment to be undertaken within the Socio-Economics and Tourism and Recreation chapter of the ES as set out in the Scoping Report.

18.1.6 Ahead of the production of the Preliminary Environmental Information Report (PEIR) for statutory consultation, it was agreed within the Applicant team that the scope of assessment for Socio-Economics and Tourism and Recreation in the ES should be extended to cover impacts during the decommissioning of the Scheme.

18.2 Consultation

18.2.1 Agreement of the scope of assessment in the ES with regard to Socio-economics and Tourism and Recreation was reached under the EIA Scoping Opinion, issued March 2022 by PINS. The Scoping Opinion is informed by responses from the statutory bodies consulted by PINS in January to February 2022.

18.2.2 The PEIR was issued as part of the statutory consultation in June 2022, initiating a 6-week statutory consultation, to which statutory bodies have had further opportunity to comment on the scope of assessment, and on the baseline information and preliminary assessment undertaken to date.

18.2.3 The comments made by PINS in the Scoping Opinion are set out in **Table 18.1** below. Responses to comments from bodies consulted by PINS, and the manner in which points raised have been addressed in the ES, are also included in this table.

Table 18.1: EIA Scoping Comments and Responses

Consultee	Comments / Matters Raised	Response / Matters Addressed
Planning Inspectorate ID 3.16.1	Human Health is scoped out of this Chapter as the assessment of impacts to human health are proposed to be incorporated into the following aspect Chapters in the ES: • 9: Hydrology, Flood Risk and Drainage • 10: Ground Conditions and Contamination • 14: Transport and Access • 15: Noise and Vibration • 16: Glint and Glare • 17: Electromagnetic Fields • 18: Light Pollution	Human health matters with regard to Socio-economics and Tourism and Recreation have been assessed in this Chapter. Signposting to the human health summary assessment at Section 21.2 in **Chapter 21: Other Environmental Matters [EN010132/APP/ WB6.2.21]** is provided in this Chapter when required.

Consultee	Comments / Matters Raised	Response / Matters Addressed
	• 19: Major Accidents and Disasters • 20: Air Quality • 22: Agricultural Circumstances • 23: Waste • 24: Telecommunications, Utilities and Television Receptors	
ID 3.16.1	It is noted that some of the Chapters referenced above are scoped out or proposed to be assessed in other relevant Chapters. The Inspectorate is content with this approach on the basis that the ES clearly signposts in which other Chapters impacts to human health are assessed.	A collective summary assessment of human health impacts from all other relevant chapters in the ES, and any other non-topic specific human health impacts, is provided at Section 21.2 in **Chapter 21: Other Environmental Matters [EN010132/APP/WB6.2.21]**.
ID 3.16.2	New census data is set to be published in spring 2022. This should be used to inform baseline data and the ES assessment.	The publication of initial Census 2021 data was deferred to July 2022, and as such was not available at PEIR stage. Census data published from July 2022 to January 2023 has been used to inform the baseline conditions in this ES Chapter.
ID 3.16.3	The Scoping Report explains that significance is assessed based on comparison of receptor sensitivity and impact magnitude criteria in Table 21.5 but does not explain what constitutes a significant effect. The ES should confirm the threshold for determination of a significant effect in relation to impacts on Human Health, Socio-economics and Tourism.	For the purposes of the assessment in this Chapter, socio-economic, tourism and recreation, and relevant human health impacts have been considered. Section 18.4: Assessment Methodology and Significance Criteria has been updated since the scoping stage to provide a clear description of the methodology for determining the sensitivity of receptors, magnitude of impact, and the resultant level of significance, and what is considered to be a significant effect.
ID 3.17.1	Scoping Report paragraph 22.4.1 proposes to assess impacts to agricultural land resources, soil resources and farming circumstances in the socio-economics, tourism and recreation	Agricultural land and farming circumstances were preliminarily included with socio-economics at PEIR. For the Application, these aspects are considered suitably important to require their own chapter, and therefore have been

Consultee	Comments / Matters Raised	Response / Matters Addressed
	and human health Chapter of the ES.	assessed in **Chapter 19: Soils and Agriculture [EN010132/APP/WB6.2.19].**
ID 3.17.1	The Inspectorate is content with this approach although the ES should signpost where effects to these receptors have been incorporated into the relevant Chapter assessments. Where impacts to soils and agricultural land is assessed in other relevant Chapters, this should include determining the degree and extent to which soils have been disturbed or damaged and any relevant mitigation measures employed to avoid/reduce impacts to soils; these should be secured via the DCO.	Assessment of soil resources and farming impacts are provided in **Chapter 19: Soils and Agriculture [EN010132/APP/WB6.2.19]** with construction impacts on soil cross-referenced with **Chapter 10: Ground Conditions and Contamination [EN010132/APP/ WB6.2.10]**, and **Chapter 14: Transport and Access [EN010132/APP/WB6.2.14]**. Mitigation measures are provided in the **Outline Construction Environmental Management Plan (OCEMP) [EN010132/APP/ WB7.1],** which is secured by a requirement under the DCO**.**
Bassetlaw District Council	The inclusion of a joint district area assessment in the form of a Local Impact Area for socio-economic, tourism and recreation, and human health impacts is welcomed.	Noted. The joint district area for assessment has been retained in this ES Chapter as described at paragraph 18.4.1.
	It is considered that [agricultural circumstances] is an important issue for the District, especially cumulatively with other similar proposals. It therefore should be scoped into the ES.	Agricultural impacts are now assessed in **Chapter 19: Soils and Agriculture [EN010132/APP/ WB6.2.19].**
Bassetlaw District Council Countryside Access Team	The West Burton Solar Project: Environmental Impact Assessment Scoping Report (EIASR) confirms that West Burton 4 is crossed by rights of way and has rights of way along its boundaries. The Grid Connection Corridor (GCC) also has the potential to affect several public rights of way in Nottinghamshire.	The site at West Burton 4 has been removed from the Scheme and therefore no further assessment of impact to public rights of way in this location is included. Public Rights of Way affected by the location of the Cable Route Corridor are assessed in Section 18.7.
Nottinghamshire County Council	Recommended the potential positive and negative impacts of the Scheme on health and wellbeing to be considered in a consistent, systematic and objective way, identifying opportunities for maximising	A standard methodology has been used to quantify the sensitivity of socio-economic, tourism and recreation receptors and the magnitude of impacts on these receptors. Impacts on health and wellbeing are collated and

Consultee	Comments / Matters Raised	Response / Matters Addressed
	potential health gains and minimizing harm and addressing inequalities taking account of the wider determinants of health.	standardised in **Chapter 21: Other Environmental Matters [EN010132/APP/WB6.2.21]**. Specific concerns regarding impacts on vulnerable or protected population groups are addressed in the **Equalities Impact Assessment [EN010132/APP/WB7.12]**.
Clayworth Parish Council	With regards to economic and social impact we consider that the loss of such a percentage of agricultural land and farming enterprises within our community has not been noted and scoped within the document.	The site at West Burton 4 has been removed from the Scheme, and as such the agricultural economy in the immediate locality of Clayworth and its neighbouring parishes is not impacted by the development of the Scheme. An assessment of the economic impacts resulting from the Scheme across the entirety of West Lindsey District and Bassetlaw District has been undertaken in Section 18.7.
	[Comments relating solely to agricultural land and impacts]	Agricultural impacts are assessed in **Chapter 19: Soils and Agriculture [EN010132/APP/WB6.2.19].**
Canal and River Trust	Boats and waterside walkers will likely have long distance views of the proposed solar farm, notably with regards to 'West Burton 3' from the River Trent and 'West Burton 2' from the Fossdyke Canal. Our waterways are utilised by leisure walkers and boaters, as well as other leisure users such as fishermen. Unlike road users, people on the waterway are not likely to transverse through the area at significant speed, and are more likely to notice changes to the local environment, including the potential visual intrusion of a new solar farm.	An assessment of the impacts resulting from the Scheme on the recreational use of waterways and waterbodies has been undertaken in Section 18.7. An assessment of the impact from the Scheme on views from these features is undertaken in **Chapter 8: Landscape and Visual [EN010132/APP/WB6.2.8].**
Gringley on the Hill Parish Council	Loss of highly productive farmland/Agricultural Land Classification [Comments relating solely to agricultural land and impacts]	Agricultural impacts are assessed in **Chapter 19: Soils and Agriculture [EN010132/APP/WB6.2.19].**

Consultee	Comments / Matters Raised	Response / Matters Addressed
	Continuing access to Public Rights of Way The report notes the presence of many footpaths and two regional footpaths, the Trent Valley Way and the Cuckoo Way, all of which are extensively accessed by local residents and increasingly also by tourists to our area. We cannot find any reference within the report what impact the construction phase will have upon access to these rights of way, how the development will affect their usage in the future or any acknowledgment as to the footfall that these footpaths currently attract.	The Site at West Burton 4 has been removed from the Scheme and therefore no further assessment of impact to public rights of way in Gringley on the Hill are included. Public Rights of Way and other long-distance recreational routes affected by the Sites at West Burton 1, 2, and 3, and the Cable Route Corridor are assessed in Section 18.7.
Natural England	[Comments relating solely to agricultural land and impacts]	Agricultural impacts are assessed in **Chapter 19: Soils and Agriculture [EN010132/APP/WB6.2.19].**
	Connecting People with nature The ES should consider potential impacts on access land, common land, public rights of way and, where appropriate, the England Coast Path and coastal access routes and coastal margin in the vicinity of the development, in line with NPPF paragraph 100. It should assess the scope to mitigate for any adverse impacts. Rights of Way Improvement Plans (ROWIP) can be used to identify public rights of way within or adjacent to the proposed site that should be maintained or enhanced. Measures to help people to better access the countryside for quiet enjoyment and opportunities to connect with nature should be considered. Such measures could include reinstating existing footpaths or the creation of new footpaths, cycleways, and bridleways. Links to other green networks and, where appropriate, urban fringe areas should also be	The potential impacts on Public Rights of Way affected by the Scheme are assessed in Section 18.7. The Scheme contains provisions for the creation of a new circular permissive footpath to be introduced off Sykes Lane and the Track off Sykes Lane, up to the Codder Lane Belt, in Saxilby with Ingleby Parish, to improve access to the countryside. This is included as Work No. 11 in Schedule 1 of the **Draft DCO [EN010132/APP/WB3.1]**.

Consultee	Comments / Matters Raised	Response / Matters Addressed
	explored to help promote the creation of wider green infrastructure. Access to nature within the development site should also be considered, including the role that natural links have in connecting habitats and providing potential pathways for movements of species.	
Lincolnshire County Council	From a socioeconomic perspective, the range of the scoping document appears reasonable, and [we will be] able to comment in further detail at the next stage.	Noted. An assessment of the socio-economic impacts resulting from the Scheme has been undertaken in Section 18.7.
UK Health Security Agency	The details for the consultancies responsible for the human health assessments should be identified.	Human health impacts have been assessed by a number of consultancies with regard to individual topic in the ES. These have been collated and assessed by Lanpro Services.
	[The current approach to population and human health is proportionate at this stage and] should be kept under review as more information becomes available … a separate population and human health chapter may be justified as the assessments develop.	A separate population and human health chapter was not considered necessary at PEIR and has not been deemed necessary at the point of submission of the Application. Responses to the statutory consultation have been reviewed to inform this approach.
	The scoping report does not identify any baseline health data to support any population or human health assessment or consider local health priorities which have been identified within local Joint Strategic Needs Assessments (JSNA) or [Joint] Health and Wellbeing Strategies [(JHWS)].	Baseline population health data has been included in Section 18.5, incorporating information and key priorities set out in the Nottinghamshire and Lincolnshire JSNAs and JHWSs.
	Baseline health data should be provided, which is adequate to identify any local sensitivity or specific vulnerable populations. The identification of vulnerable populations should be based on the list provided by the Welsh Health Impact Assessment Support Unit and the International	Baseline population health data has been included in Section 18.5, incorporating information from national and local sources. Specific concerns regarding impacts on vulnerable or protected population groups are addressed in the **Equalities Impact Assessment [EN010132/APP/WB7.12]**.

Consultee	Comments / Matters Raised	Response / Matters Addressed
	Association of Impact Assessment (IAIA).	
	The ES should provide a defined area, with justification, of the geographic scope of this assessment and any variation between geographic scope between socio-economics and population and human health.	The geographic scope of assessment is as follows: West Lindsey and Bassetlaw Districts together comprise the Local Impact Area, with the East Midlands Region forming the wider Regional Impact Area. These are justified in Section 18.4.
	The peak numbers of construction workers and non-home-based workers should be established and a proportionate assessment (including cumulative impacts) undertaken on the impacts for housing availability and affordability and impacts on any local services.	Identification of housing and accommodation availability has been provided at Section 18.5, with an assessment of likely significant effects at Section 18.7, and cumulative assessment with identified construction projects at Section 18.10. Anticipated housing needs impacts will be based on the estimated peak number of construction workers, and the estimated proportion of those likely to require new accommodation within the Local Impact Area.
West Lindsey District Council	[Comments relating solely to agricultural land and impacts]	Agricultural impacts are assessed in **Chapter 19: Soils and Agriculture [EN010132/APP/WB6.2.19].**

18.2.4 The comments resulting from the statutory consultation of the PEIR chapter 'Socio-Economics, Agriculture, and Tourism and Recreation' are summarised in **Table 18.2** below. Responses to comments and matters raised have also been included. References to where matters are addressed in the DCO Application documentation have also been included. It should be noted that between PEIR stage and the DCO Application stage, as agreed with PINS, assessment of agricultural impacts have been removed from this chapter to be included in the ES as **Chapter 19: Soils and Agriculture [EN010132/APP/WB6.2.19].**

Table 18.2: PEIR / Statutory Consultation Comments and Responses

Consultee	Commets / Matters Raised	Response / Matters Addressed
Lincolnshire County Council	LCC is seeking for Island Green Power to foster a local skills base in respect of renewable energy	The Applicant is willing to support opportunities to develop the local skill base through practicable

Consultee	Commets / Matters Raised	Response / Matters Addressed
	projects in this area … [and] across the County. Therefore, financial measures in respect of relevant skills training within the local area should be agreed. There must also be adequate assessment of the likely origins of the labour force (both local and non-local) especially in the context of other energy projects in the area with potentially overlapping construction periods.	means during the construction and operation phase of development. Opportunities to support skill training in locally-based companies, and construction-based apprenticeships or educational opportunities have been explored in the **Skills and Supply Chain Plan [EN010132/APP/WB7.10]** which is secured by a requirement under the draft DCO.
	Consideration needs to be given to community benefits and to consider legacy opportunities arising from the project.	Direct community benefits are to be provided at West Burton 2, with the introduction of an area set aside for a publicly accessible habitat management area and a permissive path along the Codder Lane Belt. These are secured under Work Nos. 10 and 11 respectively in Schedule 1 of the **Draft DCO [EN010132/APP/WB3.1]**. Opportunities to support skill training in locally-based companies, and construction-based apprenticeships or educational opportunities throughout the lifetime of the development have been explored in the **Skills and Supply Chain Plan [EN010132/APP/WB7.10]** which is secured by a requirement under the draft DCO.
	From a Growth perspective, what is considered and the methodology in Chapter 18 of the PEIR appears reasonable	Noted. This methodology has been carried over into this chapter of the ES.
	No comments on Public Rights of Way at this stage.	Noted. An assessment of the impacts from the Scheme on Public Rights of Way has been undertaken in Section 18.7.
Bassetlaw District Council	Acknowledged that the project will bring considerable benefits as well as potential harms, the broad approach in terms of impacts and proposed mitigation is agreed. There are no further comments to make at this stage.	Noted. This chapter seeks to provide a full assessment of the benefits and any potential harms to the socio-economic environment including detailing of mitigation measures

Consultee	Commets / Matters Raised	Response / Matters Addressed
		and cumulative and in combination effects.
Canal and River Trust	We strongly recommend that the Trust is included in future discussions over the location of the cable crossing and whether a single crossing point can be agreed by the respective project promoters so we can advise on any potential issues likely to affect navigational safety or our interests as an affected landowner. The PEIR indicates that the cable crossing of the river will be underground and we consider that this will assist in minimising visual impacts on the river and potential impacts on use of the Navigation.	Noted. The crossing of the River Trent remains to be undertaken by horizontal directional drilling beneath the riverbed. An assessment of the impacts from the Scheme on recreational use of navigable waterways and waterbodies has been undertaken in Section 18.7.
	The sites for the solar panels are set well away from the River Trent and their location and the local topography suggest that they are unlikely to be visible from the river. However, notwithstanding the distance between the solar panels and the river, as noted in the PINS Scoping Opinion, the Environmental Statement should assess glint and glare impacts to river users where significant effects are likely to occur. The River Trent is a navigable waterway which is also designated as a commercial waterway carrying freight. It is therefore important that visual impacts (including impacts from glint and glare) on the river do not result in any harm to navigational safety.	Noted. An assessment of the impacts from the Scheme on recreational use of navigable waterways and waterbodies has been undertaken in Section 18.7, based on the inclusion of visual receptors of waterways within the study area included within **ES Chapter 8: Landscape Visual Impact Assessment [EN010132/APP/WB6.2.8]**. An assessment of glint and glare impacts to river users has not been considered due to the more than 1km separation between the Site at West Burton 3 and the River Trent. This is detailed further in **ES Chapter 16: Glint and Glare [EN010132/APP/WB6.2.16]**.
UK Health Security Agency	Population and Human health assessment: It is noted that population and human health is being considered within existing chapters and not form a separate chapter within the ES. Given the current knowledge of the scheme and potential impacts this appears to be a proportionate approach. This should be kept under review as	A separate population and human health chapter was not considered necessary at PEIR and has not been deemed necessary at the point of submission of the Application, as matters relating to human health are suitably covered throughout the ES. Human health impacts resulting from impacts to socio-economic,

Consultee	Commets / Matters Raised	Response / Matters Addressed
	more information becomes available and a separate population and human health chapter may be justified as the assessments develop.	tourism and recreation receptors have been assessed in Section 18.7.
	Baseline data: The PEIR provides limited baseline health data, often referencing 2011 census data, to support any population or human health assessment. It does not consider local health priorities which have been identified within local Joint Strategic Needs Assessments (JSNA), Health and Wellbeing Strategies or other local published current data sources.	Baseline population health data has been included in Section 18.5, incorporating information and key priorities set out in the Nottinghamshire and Lincolnshire JSNAs and JHWSs.
	Baseline health data should be provided, which is adequate to identify any local sensitivity or specific vulnerable populations. The identification of vulnerable populations should be based on the list provided by the Welsh Health Impact Assessment Support Unit and the International Association of Impact Assessment (IAIA).	Baseline population health data has been included in Section 18.5, incorporating information from national and local sources. Specific concerns regarding impacts on vulnerable or protected population groups are addressed in the **Equalities Impact Assessment [EN010132/APP/WB7.12]**.
	The peak numbers of construction workers and non-home based workers should be established and a proportionate assessment undertaken on the impacts for housing availability and affordability and impacts on any local services. Any cumulative impact assessment should consider the impact on demand for housing and local services by construction workers, including the likely numbers of peak non-home based workers, required across all schemes within the travel to work area. The assessment should also include potential impacts on tourist accommodation within the socio-economic assessment.	Identification of housing and tourist accommodation availability has been provided at Section 18.5, with an assessment of likely significant effects at Section 18.7, and cumulative assessment with identified construction projects at Section 18.10. Anticipated permanent and temporary accommodation need impacts will be based on the estimated peak number of construction workers, and the estimated proportion of those likely to require new accommodation within the Local Impact Area.
	The PEIR is contradictory in respect of impacts on PRoW. Para 18.5.25	Public Rights of Way are to remain open where feasible during

Consultee	Commets / Matters Raised	Response / Matters Addressed
	(PEIR Volume 1) indicates PRoW will remain open during construction, yet Table 18.12 (Summary of Mitigation and Enhancement Measures and Residual Effects) identifies a minor adverse effect due to closures and diversions.	construction. Diversions and closures are only to be implemented where absolutely necessary, and will be duration limited as set out in the **OCEMP [EN010132/APP/ WB7.1]** and **Public Rights of Way Management Plan (PRoWMP) [EN010132/APP/ WB6.3.14.3].**
	Surveys of the affected PRoW network should be undertaken to provide baseline data in relation to the use of the PROWs to define the change in characteristics of tourism and recreational use of PRoW in order to define receptor sensitivity and the magnitude of change.	Surveys of PRoW usage are included in the **PRoWMP [EN010132/APP/ WB6.3.14.3].** The sensitivity of PRoW receptors is defined in Section 18.7 as medium for local network routes, and high for regional or national network routes. The magnitude of change is also set out in Section 18.7 and includes input from the outcomes of the assessment within **ES Chapter 8: Landscape and Visual Impact Assessment [EN010132/APP/ WB6.2.8]**.
	The ES should clearly and consistently report on the likely impacts on the affected PRoW, proposed mitigation and significance of effects. The CEMP should identify likely diversion routes.	An assessment of the likely impacts from the Scheme on PRoWs is found in Section 18.7. Proposed embedded mitigation measures including the routing of diversions if required are set out in the **OCEMP [EN010132/APP/ WB7.1]** and **PRoWMP [EN010132/ APP/WB6.3.14.3]** which are secured by a requirement under the draft DCO**.**
Clayworth Parish Council	The scale of the West Burton 4 as currently proposed is incongruous both physically and economically to the well-being of our village.	The site at West Burton 4 has been removed from the Scheme, and as such the agricultural economy in the immediate locality of Clayworth and its neighbouring parishes is not impacted by the development of the Scheme. An assessment of the economic impacts resulting from the Scheme across the entirety of West Lindsey District and Bassetlaw District has been undertaken in Section 18.7.
West Lindsey District Council	Due to scale of development alone and in-combination with West Burton and Gate Burton,	Impacts on tourism and recreation at a local and regional level have been assessed in this chapter,

Consultee	Commets / Matters Raised	Response / Matters Addressed
	considerations must be made of impact to tourism and recreation at higher than local level.	taking into account the level of significance of attractions in Section 18.7, and accounting for the cumulative impacts from solar NSIP development in the area in Section 18.10.
	How will the development, alone and in combination with other projects, affect visitor perceptions of rural Lincolnshire? Will it affect the desirability of West Lindsey as a place to visit? How will it affect visitor numbers?	Where quantifiable, these matters have been addressed in Sections 18.7 and 18.10 of this ES chapter. This assessment is necessarily limited as no similar schemes have been constructed in the UK and as such little comparative data is available. Where based on qualitative information, professional judgement will be used to determine anticipated impacts.
	The development will result in the loss of over 1035ha of agricultural land – of which, 253.9ha (24%) will be best and most versatile agricultural land. In combination with the Cottam Solar Project (1270ha) and Gate Burton (684ha) – it will cumulatively amount to over 3000ha of Lincolnshire (& Nottinghamshire) agricultural land. The farming circumstances (18.4.50) should therefore set out the agri-economic impacts of development. The baseline study should set out the current agricultural use of the sites, on a seasonal basis. What is being produced on site? What is its contribution towards food supplies and other sectors? How many are directly and indirectly employed that will be affected by the development and at what socio-economic impact? Whilst it is noted that this loss may be "temporary" (paragraph 18.5.15) – the development is expected to operate for around 40 years (18.5.20). Taking into account commissioning and decommissioning phases including	Noted. The Site at West Burton 4 has been removed from the Scheme therefore is not assessed further. An assessment of the impacts of the Scheme on agricultural employment and the agricultural economy have been included from start of construction to the completion of decommissioning of the Scheme in Section 18.7, with a cumulative assessment of impacts with other NSIPs in Section 18.10. Impacts relating directly to farming circumstances and quality of soils are assessed in **ES Chapter 19: Soils and Agriculture [EN010132/APP/WB6.2.19]**.

Consultee	Commets / Matters Raised	Response / Matters Addressed
	any necessary site restoration, the impact will be even longer. This is a significant part of a lifetime and within the economic cycle. These impacts must be fully assessed within the ES.	
British Horse Society	The community benefit mentions walking and cycling networks at the exclusion of equestrians. According to BETA two-thirds of equestrians are women and Church et al (2010) found 37% of women who are horse riders are over 45 years of age and over a third would pursue no other physical activity. Developers should be looking at how to include this group, not how to exclude them. Also, the two permissive footpaths in the consultation leaflet make for a very limited offer considering the size and scale of the development. Research in the area of under-recorded or unrecorded rights of way continues.	Equestrian PRoW users have been included in the assessment of impacts on PRoWs in Section 18.7, and in the assessment of impacts on road users in **ES Chapter 14: Transport and Access [EN010132/ APP/WB6.2.14]**. A permissive path has been provided as part of the Scheme to increase connectivity in tandem with ecological mitigation strategies.
Destination Lincolnshire	Having reviewed the information about the Solar Farm Development, we fully support the calls of West Lindsey District Council... to reject this project from happening in this area of Lincolnshire. The project will have a direct, long term negative impact on the visitor economy. The negative impact the proposed Solar Farm Development will have on Lincolnshire and the damage this will do to Lincolnshire's image & experience as a visitor destination Economists have predicted that it will take up to 2025/26 for businesses in this sector to recovery to pre-covid level. All activity that risks this recovery needs to be mitigated. Visit England champions the role of destinations in the attracting visitors to England. Lincolnshire is	Impacts on tourism and recreation at a local and regional level have been assessed in this chapter, taking into account the level of significance of attractions in Section 18.7, and accounting for the cumulative impacts from solar NSIP development in the area in Section 18.10. A full policy review has been undertaken in the **Planning Statement [EN010132/APP/WB7.5]** which sets out the full planning case of the Scheme and identifies how the Scheme responds to local, county, and national policy regarding tourism and recreation strategies.

Consultee	Commets / Matters Raised	Response / Matters Addressed
	currently underperforming in the Visitor Economy compared to other destination in England. There are deep seated challenges with productivity and seasonality – and we think this project would exacerbate them. Continuing with this project, knowing the long-term impact that it will have on Lincolnshire as a destination, is totally counterintuitive to the Government's 'Levelling Up' agenda, as it hinder a key sector and businesses working in it.	

18.2.5 A significant number of comments from the local community have been received on potential impacts to socio-economic, tourism and recreation during the concurrent public consultation undertaken in accordance with section 47 of the Planning Act 2008. Recurring comments refer to impacts on the agriculture and tourism economies and impacts on health and wellbeing as a result of impacts on visual amenity, mental wellbeing, and the use of recreational spaces and routes. These impacts have been addressed in the relevant chapters of the ES and so there is no change to the scope of assessment as a result of comments made by the public.

18.2.6 Where comments received from the public relate directly to the site at West Burton 4, it should be noted that this site has been removed from the Scheme ahead of submission and as such has not been assessed further.

18.3 Policy Context

Legislative Context

18.3.1 The Planning Act 2008 (Ref.2) sets out the process for the consenting of major infrastructure projects as is the principal legislation governing an application for a Nationally Significant Infrastructure Project (NSIP).

18.3.2 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Ref.1) sets out the regulatory framework for Environmental Impact Assessments in connection with development consent order applications, to include screening, scoping and the requirements in respect of their content.

National Policy Context

18.3.3 National Policy Statements (NPS) set out the policy basis for NSIPs. At present, there is no NPS which specifically deals with ground mounted solar developments. However, there are aspects of three Energy NPSs which are relevant to decision making and are important material considerations, in addition to other relevant and important national and local planning policies. These have been identified in **Chapter 6: Energy Need, Legislative Context and Energy Policy [EN010132/APP/WB6.2.6]**.

National Policy Statement for Energy (EN-1) (Ref.3)

18.3.4 Part 4 of EN-1 sets out the assessment principles for energy applications. Paragraphs 4.1.3 states that the Secretary of State should take into account the potential benefits of development proposals including their *"contribution to meeting the need for energy infrastructure, job creation and any long-term or wider benefits"*. Paragraph 4.1.4 states that the Secretary of State should take into account *"environmental, social and economic benefits and adverse impacts, at national, regional and local levels"*.

18.3.5 NPS EN-1 requires applicants to describe the existing socio-economic conditions in the areas surrounding the proposed development (paragraph 5.12.4) and, under paragraph 5.12.3, assess all relevant socio-economic impacts which may include:

- The creation of jobs and training opportunities;
- The provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities;
- Effects on tourism;
- The impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure; and
- Cumulative effects.

Draft National Policy Statement for Energy (EN-1) (Ref.4)

18.3.6 The Department for Business, Energy and Industrial Strategy is currently undertaking a review of the six NPSs for energy infrastructure, with consultation

being undertaken from September to November 2021. The transitional provisions in draft NPS EN-1 state that the 2011 NPSs will be the applicable national policy statements for any DCO application that is accepted for examination before the designation of the updated NPSs. However, the policies set out in the emerging draft NPSs (or those designated but not having effect) are potentially capable of being important and relevant considerations in the decision-making process – paragraph 1.6.3.

18.3.7 Part 4 of Draft EN-1 also sets out the assessment principles for energy applications. The requirements set out in Paragraphs 4.1.3-4.1.4 for the Secretary of State are retained. Of additional note, paragraph 4.3.4 states: *"New energy infrastructure may also affect the composition and size of the local population, and in doing so have indirect health impacts, for example if it in some way affects access to key public services, transport or the use of open space for recreation and physical activity."*

18.3.8 The Draft NPS EN-1 requires applicants to consider the generic impacts of development on the surrounding environment with regard to land use in Section 5.11, and socio-economics in Section 5.13.

18.3.9 Paragraph 5.11.8 requires applicants to *"seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations. Applicants should also identify any effects and seek to minimise impacts on soil quality taking into account any mitigation measures proposed."*

18.3.10 Paragraph 5.13.2 outlines that *"where the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts as part of the ES."*

18.3.11 As in the adopted EN-1, the draft policy requires the applicant to describe the existing socio-economic conditions in the areas surrounding the proposed development (paragraph 5.13.4), and assess all relevant socio-economic impacts as set out in paragraph 5.13.3:

- The creation of jobs and training opportunities;
- The contribution to the development of low-carbon industries;
- The provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities;
- Indirect beneficial impacts for the region hosting the infrastructure;
- Effects on tourism;
- The impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure; and
- Cumulative effects.

18.3.12 The Draft NPS EN-1 also states at paragraph 5.13.6 that *"applicants should also consider developing accommodation strategies where appropriate, especially during construction and decommissioning phases, that would include for the need to provide temporary accommodation for construction workers if required."*

18.3.13 Furthermore, Draft EN-1 requires the Secretary of State in paragraph 5.13.9 to *"consider any relevant positive provisions the applicant has made or is proposing to make to mitigate impacts (for example through planning obligations) and any legacy benefits that may arise as well as any options for phasing development in relation to the socio-economic impacts."*

Draft National Policy Statement for Renewable Energy Infrastructure (EN-3) (Ref.5)

18.3.14 Draft NPS EN-3 has been updated with a section dedicated to solar photovoltaic generation, and as such, the policies therein are directly relevant to this Scheme. Draft NPS EN-3 does not contain any policy that specifically relates to impacts on socio-economics, and tourism and recreation. However, by virtue of the inter-relationship between ES topics, it is pertinent that secondary impacts relating to matters such as landscape, visual and residential amenity, glint and glare, cultural heritage, and construction traffic, noise, and vibration, as explored in parts 2.51-2.54 are considered in relation to socio-economics, and tourism and recreation.

National Planning Policy Framework (2021) (Ref.6)

18.3.15 Paragraph 5 of the National Planning Policy Framework (NPPF), amended July 2021, acknowledges that while it *"does not contain specific policies for nationally significant infrastructure projects"*, it may be given weight in decision-making for NSIPs where the policies in the NPPF are *"other matters that are relevant"*.

18.3.16 Key to the overarching principles of the NPPF is that the *"purpose of the planning system is to contribute to the achievement of sustainable development"* (paragraph 7) and this should be achieved by pursuing interdependent and mutually supportive economic, social, and environmental objectives (paragraph 8). Therefore: *"plans and decisions should apply a presumption in favour of sustainable development."* (paragraph 11).

18.3.17 To meet the economic objectives, the NPPF emphasises the importance of building a strong, competitive economy by supporting *"economic growth and productivity, taking into account both local business needs and wider opportunities for development"* (paragraph 81) and helping to support a prosperous rural economy. Social sustainability is given policy context through emphasis on promoting healthy and safe communities (section 8) through enabling and supporting social healthy lifestyles, social interaction, providing social, recreational and cultural facilities (paragraphs 92-93), retaining access to open space, recreational spaces (paragraphs 98-99), and protecting and enhancing public rights of way (paragraph 100). Finally, the NPPF gives significant importance to protecting and enhancing the natural, built and historic environments (sections 15-16). All three of the overarching objective

areas are relevant to the assessment of socio-economic, tourism and recreation effects anticipated from the development of the Scheme.

18.3.18 Paragraph 152 demonstrates the national ambitions for the planning system to *"support the transition to a low carbon future in a changing climate"* and to *"support renewable and low carbon energy and associated infrastructure"*. The NPPF (at paragraph 155) goes on to explain how local planning authorities should seek to increase the use and supply of renewable energy through providing a positive strategy for energy whilst ensuring adverse impacts are addressed and considering identifying suitable areas for renewable energy sources.

Draft National Planning Policy Framework Consultation (2022-3) (Ref.7)

18.3.19 The consultation in respect of the Levelling-up and Regeneration Bill: reforms to national planning policy opened on 22 December 2022 and sought views on the Department for Levelling Up, Housing & Communities' proposed updates to the National Planning Policy Framework (the **"Draft NPPF"**). The consultation closed on 2 March 2023.

18.3.20 In terms of achieving sustainable development, the Draft NPPF notes that the *"purpose of the planning system is to contribute to the achievement of sustainable development [...] including supporting infrastructure in a sustainable manner"* (paragraph 7) (emphasis added). Furthermore, at paragraph 160, the Draft NPPF provides a greater level of detail to assist local authorities in determining planning applications for renewable and low-carbon development.

18.3.21 Whilst these proposed changes provide further detail in respect of the policy context for large-scale solar energy development like this Scheme, the Draft NPPF does not set out any changes that impact upon the policy context or assessment of socio-economic and tourism and recreation impacts.

Local Planning Policy Context

Central Lincolnshire Local Plan

18.3.22 The Central Lincolnshire Local Plan provides local planning and development management policy for the districts of North Kesteven, Lincoln City, and West Lindsey. The existing Local Plan document (Ref.8) and associated Proposals Maps (Ref.9) were adopted in April 2017. These are currently undergoing review, with an emerging Local Plan (Ref.10) having been consulted on between March and May 2022, and under examination since July 2022.

18.3.23 The adopted policies deemed to be of most relevance from the Central Lincolnshire Local Plan to socio-economic, and tourism and recreation factors, are:

- Policy LP1: A Presumption in Favour of Sustainable Development;
- Policy LP5: Delivering Prosperity and Jobs
- Policy LP7: A Sustainable Visitor Economy
- Policy LP9: Health and Wellbeing

- Policy LP19: Renewable Energy Proposals
- Policy LP55: Development in the Countryside

18.3.24 Those emerging policies deemed to be of most relevance from the Central Lincolnshire Local Plan Review to socio-economic, and tourism and recreation factors, are:

- Policy S5: Development in the Countryside
- Policy S10: Supporting a Circular Economy
- Policy S14: Renewable Energy
- Policy S15: Protecting Renewable Energy Infrastructure
- Policy S16: Wider Energy Infrastructure
- Policy S28: Spatial Strategy for Employment
- Policy S34: Non-designated Employment Proposals in the Countryside
- Policy S43: Sustainable Rural Tourism
- Policy S45: Strategic Infrastructure Requirements
- Policy S46: Safeguarded Land for Future Key Infrastructure
- Policy S48: Walking and Cycling Infrastructure
- Policy S54: Health and Wellbeing

West Lindsey Sustainability, Climate Change and Environment Strategy

18.3.25 In response to the Intergovernmental Panel on Climate Change's Special Report, 'Global Warming of 1.5°C' (Ref.11), published in October 2018, West Lindsey District Council have published and adopted their Sustainability, Climate Change and Environment Strategy (Ref.12). This will help to guide the Council towards achieving their internal goal of achieving net zero by 2050. Key to this strategy is the Council's "possible priority themes" which include reducing and shifting energy demands and moving energy sourcing to low carbon and renewable energy generation and storage technology.

Bassetlaw Local Plan

18.3.26 Local policy in Bassetlaw District is directed by the Bassetlaw Core Strategy & Development Management Policies Development Plan Document (Ref.13), adopted in December 2011. Those policies therein considered of relevance to the socio-economic, and tourism and recreation factors of the Scheme are:

- Policy DM1: Economic Development in the Countryside
- Policy DM3: General Development in the Countryside
- Policy DM4: Design & Character
- Policy DM7: Securing Economic Development

- Policy DM8: The Historic Environment
- Policy DM9: Green Infrastructure; Biodiversity & Geodiversity; Landscape; Open Space & Sports Facilities
- Policy DM10: Renewable & Low Carbon Energy
- Policy DM11: Developer Contributions & Infrastructure Provision

18.3.27 Bassetlaw District Council is currently preparing a new Local Plan (Ref.14), with a consultation having been held between May and June 2022, and examination in public ongoing. Given the advanced stage of the Plan, the emerging policies of relevance to the socio-economic, and tourism and recreation factors of the Scheme are:

- POLICY ST6: Cottam Priority Regeneration Area
- POLICY ST11: Rural Economic Growth and Economic Growth Outside Employment Areas
- POLICY ST12: Visitor Economy
- POLICY ST44: Promoting Healthy, Active Lifestyles
- POLICY ST47: Promoting Sport and Recreation
- POLICY ST50: Reducing Carbon Emissions, Climate Change Mitigation and Adaptation
- POLICY ST51: Renewable Energy Generation

Neighbourhood Plans

18.3.28 Neighbourhood plans were introduced under the Localism Act 2011 (Ref.15) to provide a tool for parish and town councils, and neighbourhood groups to set out planning policies within their designated areas. Once adopted, these plans become an adopted part of local planning policy and as such are material considerations in the determination of planning applications.

18.3.29 The Order limits pass through and abut a number of areas that are designated neighbourhood plan areas. Those areas that have adopted neighbourhood plans, or have plans at examination or referendum stage (as of 1st February 2023) are listed below:

- Saxilby with Ingleby
- Sturton by Stow and Stow
- Sturton Ward (Nottinghamshire)
- Treswell and Cottam

18.3.30 Those policies considered relevant to the socio-economic assessment and impacts on tourism and recreation are listed below.

- Saxilby with Ingleby Neighbourhood Plan (Ref.16)

- Policy 8: Small Scale Business Development
- Policy 9: Protecting Community Facilities
- Policy 10: Tourism Development
- Policy 14: Open Spaces, Sports Facilities and Recreation Facilities
- Policy 16: Existing and New Non Vehicular Routes

- Sturton by Stow and Stow Neighbourhood Plan (Ref.17)
  - Policy 7: Employment and Business Development
  - Policy 10: Local Green Space
  - Policy 15: Walking and Cycling
- Sturton Ward Neighbourhood Plan (Ref.18)
  - Policy 7: Tourism Development
  - Policy 8: Supporting the Local Economy
  - Policy 11: Community Facilities
- Treswell and Cottam Neighbourhood Plan (Ref.19)
  - Policy 1: Development in Treswell and Cottam
  - Policy 6: Supporting Local Employment Opportunities

Lincolnshire Minerals and Waste

18.3.31 The Lincolnshire Minerals and Waste Local Plan consists of two documents: the Core Strategy & Development Management Policies (Ref.20), adopted June 2016; and the Site Locations document (Ref.21), adopted December 2017. Together these define the countywide planning strategy and policy framework for determining applications and allocation of land for mineral extraction and waste development, including safeguarding land from other developments. Detailed matters regarding minerals and waste are discussed in **Chapter 12: Minerals [EN010132/APP/WB6.2.12]** and **Chapter 20: Waste [EN010132/APP/WB6.2.20]** of this ES respectively.

18.3.32 The policies of relevance to socio-economics are primarily concerned with minerals safeguarding and ensuring the Scheme does not impact on the viability of land for minerals extraction. These have been explored in **Chapter 12: Minerals [EN010132/APP/WB6.2.12]** of this ES.

Nottinghamshire Minerals and Waste

18.3.33 The Nottinghamshire Minerals Local Plan (Ref.22) was adopted in March 2021 and provides the policy context for minerals extraction in the Nottinghamshire county area. The Nottinghamshire Waste Plan (and draft Plan) is a separate document that does not contain policy pertinent to the socio-economic, tourism and recreation impacts of the development.

18.3.34 The policies in the Nottinghamshire Minerals Local Plan of relevance to socio-economics are primarily concerned with minerals safeguarding and ensuring the proposed development does not impact on the viability of land for minerals extraction.

18.3.35 Policy SP1 outlines the strategy for the supply of minerals in Nottinghamshire, whilst policy SP7 gives context to the strategic nature of "minerals safeguarding, consultation areas and associated minerals infrastructure". These have been explored in **Chapter 12: Minerals [EN010132/APP/WB6.2.12]** of this ES.

Local Tourism Policy and Strategy

West Lindsey Visitor Economy Strategy

18.3.36 The West Lindsey Visitor Economy Strategy (Ref.23) and associated Action Plan provide a framework for which policies relating to the visitor economy in West Lindsey District can be set against in order to aid the addition of value and stimulation of growth and development of the local visitor economy. The document also provides an up-to-date snapshot of current visitor economy conditions and sets local aims and objectives in context with the wider county level and national tourism strategies. Specifically, the strategy seeks to provide additional levels of guidance for economic development in the wake of the COVID-19 pandemic and the subsequent impact on tourism and recreation in the district.

Greater Lincolnshire Partnership

18.3.37 West Lindsey District falls within the wider reaching Greater Lincolnshire Local Enterprise Partnership (LEP) area (consisting Lincolnshire County, Rutland, North Lincolnshire, and Northeast Lincolnshire), which is responsible for providing a framework and strategy for promoting economic growth in Greater Lincolnshire. Key objectives for the Greater Lincolnshire LEP are addressing economic challenges arising from the COVID-19 pandemic, uncertainty following Britain's exit from the European Union, and creating a collective approach for growth across the nine district authorities in the LEP area. Some of their key industrial strategies include promoting the local energy sector and visitor economy (Ref.24).

18.3.38 With respect to the visitor economy, the City, Coast and Countryside: Greater Lincolnshire & Rutland Tourism Action Plan 2021-2025 was drafted to provide a sector-specific strategy for expanding Greater Lincolnshire's tourism economy. Although not yet formally completed, the draft strategies set out the existing strengths of the local tourism sector and provides priorities and objective to deliver economic growth in the sector up to 2025 (Ref.25).

Nottinghamshire Visitor Economy Strategy

18.3.39 Bassetlaw District falls within the catchment of the Visitor Economy Strategy for Nottinghamshire County, which provides an overarching strategy and sets of objectives for achieving economic growth within the tourism sector in the Nottinghamshire county area (Ref.26).

Relevant Industry Guidance

18.3.40 As the professional accreditation body for the production of EIAs, the Institute of Environmental Management & Assessment (IEMA) provides a number of guides for the production of environmental assessments and hosts a collection of articles by professional bodies on the use of and publication of socio-economic assessments for EIA.

18.3.41 It is recognised in the industry that there is a widely varied approach to socio-economic assessments as a result of the significant scope of the assessment, variety in development impacts, and the lack of procedural guidance available directly relating to the technical production of socio-economic assessments (Ref.27). As such, measurements of baseline data sensitivity, and the significance of impacts from the development are reliant on professional judgement based on best practice and experience. As such, socio-economic impacts should consider socio-demographic and cultural receptors, local economic factors, as well as the accessibility and provision of local services (Ref.28, Ref.29). It is important that socio-economic assessments are not considered in isolation from other assessment areas in the EIA, as there are multiple overlapping factors, such as with transport, construction management, water and air quality, and human health assessment (Ref.30).

18.4 Assessment Methodology and Significance Criteria

18.4.1 The baseline assessment undertaken for this ES chapter has been provided to give an understanding of the socio-economic conditions within the anticipated zones of influence of the Scheme. The Local Impact Area has been defined as the combined areas of Bassetlaw District and West Lindsey District, due to the geographic expanse and scale of the Scheme. The Regional Impact Area is defined as the statistical East Midlands International Territorial Level. Where applicable and practicable, additional fine-grain data at individual District level, or at District Ward level will be provided to determine the sensitivity of likely effected receptors and the magnitude of potential impacts upon them.

18.4.2 As part of the baseline assessments, data from the relevant local authorities and national statistics providers has been used to assess how the Scheme will affect the socio-economic environment and tourism and recreation receptors. Data for the use in the assessment has been collected up to 1st February 2023. The information sources to be used for the assessments are as follows:

- ONS Census 2011 and 2021;
- NISRA Census 2021;
- ONS Annual Population Survey;
- ONS Local Authority and National Population Projections;
- DCLG: Indices of Multiple Deprivation Map App;

- OHID: Fingertips Public Health Data web tool;
- ONS: Annual Survey of Hours and Earnings;
- ONS Business Register and Employment Survey;
- DWP Stat-Xplore web tool;
- Communities NI Statistics;
- Bassetlaw Local Plan Publication Version and supporting documentation;
- Central Lincolnshire Local Plan and supporting documentation;
- National Planning Policy Framework;
- Natural England;
- Visit Nottinghamshire;
- Visit Lincoln;
- OpenStreetMap;
- OS Explorer Map;
- Google Maps and Google Earth;
- Long Distance Walkers Association;
- Lincolnshire Ramblers Association; and
- The National Byway.

Assessment of Sensitivity and Magnitude

18.4.3 The sensitivity of all identified environmental receptors will be described as high, medium, or low, whilst the magnitude of impact on those receptors will be described as high, medium, low, negligible, or neutral.

18.4.4 The sensitivity of the receptors identified in this chapter will be 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 judgment. For example, the sensitivity of number of jobs is likely to be determined from its local characteristics and how far it deviates from national trends, in consideration with the local policy requirements for the creation of new employment opportunities.

18.4.5 To ensure a consistency of approach across the socio-demographic and economic receptors identified in this assessment, each receptor will be measured against national data at the local authority level to determine its sensitivity. Where datasets are available, the level of sensitivity will be determined by the number of standard deviations (σ) above and below the national trend or mean average. Data falling within 1 standard deviation of the mean is described as low sensitivity, data falling between 1 and 2 standard deviations from the mean are described as medium

sensitivity, and data falling beyond 2 standard deviations of the mean are described as high sensitivity. Otherwise, sensitivity will be determined based on professional judgement of the qualitative criteria set out in **Table 18.3** and **Table 18.5**.

18.4.6 The identification of key effects has been determined through provision of a model of anticipated worker requirements for both construction and operation and maintenance arising from the development by an accredited Engineering Procurement Construction (EPC) contractor and specialist high voltage cable installation contractor. The information modelled provides a reasonable worst-case scenario with regard to the quantum of work required for the construction of the Scheme within the projected 24 months construction period, and a reasonable worst-case employment requirement for the Scheme's operation and maintenance. This model has then been used to determine secondary impacts on socio-economic receptors. Impacts on tourism and recreation receptors have been determined through professional judgement and have been assessed in consideration of the anticipated impacts in associated ES chapters, such as transport, landscape, and heritage.

18.4.7 The methodology for determining the impact magnitude is described below and has been determined by quantifying the predicted deviation from baseline conditions. This will be considered both with and without mitigation. The magnitude of change will be used for either beneficial or adverse impacts. As there is no standard methodology for determining how magnitude of impacts are calculated, professional judgement has been used to determine the criteria set out in **Table 18.4** and **Table 18.6**.

Environmental Receptors – Socio-Economic

18.4.8 The Scheme is likely to have impacts on socio-economic receptors at the local and regional level, and to a more minor extent, the national level. These effects are predominantly focused on economic impacts (particularly during construction), given the nature of the Scheme. Impacts on socio-demographic receptors are likely to be limited to those as a result of the anticipated construction workforce and the related indirect impacts on socio-demographic characteristics. The sensitivity of these receptors will be assessed in accordance with **Table 18.3**.

18.4.9 The Scheme is of a nationally significant scale, and as such will provide a significant number of employment opportunities for direct and indirect sectors of the local and regional economy during construction. These will also have knock-on impacts on other socio-economic factors such as wages, unemployment, and deprivation as a result of increased access to employment. The magnitude of these impacts will be quantified in full for the construction and operational phases of the Scheme and estimated for the Scheme's decommissioning (considered for the purposes of the EIA to be no earlier than 2066) in accordance with the metrics set out in **Table 18.4**.

18.4.10 The Scheme is likely to impact on existing economic sectors within the local and regional impact areas as a result of competition for resources, labour force, and direct and indirect conflicts with economic sectors such as the agricultural economy

and in the tourism and recreation economies. Additional localised economic impacts may occur where the location of the Scheme impacts on the operation of businesses near to or adjacent to the Site where their location, landscape setting, and long views are fundamental to their economic success.

Table 18.3: Sensitivity and Importance of the Identified Environmental Receptor

Sensitivity	Definition
High	Receptor is likely to experience direct and significant socio-economic challenges with fundamental change to present characteristics. Accorded a high priority in local, regional or national economic regeneration policy. Receptor is of regional or national importance. Data for the receptor shows it is more than 2σ from the national population mean or median.
Medium	Receptor is likely to experience some socio-economic challenges, which may be indirect, but will materially change its present characteristics. Change relating to receptor has medium priority in local, regional and national economic and regeneration policy. Receptor is of significant local importance. Data for the receptor shows it is between 1σ and 2σ from the national population mean or median.
Low	Indiscernible to minor socio-economic challenges relating to receptor resulting in non-material changes to baseline conditions. Receptor is accorded a low priority in local, regional and national economic and regeneration policy. Receptor is of low importance. Data for the receptor shows it is less than 1σ from the national population mean or median.

Table 18.4: Magnitude of Change for the Identified Environmental Receptor

Magnitude	Definition	Value of Change to Receptor
High	The total loss or major change/substantial alteration to key elements/features of the baseline conditions, such that the post-development characteristics will be fundamentally changed.	Change of more than or equal to 10%
Medium	Loss or alteration to one or more key elements/features of the baseline conditions, such that post-development characteristics of the baseline will be materially changed.	Change of between 1% and 10%
Low	A minor shift away from baseline condition. As change arising from the loss/alteration will be discernible/detectable but not material. The post-development characteristics of the baseline condition will be similar to pre-development conditions.	Change of between 0.1% and 1%

Negligible	Very little change from baseline conditions. The change will be barely distinguishable and approximating to a non-change situation.	Change of less than 0.1%
Neutral	No change from baseline conditions.	0% change

Environmental Receptors – Tourism and Recreation

18.4.11 The Scheme is likely to have an impact on tourism and recreation receptors, albeit these are likely to be limited to those receptors that are directly impacted by the location of the Scheme such as Public Rights of Way. This ES will assess the sensitivity of receptors and magnitude of impact on key tourism and recreation receptors based on the metrics in **Table 18.5** and **Table 18.6** respectively.

18.4.12 The Scheme is likely to have an effect on both landscape visual receptors and on local heritage assets that rely on their setting for their value to the tourism and recreational economy. These impacts are likely to be felt at a local level only as a result of direct visual impacts. However these could have far wider-reaching direct and indirect impacts to the local and regional economy, as a result of changes to the desirability of local features and attractions for tourism and recreational use. The impacts on landscape visual receptors, including those at key tourist locations (such as important viewpoints) and on recreational routes have been discussed in greater depth in **Chapter 8: Landscape and Visual [EN010132/APP/WB6.2.8]**. The impacts on local heritage assets have been explored in **Chapter 13: Cultural Heritage [EN010132/APP/WB6.2.13]**.

18.4.13 The Scheme, being located on existing agricultural land, is not anticipated to directly impact on the use and accessibility of dedicated recreational spaces and tourist attractions. The Scheme may impact on the use of Public Rights of Way which cross the Sites or Cable Route Corridor during the project's construction, but this will be addressed in the **Outline Public Rights of Way Management Plan (PRoWMP)**at **ES Appendix 14.3 [EN010132/APP/WB6.3.14.3]**, and as part of the emerging construction management strategy set out in the **Outline Construction Environmental Management Plan (OCEMP) [EN010132/APP/WB7.1]** to ensure these features are retained and protected.

18.4.14 This chapter of the ES will therefore identify and assess the impact on key local tourism and recreational receptors including but not limited to:

- Public rights of way;
- Long distance walking and cycling routes;
- Navigable waterways; and
- Recreational hubs and key tourist attractions likely to be impacted by the development.

Table 18.5: Sensitivity and Importance of the Identified Environmental Receptor

Sensitivity	Definition
High	Receptor is likely to experience significant direct and indirect tourism and economic challenges with fundamental change to present characteristics. Accorded a high priority in local, regional or national tourism and recreation policy. Receptor is of regional or national importance.
Medium	Receptor is likely to experience some direct and indirect tourism and economic challenges, that will materially change its present characteristics. Change relating to receptor has medium priority in local and regional tourism and recreation policy. Receptor is of significant local importance.
Low	Indiscernible to minor direct or indirect tourism and economic challenges relating to receptor resulting in non-material changes to baseline conditions. Receptor is accorded a low priority in local and regional tourism and recreation policy. Receptor is of low importance.

Table 18.6: Magnitude of Change for the Identified Environmental Receptor (positive or negative)

Magnitude	Definition
High	The total loss or major change/substantial alteration to key elements/features of the baseline conditions, such that the post-development characteristics will be fundamentally changed.
Medium	Loss or alteration to one or more key elements/features of the baseline conditions, such that post-development characteristics of the baseline will be materially changed.
Low	A minor shift away from baseline condition. As change arising from the loss/alteration will be discernible/detectable but not material. The post-development characteristics of the baseline condition will be similar to pre-development conditions.
Negligible	Very little change from baseline conditions. The change will be barely distinguishable and approximating to a non-change situation.
Neutral	No change from baseline conditions.

Significance

18.4.15 The degree of significance of impacts, in respect of Socio-economics and Tourism and Recreation, is determined using the matrix below in **Table 18.7**, taking into consideration both receptor sensitivity to change and magnitude of change to baseline conditions.

18.4.16 Effects assessed to be moderate, major-moderate, or major, are deemed to be significant effects.

Table 18.7: Criteria for Assessing the Significance of Effects

Sensitivity Magnitude	High	Medium	Low
High	Major	Major-Moderate	Moderate
Medium	Major-Moderate	Moderate	Moderate-Minor
Low	Moderate	Moderate-Minor	Minor
Negligible	Moderate-Minor	Minor	Negligible
Neutral	Neutral	Neutral	Neutral

18.4.17 The degree of significance of an effect can be described either as beneficial or adverse in nature, and temporally as being of short-, medium-, or long-term. These together with the level of significance should be used to determine which effects from the Scheme need to be considered further in the ES, and therefore which effects require mitigation measures to be implemented in the design, construction, operation, and decommissioning of the Scheme.

Cumulative and In-Combination effects

18.4.18 The assessment also considers potential cumulative and in-combination effects related to relevant projects, where they are considered likely to have significant environmental effects. This includes assessing the cumulative impact of the construction of this Scheme, its operational lifetime, and its decommissioning, against other nearby NSIPs and relevant TCPA planning applications and approvals which will also have effects within the Local Impact Area and Regional Impact Area. A full list of these cumulative sites considered for assessment has been included at **ES Appendix 2.3 [EN010132/APP/WB6.3.2.3]**. Those considered in this chapter are identified in **Table 18.24.**

18.5 Baseline Conditions

18.5.1 The scale and geographic distribution of the proposals means that its effects have the potential to impact a significant geographic area and the associated population. The Scheme is situated across both West Lindsey District and Bassetlaw District. The Sites and the eastern portion of the Cable Route Corridor are located in West Lindsey, whilst the western part of the Cable Route Corridor and the connection point at West Burton Power Station Substation are within Bassetlaw District. As such, both district areas are assessed jointly as the Local Impact Area for socio-economic, agriculture, tourism and recreation, and human health impacts. Where the two districts have significantly differing baseline characteristics, these will be identified. Wider regional impacts from the Scheme are assessed across the East Midlands official statistical region, which is referred to in this chapter as the Regional Impact Area. Receptors discussed within this chapter are also comparatively assessed against national trends across the United Kingdom (subject to availability of information).

18.5.2 Other than population projections, which are discussed below, the future baseline is likely to be the same as the existing baseline for socio-economics and land use. Businesses may open and close, however the exact details of this cannot be known in advance. It is expected that there will not be any significant changes to the local economic baseline assessment and the Scheme should be assessed against current baseline conditions and policies.

Socio-Economic

Resident Population Size and Growth

18.5.3 The Local Impact Area, which comprises Bassetlaw and West Lindsey Districts had a combined population of 202,113 in 2011 (Ref.31), of which 112,863 (56%) live in Bassetlaw and 89,250 (43%) live in West Lindsey. The population of the Local Impact Area has increased to 212,957 in 2021 (Ref.32), representing a 5.4% increase over the last decade. This compares to a 7.7% population increase in the Regional Impact Area (comprising the East Midlands) (Ref.32), and an estimated 6.0% (Ref.32, Ref.33, Ref.34) population increase across the United Kingdom.

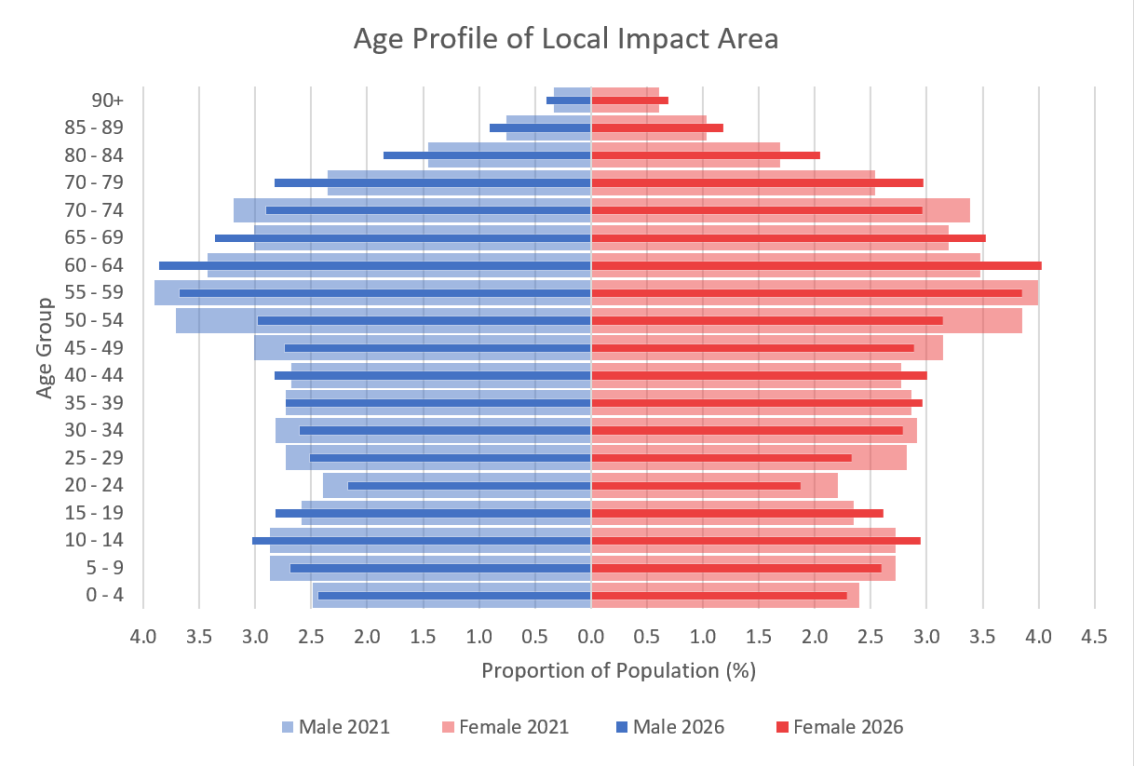
18.5.4 The population of the Local Impact Area is projected to rise by a further 4.2% (Ref.35) from 2021 to 2026, by which time the solar farm is anticipated to be operational. In the same 5-year period, the projected population growth in Regional Impact Area is estimated to be 4.1%, and nationally 2.9% (Ref.35). The Scheme has an estimated operational life of approximately 40 years, and for the purposes of the EIA the Scheme is anticipated to be decommissioned in 2066, at which point, the national population of the UK is projected to reach 75.4 million, approximately 12.6% (Ref.35, Ref.36) higher than the 2021 Census population estimate.

18.5.5 The projected population increase in the Local Impact Area from 2021-2026 is somewhat above national projections, although is within one standard deviation of the mean growth for LPA areas in England for 2021-2026.

Resident Population Age Demographics

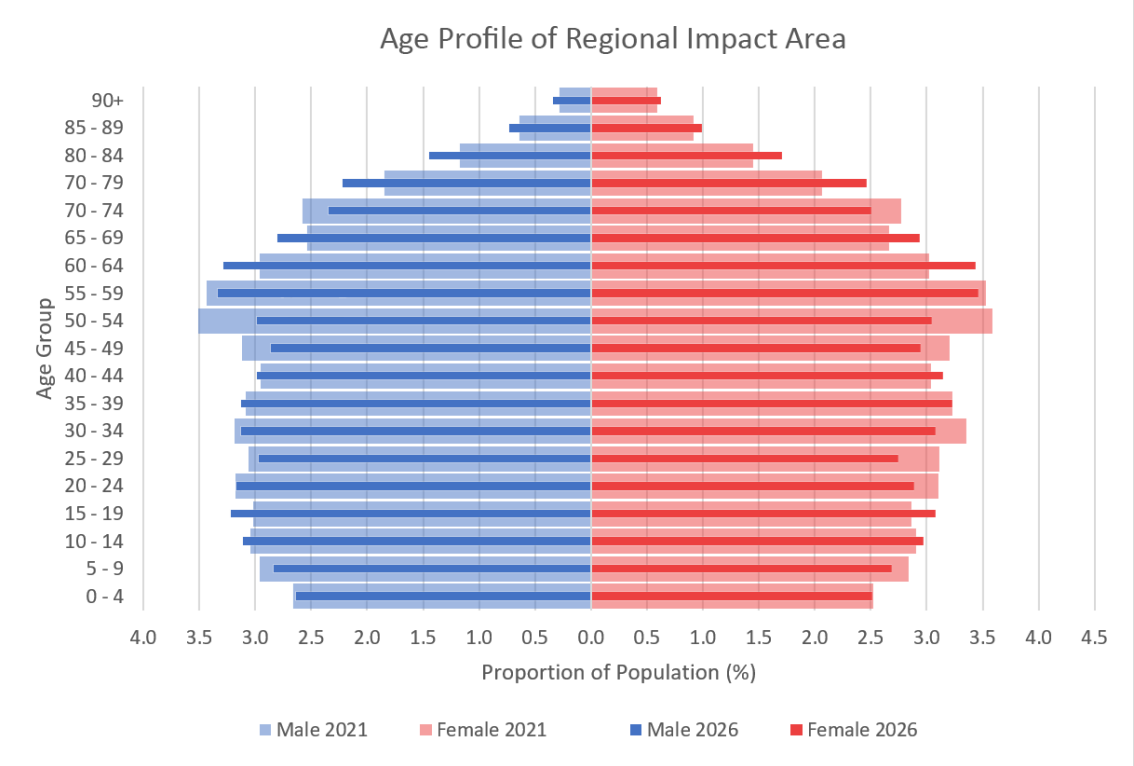
18.5.6 The Local Impact Area demonstrates a significantly older-biased population than the Regional Impact Area, as demonstrated in the 2021 Census population publications (Ref.37). In the Local Impact Area in 2021, the largest age bracket for both men and women is 55-59 years old, with the ages 50-74 comprising the five largest 5-year brackets, accounting for a total of 35.1% of the population. There is a secondary, smaller mode between 5- and 14-year-olds. The age group 20-24 years old is notable as being the smallest group below the age of 80 years old. This is demonstrated in **Figure 18.1**. These trends are further demonstrated in the 2026 population demography projections (Ref.35), which show the largest population age group will be 60-64 years old, with the ages 20-24 years old again being significantly smaller than most other age brackets below the age of 80 years old.

Figure 18.1: Age Profile of Bassetlaw and West Lindsey (Local Impact Area)



18.5.7 In comparison, the Regional Impact Area as demonstrated in the 2021 Census data has a modal age profile of ages 50-59, with the brackets between ages 5- and 49 years old largely consistently comprising 6.0%-6.5% of the population per 5-year bracket (Ref.37Ref.34Ref.35). The population age profile of the Regional Impact Area is projected to age in a consistent manner by 2026 (Ref.35). This is shown in **Figure 18.2**.

Figure 18.2: Age Profile of the East Midlands (Regional Impact Area)



18.5.8 The age profile of the local and regional impact areas demonstrate that the areas are likely to see a significant number of their populations reaching or nearing retirement age over the course of the Scheme's construction and delivery. This is particularly exaggerated in the Local Impact Area.

Accommodation Stock

18.5.9 The Local Impact Area falls across the boundary of the Central Lincolnshire Local Plan area and the Bassetlaw Local Plan area. As both Local Plans are in draft and substantively progressed, the housing stock, housing need, and projected housing supply rates set out in the draft Local Plans can be deemed as the most up-to-date. Data for the Regional Impact Area with regard to accommodation stock has not been collected separately as it is anticipated that all impacts on housing, temporary and visitor accommodation stock will be contained within the Local Impact Area.

18.5.10 The Central Lincolnshire Plan covers West Lindsey District, as well as North Kesteven District and Lincoln City. The Housing Needs Assessment (April 2020), undertaken to support the emerging plan, indicates that the required housing need for Central Lincolnshire is 1,325 dwellings per year from 2020 to 2040 (Ref.38). In the shorter term, the 2022 Central Lincolnshire Five Year Land Report (Oct 2022) calculates the housing need over the next five years is a minimum of 1,102 units per year. With the required 5% NPPF uplift, this shows a requirement of 1,157 units per year, equating to 5,786 dwellings over 5 years. Central Lincolnshire have calculated they are able

to deliver 9,319 units, thus can demonstrate an 8.05-year housing land supply (Ref.39).

18.5.11 Likewise, the Bassetlaw Local Plan estimates it can deliver a supply of 12,938 homes over the plan period 2020-2038 (Ref.14), equating an average of 718 units per year. In the shorter-term, the Five-Year Housing Land Supply Statement for Bassetlaw calculates the housing need over the next five years is a minimum of 279 units per year. With the required 5% NPPF uplift, this shows a requirement of 293 dwellings per year over 5 years. Bassetlaw have calculated they are able to deliver 3,982 units, thus can demonstrate a 13.5-year housing land supply (Ref.40).

18.5.12 These figures indicate that the Local Impact Area is well stocked with housing accommodation and is able to meet and exceed the needs of the local population.

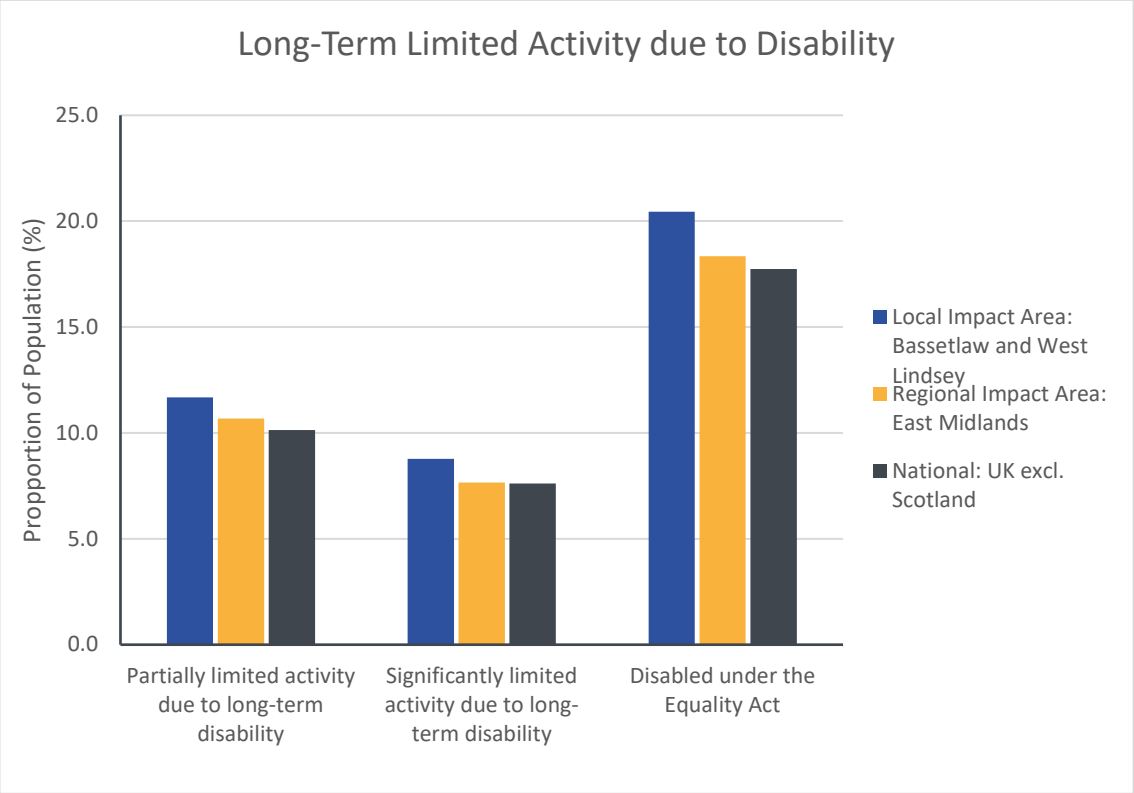
18.5.13 Under the most recent Visit Britain Accommodation Stock Audit in 2016, the surveyed number of serviced accommodation establishments (such as hotels) was 100, containing a total of 953 rooms or 2,210 'bed spaces'. Furthermore, there were another 80 non-serviced accommodation establishments, containing a total of 466 rooms or 1,865 bed-spaces (Ref.41). The size of the accommodation sector both with regard to number of establishments and number of employees is likely to have been temporarily impacted by the COVID-19 pandemic and subsequent economic pressures, and as such, is likely to be in a more sensitive position than when audited in 2016.

Population Health and Wellbeing

18.5.14 The 2021 Census collected information on the long-term health of residents, including proportions of people with limited activity due to long-term physical and mental disabilities as defined by the Equality Act 2010 (Ref.42), in the whole population. It also collected data on self-assessed personal health. National information excludes Scotland as comparative Census 2022 data has not yet been published. Supporting data has been collected through the Department of Work and Pensions (DWP) and Office for Health Improvement and Disparities (OHID) Public Health Data service, although it does not necessarily calculate health and wellbeing data in the same way as the Census.

18.5.15 Within the Local Impact Area, limited activity as a result of a long-term disability, as defined under the Equality Act 2010, within the population in 2021 stands at 20.5%, which is notably higher than both the regional and national rates at 18.3% and 17.7% respectively (Ref.43, Ref.44). This is shown in **Figure 18.3**.

Figure 18.3: Long-Term Limited Activity due to Disability in the Population



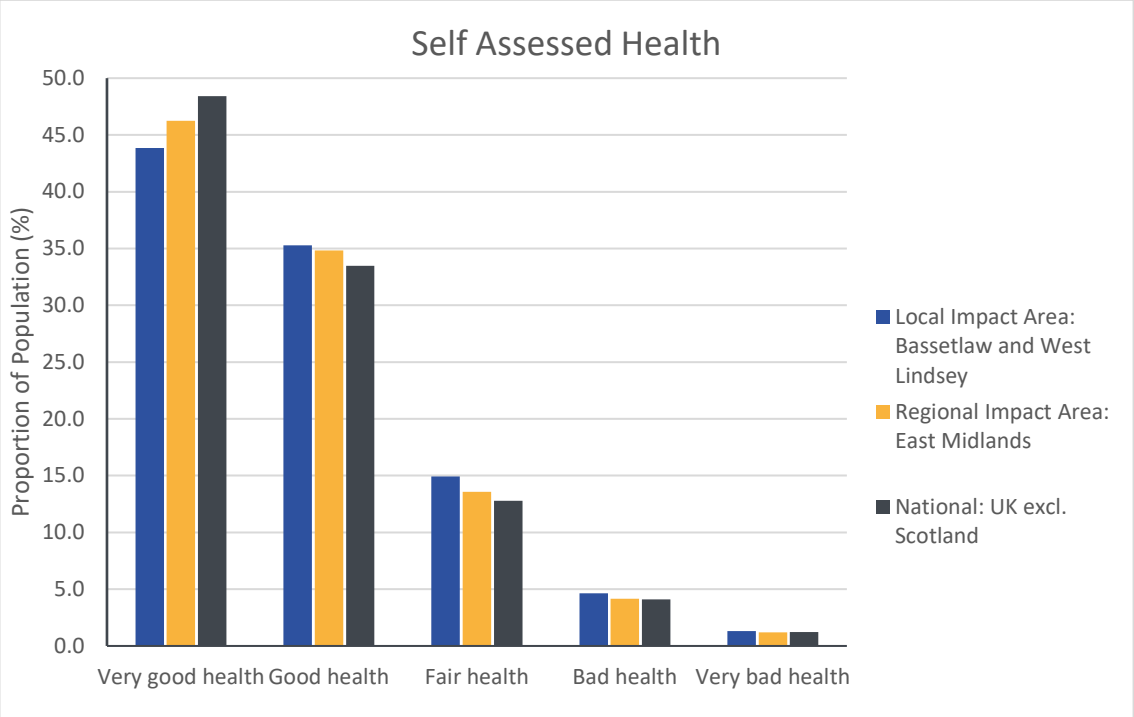
18.5.16 Furthermore, the proportion of the population in the Local Impact Area awarded Personal Independence Payment (PIP) in August 2022 is approximately 5.5%. This is somewhat higher than the rate in the Regional Impact Area and across the UK (4.9%) (Ref.45, Ref.46).

18.5.17 OHID data demonstrates that in 2020-21, the rate of physical inactivity in the adult population of the Local Impact Area stood at 23.7%, falling between the rate of 24.5% in the Regional Impact Area, and 23.4% for England (Ref.47).

18.5.18 Whilst the rates of long-term disability within the general and working age population of the Local Impact Area is demonstrably higher than the regional and national rates, these still fall within one standard deviation of the rates across all local authority areas in the UK. This is also true for the proportion of the population in the Local Impact Area claiming Disability Living Allowance.

18.5.19 The 2021 Census found that in regard to self-assessment of health, the proportion of the population in the Local Impact Area who considered themselves to have "bad" or "very bad" health was slightly higher than the regional and national rate. The proportion within the Local Impact Area was 5.9%, compared to 5.3% regionally and nationally (Ref.48, Ref.49). **Figure 18.4** demonstrates the self-assessment of health in greater detail and notably demonstrates that the Local Impact Area also has a lower than regional or national rate of reporting of 'very good' health.

Figure 18.4: Self-Assessment of Health in the Population



18.5.20 The number of full-time equivalent general practitioners (FTE GP) per 100,000 population in an area is a metric for identifying the level of general healthcare available and can be used to make a judgement on the accessibility of general healthcare in the target area. As of December 2022, the English national average number of FTE GPs per 100,000 is 44.0 (equivalent to 2,273 patients per FTE GP) (Ref.50). The Local Impact Area falls across both Bassetlaw and Lincolnshire NHS Care Commissioning Group (CCG) areas, the latter of which West Lindsey District falls entirely within. Both areas fare favourably compared to national rates. Bassetlaw NHS CCG has an average 46.6 FTE GPs per 100,000 population (equivalent to 2,147 patients per FTE GP) (Ref.51), whilst the collective of surgeries in the West Lindsey part of Lincolnshire NHS CCG has a slightly lower rate of 46.2 FTE GPs per 100,000 (equivalent to 2,163 patients per FTE GP) (Ref.52).

18.5.21 The Regional Impact Area also has a very slightly higher than national average rate of FTE GPs per population at 44.8 FTE GPs per 100,000, equivalent to 2,234 patients per FTE GP (Ref.50).

18.5.22 Whilst the level of access to general healthcare is generally even across Bassetlaw and West Lindsey, this does not overall reflect the health and wellbeing of the local population. The Indices of Multiple Deprivation 2019 (Ref.53) demonstrates that residents in Bassetlaw are more likely than the national average to be deprived with regard to healthcare and disability (average rank 68th most deprived of 317 LPAs), whilst in West Lindsey, access is at, or slightly better than, national expectations (average rank 143rd most deprived of 317 LPAs). This apparent reversal of local

circumstances compared to general healthcare provision indicates that issues such as population rates of disability, personal wellbeing, physical distance and accessibility to healthcare providers, and emergency and long-term healthcare are likely to be greater concerns in Bassetlaw than West Lindsey.

18.5.23 In addition to the above, OHID data available through their Fingertips: Public Health Data online web tool (Ref.47), as reported in Lincolnshire and Nottinghamshire's Joint Strategic Needs Assessments, identified further indicators of health and wellbeing in the population.

18.5.24 The rate of adults in 2020-21 defined as overweight or obese (having a BMI of 25 or above) is approximately 67.4% in the Local Impact Area. This is higher than both the Regional Impact Area (66.6%) and the national average for England (63.5%). In children, the population rate of those who are overweight or obese is 37.7%, however this is unevenly split across the two constituent districts with the rate in Bassetlaw being higher at 38.5% than in West Lindsey at 36.8%. Together, the rate for the Local Impact Area is consistent with both the regional and national average (37.8%).

18.5.25 The estimated prevalence of common mental disorders and disabilities among adults in the Local Impact Area is 16.6%. This is however unevenly split across the two constituent districts with the rate in Bassetlaw being higher at 17.7% than in West Lindsey at 15.3%. Together, the prevalence of common mental disorders and disabilities in the Local Impact Area is consistent with both the regional (16.3%) and national average (16.9%).

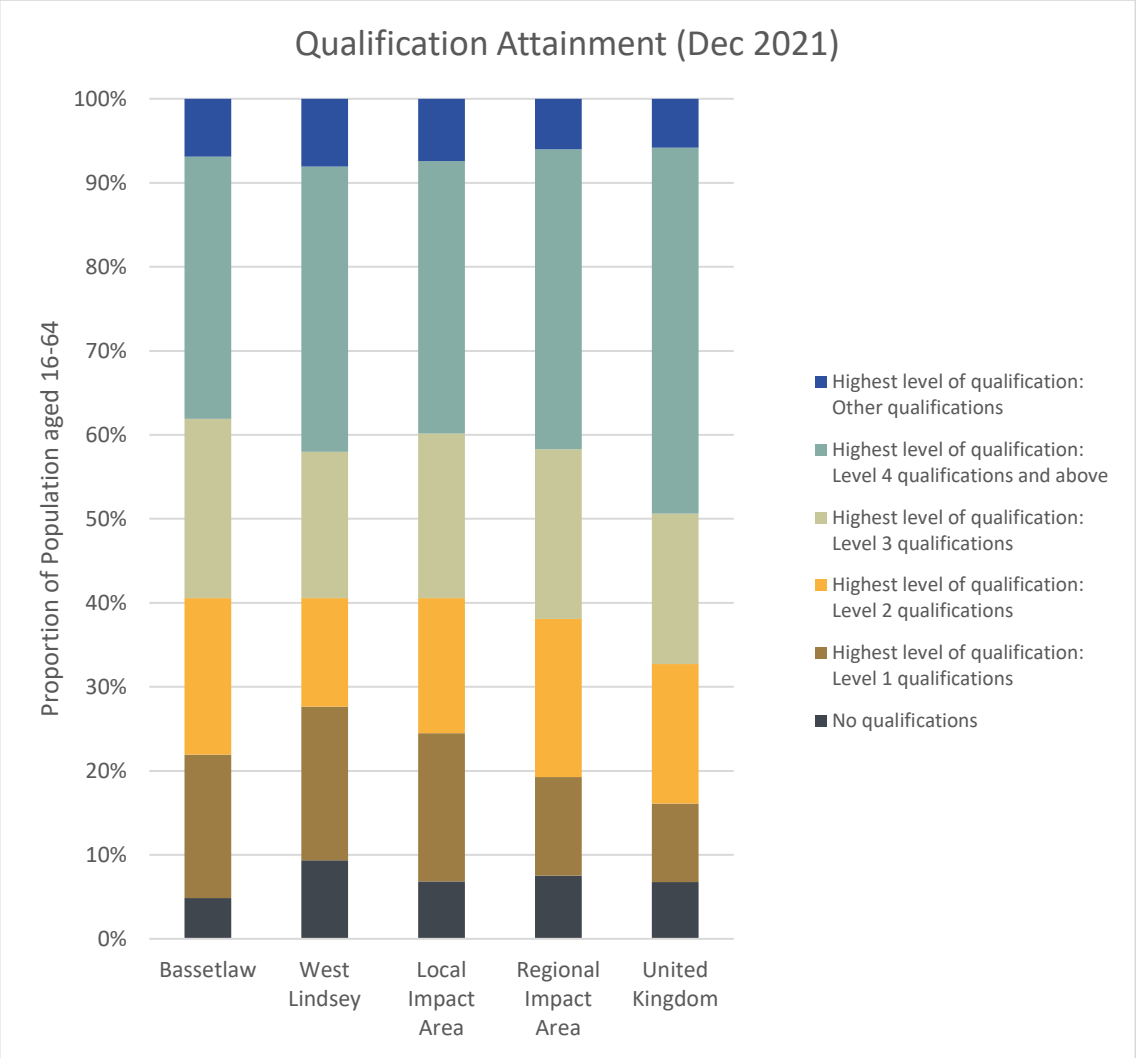
Skills and Qualification Attainment

18.5.26 The qualification attainment rate within the Local Impact Area at the time of the December 2021 Annual Population Survey indicates a significant variance in skills and qualification between the two subject local authority areas and regional and national qualification attainment rates (Ref.54).

18.5.27 The proportion of the population between the ages 16-64 years old achieving no qualifications varies significantly, with Bassetlaw having a notably low rate of 4.9% compared to the high rate of 9.4% in West Lindsey. The resultant combined Local Impact Area has a rate of 6.9%, which is far more consistent with the regional (7.5%) and UK national (6.8%) rates.

18.5.28 Both districts within the Local Impact Area are notable for having a far greater (Bassetlaw: 17.0%; West Lindsey: 18.3%) than average (Regional Impact Area: 11.8%; UK 9.3%) proportion of the working age population with a maximum qualification of NVQ Level 1 or equivalent. Resultantly, the Local Impact Area has a significantly lower rate of attainment of NVQ Level 4 and higher qualifications, at about 32.5%, compared to 35.7% in the East Midlands, and 43.5% across the UK. These can be seen in more detail in **Figure 18.5** below.

Figure 18.5: Qualification Attainment Rate in ages 16-64 as of December 2021



Deprivation

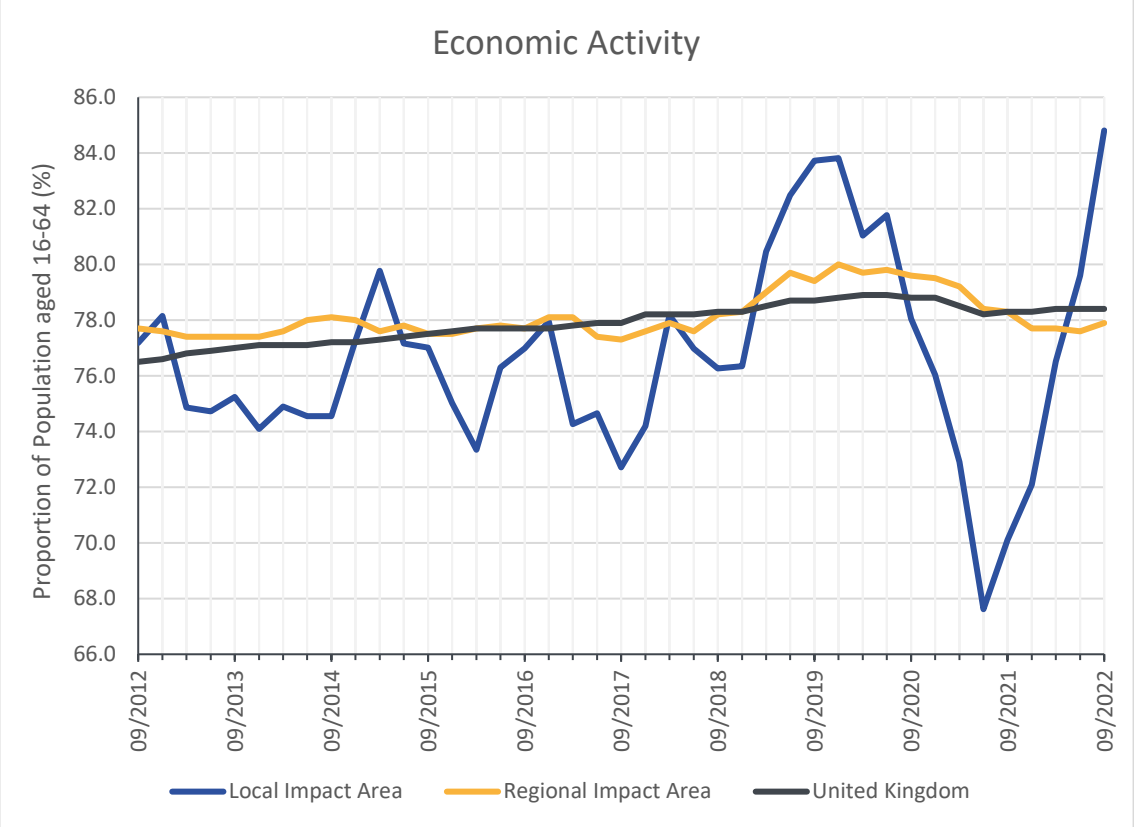
18.5.29 The Indices of Multiple Deprivation 2019 provides the most up-to-date information regarding measures of population deprivation across England. The Scheme is located in both Bassetlaw and West Lindsey districts, which are respectively the 108th and 146th most deprived of 317 authority areas in England (Ref.55). The populations within both districts in the Local Impact Area are more likely to be deprived (than the national average) of access to employment, whilst those in Bassetlaw are more likely (than the national average) to be deprived of access to education and skills, and to suitable incomes (Ref.55). Consideration of these factors against the notable shortfall in population in their 20s and 30s within the Local Impact Area, are likely representative of a localised "brain drain" as young professions seek to find employment and better quality of life outside the Local Impact Area.

Economic Activity and Unemployment

18.5.30 The economically active population is defined as the members of the working age (16–64-year-old) population being in employment, and those who are seeking employment and are able for work. Economically inactive members of a population are predominantly categorised by retirement, those in full-time education not seeking employment, full-time carers of family members, and long-term sick and disabled people.

18.5.31 The September 2022 Annual Population Survey indicates that the Local Impact Area has an economic activity rate of 84.8%. This figure is substantively higher than both the regional (77.9%) and national rates (78.4%) (Ref.56), and is more than one standard deviation of the rates across all local authority areas in the UK. Trends in economic activity since 2012, as can be seen in **Figure 18.6**, show that the Local Impact Area has had a far more fluctuating activity rate than the regional and national trends (which have remained relatively consistent).

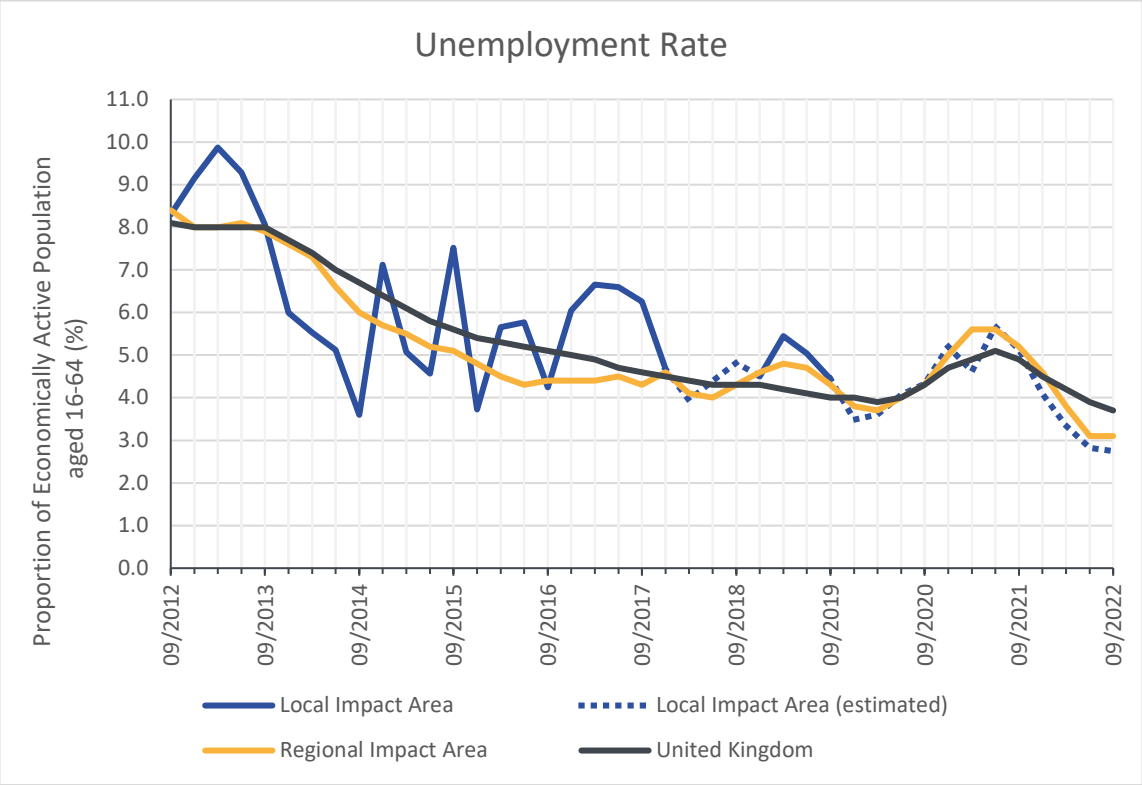
Figure 18.6: Economic Activity from 2012-2022



18.5.32 Notably in the period 2019-2021, the economic activity rate in the Local Impact Area has dropped from a peak of 83.8% down to low of 67.6%. In the same period, the national rate dropped from 78.9% to 78.2%. Whilst this may be the result of several underlying factors, it is likely that the economy of the Local Impact Area has been disproportionately affected by the COVID-19 pandemic.

18.5.33 The September 2022 Annual Population Survey measures the unemployment rate as being the proportion of the economically active population who are not in active employment. National trends from 2012-2022 show unemployment has fallen from 8.2% in 2012 to a low of 3.7% in 2022, with an interim rise to 5.1% in 2021 (Ref.57), likely as a result of economic impacts from the COVID-19 pandemic. The trend in the Regional Impact Area has broadly tracked the national trend over the decade. Data for the Local Impact Area is incomplete from 2018 onwards and as such relies on ONS unemployment modelling and labour market indicators (Ref.58, Ref.59). The overall trend for the Local Impact Area also follows the national trend but shows far more exaggerated year-on-year fluctuations. This is shown in **Figure 18.7** below.

Figure 18.7: Unemployment Rate from 2012-2022



Employment and Wages

18.5.34 Closely related to the rates of economic activity, the rate of residents in the Local Impact Area between 16 and 64 years of age who are in employment has fluctuated considerably in the last 10 years. Growth in the employment in the Local Impact Area since 2012 has largely trended below the regional and national trends, although the employment rate has tended to oscillate both above and below regional and national rates. From 2012 to 2022, the employment market in the Local Impact Area has grown by 20.3% (equivalent to approximately 18,000 people), with the rate of employment increasing from 70.9% to 83.4% of the population aged 16-64. The employment count and rate were at their highest in September 2022 following rapid

growth from significant lows in June 2021, most likely as a result of the economic impacts of Brexit and the COVID-19 pandemic. This is shown in **Figures 18.8** and **18.9** below.

18.5.35 Whilst changes in the Local Impact Area have a greater level of variability, the overall trend largely correlates with the steady growth in employment count and rate in the Regional Impact Area and in the UK from 2012-2020, with a dip and recovery in 2021 and 2022 as a result of the economic impacts of the impacts of Brexit and the COVID-19 pandemic. Both the regional and national peaks in employment growth from the 2012 baseline occurred in March-June 2020, being approximately 10.0-10.5% greater than the 2012 baseline. With regard to peak employment rates, these were 76.9% in December 2019 in the Regional Impact Area and 75.8% in March 2020 in the UK (Ref.60).

Figure 18.8: Employment Count 2012-2022 related to 2012 baseline

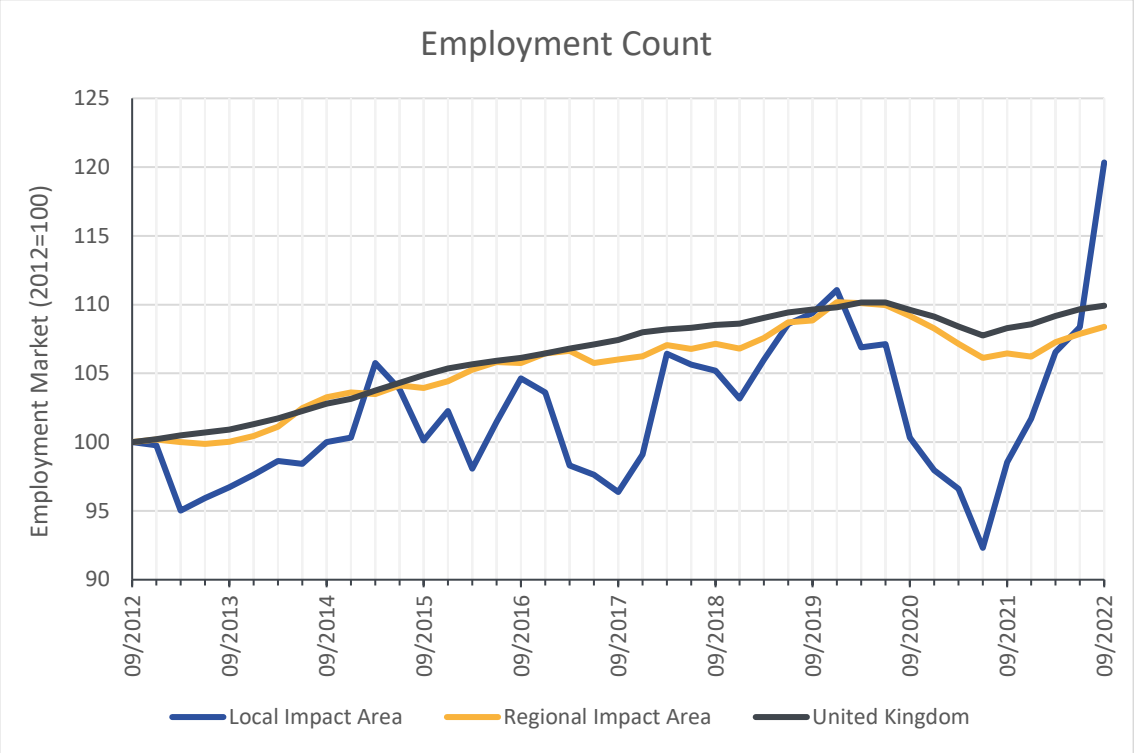
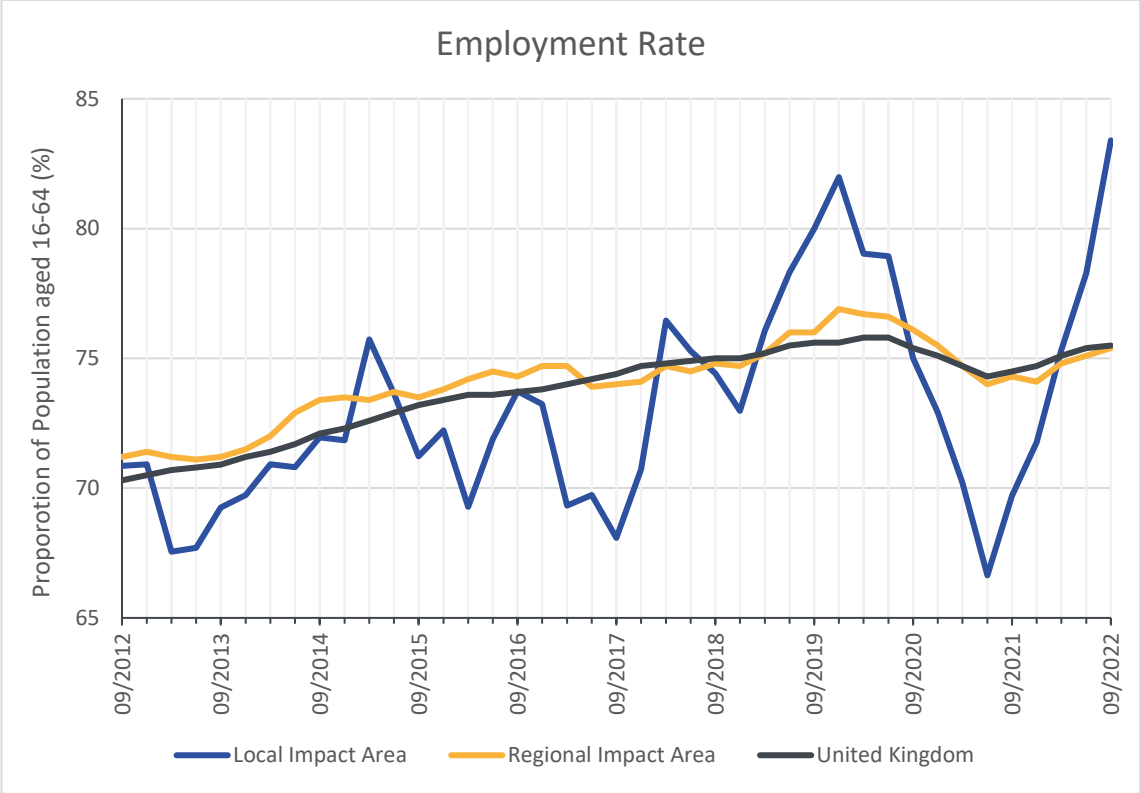


Figure 18.9: Employment Rate in 16-64 year olds from 2012-2022



18.5.36 For residents within the Local Impact Area, the median annual gross salary for full-time workers (in 2022) was £30,958. This is marginally higher than that of the East Midlands region, at £30,900, but notably lower than the UK median, at £33,000 (Ref.61). As indicated previously when discussing indices of deprivation, income is uneven across the two constituent districts, with residents in West Lindsey earning approximately £5,600 more than their counterparts in Bassetlaw. Since 2012, median wages in the Local Impact Area have risen by approximately 24.5% (£6,095). This is proportionally very similar to wage rises in the Regional Impact Area (23.6% – £5,905) or nationally (24.7% – £6,530) in the last decade (Ref.61). These trends are shown in **Figure 18.10** and **Figure 18.11**.

Figure 18.10: Resident Median Annual Gross Income 2012-2022

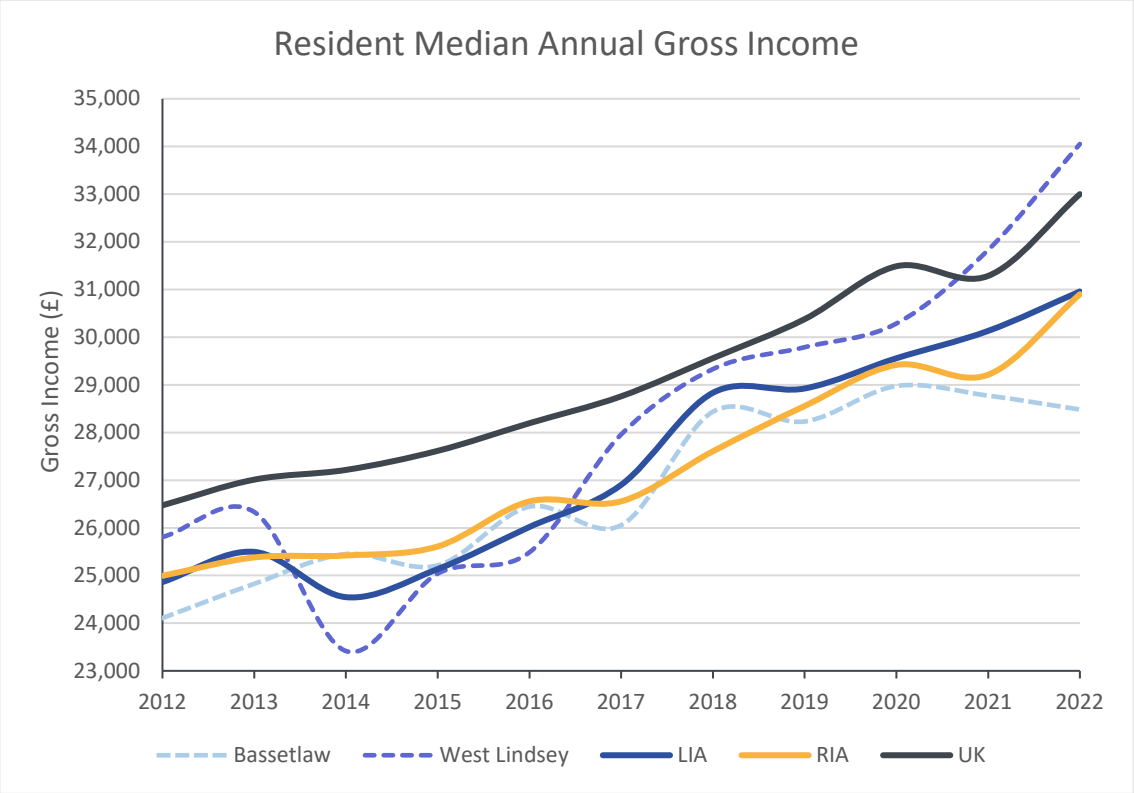
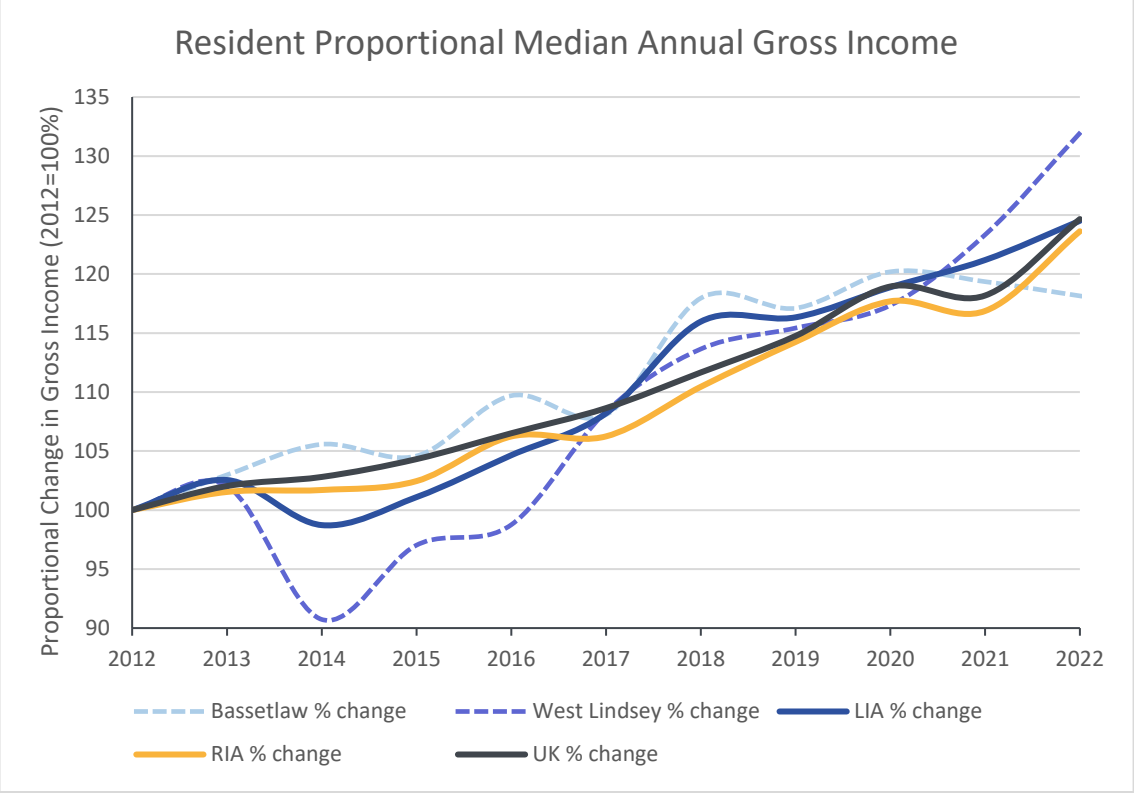


Figure 18.11: Resident Median Annual Gross Income 2012-2022 related to 2012 baseline



18.5.37 For workers within the Local Impact Area, the median annual gross salary for full-time employment (in 2022) was £29,759. Unlike resident median wages, this is marginally lower than that of the Regional Impact Area, at £30,326, and notably lower than the UK median, at £33,000 (Ref.62). This difference between resident and workplace median pay indicates that it is likely that employees travel outside the local and regional areas to access higher-paid work, or that lower-paid workers are more likely to travel into the area. As with residents' median pay, there is a significant difference across the two constituent district in the Local Impact Area, with those working in West Lindsey paid on average £8,900 more than those in Bassetlaw.

18.5.38 Since 2012, median wages for workers in West Lindsey and Bassetlaw have risen at very different rates. In West Lindsey, the proportional wage rise is 49.4% compared to 10.6% in Bassetlaw. The resultant proportional wage rise of approximately 27.8% (£6,465) across the Local Impact Area is somewhat greater than the proportional wage rises in the Regional Impact Area (23.1% – £5,700) or nationally (24.7% – £6,530) for the same period (Ref.62). These trends are shown in **Figure 18.12** and **Figure 18.13**.

Figure 18.12: Workplace Median Annual Gross Income 2012-2022

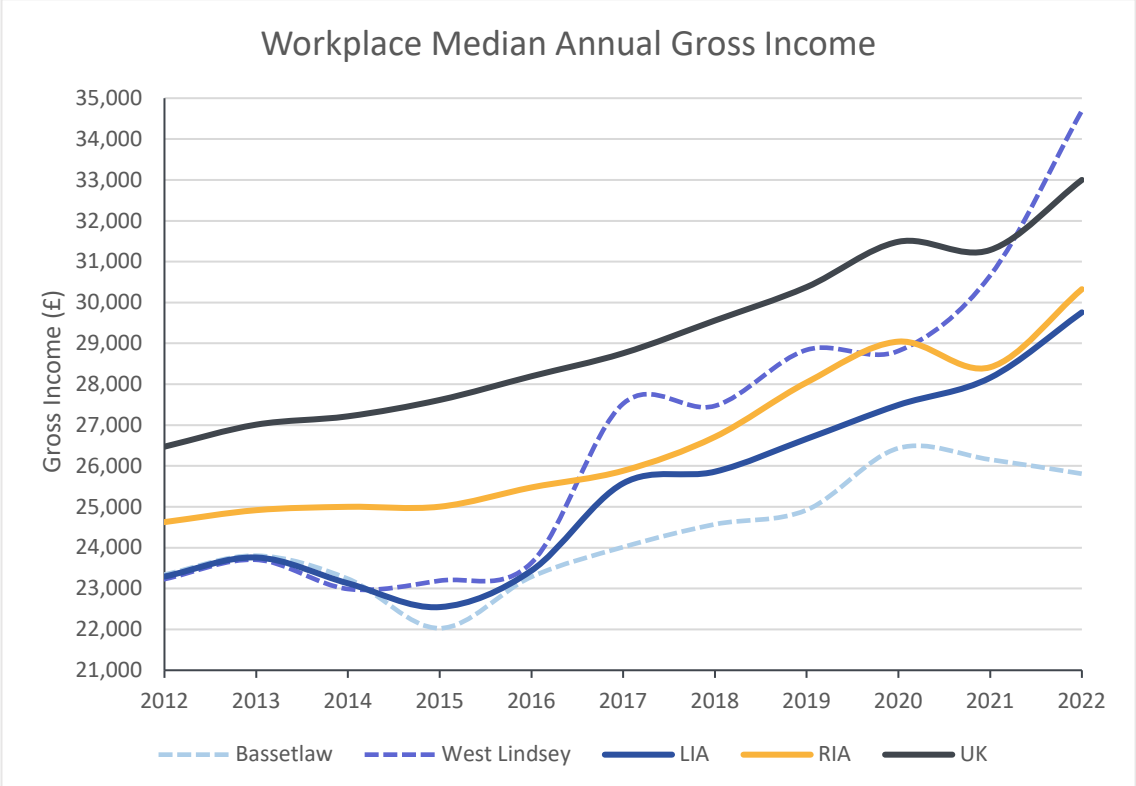
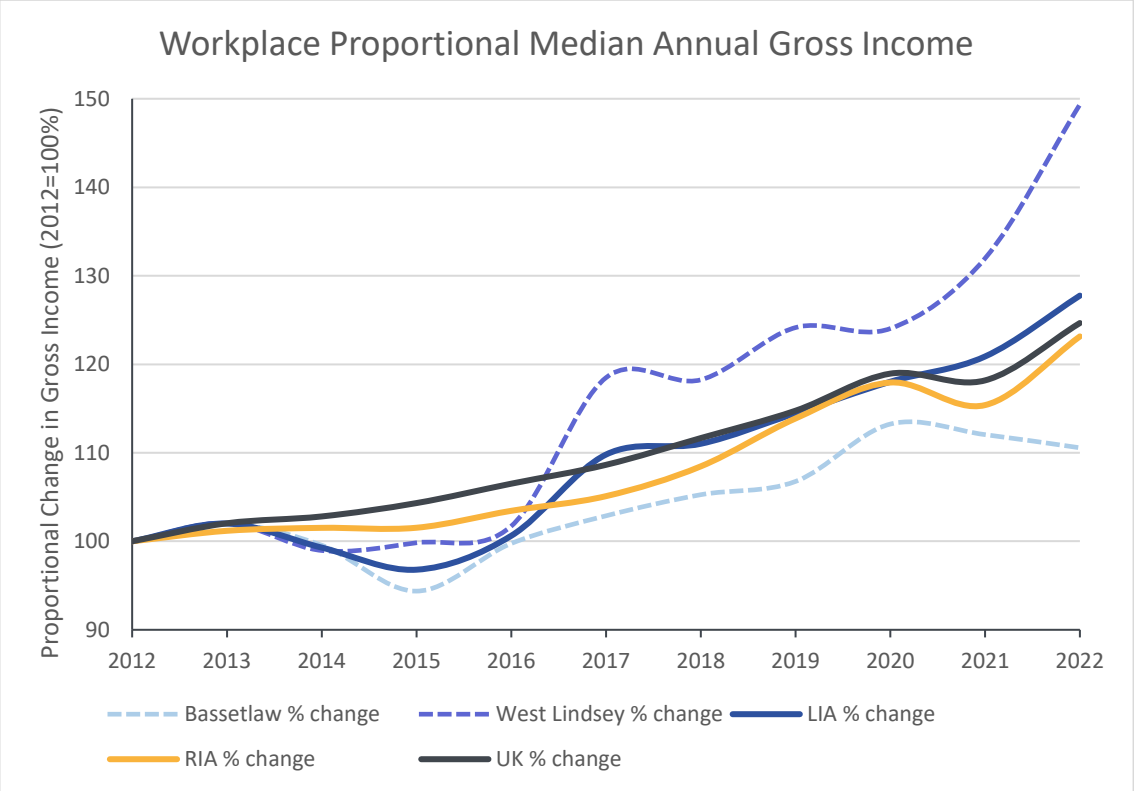


Figure 18.13: Workplace Median Annual Gross Income 2012-2022 related to 2012 baseline



18.5.39 Although there are significant differences between the two constituent districts within the Local Impact Area since 2016, the overall conditions with regard to workplace median annual gross income growth are more consistent with regional and national trends. That notwithstanding, the gross income for workers in the Local and Regional Impact Areas is substantively below the national average.

Working Population

18.5.40 Data for the location of residence versus workplace, commuting distance, and commuting method, has been taken from the 2011 Census. Similar data from the 2021 Census is not due to be published until after the DCO submission, and as a result of the 2021 Census being undertaken while the United Kingdom was under national lockdown, with national guidance urging non-essential workers to work from home, the data is very likely to be unrepresentative of working patterns in 2023 and onwards. As a matter of due diligence, it should be noted that the baseline conditions are likely to have remained considerably changed since before the imposition of national lockdown measures, however, in the absence of any interim data, the 2011 Census data remains the most useful and up-to-date data for determining the relevant baseline conditions.

18.5.41 The fixed 2011 workplace population of the Local Impact Area was 65,605, approximately 78.2% of the population of residents aged 16 and above in

employment of 83,925. This is slightly lower but nonetheless consistent with regional and national trends (mean workplace population is 86.2% of resident population in UK district authority areas), particularly in consideration of the largely rural nature of the Local Impact Area.

18.5.42 Of the 65,605 workers in the Local Impact Area, 42,099 (64.2%) are also usual residents of the Local Impact Area. Of the remaining 23,506 (35.8%) workers in the Local Impact Area, 12,690 (19.3% of total) commute in from other districts within the Regional Impact Area and 10,816 (16.5% of total) travel in from elsewhere in the UK, predominantly Yorkshire and the Humber. Specifically, the largest inflows of commuters are from the neighbouring districts Rotherham (2,226), Doncaster (2,435), and Lincoln City (2,615).

18.5.43 A significant number of residents from the Local Impact Area, approximately 41,800, commuted out for work. This included almost 25,700 commuting to the immediately neighbouring districts and authority areas, of which there were approximately 3,400 working in North Lincolnshire, over 3,600 in Doncaster, and nearly 8,300 in Lincoln. In the 2011 Census, 6,450 of the residents of the Local Impact Area had no fixed place of work, whilst approximately 300 people from the local impact area work in offshore installations or outside the UK (Ref.63).

18.5.44 The Local Impact Area is consistent with national trends for workplace population as a proportion of the employed resident population, the proportion of the workplace population who work and live in the same district, and with the proportion of the residential and working populations that commute in and out of the district area.

18.5.45 The working population of the Local Impact Area in 2011 was on average more likely than regional and national trends to work mainly at or from home: 13.5% compared to 10.5% regionally and 10.3% nationally (England & Wales only). However, the proportion of workers with no fixed workplace was consistent with regional and national averages (~8%) (Ref.63).

18.5.46 The average travel distance for commuters in the Local Impact Area was 14.6km, which was consistent with the distance travelled by commuters across England and Wales (14.5km). This is however notably more than the average for the Regional Impact Area of 12.8km (Ref.64).

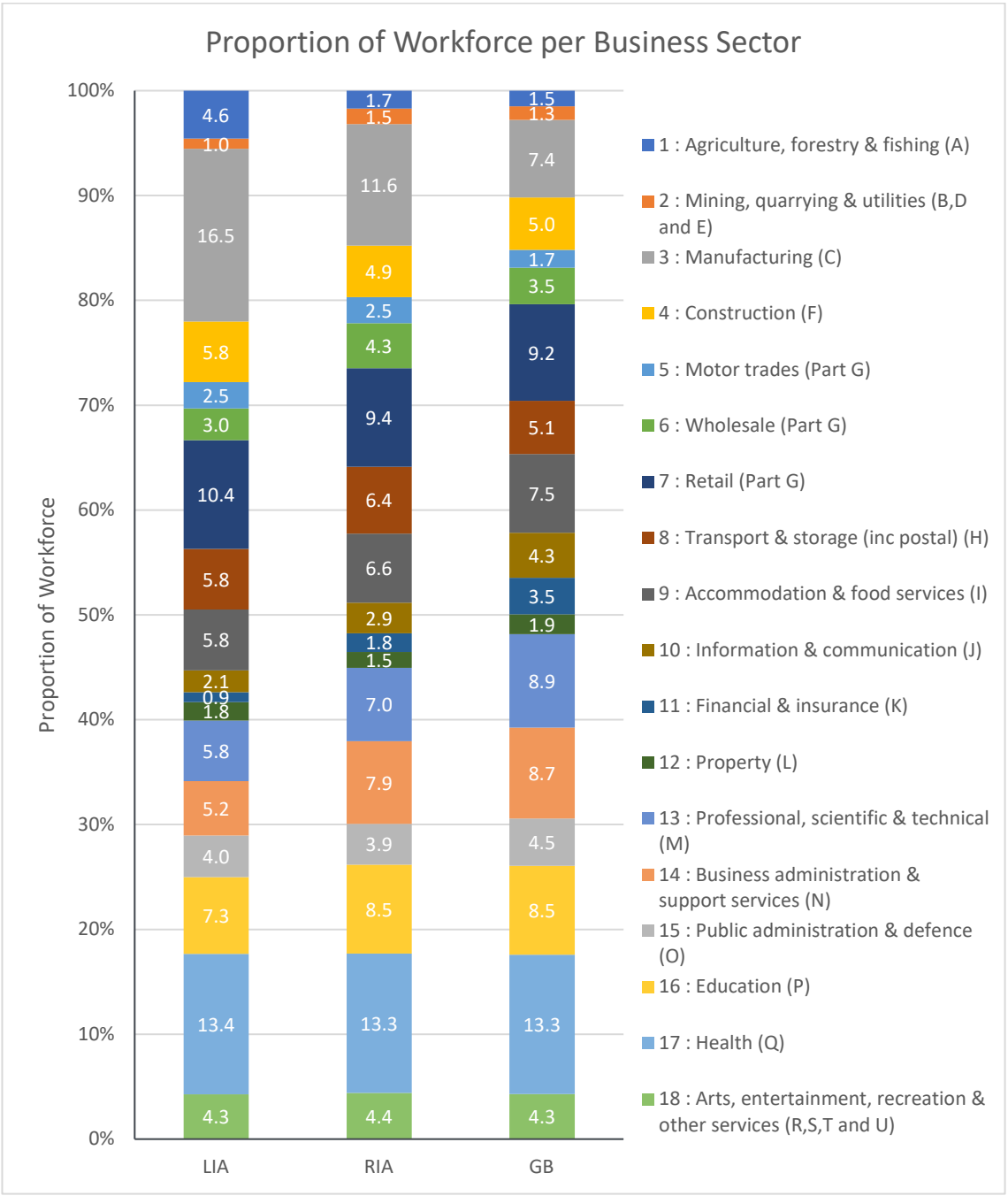
18.5.47 Rates of commuters travelling to work in the Local Impact Area by foot and by bicycle were relatively consistent at all levels, at ~10% and ~2.8% respectively. The Local Impact Area was distinct from commuting trends at a regional and national level due to the heavier reliance on private vehicles (cars, van, motorcycles, taxis), at 70.8%. Across the Regional Impact Area, private vehicle use for commuting is at 68.6%, whilst across England and Wales is 60.8%. Resultantly, the Local Impact Area had little comparative commuting by public transport or larger shared vehicles (minibuses/coaches etc.). Use of these methods for commuting stood at 2.9% across the Local Impact Area, versus 7.3% in the Regional Impact Area, and 15.9% across

England and Wales (Ref.65). The figure for the Local Impact Area is significant as it is more than one standard deviation lower than the national average.

Business Sector Workforce

18.5.48 The 2021 Business Register and Employment Survey demonstrates that the working population of the Local Impact Area in 2021 was approximately 82,025, whilst for the Regional Impact Area, the working population was approximately 2,204,000 (Ref.66). **Figure 18.14** below presents a detailed breakdown of the proportion of the workforce in broad business sectors.

Figure 18.14: Proportion of Workforce per Business Sector



18.5.49 Figure 18.14 above demonstrates the largest business sector by percentage of employed workforce in the Local Impact Area is manufacturing (16.5%), followed by health (13.4%), and retail (10.4%). This contrasts with the national (GB only) largest three sectors: health (13.3%), retail (9.2%) and professional, scientific and technical (8.9%) (Ref.66).

18.5.50 By number of standard deviations away from the national mean, the Local Impact Area's manufacturing, and motor trades industries are the only industries significantly larger by business proportion than the national level. No industry in the Local Impact Area is significantly smaller than the national mean. Similarly, only the motor trades industry within the Regional Impact Area is significantly larger than the national mean, all other business sectors fall within one standard deviation of the national rates.

18.5.51 There is not, however, consistency across the two constituent districts that make up the Local Impact Area. Notably, compared to West Lindsey, Bassetlaw has a far bigger manufacturing sector (19.2% vs. 11.3%) and retail sector (11.5% vs. 8.1%). Conversely, West Lindsey has a proportionally far larger agriculture, forestry and fishing industry workforce (8.1% vs. 2.4%), construction sectors (7.3% vs. 4.8%), and property sector (3.2% vs. 0.9%) (Ref.66).

Local Economy

18.5.52 The size of the local economy can be measured using Gross Value Added (GVA), which measures the value of goods and services in a given area. The most recent data for GVA at local authority level is from 2020. The Local Impact Area had a GVA (balanced) of £3.6 billion, forming part of the Regional Impact Area's GVA of £104.4 billion, with Great Britain having a GVA of £1.77 trillion (Ref.67).

18.5.53 Per head of population (Ref.68), the 2020 GVA was unevenly split within the Local Impact Area, with Bassetlaw having a GVA per population of £18,448, whilst in West Lindsey the GVA per population stood at £14,971. Together, the Local Impact Area had a GVA per population of £16,888. This is lower than both the Regional Impact Area (£21,464) and Great Britain (£27,097). The GVA per population in the Local Impact Area falls within the lowest 25% of local authority areas in the United Kingdom, whilst the Regional Impact Area is nearer to the median GVA per population. The GVA per population for Great Britain is skewed by outlying data from exceptionally high GVA in Greater London.

18.5.54 Comparatively, per worker, the 2020 GVA is more evenly split within the Local Impact Area, with Bassetlaw having a GVA per worker of £43,727, whilst in West Lindsey the GVA per population stood at £46,640. Together, the Local Impact Area had a GVA per population of £44,841. This is still lower than both the Regional Impact Area (£48,825) and Great Britain (£57,843) but is comparatively closer than the GVA per head of population. The GVA per worker for both the Local and Regional Impact Areas falls within one standard deviation of the national mean.

Table 18.8: GVA per Broad Sector

Broad Economic Sector	Local Impact Area		Regional Impact Area		Great Britain	
	GVA (£ million)	% total	GVA (£ million)	% total	GVA (£ million)	% total
Total	3,622	100.0	104,437	100.0	1,766,342	100.0
Agriculture, forestry & fishing (A); and Mining, quarrying & utilities (B, D, E)	265	7.3	5,575	5.3	66,637	3.8
Manufacturing (C)	709	19.6	17,700	16.9	176,037	10.0
Construction (F)	258	7.1	6,983	6.7	104,708	5.9
Motor trades, wholesale & retail (G); Transport & storage (inc. postal) (H); and Accommodation & food services (I)	709	19.6	20,341	19.5	287,526	16.3
Information & communication (J)	44	1.2	3,344	3.2	117,079	6.6
Financial & insurance (K)	41	1.1	3,442	3.3	156,971	8.9
Property (L)	582	16.1	13,654	13.1	257,084	14.6
Professional, scientific & technical (M); and Business administration & support services (N)	204	5.6	10,178	9.7	221,761	12.6
Public administration & defence (O); Education (P); and Health (Q)	736	20.3	20,304	19.4	327,398	18.5
Arts, entertainment, recreation & other services (R, S, T and U)	76	2.1	2,919	2.8	51,090	2.9

18.5.55 Table 18.8 demonstrates the nominal and proportional split between economic sectors within the Local and Regional Impact Areas compared with national trends, as measured by Gross Value Added. A substantively larger part of the local economy

is generated in manufacturing (C) than the national average. In contrast, the information & communication (J); financial & insurance (K); and professional, scientific & technical and business administration & support services (M, N) are all significantly smaller than the national average. All of these sectors fall between one and two standard deviations of the national mean. All other sectors fall within one standard deviation of the national mean.

18.5.56 All the sectors in the Regional Impact Area fall within one standard deviation of the national mean.

Tourism and Recreation

Tourism Economy

18.5.57 The Local Impact Area falls across two counties (Lincolnshire and Nottinghamshire), each with their own economic strategies for tourism. In 2019, the Nottinghamshire visitor economy was worth approximately £1.75 billion and supported 15,000 jobs (Ref.69), within which Bassetlaw provides a small number of key attractions such as the Pilgrims Gallery, Clumber Park, Sundown Adventureland and the Harley Gallery at the Welbeck Estate.

18.5.58 The Greater Lincolnshire (Lincolnshire County, North Lincolnshire, North East Lincolnshire, and Rutland) visitor economy was worth approximately £2.5 billion (Ref.25) and accounted for approximately 30,000 jobs in 2019 (Ref.70). Within this West Lindsey contributed approximately £143 million to the visitor economy. Large attractions in West Lindsey are recognised as being limited in number, with main attraction being focussed on heritage, aviation, environment and landscape, and key events. The district also hosts a number of niche attractions and prominently advertised attractions such as the Hemswell Antiques Centre, RAF Scampton Heritage Centre, Woodside Wildlife Park, and the Blyton Park motorsports venue (Ref.23).

18.5.59 It is of note that the baseline data available for the national tourism industry is from 2019, before the COVID-19 pandemic, which had very significant effects on both domestic and international tourism. As a result, the years 2020 and 2021 would have received a dramatically reduced number of international and domestic visitors, with any tourism being highly localised as a result of travel and movement restrictions. International Passenger Survey data shows that in the calendar year 2020, the UK received 11.1 million visitors, 73% less than in 2019 (40.9 million) (Ref.71) as a result of travel restriction imposed throughout Q2, Q3 and Q4. Spending by visitors in 2020 reached only £6.2 billion compared to £28.4 billion in 2019 (Ref.72).

18.5.60 The calendar year 2021 faired similarly poorly with only 6.4 million visitors spending £5.6 billion, 84% and 80% down on 2019 with respect to visitor numbers and spending respectively (Ref.73). Forecasts for the year 2022 show signs of a gradual recovery in the tourism industry, as international visitors are expected to increase to 26.7 million and spending to £21.6 billion over the course of the calendar year (Ref.74).

18.5.61 The most recent sub-national visitor spending figures date to 2019, which shows that the total expenditure in Lincolnshire and Nottinghamshire from domestic visitors is approximately £452 million, of which £17 million was within the Local Impact Area. The total domestic tourist expenditure in the Regional Impact Area was £1.13 billion (Ref.75).

18.5.62 For international visitors, total expenditure in 2019 was £185.61 million (Ref.76). No data is available sub-county level, so it can be approximated that the proportion of spending in the Local Impact Area is similar to that of domestic visitors. As such, it is estimated that international visitor expenditure in the LIA in 2019 was approximately £7.0 million. Therefore, the total visitor expenditure in the LIA can be estimated to be £24 million. For the Regional Impact Area, international visitor expenditure in 2019 was approximately £464 million (Ref.76). Therefore, the total visitor expenditure in the Regional Impact Area can be estimated to be £1.60 billion.

Local Attractions and Recreation Sites

18.5.63 The Scheme and its near surroundings host a number of Public Rights of Way, which form important local recreational walking and cycling routes between villages in the immediate vicinity. The Scheme is located nearby to a small number of long-distance recreational walking and cycling routes which are of regional or national importance. The local network of Public Rights of Way, shown in the **Public Rights of Way Plan [EN010132/APP/WB2.5]** and listed below in **Table 18.9** below, is important to the local population for personal health and wellbeing, and for local amenity.

18.5.64 There are also a number of long-distance walking and cycling routes near to the Scheme, including passing through parts of the Order limits. These include: the county/regional Plogsland Round (500m to the south of West Burton 1, and crossing through West Burton 2 on Broxholme Lane), and the national Trent Valley Way (Ref.77), which crosses the Cable Route Corridor via the western bank of the River Trent (Ref.78) and via its variant route on Fenton Lane, near Sturton le Steeple. The National Byways cycle route passes within 1km of the West Burton connection point and interacts with the Cable Route Corridor at a number of locations between Coates (Nottinghamshire) and Sturton le Steeple. National Cycle Route Network Route 64 passes within 5km of the southern end of West Burton 2 on the former Lancashire, Derbyshire and East Coast Railway (Ref.79).

Table 18.9: Public Rights of Way within or bounded by the Order limits

Public Right of Way Identifier	Location	Relationship to Order limits
LINCOLNSHIRE		
Brox/197/1 Public footpath	Broxholme CP West of West Burton 1	Joins construction access route Crossed by Cable Route Corridor

Public Right of Way Identifier	Location	Relationship to Order limits
Brox/196/1-Scmp/196/1 Public footpath	Broxholme CP West of West Burton 1	Joins construction access route <100m from Order limits
Mton/68/1 Public footpath	Marton CP Northwest of West Burton 3 (Q1)	Crosses Site Crossed by Shared Cable Route Corridor
Mton/66/4-Bram 66/1 Public footpath	Marton CP and Brampton CP West of West Burton 3	Construction access route AIL route requiring alterations Crossed by Shared Cable Route Corridor
NOTTINGHAMSHIRE		
Cottam FP1 Public footpath	Cottam CP West of River Trent	Crossed by Shared Cable Route Corridor
Unnamed footpath (marked on OS mapping)	North Leverton with Habblesthorpe CP West of River Trent	Joins construction access route Crossed by Cable Route Corridor
North Leverton with Habblesthorpe RB25 Restricted bridleway	North Leverton with Habblesthorpe CP West of River Trent	Joins construction access route <100m from Order limits
North Leverton with Habblesthorpe BOAT14 Byway open to all traffic (known as Craikbank Lane)	North Leverton with Habblesthorpe CP Southeast of grid connection point	Joins construction access route Crossed by Cable Route Corridor
North Leverton with Habblesthorpe FP18 Public footpath	North Leverton with Habblesthorpe CP Southeast of grid connection point	Crossed by Cable Route Corridor
Sturton le Steeple BW5 Public bridleway (known as Fenton Lane)	Sturton le Steeple CP Southeast of grid connection point	Construction access route Crossed by Cable Route Corridor

Public Right of Way Identifier	Location	Relationship to Order limits
Sturton le Steeple RB32 (adj. to Littleborough Road) Restricted byway (known as Cross Common Lane)	Sturton le Steeple CP Southeast of grid connection point	Joins construction access route Crossed by Cable Route Corridor
Sturton le Steeple RB32 (Common Lane) Restricted byway	Sturton le Steeple CP South of grid connection point	Construction access route Crossed by Cable Route Corridor
Sturton le Steeple FP38 Public footpath	Sturton le Steeple CP South of grid connection point	Joins construction access route <100m from Order limits
Sturton le Steeple FP39 Public footpath	Sturton le Steeple CP South of grid connection point	Joins construction access route Crossed by Cable Route Corridor
Sturton le Steeple FP15 Public footpath	Sturton le Steeple CP South of grid connection point	Joins construction access route Crossed by Cable Route Corridor
Sturton le Steeple FP17 Public footpath	Sturton le Steeple CP South of grid connection point	Joins construction access route Crossed by Cable Route Corridor

18.5.65 There are a number of navigable waterways within proximity of the Order limits. The River Trent lies between the Sites and the West Burton Power Station Connection Point, and as such is crossed by the Cable Route Corridor. The Fossdyke Navigation Canal runs from Lincoln to Torksey Lock, which at nearest is approximately 1km to the southwest of West Burton 3, and 1.7km to the west of West Burton 2.

18.5.66 The smaller River Till runs along the eastern boundary of West Burton 2. Whilst accessible at Saxilby and Sturton by Stow for fishing, there is no formal navigability of the river due to low bridges at Saxilby and the Till Washlands Main Sluice. There are a small number of recreational fishing lakes near to the Sites, with the Old Brick Pits at Sturton by Stow 1km north of West Burton 2, and Locklands at Torksey 2km to the southwest of West Burton 3.

18.5.67 Additionally, there are a number of formal recreational facilities in the surrounding area. Lincoln Golf Club is located near Brampton village, approximately 400m to the southwest of West Burton 3. Millfield Golf Complex is located further to the southwest and is within 5km of both West Burton 2 and 3 Aisthorpe Cricket Club is also located 3.2km to the northeast of West Burton 1. Sturgate Airfield, 7km to the north of West Burton 3 hosts the Lincoln Aero Club for recreational flying. The Retford Model Flying Club is located less than 100m from the Cable Route Corridor on Northfield Road in North Leverton with Habblesthorpe.

18.5.68 There are a small number of recreational play and sport areas in local villages. Notably, there are sports pitches at Saxilby Sports and Social Club, and Sturton by Stow Recreation Ground. There are a number of play areas for children in local villages such as at Saxilby Village Hall, Sturton by Stow Village Hall, Sturton le Steeple, and Torksey Village Green. Smaller informal play areas are also located within some local housing developments.

18.5.69 The Scheme is predominantly set within agricultural land, which due to its existing use, is not in itself a key tourist attraction or destination. The land does however play an important role in providing a landscape context to recreational use of waterways and walking and cycling routes, as well as for key attractions wherein their location is a key selling point. The potential impacts to the tourism economy are explored in this chapter, whilst the landscape impacts on the use of Public Rights of Way, Cycle Routes, and navigable waterways are explored in **Chapter 8: Landscape and Visual [EN010132/APP/WB6.2.8]**, and likely effects on local heritage assets are assessed in **Chapter 13: Cultural Heritage [EN010132/APP/WB6.2.13]**.

18.6 Embedded Mitigation

18.6.1 The design of the ground mounted solar PV panel arrays and their supporting infrastructure, and the scheme of construction works have been designed to include measures to minimise impacts on socio-economic, tourism and recreation receptors during the Scheme's construction and operation.

18.6.2 Embedded mitigation measures are set out in detail in the following documents:

- **ES Chapter 4: Scheme Description [EN010132/APP/WB6.2.4]**;
- **ES Appendix 14.1: Construction Traffic Management Plan (CTMP) [EN010132/APP/WB6.3.14.2]**;
- **ES Appendix 14.3: Public Rights of Way Management Plan (PRoWMP) [EN010132/APP/WB6.3.14.3]; and**
- **Outline Construction Environmental Management Plan (OCEMP) [EN010132/APP/WB7.1].**

18.6.3 Together, the CTMP and OCEMP seek to provide embedded mitigation to limit construction impacts from the Scheme on socio-economic receptors.

18.6.4 Construction is anticipated to take place across an approximate 24-month period. Key mitigation and enhancement measures for the Scheme's construction across all EIA topics are set out in the **OCEMP [EN010132/APP/WB7.1]**. An all-encompassing mitigatory measure is for the construction schedule for the Scheme to retain flexibility to be phased and staggered across the Sites to reduce impacts on environmental receptors.

18.6.5 With specific regard to socio-economic, tourism and recreation receptors, the embedded flexibility in the construction timescale of the Scheme could be utilised to reduce the peak number of construction workers and movements or alter when this peak will occur. This will help to moderate the level of temporary accommodation demand, to the benefit of both the accommodation and tourism employment and economic sectors.

18.6.6 Measures to mitigate visual impacts from construction operations, lighting, and the location of construction equipment, as set out in the **OCEMP [EN010132/APP/WB7.1]** will have a secondary benefit to the tourism economy through reducing the level of impact on the desirability of the Local Impact Area. These measures are likely to decrease the level of adverse effects across all recreational receptors. Furthermore, embedded design measures including the location of construction compounds, the location of works areas within the Sites, and the retention of existing screening vegetation where suitable.

18.6.7 In co-ordination with the **CTMP [EN010132/APP/WB6.3.14.2]** and **PRoWMP [EN010132/APP/WB6.3.14.3]**, the embedded flexibility in the construction timescale of the Scheme will help to control construction traffic movements, to the benefit of accessibility and desirability of public rights of way; recreational use of highways; use, accessibility and desirability of recreation centres and facilities; and on the accessibility and desirability of local tourist attractions. Of greatest effect is the impact of fear and intimidation from construction traffic on vulnerable shared road users such as walkers, cyclists, and horse riders. Therefore mitigation measures including control of the routing and number of HGV movements secured through the CTMP will help to protect these users.

18.6.8 Where recreational receptors, principally public rights of way and regionally and nationally important walking and cycling routes are likely to be directly affected by the construction of the Scheme, the **OCEMP [EN010132/APP/WB7.1]**, **CTMP [EN010132/APP/WB6.3.14.2]** and **PRoWMP [EN010132/APP/WB6.3.14.3]** together set out mitigatory measures to ensure impacts on these receptors are minimised. Recreational routes crossing or within the Order Limits will seek to be kept open during construction, with any crossing or traffic conflict points overseen by spotters or banksmen for HGVs. Where closures are deemed to be necessary, these will be temporary in nature and supported by appropriate amount of notice and suitable diversions. Any diversions to routes will be appropriately signed, and the duration and length of diversions will be optimised to minimise impacts on accessibility and desirability.

18.6.9 The Scheme also features a new semi-accessible habitat management area adjacent to Sykes Lane near the existing Hardwick Scrub, which will provide an area for public recreational use and learning about ecological enhancement. Furthermore, a permissive path has been included within West Burton 2 to provide an alternative circular walking route for recreational users in the vicinity of Saxilby. The route will include the track off Sykes Lane, a section to the south of the Codder Lane Belt, before returning back to Sykes Lane along the edge of the Scheme. This is aimed to improve recreational walking in the immediate vicinity, secondarily benefitting local population health and wellbeing in the long-term. The accessible habitat management area and permissive footpaths are denoted respectively by the extents of Work Nos.10 and 11 in **Schedule 1 of the Draft Development Consent Order [EN010132/APP/WB3.1]** and on the **Works Plans [EN010132/APP/WB2.4]**.

18.6.10 Additional mitigation measures are described in **Section 18.8**.

18.7 Identification and Evaluation of Likely Significant Effects

18.7.1 The likely significant environmental effects, both positive and negative, resulting from the Scheme are identified in the following section. These have been broken down into the three major Scheme stages: construction, operation, and decommissioning, each of which will have differing impacts on the local and regional socio-economic, tourism and recreation environment.

18.7.2 As has been identified in the **Section 18.4: Methodology**, the identification of likely key effects has been determined through provision of a model of anticipated worker requirements for construction by an accredited Engineering Procurement Construction (EPC) contractor and specialist high voltage cable installation contractor. Anticipated worker requirements for operation and maintenance have been provided by the Applicant based on industry experience and professional judgement. Economic effects have been derived from the EPC model for construction and from the anticipated worker requirements for operation and maintenance by multiplying number of workers by the gross value added per worker per annum for the relevant sector and area.

18.7.3 All figures for numbers of full-time equivalent (FTE) employees are rounded to the nearest whole number. All figures for gross value added (GVA) to economic sectors are rounded to the nearest £100,000. As such, some figures in the tables in the following sections may not total due to rounding.

Construction (estimated 2024-2026)

18.7.4 The construction of the Scheme is estimated for the purpose of EIA to be undertaken over a 2-year period. Subject to when the DCO is approved, the earliest construction may start is Q4 2024 and will run for 24-25 months to Q4 2026. The Scheme retains flexibility for construction across the Sites 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 in parallel has been assessed.

Socio-Economics

Employment

18.7.5 The construction of the Scheme is anticipated to generate an estimated total quantum of labour equivalent to 7,390 months of employment, based on the modelled worker requirements for construction used for this socio-economic assessment. The consequential estimated labour requirement for the Scheme over the projected 25-month construction period is therefore equivalent to a gross 296 full time equivalent (FTE) employees per annum, with the estimated on-site construction workforce expected to peak at approximately 429 employees at month 14 of the construction period.

18.7.6 The construction workforce is to consist of a mix of employees from within and outside the Local Impact Area. There may be need for specialist employment to be sourced from outside the Local Impact Area where particular skillsets cannot be sourced locally. A full breakdown of the required worker skillset is set out in the **Outline Skills, Supply Chain and Employment Plan [EN010132/APP/WB7.10]**. As such, there is likely to be "leakage" of economic benefits to employees travelling in from outside the Local Impact Area. Data from the Census 2011 indicates that approximately 35.8% of the workforce (Ref.63) commute into the Local Impact Area from elsewhere (19.3% from the rest of the Regional Impact Area, and 16.5% from the rest of the UK). As similar data from the 2021 Census is not available, this is deemed to be the most suitable metric for this assessment, and as such, it is estimated 106 FTE employees are expected to commute in from outside the Local Impact Area.

18.7.7 The uplift in labour demand as a result of the employment opportunities arising from the Scheme cannot be treated simply as a net benefit as there is potential for workers within the Local Impact Area to be displaced, thus reducing the extent of the net benefit to the labour market. However, due to the flexibility of the labour market in the construction industry, the level of displacement is assumed to be low.

18.7.8 Although withdrawn as official guidance as of May 2022*, the HCA Additionality Guide; 4th edition (Ref.80), provides standards (or 'ready reckoners') for displacement. Within the context of a construction project in the Local and Regional Impact Areas, a low displacement factor for 25% is considered appropriate according to the HCA. This factor is a best practice approach in the absence of special local information that might provide a defensible justification for a different level of displacement being used. As such, the net direct employment generated by the Scheme can be estimated as 222 FTE per annum during the construction period.

* The HCA Additionality Guide, 4th edition, was removed from official guidance as HCA – the Homes & Communities Agency – has been replaced by Homes England. No replacement like-for-like guidance has yet been published.

18.7.9 In addition to the direct employment generated by construction, the Scheme is anticipated to support an estimated further 1.33 employees per direct FTE employee per annum through indirect employment in the construction industry supply chain, and through induced economic impacts of increased spending by employees and suppliers on local goods and services. This multiplier is based on the findings of CEBR in their 2014 report for the Solar Trade Association (Ref.81), which gives the most up-to-date information available on construction effects from small-scale and major-scale solar development.

18.7.10 Taking into account the direct, indirect, and induced employment generated by the Scheme, and the effects of leakage and displacement, the net employment figures for construction of the Scheme have been provided in **Table 18.10** below.

Table 18.10: FTE Employment per Annum as a Result of Scheme Construction

(rounding to nearest 1 FTE)	Local Impact Area	Rest of Regional Impact Area	Rest of UK	Total
Gross Direct Employment	190	57	49	296
Displacement	-47	-14	-12	-74
Net Direct Employment	142	43	37	222
Indirect and Induced Employment	252	76	65	393
Total Net Employment	**395**	**119**	**101**	**615**

18.7.11 The temporary employment generated by the Scheme's construction is equivalent to approximately 615 FTE jobs per annum. Of these, 395 are anticipated to be taken up by the workforce within the Local Impact Area, a total of 513 are anticipated within the Regional Impact Area (inclusive of the LIA), and the other 101 jobs are expected to be taken up by workers from elsewhere in the UK.

18.7.12 In the context of the approximately 4,750 worker strong construction labour market within the Local Impact Area, it can be assessed that the net uplift of 142 workers, representing an increase of 3.0% in construction employment. This will therefore have a temporary medium positive impact. The construction industry workforce in the Local Impact Area is of a low sensitivity as it falls within one standard deviation of the national mean (see paragraph 18.5.50). Resultantly, the effect is a medium-term temporary **moderate-minor beneficial effect**. At the regional level, sensitivity is

also low, and the magnitude of impact (185 workers in a pool of approximately 107,000) is low, and as such is a medium-term temporary **minor beneficial effect**.

18.7.13 The Scheme does however have the potential to negatively impact on some local employment sectors: specifically the agricultural, and tourism and recreation industries.

18.7.14 The agriculture sector in the Local Impact Area employs approximately 3,750 workers (Ref.66). Whilst the agriculture sector workforce is proportionally much larger than the national average in West Lindsey, overall in the Local Impact Area it is not more than one standard deviation from the national average, and as such it is of a low sensitivity to change. The Regional Impact Area has an agriculture sector workforce of approximately 38,000 and is of a low sensitivity to change due to its closer to national average size.

18.7.15 The Scheme is projected to impact on up to 769 hectares of agricultural land for the operational lifetime of the Scheme, this will therefore cause approximately 13 FTE agricultural sector jobs to be lost as demonstrated in **ES Chapter 19: Soils and Agriculture [EN010132/APP/WB6.2.19]**. This impacts approximately 0.3% of the agricultural sector employment, and as such is a low magnitude impact. Due to its low sensitivity this results in a long-term **minor adverse effect** to the Local Impact Area. In the Regional Impact Area, this is a 0.03% reduction in agricultural employment, representing a negligible change to a receptor of low sensitivity. Therefore, the effect is long-term **negligible adverse**.

18.7.16 As a secondary impact of the uplift in the construction employment in the Local Impact Area, there is potential for the accommodation industry to be impacted by the need for inbound temporary construction workers to be accommodated within the Local Impact Area.

18.7.17 The anticipated inbound number of construction workers (average 79 FTE employees, with a peak month of 154 FTE employees, based on the modelled construction programme used for the purpose of this socio-economic assessment) has the potential to increase accommodation occupancy rates by 10.7% over the 25-month construction period. A 10.7% increase in the 525-strong accommodation employment sector (Ref.66) to meet this increased need would equate to an additional 56 FTE employees per annum over the construction period. This would amount to a high positive impact in the Local Impact Area, which is of a medium sensitivity to change due to its small size, thus resulting in a medium-term temporary **major-moderate beneficial effect**. This is therefore a **significant effect**. This level of uplift in the Regional Impact Area is low (a 0.2% increase to the 24,000-worker accommodation services employment sector), to a sector of low sensitivity, and thus is a medium-term temporary **minor beneficial effect**.

18.7.18 The anticipated requirement for accommodation units for inbound construction workers is estimated to be accommodated entirely within the usual unfilled capacity of the total serviced and non-serviced accommodation stock of 1,419 units (Ref.41) in the Local Impact Area. As such, it is not anticipated that construction workers will

displace any usual visitors. As a result, the effect on the accommodation industry with regard to visitor accommodation availability is **neutral**. As impacts are not anticipated beyond the Local Impact Area, this **neutral effect** is also applicable at the Regional Impact Area level.

18.7.19 Due to the neutral effect on visitor accommodation availability, it is not anticipated that there will be any direct reduction in visitor spending in the tourism and recreation sector as a result of reduced access to accommodation in the Local Impact Area (and as a result in the Regional Impact Area). Therefore, it is anticipated that the construction of the Scheme will have a **neutral effect** on tourism and recreation sector employment in the Local and Regional Impact Areas.

18.7.20 The overall changes to employment as a result of the construction of the Scheme are set out in **Table 18.11** below.

Table 18.11: Overall Changes to Employment per Annum

(rounding to nearest 1 FTE)	Local Impact Area	Other within Regional Impact Area	Rest of UK	Total
Net Direct Construction Employment	142	43	37	222
Indirect and Induced Employment	252	76	65	393
Agricultural Employment	-13	0	0	-13
Accommodation Employment	50	0	0	50
Tourism and Recreation (RSTU) Employment	0	0	0	0
Total Net Employment Change	**432**	**119**	**101**	**652**

18.7.21 The total net employment change as a result of the effects of the Scheme on the construction sector, indirect and induced employment, the agriculture sector, and the tourism and recreation (RSTU) sectors is 432 FTE workers in the Local Impact

Area, and a total of 550 workers in the Regional Impact Area. A further 101 jobs are expected to be generated in the rest of the UK.

18.7.22 As a result of volatility in the Local Impact Area to changes to economic activity, unemployment, and the level of employment, the overall workforce in the Local Impact Area is of a medium sensitivity to change. Regional responses to changes to economic activity, unemployment, and the level of employment are consistent with national trends, and as a result the Regional Impact Area is of a low sensitivity to impacts from the Scheme.

18.7.23 The uplift of 432workers in the Local Impact Area represents a 0.5% increase in employment from the baseline of 82,025 total workers. The uplift in employment represents an overall low positive impact to a medium sensitivity receptor, thus having an overall medium-term temporary **moderate-minor beneficial effect** on the labour force in the Local Impact Area.

18.7.24 In the Regional Impact Area, the uplift of 550 workers to the 2,204,000 working population represents a negligible (0.02%) positive impact to a low sensitivity receptor, thus having an overall long-term **negligible beneficial effect** on the labour force in the Regional Impact Area.

Socio-Demographic Impacts

18.7.25 In assessing the worst-case scenario, it is prudent to assess the potential socio-economic impacts of the approximately 79 FTE employees per annum from outside the Local Impact Area relocating to within (based on net direct employment uplift from the rest of the Regional Impact Area and the UK in **Table 18.10** and **Table 18.11**). The Regional Impact Area is likely only to experience an uplift of 37 FTE employees per annum from the rest of the UK.

18.7.26 The projected population increase in the Local Impact Area from 2021-2026 is somewhat above national projections, although is within one standard deviation of the mean growth for LPA areas in England for 2021-2026. As a result, it should be designated as being of low sensitivity to change. The regional population is also of a low sensitivity due to projected population growth being similar to the Local Impact Area. The population uplift attributed to the Scheme's construction will bring a likely medium-term, partially temporary uplift of 0.04% to the residential population above the anticipated growth from the 2021 baseline of 212,957, representing a medium-term temporary negligible magnitude impact and resultantly contributing a medium-term temporary **negligible beneficial effect** to the Local Impact Area. The uplift in the Regional Impact Area is also negligible (0.001%), and thus represents a medium-term temporary **negligible beneficial effect**.

18.7.27 The anticipated uplift in population is anticipated to be negligible in magnitude, at both level of the Local and Regional Impact Areas. Any changes to the demographic profile of either the Local or Regional Impact Area are expected to be extremely low and unlikely to have either a predominantly positive or negative bias. Therefore

there is anticipated to be a **neutral effect** overall with regard to resident age demographics.

18.7.28 The projected uplift of 0.04% to the residential population in the Local Impact Area represents a medium-term temporary negligible magnitude impact with regard to the number of people requiring access to local services including primary health services. The baseline accessibility to primary healthcare in the Local Impact Area is set out in paragraph 18.5.20 demonstrates there is better than national average access to general practice healthcare within the Local Impact Area. Therefore, as this falls within one-standard deviation of national rates, the sensitivity to change across the Local Impact Area is low. Resultantly, the anticipated effect on access to primary healthcare is a medium-term temporary **negligible adverse effect**. Within the Regional Impact Area, the sensitivity of primary healthcare is also low, and the anticipated impacts are also of a negligible level, thus resulting in a medium-term temporary **negligible adverse effect**.

18.7.29 This could therefore have secondary impacts on other types of health and wellbeing receptors in the population of the Local and Regional Impact Areas as a result of reduced accessibility to local healthcare services. The baseline conditions set out in paragraphs 18.5.19-18.5.25 demonstrate that there are sections of the population of the Local Impact Area that are of up to a medium sensitivity to change, specifically with regard to the following indicators for health: self-assessed health, obesity, and mental health disorders and disabilities. Resultantly, the negligible negative level of impact on access to healthcare could have a medium-term temporary **minor adverse effect** on general population health in the Local Impact Area. This effect would be a medium-term temporary **negligible adverse effect** in the Regional Impact Area as a result of its low sensitivity.

18.7.30 Rates of disability and long-term physical health conditions in the Local Impact Area are higher than national trends, however, are within one standard deviation of the national mean. As such, the sensitivity of this receptor is low, and thus the negligible scale impact would result in a medium-term temporary **negligible adverse effect**. This would be the same in the Regional Impact Area.

18.7.31 The anticipated increase in construction workers in the Local Impact Area is likely to create increased demand for accommodation and will therefore have a potential impact on temporary and permanent accommodation stock within the Local Impact Area including hotel rooms, temporary accommodation, and rented and market properties. Effects at the regional level have not been assessed as the anticipated need for accommodation is considered to be exclusive to the Local Impact Area for assessing the worst-case scenario resulting from the Scheme's construction.

18.7.32 Should the temporary employees from outside the Local Impact Area require accommodation in temporary accommodation units, the anticipated peak monthly requirement will be 154 units (derived from the EPC construction model), in the context of a known temporary accommodation stock of 1,419 units within the Local Impact Area. An analysis of the impact per month of meeting the peak construction

requirement is set out in **Table 18.12** below. Room occupancy rates are based on the monthly room occupancy rates for England in 2019 (Ref.82) as this constitutes the most recent complete year's accommodation data prior to the onset of impacts from the COVID-19 pandemic. The impact per month model assumes construction to begin in October 2024.

Table 18.12: Accommodation Capacity within Local Impact Area

Month	Usual (2019) Room Occupancy (%)	Unfilled Capacity	Estimated Employee Requirement	Estimated Remaining Capacity
Oct '24	83%	241	52	-190
Nov '24	79%	298	59	-239
Dec '24	71%	412	106	-306
Jan '25	65%	497	120	-377
Feb '25	73%	383	135	-248
Mar '25	75%	355	150	-204
Apr '25	79%	298	147	-150
May '25	79%	298	135	-163
Jun '25	84%	227	130	-97
Jul '25	85%	213	124	-89
Aug '25	82%	255	115	-141
Sep '25	83%	241	114	-127
Oct '25	83%	241	119	-122
Nov '25	79%	298	154	-144
Dec '25	71%	412	109	-303
Jan '26	65%	497	124	-373
Feb '26	73%	383	131	-252
Mar '26	75%	355	128	-227
Apr '26	79%	298	82	-216
May '26	79%	298	93	-205
Jun '26	84%	227	77	-150
Jul '26	85%	213	81	-132
Aug '26	82%	255	72	-184
Sep '26	83%	241	55	-186
Oct '26	83%	241	35	-206

18.7.33 The analysis of accommodation units shows that accommodating the anticipated temporary employee requirement could be achieved within the usual unfilled capacity across the entirety of the anticipated 25-month construction period. As such, it is not anticipated that usual visitors or users of temporary accommodation would be displaced. That notwithstanding, embedded mitigation measures in **Section 18.6** to reduce the level of impact on temporary accommodation requirement should be utilised, due primarily to the uncertainty of the capacity in the Local Impact Area following the COVID-19 pandemic. These mitigation measures could require employees to be accommodated elsewhere, such as in private rental accommodation to ensure minimal levels of displacement of the predicted usual business and tourism requirement for accommodation spaces. Furthermore, the construction timescale has an embedded level of flexibility, and thus the peak need could be moved to months of greater usual capacity.

18.7.34 The accommodation sector in the Local Impact Area is of a medium sensitivity to change due to its small size, particularly in comparison to the Regional Impact Area or national trends. The potential for construction employees increasing the occupation rate of accommodation units throughout the construction period would have a high positive impact directly on the accommodation sector, thus having a direct medium-term temporary **major-moderate beneficial effect**. This therefore would be a **significant effect**. As there is no anticipated impact on the availability of accommodation for tourism and recreation, the resultant effect is anticipated to be a **neutral effect** over the course of the construction period.

18.7.35 The Central Lincolnshire Plan covers West Lindsey District, as well as North Kesteven District and Lincoln City. The Housing Needs Assessment (April 2020), undertaken to support the emerging plan, indicates that the required housing need for Central Lincolnshire is 1,325 dwellings per year from 2020 to 2040 (Ref.38). In the shorter term, the 2022 Central Lincolnshire Five Year Land Report (Oct 2022) calculates the housing need over the next five years is a minimum of 1,102 units per year. With the required 5% NPPF uplift, this shows a requirement of 1,157 units per year, equating to 5,786 dwellings over 5 years. Central Lincolnshire have calculated they are able to deliver 9,319 units, thus can demonstrate an 8.05-year housing land supply (Ref.39).

18.7.36 Likewise, the Bassetlaw Local Plan estimates it can deliver a supply of 12,938 homes over the plan period 2020-2038 (Ref.14), equating an average of 718 units per year. In the shorter-term, the Five-Year Housing Land Supply Statement for Bassetlaw calculates the housing need over the next five years is a minimum of 279 units per year. With the required 5% NPPF uplift, this shows a requirement of 293 dwellings per year over 5 years. Bassetlaw have calculated they are able to deliver 3,982 units, thus can demonstrate a 13.5-year housing land supply (Ref.40).

18.7.37 Should the uplift in workforce be required to find permanent accommodation, this would likely equate to approximately 79 FTE employees per annum based on average requirement across the construction period. As the baseline level of

available new housing stock is approximately 2,660 units per annum, some 64.4% above the maximum assessed need of 1,618 dwellings per annum, the sensitivity of the housing market is low as it can easily accommodate additional need. Should all 79 FTE employees require individual housing units, this would take up 7.6% of the 1,042 dwelling per annum excess capacity. As this can be accommodated, and constitutes a medium-term medium magnitude impact, the resultant effect is **moderate-minor beneficial** to the local housing market as this will help to fill the local supply of housing.

18.7.38 In the medium-term, the Scheme brings an uplift in employment within the Local Impact Area which constitutes a low positive impact. Access to employment in the Local Impact Area is a matter of high sensitivity due to parts of the Local Impact Area being notably deprived of sufficient access to employment. This will therefore have a medium-term temporary **moderate beneficial effect** regarding access to employment, as a result of increased labour opportunities from the construction of the Scheme. This is therefore a **significant effect**.

18.7.39 As a result of areas within the Local Impact Area being of greater levels of deprivation of access to education, this is a high sensitivity receptor. Without additional measures, the Scheme is unlikely to produce more than a negligible magnitude of skills and education opportunities, such as through construction apprenticeships. Therefore, the likely effect on access to education as an index of deprivation in the Local Impact Area is a medium-term temporary **moderate-minor beneficial effect**.

18.7.40 As a result of the significant disparity between conditions in the Local Impact Area and those at the regional and national scale, the population is of a medium sensitivity to changes in skills and qualification attainment. The Regional Impact Area also shows a similar albeit less pronounced trend towards populations achieving lower rates of higher-level qualifications. As a result, the Regional Impact Area is of a low sensitivity to change. Resultantly, the negligible positive impact of education opportunity from the Scheme will likely induce a medium-term **minor beneficial effect** on skills and qualification attainment in the Local Impact Area. Access to these opportunities is likely to be concentrated within the Local Impact Area and so the effects on the rest of the Regional Impact Area are likely to be **neutral**.

18.7.41 Whilst the Scheme's construction is anticipated to generate a notable amount of commuting traffic and construction works traffic, the additional traffic loads on the local highway network have been assessed in **Chapter 14: Transport and Access [EN010132/APP/WB6.2.14]** as having a negligible impact on driver delay due to existing low levels of use, good accessibility to the strategic highway network, and the embedded mitigation measures set out in the **OCEMP [EN010132/APP/WB7.1]** and **CTMP [EN010132/APP/WB6.3.14.2]**. There is also an assessed negligible impact on public transport services. Baseline conditions demonstrate that compared to regional and national rates the Local Impact Area has a substantially greater rate of

driving to work and lower rate of use of public transport. As a result, working commuting patterns in the Local Impact Area are of a medium sensitivity to change. Resultantly, at worst, the impact on existing commuters is a medium-term **minor adverse effect**. Impacts at the regional level are not assessed due to the localised nature of transport impacts from the Scheme.

18.7.42 The movement of construction works traffic along roads within the near vicinity of the Scheme have been assessed as having an up to minor negative impact with respect to accessibility and delay for pedestrian and cycle traffic, once embedded mitigation measures are implemented. This could therefore have a minor, localised delay on local movements (for work, school, accessing localised services). Furthermore, the presence of construction traffic on local routes may cause a moderate, localised fear and intimidation impact which may negatively impact the desirability of walking, running and cycling along local routes, thus having a negative impact on commuting methods and on health and wellbeing. This is assessed to only effect "Main Street" connecting the A1500 to West Burton 1 and Broxholme village. Full details on the extent of these impacts are in **Chapter 14: Transport and Access [EN010132/APP/WB6.2.14]**. Pedestrian and cycling accessibility is of a medium sensitivity in the Local Impact Area due to its secondary impact on health and wellbeing. These impacts are therefore likely to have a medium-term **moderate-minor adverse effect** on population health and wellbeing as a result of reduction in accessibility for pedestrian and cycle traffic and increased fear and intimidation from HGV traffic.

Economic Impacts

18.7.43 All of the economic sectors measured in this assessment in the Local Impact Area as a proportion of the whole economy fall within one standard deviation of the national average and are therefore of a low sensitivity to change. This is also the case in the Regional Impact Area, and as such all assessed economic sectors are of a low sensitivity to change.

18.7.44 The construction of the Scheme is anticipated to generate a net uplift to Gross Value Added of £13.3 million per annum, based on local, regional and national average GVA per construction workers (Ref.67), through direct employment. The Scheme is also projected to induce a further economic boost through indirect and induced employment generated by the construction phase. The Scheme therefore is estimated to have a further Gross Value Added of £18.8 million per annum through supply chains, local manufacturing, and induced benefits through additional spending by workers and their families in the local economy. The outline of GVA generated by the Scheme's construction is shown in **Table 18.13**. These estimated have been generated from multiplying the anticipated change in FTE employment by the industry and location specific GVA per worker (Ref.67).

Table 18.13: GVA per Annum Generated by the Scheme's Construction

(rounded to nearest £100,000)	Local Impact Area	Rest of Regional Impact Area	Rest of UK	Total
GVA from Net Direct Employment	£7,700,000	£3,000,000	£2,600,000	£13,300,000
GVA from Indirect and Induced Employment	£11,300,000	£3,700,000	£3,800,000	£18,800,000
Total Net GVA	£19,000,000	£6,700,000	£6,300,000	£32,000,000

18.7.45 The temporary direct construction employment generated by the Scheme's construction is estimated to generate a GVA of £13.3 million. Of this, £7.7 million is anticipated to be retained within the Local Impact Area, with up to a total of £10.7 million anticipated within the Regional Impact Area (inclusive of the LIA). The final £2.6 million is expected to be generated elsewhere in the UK.

18.7.46 The construction economy (Ref.67) in the Local Impact Area is worth approximately £258 million, and as such, the net uplift in GVA of £7.7 million represents a potential increase of 3.0% in the local construction economy. This will therefore have a temporary medium positive impact to a low sensitivity receptor, thus resulting in a medium-term temporary **moderate-minor beneficial effect**. In the Regional Impact Area, the magnitude of impact (of £10.7 million GVA to an economy worth approximately £7.0 billion) is low, and as such is a medium-term temporary **minor beneficial effect**.

18.7.47 As demonstrated in discussions on the impacts on employment, the Scheme has the potential to negatively impact on the economic prosperity of the agricultural, and tourism and recreation industries.

18.7.48 As the Scheme is estimated to displace approximately 13 agricultural sector jobs in the Local Impact Area, this is estimated to have an economic impact of £600,000, based on a GVA per worker of £49,074 (Ref.67). This impact will reduce the value of the local agricultural economy (£265 million) by approximately 0.2%, and as such is a low magnitude impact to a low sensitivity receptor, resulting in a long-term **minor adverse effect**. A £600,000 reduction to the agricultural economy in the Regional Impact Area (£5.6 billion) is negligible, resulting in a long-term **negligible adverse effect**.

18.7.49 The use of temporary accommodation for inbound temporary construction workers from outside the Local Impact Area could lead to a 10.7% increase in

accommodation employment. This is likely to induce a GVA uplift to the accommodation sector economy of £1.7 million, based on a GVA per worker of £31,028 (Ref.67). This represents a 3.2% increase in the local accommodation and food services economy (worth £55 million) (Ref.67), and as such, is a medium magnitude impact to a low sensitivity receptor, resulting in a medium-term temporary **moderate-minor beneficial effect**. The impact within the Regional Impact Area, with an accommodation and food services economy worth £1.8 billion (Ref.67), is a negligible (<0.1%) impact to a low sensitivity receptor and is therefore a short-term temporary **negligible beneficial effect**.

18.7.50 As stated previously, the Scheme is not anticipated to impact on the tourism economy as a result of reduced visitor spending. Most of the economic impact from visitor spending is felt in the local arts, entertainment, and recreation sector, which is of a low sensitivity to change in both the Local and Regional Impact Areas. As no impact to this economic sector is directly anticipated during construction, the resultant effect to the arts, entertainment, and recreation sector in both the Local and Regional Impact Areas is anticipated to be a **neutral effect**.

18.7.51 The overall changes to the economy as a result of the construction of the Scheme are set out in **Table 18.14** below.

Table 18.14: Overall Changes to Economic GVA per Annum

(rounding to nearest £100,000)	Local Impact Area	Rest of Regional Impact Area	Rest of UK	Total
Net Direct Construction Uplift	£7,700,000	£3,000,000	£2,600,000	£13,300,000
Indirect and Induced Uplift	£11,300,000	£3,700,000	£3,800,000	£18,800,000
Agriculture Impact	-£600,000	£0	£0	-£600,000
Accommodation Impact	£1,600,000	£0	£0	£1,600,000
Tourism and Recreation Impact	£0	£0	£0	£0
Total Net GVA Change	**£20,000,000**	**£6,700,000**	**£6,300,000**	**£33,000,000**

18.7.52 The total net economic GVA change in the Local Impact Area as a result of the effects of the Scheme equates to a net benefit of approximately £20.0 million to the economy in the Local Impact Area. As the economy of the Local Impact Area is an estimated £3.6 billion, this change represents a 0.6% increase in the value of the local economy, which is of overall low sensitivity to change. This represents an overall low positive impact, thus having an overall medium-term temporary **minor beneficial effect** on the economy in the Local Impact Area. The total economic benefit to the Regional Impact Area is £26.7 million, which constitutes a 0.03% increase to the regional economy. This negligible positive impact results in a medium-term temporary **negligible beneficial effect**.

18.7.53 The 0.6% increase in the GVA of the local economy will amount to an uplift of £247 GVA per worker per annum in the Local Impact Area from the 2020 baseline (Ref.68) during the Scheme's construction. This rise would constitute a low positive impact on the local economy, as well as on local prosperity, and has the potential to have a medium-term low positive impact on resident and workplace population salary. These are medium sensitivity receptors as a result of the greater than regional and national rates of volatility within the economy and subsequent volatility of resident and workplace population income. These impacts would therefore constitute medium-term temporary **moderate-minor beneficial effects** in the Local Impact Area.

Tourism and Recreation

18.7.54 The Scheme's estimated two-year construction period is likely to have a degree of impact on tourism and recreation in the immediate locality and Local Impact Area. Impacts on tourism and recreation receptors in the wider Regional Impact Area have not been considered due to the anticipated containment of impacts within the Local Impact Area. Whilst the economic impact as a result of the Scheme's potential impact on temporary accommodation provision has been explored in the previous section, the Scheme may likely have further economic impacts as a result of landscape and traffic impacts. The potential changes to landscape views, both temporarily from construction equipment and longer-term from the installation of the Scheme infrastructure, and the impacts from construction traffic impacting the desirability and accessibility of tourism and recreation routes and centres, both could negatively impact the prosperity of the local tourism economy.

Tourism Attractions

18.7.55 The immediate surroundings of the Scheme are host to a small number of regionally important tourism destinations, as identified in Nottinghamshire's (Ref.69) and West Lindsey's visitor economy strategies (Ref.23). Within 5km of the Sites and Cable Route Corridor are Lincolnshire Showground, RAF Scampton, and Sundown Adventureland. As these are identified as regionally important, their sensitivity to changes is medium. Whilst there may be a degree of impact on the landscape setting of these attractions, it is not anticipated that this impact will impact upon the use, desirability and importance as visitor attractions. Furthermore, construction traffic

impacts are assessed at having a negligible impact on the highway network used to access these identified attractions. As such, the anticipated impact on regionally important destinations is negligible, and as a result the expected effect will be medium-term **minor adverse**.

18.7.56 The immediate surroundings to the Sites contain a number of localised attractions, including local landscape, heritage, and recreational attractions. These receptors are attributed a low sensitivity due to their localised importance. A minimal number of receptors are anticipated to be directly impacted by the development due to embedded mitigation and physical separation from formal recreation sites. Whilst many of the local attractions within the Scheme's area of visual influence are likely to be negligibly affected by the construction of the Scheme, those that are reliant on their landscape setting as an intrinsic part of their value may be impacted to a greater extent, such as on their surrounding landscape character and serenity. Key landscape and heritage assets, such as The Cliff Area of Great Landscape Value, listed buildings, and scheduled monuments, are identified and assessed in **Chapter 8: Landscape and Visual Impact [EN010132/APP/WB6.2.8]** and **Chapter 13: Cultural Heritage [EN010132/APP/WB6.2.13]**.

18.7.57 The landscape receptors assessed in Chapter 8 identify a substantial number of viewpoints. It is identified that as a result of the Scheme's construction some of these receptors have up to a high negative magnitude impact on their visual setting. This therefore is likely to have up to a peak **moderate adverse effect** on the tourism value of these locations, some of which are public rights of way. These peak effects are therefore **significant**.

18.7.58 Without additional mitigation, the greatest effect from construction of the Scheme on cultural heritage assets is a moderate adverse on one designated asset (the mediaeval bishop's palace and deer park, Stow Park Scheduled Monument), and up to major adverse on two non-designated assets. This therefore can be attributed as having a medium magnitude impact on these assets for tourism and visitors. Resultantly, the Scheme's construction is likely to have a peak medium-term **moderate-minor adverse effect** on heritage-based tourism receptors.

18.7.59 Although some of the identified effects are significant, the number of identified landscape and heritage tourism receptors that are likely to be adversely effected by the Scheme's construction are likely to have a low overall impact on the desirability of the Local Impact Area for tourists and visitors. Resultantly, the effect on local tourism attractions in the Local Impact Area is **minor adverse**.

Public Rights of Way and Long-Distance Recreational Routes

18.7.60 The Scheme's construction is likely to have direct impacts on a number of Public Rights of Way and long-distance recreation routes as a result of temporary use as construction accesses, any required diversions and closures, and secondary temporary impacts as a result of the movements of construction goods and employee traffic. Embedded mitigation to limit impacts on these features are detailed in the **OCEMP [EN010132/APP/WB7.1]**, **CTMP [EN010132/APP/WB6.3.14.2]**

and **PRoWMP [EN010132/APP/WB6.3.14.3]**. The local network of Public Rights of Way is important to the local population for personal health and wellbeing, and for local amenity. Thus the Public Right of Way network is of a medium sensitivity to impacts. As a result of their regional and national importance, Long Distance Recreation Routes are of high sensitivity to impacts from the Scheme.

18.7.61 The resultant impacts in relation to these routes are tabulated in **Table 18.15** below.

Table 18.15: Impacts on Public Rights of Way and Long-Distance Recreational Routes

Public Right of Way/Route Identifier	Potential Impacts	Magnitude of Impact	Significance of Effect
LINCOLNSHIRE PRoWs			
Brox/197/1 Public footpath	Short-term temporary closure due to cable burying, and medium-term temporary management system due to use by cable construction traffic	Low medium-term negative	Moderate-minor adverse
Brox/196/1-Scmp/196/1 Public footpath	Potential for construction traffic on connecting routes	Negligible medium-term negative	Minor adverse
Mton/68/1 Public footpath	Short-term temporary diversion or closure due to cable burying and medium-term temporary potential for construction traffic on connecting routes.	Negligible medium-term negative	Minor adverse
Mton/66/4-Bram/66/1 Public footpath	Short-term temporary closure due to cable burying, and medium-term temporary management system due to use by cable construction traffic	Low medium-term negative	Moderate-minor adverse
NOTTINGHAMSHIRE PRoWs			
Cottam FP1 Public footpath	See long-distance recreation routes below		

Public Right of Way/Route Identifier	Potential Impacts	Magnitude of Impact	Significance of Effect
(Trent Valley Way)			
Unnamed footpath (marked on OS mapping)	Short-term temporary diversion or closure due to cable burying and medium-term temporary potential for construction traffic on connecting routes.	Negligible medium-term negative	Minor adverse
North Leverton with Habblesthorpe RB25 Restricted bridleway	Short-term temporary diversion or closure due to cable burying and medium-term temporary potential for construction traffic on connecting routes.	Negligible medium-term negative	Minor adverse
North Leverton with Habblesthorpe BOAT14 Byway open to all traffic (known as Craikbank Lane)	Short-term temporary diversion or closure due to cable burying and medium-term temporary potential for construction traffic on connecting routes.	Negligible medium-term negative	Minor adverse
North Leverton with Habblesthorpe FP18 Public footpath	Short-term temporary diversion or closure due to cable burying.	Negligible medium-term negative	Minor adverse
Sturton le Steeple BW5 Public bridleway (known as Fenton Lane) **(Trent Valley Way)**	See long-distance recreation routes below		

Public Right of Way/Route Identifier	Potential Impacts	Magnitude of Impact	Significance of Effect
Sturton le Steeple RB32 (adj. to Littleborough Road) Restricted byway (known as Cross Common Lane)	Short-term temporary diversion or closure due to cable burying and medium-term temporary potential for construction traffic on connecting routes.	Negligible medium-term negative	Minor adverse
Sturton le Steeple RB32 (Common Lane) Restricted byway	Short-term temporary closure due to cable burying, and medium-term temporary management system due to use by cable construction traffic	Low medium-term negative	Moderate-minor adverse
Sturton le Steeple FP38 Public footpath	Potential for construction traffic on connecting routes	Negligible medium-term negative	Minor adverse
Sturton le Steeple FP39 Public footpath	Short-term temporary diversion or closure due to cable burying and medium-term temporary potential for construction traffic on connecting routes.	Negligible medium-term negative	Minor adverse
Sturton le Steeple FP15 Public footpath	Short-term temporary diversion or closure due to cable burying and medium-term temporary potential for construction traffic on connecting routes.	Negligible medium-term negative	Minor adverse
Sturton le Steeple FP17 Public footpath	Short-term temporary diversion or closure due to cable burying and medium-term temporary potential	Negligible medium-term negative	Minor adverse

Public Right of Way/Route Identifier	Potential Impacts	Magnitude of Impact	Significance of Effect
	for construction traffic on connecting routes.		
LONG DISTANCE RECREATIONAL ROUTES			
Trent Valley Way (Cottam FP1) Long distance path	Short-term temporary diversion or closure due to cable burying.	Negligible medium-term negative	Moderate-minor adverse
Trent Valley Way (Sturton le Steeple BW5) Long distance path	Short-term temporary closure due to cable burying, and medium-term temporary management system due to use by cable construction traffic	Low medium-term negative	**Moderate adverse**
Plogsland Round Long distance path	Potential for construction traffic on connecting routes	Negligible medium-term negative	Moderate-minor adverse
National Byways Long distance cycle route	Short-term temporary closure due to cable burying, and medium-term temporary management system due to use by cable construction traffic	Low medium-term negative	**Moderate adverse**
National Cycle Route Network Route 64 Long distance cycle route	No direct impacts on use – visual impact only	Neutral	Neutral

18.7.62 As a result of the embedded mitigation measures set out in the **OCEMP [EN010132/APP/WB7.1]**, **CTMP [EN010132/APP/WB6.3.14.2]** and **PRoWMP [EN010132/APP/WB6.3.14.3]** the greatest effects on the use, accessibility, and desirability of Public Rights of Way are **moderate-minor adverse effects**. The greatest level of effects on high sensitivity long-distance recreational routes are **moderate adverse effects**. These are therefore **significant**. These embedded mitigation measures include the use of traffic management to ensure conflicts between the

use of recreational routes and the routing of construction traffic are minimised, and the need for diversion or closure of public rights of way is limited. Where necessary for cable laying, public right of way closures will be limited to overnight working to limit the impacts of closures.

18.7.63 Additionally, as described in paragraph 18.7.42, there are up to **moderate-minor adverse effects** on pedestrian and cycling traffic as a result of fear and intimidation from construction vehicle movements. Whilst all of these routes are highways, they are important as links connecting the PRoW network to nearby settlements and are therefore important to be considered as part of the assessment of effects on recreational routes.

Recreation Facilities and Attractions

18.7.64 Waterways and bodies of water used for recreation are not anticipated to be impacted directly by the Scheme due to their physical separation from construction works on the Sites, and the use of horizontal directional drilling for crossing major waterways, as demonstrated in the **Crossing Schedule [EN010132/APP/WB7.15]**. As such, the River Trent is likely only to experience a negligible magnitude medium-term visual impact (identified in **ES Appendix 8.3: Potential Visual Effects [EN010132/APP/WB6.3.8.3]** as a very low visual impact) from the placement of drilling infrastructure for the cable crossing of the River Trent and from construction activities in the Site at West Burton 3. Due to its regional significance, the River Trent is of a medium sensitivity to changes. As such, this will be no more than a temporary, medium-term **minor adverse effect** to the recreational desirability of the river. The Fossdyke Navigation Canal is likely to experience no more than fleeting views (scoped out of landscape visual assessment in **ES Appendix 8.3: Potential Visual Impacts [EN010132/APP/WB6.3.8.3]**) of the Sites at West Burton 1, 2 and 3, and as such is likely unlikely to experience no more than a temporary, medium-term **minor adverse effect** to the recreational desirability of the canal.

18.7.65 Fishing locations on the River Till at Saxilby are likely to experience mid-range views of construction works at West Burton 1 and 2, thus there may be up to a low magnitude impact on the use of this location. As a result of its local level of importance, and thus a low sensitivity, this will therefore have a medium-term temporary **minor adverse effect**. The ponds at the Old Brick Pits, and at Locklands at Torksey are not likely to be affected by the Scheme due to existing intervening topography and vegetation, and therefore will experience a **neutral effect**.

18.7.66 The maximum impacts on the recreation use of waterways and water bodies is therefore no greater than a medium-term temporary **minor adverse effect**.

18.7.67 Formal recreational facilities for activities such as golf, cricket, and flying have been identified within 5km of the Sites. Of these, only the Retford Model Flying Club is anticipated to be directly affected by construction works or traffic, and as such there is deemed to be an overall low sensitivity to changes from the Scheme. That notwithstanding, there may be a low impact on the landscape context as a result of short, and long-range views (as identified in the Augmented Zone of Theoretical

Visibility Plans at **ES Figures 8.12.1-4 [EN010132/APP/WB6.4.8.12.1-4]**) and thus the desirability of these locations for recreational use. As such, this would be up to a temporary medium-term **minor adverse effect**.

18.7.68 As outlined in the baseline conditions section, the areas surrounding the Sites play host to a number of formal and informal recreational facilities, including those for recreational sports and children's play areas. Some of these recreational facilities for youths are located near to or on construction access routes, or routes likely to be affected by construction employment traffic, there is potential for accessibility to recreational facilities to be impacted. Given that these facilities are more likely to be used by children and youths, there is greater risk of reduced accessibility and desirability impacting health and wellbeing. As such, these facilities are of a medium sensitivity to changes.

18.7.69 Construction of the Scheme, including the laying of cables is not anticipated to impact the desirability of these as a result of landscape context. At worst, it can be anticipated that construction traffic has an up to low-level impact on the accessibility of some of the local recreation areas, particularly where users may have to use routes allocated for construction traffic. As a result this could generate up to a **moderate-minor adverse effect** on the accessibility of recreational facilities for children and youth groups.

Other Tourism and Recreation Receptors

18.7.70 As a result of the identified direct impacts on tourism and recreation receptors in the Local Impact Area, there are likely to be secondary impacts on local businesses that are reliant on tourism. Thus, the predominantly **moderate-minor adverse effect** on the desirability of local tourist attractions and recreation centres in the Local Impact Area could lead to a proportional **moderate-minor adverse effect** on the local tourism industry and economy during the Scheme's construction.

Operation (no earlier than 2026)

18.7.71 For the purposes of assessment, it has been assumed that the Scheme will commence operation at the end of Q4 2026. The operational life of the Scheme is anticipated to be 40 years and decommissioning is therefore estimated to be no earlier than 2066.

Socio-Economics

Employment

18.7.72 During its operational lifetime, the Scheme is anticipated to generate a modest quantum of labour, related to ongoing operational management and site management. It is projected that the Scheme will require a gross 12 FTE employees per annum. This number for worker requirements for operation and maintenance have been provided by the Applicant based on industry experience and professional judgement.

18.7.73 As per employment during the construction phase and detailed in paragraphs 18.7.6-18.7.9, assumptions on the leakage of benefits to outside the Local Impact Area, displacement of existing employment, and the level of indirect and induced employment have been accounted into calculating the net employment from the Scheme, demonstrated in **Table 18.16** below. These assumptions are that: 19.3% of employment will come from the rest of the Regional Impact Area, and 16.5% from the rest of the UK (Ref.63); the displacement rate is 25% (Ref.80); and an estimated further 1.33 employees per direct FTE employee per annum will be generated through indirect and induced impacts (Ref.81).

Table 18.16: FTE Employment per Annum as a Result of Scheme Operation

	Local Impact Area	Rest of Regional Impact Area	Rest of UK	Total
Gross Direct Employment	8	2	2	12
Displacement	-2	-1	0	-3
Net Direct Employment	6	2	1	9
Indirect and Induced Employment	10	3	3	16
Total Net Employment	**16**	**5**	**4**	**25**

18.7.74 The employment generated by the Scheme's operation and maintenance is equivalent to approximately 25 FTE jobs per annum. Of these, 16 are anticipated to be taken up by the workforce within the Local Impact Area, a total of 21 are anticipated within the Regional Impact Area (inclusive of the LIA), and the other 4 jobs are expected to be taken up by workers from elsewhere in the UK.

18.7.75 Much of the operation and maintenance employment will sit within the energy sector. As such, the net direct employment uplift of 6 workers in the context of approximately 320 sector workers in the Local Impact Area represents a 1.9% increase from 2021 levels (Ref.66). This therefore represents a long-term medium positive impact to an industry that has a low sensitivity in the Local Impact Area, thus resulting in a long-term **moderate-minor beneficial effect** for the duration of the Scheme. At the regional level, where the sensitivity is also low, the magnitude of impact (a total of 8 workers in a pool of approximately 12,000) is negligible (0.07%), and as such is a long-term **negligible beneficial effect**.

18.7.76 As was assessed for the construction period, the ongoing operation and maintenance of the Scheme is likely to negatively impact on some local employment sectors: specifically the agricultural, and tourism and recreation industries.

18.7.77 As identified in the likely effects from the Scheme's construction, there are approximately 13 FTE agricultural sector jobs that will remain lost during the Scheme's operational lifetime. As a result, this will have a long-term **minor adverse effect** in the Local Impact Area, and a long-term **negligible adverse effect** in the Regional Impact Area.

18.7.78 The impact from workers moving from outside the Local Impact Area is not anticipated to have any impact on the serviced accommodation industry as a result of the low number of workers, and their probable longer-term employment status. Therefore, the direct impacts on the serviced accommodation industry are likely to cause a **neutral effect** at both local and regional level.

18.7.79 That notwithstanding, the potential loss to the visitor economy as a result of decreased desirability of the Local Impact Area for visitors, is estimated at worst to be 1%, based on the overall long-term low to medium impact on the local landscape quality, impact on heritage asset context and quality, and on the desirability of recreational facilities. This estimation is based on professional judgement taking into account the scale of the Scheme within the Local Impact Area, anticipated impacts on tourism and recreation destinations, the estimated up to moderate adverse impacts on landscape assets estimated in **Chapter 8: Landscape and Visual Impact [EN010132/APP/WB6.2.8]**, and the up to moderate adverse pre-mitigation impacts on heritage assets estimated in and **Chapter 13: Cultural Heritage [EN010132/APP/WB6.2.13]**.

18.7.80 A 1.0% loss to yearly visitor spending (Ref.75, Ref.76) would equate to approximately £240,000, which could lead to the loss of 5 workers in the tourism and recreation industry (based on an average £44,841 GVA per worker per annum). This impacts approximately 0.1% of the 3,500-strong arts, entertainment, and recreation (RSTU) sector employment, and as such is a low magnitude impact to a low sensitivity receptor, resulting in a long-term **minor adverse effect**. The magnitude of impact at the regional level is negligible (0.005% reduction to 97,000 employees), and as such is a **negligible adverse effect** when measured at the regional level.

Table 18.17: Overall Changes to Employment per Annum

	Local Impact Area	Other within Regional Impact Area	Rest of UK	Total
Net Direct Operational Employment	6	2	1	9
Indirect and Induced Employment	10	3	3	16
Agricultural Employment	-13	-	-	-13
Tourism and Recreation Employment	-5	-	-	-5
Total Net Employment Change	-2	5	4	7

18.7.81 The total net employment change as a result of the effects of the Scheme on the construction sector, indirect and induced employment, the agriculture sector, and the tourism and recreation (RSTU) sectors is a loss of 2 FTE workers in the Local Impact Area, and a total gain of 2 FTE workers in the Regional Impact Area.

18.7.82 The net loss of 2 FTE workers per annum in the Local Impact Area represents a 0.003% decrease in employment from the baseline of 82,025 total workers. This reduction in employment represents an overall negligible negative impact to a medium sensitivity receptor, thus having an overall long-term **minor adverse effect** on the labour force in the Local Impact Area.

18.7.83 In the Regional Impact Area, the net change in employment is an uplift of 2 FTE workers to the 2,204,000 working population. This is effectively a **neutral effect** on the labour force in the Regional Impact Area.

Socio-Demographic Impacts

18.7.84 Whilst the majority of the net direct employment generated by the operation and management of the Scheme is anticipated to be sourced from the Local Impact Area, an estimated 2 FTE employees are likely to be sourced from elsewhere in the Regional Impact Area, and a further 1 FTE employee from the rest of the UK as demonstrated in **Table 18.16** and **Table 18.17**. Should the 3 FTE employees from outside the Local Impact Area need to be relocated within, this would represent an

uplift of 0.001% to the residential population above the anticipated growth from the 2021 baseline of nearly 213,000, representing a long-term negligible magnitude impact to a low sensitivity receptor, and resultantly having a long-term **negligible beneficial effect** with regard to population (in EIA terms) in the Local Impact Area. The net uplift in the Regional Impact Area from the rest of the UK is only 1 FTE employee, which given the 2021 baseline population of over 4,880,000, is effectively a **neutral effect**.

18.7.85 As during construction, the changes to the demographic profile of both the Local and Regional Impact Areas as a result of the uplift from the operational and maintenance employment from the Scheme are expected to be extremely low and unlikely to have either a predominantly positive or negative bias. Therefore there is anticipated to be a **neutral effect** overall with regard to resident age demographics.

18.7.86 The negligible magnitude uplift in population in the Local Impact Area is likely to generate a long-term **negligible adverse effect** in the number of people requiring access to local services including primary health services, as a result of the medium sensitivity of the receptor. At the regional level, this will be a **neutral effect**.

18.7.87 Secondary impacts on health and wellbeing receptors such as self-assessed health, obesity, and mental health disorders and disabilities will be effected proportionally due to the magnitude of impact, and medium sensitivity in the Local Impact Area. As a result, there is likely to be a long-term **minor adverse effect** to general population health in the Local Impact Area. This effect is anticipated to be **neutral** in the Regional Impact Area. Resultant effects on disability and long-term physical health conditions are likely to be reduced in the Local Impact Area as a result of the low sensitivity of the receptor. As such, the effect on disability and long-term physical health conditions during the Scheme's operational lifetime is a **negligible adverse effect**. This effect is also anticipated to be **neutral** in the Regional Impact Area.

18.7.88 This uplift would not likely require to be accommodated in temporary serviced accommodation, and as such would have a **neutral effect** on the serviced accommodation industry both with regard to employee need and accommodation space for visitors to the Local Impact Area.

18.7.89 The uplift in local housing requirement of 3 FTE employees per annum could also be easily accommodated in the current 1,042 dwelling per annum housing stock surplus in the Local Impact Area. The resultant uplift in housing need would fill 0.3% of the surplus, thus providing a long-term low magnitude impact, thus creating a **minor beneficial effect** (in EIA terms) to the local housing market.

18.7.90 With regard to local levels of deprivation, the decrease in employment in the Local Impact Area will have a long-term negative impact, albeit of negligible magnitude, to a receptor of high sensitivity, resulting in a net **moderate-minor adverse effect** on access to employment. Furthermore, without additional measures, the likely effect on access to education as an index of deprivation in the Local Impact Area is a **neutral effect**. Resultantly, the long-term effects on skills and qualification attainment in the Local and Regional Impact Areas are also **neutral**.

18.7.91 Due to the negligible magnitude change in employment from the baseline data, and the anticipated negligible effects of traffic from the Scheme during its operational lifetime as assessed in **Chapter 14: Transport and Access [EN010132/APP/WB6.2.14]** it is anticipated there will be no greater than a **neutral effect** on employment accessibility, including commuting distance and method. There will be a neutral impact on desirability of walking, running and cycling along local routes for the purpose of commuting or for health and wellbeing as a result of baseline agricultural traffic being replaced by operational and maintenance vehicle movements, thus resulting in a long-term **neutral effect**. Impacts at the regional level are not assessed due to the localised nature of these impacts from the Scheme.

Economic Impacts

18.7.92 The operation and maintenance of the Scheme is anticipated to generate a net uplift to Gross Value Added of £500,000 per annum, based on local, regional and national average GVA per energy sector workers (Ref.67), through direct employment. As per the construction phase, the Scheme is projected to generate indirect and induced employment throughout its operation. The Scheme therefore is estimated to have a further Gross Value Added of £800,000 per annum through supply chains, local manufacturing, and induced benefits through additional spending by workers and their families in the local economy. The outline of GVA generated by the Scheme's operation and maintenance is shown in **Table 18.18**.

Table 18.18: GVA per Annum Generated by the Scheme's Operation

(rounded to nearest £100,000)	Local Impact Area	Rest of Regional Impact Area	Rest of UK	Total
GVA from Net Direct Employment	£300,000	£100,000	£100,000	£500,000
GVA from Indirect and Induced Employment	£500,000	£200,000	£200,000	£800,000
Total Net GVA	£700,000	£300,000	£300,000	£1,300,000

18.7.93 Of the anticipated annual GVA uplift from the net direct and net indirect and induced employment generated by the Scheme's operation, £700,000 is anticipated to be retained within the Local Impact Area, with up to a total of £1.0 million anticipated within the Regional Impact Area (inclusive of the LIA). The final £300,000 is expected to be generated elsewhere in the UK.

18.7.94 The net direct employment generated by the Scheme will have a direct benefit on the energy sector, which economically is part of the agriculture, mining, electricity, gas, water and waste (ABDE) grouped sector economy (Ref.67). In the Local Impact Area, this grouped sector is worth approximately £265 million, and as such, the net uplift in GVA per annum of £300,000 in the energy sector represents a potential increase of 0.1% in the local ABDE grouped sector economy. This will therefore have a long-term low positive impact on a low sensitivity receptor, thus resulting in a long-term **minor beneficial** effect. At the regional level, the magnitude of impact (of £400,000 GVA per annum to an economy worth approximately £5.6 billion) is negligible, and as such is a medium-term temporary **negligible beneficial** effect.

18.7.95 As identified during the construction phase, the Scheme's ongoing operation and maintenance could also potentially negatively impact on the economic prosperity of the agricultural, and tourism and recreation industries.

18.7.96 As the Scheme is estimated to displace approximately 13 agricultural sector jobs in the Local Impact Area, this is estimated to have an economic impact of £600,000 per annum, based on an annual GVA per worker of £49,074. This impact will reduce the value of the local agricultural economy by approximately 0.2%, and as such is a low magnitude impact, resulting in a long-term **minor adverse** effect. At the regional level, this is a **negligible adverse** effect. This notwithstanding, the Scheme is likely to bring a direct benefit to local landowners through payment of annual ground rent. This is anticipated to be in the region of £1.7 million per annum.

18.7.97 Whilst the operation of the Scheme is not anticipated to have a direct impact on the serviced accommodation in contrast to the construction phase, there is a potential for the Scheme to reduce the desirability of the Local Impact Area for tourism, and as such, an estimated worst-case scenario of a 1% drop in visitor spending per annum (as described in paragraph 18.7.79) is assessed herein. This 1% fall in visitor spending per annum is approximately £240,000 (equivalent to the loss of 5 workers). Most of this economic loss will be felt in the local arts, entertainment, and recreation (RSTU) grouped economic sector. As such, a £240,000 loss to this economic sector (worth £76 million) represents a loss of 0.3%, which therefore constitutes a low magnitude impact, resulting in a long-term **minor adverse effect**. At the regional level, the loss to the arts, entertainment, and recreation sector is equivalent to 0.008% of the regional economic sector value. Therefore, the effect the Regional Impact Area is a long-term **negligible adverse effect**.

18.7.98 The overall changes to the economy as a result of the construction of the Scheme are set out in **Table 18.19** below.

Table 18.19: Overall Changes to Economic GVA per Annum

(rounding to nearest £100,000)	Local Impact Area	Rest of Regional Impact Area	Rest of UK	Total
Net Direct Employment Uplift	£300,000	£100,000	£100,000	£500,000
Indirect and Induced Uplift	£500,000	£200,000	£200,000	£800,000
Agriculture Impact	-£600,000	£0	£0	-£600,000
Tourism and Recreation Impact	-£200,000	£0	£0	-£200,000
Ground Rent Uplift	£1,700,000	£0	£0	£1,700,000
Total Net GVA Change	**£1,500,000**	**£300,000**	**£300,000**	**£2,100,000**

18.7.99 The total net economic GVA change in the Local Impact Area as a result of the effects of the Scheme including impacts on agriculture and the tourism and recreation sectors equates to a net benefit of approximately £1.5 million per annum. As the economy of the Local Impact Area is an estimated £3.6 billion, this change represents a 0.04% increase in the value of the local economy. This represents an overall negligible positive impact to a receptor of low sensitivity, thus having an overall long-term **negligible beneficial effect** on the economy in the Local Impact Area. The total economic benefit to the Regional Impact Area is £2.1 million, which constitutes a 0.002% increase to the regional economy. This negligible positive impact results in a long-term **negligible beneficial effect**.

18.7.100 The 0.04% increase in the GVA of the local economy will amount to an uplift of £19 GVA per worker per annum in the Local Impact Area from the 2020 baseline during the Scheme's operational lifetime. This rise would constitute a negligible positive impact on the local economy, as well as on local prosperity, and has the potential to have a long-term negligible positive impact on resident and workplace population salary. These are medium sensitivity receptors and as such these impacts would constitute long-term **minor beneficial effects** in the Local Impact Area.

Tourism and Recreation

18.7.101 The Scheme is assessed in this ES as having a 40-year operational lifetime, during which the Scheme is likely to have a degree of impact on tourism and recreation in the immediate locality and Local Impact Area. During the Scheme's operational lifetime, impacts on tourism and recreation are almost exclusively as a result of change in landscape context and the potential subsequent reduction in desirability of the Local Impact Area to visitors.

Tourism Attractions

18.7.102 Regionally important tourism destinations, that have been assessed as of a medium sensitivity to change, may experience a degree of impact on their landscape settings. It is not anticipated that this will impact upon the use, desirability and importance as visitor attractions. Furthermore, operational and maintenance traffic impacts are assessed at having a negligible impact on the highway network used to access these identified attractions. As such, the anticipated impact on regionally important destinations is negligible negative, and as a result the expected effect will be a long-term **minor adverse effect**.

18.7.103 Locally important attractions, including local landscape, heritage, and recreational attractions are only in a minimal number of instances directly impacted by the Scheme due to embedded mitigation and physical separation from formal recreation sites. These are attributed a low sensitivity with regard to tourism impacts due to their local level of importance. Of those that are reliant on their landscape setting as an intrinsic part of their value may experience a long-term adverse effect, the significance of which has been assessed in **Chapter 8: Landscape and Visual Impact [EN010132/APP/WB6.3.8]** and **Chapter 13: Cultural Heritage [EN010132/APP/WB6.3.13]**.

18.7.104 The landscape receptors assessed in Chapter 8 identify a substantial number of viewpoints. It is identified that as a result of the Scheme's operation and the associated embedded mitigation that landscape receptors around the Scheme will experience impacts ranging from medium beneficial to medium adverse. Therefore, the worst-case is up to a peak **moderate-minor adverse effect** on the tourism value of these locations.

18.7.105 Without additional mitigation, the greatest effect from the operation of the Scheme on cultural heritage assets is a major adverse on one designated asset (the mediaeval bishop's palace and deer park, Stow Park Scheduled Monument), up to moderate adverse to the Grade I listed Church of St Botolph, Saxilby with Ingleby, and up to major adverse on non-designated assets. Elsewhere, there are impacts ranging from moderate adverse to major beneficial on some assets including non-designated archaeological remains. Overall, the combined impacts are judged as having a medium magnitude negative impact on tourism and visitors. Resultantly, the Scheme's construction is likely to have a peak medium-term **moderate-minor adverse effect** on heritage-based tourism receptors.

18.7.106 Although some of the identified effects are significant, the number of identified landscape and heritage tourism receptors that are likely to be adversely effected by the Scheme's construction are likely to have a low overall impact on the desirability of the Local Impact Area for tourists and visitors. Resultantly, the effect on local tourism attractions in the Local Impact Area is a long-term **minor adverse effect**.

Public Rights of Way and Long-Distance Recreational Routes

18.7.107 The routing of Public Rights of Way that run within the Order limits is to be retained as existing or restored to as existing following the completion of the Scheme's construction, as set out in the **PRoWMP [EN010132/APP/WB6.3.14.3]**. As such, the operational lifetime of the Scheme is anticipated only to impact on the desirability of affected Public Rights of Way as a result of changes to landscape setting and aspect, not their accessibility or use. A full assessment of the landscape impacts on Public Rights of Way is presented in **Chapter 8: Landscape and Visual Impact [EN010132/APP/WB6.3.8]**. Where receptors in **Table 18.20** are marked as having no visual impact, this is based on the Augmented Zone of Theoretical Visibility Plans at **ES Figures 8.12.1-4 [EN010132/APP/WB6.4.8.12.1-4]**.

18.7.108 The local network of Public Rights of Way is important to the local population for personal health and wellbeing, and for local amenity. Thus the Public Right of Way network is of a medium sensitivity to impacts. As a result of their regional and national importance, Long Distance Recreation Routes are of high sensitivity to impacts from the Scheme. The potential routes likely to be affected are listed in **Table 18.20** below.

Table 18.20: Impacts on Public Rights of Way and Long-Distance Recreational Routes

Public Right of Way/Route Identifier	Potential Impacts	Magnitude of Impact	Significance of Effect
LINCOLNSHIRE PRoWs			
Brox/197/1 Public footpath	Visual impacts	Negligible long-term negative	Minor adverse
Brox/196/1-Scmp/196/1 Public footpath	Visual impacts	Negligible long-term negative	Minor adverse
Mton/68/1 Public footpath	Immediate visual impacts	Low long-term negative	Moderate-minor adverse
Mton/66/4 Public footpath	Visual impacts	Negligible long-term negative	Minor adverse
NOTTINGHAMSHIRE PRoWs			

Public Right of Way/Route Identifier	Potential Impacts	Magnitude of Impact	Significance of Effect
Cottam FP1 Public footpath **(Trent Valley Way)**	See long-distance recreation routes below		
Unnamed footpath (marked on OS mapping)	Distant visual impacts	Negligible long-term negative	Minor adverse
North Leverton with Habblesthorpe RB25 Restricted bridleway	Distant visual impacts	Negligible long-term negative	Minor adverse
North Leverton with Habblesthorpe BOAT14 Byway open to all traffic (known as Craikbank Lane)	Distant visual impacts	Negligible long-term negative	Minor adverse
North Leverton with Habblesthorpe FP18 Public footpath	Distant visual impacts	Negligible long-term negative	Minor adverse
Sturton le Steeple BW5 Public bridleway (known as Fenton Lane) **(Trent Valley Way)**	See long-distance recreation routes below		
Sturton le Steeple RB32 (adj. to Littleborough Road) Restricted byway (known as Cross Common Lane)	Distant visual impacts	Negligible long-term negative	Minor adverse

Public Right of Way/Route Identifier	Potential Impacts	Magnitude of Impact	Significance of Effect
Sturton le Steeple RB32 (Common Lane) Restricted byway	Distant visual impacts	Negligible long-term negative	Minor adverse
Sturton le Steeple FP38 Public footpath	Distant visual impacts	Negligible long-term negative	Minor adverse
Sturton le Steeple FP39 Public footpath	Distant visual impacts	Negligible long-term negative	Minor adverse
Sturton le Steeple FP15 Public footpath	Distant visual impacts	Negligible long-term negative	Minor adverse
Sturton le Steeple FP17 Public footpath	Distant visual impacts	Negligible long-term negative	Minor adverse
LONG DISTANCE RECREATIONAL ROUTES			
Trent Valley Way (Cottam FP1) Long distance path	Visual impacts	Negligible long-term negative	Moderate-minor adverse
Trent Valley Way (Sturton le Steeple BW5) Long distance path	Distant visual impacts	Negligible long-term negative	Moderate-minor adverse
Plogsland Round Long distance path	Visual impacts	Negligible long-term negative	Moderate-minor adverse
National Byways Long distance cycle route	Distant visual impacts	Negligible long-term negative	Moderate-minor adverse
National Cycle Route Network Route 64	Distant visual impacts	Negligible long-term negative	Moderate-minor adverse

Public Right of Way/Route Identifier	Potential Impacts	Magnitude of Impact	Significance of Effect
Long distance cycle route			

18.7.109 As a result of the embedded mitigation measures set out in the **OCEMP [EN010132/APP/WB7.1]**, **CTMP [EN010132/APP/WB6.3.14.2]** and **PRoWMP [EN010132/APP/WB6.3.14.3]** the greatest effects on the use, accessibility, and desirability of either Public Rights of Way or of long-distance recreation routes during the operational lifetime of the Scheme are **moderate-minor adverse effects**. Therefore these effects are not deemed to be significant.

18.7.110 As described previously in paragraph 18.6.9, the Scheme also features a new semi-accessible habitat management area and a permissive path from Sykes Lane up to the Codder Lane Belt. These are aimed to improve recreational walking opportunities in the immediate vicinity, secondarily benefitting local population health and wellbeing in the long-term. The accessible habitat management area and permissive footpaths are denoted respectively by the extents of Work Nos.10 and 11 in **Schedule 1 of the Draft Development Consent Order [EN010132/APP/WB3.1]** and on the **Works Plans [EN010132/APP/WB2.4]**. Resultantly this would be a low long-term positive impact to a medium sensitivity receptor, and as such, would have a localised **moderate-minor beneficial effect** on recreational walking, and this resultantly on health and wellbeing. Traffic movements associated with the operation and maintenance of the Scheme are likely to have a **neutral effect** on Public Rights of Way and other recreational routes.

Recreation Facilities and Attractions

18.7.111 During the operational lifetime of the Scheme, impacts on waterways and bodies of water used for recreation are only anticipated as a result of change to landscape setting for recreational waterway users. The River Trent is likely to experience intermittent visual impacts from the Site at West Burton 3, as a result of intervening woodland and topography. As such, the long-term effect on the desirability of the River Trent for recreational use, which has a medium sensitivity due to its regional significance, is a negligble negative impact, and this a long-term **minor adverse effect**. The Fossdyke Navigation Canal is also likely to experience intermittent visual impacts from the Site at West Burton 2, albeit to a lesser extent. As such, the long-term impact is likely to be negligible, resulting in a long-term **minor adverse effect** to the desirability of the canal for recreational use.

18.7.112 Fishing locations on the River Till at Saxilby are likely to experience mid-range views of panels at West Burton 1 and 2, thus there may be up to a low magnitude impact on the use of this location. As a result of its local level of importance, and thus a low sensitivity, this will therefore have a medium-term temporary **minor adverse effect**.

The ponds at the Old Brick Pits, and at Locklands at Torksey are not likely to be affected by the Scheme due to existing intervening topography and vegetation, and therefore will experience a **neutral effect**.

18.7.113 As such, the impacts on the recreation use of waterways and water bodies is no greater than a long-term **minor adverse effect**.

18.7.114 Formal recreational facilities for activities such as golf, cricket, and flying have been identified within 5km of the Sites. Of these, only Lincoln Golf Club is likely to experience short-range views of the Scheme, with all others experiencing distant views or no likely view. As such, it is anticipated the greatest magnitude of impact will be low, as a result of short-range views on the landscape context of Lincoln Golf Club (as identified in the Augmented Zone of Theoretical Visibility Plans at **ES Figures 8.12.1-4 [EN010132/APP/WB6.4.8.12.1-4]**). As these locations are a low sensitivity to change as a result of their local level of importance, the resultant effects on the desirability of these locations for tourism and recreation is anticipated to be up to a long-term **minor adverse effect**.

18.7.115 Formal and informal recreational facilities, including those for recreational sports and children's play areas are attributed a medium sensitivity to change due to some of their locations near to the Sites and their use for encouraging health and wellbeing in younger demographics in the local population. The Scheme is not anticipated to impact the long-term desirability of these as a result of landscape context by any more than a negligible magnitude. Operation and maintenance traffic on the surrounding highway network is anticipated to have a neutral impact on traffic movements, and thus the accessibility of some of the local recreation areas. As such, there would be no more than a long-term **minor adverse effect** on the accessibility of recreational facilities for children and youth groups.

Other Tourism and Recreation Receptors

18.7.116 The development of the Scheme will have a long-term impact on the landscape character of some tourism and recreation receptors that are reliant on the landscape context for their value, such as viewpoints, landmarks, and cultural heritage assets.

18.7.117 This could therefore have a secondary impact on local business that are reliant on tourism. Thus, the maximum long-term **moderate-minor adverse effect** on the desirability of local tourist attractions and recreation centres in the Local Impact Area could lead to a proportional maximum long-term **moderate-minor adverse effect** on the local tourism industry and economy during the Scheme's operational lifetime.

Decommissioning

18.7.118 The decommissioning of the Scheme is expected to take 12-24 months at the end of the life of the Scheme (which is estimated to be no earlier than 2066 for the purpose of EIA), and will be undertaken in phases, under direction of the **Outline Decommissioning Statement [EN010132/APP/WB7.2]**, which is secured by a

Requirement in the draft DCO. The effects of decommissioning are similar to, or often of a lesser magnitude than construction effects. For the purposes of this assessment, the estimated number of workers required to undertake the decommissioning of the Scheme is 80% of that during construction. This estimate is derived from professional judgement based on known areas of the Scheme that will not require decommissioning (i.e. cable route ducting and some areas of landscaping). It should however be noted that there is a far greater degree of uncertainty in estimating the sensitivity of the receptors and magnitude of the impacts due to them being projected up to 2066. This uncertainty is borne from ranged estimates with regard to socio-economic, agricultural, and tourism and recreational factors, and the engineering approaches and technologies that are likely to change over the operational life of the Scheme. As such, for the purpose of this assessment, the sensitivities of each receptor are the same as for the construction and operational phases of the Scheme.

Socio-Economics

Employment

18.7.119 The decommissioning of the Scheme is anticipated to generate an estimated 80% of the level of employment of the construction phase, owing to the reduced labour requirements of decommissioning works, including those on the Cable Route Corridor. As such, it can be estimated that the decommissioning phase will employ a gross of 236 FTE employees per annum, based on a worst-case 24-month decommissioning timeframe. For the purpose of this assessment, this would produce a peak decommissioning workforce of 343 employees, however this peak may be higher if a shorter decommissioning timeframe is undertaken.

18.7.120 As per employment during the construction and operational phases (and detailed in paragraphs 18.7.6-18.7.9), assumptions on the leakage of benefits to outside the Local Impact Area, displacement of existing explement, and the level of indirect and induced employment have been accounted into calculating the net employment from the Scheme, demonstrated in **Table 18.21** below. These assumptions are that: 19.3% of employment will come from the rest of the Regional Impact Area, and 16.5% from the rest of the UK (Ref.63); the displacement rate is 25% (Ref.80); and an estimated further 1.33 employees per direct FTE employee per annum will be generated through indirect and induced impacts (Ref.81).

Table 18.21: FTE Employment per Annum as a Result of Scheme Decommissioning

	Local Impact Area	Rest of Regional Impact Area	Rest of UK	Total
Gross Direct Employment	152	46	39	236
Displacement	-38	-11	-10	-59
Net Direct Employment	114	34	29	177
Indirect and Induced Employment	202	61	52	314
Total Net Employment	**316**	**95**	**81**	**492**

18.7.121 The total net employment generated by the Scheme's decommissioning is equivalent to approximately 492 FTE jobs per annum. Of these, 316 are anticipated to be taken up by the workforce within the Local Impact Area, a total of 411 are anticipated within the Regional Impact Area (inclusive of the LIA), and the other 81 jobs are expected to be taken up by workers from elsewhere in the UK.

18.7.122 The net direct employment from the Scheme decommissioning is likely to most benefit the construction employment sector. The net uplift of 114 workers is a 2.4% increase to construction employment in the Local Impact Area. This is a medium magnitude impact to a low sensitivity receptor, resulting in a medium-term temporary **moderate-minor beneficial effect**. The total net direct uplift of 148 workers is a 0.1% increase to construction employment in the Regional Impact Area. This is a low magnitude impact to a low sensitivity receptor, resulting in a medium term temporary **minor beneficial effect**.

18.7.123 The energy sector will experience a permanent decline in employment as a result of the decommissioning of the Scheme. The loss to the Local Impact Area of 8 FTE employees is a 2.4% reduction. This therefore represents a permanent medium negative impact to an industry that has a low sensitivity, resulting in a permeant **moderate-minor adverse effect**. At the regional level, where the sensitivity is also low, the magnitude of impact (a total loss of 10 workers from a pool of approximately 12,000) is negligible (0.08%), and as such is a permanent **negligible adverse effect**.

18.7.124 The loss of energy sector employment will be negated by the reinstatement of up to 13 FTE agricultural sector jobs as a result of the land being returned to agricultural use at the conclusion of the decommissioning phase, thus benefitting agricultural

sector employment opportunities. The level of effect in the Local Impact Area will be a permanent **minor beneficial effect**. At the regional level, this will be a permanent **negligible beneficial effect**.

18.7.125 The decommissioning of the Scheme is likely to require temporary workers to be accommodated in the Local Impact Area. This will bring a temporary uplift in accommodation demand, anticipated to be average 63 FTE employees, with a peak of 123 employees. This would increase occupancy rates by approximately 9.1%. A proportional rise in accommodation sector workers to meet this would equate to 48 FTE staff. This would amount to a medium magnitude impact to a medium sensitivity receptor; thus the Local Impact Area would experience a medium-term temporary **moderate beneficial effect**. This is therefore a **significant effect**. This level of uplift in the Regional Impact Area is low (a 0.2% increase to the 28,000-worker accommodation services employment sector), to a sector of low sensitivity, and thus is a medium-term temporary **minor beneficial effect**.

18.7.126 The operation of the Scheme is estimated to cause a worst-case scenario loss of 5 workers in the local arts, entertainment, and recreation (RSTU) grouped employment sector. This will continue until decommissioning is complete. Accounting for the potential worst-case peak accommodation need for construction workers, this may displace visitors from accommodation, leading to a further 1% drop in visitor spending in the Local Impact Area. It is prudent to account for a worst-case loss of 11 FTE employees to the RSTU grouped employment sector during decommissioning. As such, this represents a loss of 0.3%, which therefore constitutes a low magnitude impact, resulting in a medium-term temporary **minor adverse effect**. At the regional level, the loss to the RSTU grouped employment sector is equivalent to 0.01% of the regional economic sector employment. Therefore, the effect the Regional Impact Area is a medium-term temporary **negligible adverse effect**.

18.7.127 That notwithstanding, this sector is likely to return to near baseline conditions following the conclusion of the Scheme's decommissioning. As such, the Local Impact Area will experience a permanent **minor beneficial effect** following completion of decommissioning. This effect will be a permanent **negligible beneficial effect** in the Regional Impact Area.

18.7.128 The overall changes to employment as a result of the decommissioning of the Scheme are set out in **Table 18.22** below.

Table 18.22: Overall Changes to Employment per Annum During Decommissioning

(rounding to nearest 1 FTE)	Local Impact Area	Rest of Regional Impact Area	Rest of UK	Total
Net Direct Construction Employment	114	34	29	177
Indirect and Induced Employment	202	61	52	314
Energy Employment	-8	-2	-2	-12
Agricultural Employment	-13	-	-	-13
Accommodation Employment	40	-	-	40
Tourism and Recreation (RSTU) Employment	-11	-	-	-11
Total Net Employment Change	**324**	**93**	**79**	**496**

18.7.129 The total net employment change during the decommissioning phase of 324 workers in the Local Impact Area represents a 0.4% increase. This is therefore a low magnitude positive impact to a medium sensitivity receptor, resulting in an overall medium-term temporary **moderate-minor beneficial effect** in the Local Impact Area. In the Regional Impact Area, the net employment uplift of 417 workers represents a negligible (0.02%) positive impact to a low sensitivity receptor, thus having an overall medium-term temporary **negligible beneficial effect** on employment in the Regional Impact Area.

18.7.130 Following completion of the decommissioning phase, employment will return to near baseline levels. This will therefore represent a permanent **minor beneficial effect** to the Local Impact Area, and a **neutral effect** to the Regional Impact Area.

Socio-Demographic Impacts

18.7.131 The baseline socio-demographic conditions used for assessing the construction phase in 2024-2026 are unlikely to be representative of the population in 2066 at the assessed time of decommissioning. The uplift in population associated with the decommissioning of the Scheme is likely to affect some socio-demographic

receptors such as access to local services including primary health services, access to accommodation, access to employment and education, and health and wellbeing. Any effects on the socio-demographic environment of the Local Impact Area are unable to be representatively assessed. However, if the assessment of the construction phase effects is taken as a worst-case, the impacts on the socio-demographic environment can be estimated as have up to a medium-term temporary **moderate-minor adverse effect** in the Local Impact Area, and up to a medium-term temporary **negligible adverse effect** in the Regional Impact Area.

Economic Impacts

18.7.132 As mentioned with regard to employment, the decommissioning of the Scheme is likely to generate approximately 80% of the GVA per annum as the construction phase (adjusted for inflation). As it is not feasible to determine the future economic conditions within the Local and Regional Impact Areas during the decommissioning phase, the sensitivity of economic receptors is assumed to be the same as during the construction phase, and the level of magnitude of impacts from the Scheme are assumed to be the same as during construction. Any other assumed impacts relating to scale of magnitude of impacts from the Scheme's operation and maintenance are also assumed to be the same for decommissioning as required for this assessment.

18.7.133 As such, it is likely the construction sector economy in the Local Impact Area will experience a temporary medium positive impact during the Scheme's decommissioning. This impact to a low sensitivity receptor will result in a medium-term temporary **moderate-minor beneficial effect**. In the Regional Impact Area, the magnitude of impact is likely to be low, and as such constitutes a medium-term temporary **minor beneficial effect**.

18.7.134 The decommissioning of the Scheme will also bring a close to the long-term benefits of the Scheme to the energy sector economy. As such, the decommissioning of the Scheme will lead to a permanent low magnitude negative impact on the energy sector economy in the Local Impact Area, resulting in a permanent **minor adverse effect**. The magnitude of this impact in the Regional Impact Area is negligible, and as such, the resultant effect is a permanent **negligible adverse effect**.

18.7.135 The conclusion of the Scheme's decommissioning phase will see the land occupied by the Scheme returned to agricultural use. As such, the long-term effects on the agricultural economy from the Scheme's construction and operation and maintenance will be reversed. As such, following the conclusion of the decommissioning works, the Local Impact Area will experience a low magnitude positive impact, resulting in a permanent **minor beneficial effect**. The magnitude of this impact in the Regional Impact Area is negligible, and as such, the resultant effect is a permanent **negligible beneficial effect**.

18.7.136 The accommodation economy is likely to see a medium-term uplift as a result of decommissioning workers filling unfilled capacity within the accommodation sector. This will therefore have a medium magnitude positive impact on the low sensitivity

receptor, resulting in a medium-term temporary **moderate-minor beneficial effect** in the Local Impact Area. The magnitude of change at the regional level will be experienced as a negligible positive impact, translating to a medium-term temporary **negligible beneficial effect** in the Regional Impact Area.

18.7.137 The operation of the Scheme is estimated to cause a worst-case scenario 1% drop in visitor spending per annum (£240,000), felt predominantly in the local arts, entertainment, and recreation (RSTU) grouped economic sector. This will continue until decommissioning is complete. Accounting for the potential worst-case peak accommodation need for construction workers, this may displace visitors from accommodation, leading to a further drop in visitor spending in the Local Impact Area. It is prudent to account for a further 1% loss to visitor spending and thus to the RSTU grouped sector economy. As such, a £480,000 loss to this economic sector represents a loss of 0.6% (based on the existing baseline (Ref.67), which therefore constitutes a low magnitude impact, resulting in a medium-term temporary **minor adverse effect**. At the regional level, the loss to the RSTU grouped sector is equivalent to 0.02% of the existing baseline regional economic sector value (Ref.67). Therefore, the effect the Regional Impact Area is a medium-term temporary **negligible adverse effect**.

18.7.138 As a result of the completion of the Scheme's decommissioning phase, the desirability of the surrounding area for tourism and recreation is likely to return to the existing baseline conditions. This therefore would mark a reversal to the long-term effects generated within the Scheme's operational lifetime. As such, the completion of decommissioning of the Scheme is likely to bring about a permanent low magnitude positive impact to the Local Impact Area, and thus is a permanent **minor beneficial effect**. In the Regional Impact Area, the magnitude of this impact is negligible, thus resulting in a permanent **negligible beneficial effect**.

18.7.139 The total net economic change during the decommissioning phase of the Scheme is likely to bring a medium-term temporary low magnitude positive impact to the Local Impact Area's economy. As such, the Local Impact Area is anticipated to experience a medium-term temporary **minor beneficial effect** during the decommissioning phase. At the regional level, this impact is anticipated to be of a negligible magnitude, thus the anticipated effect will be a medium-term temporary **negligible beneficial effect** in the Regional Impact Area.

18.7.140 This will then be followed by an anticipated net negative effect on the local and regional economies following the conclusion of the Scheme's decommissioning as the economic conditions return to those in the baseline. As such, it is anticipated that the magnitude of this impact will be negligible at both the local and regional level, resulting in permanent **negligible adverse effects** to both the economies of the Local and Regional Impact Areas.

18.7.141 The magnitude of changes to the economy in the Local Impact Area during, and following decommissioning are also anticipated to be experienced with regard to economic prosperity and resident and working population income in the Local

Impact Area, both of which are a medium sensitivity to change. As such, the low positive impact during decommissioning is likely to result in medium-term temporary **moderate-minor beneficial effects** to both these receptors. Following this, the negligible negative impact of completion of decommissioning will result in permanent **minor adverse effects** to these receptors.

Tourism and Recreation

18.7.142 The scale of works required for decommissioning is likely to be similar to that of the Scheme's construction phase, and as such, impacts on tourism and recreation receptors during decommissioning are equatable to those during the construction phase. That notwithstanding, following completion of decommissioning and the return of the land to agricultural use, the desirability of the surrounding area is likely to return to near baseline conditions prior to the construction of the Scheme. A notable exception to this will be any landscape or ecological enhancement measures installed as part of the Scheme that are intended to be retained in perpetuity.

Tourism Attractions

18.7.143 The network of regionally important tourism destinations in the Scheme's immediate surroundings are likely to experience no more than a medium-term negligible negative impact from the decommissioning of the Scheme. Given their medium sensitivity, the expected effect will be medium-term **minor adverse effect** during the Scheme's decommissioning. This will be followed by a permanent **minor beneficial effect** to desirability and thus tourism value as a result of the land within the Scheme being returned to agricultural use.

18.7.144 Given the implementation of embedded mitigation to limit the impact of the Scheme on surrounding views, it can be estimated that the impacts from decommissioning on local tourism attractions in the surrounding area reliant on landscape and heritage assets are likely to be no greater than those during the Scheme's operation. As such the anticipated impacts on local landscape and heritage tourism receptors are up to peak medium magnitude negative impacts, and thus are likely to experience peak medium-term temporary **moderate-minor adverse effects** during decommissioning.

18.7.145 The impacts of the conclusion of decommissioning, and the return of the land within the Order limits to agricultural use, in addition to the long-term benefits associated with any landscape or ecological enhancement measures installed as part of the Scheme that are intended to be retained in perpetuity, will result in permanent improvement to local landscape and heritage tourism receptors. The magnitude of impact is anticipated to be medium, and as a result, the effects on both landscape and heritage tourism receptors is likely to be permanent **moderate-minor beneficial effects**.

18.7.146 The resultant effects to regionally and locally important tourist attractions means that it is anticipated that (as per construction) the overall magnitude of impact on the desirability of tourism attractions across the Local Impact Area is low. During

decommissioning, this low negative impact results in an overall medium-term temporary **minor adverse effect** to tourist attractions in the Local Impact Area. Post-decommissioning, low positive impact results in an overall permanent **minor beneficial effect**.

Public Rights of Way and Long-Distance Recreational Routes

18.7.147 The Scheme's decommissioning is likely to have direct impacts on a number of Public Rights of Way and long-distance recreation routes as a result of temporary use as HGV accesses, required diversions and closures, and secondary temporary impacts as a result of the movements of goods and employee traffic. The magnitudes of these impacts are anticipated to be similar to those anticipated during the Scheme's construction. Some public rights of way and long-distance recreational routes may have fewer or smaller impacts as cable ducting relating to the Cable Route Corridor is anticipated to be left in situ, thus reducing the need for closures or diversions of routes. Embedded mitigation to limit impacts on these features during construction are detailed in the **CTMP [EN010132/APP/WB6.3.14.2]** and **PRoWMP [EN010132/APP/WB6.3.14.3]** and as such similar measures are anticipated to be implemented during decommissioning.

18.7.148 Upon completion of decommissioning and the reinstatement of the land within the Order limits to agricultural use, the long-term effects from the operation of the Scheme will be reversed to near baseline conditions, albeit including benefits from any landscape or ecological enhancement measures installed as part of the Scheme that are intended to be retained in perpetuity.

18.7.149 As identified in **Table 18.15** and paragraph 18.7.62, the anticipated effects on public rights of way during construction are not significant. Nor are those identified in **Table 18.20** and paragraph 18.7.109 for effects during the Scheme's operational lifetime.

18.7.150 As a result of their importance to local health and wellbeing, public rights of way are attributed a medium sensitivity to change. The magnitude of negative impact is anticipated to be low during decommissioning, and as a result there is an anticipated short to medium-term **moderate-minor adverse effect** to public rights of way. The return to baseline conditions post-decommissioning will bring a low positive impact, resulting in a permanent **moderate-minor beneficial effect**.

18.7.151 Long distance recreational routes have a high sensitivity due to their regional importance and benefits to health and wellbeing. Whilst impacts on long-distance recreational routes from construction are significant, as identified in paragraph 18.7.63, these impacts relate primarily to the cable route and as such impacts during decommissioning are likely to be far less. As a result, it is anticipated there will be no greater than a short to medium-term **moderate-minor adverse effect** on the use of these routes for recreation. The return to baseline conditions post-decommissioning will bring a negligible positive impact, resulting in a permanent **moderate-minor beneficial effect**.

18.7.152 As identified in **Chapter 14: Transport and Access [EN010132/APP/WB6.2.14]**, during the construction phase of the Scheme, there are up to low negative impacts on pedestrian, cycling, and horse-riding traffic on some other routes used for recreation. These other recreational routes are given a medium sensitivity due to their importance as links connecting the PRoW network to nearby settlements. This negative impact is as a result of fear and intimidation from construction vehicle movements. It is expected that the same magnitude of impact will be experienced during decommissioning, thus generating a **moderate-minor adverse effect** to these receptors.

18.7.153 Furthermore, the decommissioning of the Scheme may lead to the closure of the semi-accessible habitat management area and proposed permissive path from Sykes Lane along Codder Lane Belt subject to landowner agreement, as the land is likely to be returned in full to agricultural use. As a worst-case scenario impact, this closure has the potential to have a permanent low negative impact, and as such, would have a localised permanent **moderate-minor adverse effect** on recreational walking, with secondary impacts therefrom on local health and wellbeing.

Recreation Facilities and Attractions

18.7.154 Recreational waterways, and formal and informal recreational facilities in the area surrounding the Scheme are anticipated to be impacted by the Scheme's decommissioning to the same magnitude as during construction phase. Following decommissioning, the impacts on these receptors are anticipated to be reversed from the operational impacts as a result of the land within the Order limits being returned to agricultural use.

18.7.155 As such, the impacts on waterways and bodies of water used for recreation are anticipated to be no more than a low magnitude negative impact, resulting in a maximum medium-term temporary **minor adverse effect**. This then will be followed by an anticipated permanent **minor beneficial effect** to the recreational desirability of waterways and formal facilities as a result of the visual impact of the land returning to agricultural use at the completion of the Scheme's decommissioning.

18.7.156 Formal recreational facilities identified within 5km of the Sites are not anticipated to experience more than a low impact on the landscape context and thus the desirability of these locations for recreational use. As such, this would result in up to a temporary medium-term **minor adverse effect** to these receptors during the Scheme's decommissioning. Following the conclusion of this phase, these receptors would experience a permanent **minor beneficial effect**.

18.7.157 Other informal recreational facilities, including those for recreational sports and children's play areas are more likely to impacted by vehicle movements associated with the decommissioning of the Scheme as are likely to be experienced during construction. As such, there is an anticipated up to low negative magnitude impact on these receptors, which as a result of their medium sensitivity result in a maximum medium-term temporary **moderate-minor adverse effect** on the accessibility of recreational facilities for children and youth groups for the duration

of decommissioning works. Once these decommissioning works are finished, these receptors are likely to experience a permanent **minor beneficial effect**.

Other Tourism and Recreation Receptors

18.7.158 As a result of the identified direct impacts on tourism and recreation receptors in the Local Impact Area, there are likely to be secondary impacts on local businesses that are reliant on tourism during the decommission phase. Thus, the maximum **moderate-minor adverse effect** on the desirability of local tourist attractions and recreation centres in the Local Impact Area could lead to a proportional maximum **moderate-minor adverse effect** on the local tourism industry and economy during the Scheme's decommissioning. These effects are however likely to be reverted to near-baseline conditions following the completion of the decommissioning of the Scheme, thus there is potential for up to a permanent **moderate-minor beneficial effect** on the local tourism and recreation industry following the completion of the Scheme's decommissioning and the return of the land to agricultural use.

Summary

18.7.159 The anticipated pre-mitigation impacts resulting from the Scheme on socio-economic and tourism and recreation receptors are summarised in **Table 18.23**, demonstrating the receptor sensitivity, and the likely significant impact associated with that receptor. Where the estimated significance of the described effects has been identified, those deemed to be moderate, major-moderate, or major are key significant effects. These have been shown with bold text.

Table 18.23: Summary of Preliminary Magnitude and Significance of Effects

Receptor	Sensitivity	Description of Impact	Estimated Magnitude of Impact	Effect Level (significant effects identified in bold)
CONSTRUCTION				
Construction sector employment	Low (LIA)	Increase in construction employment opportunities generated from Scheme construction	Medium positive	Medium-term temporary moderate-minor beneficial
	Low (Regional)		Low positive	Medium-term temporary minor beneficial
Agriculture, forestry & fishing sector employment	Low (LIA)	Decrease in agriculture-based employment as a result of the Scheme's construction	Low negative	Long-term temporary minor adverse
	Low (Regional)		Negligible negative	Long-term temporary negligible adverse
Accommodation sector employment	Medium (LIA)	Increase in demand for temporary accommodation units	High positive	**Medium-term temporary major-moderate beneficial**
	Low (Regional)		Low positive	Medium-term temporary minor beneficial
	Medium (LIA)	Decrease in visitor accommodation	Neutral	Neutral effect
	Low (Regional)		Neutral	Neutral effect
Tourism and recreation sector employment	Low (LIA)	Decrease in tourism and recreation demand due to reduced accessibility to accommodation	Neutral	Neutral effect
	Low (Regional)		Neutral	Neutral effect
Economic activity and employment	Medium (LIA)	Increase in labour and employment opportunity	Low positive	Medium-term temporary moderate-minor beneficial

Receptor	Sensitivity	Description of Impact	Estimated Magnitude of Impact	Effect Level (significant effects identified in bold)
	Low (Regional)		Negligible negative	Medium-term temporary negligible beneficial
Resident population	Low (LIA)	Uplift in population from construction workforce and families	Negligible positive	Medium-term temporary negligible beneficial
	Low (Regional)		Negligible positive	Medium-term temporary negligible beneficial
Resident age demographics	Medium (LIA)	Uplift in population from construction workforce and families	Neutral	Neutral effect
	Low (Regional)		Neutral	Neutral effect
Access to primary healthcare	Low (LIA)	Uplift in population looking to access primary healthcare facilities	Negligible negative	Medium-term temporary negligible adverse
	Low (Regional)		Negligible negative	Medium-term temporary negligible adverse
General population health and wellbeing	Medium (LIA)	Uplift in population looking to access primary healthcare facilities	Negligible negative	Medium-term temporary minor adverse
	Low (Regional)		Negligible negative	Medium-term temporary negligible adverse
Disability and long-term health conditions	Low (LIA)	Uplift in population looking to access healthcare facilities	Negligible negative	Medium-term temporary negligible adverse
	Low (Regional)		Negligible negative	Medium-term temporary negligible adverse
Accommodation stock (construction)	Medium (LIA)	Increase in accommodation occupancy for temporary or short-term workers	High positive	**Medium-term temporary major-moderate beneficial**

Receptor	Sensitivity	Description of Impact	Estimated Magnitude of Impact	Effect Level (significant effects identified in bold)
Accommodation stock (visitor)	Medium (LIA)	Visitor displacement due to accommodation for temporary or short-term workers	Neutral	Neutral effect
Accommodation stock (housing)	Low (LIA)	Increase in accommodation requirement for workers and families	Medium positive	Medium-term temporary moderate-minor beneficial
Access to employment (IMD)*	High (LIA)	Changes in overall employment opportunities generated from Scheme construction	Low positive	**Medium-term temporary moderate beneficial**
Access to education (IMD)	High (LIA)	Increase in sector-based skills training and qualification opportunities	Negligible positive	Medium-term moderate-minor beneficial
Skills and qualification	Medium (LIA)	Increase in sector-based skills training and qualification opportunities	Negligible positive	Medium-term minor beneficial
	Low (Regional)		Neutral	Neutral effect
Working and commuting patterns	Medium (LIA)	Changes in overall employment opportunities for local and long-distance commuters Changes to commuting method as a result of Scheme location	Negligible negative	Medium-term temporary minor adverse
Health and wellbeing	Medium (LIA)	Fear and intimidation from HGV traffic on highways used by walkers, cyclists, and horse riders Diversion, closure or accessibility impacts to public rights of way	Low negative	Medium-term temporary moderate-minor adverse

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Receptor	Sensitivity	Description of Impact	Estimated Magnitude of Impact	Effect Level (significant effects identified in bold)
Construction economy	Low (LIA)	Economic impacts on existing construction economy	Medium positive	Medium-term temporary moderate-minor beneficial
	Low (Regional)		Low positive	Medium-term temporary minor beneficial
Agricultural economy	Low (LIA)	Economic impacts on existing agriculture economy	Low negative	Long-term temporary minor adverse
	Low (Regional)		Negligible negative	Long-term temporary negligible adverse
Accommodation economy	Low (LIA)	Economic impacts on existing accommodation economy	Medium positive	Medium-term temporary moderate-minor beneficial
	Low (Regional)		Negligible positive	Medium-term temporary negligible beneficial
Tourism and visitor economy	Low (LIA)	Economic impacts on existing tourism and visitor-based economy	Neutral	Neutral effect
	Low (Regional)		Neutral	Neutral effect
Local economy	Low (LIA)	Economic impacts on the overall existing economy	Low positive	Medium-term temporary minor beneficial
	Low (Regional)		Negligible positive	Medium-term temporary negligible beneficial
Economic prosperity	Medium (LIA)	Total GVA and GVA/head change associated with construction of Scheme	Low positive	Medium-term temporary moderate-minor beneficial
Resident and working population income	Medium (LIA)	Changes in overall employment opportunities and personal income from Scheme construction	Low positive	Medium-term temporary moderate-minor beneficial

Receptor	Sensitivity	Description of Impact	Estimated Magnitude of Impact	Effect Level (significant effects identified in bold)
Regional tourist attractions	Medium	Impacts from construction noise, traffic, and views on desirability and use	Negligible negative	Medium-term temporary minor adverse
Local tourist attractions (landscape)	Low	Impacts from construction noise, traffic, and views on desirability and use	Peak high negative	**Peak medium-term temporary moderate adverse**
Local tourist attractions (heritage)	Low	Impacts from construction noise, traffic, and views on desirability and use	Peak medium negative	Peak medium-term temporary moderate-minor adverse
Local tourist attractions (all LIA)	Low	Impacts from construction noise, traffic, and views on desirability and use	Low negative	Medium-term temporary minor adverse
Public Rights of Way	Medium	Impacts from construction noise, traffic, views, and diversions and closures of routes on PRoW desirability and use	Up to low negative	Short- to medium-term temporary moderate-minor adverse
Long distance recreation routes	High	Impacts from construction noise, traffic, views, and diversions and closures of routes on route desirability and use	Up to low negative	**Short- to medium-term temporary moderate adverse**
Other walking and cycling routes	Medium	Fear and intimidation from HGV traffic on highways used by walkers, cyclists, and horse riders Diversion, closure or accessibility impacts to public rights of way	Low negative	Medium-term temporary moderate-minor adverse
Recreational use of waterways for navigation or fishing	Low-Medium	Impacts from construction noise, traffic, and views on desirability and use	Up to low negative	Medium-term temporary minor adverse

Receptor	Sensitivity	Description of Impact	Estimated Magnitude of Impact	Effect Level (significant effects identified in bold)
Formal recreation centres	Low	Impacts from construction noise, traffic, and views on desirability and use	Up to low negative	Medium-term temporary minor adverse
Informal and youth recreation centres	Medium	Impacts from construction noise, traffic, and views on desirability and use	Up to low negative	Medium-term temporary moderate-minor adverse
Other tourism and recreation receptors	Low-Medium	Secondary impacts on tourist industry and recreation receptors from construction noise, traffic, and views on desirability, accessibility and use in-combination with landscape and heritage impacts	Up to medium negative	Medium-term temporary moderate-minor adverse
OPERATION				
Energy sector employment	Low (LIA)	Increase in energy-based employment as a result of the Scheme's operation and maintenance	Medium positive	Long-term moderate-minor beneficial
	Low (Regional)		Negligible positive	Long-term negligible beneficial
Agriculture, forestry & fishing sector employment	Low (LIA)	Decrease in agriculture-based employment as a result of the Scheme's operation and maintenance	Low negative	Long-term temporary minor adverse
	Low (Regional)		Negligible negative	Long-term temporary negligible adverse
Accommodation sector employment	Medium (LIA)	Increase in demand for temporary accommodation units	Neutral	Neutral effect
	Low (Regional)		Neutral	Neutral effect
Tourism and recreation sector employment	Low (LIA)	Decrease in tourism and recreation demand due to visual, accessibility, and desirability impacts of Scheme	Low negative	Long-term minor adverse
	Low (Regional)		Negligible negative	Long-term negligible adverse

Receptor	Sensitivity	Description of Impact	Estimated Magnitude of Impact	Effect Level (significant effects identified in bold)
Economic activity and employment	Medium (LIA)	Changes in employment opportunities resulting from Scheme operation and maintenance	Negligible negative	Long-term minor adverse
	Low (Regional)		Neutral	Neutral effect
Resident population	Low (LIA)	Uplift in population from operation and maintenance workforce and families	Negligible positive	Long-term negligible beneficial
	Low (Regional)		Neutral	Neutral effect
Resident age demographics	Medium (LIA)	Uplift in population from operation and maintenance workforce and families	Neutral	Neutral effect
	Low (Regional)		Neutral	Neutral effect
Access to primary healthcare	Low (LIA)	Uplift in population looking to access primary healthcare facilities	Negligible negative	Long-term negligible adverse
	Low (Regional)		Neutral	Neutral effect
General population health and wellbeing	Medium (LIA)	Uplift in population looking to access primary healthcare facilities	Negligible negative	Long-term minor adverse
	Low (Regional)		Neutral	Neutral effect
Disability and long-term health conditions	Low (LIA)	Uplift in population looking to access healthcare facilities	Negligible negative	Long-term negligible adverse
	Low (Regional)		Neutral	Neutral effect
Accommodation stock (employees)	Medium (LIA)	Increase in accommodation occupancy for temporary or short-term workers	Neutral	Neutral effect
Accommodation stock (visitor)	Medium (LIA)	Visitor displacement due to accommodation for temporary or short-term workers	Neutral	Neutral effect
Accommodation stock (housing)	Low (LIA)	Increase in accommodation requirement for long-term workers and families	Low positive	Long-term minor beneficial

Receptor	Sensitivity	Description of Impact	Estimated Magnitude of Impact	Effect Level (significant effects identified in bold)
Access to employment (IMD)	High (LIA)	Changes in overall employment opportunities generated from Scheme's operation and maintenance	Negligible negative	Long-term moderate-minor adverse
Access to education (IMD)	High (LIA)	Increase in sector-based skills training and qualification opportunities	Neutral	Neutral effect
Skills and qualification	Medium (LIA)	Changes in sector-based skills training and qualification opportunities	Neutral	Neutral effect
	Low (Regional)		Neutral	Neutral effect
Working and commuting patterns	Medium (LIA)	Changes in overall employment opportunities for local and long-distance commuters Changes to commuting method as a result of Scheme location	Neutral	Neutral effect
Health and wellbeing	Medium (LIA)	Fear and intimidation from site traffic on highways used by walkers, cyclists, and horse riders Desirability or accessibility impacts to public rights of way	Neutral	Neutral effect
Energy sector economy	Low (LIA)	Long-term economic impacts on energy sector economy	Low positive	Long-term minor beneficial
	Low (Regional)		Negligible positive	Long-term negligible beneficial
Agricultural economy	Low (LIA)	Long-term economic impacts on agriculture economy	Low negative	Long-term minor adverse
	Low (Regional)		Negligible negative	Long-term negligible adverse
	Low (LIA)		Low negative	Long-term minor adverse

Receptor	Sensitivity	Description of Impact	Estimated Magnitude of Impact	Effect Level (significant effects identified in bold)
Tourism and visitor economy	Low (Regional)	Long-term economic impacts on tourism and visitor-based economy	Negligible negative	Long-term negligible adverse
Local economy	Low (LIA)	Long-term economic impacts on the overall existing economy	Negligible positive	Long-term negligible beneficial
	Low (Regional)		Negligible positive	Long-term negligible beneficial
Economic prosperity	Medium (LIA)	Total GVA and GVA/head change associated with operation of Scheme	Negligible positive	Long-term minor beneficial
Resident and working population income	Medium (LIA)	Changes in employment opportunities resulting from Scheme operation and maintenance	Negligible positive	Long-term minor beneficial
Regional tourist attractions	Medium	Impacts from views and operation and maintenance traffic on desirability and use	Negligible negative	Long-term minor adverse
Local tourist attractions (landscape)	Low	Impacts from views and operation and maintenance traffic on desirability and use	Peak medium negative	Peak long-term moderate-minor adverse
Local tourist attractions (heritage)	Low	Impacts from views and operation and maintenance traffic on desirability and use	Peak medium negative	Peak long-term moderate-minor adverse
Local tourist attractions (all LIA)	Low	Impacts from views and operation and maintenance traffic on desirability and use	Low negative	Long-term minor adverse
Public Rights of Way	Medium	Impacts from views on PRoW desirability and use	Up to low negative	Long-term moderate-minor adverse

Receptor	Sensitivity	Description of Impact	Estimated Magnitude of Impact	Effect Level (significant effects identified in bold)
Long distance recreation routes	High	Impacts from views on route desirability and use	Up to negligible negative	Long-term moderate-minor adverse
Other walking and cycling routes	Medium	Fear and intimidation from HGV traffic on highways used by walkers, cyclists, and horse riders Impacts of use of semi-accessible habitat management area and permissive path for recreational walking	Low positive	Long-term moderate-minor beneficial
Recreational use of waterways for navigation or fishing	Low-Medium	Impacts from views on desirability and use	Up to low negative	Long-term minor adverse
Formal recreation centres	Low	Impacts from views on desirability and use	Up to low negative	Long-term minor adverse
Informal and youth recreation centres	Medium	Impacts from views on desirability and use	Up to negligible negative	Long-term minor adverse
Other tourism and recreation receptors	Low-Medium	Secondary impacts on tourist industry and recreation receptors from impacts on views, desirability and use	Up to medium negative	Long-term moderate-minor adverse
DECOMMISSIONING				
Construction sector employment	Low (LIA)	Increase in construction employment opportunities generated from Scheme decommissioning	Medium positive	Medium-term temporary moderate-minor beneficial
	Low (Regional)		Low positive	Medium-term temporary minor beneficial

Receptor	Sensitivity	Description of Impact	Estimated Magnitude of Impact	Effect Level (significant effects identified in bold)
Energy sector employment	Low (LIA)	Conclusion of energy sector employment generated from Scheme operation and maintenance	Medium negative	Permanent moderate-minor adverse
	Low (Regional)		Negligible negative	Permanent negligible adverse
Agriculture, forestry & fishing sector employment	Low (LIA)	Increase in agriculture-based employment as a result of completion of the Scheme decommissioning	Low positive	Permanent minor beneficial
	Low (Regional)		Negligible positive	Permanent negligible beneficial
Accommodation and services sector employment	Medium (LIA)	Increase in demand for temporary accommodation units	Medium positive	**Medium-term temporary moderate beneficial**
	Low (Regional)		Low positive	Medium-term temporary minor beneficial
Tourism and recreation sector employment	Low (LIA)	Decrease in visitor demand during decommissioning Decrease in availability of accommodation for visitors	Low negative	Medium-term temporary minor adverse
	Low (Regional)		Negligible negative	Medium-term temporary negligible adverse
	Low (LIA)	Increase in visitor demand following completion of the Scheme decommissioning	Low positive	Permanent minor beneficial
	Low (Regional)		Negligible positive	Permanent negligible beneficial
Economic activity and employment	Medium (LIA)	Changes in overall employment opportunities generated from Scheme decommissioning	Low positive	Medium-term temporary moderate-minor beneficial
	Low (Regional)		Negligible positive	Medium-term temporary negligible beneficial
	Medium (LIA)		Negligible positive	Permanent minor beneficial

Receptor	Sensitivity	Description of Impact	Estimated Magnitude of Impact	Effect Level (significant effects identified in bold)
	Low (Regional)	Impact on overall labour market following completion of the Scheme decommissioning	Neutral	Neutral effect
Socio-demographic environment	Low-Medium (LIA)	Uplift in population from decommissioning workforce and families	Up to medium negative	Medium-term temporary moderate-minor adverse
	Low (Regional)		Up to negligible negative	Medium-term temporary negligible adverse
Construction economy	Low (LIA)	Economic impacts on existing construction economy	Medium positive	Medium-term temporary moderate-minor beneficial
	Low (Regional)		Low positive	Medium-term temporary minor beneficial
Energy sector economy	Low (LIA)	Economic impacts on energy sector economy as a result of Scheme decommissioning	Low negative	Permanent minor adverse
	Low (Regional)		Negligible negative	Permanent negligible adverse
Agricultural economy	Low (LIA)	Economic impacts on agriculture economy of land returning to agricultural use	Low positive	Permanent minor beneficial
	Low (Regional)		Negligible positive	Permanent negligible beneficial
Accommodation economy	Low (LIA)	Economic impacts on existing accommodation economy	Medium positive	Medium-term temporary moderate-minor beneficial
	Low (Regional)		Negligible positive	Medium-term temporary negligible beneficial
Tourism and visitor economy	Low (LIA)	Economic impacts on existing tourism and visitor-based economy from decommissioning	Low negative	Medium-term temporary minor adverse
	Low (Regional)		Negligible negative	Medium-term temporary negligible adverse

Receptor	Sensitivity	Description of Impact	Estimated Magnitude of Impact	Effect Level (significant effects identified in bold)
	Low (LIA)	Economic impacts of reinstatement of land to agricultural use	Low positive	Permanent minor beneficial
	Low (Regional)		Negligible positive	Permanent negligible beneficial
Local economy	Low (LIA)	Economic impacts on the overall existing economy during decommissioning	Low positive	Medium-term temporary minor beneficial
	Low (Regional)		Negligible positive	Medium-term temporary negligible beneficial
	Low (LIA)	Economic impacts on the overall existing economy during decommissioning following completion of decommissioning of Scheme	Negligible negative	Permanent negligible adverse
	Low (Regional)		Negligible negative	Permanent negligible adverse
Economic prosperity	Medium (LIA)	Total GVA and GVA/head change associated with decommissioning of Scheme	Low positive	Medium-term temporary moderate-minor beneficial
		Total GVA and GVA/head change upon completion of decommissioning of Scheme	Negligible negative	Permanent minor adverse
Resident and working population income	Medium (LIA)	Changes in overall employment opportunities and personal income from Scheme decommissioning	Low positive	Medium-term temporary moderate-minor beneficial
		Changes in overall employment opportunities and personal income from Scheme decommissioning	Negligible negative	Permanent minor adverse
Regional tourist attractions	Medium	Decrease in tourism and recreation demand due to visual, accessibility, and traffic impacts of Scheme decommissioning	Negligible negative	Medium-term temporary minor adverse

Receptor	Sensitivity	Description of Impact	Estimated Magnitude of Impact	Effect Level (significant effects identified in bold)
		Removal of solar panel areas and infrastructure and return of land under Scheme to agricultural use	Negligible positive	Permanent minor beneficial
Local tourist attractions (landscape)	Low	Decrease in tourism and recreation demand due to visual, accessibility, and traffic impacts of Scheme decommissioning	Peak medium negative	Peak medium-term moderate-minor adverse
		Removal of solar panel areas and infrastructure and return of land under Scheme to agricultural use	Medium positive	Permanent moderate-minor beneficial
Local tourist attractions (heritage)	Low	Decrease in tourism and recreation demand due to visual, accessibility, and traffic impacts of Scheme decommissioning	Peak medium negative	Peak medium-term moderate-minor adverse
		Removal of solar panel areas and infrastructure and return of land under Scheme to agricultural use	Medium positive	Permanent moderate-minor beneficial
Local tourist attractions (all LIA)	Low	Decrease in tourism and recreation demand due to visual, accessibility, and traffic impacts of Scheme decommissioning	Low negative	Medium-term temporary minor adverse
		Removal of solar panel areas and infrastructure and return of land under Scheme to agricultural use	Low positive	Permanent minor beneficial
Public Rights of Way	Medium	Impacts from decommissioning noise, traffic, views, and diversions and closures of routes on PRoW desirability and use	Up to low negative	Short- to medium-term temporary moderate-minor adverse
		Removal of solar panel areas and infrastructure	Low positive	Permanent moderate-minor beneficial

Receptor	Sensitivity	Description of Impact	Estimated Magnitude of Impact	Effect Level (significant effects identified in bold)
Long distance recreation routes	High	Impacts from decommissioning noise, traffic, views, and diversions and closures of routes on route desirability and use	Up to negligible negative	Short- to medium-term temporary moderate-minor adverse
		Removal of solar panel areas and infrastructure	Up to negligible positive	Permanent moderate-minor beneficial
Other recreational routes	Medium	Fear and intimidation impact from construction traffic on shared routes with walkers, cyclists, and horse riders	Up to low negative	Short- to medium-term temporary moderate-minor adverse
		Impacts of closure of semi-accessible habitat management area and permissive path for recreational walking	Low negative	Permanent moderate-minor adverse
Recreational use of waterways for navigation or fishing	Low-Medium	Impacts from decommissioning noise, traffic, views, and diversions and closures of routes on desirability and use	Up to low negative	Medium-term temporary minor adverse
		Removal of solar panel areas and infrastructure	Up to low positive	Permanent minor beneficial
Formal recreation centres	Low	Impacts from decommissioning noise, traffic, and views on desirability and use	Up to low negative	Medium-term temporary minor adverse
		Removal of solar panel areas and infrastructure	Up to low positive	Permanent minor beneficial
Informal and youth recreation centres	Medium	Impacts from decommissioning noise, traffic, and views on desirability and use	Up to low negative	Medium-term temporary moderate-minor adverse
		Removal of solar panel areas and infrastructure	Up to negligible positive	Permanent minor beneficial

Receptor	Sensitivity	Description of Impact	Estimated Magnitude of Impact	Effect Level (significant effects identified in bold)
Other tourism and recreation receptors	Low-Medium	Impacts from decommissioning noise, traffic, and views on desirability, accessibility and use in-combination with landscape and heritage impacts	Up to medium negative	Medium-term temporary moderate-minor adverse
		Removal of solar panel areas and infrastructure	Up to medium positive	Permanent moderate-minor beneficial

18.8 Mitigation and Enhancement Measures

18.8.1 Key embedded mitigation and enhancement measures for the Scheme's construction are set out in **Section 18.6**.

18.8.2 Where the assessment of the anticipated effects in **Section 18.7** has identified the likely magnitude and significance of effects of the Scheme on socio-economic, tourism and recreation receptors, this section provides information of additional mitigation and enhancement measures.

18.8.3 Where significant adverse effects are anticipated as a result of the development of the Scheme, the mitigation measures hereafter presented ensure that the design, construction, operation, and management of the Scheme can be adapted where feasible to ensure these impacts are minimised. 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.

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

18.8.5 The proposed mitigation and enhancement measures outlined in this section should be read in conjunction with the relevant submission document referred to in table.

18.8.6 These reference documents, all of which are secured by Requirements under the draft DCO, are:

- **Outline Decommissioning Statement [EN010132/APP/WB7.2] (ODS);**
- **Outline Skills Supply Chain and Employment Plan [EN010132/APP/WB7.10] (OSSCEP);** and
- **Outline Operational Environment Management Plan [EN010132/APP/WB7.14] (OOEMP).**

18.8.7 Additional (also referred to as secondary) mitigation in the form of landscape screening planting has been provided across much of the Sites to ensure visual impacts on other tourist and recreational attractions are minimised during the Scheme's operational lifetime. Full assessment of visual impact on important receptors, and details of the provided landscape mitigation can be found in the following documents:

- **ES Chapter 8: Landscape and Visual Impact Assessment [EN010132/APP/WB6.2.8];**
- **ES Figures 8.16.1-11: Detailed Landscape Mitigation Plans [EN010132/APP/WB6.4.8.16.1-11];** and
- **Outline Landscape and Ecological Management Plan [EN010132/APP/WB7.3].**

18.8.8 These documents will set out how the environmental effects across the Scheme are to be minimised and controlled where adverse, and where they can be enhanced or promoted where beneficial.

18.8.9 Where additional mitigation measures are set out in the following section, only those where it is judged that there will be a change to an assessed likely environmental effect are referenced.

Construction

18.8.10 Construction is anticipated to take place across an approximate two-year period. For the purpose of assessment, it is assumed that all parts of the Scheme will be constructed in parallel to determine the worst-case environmental effects.

18.8.11 Practicable opportunities to promote local recruitment and procurement, education and skills uplifting, and apprenticeship and training schemes for construction, manufacturing, and the energy industry are explored through the **Outline Skills Supply Chain and Employment Plan (OSSCEP) [EN010132/APP/WB7.10]**. Focus on local recruitment and procurement during construction will help to enhance construction sector employment and the sector economy in the Local and Regional Impact Areas. Furthermore, exploration of options to find ways to support agricultural workers in moving to diversified agricultural practices (such as sheep rearing and grazing) that can be continued alongside the operation of the Scheme will help to mitigate the impacts on agriculture sector employment and the sector economy. These measures however are not likely to change the assessed significance of effect to these receptors.

18.8.12 These measures will collectively help to enhance the level of economic activity and employment in the Local Impact Area. As a secondary effect, this will also enhance access to employment as a measured index of deprivation in the Local Impact Area. Whilst these enhancements are anticipated to improve employment conditions in the Local Impact Area, it is not anticipated that the level of significance of the effects to these receptors is likely to be increased.

18.8.13 Enhancement to local education through promoting of apprenticeship and training schemes will have a positive impact on education and skills attainment in fields such as construction, engineering, and energy technology throughout the construction of the Scheme, as set out in the **OSSCEP [EN010132/APP/WB7.10]**. As such, access to education as a measured index of deprivation in the Local Impact Area will be uplifted to a **medium-term temporary moderate beneficial effect**. This therefore will be a **significant effect**. Skills and qualification rates in the Local and Regional Impact Area are also anticipated to be uplifted by the enhancement measures set out in the OSSCEP, and resultantly, the significance of effects are likely to be uplifted to **medium-term moderate-minor beneficial** in the Local Impact Area, and **medium-term negligible beneficial** in the Regional Impact Area.

18.8.14 As a result of the enhancements set out in the **OSSCEP [EN010132/APP/WB7.10]** there is likely to be an uplift in level of net benefit to the local economy, and thus to

economic prosperity, and resident and workplace income. As with the level of employment, this change is not anticipated to increase the level of significance of the effect to these receptors.

Operation

18.8.15 The operational lifetime of the Scheme is estimated to be 40 years from the completion of the construction phase. For the purpose of assessment, it has been assumed that the Scheme will commence operation from Q4 2026 and have a 40-year operational life, with decommissioning estimated to be no earlier than 2066. Key mitigation and enhancement measures for the Scheme's operation and maintenance across all EIA topics are set out in the **Outline Operational Environment Management Plan [EN010132/APP/WB7.14]**.

18.8.16 The measures set out in the OOEMP are used to control impacts on visual, accessibility, and operational and maintenance traffic impacts from the Scheme to mitigate adverse effects from the Scheme. Visual impacts from the Scheme are mitigated against in co-ordination with the measures set out in the **Outline Landscape and Ecological Mitigation Plan [EN010132/APP/WB7.3]**. These mitigation measures, such as noise attenuation, glint and glare mitigation, and additional landscape screening to residential and other sensitive receptors will help to reduce overall impacts on tourism and recreational receptors such as tourist attractions, recreation centres, and recreational routes in the proximity of the Scheme. The peak anticipated level of significance during operation on tourism and recreation receptors however is not anticipated to change.

18.8.17 As described for the construction phase, efforts should be made to find opportunities for local recruitment and procurement, and supporting local education and skills uplifting during the Scheme's operation. Efforts to secure opportunities for re-skilling of employees into new industries, including the energy sector, and supporting the local agricultural industry (such as through diversified agricultural practices, such as sheep rearing and grazing) are set out in the **Outline Skills Supply Chain and Employment Plan [EN010132/APP/WB7.10]**. Whilst these enhancement measures should improve the environmental effects on these receptors, the level of significance of effects to these sectors is not anticipated to be different.

18.8.18 Additionally, The OSSCEP furthermore seeks to build upon these measures by enhancing the Scheme's employment and economic benefit through focussing on local recruitment and procurement, and supporting local education and skills uplifting. This should be focussed on ensuring loss of agricultural employment is directly mitigated or compensated through uplifts in other employment sectors. Resultantly, it is anticipated that the measures set out in the OSSCEP will mitigate the adverse effect on economic activity and employment to a **long-term minor beneficial effect**. Resultantly, this will also improve access to employment as a measured index of deprivation to a **long-term moderate-minor beneficial effect**. The measures are not however likely to change the level of significance of the effects on

the local economy, economic prosperity, or resident and working population incomes.

18.8.19 Support for local education and skills uplifting during operation as secured through the OSSCEP is anticipated to enhance access to education as a measured index of deprivation to a **long-term moderate-minor beneficial effect**. Resultantly, skills and qualification attainment in the Local and Regional Impact Areas are likely to be enhanced to experience a **long-term minor beneficial effect** and **long-term negligible beneficial effect** respectively.

18.8.20 Additional mitigation to limit the impact on socio-demographic receptors are secured through the OOEMP to limit the impacts on the existing population. This includes ensuring employees who move to the Local Impact Area long-term during operation are helped to be directed to using primary health facilities with existing excess capacity. As a result, impacts in the Local Impact Area on access to primary healthcare, general population health and wellbeing, and disability and long-term health conditions are anticipated to be mitigated to **neutral effects**.

Decommissioning

18.8.21 Decommissioning will see the return of impacts to socio-economic, tourism and recreation receptors in a similar magnitude to those experienced during construction. Whilst a detailed assessment on the anticipated effects cannot be reliably made due to uncertainty of future baseline conditions, mitigatory measures can still be implemented through the DCO application submission via the **Outline Decommissioning Statement (ODS) [EN010132/APP/WB7.2]**. Specifically, adverse effects on recreational walking and cycling routes, fear and intimidation to recreational road users from decommissioning noise, traffic, and views on desirability, accessibility and use in-combination with landscape and heritage impacts are to be mitigated against through the implemented of the measures set out in the ODS. Landscape measures secured through the **Outline Landscape and Ecological Mitigation Plan [EN010132/APP/WB7.3]** will also be implemented to mitigate effects from decommissioning works. Furthermore, the ODS secures that flexibility within the decommissioning schedule can be utilised to minimise the peak impacts from decommissioning activities on tourism and recreation receptors, and the local accommodation sector.

18.8.22 The level of significance of most effects will not change as a result of the mitigation and enhancement measures set out in the OSSCEP, ODS and OLEMP. Exceptions to this are that the effect of the termination of energy employment from the Scheme can be mitigation through focussing on reskilling and retraining energy workers as secured through the ODS and OSSCEP. The resultant effect in the Local Impact Area is mitigated to a **permanent minor adverse effect**. Mitigation measures set out in the OSSCEP and ODS together will mitigate peak impacts on the socio-demographic environment through focussing on local recruitment and procurement and using the flexibility within the decommissioning phase to reduce peak impacts on accommodation availability and access to healthcare services. As such, the peak

effect on the socio-demographic environment in the Local Impact Area is likely to be no more than a **medium-term temporary minor adverse effect**.

18.9 In-Combination Effects

18.9.1 The Scheme has potential to incur combined effects with regard to socio-economic and tourism and recreation impacts with other topics assessed within this ES. In compliance with paragraph 5(2)(a) to (d) of the EIA Regulations (Ref.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.

Individual Effects

18.9.2 The construction and decommissioning of the Scheme are likely to produce in-combination effects on access to primary healthcare, and resident healthcare and wellbeing from hydrological, ground conditions, noise, and air quality impacts in tandem with the anticipated resident population uplift generated by the Scheme. The interaction between these effects is explored in the human health assessment in **ES Chapter 21: Other Environmental Matters [EN010132/APP/WB6.2.21]**. This would be as a result of impacts of an increased labour force and resultant residential population impacting the accessibility of general practice healthcare combined with the pre-mitigation human health impacts from noise, dust, and emissions from the Scheme's construction and associated traffic movements.

18.9.3 As identified in earlier sections of this chapter, transport and landscape impacts from the construction and operation of the Scheme on tourism and recreation receptors have potential for an in-combination effect on health and wellbeing as a result of decreased desirability and accessibility of recreational facilities and walking and cycling routes.

18.9.4 In addition, landscape and heritage impacts have been identified as having in-combination effect on the tourism economy as a result of reduced desirability of the Local Impact Area and the visitor attractions therein. This therefore could have an additional long-term **moderate-minor adverse** effect on the local tourism economy and dependent sectors.

Individual Topics

18.9.5 The Scheme is likely to produce in-combination effects on transport and climate change as a result of increased employment and resultant resident population

during the operation and decommissioning phases of the Scheme. In-combination effects are not anticipated during the operational phase of development due to the low magnitude of socio-economic impacts during this phase.

18.9.6 The increased employment and subsequent resident population are likely to generate additional traffic movements on the local highway network as a result of commuting for work, education, and recreational trips. Furthermore, the anticipation of workers from outside the Local Impact Area being employed as part of the Scheme could furthermore increase mid to long-distance commuting. As such, these will have an in-combination effect on transport and access in the Local Impact Area. These impacts are likely to be of a low magnitude given the geographic spread of the Scheme and are anticipated only for the duration of the construction phase of the Scheme. Therefore, the anticipated in-combination effect with transport is short-term temporary **moderate-minor adverse effect** in addition to the transport effects identified in **ES Chapter 14: Transport and Access [EN010132/APP/WB6.2.14]**.

18.9.7 The resultant increase in traffic movements and resident population from the increased employment is likely to generate in-combination effects with climate change as a result of increased vehicle emissions, and increased use of water, food, energy and materials. As such, the socio-economic effects of the Scheme could produce a short-term temporary **moderate-minor adverse effect** in addition to the climate change effects identified in **ES Chapter 7: Climate Change [EN010132/APP/WB6.2.7]**.

18.9.8 The effects related to tourism and recreation are identified to be linked to the effects on landscape and heritage and have been assessed across the three relevant chapters of the ES. As such, there are no additional identified in-combination effects.

Combination of effects associated with different Works Packages

18.9.9 Works packages are described in Chapter 4 of the ES Scheme Description **[EN010132/APP/WB6.2.4]**. This socio-economic, tourism and recreation assessment has assessed the Scheme as a whole with regard to its effects on receptors in the Local Impact Area and Regional Impact Area.

18.9.10 Most of the identified socio-demographic, employment and economic effects from the Scheme are likely to be felt across the entire Local Impact Area and as such are not able to be broken down by works packages. Where works packages are split by generating station and associated development, these are discussed in paragraphs 18.9.13-18.9.16. Tourism and recreation receptors are more likely to be affected at a localised level and as such, a greater level of fidelity can be given to the assessment of impacts from individual works packages as part of the Scheme.

18.9.11 In-combination effects may be felt on users of public rights of way and public highways that are also to be used for construction traffic associated with different Works for the Scheme. Specifically, HGV traffic movements on roads also used by walkers, cyclist, and horse riders are most prone to feeling an in-combination effect

from construction of various parts of the Scheme. The location of these effects has been identified in **Chapter 14: Transport and Access [EN010132/APP/WB6.2.14]**. Whilst fear and intimidation from HGV traffic may be of a negligible or low magnitude for each of the Works packages, the in-combination effect cumulates to the short-term temporary **moderate-minor adverse effect** identified in **Table 18.23.**

18.9.12 The recreational use of public rights of way may also be affected by the in-combination effect of different Works associated with the Scheme. This is anticipated particularly where the visual impact of the Scheme is intensified as a result of multiple ongoing Works, or where closures, diversions, or other impacts on accessibility to public rights of way induce in-combination effects on a single or set of connected public rights of way. This is relevant particularly where works to install the high voltage cable coincide with works for the installation of accesses, the solar generation stations, and the substations.

Combination of Generating Stations

18.9.13 As previously described, this socio-economic, tourism and recreation assessment has assessed the Scheme as a whole with regard to its effects on receptors in the Local and Regional Impact Areas. However, due to the geographical spread of the three constituent generating stations, and flexibility in construction timescale, these should be considered both separately and in combination.

18.9.14 With regard to employment and economic effects, the magnitude of effect from the three Sites can be assessed proportionally to the scale of the generating capacity. This is as a result of the economic impacts of each generating station being felt over a sufficiently overlapping area (the Local Impact Area) wherein the anticipated workforce, and thus beneficiaries of improved economic prosperity, are likely to be the same across all four Sites.

18.9.15 Likewise, most socio-demographic receptors will be affected proportionally as the population affected by changes as a result of construction workers and employment is consistent across the three generating stations. This however does not include impacts on population health and wellbeing as a result of location-specific changes to recreational rights of way and facilities.

18.9.16 Due to the localised nature of impacts on tourism and recreation features, the only in-combination effects the three Sites will produce are based on landscape impacts on receptors where there are long-range views covering multiple parts of the Scheme. These effects are identified in **ES Chapter 8: Landscape Visual Impact Assessment [EN010132/APP/WB6.2.8].**

18.10 Cumulative Effects

18.10.1 The Scheme is located in an area where a number of Nationally Significant Infrastructure Projects are proposed, that may be developed in a similar timeframe. Thus there is the potential for cumulative effects on the local and regional socio-economic, tourism and recreation environment both during the development of these identified NSIPs, and their operational lifetimes. There are also a smaller number of other planning applications which have been considered for the same reasons, due to their scale and proximity to the Scheme.

18.10.2 A full list of identified schemes that could generate cumulative effects is presented in **ES Appendix 2.3: Cumulative Assessment Sites [EN010132/APP/WB6.3.2.3]** and its supporting **Figure 2.1: Cumulative Assessments Site Plan [EN010132/APP/WB6.4.2.1]**.

18.10.3 For the purpose of assessing socio-economic, tourism and recreation impacts, **Table 18.24** below outlines the identified cumulative projects that have been considered.

Table 18.24: Cumulative Projects Assessed for Socio-Economic, Tourism and Recreation Effects

Reference	Project Name & Location	Description
EN010133	Cottam Solar Project: Cottam, Stow, Corringham, Blyton, Lincolnshire	NSIP 600MW four-part solar electricity generation generating station with associated infrastructure and energy storage
EN010131	Gate Burton Energy Park: Gate Burton, Lincolnshire	NSIP 500MW solar power electricity generation station with associated infrastructure and energy storage
EN010088	West Burton C: West Burton Power Station	NSIP 299MW gas-fired electricity generation station
[WBA]	West Burton A Decommissioning: West Burton Power Station	Decommissioning of West Burton A Power Station estimated 2024.
EN010142	Tillbridge Solar: Glentworth, Lincolnshire	NSIP 500MW solar electricity generation generating station
131174 137071 141615	Saxilby Heights: N of Saxilby, Lincolnshire	Outline planning application for residential development of 230no. dwellings
132286, 138472 138574, 139469 140143, 140813	Ingleby View: N of Saxilby, Lincolnshire	Hybrid application to include outline planning application for the erection of up to 133 dwelling

Reference	Project Name & Location	Description
142022, 142107		
125020 138921 140081	Gainsborough Sustainable Urban Extension (SUE) South Phase 1: Gainsborough, Lincolnshire	Reserved matters planning permission for residential development of 454no. dwellings
137763	Gainsborough Gateway Riverside: Gainsborough, Lincolnshire	Planning permission for residential development of 220no. dwellings
20/00117/FUL 21/01552/VOC	Land NW and S of Field Farm, Wood Lane Sturton Le Steeple, Nottinghamshire	Installation and operation of a solar farm ~ 50MW
22/00358/FUL	Land East of Bumble Bee Farm, Gainsborough Road, Saundby, Nottinghamshire	Installation of a solar farm (49.9MW) and battery storage facility
21/01661/DEM	Cottam Power Station, Nottinghamshire	Demolition of Cottam Power Station

18.10.4 The calculation of cumulative socio-economic, tourism and recreation effects from the identified projects has been taken through a mixed methodology which utilises both information available in the public domain, and extrapolated estimates based on the EPC model used for the socio-economic assessment set out in **Section 18.7**. Information sources for identified projects include use of the Planning Inspectorate's National Infrastructure website, individual project websites, press releases, and Local Planning Authority planning application portals (Ref.83-Ref.96)

18.10.5 This combined methodology seeks to provide as accurate as possible an estimation of cumulative effects on direct effects such as employment, economic gross value added, and impacts on use and accessibility of recreational facilities. These have then been utilised to determine indirect or secondary effects, such as on socio-demographic indicators. It should be noted that this methodology seeks to determine a worst-case or greatest level of cumulative effect.

18.10.6 This section will only describe where there is anticipated to be a change of level of significance from the assessment of the key likely effects in **Section 18.7** and post-mitigation effects in **Section 18.8**. All other effects should be treated as the same level of significance as Cottam Solar Project assessed in isolation.

Cumulative Construction Phases

18.10.7 The following table sets out the assumptions made to calculate the cumulative construction impacts of the identified projects. These assumptions are made on the basis of publicly available project information, such as DCO application documents, planning submissions, and press articles, and housebuilding employment assumptions, together with assumptions generated from scaling assessed effects from West Burton Solar Project (the Scheme) to other developments (particularly in regard to accommodation employment).

Table 18.25: Cumulative Construction Assumptions

Project	Earliest Construction Timescale	Net Construction Employment	Indirect and Induced Employment	Accommodation Employment	Agricultural Employment	Energy Employment
West Burton Solar Project (the Scheme)	Q4 2024-Q4 2026	222	393	50	-13	0
Cottam Solar Project	Q4 2024-Q4 2026	350	621	65	-17	0
Gate Burton Energy Park	2025-mid-2027	300	532	56	-2	0
West Burton C	2023-2025	71	126	13	0	0
West Burton A Decommissioning	2023-2026	75	133	14	0	-125
Tillbridge Solar	2026-2027	375	665	70	-5	0
Saxilby Heights	2018-2023	166	332	31	-0	n/a
Ingleby View	2019-2023	96	192	18	-0	n/a
Gainsborough SUE (South) Phase 1	2021-2031	327	654	62	-0	n/a

Project	Earliest Construction Timescale	Net Construction Employment	Indirect and Induced Employment	Accommodation Employment	Agricultural Employment	Energy Employment
Gainsborough Gateway Riverside	2022-2032	158	317	30	0	n/a
Field Farm	2023	30	53	6	-1	0
Bumble Bee Farm	2023	30	53	6	-1	0
Cottam Demolition	2023-2025	75	133	14	0	0

18.10.8 Applying these assumptions shows that the indicative peak of construction activity will occur in the year 2026 (the second full year of the Scheme's estimated construction phase). As such, this is used to estimate the peak cumulative environmental effects on socio-economic, tourism and recreation receptors in the Local and Regional Impact Areas. Economic and employment impacts on tourism and recreation are estimated from accommodation impacts.

Socio-Economics

Employment

18.10.9 Accounting for "leakage" of commuters from outside the Local Impact Area, and existing employment displacement, the peak net uplift in construction employment in the Local Impact Area is 1,160 FTE employees in 2026. This represents an increase of 24.4% (from 4,750) in construction employment which is of high magnitude. This is therefore a **peak cumulative medium-term temporary moderate beneficial effect** and is therefore a **significant effect**. In the Regional Impact Area, the magnitude of impact (1,509 workers in a pool of approximately 107,000) is medium (+1.4%), and as such is a **peak cumulative medium-term temporary moderate-minor beneficial effect**.

18.10.10 The anticipated cumulative effect of the cumulative projects on the agricultural economy is a peak loss of approximately 38 FTE workers by 2026. This is a 1.0% loss to the level of agriculture employment in the Local Impact Are, and therefore represents a medium magnitude impact. This results in a **cumulative long-term moderate-minor adverse effect**. The loss in agriculture employment in the Regional Impact Area is not anticipated to be of an increased level of significance of effect.

18.10.11 The need for temporary accommodation for up to a peak of 736 FTE inbound construction workers during the cumulative construction phase is anticipated to generate a peak uplift of 348 FTE employees in the accommodation sector. This is not anticipated to increase the already **significant level of effect** at the local level. In the Regional Impact Area, this amounts to a 1.5% increase from the baseline of 24,000 and is resultantly a medium magnitude increase. Therefore, this represents a **peak cumulative medium-term temporary moderate-minor beneficial effect**.

18.10.12 The peak level of accommodation needed for temporary construction workers is likely to exceed accommodation surplus, thus displacing up to a peak of 38.0% of the usual number of visitors using accommodation in the Local impact Area. This however is not likely to have a direct impact on employment in the accommodation sector. As such, these impacts are likely to remain neutral in both the Local and Regional Impact Areas.

18.10.13 The displacement of visitors is however likely to lead to a loss of visitor spending as a result of displacement from accommodation, and the secondary impacts of the cumulative projects on local desirability for tourism and recreation, are likely to result in a reduction of 246 FTE employees in the grouped tourism and recreation (RSTU) employment sector. This represents a 7.0% loss of employment in the Local Impact Area, which is a medium magnitude impact, thus signifying a **peak cumulative medium-term temporary moderate-minor adverse effect**. In the Regional Impact Area, the magnitude of change is low (0.3%), and thus represents a **peak cumulative medium-term temporary minor adverse effect**.

18.10.14 The peak total net employment change in the Local Impact Area (3,263 FTE employees) in the year 2026 as a result of the effects of the cumulatively assessed projects represents a 4.0% increase in employment across all sectors in the Local Impact Area. This is a medium magnitude impact and thus represents a peak **cumulative medium-term temporary moderate beneficial effect** in the Local Impact Area. This is therefore a **significant effect**. The peak cumulative employment change in the Regional Impact Area is an uplift of 4,257 FTE employees, which is a low magnitude (0.2%) increase across all sectors in the Regional Impact Area. This, therefore, has an overall **peak cumulative medium-term temporary minor beneficial effect**.

Socio-Demographic Impacts

18.10.15 In assessing the worst-case scenario, it is estimated approximately 649 FTE employees from outside the Local Impact Area could relocate to within, in the year 2026. This will therefore bring a low magnitude uplift of 0.3% to the residential population. This therefore represents a **peak cumulative medium-term temporary minor beneficial effect** (in EIA terms) to the resident population in the Local Impact Area. The level of significance to the Regional Impact Area is not anticipated to change, nor are the effects on resident age demographics in either the Local or Regional Impact Areas.

18.10.16 The projected 0.3% uplift to the residential population in the Local Impact Area is likely to induce a **peak cumulative medium-term temporary minor adverse effect** in the number of people requiring access to primary health services. This could therefore have a secondary **peak cumulative medium-term temporary moderate-minor adverse effect** on general population health and wellbeing, and a **peak cumulative medium-term temporary minor adverse effect** on disability and long-term health in the local population as a result of reduced accessibility to local healthcare services. The level of significance to any of these receptors in the Regional Impact Area is not anticipated to change.

18.10.17 The peak cumulative impacts on temporary accommodation stock for construction workers and for visitors are not anticipated to change the level of significance from assessment of the Scheme in isolation. That notwithstanding the potential peak cumulative need for permanent accommodation is likely to equate to approximately 649 dwellings in the year 2026. The therefore takes up 62.3% of the estimated available 1,042 units per annum of excess available new housing stock. This is therefore likely to create a **peak cumulative medium-term moderate beneficial effect** (in EIA terms) to housing accommodation in the Local Impact Area. This therefore is a **significant effect**.

18.10.18 Cumulative effects on access to employment as a measured index of deprivation are anticipated to increase to a **peak cumulative medium-term major-moderate beneficial effect** as a result of the cumulative medium magnitude impact on employment in the Local Impact Area. This is therefore a **significant effect**.

18.10.19 Cumulative impacts on access to education as a measured index of deprivation, and skills and qualification attainment in both the Local and Regional Impact Areas are not anticipated to increase the significance of effects on these receptors.

18.10.20 The cumulative traffic loads on the local highway network have been assessed in **Chapter 14: Transport and Access [EN010132/APP/WB6.3.14]** as having no significantly greater level of impact on receptors as a result of the geographic spread of the projects, and limitation of cumulative effects to low sensitivity routes. As a result, the cumulative effects on existing commuters with regard to delay and on population health and wellbeing as a result of reduction in accessibility for pedestrian and cycle traffic are unchanged.

Economic Impacts

18.10.21 As a result of the cumulative employment effects, the changes to Gross Value Added as a result of the cumulative construction phases of the assessed projects is anticipated to have its level of greatest effect in the year 2026 for most of the assessed employment sectors. The greatest level of cumulative effects has been assessed below.

18.10.22 The peak cumulative net uplift in construction employment in the Local Impact Area is likely to generate a peak GVA in 2026 of £63.0 million. This represents an increase of 24.4% to the local construction economy, which is of high magnitude. This is

therefore a **peak cumulative medium-term moderate beneficial effect** and is therefore a **significant effect**. The £87.4 million increase to the construction economy in the Regional Impact Area represents a 1.3% uplift, which is of a medium magnitude, and thus represents a **peak cumulative medium-term moderate-minor beneficial effect**.

18.10.23 The anticipated cumulative effect of the identified projects on the agricultural economy is a peak loss of approximately £1.9 million per annum by 2026. This impacts approximately 0.7% of the agriculture, mining, electricity, gas, water and waste (ABDE) grouped sector economy in the Local Impact Area, and approximately 0.03% in the Regional Impact Area. As such, the level of significance in both impact areas is not changed from the previous assessment.

18.10.24 The anticipated uplift in need for temporary accommodation for inbound construction workers is likely to generate a peak of £10.8 million GVA in the year 2026 to the accommodation and services sector economy. This represents a 19.6% increase in the Local Impact Area, thus resulting in a **peak cumulative medium-term temporary moderate beneficial effect**. This is therefore a **significant effect**. Within the Regional Impact Area, this anticipated uplift represents a 0.6% increase. This therefore represents a is a **peak cumulative medium-term temporary minor beneficial effect**.

18.10.25 The greatest level of economic impact to tourism and recreation, most likely to be felt in the arts, entertainment, and recreation grouped sector, is estimated to be a loss of £11.0 million. This is likely to be as a result of visitor spending reduction as a result of displacement from accommodation. This loss amounts to a high magnitude 14.5% reduction in the economic sector in the Local Impact Area, thus constituting a **peak cumulative medium-term temporary moderate adverse effect**. This is therefore a **significant effect**. The loss to the economic sector in the Regional Impact Area is low at 0.4%, and thus the level of significance of effect is a **peak cumulative medium-term temporary minor adverse effect**.

18.10.26 The total peak cumulative economic impact of the assessed projects in the year 2026 is a GVA uplift of £161.4 million, representing a 4.5% increase to the £3.6 billion economy of the Local Impact Area. This medium magnitude uplift therefore represents a **peak cumulative medium-term temporary moderate-minor beneficial effect**. therefore falls within the same level of significance of effect as the Scheme assessed in isolation. The peak cumulative GVA uplift of £217.3 million to the Regional Impact Area is an uplift of 0.2%. As such, this is therefore a **peak cumulative medium-term temporary minor beneficial effect**.

18.10.27 The total peak cumulative 4.5% increase in the GVA of the local economy will amount to a maximum uplift of £1,998 GVA per worker per annum in the Local Impact Area from the 2020 baseline. This therefore rise represents a medium magnitude uplift to economic prosperity and to resident and working incomes, both of which are medium sensitivity receptors, thus generating **peak cumulative medium-term temporary moderate beneficial effects**. These are therefore **significant effects**.

Tourism and Recreation

18.10.28 The cumulative construction phase impacts from the assessed projects are very likely to have a somewhat increased level of effect on tourism and recreation in the immediate locality and Local Impact Area.

18.10.29 Regional and local attractions, including local landscape, heritage, and recreational attractions are likely to have some degree of cumulative impacts as a result of cumulative landscape effects. As assessed in **Chapter 8: Landscape and Visual Impact [EN010132/APP/WB6.2.8]** and **Chapter 13: Cultural Heritage [EN010132/APP/WB6.2.13]**, the peak cumulative impacts on these assets are not however likely to increase the level of significance of effect to their value to tourism and recreation.

18.10.30 Cumulative construction traffic impacts have been assessed in **Chapter 14: Transport and Access [EN010132/APP/WB6.2.14]**, which assesses there are no cumulative impacts on routes used as key access routes for regionally important tourism destinations, nor on the use of or accessibility to recreational centres. As such, the level of effect to recreational use of waterways for navigation or fishing, formal recreation centres, and informal and youth recreation centres is unchanged. Furthermore, there are no cumulative impacts on the use of highways or other non-designated recreational routes for walking, cycling and horse riding.

18.10.31 The cumulative construction phase of the identified projects is likely to increase impacts on Public Rights of Way and long-distance recreation routes as a result of temporary construction use, diversions and closures, construction goods and employee traffic movements, and visual impacts. Notably, where the Scheme, Cottam Solar Project, and Gate Burton Energy Park share a proposed Cable Route Corridor, cumulative effects may be experienced from a period of 1.5 years to a maximum of 5 years.

18.10.32 Of the Public Rights of Way and long-distance recreation routes assessed, the Trent Valley Way and National Byways Cycle Route are likely to see the greatest level of cumulative impact. These cumulative impacts are as a result of direct impacts from cable routes crossings and visual impacts from the multiple projects nearby or adjacent to the variant routes of both these long-distance recreation routes. In a worst-case scenario, construction of the cable routes of the identified projects may run sequentially over a five-year period, requiring the Trent Valley Way to be closed three times during this. Similarly, the National Byways route from Sturton le Steeple to Bole may need to be closed for an extended time to facilitate the cable connection from Bumble Bee Farm to its connection point. As such, these routes could experience a **peak cumulative short to medium-term temporary moderate adverse effect**. This is a **significant effect** albeit of the same level as anticipated for the Scheme in isolation. Nevertheless, where feasible, the Applicant would look to work with other developers to seek to ensure that relevant the impacts to affected Public Rights of Way and long-distance recreation routes are mitigated and kept to a minimum.

Cumulative Operation Phases

18.10.33 The cumulative operation phase is considered to be the years 2033-2063 for the purpose of this cumulative assessment. This has been defined as the estimated time period between the completion of the final identified project's construction period, and the beginning of the first project decommissioning stage. During this period, the assessed socio-economic impacts are anticipated to be relatively static, as are the tourism and recreation impacts subject to the successful implementation of visual screening and planting.

18.10.34 The following table sets out the assumptions made to calculate the cumulative operation impacts of the identified projects. As for the cumulative construction phase, these assumptions are made on the basis of publicly available project information, or generated from scaling assessed effects from the Scheme.

Table 18.26: Cumulative Operation Assumptions

Project	Estimated Operation Timescale	Net Energy Employment	Indirect and Induced Employment	Accommodation Employment	Agricultural Employment	Tourism and Recreation Employment
West Burton Solar Project	2027-2066	9	16	0	-13	-5
Cottam Solar Project	2027-2066	11	20	0	-17	-5
Gate Burton Energy Park	2028-2087	11	19	0	-2	-5
West Burton C	2026-2065	11	20	0	0	-3
West Burton A Decommissioning	2026-	-125	0	0	0	1
Tillbridge Solar	2028-2067	11	20	0	-5	-5
Saxilby Heights	2024-	0	0	0	-0	-0
Ingleby View	2024-	0	0	0	-0	-0
Gainsborough SUE (South) Phase 1	2032-	0	0	0	-0	-0
Gainsborough Gateway Riverside	2033-	0	0	0	0	-0

Project	Estimated Operation Timescale	Net Energy Employment	Indirect and Induced Employment	Accommodation Employment	Agricultural Employment	Tourism and Recreation Employment
Field Farm	2024-2063	3	4	0	-1	-1
Bumble Bee Farm	2024-2063	3	4	0	-1	-1
Cottam Demolition	2026-	0	0	0	0	1

Socio-Economics

Employment

18.10.35 The cumulative operation phase of the projects is anticipated to generate a net loss of 66 FTE jobs per annum in the energy sector, accounting for leakage and displacement factors and the 125 energy sector jobs lost as a result of the closure of West Burton A. This represents a decrease of 20.5% in energy employment in the Local Impact Area from the 320-worker baseline. Resultantly, this is a **cumulative long-term moderate adverse effect**. This therefore is a **significant effect**. At the regional level, the magnitude of impact (a loss of 66 FTE employees per annum in a pool of approximately 12,000) is low (0.5%), and as such is a **cumulative long-term minor adverse effect**.

18.10.36 The anticipated cumulative effect of the cumulative projects on the agricultural economy is a continual loss of approximately 38 FTE workers until the year 2063, at which point decommissioning of the first solar projects will return land to agricultural use. This is a 1.0% loss to the level of agriculture employment in the Local Impact Are, and therefore represents a medium magnitude impact. This results in a **cumulative long-term moderate-minor adverse effect**. The loss in agriculture employment in the Regional Impact Area is not anticipated to be of an increased level of significance of effect.

18.10.37 The operation of all of the identified projects is not anticipated to create a need for temporary accommodation for workers. There are no direct cumulative effects on accommodation industry employment anticipated in the Local or Regional Impact Area.

18.10.38 As a result of the impacts of the cumulative projects on local desirability for tourism and recreation, the resultant cumulative impact on the tourism and recreation employment sector is an estimated loss of 24 FTE employees per annum. This does

not change the level of significance of effect in either the Local or Regional Impact Area.

18.10.39 The cumulative net employment change as a result of the identified projects, including indirect and induced employment is a net loss of 63 FTE worker per annum in the Local Impact Area, and a loss of 43 FTE workers in the Regional Impact Area. The magnitude of the loss of employment in the Local Impact Area is negligible at 0.08%, thus there is a **cumulative long-term minor adverse effect**. In the Regional Impact Area, the loss accounts for 0.002% of the workforce, and as a result, there is a **cumulative long-term negligible adverse effect**.

Socio-Demographic Impacts

18.10.40 In assessing the cumulative scenario, it is estimated a cumulative maximum of 21 FTE employees from outside the Local Impact Area could relocate to within that area. This will therefore bring an uplift of 0.01% to the residential population in the Local Impact Area and a rise in resident population of less than 0.001% in the Regional Impact Area. This changes neither the level of significance of the effect in either the Local or Regional Impact Area.

18.10.41 As such, the level of significance to any other socio-demographic impacts, these being: age demographics, access to primary healthcare, general population health and wellbeing, and disability and long-term health conditions, are similarly not likely to experience additional cumulative effects.

18.10.42 The anticipated uplift in employees is unlikely to generate need for temporary accommodation due to its long-term nature. As such, the level of significance of impacts on access to temporary accommodation for workers, and resultantly for visitors, is not anticipated to change.

18.10.43 The cumulative uplift in local housing requirement of 21 FTE employees could also be easily accommodated in the current 1,042 dwelling per annum housing stock surplus in the Local Impact Area. The resultant uplift in housing need would fill 0.2% of the surplus, and thus would not have any increased level of significance.

18.10.44 The indicative cumulative net employment loss of 63 FTE worker per annum in the Local Impact Area represents a negligible negative impact on access to employment as a measured index of deprivation. As mitigation measures from other projects are not known, it is estimated that there will be an overall **cumulative long-term moderate-minor adverse effect** on access to employment in Local Impact Area.

18.10.45 Cumulative effects on access to education as a measured index of deprivation, and skills and qualification attainment in both the Local and Regional Impact Areas are not anticipated to increase the significance of effects on these receptors. Cumulative effects from operation and maintenance traffic on existing commuters with regard to delay and on population health and wellbeing as a result of reduction in accessibility for pedestrian and cycle traffic are also unchanged from the assessment of the Scheme in isolation.

Economic Impacts

18.10.46 The net decrease in energy employment is likely to generate a cumulative GVA loss of £3.2 million per annum. This represents a loss of 1.2% to the agriculture, mining, electricity, gas, water and waste (ABDE) grouped sector economy, which is of a medium magnitude. This is therefore a **cumulative long-term moderate-minor adverse effect** in the Local Impact Area. In the Regional Impact Area, this loss of GVA to the ABDE grouped sector economy is equivalent to 0.06%, and therefore represents a **cumulative long-term negligible adverse effect.**

18.10.47 The continued cumulative effect of the projects on the agricultural economy is a peak loss of approximately £1.8 million per annum. This does not change the level of significance of effect in either the Local or Regional Impact Area. This notwithstanding, annual ground rent benefits to landowners are likely to bring up to an estimated £9.5 million per annum to local landowners, this is based on an estimated rate of £2,180 per hectare and on the following estimated land areas for the cumulatively assessed solar power projects:

- West Burton Solar Project: 769 ha
- Cottam Solar Project: 1,291 ha
- Gate Burton Energy Park: 667 ha
- Tillbridge Solar: 1,400 ha
- Field Farm: 95 ha
- Bumble Bee Farm: 155 ha

18.10.48 The anticipated cumulative level of economic impact to tourism and recreation, as a result of reduced desirability of the Local Impact Area for tourism, is most likely to be felt in the arts, entertainment, and recreation grouped sector. The estimated worst-case cumulative economic effect is a loss of £1.1 million GVA per annum. This loss is of a medium magnitude (1.4%) in the Local Impact Area, and as such is a **cumulative long-term moderate-minor adverse effect**. This loss does not change the level of significance of effect for the Regional Impact Area.

18.10.49 The cumulative annual economic impact of the assessed projects during the combined operational phase is a GVA uplift of £6.3 million per annum, representing a 0.2% increase to the Local Impact Area's economy. This therefore represents an overall **cumulative long-term minor beneficial effect**. The cumulative net GVA uplift in the Regional Impact Area is estimated at £7.2 million per annum, indicating a 0.007% increase to the regional economy. This does not however change the level of significance of effect in the Regional Impact Area.

18.10.50 The total peak cumulative 0.2% increase in the GVA of the local economy will amount to a maximum uplift of £77 GVA per worker per annum in the Local Impact Area from the 2020 baseline. This rise would signify a **cumulative long-term moderate-minor beneficial effect** to economic prosperity, and to resident and workplace population salaries in the Local Impact Area.

Tourism and Recreation

18.10.51 The cumulative construction phase impacts from the assessed projects are very likely to have a somewhat increased level of effect on tourism and recreation in the immediate locality and Local Impact Area. These include the impacts to the economy already explored, as well as the further economic impacts as a result of cumulative landscape and traffic impacts. The resultant changes are therefore likely to affect the desirability and accessibility of tourism and recreation routes, attractions, and facilities.

18.10.52 Regional and local attractions, including local landscape, heritage, and recreational attractions are likely to have some degree of cumulative impacts as a result of long-term cumulative landscape effects. As assessed in **Chapter 8: Landscape and Visual Impact [EN010132/APP/WB6.2.8]** and **Chapter 13: Cultural Heritage [EN010132/APP/WB6.2.13]**, the peak cumulative impacts on these assets are not however likely to increase the level of significance of effect to their value to tourism and recreation.

18.10.53 Cumulative operation and maintenance traffic impacts have been assessed in **Chapter 14: Transport and Access [EN010132/APP/WB6.2.14]**, which assesses there are no cumulative impacts on routes used as key access routes for regionally important tourism destinations, nor on the use of or accessibility to recreational centres. As such, the level of effect to recreational use of waterways for navigation or fishing, formal recreation centres, and informal and youth recreation centres is unchanged. Furthermore, there are no cumulative impacts on the use of highways or other non-designated recreational routes for walking, cycling and horse riding.

18.10.54 The cumulative construction phase of the identified projects is likely to increase impacts on Public Rights of Way and long-distance recreation routes as a result of visual impacts. This therefore is unlikely to change the overall significance of effect on recreational routes such as Public Rights of Way, long-distance recreation routes, or any other recreational routes.

18.10.55 As a result of there being no additional cumulative effects on tourism and recreation receptors, the significance of effects on other tourism and recreation receptors is also unchanged from the assessment of the Scheme in isolation.

Cumulative Decommissioning Phases

18.10.56 For assessment purposes, the anticipated impacts of decommissioning are expected to be similar to those for construction. Due to the highly likely staggering of decommissioning phases on the identified cumulative assessment projects as a result of construction phase initiation and operational lifetimes, and the lack of further works on West Burton A, Cottam Power Station or any other residential sites, it is not anticipated that the cumulative environmental effects on socio-demographic, or tourism and recreation receptors will be substantively greater than those assessed for the Scheme in isolation. As such, only cumulative employment and economic effects are detailed in full in this section.

18.10.57 The following table sets out the assumptions made to calculate the cumulative construction impacts of the identified projects. As for the cumulative construction phase, these assumptions are made on the basis of publicly available project information, or generated from scaling assessed effects from the Scheme.

Table 18.27: Cumulative Decommissioning Assumptions

Project	Earliest Decommissioning Timescale	Net Construction Employment	Indirect and Induced Employment	Accommodation Employment	Agricultural Employment	Energy Employment	Tourism and Recreation Employment
West Burton Solar Project	2067-2068	177	314	40	-13	0	-5
Cottam Solar Project	2067-2068	280	497	53	-17	0	-5
Gate Burton Energy Park	2088-2089	240	426	45	-2	0	-5
West Burton C	2066-2067	57	101	11	0	0	-3
Tillbridge Solar	2068-2069	300	532	56	-5	0	-5
Field Farm	2064	24	43	5	-1	0	-1
Bumble Bee Farm	2064	24	43	5	-1	0	-1

18.10.58 Applying these assumptions shows that the indicative peak of decommissioning activity will occur in the year 2068 based on the alignment of decommissioning activity from the Scheme, Cottam Solar Project, and Tillbridge Solar. This assumes that each of these projects will not have an operational lifetime of more than 40 years. As such, this is used to estimate the peak cumulative environmental effects on socio-economic receptors in the Local and Regional Impact Areas. Assessment of these effects is made against the existing baseline conditions, as per the assessment of the Scheme in isolation in **Section 18.7**.

Socio-Economics

Employment

18.10.59 The direct employment from the Scheme during decommissioning is likely to most benefit the construction employment sector. Accounting for "leakage" of commuters from outside the Local Impact Area, and existing employment displacement, the peak net uplift in construction sector employment in the Local Impact Area is 486 FTE employees in 2068. This represents an increase of 10.2% in construction employment which is of high magnitude. This is therefore a **peak cumulative medium-term temporary moderate beneficial effect** and is therefore a **significant effect**. In the Regional Impact Area, the magnitude of impact (633 workers in a pool of approximately 107,000) is low (0.6%), and as such does not increase the level of significance of effect from the previous assessment.

18.10.60 The anticipated cumulative effect on the energy sector as a result of the end of the operational life of identified projects after 2088 is a permanent loss of 125 FTE workers. In the Local Impact Area, this accounts for 39.1% of the 320-strong energy sector workforce and this is a high magnitude loss, resulting in a **cumulative permanent moderate adverse effect**. This therefore is a **significant effect**. In the Regional Impact Area, the loss to energy sector employment is of medium magnitude at 1.0%. This therefore results in a **cumulative permanent moderate-minor adverse effect**.

18.10.61 In contrast, the anticipated cumulative effect on the agricultural sector as a result of the end of the operational life of identified projects after 2088 is a permanent increase of approximately 38 FTE workers. As this is a medium magnitude impact (1.0%) in the Local Impact Area, this represents a **cumulative permanent moderate-minor beneficial effect**. The level of significance of effect at within the Regional Impact Area is not anticipated to be different for that of the Scheme assessed in isolation.

18.10.62 The need for temporary accommodation for 316 FTE inbound workers during the cumulative decommissioning phase is anticipated to generate a peak uplift of 149 FTE employees in the accommodation sector. This represents a high magnitude (28.4%) impact in the Local Impact Area, and a low magnitude (0.6%) impact in the Regional Impact Area. At the local level, this represents a **peak cumulative medium-term temporary major-moderate beneficial effect**. This is therefore a **significant effect**. At the regional level, this does not increase the level of significance of effect.

18.10.63 The peak level of accommodation needed for temporary construction workers is likely to exceed accommodation stock, thus displacing a notable proportion of the usual number of visitors using accommodation in the Local impact Area. The resultant loss of visitor spending as a result of displacement from accommodation, and the secondary impacts of the cumulative projects on local desirability for tourism and recreation, are likely to result in a peak cumulative reduction of 38 FTE employees. In the Local Impact Area, this constitutes a medium magnitude (1.1%) reduction in employment in the tourism and recreation (RSTU) sector. As such, this

represents a **peak cumulative medium-term temporary moderate-minor adverse effect**. This loss does not increase the level of significance of effect at the regional level.

18.10.64 The tourism and recreation sector is however likely to see a return to baseline conditions following the completion of the decommissioning of all the identified cumulative energy projects. As such, there is likely to be a permanent increase of 24 FTE employees from the levels during the operational lifetime of the cumulatively assessed projects. This however is not anticipated to change the level of significance of this effect at either the local or regional level.

18.10.65 The peak total net employment change in the Local Impact Area (1,322 FTE employees) in the year 2068 as a result of the effects of the cumulatively assessed projects represents a 1.6% increase employment across all sectors in the Local Impact Area. This medium magnitude uplift therefore generates a **peak cumulative medium-term temporary moderate beneficial effect** which is therefore a **significant effect**. The peak cumulative employment change in the Regional Impact Area is an uplift of 1,731 FTE employees, which is a 0.08% increase across all sectors in the Regional Impact Area. This therefore does not change the level of significance of this effect.

18.10.66 The anticipated cumulative effect on employment as a result of the end of the operational life of identified projects after 2088 is a permanent loss of 125 FTE workers in the Local and the Regional Impact Area. In the Local Impact Area, this loss accounts for 0.2% of the total workforce, thus is a low magnitude impact, resulting in a **cumulative permanent moderate-minor adverse effect**. In the Regional Impact Area, the loss to the total workforce is negligible at 0.006%. This therefore results in a **cumulative permanent negligible adverse effect**.

Economic Impacts

18.10.67 As a result of the cumulative employment effects, the changes to Gross Value Added as a result of the cumulative decommissioning phases of the assessed projects are anticipated to have its level of greatest effect in the year 2068 for most of the assessed employment sectors.

18.10.68 The peak cumulative net uplift to employment in the construction sector is likely to generate a peak GVA in 2068 of £26.4 million in the Local Impact Area. This represents an increase of 10.2% to the local construction economy, which is of high magnitude. This is therefore a **peak cumulative medium-term moderate beneficial effect** and is therefore a **significant effect**. The £36.6 million increase to the construction economy in the Regional Impact Area represents a low magnitude 0.6% uplift, and thus does not change the level of significance of effect.

18.10.69 The anticipated cumulative effect on the energy sector economy as a result of the end of the operational life of identified projects after 2088 is a permanent loss of £6.1 million GVA per annum. In the Local Impact Area, this accounts for 2.3% of the agriculture, mining, electricity, gas, water and waste (ABDE) grouped sector

economy and thus is a medium magnitude loss, resulting in a **permanent cumulative moderate-minor adverse effect**. In the Regional Impact Area, the loss in GVA to the grouped ABDE economy is of low magnitude at 0.1%. This therefore results in a **permanent cumulative minor adverse effect**.

18.10.70 The anticipated cumulative effect of the identified projects on the agricultural economy is to revert to baseline conditions following the completion of decommissioning on all the cumulatively assessed solar energy projects. This therefore will a peak gain of approximately £1.8 million per annum by 2088. As such, the level of significance in both the Local and Regional Impact Areas is not changed from the previous assessment. That notwithstanding, completion of the cumulatively assessed solar energy projects will likely see the end of ground rent payments, to the detriment of local landowners.

18.10.71 The anticipated uplift in need for temporary accommodation for inbound construction workers is likely to generate a peak of £4.6 million GVA in the year 2068 to the accommodation economy. This represents a medium magnitude 8.4% increase in the Local Impact Area, and thus does not result in any additional level of effect to this receptor. Within the Regional Impact Area, this anticipated uplift represents a 0.3% increase. This low magnitude impact therefore represents a **peak cumulative medium-term temporary minor beneficial effect**.

18.10.72 The greatest level of economic impact to tourism and recreation, most likely to be felt in the arts, entertainment, and recreation grouped sector, is estimated to be a loss of £1.7 million GVA per annum. This is as a result of the cumulative effects of ongoing impacts on desirability from operation and additional impacts from decommissioning works. This loss amounts to a 2.2% (medium magnitude) reduction in the economic sector in the Local Impact Area, thus constituting a **peak cumulative medium-term temporary moderate-minor adverse effect**. The level of significance of effect in the Regional Impact Area is not anticipated to change.

18.10.73 The tourism and recreation sector is however likely to see a return to baseline conditions following the completion of the decommissioning of all the identified cumulative energy projects. As such, there is likely to be a permanent increase of £1.1 million GVA per annum from the levels during the operational lifetime of the cumulatively assessed projects. In the Local Impact Area, this amounts to a 1.4% increase, and as such is of medium magnitude, signifying a **cumulative permanent moderate-minor beneficial effect**. This however is not anticipated to change the level of significance of this effect at the regional level.

18.10.74 The peak cumulative annual economic impact of the assessed projects in 2068 in the Local Impact Area is a GVA uplift of £70.1 million, representing a 1.9% increase to the Local Impact Area's economy. This therefore represents an overall **peak cumulative medium-term temporary moderate-minor beneficial effect**. The estimated uplift in the Regional Impact Area is £93.2 million GVA, representing a 0.09% increase to the regional economy. This does not however change the level of significance of this effect.

18.10.75 Following completion of the decommissioning of all the cumulatively assessed energy projects, there is anticipated to be a permanent fall of £6.3 million GVA per annum in the Local Impact Area compared to joint operational phase of the projects. As such this 0.2% loss to the local economy is anticipated to be experienced as a **cumulative permanent minor adverse effect**. The projected cumulative net GVA loss in the Regional Impact Area is estimated at £7.2 million. This does not however change the level of significance of effect in the Regional Impact Area.

18.10.76 The total peak cumulative 1.9% increase in the GVA of the local economy will amount to a maximum uplift of £868 GVA per worker per annum in the Local Impact Area from the 2020 baseline. This rise would signify **peak cumulative medium-term temporary moderate beneficial effects** to economic prosperity, and to resident and workplace population salaries in the Local Impact Area. These therefore are **significant effects**.

18.10.77 Following the completion of decommissioning of all the cumulative assessed energy projects, the permanent cumulative loss of 0.2% in the GVA of the local economy will amount to a fall of £77 GVA per worker per annum in the Local Impact Area from the conditions during the joint operational lifetime of the cumulatively assessed projects. This fall would therefore signify **cumulative permanent moderate-minor adverse effects** to economic prosperity, and to resident and workplace population salaries in the Local Impact Area.

18.11 Residual Effects

18.11.1 The residual effects of the development of the Scheme assuming the implementation of the proposed mitigation, has been presented in **Section 18.8**. These have then been assessed against the cumulative impacts of the identified projects within **Section 18.10**, with the resultant cumulative residual effects set out in this section.

18.11.2 Of the effects identified within **Section 18.10**, those that are likely to be experienced in the Local and Regional Impact Areas as significant effects as a result of the cumulative impacts of the identified projects are set out in **Table 18.28** below.

Table 18.28: Summary of Significant Cumulative Residual Effects

Receptor	Description of Impact	Significant Residual Post-Mitigation Effects
CONSTRUCTION		
Construction sector employment (Local Impact Area)	Increase in construction employment opportunities	**Peak cumulative medium-term temporary moderate beneficial**
Accommodation sector employment (Local Impact Area)	Increase in demand for temporary accommodation units	**Peak cumulative medium-term temporary major-moderate beneficial**

Receptor	Description of Impact	Significant Residual Post-Mitigation Effects
Economic activity and employment (Local Impact Area)	Increase in labour and employment opportunity	**Peak cumulative medium-term temporary moderate beneficial**
Accommodation stock for construction	Increase in accommodation occupancy for temporary or short-term workers	**Peak cumulative medium-term temporary major-moderate beneficial**
Accommodation stock (housing)	Increase in accommodation requirement for workers and families	**Peak cumulative medium-term temporary moderate beneficial**
Access to employment (IMD)	Changes in overall employment opportunities	**Peak cumulative medium-term temporary major-moderate beneficial**
Access to education (IMD)	Increase in sector-based skills training and qualification opportunities	**Peak cumulative medium-term temporary moderate beneficial**
Construction economy (Local Impact Area)	Economic impacts on existing construction economy	**Peak cumulative medium-term temporary moderate beneficial**
Accommodation economy (Local Impact Area)	Economic impacts on existing accommodation economy	**Peak cumulative medium-term temporary moderate beneficial**
Tourism and visitor economy (Local Impact Area)	Economic impacts on existing tourism and visitor-based economy	**Peak cumulative medium-term temporary moderate adverse**
Economic prosperity	Total GVA and GVA/head change associated with construction	**Peak cumulative medium-term temporary moderate beneficial**
Resident and working population income	Changes in overall employment opportunities and personal income from construction	**Peak cumulative medium-term temporary moderate beneficial**
Local tourist attractions (landscape)	Impacts from construction noise, traffic, and views on desirability and use	**Peak cumulative medium-term temporary moderate adverse**
Long distance recreation routes	Impacts from construction noise, traffic, views, and diversions and closures of routes on route desirability and use	**Peak cumulative short to medium-term temporary moderate adverse** (Trent Valley Way / National Byways)
OPERATION		
Energy sector employment (Local Impact Area)	Change in energy-based employment (including the decommissioning of West Burton A Power Station)	**Cumulative long-term moderate adverse**

Receptor	Description of Impact	Significant Residual Post-Mitigation Effects
DECOMMISSIONING		
Construction sector employment (Local Impact Area)	Increase in sector employment opportunities generated from decommissioning works	**Peak cumulative medium-term temporary moderate beneficial**
Energy sector employment (Local Impact Area)	Conclusion of energy sector employment (including the decommissioning of West Burton A Power Station)	**Cumulative permanent moderate adverse**
Accommodation sector employment (Local Impact Area)	Increase in demand for temporary accommodation units	**Peak cumulative medium-term temporary major-moderate beneficial**
Economic activity and employment (Local Impact Area)	Changes in overall employment opportunities generated from decommissioning works	**Peak cumulative medium-term temporary moderate beneficial**
Construction sector economy (Local Impact Area)	Economic impacts on existing construction economy	**Peak cumulative medium-term temporary moderate beneficial**
Economic prosperity	Total GVA and GVA/head change associated with decommissioning works	**Peak cumulative medium-term temporary moderate beneficial**
Resident and working population income	Changes in overall employment opportunities and personal income from decommissioning works	**Peak cumulative medium-term temporary moderate beneficial**

18.11.3 The full table of anticipated cumulative residual effects is presented in **Table 18.29** overleaf.

Table 18.29: Cumulative Residual Environmental Effects Subject to Mitigation Measures and Cumulative Effects

Receptor	Description of Impact	Impact Area	Post-Mitigation Residual Effects	Cumulative Residual Effects
CONSTRUCTION				
Construction sector employment	Increase in construction employment opportunities generated from Scheme construction	Local Impact Area (LIA)	Medium-term temporary moderate-minor beneficial	**Peak cumulative medium-term temporary moderate beneficial**
		Regional Impact Area (RIA)	Medium-term temporary minor beneficial	Peak cumulative medium-term temporary moderate-minor beneficial
Agriculture, forestry & fishing sector employment	Decrease in agriculture-based employment as a result of the Scheme's construction	LIA	Long-term temporary minor adverse	Cumulative long-term moderate-minor adverse
		RIA	Long-term temporary negligible adverse	*Not substantively different*
Accommodation and services sector employment	Increase in demand for temporary accommodation units	LIA	**Medium-term temporary major-moderate beneficial**	***Not substantively different***
		RIA	Medium-term temporary minor beneficial	Peak cumulative medium-term temporary moderate-minor beneficial
	Decrease in visitor demand	LIA	Neutral effect	*Not substantively different*
		RIA	Neutral effect	*Not substantively different*
Tourism and recreation sector employment	Decrease in tourism and recreation demand due to visual, accessibility, and traffic impacts of Scheme	LIA	Neutral effect	Peak cumulative medium-term temporary moderate-minor adverse
		RIA	Neutral effect	Peak cumulative medium-term temporary minor adverse

Receptor	Description of Impact	Impact Area	Post-Mitigation Residual Effects	Cumulative Residual Effects
Economic activity and employment	Changes in overall employment opportunities generated from Scheme construction	LIA	Medium-term temporary moderate-minor beneficial	**Peak cumulative medium-term temporary moderate beneficial**
		RIA	Medium-term temporary negligible beneficial	Peak cumulative medium-term temporary minor beneficial
Resident population	Uplift in population from construction workforce and families	LIA	Medium-term temporary negligible beneficial	Peak cumulative medium-term temporary minor beneficial
		RIA	Medium-term temporary negligible beneficial	*Not substantively different*
Resident age demographics	Uplift in population from construction workforce and families	LIA	Neutral effect	*Not substantively different*
		RIA	Neutral effect	*Not substantively different*
Access to primary healthcare	Uplift in population looking to access primary healthcare facilities	LIA	Medium-term temporary negligible adverse	Peak cumulative medium-term temporary minor beneficial
		RIA	Medium-term temporary negligible adverse	*Not substantively different*
General population health and wellbeing	Uplift in population looking to access primary healthcare facilities	LIA	Medium-term temporary minor adverse	Peak cumulative medium-term temporary moderate-minor beneficial
		RIA	Medium-term temporary negligible adverse	*Not substantively different*
Disability and long-term health conditions	Uplift in population looking to access healthcare facilities	LIA	Medium-term temporary negligible adverse	Peak cumulative medium-term temporary minor beneficial
		RIA	Medium-term temporary negligible adverse	*Not substantively different*
Accommodation stock (construction)	Increase in accommodation occupancy for temporary or short-term workers	LIA only	**Medium-term temporary major-moderate beneficial**	***Not substantively different***

Receptor	Description of Impact	Impact Area	Post-Mitigation Residual Effects	Cumulative Residual Effects
Accommodation stock (visitor)	Visitor displacement due to accommodation for temporary or short-term workers	LIA only	Neutral effect	*Not substantively different*
Accommodation stock (housing)	Increase in accommodation requirement for workers and families	LIA only	Medium-term temporary moderate-minor beneficial	**Peak cumulative medium-term temporary moderate beneficial**
Access to employment (IMD)	Changes in overall employment opportunities generated from Scheme construction	LIA only	**Medium-term temporary moderate beneficial**	**Peak cumulative medium-term temporary major-moderate beneficial**
Access to education (IMD)	Increase in sector-based skills training and qualification opportunities	LIA only	**Medium-term moderate beneficial**	***Not substantively different***
Skills and qualification	Increase in sector-based skills training and qualification opportunities	LIA	Medium-term moderate-minor beneficial	*Not substantively different*
		RIA	Medium-term negligible beneficial	*Not substantively different*
Working and commuting patterns	Changes in overall employment opportunities for local and long-distance commuters Changes to commuting method as a result of Scheme location	LIA only	Medium-term temporary minor adverse	*Not substantively different*
Health and wellbeing	Fear and intimidation from HGV traffic on highways used by walkers, cyclists, and horse riders Diversion, closure or accessibility impacts to public rights of way	LIA only	Medium-term temporary moderate-minor adverse	*Not substantively different*
Construction economy	Economic impacts on existing construction economy	LIA	Medium-term temporary moderate-minor beneficial	**Peak cumulative medium-term temporary moderate beneficial**
		RIA	Medium-term temporary minor beneficial	Peak cumulative medium-term temporary moderate-minor beneficial

Receptor	Description of Impact	Impact Area	Post-Mitigation Residual Effects	Cumulative Residual Effects
Agricultural economy	Economic impacts on existing agriculture economy	LIA	Long-term temporary minor adverse	*Not substantively different*
		RIA	Long-term temporary negligible adverse	*Not substantively different*
Accommodation economy	Economic impacts on existing accommodation economy	LIA	Medium-term temporary moderate-minor beneficial	**Peak cumulative medium-term temporary moderate beneficial**
		RIA	Medium-term temporary negligible beneficial	Peak cumulative medium-term temporary minor beneficial
Tourism and visitor economy	Economic impacts on existing tourism and visitor-based economy	LIA	Neutral effect	**Peak cumulative medium-term temporary moderate adverse**
		RIA	Neutral effect	Peak cumulative medium-term temporary minor adverse
Local economy	Economic impacts on the overall existing economy	LIA	Medium-term temporary minor beneficial	Peak cumulative medium-term temporary moderate-minor beneficial
		RIA	Medium-term temporary negligible beneficial	Peak cumulative medium-term temporary minor beneficial
Economic prosperity	Total GVA and GVA/head change associated with construction of Scheme	LIA only	Medium-term temporary moderate-minor beneficial	**Peak cumulative medium-term temporary moderate beneficial**
Resident and working population income	Changes in overall employment opportunities and personal income from Scheme construction	LIA only	Medium-term temporary moderate-minor beneficial	**Peak cumulative medium-term temporary moderate beneficial**
Regional tourist attractions	Impacts from construction noise, traffic, and views on desirability and use	LIA only	Medium-term temporary minor adverse	*Not substantively different*

Receptor	Description of Impact	Impact Area	Post-Mitigation Residual Effects	Cumulative Residual Effects
Local tourist attractions (landscape)	Impacts from construction noise, traffic, and views on desirability and use	LIA only	**Peak medium-term temporary moderate adverse**	***Not substantively different***
Local tourist attractions (heritage)	Impacts from construction noise, traffic, and views on desirability and use	LIA only	Peak medium-term temporary moderate-minor adverse	*Not substantively different*
Local tourist attractions (all LIA)	Impacts from construction noise, traffic, and views on desirability and use	LIA only	Medium-term temporary minor adverse	*Not substantively different*
Public Rights of Way	Impacts from construction noise, traffic, views, and diversions and closures of routes on PRoW desirability and use	LIA only	Short- to medium-term temporary moderate-minor adverse	*Not substantively different*
Long distance recreation routes	Impacts from construction noise, traffic, views, and diversions and closures of routes on route desirability and use	LIA only	**Short- to medium-term temporary moderate adverse**	***Not substantively different***
Other walking and cycling routes	Fear and intimidation from HGV traffic on highways used by walkers, cyclists, and horse riders Diversion, closure or accessibility impacts to public rights of way	LIA only	Medium-term temporary moderate-minor adverse	*Not substantively different*
Recreational use of waterways for navigation or fishing	Impacts from construction noise, traffic, and views on desirability and use	LIA only	Medium-term temporary minor adverse	*Not substantively different*
Formal recreation centres	Impacts from construction noise, traffic, and views on desirability and use	LIA only	Medium-term temporary minor adverse	*Not substantively different*
Informal and youth recreation centres	Impacts from construction noise, traffic, and views on desirability and use	LIA only	Medium-term temporary moderate-minor adverse	*Not substantively different*

Receptor	Description of Impact	Impact Area	Post-Mitigation Residual Effects	Cumulative Residual Effects
Other tourism and recreation receptors	Secondary impacts on tourist industry and recreation receptors from construction noise, traffic, and views on desirability, accessibility and use in-combination with landscape and heritage impacts	LIA only	Medium-term temporary moderate-minor adverse	*Not substantively different*
OPERATION				
Energy sector employment	Increase in energy sector employment opportunities generated from Scheme operation and maintenance	LIA	Long-term moderate-minor beneficial	**Cumulative long-term moderate adverse**
		RIA	Long-term negligible beneficial	Cumulative long-term minor adverse
Agriculture, forestry & fishing sector employment	Decrease in agriculture-based employment as a result of the Scheme's operation and maintenance	LIA	Long-term temporary minor adverse	Cumulative long-term moderate-minor adverse
		RIA	Long-term temporary negligible adverse	*Not substantively different*
Accommodation and services sector employment	Increase in demand for temporary accommodation units	LIA	Neutral effect	*Not substantively different*
		RIA	Neutral effect	*Not substantively different*
Tourism and recreation sector employment	Decrease in tourism and recreation demand due to visual, accessibility, and traffic impacts of Scheme	LIA	Long-term minor adverse	*Not substantively different*
		RIA	Long-term negligible adverse	*Not substantively different*
Economic activity and employment	Changes in employment opportunities resulting from Scheme operation and maintenance	LIA	Long-term minor beneficial	Cumulative long-term minor adverse
		RIA	Neutral effect	Cumulative long-term negligible adverse
Resident population		LIA	Long-term negligible beneficial	*Not substantively different*

Receptor	Description of Impact	Impact Area	Post-Mitigation Residual Effects	Cumulative Residual Effects
	Uplift in population from operation and maintenance workforce and families	RIA	Neutral effect	*Not substantively different*
Resident age demographics	Uplift in population from operation and maintenance workforce and families	LIA	Neutral effect	*Not substantively different*
		RIA	Neutral effect	*Not substantively different*
Access to primary healthcare	Uplift in population looking to access primary healthcare facilities	LIA	Neutral effect	*Not substantively different*
		RIA	Neutral effect	*Not substantively different*
General population health and wellbeing	Uplift in population looking to access primary healthcare facilities	LIA	Neutral effect	*Not substantively different*
		RIA	Neutral effect	*Not substantively different*
Disability and long-term health conditions	Uplift in population looking to access healthcare facilities	LIA	Neutral effect	*Not substantively different*
		RIA	Neutral effect	*Not substantively different*
Accommodation stock (employees)	Increase in accommodation occupancy for temporary or short-term workers	LIA only	Neutral effect	*Not substantively different*
Accommodation stock (visitor)	Visitor displacement due to accommodation for temporary or short-term workers	LIA only	Neutral effect	*Not substantively different*
Accommodation stock (housing)	Increase in accommodation requirement for long-term workers and families	LIA only	Long-term minor beneficial	*Not substantively different*
Access to employment (IMD)	Changes in overall employment opportunities generated from Scheme's operation and maintenance	LIA only	Long-term moderate-minor beneficial	Cumulative long-term moderate-minor adverse
Access to education (IMD)	Increase in sector-based skills training and qualification opportunities	LIA only	Long-term moderate-minor beneficial effect	*Not substantively different*
Skills and qualification		LIA	Long-term minor beneficial effect	*Not substantively different*

Receptor	Description of Impact	Impact Area	Post-Mitigation Residual Effects	Cumulative Residual Effects
	Changes in sector-based skills training and qualification opportunities	RIA	Long-term negligible beneficial effect	*Not substantively different*
Working and commuting patterns	Changes in overall employment opportunities for local and long-distance commuters Changes to commuting method as a result of Scheme location	LIA only	Neutral effect	*Not substantively different*
Health and wellbeing	Fear and intimidation from site traffic on highways used by walkers, cyclists, and horse riders Desirability or accessibility impacts to public rights of way	LIA only	Neutral effect	*Not substantively different*
Energy sector economy	Long-term economic impacts on energy sector economy	LIA	Long-term minor beneficial	Cumulative long-term moderate-minor adverse
		RIA	Long-term negligible beneficial	Cumulative long-term negligible adverse
Agricultural economy	Long-term economic impacts on agriculture economy	LIA	Long-term minor adverse	*Not substantively different*
		RIA	Long-term negligible adverse	*Not substantively different*
Tourism and visitor economy	Long-term economic impacts on tourism and visitor-based economy	LIA	Long-term minor adverse	Cumulative long-term moderate-minor adverse
		RIA	Long-term negligible adverse	*Not substantively different*
Local economy	Long-term economic impacts on the overall existing economy	LIA	Long-term negligible beneficial	Cumulative long-term minor beneficial
		RIA	Long-term negligible beneficial	*Not substantively different*

Receptor	Description of Impact	Impact Area	Post-Mitigation Residual Effects	Cumulative Residual Effects
Economic prosperity	Total GVA and GVA/head change associated with operation of Scheme	LIA only	Long-term minor beneficial	Cumulative long-term moderate-minor beneficial
Resident and working population income	Changes in employment opportunities resulting from Scheme operation and maintenance	LIA only	Long-term minor beneficial	Cumulative long-term moderate-minor beneficial
Regional tourist attractions	Impacts from views and operation and maintenance traffic on desirability and use	LIA only	Long-term minor adverse	*Not substantively different*
Local tourist attractions (landscape)	Impacts from views and operation and maintenance traffic on desirability and use	LIA only	Peak long-term moderate-minor adverse	*Not substantively different*
Local tourist attractions (heritage)	Impacts from views and operation and maintenance traffic on desirability and use	LIA only	Peak long-term moderate-minor adverse	*Not substantively different*
Local tourist attractions (all LIA)	Impacts from views and operation and maintenance traffic on desirability and use	LIA only	Long-term minor adverse	*Not substantively different*
Public Rights of Way	Impacts from views on PRoW desirability and use	LIA only	Long-term moderate-minor adverse	*Not substantively different*
Long distance recreation routes	Impacts from views on route desirability and use	LIA only	Long-term moderate-minor adverse	*Not substantively different*
Other walking and cycling routes	Fear and intimidation from HGV traffic on highways used by walkers, cyclists, and horse riders	LIA only	Long-term moderate-minor beneficial	*Not substantively different*
Recreational use of waterways for navigation or fishing	Impacts of use of new permissive path for recreational walking	LIA only	Long-term minor adverse	*Not substantively different*
Formal recreation centres	Impacts from views on desirability and use	LIA only	Long-term minor adverse	*Not substantively different*

Receptor	Description of Impact	Impact Area	Post-Mitigation Residual Effects	Cumulative Residual Effects
Informal and youth recreation centres	Impacts from views on desirability and use	LIA only	Long-term minor adverse	*Not substantively different*
Other tourism and recreation receptors	Impacts from views on desirability and use	LIA only	Long-term moderate-minor adverse	*Not substantively different*
DECOMMISSIONING				
Construction sector employment	Increase in construction employment opportunities generated from Scheme decommissioning	LIA	Medium-term temporary moderate-minor beneficial	**Peak cumulative medium-term temporary moderate beneficial**
		RIA	Medium-term temporary minor beneficial	*Not substantively different*
Energy sector employment	Conclusion of energy sector employment generated from Scheme operation and maintenance	LIA	Permanent minor adverse	**Cumulative permanent moderate adverse**
		RIA	Permanent negligible adverse	Cumulative permanent moderate-minor adverse
Agriculture, forestry & fishing sector employment	Increase in agriculture-based employment as a result of completion of the Scheme decommissioning	LIA	Permanent minor beneficial	Cumulative permanent moderate-minor beneficial
		RIA	Permanent negligible beneficial	*Not substantively different*
Accommodation sector employment	Increase in demand for temporary accommodation units	LIA	**Medium-term temporary moderate beneficial**	**Peak cumulative medium-term temporary major-moderate beneficial**
		RIA	Medium-term temporary minor beneficial	*Not substantively different*

Receptor	Description of Impact	Impact Area	Post-Mitigation Residual Effects	Cumulative Residual Effects
Tourism and recreation sector employment	Decrease in visitor demand during decommissioning Decrease in availability of accommodation for visitors	LIA	Medium-term temporary minor adverse	Peak cumulative medium-term temporary moderate-minor adverse
		RIA	Medium-term temporary negligible adverse	*Not substantively different*
	Increase in visitor demand following removal of solar panel areas and infrastructure	LIA	Permanent minor beneficial	*Not substantively different*
		RIA	Permanent negligible beneficial	*Not substantively different*
Economic activity and employment	Changes in overall employment opportunities generated from Scheme decommissioning	LIA	Medium-term temporary moderate-minor beneficial	**Peak cumulative medium-term temporary moderate beneficial**
		RIA	Medium-term temporary negligible beneficial	*Not substantively different*
	Impact on overall labour market following completion of the Scheme decommissioning	LIA	Permanent minor beneficial	Cumulative permanent moderate-minor adverse
		RIA	Neutral effect	Cumulative permanent negligible adverse
Socio-demographic environment	Uplift in population from decommissioning workforce and families	LIA	Medium-term temporary minor adverse	*Not substantively different*
		RIA	Medium-term temporary negligible adverse	*Not substantively different*
Construction economy	Economic impacts on existing construction economy	LIA	Medium-term temporary moderate-minor beneficial	**Peak cumulative medium-term temporary moderate beneficial**

Receptor	Description of Impact	Impact Area	Post-Mitigation Residual Effects	Cumulative Residual Effects
		RIA	Medium-term temporary minor beneficial	*Not substantively different*
Energy sector economy	Economic impacts on energy sector economy as a result of Scheme decommissioning	LIA	Permanent minor adverse	Cumulative permanent moderate-minor adverse
		RIA	Permanent negligible adverse	Cumulative permanent minor adverse
Agricultural economy	Economic impacts on agriculture economy of land returning to agricultural use	LIA	Permanent minor beneficial	*Not substantively different*
		RIA	Permanent negligible beneficial	*Not substantively different*
Accommodation economy	Economic impacts on existing accommodation economy	LIA	Medium-term temporary moderate-minor beneficial	*Not substantively different*
		RIA	Medium-term temporary negligible beneficial	Peak cumulative medium-term temporary minor adverse
Tourism and visitor economy	Economic impacts on existing tourism and visitor-based economy from decommissioning	LIA	Medium-term temporary minor adverse	Peak cumulative medium-term temporary moderate-minor adverse
		RIA	Medium-term temporary negligible adverse	*Not substantively different*
	Economic impacts of reinstatement of land to agricultural use	LIA	Permanent minor beneficial	Cumulative permanent moderate-minor beneficial
		RIA	Permanent negligible beneficial	*Not substantively different*
Local economy	Economic impacts on the overall existing economy during decommissioning	LIA	Medium-term temporary minor beneficial	Peak cumulative medium-term temporary moderate-minor beneficial
		RIA	Medium-term temporary negligible beneficial	*Not substantively different*
		LIA	Permanent negligible adverse	Cumulative permanent minor adverse

Receptor	Description of Impact	Impact Area	Post-Mitigation Residual Effects	Cumulative Residual Effects
	Economic impacts on the overall existing economy during decommissioning following completion of decommissioning of Scheme	RIA	Permanent negligible adverse	*Not substantively different*
Economic prosperity	Total GVA and GVA/head change associated with decommissioning of Scheme	LIA only	Medium-term temporary moderate-minor beneficial	**Peak cumulative medium-term temporary moderate beneficial**
	Total GVA and GVA/head change upon completion of decommissioning of Scheme	LIA only	Permanent minor adverse	Cumulative permanent moderate-minor adverse
Resident and working population income	Changes in overall employment opportunities and personal income from Scheme decommissioning	LIA only	Medium-term temporary moderate-minor beneficial	**Peak cumulative medium-term temporary moderate beneficial**
	Changes in overall employment opportunities and personal income from Scheme decommissioning	LIA only	Permanent minor adverse	Cumulative permanent moderate-minor adverse
Regional tourist attractions	Decrease in tourism and recreation demand due to visual, accessibility, and traffic impacts of Scheme decommissioning	LIA only	Medium-term temporary minor adverse	*Not substantively different*
	Removal of solar panel areas and infrastructure and return of land under Scheme to agricultural use	LIA only	Permanent minor beneficial	*Not substantively different*
Local tourist attractions (landscape)	Decrease in tourism and recreation demand due to visual, accessibility, and traffic impacts of Scheme decommissioning	LIA only	Peak medium-term moderate-minor adverse	*Not substantively different*
	Removal of solar panel areas and infrastructure and return of land under Scheme to agricultural use	LIA only	Permanent moderate-minor beneficial	*Not substantively different*

Receptor	Description of Impact	Impact Area	Post-Mitigation Residual Effects	Cumulative Residual Effects
Local tourist attractions (heritage)	Decrease in tourism and recreation demand due to visual, accessibility, and traffic impacts of Scheme decommissioning	LIA only	Peak medium-term moderate-minor adverse	*Not substantively different*
	Removal of solar panel areas and infrastructure and return of land under Scheme to agricultural use	LIA only	Permanent moderate-minor beneficial	*Not substantively different*
Local tourist attractions (all LIA)	Decrease in tourism and recreation demand due to visual, accessibility, and traffic impacts of Scheme decommissioning	LIA only	Medium-term temporary minor adverse	*Not substantively different*
	Removal of solar panel areas and infrastructure and return of land under Scheme to agricultural use	LIA only	Permanent minor beneficial	*Not substantively different*
Public Rights of Way	Impacts from decommissioning noise, traffic, views, and diversions and closures of routes on PRoW desirability and use	LIA only	Short- to medium-term temporary moderate-minor adverse	*Not substantively different*
	Removal of solar panel areas and infrastructure	LIA only	Permanent moderate-minor beneficial	*Not substantively different*
Long distance recreation routes	Impacts from decommissioning noise, traffic, views, and diversions and closures of routes on route desirability and use	LIA only	Short- to medium-term temporary moderate-minor adverse	*Not substantively different*
	Removal of solar panel areas and infrastructure	LIA only	Permanent moderate-minor beneficial	*Not substantively different*
Other recreational routes	Fear and intimidation impact from construction traffic on shared routes with walkers, cyclists, and horse riders	LIA only	Short- to medium-term temporary moderate-minor adverse	*Not substantively different*

Receptor	Description of Impact	Impact Area	Post-Mitigation Residual Effects	Cumulative Residual Effects
	Impacts of closure of new permissive path for recreational walking	LIA only	Permanent moderate-minor adverse	*Not substantively different*
Recreational use of waterways for navigation or fishing	Impacts from decommissioning noise, traffic, views, and diversions and closures of routes on desirability and use	LIA only	Medium-term temporary minor adverse	*Not substantively different*
	Removal of solar panel areas and infrastructure	LIA only	Permanent minor beneficial	*Not substantively different*
Formal recreation centres	Impacts from decommissioning noise, traffic, and views on desirability and use	LIA only	Medium-term temporary minor adverse	*Not substantively different*
	Removal of solar panel areas and infrastructure	LIA only	Permanent minor beneficial	*Not substantively different*
Informal and youth recreation centres	Impacts from decommissioning noise, traffic, and views on desirability and use	LIA only	Medium-term temporary moderate-minor adverse	*Not substantively different*
	Removal of solar panel areas and infrastructure	LIA only	Permanent minor beneficial	*Not substantively different*
Other tourism and recreation receptors	Impacts from decommissioning noise, traffic, and views on desirability, accessibility and use in-combination with landscape and heritage impacts	LIA only	Medium-term temporary moderate-minor adverse	*Not substantively different*
	Removal of solar panel areas and infrastructure	LIA only	Permanent moderate-minor beneficial	*Not substantively different*

18.12 References

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