Great North Road Solar and Biodiversity Park

Environmental Statement

Volume 1 – Chapters

Chapter 13 – Socioeconomics and Tourism

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Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009, APFP Regulation 5(2)(a)

Contents

13.1 INTRODUCTION

1 This chapter of the Environmental Statement (ES) has been prepared by RPS on behalf of Elements Green Trent Limited (the 'Applicant').

2 This chapter identifies and assesses the likely significant effects of the Development on socioeconomic and tourism resources.

3 The Development would be located to the northwest of Newark, in the Newark and Sherwood district of Nottinghamshire, East Midlands. The Development would be within an area bound by the Order Limits. The Order Limits are to the west of the A1, north of the A617, east of Eakring, and south of Egmanton, to the north and northwest of Staythorpe.

4 The Development is described by ES Chapter 5, Development Description, [EN010162/APP/6.2.5], and briefly summarised here. The Development essentially consists of discrete land parcels proposed to be occupied by solar PV panels and associated infrastructure (Work no. 1), connected by cable route areas (Work no. 2). Up to 4 intermediate substations (Work no. 4) will be spaced around the solar areas, and a Battery Energy Storage System (BESS; Work no. 5a) and 400 kV Compound (Work no. 5b) will collate the electrical energy and step up the voltage before cabling it to the National Grid Staythorpe Substation (Work no. 6), possibly via the Consented Staythorpe BESS (Work no. 7). Road works (Work no. 8; access) will be undertaken, principally to create passing places and create or upgrade access points. Other areas within the Order Limits are identified for mitigation/enhancement (Work no. 3). The Work Areas are shown on ES Figure 5.1 [EN010162/APP/6.3.5.1] and a summary of mitigation/enhancement measures is shown on ES Figure 5.2 [EN010162/APP/6.3.5.2].

5 The assessment is supported by the following figures in Volume 3 of this ES:

- Figure 13.1: Order Limits and Travel To Work Areas [EN010162/APP/6.3.13.1];
- Figure 13.2: Public Rights of Way Tourism Survey Locations [EN010162/APP/6.3.13.2]; and
- Figure 13.3: Serviced Accommodation Supply and Order Limits [EN010162/APP/6.3.13.3].

6 The assessment presented is informed by the following technical chapters of this ES:

- Chapter 7: Landscape and Visual [EN010162/APP/6.2.7];
- Chapter 10: Ground Conditions and Contaminated Land [EN010162/APP/6.2.10];
- Chapter 11: Cultural Heritage and Archaeology [EN010162/APP/6.2.11];
- Chapter 12: Noise and Vibration [EN010162/APP/6.2.12];
- Chapter 14: Traffic and Transport [EN010162/APP/6.2.14];
- Chapter 16: Miscellaneous Issues [EN010162/APP/6.2.16];
- Chapter 17: Agricultural Land [EN010162/APP/6.2.17]; and
- Chapter 18: Recreation [EN010162/APP/6.2.18].

7 This chapter is supported by the following Technical Appendices (TAs) in Volume 4:

- Technical Appendix A13.1 - Socioeconomic Baseline Report [EN010162/APP/6.4.13.1]; and
- Technical Appendix A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2].

8 This chapter is also supported by ES Chapter 20: Glossary [EN010162/APP/6.2.20].

13.2 CONSULTATION

9 In November 2023, the Applicant submitted a Scoping Request to the Planning Inspectorate, which described the scope and methodology for the technical studies being undertaken to provide an assessment of any likely significant effects for the Development's construction, operation and maintenance and decommissioning phases. It also described those topics or sub-topics which are proposed to be scoped out of the EIA process, providing justification as to why the Development would not have the potential to give rise to significant environmental effects in these areas.

10 Following consultation with the appropriate statutory bodies, the Planning Inspectorate (on behalf of the Secretary of State) provided a Scoping Opinion on 19th December 2023.

11 A Preliminary Environmental Information Report (PEIR) was submitted in January 2025 and feedback from statutory consultees has been received.

12 Key issues raised in consultation responses specific to socioeconomics and tourism and are summarised in Table 13.1, together with details of how these issues have been addressed within this chapter.

Table 13.1: Scoping Opinion and PEIR – Key Issues

Responder	Comments	How Comments Have Been Resolved
Planning Inspectorate (Scoping Opinion)	Socioeconomics – Operational phase effects excluding tourism: The Scoping Request proposes to scope out all socioeconomic impacts which were scoped in for the construction phase, resulting from the operation of the Development (with the exception of effects on tourism) from the operational assessment on the basis that these effects would be similar to the construction phase, but to a much lesser extent. It is however noted at paragraph 487 that operational effects on recreation are scoped into the ES, and at paragraphs 505 and 513 that there is potential disruption to farm businesses. Furthermore, the ES does not refer to any leisure and recreation users, businesses related to these. As such, it is unclear what effects the Scoping Request is referring to here, and consequently the Inspectorate is not in agreement that an assessment of the operational effects can be scoped out. The ES should assess all potentially significant effects on socioeconomics resulting from the operation of the Development. This should include any	Socioeconomic impacts during the operational phase of the Development have been scoped into the socioeconomic impact assessment where appropriate. Detailed assessment of the significance of effects on socioeconomic receptors during the operational phase has been undertaken in section 13.8. There will be no loss of farmer access to their remaining agricultural land as a result of the Development. Detailed arable agricultural economic output change has been assessed in this assessment informed by comprehensive farmer interviews and farm crop classification.

Responder	Comments	How Comments Have Been Resolved
	impacts on the viability of farm businesses resulting from the loss of access or holdings being split.	
Planning Inspectorate (Scoping Opinion)	Physical and other potential effects: The Scoping Request does not appear to make reference to considerations such as noise or other nuisances affecting tranquillity of socio-economic (or associated heritage, landscape or visual) receptors. The ES should include a consideration of effects such as disturbance of tranquillity.	The socioeconomic impact assessment has considered the conclusions of both the landscape and visual chapter, noise chapter and heritage chapter, along with other chapters of relevance, when determining the significance of effects on socioeconomic receptors. This includes a consideration of tranquillity.
Planning Inspectorate (Scoping Opinion)	Impacts to agricultural businesses and food production / security: With reference to paragraphs 505 and 513, whilst it is noted that Chapter 10 proposes to focus on agricultural land classification (ALC) a physical characteristic of soils which does not require an assessment of land use and food production), the Scoping Request does refer to the potential disruption or benefits (such as introduction of grazing opportunities) to existing farm businesses (during both construction and operation). The Inspectorate considers that the topics of land use and food production in relation to business (landowner and tenant farmers)	The topic of land use is addressed in ES Chapter 10: Ground Conditions [EN010162/APP/6.2.10]. Food production in relation to business has been assessed in Section 13.8.4. Reduced Arable Agricultural Output within this chapter. Gross Value Added (GVA) calculations have been made to assess the potential impact. Effects on farm businesses is assessed in Chapter 17, Agricultural Land [EN010162/APP/6.2.17].

Responder	Comments	How Comments Have Been Resolved
	should be assessed as part of the assessment of farm businesses.	
Planning Inspectorate (Scoping Opinion)	Accommodation for construction workers: The potential impacts listed in paragraphs 454 and 455 within the Scoping Request socio-economics chapter do not specifically refer to the potential impact of construction workers on the capacity of local accommodation and services (despite this being noted to be required by paragraph 421). The ES should define a worst-case scenario of construction worker numbers and assess impacts on the availability of local accommodation and services where significant effects are likely to occur.	The availability of accommodation for construction workers has been assessed in detail in Section 13.8.6 and no significant adverse effects were found. As there is not a significant adverse effect based on construction workers temporarily staying within the Study Area, it is not necessary to scope in effects on services as the number of temporary construction workers is insignificant. Furthermore, the cumulative impact of additional construction has been assessed in section 13.9. For the purposes of socioeconomics, the zone of influence for cumulative developments consists of the following local authorities: Newark and Sherwood and Mansfield as explained in Section 13.4.3. The Study Area has been limited to the above local authorities because these are the areas that will experience the most impact, those impacts mainly being employment.
Planning Inspectorate (Scoping Opinion)	Specific tourism assets and attractions: There is no list in Table 10.3 (or elsewhere in the Scoping Request) of the specific tourism assets and attractions scoped into the assessment. The ES should provide this information along with a description of the receptors.	Tourists may use recreation assets. Recreation receptors within 250 m of the Order Limits, which may be used by tourists, are identified within the ES Chapter 18, Recreation [EN010162/APP/6.2.18].

Responder	Comments	How Comments Have Been Resolved
Averham, Kelham and Staythorpe Parish Council (Scoping Opinion)	Socio Economics section states that the Socio-economic effects from the Development are expected to be modest during the operation phase and much less than those of the construction phase. Social and economic factors include factors such as income, education, employment, community safety and social support. The choices that are available in a community are impacted by social and economic factors. These choices include our abilities to afford medical care and housing and to manage stress. This development will have an impact on a large number of communities to a greater or lesser degree. One of these impacts will be a reduction in the desirability or appeal as rural residential areas which will have a socio-economic impact in those communities. The PC would request that this be scoped in and not excluded.	Socioeconomic impacts during the operational phase of the Development have been scoped into this chapter, as assessed in Section 13.8. Factors have been scoped in or out of the assessment based on a detailed review of the socioeconomic baseline conditions in the Study Area (see TA A13.1 - Socioeconomic Baseline Report [EN010162/APP/6.4.13.1] Social and economic factors such as income, education, employment, were taken into account as part of the socioeconomic scoping request. The Applicant is looking to commit to providing support to the community through various employment, skills and education initiatives. These are discussed in greater detail in TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2]. IEMA guidance[1] states that socioeconomics and human health should be separated out and thus discussion around medical care and stress are considered in ES Chapter 16, Miscellaneous Issues [EN010162/APP/6.2.16]. Given the data presented in the Department for Energy Security and Net Zero's Public Attitudes Tracker, along with the fact that the visual impact of the Development is being assessed and mitigated against, where possible, with extensive areas of landscaping / the planting of at least 64,500 trees (as set out in the Outline Landscape and Ecological

[1] IEMA (2022). Impact Assessment Outlook Journal – Social Impact Assessment. Available at: https://s3.eu-west-2.amazonaws.com/iema.net/documents/knowledge/policy/impact-assessment/ia-outlook/J37444_IEMA_Impact_Assessment_Outlook_Journal_V13_V4.pdf [Accessed on 08/11/2024].

Responder	Comments	How Comments Have Been Resolved
		Management Plan [EN010162/APP/6.4.5.1]). The Development provides 21 permissive footpaths and 6 permissive bridleways within the Order Limits, and identifies a new long-distance footpath that would be in place for use by members of the public during the operation phase.
Bathley Parish Council, South Muskham and Little Carlton Parish Council, Norwell Parish Council, Kneesall, Kersall, Ompton Parish Council (Scoping Opinion)	The Council agrees that the suggested matters to be scoped in (The assessment has scoped in jobs, economic output, employment and skills, long term reversable agricultural cessation, temporary construction workers accommodation, visitor economy impacts) should be 'scoped in' as part of the ES assessments are accurate. These are seen within the Scope of the assessment. Paragraph 461 attempts to summarise the likely environmental effects of the development. It includes the phrase: "Creation of long-term employment opportunities once the Development is operational including, consideration of any existing employment uses on-site (principally related to agricultural land use);" It is hoped the meaning of the second part of this sentence means that this includes a quantifying of the long term lost employment opportunities in agricultural and leisure businesses and their related supply chains,	Socioeconomics and tourism have been considered together as part of the socioeconomic impact assessment. Ground Conditions are assessed in ES Chapter 10 of this ES [EN010162/APP/6.2.10]. Employment has been considered in detail as part of the socioeconomic impact assessment, along with other receptors. TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] details how education paths can lead to long term employment opportunities associated with the Development. Furthermore, Chapter 13 Socioeconomics and Tourism [EN010162/APP/6.2.13] quantifies the long-term reversable employment opportunities lost pertaining to agricultural land use.

Responder	Comments	How Comments Have Been Resolved
	due to the change of land use. If it does not the Council would wish this to be scoped in.	
Bathley Parish Council, South Muskham and Little Carlton Parish Council, Norwell Parish Council, Kneesall, Kersall, Ompton Parish Council (Scoping Opinion)	Farmland and crop production: The Council believes that the ES should also include an assessment of the economic impact the loss of arable farmland and crop production would have during the operation of the development and a comparison of this to the economic benefits/gains identified. This should be an individual assessment and a cumulative one, encompassing all other proposed schemes within or in proximity to the order limits.	The assessment includes the economic impact of the loss of arable farmland and crop production during the operation of the Development, comparing this to the economic benefits/gains identified in section 13.8. Cumulative effects are assessed in Section 13.9.
Carlton on Trent Parish Council (Scoping Opinion)	Tourism and Recreation: As the name suggests, the Newark and Sherwood area inextricably links Newark on Trent, just South of this development and renowned for being a fiercely contested hotspot in the Civil War, to Sherwood Forest to the North of the development and notorious for its connections to Robin Hood. These make the whole area very popular with tourists bringing income to the local economy, with local pubs, restaurants and B&Bs benefitting. The rural beauty of the area makes it popular with walkers, cyclists and horse riders. It is	The impact on tourism has been considered in detail within the socioeconomic impact assessment. Recreation is assessed within ES Chapter 18, Recreation [EN010162/APP/6.2.18]. Users of the footpaths subject to the most significant adverse visual effects have been subject to user surveys. The results of these are explained in Section 13.8.5, Change in Visitor Economy. The conclusions of other chapters, such as landscape and visual and noise, have also been considered in the assessment of impact on tourism.

Responder	Comments	How Comments Have Been Resolved
	almost incomprehensible to think that covering the area in solar panels will continue to have the same attraction. The council would therefore like to see a comprehensive study on the potential negative impact on local tourism and leisure activities, including detailed assessments of foot traffic, horse riding, and other recreational pursuits along with a robust tourism promotion plan to counteract any negative impacts. Carlton-on-Trent benefits from the local caravan parks, public house and B&B's, the need to protect the tourism and leisure revenue supports the need for stringent Visual Impact Assessments.	
Caunton Parish Council (Scoping Opinion)	Impact on people working in the area: The scale and timeline for the development will have considerable impact on the land, people living in the area. Consideration should be given to the negative impact/mitigation on farming workforce that will lose their jobs as well as loss of skills. Financial handouts such as those on the company's website are no substitute for employment and more robust assessment should be provided.	Employment has been considered in detail as part of the socioeconomic impact assessment, along with other receptors. This includes a detailed assessment of the loss of jobs as a result of the loss of agricultural production. An Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] has been prepared which outlines the employment and training opportunities the Applicant has already provided, and the ones they will build upon, as part of the Development to ensure local skills are enhanced and prioritised.

Responder	Comments	How Comments Have Been Resolved
Newark and Sherwood District Council (PEIR response)	During the construction phase of the Development, there is a potential net increase of 21 FTE jobs, which is noted within the assessment as being 'minor beneficial'. Whilst noting that job creation is typically lower during the operation phase of the development, the Applicant should equally consider how job creation can be maximised and secured during the significant and long-term operational phase of the proposed development.	All SEIA assessments are based on a worst-case scenario approach which ensures benefits are not overstated. Furthermore, an Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] has been prepared which outlines how long-term operational phase employment can be maximised.
Newark and Sherwood District Council (PEIR response)	NSDC note that during the operational stage of the development, once all factors are applied, the proposed development will potentially generate an overall net gain in employment as a result of the proposed development of 166 direct local FTE jobs. This positive effect is assessed as being 'moderate beneficial' but given the scale and extent of the proposed development, NSDC consider this to be a low number, in relation to other comparable solar NSIP schemes. Whilst the assessment acknowledges there is some uncertainty associated with the conclusions at this stage, NSDC consider that the Applicant should demonstrate in a robust manner, how the proposal will	All SEIA assessments are based on a worst-case scenario approach and the methodology is explained within the SEIA Employment Assessment. Further detail on the Outline Skills, Supply Chain and Employment Plan can be seen TA A13.2 Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2]. In terms of specific content, the Outline Skills, Supply Chain and Employment Plan contains three key sections that pertain to job delivery mechanism: **Opportunities** (these are 7 unique opportunities, ranging from skills, employment and supply chain). **Delivery** (this outlines how the SSCE plan will be delivered, including roles, responsibilities, and timelines). **Monitoring and Feedback** (this section ensures that there are clear objectives of the Outline Skills, Supply Chain and

Responder	Comments	How Comments Have Been Resolved
	generate and maximise job creation leading up to and during the construction stage (should permission be given for the proposed development) of the proposed development. Whilst noting that the applicant is currently drafting an Outline Employment and Skills Plan, NSDC are keen to understand the likely content of this plan and therefore the extent to which a mechanism is in place to deliver such jobs, for the benefit of the NSDC area.	Employment Plan, and ensures it is effectively monitored, measured and reported against).
Kneesall, Kersall and Ompton Parish Council (PEIR response)	Other socio-economic impacts will be the queuing traffic at certain times on our main roads particularly on Mondays and Fridays when a large local employer Center Parcs and Forest holidays have their changeover days. We also would like you to consider the potential lack of employment particularly in agriculture and associated industries.	The SEIA references conclusions from the Traffic and Access Chapter [EN010162/APP/6.2.14]. Furthermore, the long-term reversable arable agricultural employment cessation has been assessed in detail within the SEIA.
Nottinghamshire County Council (PEIR response)	It is recommended that the report is clearer on the specific business energy savings and skills benefits that will arise from the scheme.	The SEIA references TA A13.2 Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] which explores in further detail skills benefits that will arise from the scheme. Energy savings have been considered at the local authority level within the Operational Electricity Sale GVA section.

Responder	Comments	How Comments Have Been Resolved
Nottinghamshire County Council (PEIR response)	NCC have concerns regarding high levels of displacement and state that the reference to 25% immediate displacement and 75% long term displacement is concerning.	The assessment is based on a worst-case scenario approach. Despite this there is still a positive net change in regard to employment as 1,204 net direct local person years are expected to be added during construction.
Norwell and Norwell Woodhouse Parish Council (PEIR response)	The Council are of the view that in terms of explaining financial benefits in the ES, then it should be made clear that all financial benefits mentioned are for landowners, not farmers.	Financial benefits will accrue to both landowners and farmers across the project. There is a nuanced relationship between landowners and farmers that the assessment reflects and the project responds to in terms of benefits and opportunities. Some landowners within the OL are farmers, others rely on farming tenants to pay their rent. Furthermore, there will be direct farming benefits from sheep grazing opportunities. Overall economic benefit e.g. GVA is not split on a personal basis but measures total economic output generated from the Study Area.
Norwell and Norwell Woodhouse Parish Council	It may not be reasonable to expect the ES to complete a comprehensive tax liability projection for the landowners in the scheme. It is possible that the Applicant might take the view that that is a private matter and not the Applicant's problem. However, there does appear to be an argument that a more general assessment is required as part of the socioeconomic impact assessment.	It is clear that the project will generate substantial tax revenue for local authorities. However, it is not a mandatory requirement as part of established SEIA methodologies and any attempts will be extremely circumstantial – therefore it is not considered further.

Responder	Comments	How Comments Have Been Resolved
Norwell and Norwell Woodhouse Parish Council (PEIR response)	Firstly, these sheep farmers are presumably already employed as such (or self-employed). The new jobs will either be new entrants (competitors) or extra staff taken on by the existing sheep farmers.	The sheep grazing methodology is explained in detail in the Assessment and is robust.
Norwell and Norwell Woodhouse Parish Council (PEIR response)	The effects on short term lets, part informed by a basic graphic from AirDNA, is summarised as being disregarded because there are not many of these properties, compared to Southwell and Newark. So, in other words, they can be forgotten about. How consistent this is with the Applicant's promise of a “detailed assessment” is not clear.	An assessment of effects arising from temporary worker accommodation is presented in Section 13.8.6.

13.3 LEGISLATIVE AND POLICY CONTEXT

13.3.1 Legislation

13 Regulation 5(2)(a) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017[2] (the EIA Regulation) requires that the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the likely significant direct and indirect effects of the Developments on population and human health.

13.3.2 Planning Policy Context

14 The Development would be located in the Newark and Sherwood district, Nottinghamshire, East Midlands.

15 As such, the Development only falls within the Local Planning Authority (LPA) of Newark and Sherwood District Council.

13.3.2.1 National Policy Statements

16 There are currently six energy National Policy Statements (NPSs).

17 Table 13.2 sets out a summary of the policies within these NPSs, relevant to socioeconomics, tourism and recreation.

18 Of the six NPS only two are relevant to the Development: Overarching National Policy Statement for Energy (EN-1) and National Policy Statement for Renewable Energy Infrastructure (EN-3). Whilst National Policy Statement for Electricity Networks Infrastructure (EN-5) was also potentially relevant and was reviewed, there were no relevant provisions relating to the scope of the assessment.

Table 13.2: Summary of Relevant NPS EN-1[3] and EN-3[4] Requirements

Summary of NPS requirement	How and where considered in the ES
EN-1	
The EIA Regulations require an assessment of the likely significant effects of the proposed Project on the environment, covering the direct effects and any indirect, secondary,	This assessment considers the social and economic effects of the Development at section 13.8. These effects are considered for the construction, operation, and decommissioning

[2] Department for Levelling Up, Housing & Communities (2023). Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Available at: https://www.gov.uk/government/consultations/environmental-outcomes-reports-a-new-approach-to-environmental-assessment/post-implementation-review-infrastructure-planning-environmental-impact-assessment-regulations-2017 [Accessed on 09/06/2025]
[3] Department for Energy Security & Net Zero (2023). Overarching National Policy Statement for Energy (EN-1). Available at: https://assets.publishing.service.gov.uk/media/65bbfbdc709fe1000f637052/overarching-nps-for-energy-en1.pdf [Accessed on 09/06/2025].
[4] Department for Energy Security & Net Zero (2023). National Policy Statement for Renewable Energy Infrastructure (EN-3). Available at: https://assets.publishing.service.gov.uk/media/65a7889996a5ec000d731aba/nps-renewable-energy-infrastructure-en3.pdf [Accessed on 31/03/2025]

Summary of NPS requirement	How and where considered in the ES
cumulative, transboundary, short, medium, and long-term, permanent and temporary, positive and negative effects at all stages of the Project, and also of the measures envisaged for avoiding or mitigating significant adverse effects (para 4.3.3)	phases of the Development. Mitigation measures are proposed in accordance with the mitigation hierarchy at section 13.6.2.
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 (para 5.13.4).	As part of the baseline assessment, TA A13.1 – Socio-economic Baseline Report [EN010162/APP/6.4.13.1], the local socioeconomic profile of the Study Area has been considered and compared to regional and national indicators. This assessment also reviews the socioeconomic impacts of the Development at section 13.8. Local impacts are considered contained within the Study Area and regional impacts are considered indirect impacts that are 'multiplied', 'leaked' or 'displaced'. These assessments account for both types.
Set out information on the likely significant environmental, social, and economic effects of the development, and show how any likely significant negative effects would be avoided, reduced, mitigated or compensated for, following the mitigation hierarchy (para 4.3.4).	This assessment considers the Development's social and economic effects at section 13.8 and discusses the mitigation measures proposed (in accordance with the mitigation hierarchy) at section 13.6.2.
The ES should cover the environmental, social and economic effects arising from pre-construction, construction, operation and decommissioning of the project (para 4.3.5).	This assessment considers the social and economic effects of the development at section 13.8. These effects are considered for the construction, operation, and decommissioning phases of the Development.
Where some details are still to be finalised, the ES should, to the best of the applicant's knowledge, assess the likely worst-case environmental, social and economic effects of the Development to ensure that the impacts of the project as it may be constructed have been properly assessed (para 4.3.12).	This assessment is based on worst-case scenarios as described in the Maximum Design Scenario (see section 13.6.1) which is the realistic set of Development parameters having the potential to result in the greatest effect on an identified receptor or receptor group. This scenario has been selected from the Development Description and Illustrative Design provided in ES Chapter 5: Development Description

Summary of NPS requirement	How and where considered in the ES
	[EN010162/APP/6.2.5]. Effects of greater adverse significance or lower beneficial significance are not predicted to arise should any other development scenario, based on details within the design parameters (e.g., different infrastructure layouts), to that assessed here be taken forward in the final design.
The applicant is strongly encouraged to engage with relevant local authorities during early stages of Project development so that the applicant can gain a better understanding of local or regional issues and opportunities (para 5.13.3)	Consultation and engagement carried out as part of this assessment is discussed at section 13.2. The Applicant has undertaken the necessary consultation exercises in accordance with best practice and are content that local and regional issues and opportunities are well understood and reflected in the assessment
Assessment should consider 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 • 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 • cumulative effects (para 5.13.4).	TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] provides information on the sustainability of the jobs created, including where they will help to develop the skills needed for the UK's transition to Net Zero at the local and regional level as well as nationally. It discusses in detail the Applicant's provision of programmes to increase educational skills engagement such as through the creation of the EG Academy, as well as local supplier engagement initiatives to increase local supply chains. TA A13.1, Socioeconomic Baseline Report [EN010162/APP/6.4.13.1] considers the existing socio-economic baseline of the Study Area and allows this assessment to review the effect of any changes to the local population dynamics. Cumulative developments have been assessed in section 13.9 of this chapter.
Describe the existing socio-economic conditions in the areas surrounding the Development and should also refer to how the development's socio-economic impacts correlate with local planning policies (para 5.13.5).	The assessment has considered the socioeconomic impacts within the context of the strategic priorities set out by local and national planning policies. Local planning policy considerations are set out in section 13.3.2.4 of this assessment.
Socio-economic impacts may be linked to other impacts, for example visual impacts	This chapter also considers the conclusions of other technical chapters such as landscape and visual impact and noise in relation to the

Summary of NPS requirement	How and where considered in the ES
considered in Section 5.10 but may also have an impact on tourism and local businesses. Applicants are encouraged, where possible, to demonstrate that local suppliers have been considered in any supply chain. (para 5.13.6)	assessment of tourism impacts at 13.8.5. The supply chain and use of local suppliers is discussed in TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2].
Applicants should consider developing accommodation strategies where appropriate, especially during construction and decommissioning phases, which would include the need to provide temporary accommodation for construction workers if required (para 5.13.7)	The need for temporary workers accommodation during the construction and decommissioning phases has been assessed in section 13.8.6. of this chapter
EN-3	
Applicants should consider where there may be socio-economic benefits in retaining site infrastructure after the operational life, such as retaining pathways through the site or a site substation (para 2.10.69)	As part of a worst-case scenario approach, no new routes through the Order Limits will be permanent as it is each landowner's right to remove them if they wish. PRoW diversions during the operation phase will be permanent, though the Outline Decommissioning Restoration Plan (DRP) [EN010162/APP/6.4.5.6] sets out that a review of PRoW routes within the Order Limits will be carried out in the final DRP and any agreed re-routing will be subject to applications to NCC through the normal (non-DCO) process.

13.3.2.2 The National Planning Policy Framework (NPPF)

19 The NPPF[5] (adopted December 2024), sets out the Government's planning policies for England.

20 Table 13.3a sets out a summary of the NPPF policies relevant to this chapter.

[5] Ministry of Housing, Communities & Local Government (2025). National Planning Policy Framework Available at https://www.gov.uk/government/publications/national-planning-policy-framework--2 [Accessed on 09/06/2025]

Table 13.3a: Summary of Relevant NPPF Policies

Policy	Key provisions	How and where considered in the ES
Section 2 (Achieving sustainable development)	States that in guiding developments towards sustainable development, local circumstances should be considered, to reflect the character, needs and opportunities of each area.	A desktop baseline assessment (TA A13.1 - Socioeconomic Baseline Report [EN010162/APP/6.4.13.1] has been carried out to understand the socio-economic profile of the Study Area. This ensures that the socio-economic impact of the Development can be considered against the local needs and opportunities of the Study Area.
Section 6 (Building a strong, competitive economy)	Planning policies should support the sustainable growth and diversification of rural businesses. Emphasis is placed on converting existing buildings and creating well-designed new structures. Policies should facilitate agricultural diversification, as a means to enhance rural economies. Development should respect the countryside's character, address infrastructure needs, and improve accessibility. Encouraging the use of previously developed land and sites near existing settlements is crucial for sustainability.	The Development represents agricultural diversification for the farm businesses within the Order Limits, all of whom have agreed to participate voluntarily.

13.3.2.3 National Planning Policy Guidance (NPPG)[6]

21 Table 13.3b sets out a summary of the guidance in NPPG relevant to this chapter.

[6] Ministry of Housing, Communities and Local Government, Ministry of Housing, Communities & Local Government (2018 to 2021) and Department for Levelling Up, Housing and Communities (2024). Planning Practice Guidance - Natural Environment. Available at: https://www.gov.uk/guidance/natural-environment [Accessed on 09/06/2025].

Table 13.3b: Summary of Relevant NPPG Policies

Document	Key provisions	How and where considered in the ES
Natural Environment (para 005)	Green infrastructure can improve the wellbeing of a neighbourhood with opportunities for recreation, exercise, social interaction, experiencing and caring for nature, community food-growing and gardening, all of which can bring mental and physical health benefits.	The Applicant is proposing new permissive routes through the Order Limits to encourage greater use among residents/visitors. Also proposed are information boards (e.g. on wildlife and solar energy). Furthermore, the proposal includes the provision of a community orchard. This is discussed within Table 13.14 and further detail can be read in ES Chapter 18, Recreation [EN010162/APP/6.2.18].

13.3.2.4 Local Planning Policy

22 The relevant local planning policies applicable to socioeconomics based on the extent of the Study Area for this assessment are summarised in Table 13.4.

23 Whilst there are many neighbourhood plans within Newark and Sherwood District Council, none fall within the Order Limits.

Table 13.4: Summary of Relevant Local Planning Policy

Policy	Key provisions	How and where considered in the ES
Newark and Sherwood Local Development Framework (2019)[7]		
Core Policy 6 - Shaping our Employment Profile	To promote the improvement and maintenance of employment opportunities. To increase the skill level of local residents by working with learning and training partners, as well as educational institutions.	The Applicant is planning to provide a number of different employment and training initiatives to local residents, targeting those most in need. Details of initiatives are shared within TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2]. Where this has an impact on Education/Skills receptors it is considered at section 13.8.

[7] Newark and Sherwood Council (2019). Newark and Sherwood Local Development Framework (2019) https://www.newark-sherwooddc.gov.uk/media/nsdc-redesign/documents-and-images/your-council/planning-policy/local-development-framework/amended-core-strategy-dpd/amended-core-strategy-DPD.pdf [Accessed on 09/06/2025].

Policy	Key provisions	How and where considered in the ES
Core Policy 7 - Tourism Development	To promote sustainable tourism that promotes economic development. Ensuring developments complement tourism assets and that cumulative impacts are mitigated.	As part of the Development, the Applicant is planning to enhance landscaping areas within the Order Limits, as well as providing 21 permissive footpaths and 6 permissive bridleways, improving access into green / open spaces. Where this has an impact on tourism receptors, it is considered at section 13.8. Cumulative impacts have been assessed in Section 13.9.

13.3.2.5 Economic Strategy Review

24 The relevant economic strategies applicable to this assessment, based on the extent of the Study Area are summarised in Table 13.5.

Table 13.5: Summary of Local Economic Strategies

Policy	Key provisions	How and where considered in the ES
Newark and Sherwood - Economic Growth Strategy 2021-2026[8]		
Priority – Infrastructure	Seeks to evaluate the economic impact of renewable "energy options for development and infrastructure projects"	The economic impact of the Development is reviewed in detail in section 13.8, with assessments of impact with regards to economic output/ GVA, local tax income, employment and agricultural output.
Newark and Sherwood District Council Community Plan – 2023 - 2027[9]		
Objective 3 – Raise People's Skills Levels and Create Employment Opportunities for	This objective seeks to "Maximise local employment opportunities during, and arising from, major infrastructure… schemes,"	The Applicant is planning to provide a number of different employment and training initiatives to local residents, targeting those

[8] Newark and Sherwood District Council (2021). Economic Growth Strategy 2021-2026. Available at: https://www.newark-sherwooddc.gov.uk/media/newark-and-sherwood/images-and-files/economic-development/Newark-&-Sherwood-Economic-Growth-Strategy-2021-2026.pdf [Accessed on 31/03/2025].
[9] Newark and Sherwood District Council Community Plan – 2023 – 2027 (2022). Available at: https://www.newark-sherwooddc.gov.uk/media/nsdc-redesign/documents-and-images/your-council/your-council/about-us/community-plan/12.12.23-Community-Plan-2023v16-Appendix-1.pdf [Accessed on 31/03/2025].

Policy	Key provisions	How and where considered in the ES
them to fulfil their potential	and "Expand the number of apprenticeship and work experience opportunities across the Council and district, including major projects, working with partner organisations to deliver this."	most in need. Details of initiatives are shared within TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] . Where this has an impact on Education/Skills receptors it is considered at section 13.8.
Objective 5 – Protect and Enhance the District's Natural Environment and Green Spaces	The objective specifically mentions "Deliver on the Council's Tree Strategy."	The Applicant is planting 64,500 native trees in conjunction with the Sherwood Forest Trust, employing a local charity and giving them the benefit of the planting contract, whilst ensuring use of the native Sherwood Forest Tree species.
Nottinghamshire County Council - Employment and Health Strategy – 2019 to 2030[10]		
County Council Commitment	County Council will support actions to: • close the gap on average earnings - increasing the earnings (gender equality), qualification levels and progression rates for residents to ensure that they have access to opportunities; • close the unemployment gap - removing barriers which make it difficult for people to take up employment and training; • close the education and skills gap - making sure	Provision of both employment opportunities and education/skills directly through the Development is discussed in section 13.8 'Assessment of Effects. Within this section an estimate of job creation during each phase of the development is undertaken. TA A13.1 - Socioeconomic Baseline Report [EN010162/APP/6.4.13.1] also outlines the socio-

[10] Nottinghamshire County Council - Employment and Health Strategy – 2019 to 2030 (2020). Available at: https://www.nottinghamshire.gov.uk/media/2887426/employment-and-health-strategy-2020-30.pdf [Accessed on 31/03/2025].

Policy	Key provisions	How and where considered in the ES
	our young people have the skills, knowledge, experience and qualifications to take up quality training and jobs; • close the aspiration and ambition gap - so local people own their economic future and have high aspirations and confidence, with support to enable them to make good choices.	economic conditions with regards to employment and education. TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] identifies gaps in the skills required to deliver the Development and outlines and directs users to existing support mechanisms created by the Applicant for employees in gaining the relevant qualifications to fill these gaps.
D2N2[11] Local Economic Partnership - Energy Strategy – 2019 to 2030[12]		
Conclusions and Recommendations	With effective coordination of a pipeline of projects, it will be possible to grow the low carbon energy and renewables sector; thereby creating sustainable jobs and maintaining and attracting investment in the D2N2 region. To achieve this, there will need to be significant investment in skills and training at all levels.	Skills and training opportunities to be provided and those that are already being provided as a result of the Development are discussed in TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] . Jobs created will be in the renewable energy sector, assisting in the UK's transition to net zero. As part of the EG Academy, the Applicant is offering internships and create funded partnerships to expand STEM education and career opportunities. The EG Academy is currently

[11] The Local Enterprise Partnership for Derby, Derbyshire, Nottingham and Nottinghamshire
[12] D2N2 Local Economic Partnership - Energy Strategy – 2019 to 2030 (2019). Available at: https://d2n2lep.org/wp-content/uploads/2022/12/D2N2_Energy_Strategy-1.pdf [Accessed on 31/03/2025].

Policy	Key provisions	How and where considered in the ES
		providing various renewables focused CPD accredited courses for local residents. Skills/ education provision is also assessed in detail within section 13.8.

13.4 METHODOLOGY

13.4.1 Relevant guidance

25 There is no specific guidance available which establishes a methodology for undertaking an Environmental Impact Assessment (EIA) of the socio-economic effects of a Development. Accordingly, the approach adopted for this assessment is based on professional experience and best practice, and in consideration of the policy requirements/tests set out within the NPPF, NPSs, and local planning policy.

13.4.2 Scope of the assessment

26 The scope of this ES has been developed in consultation with relevant statutory and non-statutory consultees as detailed in section 13.2. The socioeconomic assessment identifies the potential impact of the Development on the socioeconomic and tourism profile of the area. This assessment is also informed by relevant conclusions of other technical topics as stated within Section 13.1, Introduction.

27 Taking into account the scoping and consultation process, Table 13.6 summarises the issues considered as part of this assessment.

Table 13.6: Issues Considered Within this Assessment

Activity	Potential effects scoped into the assessment
Construction and Decommissioning phases	
Creation of Jobs	The Development will create direct and indirect jobs, which will present opportunities to increase local skills by providing training and skills to workers as part of an Outline Skills, Supply Chain and Employment Plan, which includes the EG Academy.
Spending in local economy	Greater construction worker spending in local economy and the direct investment in the local supply chain could have an impact on economic output. Consideration is also given to the potential for reduced tourist spending in the local economy.

Activity	Potential effects scoped into the assessment
Implementation of Outline Skills, Supply Chain and Employment Plan (TA A13.2) [EN010162/APP/6.4.13.2]	The construction and decommissioning stages provide an opportunity for skilling up the workforce by providing a targeted scheme of access to construction, operation and maintenance and decommissioning training schemes and apprenticeships for disadvantaged adults and young people in the local and regional area who are not in Education, Employment, or Training (NEET).
Temporary road closures/disruption	Temporary road diversions and disruption because of increased traffic during construction could impact commuting times/patterns and have potential economic impacts on local economy.
Construction works	The visual impact of construction equipment and the associated noise and traffic impacts has the potential to impact nearby tourism receptors.
Cessation of agricultural activities	The construction and decommissioning stages will require the agricultural use of the Order Limits to stop which has the potential to have an impact on agricultural jobs and the economic output.
Impact on accommodation providers	Potential increase in demand for short term let accommodation during the construction phase if a large, non-resident workforce is required which may impact availability for tourists.
Operation and maintenance	
Changes in employment	The maintenance of the Development will require and support the creation of a dedicated workforce on a regular basis. Indirect employment may also arise once the Development is operational. Existing, farm-related employment may be affected.
Provision of education/information points	There are opportunities for schools and community group programmes where educational visits are organised. The ongoing educational opportunities are explored in the Outline Skills, Supply Chain and Employment Plan.
Implementation of Outline Skills, Supply Chain and Employment Plan	Commitment to continue work with local education and training providers to support opportunities to provide local adult learning linked to operation and maintenance job opportunities relevant to disadvantaged adults facing skills barriers to employment opportunities and young people in the local and regional area who are NEET.
Spending in local economy	The Gross Value Added (GVA) associated with the direct, indirect, and induced jobs over the lifetime of the Development.
Change of use of agricultural land	Loss of Economic output due to the displacement of agricultural land uses for the duration of the Development.

Activity	Potential effects scoped into the assessment
Changes to PRoW network	There is the potential for recreational tourism to be affected as visitors make use of the altered PRoW / new permissive routes created as part of the Development.
Erection of solar panels in landscape	There is some potential that the Development could impact the visual amenity of some tourist destinations and therefore negatively impact the visitor economy.

13.4.3 Defining the Study Area

13.4.3.1 Site Location

28 The Order Limits are shown on Figure 13.1 and occupy approximately 1,765 hectares (ha) of land.

29 In September 2016, the Office for National Statistics (ONS) published its latest Travel to Work Area (TTWA) boundaries, derived from Census 2011 data. Travel to Work Areas are a useful starting point for understanding the spatial extents of labour markets. Each TTWA has a high degree of self-containment; meaning that most people who work within the TTWA also live in that same area.

30 The Development Order Limits fall partially within both the Mansfield and Lincoln TTWAs.

13.4.4 Study Area Summary

31 The EIA Scoping Request initially proposed to utilise a Study Area consisting solely of Newark and Sherwood Local Authority. However, upon further analysis, it is clear that a significant number of residents from Mansfield Local Authority commute in and out of the area for work. Mansfield has the highest commuting inflows into Newark and Sherwood, second only to Newark and Sherwood itself. Furthermore, Newark and Sherwood is a sparsely populated local authority, while Mansfield, with its higher population density, has a greater proportion of working-age population available for work opportunities, as evidenced by its commuting inflow numbers. Therefore, when considering the employment impacts of the Development, the Study Area has been expanded to also include Mansfield. This careful selection of Newark and Sherwood and Mansfield as the primary Socio-Economic Study Area ensures a balanced assessment, avoiding the overstatement of beneficial effects and the understatement of adverse effects. Overall, the Socio-Economic Study Area has expanded to include Mansfield as most of the beneficial impacts particularly employment, will occur in both Newark and Sherwood, and Mansfield, whilst the adverse impacts such as visitor economy disruptions or long term reversable arable agricultural output cessation will solely occur in Newark and Sherwood.

32 This methodology is further explained in the TA A13.1 - Socioeconomic Baseline Report [EN010162/APP/6.4.13.1] which was applied at PEIR stage. There were no consultee responses suggesting an alternative approach should be taken.

33 For tourism, at construction and operation stage, tourist nodes within the whole Newark and Sherwood District have been considered, in line with the tourism Study Area used within TA A13.1, Socioeconomic Baseline Report [EN010162/APP/6.4.13.1]). Furthermore, a 5 km tourism buffer has been applied.

34 The Study Area for the ES Chapter 7: Landscape and Visual Impact [EN010162/APP/6.2.7] is 2km. Beyond 2 km any views of the Development will be glimpses and/or distant and unlikely to cause visual disturbance, therefore, unlikely to have a negative visual effect on tourism receptors. The same is likely to be true whilst the Development is under construction.

35 As noise impacts are very sensitive to the Development the Noise and Vibration Chapter [EN010162/APP/6.2.12] uses a maximum 500 m Study Area.

36 The Study Area within the Traffic and Transport Chapter is not based on a distance buffer but instead based on the identified "surrounding road network to be used by construction related vehicles travelling to and from the Development" [EN010162/APP/6.2.14]. This ensures that potential transport impacts, as a result of additional construction related traffic are fully considered.

13.4.5 Worst-Case Design Scenarios

37 The assessment reported in this Chapter assumes realistic worst-case scenarios from the range allowed by ES Chapter 5: Development Description [EN010162/APP/6.2.5] as follows:

- It is assumed that the activities specified for Work No.s 1 (Solar PV), 4 (Intermediate Substations), 5a (BESS), 5b (400 kV Compound), 6 (National Grid Staythorpe Substation) and 7 (Consented Staythorpe BESS and Connection) fully occupy, insofar as they are able to given the constraints set out in Table 5.1 of Chapter 5, the area covered by those Work No.s;
- It is assumed that cable routes (work no. 2) use the maximum expected 30 m-wide corridors including a 12 m-wide trench for construction activity and that this area could be anywhere within the Work no. 2 area (which is generally 60 m wide);
- It is assumed that the activities specified for Work No. 8 (Access) include road widening and vegetation clearance only insofar as required to meet the traffic management aims, such as passing places involving widening the road by c. 3 m rather than for the full width of the adopted highway; and
- It is assumed that all parameters take the maximum of the range specified in the tables in section 5.4.3 of ES Chapter 5: Development Description EN010162/APP/6.2.5].

38 In order to deliver the 800 MW (AC) as per the grid connection contract with National Grid Electricity Transmission (NGET), the Development needs to provide an installed DC capacity of approximately 1,120 MW, based on a 1.4 ratio for overplanting[6].

39 DESNZ (2023), National Policy Statement for Renewable Energy, EN-3, states (page 95), that, "*Overplanting refers to the situation in which the installed generating capacity or nameplate capacity of the facility is larger than the generator's grid connection. This allows developers to take account of degradation in panel array efficiency over time, thereby enabling the grid connection to be maximised across the lifetime of the site. Such reasonable overplanting should be considered acceptable in a planning context so long as it can be justified and the electricity export does not exceed the relevant NSIP installed capacity threshold throughout the operational lifetime of the site and the proposed development and its impacts are assessed through the planning process on the basis of its full extent, including any overplanting*". Therefore the 800 MW (AC) is the worst-case design scenario as it is the smallest expected output, out of the total installed DC capacity of 1,120 MW.

40 Further parameters in relation to a worst-case assessment are set out in section 13.6.1 and are discussed as appropriate within the section 13.8 assessment of effects.

13.4.6 Methodology for baseline studies

13.4.6.1 Desk studies

41 A desktop socioeconomic baseline assessment has been carried out to assess the social and economic characteristics of the area in the context of the Development. This is available within TA A13.1, Socioeconomic Baseline Report [EN010162/APP/6.4.13.1] and its key conclusions pertaining to this assessment are set out in section 13.5.

13.4.6.2 Tourism Survey of PRoW

42 Public Rights of Way surveys were conducted with an aim to assess potential impacts on tourist users. The survey aimed to understand the usage patterns of PRoW that go through the Order Limits. The purpose was to understand to what extent, if any, the tourism economy may be impacted due to the Development.

43 The 8 locations shown in Figure 13.2 were selected for survey as a representative viewpoints at which significantly adverse visual effects were assessed (ES Chapter 7, Landscape and Visual [EN010162/APP/6.2.7]).

44 The surveys were conducted across four dates (9th April, 12th April, 18th April and 4th May 2025). A variety of day types were chosen, with a preference towards weekends which will show a larger recreational or tourist use. One of the dates was a Bank Holiday (Friday 18th April); one was a weekday (Wednesday 9th April) and two were weekends (Saturday 12th April and 4th May).

45 The results of the surveys are discussed in Section 13.8.5.

13.4.7 Impact Assessment Methodology

13.4.7.1 Overview

46 The significance of an effect is determined based on the sensitivity of a receptor and the magnitude of an impact. This section describes the criteria

applied in this chapter to characterise the sensitivity of receptors and magnitude of potential impacts.

47 In the absence of more directly applicable guidance, the definitions of magnitude and sensitivity are adapted from those used in the Design Manual for Roads and Bridges (DMRB) methodology (Highways England et al., 2020)[13].

48 The approach to determining the significance of effects is a two-stage process that involves defining the magnitude of the impact and the sensitivity of the receptor.

13.4.7.2 Receptor Sensitivity/Value

49 The criteria for defining sensitivity in this chapter are outlined in Table 13.7.

Table 13.7: Sensitivity Criteria

Sensitivity	Definition
High	Receptor is identified as a policy priority; and Evidence of major socio-economic challenge or underperformance.
Medium	Receptor is important in policy; and Evidence of under-performance or vulnerability.
Low	Receptor is not a policy priority; and Evidence that the receptor is resilient and no particular challenges.
Negligible	Receptor is not a policy priority; and Good overall performance in impact area.

13.4.7.3 Magnitude of impact

50 The criteria for defining magnitude in this chapter are outlined in Table 13.8.

Table 13.8: Impact Magnitude Criteria

Magnitude of impact		Definition
High	Adverse	Severe detrimental impact to key social and/or economic characteristic(s). Where the impact is able to be quantified this would equate to a percentage change of above 20% and where it is not appropriate to quantify this, professional judgement is used to qualitatively determine if there would be an impact of this scale.
	Beneficial	Major enhancement to key social and/or economic characteristic(s). Where the impact is able to be quantified this would equate to a percentage change of above 20% and where it is not appropriate to quantify this, professional judgement is used to qualitatively determine if there would be an impact of this scale.

[13] Highways England. 2020a. Design Manual for Roads and Bridges, LA 104 Environmental Assessment and Monitoring (Revision 1). [online] Available at: https://standardsforhighways.co.uk/dmrb/search/0f6e0b6a-d08e-4673-8691- cab564d4a60a [Accessed 23/05/2025]

Magnitude of impact		Definition
Medium	Adverse	Discernible detrimental impact upon key social and/or economic characteristic(s). Where the impact is able to be quantified this would equate to a percentage change of 11-20% and where it is not appropriate to quantify this, professional judgement is used to qualitatively determine if there would be an impact of this scale.
	Beneficial	Discernible improvement to key social and/or economic characteristic(s). Where the impact is able to be quantified this would equate to a percentage change of 11-20% and where it is not appropriate to quantify this, professional judgement is used to qualitatively determine if there would be an impact of this scale.
Low	Adverse	Minor detrimental alteration to, one or more key social and/or economic baseline characteristic(s). Where the impact is able to be quantified this would equate to a percentage change of 6-10% and where it is not appropriate to quantify this, professional judgement is used to qualitatively determine if there would be an impact of this scale.
	Beneficial	Minor benefit to one or more key social and/or economic baseline characteristic(s), or a reduced risk of negative impact occurring. Where the impact is able to be quantified this would equate to a percentage change of 6-10% and where it is not appropriate to quantify this, professional judgement is used to qualitatively determine if there would be an impact of this scale.
Negligible	Adverse	Very minor detrimental alteration to one or more social and/or economic baseline characteristic(s). Where the impact is able to be quantified this would equate to a percentage change of under 5% and where it is not appropriate to quantify this, professional judgement is used to qualitatively determine if there would be an impact of this scale.
	Beneficial	Very minor benefit to one or more social and/or economic baseline characteristic(s). Where the impact is able to be quantified this would equate to a percentage change of under 5% and where it is not appropriate to quantify this, professional judgement is used to qualitatively determine if there would be an impact of this scale.
No change		No loss or alteration of characteristics, features or elements; no observable impact in either direction and where it is not appropriate to quantify this, professional judgement is used to qualitatively determine if there would be an impact of this scale.

13.4.8 Duration of impacts

51 Time periods within the socioeconomic assessment are defined as follows and have informed the professional judgement in determining magnitude:

Table 13.9: Magnitude of Impact Duration Definitions

Duration of impact	Definition
Short term	Period of months, up to one year.
Medium term	Period of more than one year, up to five years.
Long term	Period of greater than five years. This includes operational lifetime effects, which are considered long-term reversible

52 Effects that have a longer duration will typically have a greater magnitude of impact.

13.4.8.1 Significance of Effects

53 The significance of effects upon socioeconomic receptors has been determined by taking into account the sensitivity of the receptor, the magnitude of the impact (which includes the duration) and also guided by professional judgement. The method employed for this assessment is presented in Table 13.10. Where a range of significance levels is presented, the final assessment for the effect has been based upon professional judgement.

54 In all cases, the evaluation of receptor sensitivity, impact magnitude (including duration) and significance of effect has been informed by professional judgement and is underpinned by narrative to explain the conclusions reached.

55 For the purpose of this assessment, any effects with a significance level of minor or less are not considered to be significant, whilst any effects with a significance level of moderate or major are considered to be significant in terms of the EIA Regulations.

Table 13.10: Assessment Matrix

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

56 Where the magnitude of impact is ‘Negligible’, no discernible effect would arise.

57 The definitions for significance of socioeconomic effect levels are described as follows:

- **Major:** These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the determination of the DCO application. These effects are generally, but not exclusively, associated with sites or features of international, national or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category. Effects upon human receptors may also be attributed this level of significance;
- **Moderate:** These beneficial or adverse effects have the potential to be important and may influence the key decision-making process. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse or beneficial effect on a particular resource or receptor;
- **Minor:** These beneficial or adverse effects are generally, but not exclusively, raised as local factors. They are unlikely to be critical in the decision-making process but are important in enhancing the subsequent design of the Development; and
- **Negligible:** No effects or those that are beneath typical levels of perception, within normal bounds of variation or within the margin of forecasting error.

13.5 BASELINE ENVIRONMENT

13.5.1 Desk Study

58 Information on socioeconomics and tourism within the Study Area was collected through a detailed review of existing studies and datasets. These are summarised in Table 13.11.

Table 13.11: Summary of Desk Study Sources Used

Indicator	Elements	Source
Population and Deprivation	Age structure, social class, qualifications, earnings, deprivation, motor car availability and internet access, electric vehicle (EV) car infrastructure access, renewable energy access, population projections	ONS, Census 2011 and 2021[14], English Indices of Deprivation[15], Department for Transport[16], Department for Business Energy and Industrial Strategy, The House of Commons Library[17]

[14] Office for National Statistics. (2021). Census 2021 and 2011 data. Available at: https://www.ons.gov.uk/census [Accessed 18 Jun. 2025]
[15] Ministry of Housing, Communities and Local Government. (2019). *English indices of deprivation 2019*. Available at: https://www.gov.uk/government/collections/english-indices-of-deprivation [Accessed 18 Jun. 2025]
[16] Department for Transport. (2025). *Department for Transport*. Available at: https://www.gov.uk/government/organisations/department-for-transport [Accessed 18 Jun. 2025]
[17] House of Commons Library. (2024). *Constituency data: broadband coverage and speeds*. Available at: https://commonslibrary.parliament.uk/constituency-data-broadband-coverage-and-speeds/ [Accessed 18 Jun. 2025]

Indicator	Elements	Source
Economy	Economic activity, GVA, business activity	ONS 2011 and 2023, UK Business Count[18], Census, IRENA Renewable Cost Database
Employment and Skills	Unemployment, commuting patterns, occupation, industry, earnings, qualifications	ONS (2022,2023), Census 2011 and 2021, BRES[19], Nomis[20] (Labour Market Profiles, UK Business Count, Annual Population Survey, Annual Survey of Hours and Earnings)
Tourism	Public rights of way, land use, tourist economy, accommodation	Census of Agriculture[21], The Newark and Sherwood District Council Visitor Economy Strategy[22], Satellite Imagery, England Occupancy Survey[23], Google Maps.

13.5.2 Baseline Summary Relevant to this Chapter

13.5.2.1 Population and Demographics

- As of 2022 Newark and Sherwood has a population of 125,089 people which is 2.5% of the East Midlands;
- The population of Newark and Sherwood is estimated to have increased by 8.1% since 2012. This is slightly higher than the growth observed regionally (8.0%) and nationally (6.7%) during the same time period;
- Newark and Sherwood is in the bottom of the 45-50 median age band; and
- Newark and Sherwood has a slightly smaller working age population, (60.2%), when compared to the wider region (62.2%) and nationally (62.9%).

[18] Office for National Statistics. (2023). *UK business; activity, size and location: 2023*. Available at: https://www.ons.gov.uk/businessindustryandtrade/business/activitysizeandlocation/bulletins/ukbusinessactivitysizeandlocation/2023 [Accessed 18 Jun. 2025]
[19] ONS (2024). Business Register and Employment Survey (BRES): provisional results 2023, revised results 2022. Available at: https://www.gov.uk/government/statistics/business-register-and-employment-survey-bres-provisional-results-2023-revised-results-2022 [Accessed 24 Jun 2025].
[20] Nomis. (2025). *Official Census and Labour Market Statistics*. Available at: https://www.nomisweb.co.uk/ [Accessed 18 Jun. 2025]
[21] Department for Environment, Food & Rural Affairs. (2023). *Agricultural land use in the United Kingdom at 1 June 2023*. Available at: https://www.gov.uk/government/statistics/agricultural-land-use-in-the-united-kingdom/agricultural-land-use-in-united-kingdom-at-1-june-2023 [Accessed 18 Jun. 2025]
[22] Newark and Sherwood District Council. (2020). *Visitor Economy Strategy 2020-23*
[23] VisitBritain. (2025). *England Hotel Occupancy: latest*. Available at: https://www.visitbritain.org/research-insights/england-hotel-occupancy-latest [Accessed 18 Jun. 2025]

13.5.2.2 Employment

- The proportion of people employed in full time employment, out of the total employees is higher in Newark and Sherwood (66%) compared to Mansfield (65.1%) – however both are lower compared to the East Midlands (68%) and England (69%);
- Interestingly, Newark and Sherwood, and Mansfield typically has a larger share of employment within the construction sector, than observed regionally (4.3%) and nationally (4.7%). Out of the two local authorities, Newark and Sherwood had a higher proportion (6%) of those employed in construction compared to Mansfield (5.2%);
- The proportion of individuals in Newark and Sherwood employed in Manufacturing (12%) was also higher than the national average (7.4%), but lower than the regional average of (12.3%);
- Agriculture has the large share of employment in Newark and Sherwood (1.4%), 0.9% higher than the national average. On the other hand, only 0.1% of employment in Mansfield was within the same sector;
- Both Newark and Sherwood, and Mansfield have a higher rate of unemployment than was observed both regionally and nationally throughout the ten-year period; and
- The average construction worker wage in the Study Area is £34,528.

13.5.2.3 GVA per Employee

- The average GVA per construction employee in Newark and Sherwood is equated to approximately £86,667[19]; and
- The East Midlands states there is a GVA per Agriculture, forestry and fishing; mining and quarrying employee of £128,667. Although this covers other industries, this is the smallest available industry sizing therefore GVA per regional agricultural employee is £128,667[19].

13.5.2.4 Education

- Newark and Sherwood's population has a lower share of the 16–64-year-old population educated to RQF1, RQF2, RQF3 and RFQ4+ than was observed nationally;
- The Study Area has a higher share of individuals RQF qualified across all levels, aside from RQF2+, compared to the East Midlands; and
- The areas with the lowest proportion of individuals who have a Level 3 qualification or higher (education deprivation) are typically within/adjacent to Newark-upon-Trent, Broughton and Mansfield (along the western border of Newark and Sherwood).

13.5.2.5 Travel and Commuting

- The majority of residents in the local authority areas drive a van or car to their place of work, with more than 50% of workers in both Newark and Sherwood and Mansfield using this mode of transport; and
- There was a total of 1,504 plug-in vehicles registered in Newark and Sherwood, which is a growing trend implying potential increased electricity demand if trends continue.

13.5.2.6 Access to Renewable Electricity

- In 2022, Newark and Sherwood produced a total of approximately 184,792 MWh of renewable energy which equates to circa 0.4% of England's total;
- In terms of installed capacity, the DBEIS data indicates that as of 2021, the Study Area has approximately 72 MW of installed solar photo voltaic capacity;
- Renewable electricity within Newark and Sherwood can cover circa 38% of its domestic and non-domestic electricity usage; and
- The cost of electricity has a steady rise since 2022, with a drop from 2023 June to 2024 October and a gradual rise to Q1 2025.

13.5.2.7 Deprivation

- Of Newark and Sherwood's 66 LSOA, there are three LSOAs classed as being in the top 10% most deprived (decile 1) areas in England;
- Newark and Sherwood is more affluent than the area beyond the western and northern boundary and similar in terms of deprivation to those on the eastern and southern boundary;
- The majority of LSOAs in the Study Area fall within the top 50% least deprived in England; and
- The educational deprivation is highest towards the town of Newark-On-Trent and around the northeastern perimeter of the district.

13.5.2.8 Tourism

- There were 4.46 million annual visitors to Newark and Sherwood in 2019 (Visitor Economy Strategy). These visitors contributed a total of £298.32 million to the visitor economy;
- The majority (54%) of visitors were from the East Midlands, followed by Yorkshire and Humberside and the West Midlands;
- The main reasons for visiting the district were attending arts events/festivals (21%); visiting attractions (17%); and general sightseeing (15%); and
- There was a total of 558 short-term serviced accommodations bedspaces in Nottinghamshire (excluding hotels and long term rents), with a occupancy rate of 51% as of 2025.

13.5.2.9 PRoW Landscape

- There are 1,960 PRoW paths within Newark and Sherwood District Council and 117 within the Recreation Study Area according to ES Chapter 18, Recreation [EN010162/APP/6.2.18] (circa 6% of the local authority total);
- The Applicant has undertaken a PRoW usage survey on 9th April, 12th April, 18th April and 4th May 2025.
- Out of 186 respondents, the PRoW survey had circa 13% of respondents who were non-Newark and Sherwood residents;
- The PRoW usage survey asked users of the 8 viewpoint at which significant adverse visual effects were assessed along the Development's PRoW network a series of questions; and

- When asked "If there were solar panels within the existing landscape, would it have changed your decision to visit today?" 47% of people said no and 45% of people said yes.

13.5.2.10 Future Baseline

- ONS[24] data estimates that Newark and Sherwood's population will increase to around 139,069 in 2043, from 121,566 in 2018, approximately a 14.4% increase; and
- The over 65 age group is projected to increase by 44.5%, a significant increase.

13.5.3 Key Receptors

59 There are several key receptors being taken forward into the assessment. Firstly, employment is assessed, which includes indicators such as unemployment levels. Education and skills are assessed, which considers elements such as the level of qualifications of workers. Economic output is assessed, which considers spending in the local economy and the gross value added. The assessment of land use considers the effects on agricultural output. The tourism assessment looks at effects on the visitor economy and, finally, the assessment of commuting patterns assesses any effects of disruption potentially caused by the Development.

60 Table 13.12 identifies the receptors taken forward into the assessment.

Table 13.12: Key Receptors Taken Forward to Assessment

Receptor	Description	Sensitivity/value
Employment	Unemployment levels, occupations, industry, and earnings, labour supply	**Medium** – In terms of the vulnerability of the receptor; unemployment levels in Newark and Sherwood and Mansfield have typically sat above regional and national averages over the last ten-year period. The latest Annual Population Survey data indicates that the unemployment rate in the Study Area in 2021 was approximately 2% higher than the national average and more than 2% higher than the East Midlands average. Employment generation is a policy priority across all local authorities in the Study Area. The Development impact is predicted to be of regional spatial extent.

[24] Office of National Statistics (2020). Population projections - local authority based by single year of age. Available at: https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=2006 [accessed on 20/05/2024].

Receptor	Description	Sensitivity/value
Economic Output	Economic activity and Gross Value Added	**Medium –** The vulnerability of the receptor is considered low given that the Study Area has a higher average level of economic activity compared to the other adjacent local authorities and regionally. However, whilst the Study Area has a high proportion of economically active individuals, a larger proportion, relative to regional and national averages over the last few years, are unemployed. The economic activity rate was consistent with the national average. The recoverability is also considered high, given the number of businesses that are active in the Study Area. The impact is predicted to be of regional spatial extent.
Education and Skills	Level of qualifications/number of highly skilled workers	**Medium –** Education and skills development form part of several local plan policies across the Study Area. Populations within the Study Area generally haves a high level of qualifications when compared to the regional level, but lower levels than national norms. The Index of Multiple Deprivation data indicates that the Lower Super Output Areas (LSOAs) in the Study Area vary significantly in terms of educational deprivation: 16% of LSOAs in the Study Area fall within the 10% most deprived nationally, 59% of the LSOAs are within the 50% most deprived LSOAs in England. However, 17% of the LSOAs fall within the top 20% least deprived in England. The impact is predicted to be of local spatial extent.

Receptor	Description	Sensitivity/value
Land Use	Agricultural land value and agricultural output	**Medium –** This receptor is not a key socio-economic policy consideration considering the 2024 NPPF allows for rural agricultural diversification. The number of people employed in farm-based agriculture accounted for less than 0.1% of all employment in Study Area. However, 55.8% of the land within the Order Limits is estimated to be Grade 3a best and most versatile land and the GVA associated with agriculturally based labour is higher than the area average. The impact is predicted to be of local spatial extent.
Tourism	Tourist uses, spending in local economy and, specific tourist attractions	**Low** – The visitor economy is an important local socio-economic policy consideration, and the tourism sector is a modest economic contributor. According to the PRoW User surveys tourism use of PRoW networks is low (circa 13.3% - see Section 13.8.5). Research undertaken by Newark and Sherwood Council[25] indicates that visitors most commonly visit the district to attend arts events/festivals, visit attractions and to do 'general sightseeing'. This does not indicate that walking/hiking is one of the main tourism draws for the District and, consequently, it is unlikely that accommodation providers are reliant on this form of recreational tourism for consistent business. The impact is predicted to be of local spatial extent.

[25] Newark and Sherwood District Council. Visitor Economy Strategy 2020-2023. Available at: https://www.newark-sherwooddc.gov.uk/media/newark-and-sherwood/images-and-files/strategies-and-policies/pdfs/Visitor-Economy--Strategy-2020-23---FINAL.pdf [Accessed on 11/10/2024].

Receptor	Description	Sensitivity/value
Temporary Accommodation	Availability of short-term rentals, construction employment, housing composition, housing tenures	**Low -** The vulnerability of the receptor is considered to be low given the large number of workers within the Study Area and surrounding districts who work within the construction sector. There is also a modest supply of short-term rental accommodation within the Study Area to cater for the anticipated number of non-resident workers. Room occupancy data for the region indicates that there are likely to be vacant rooms year-round, but especially during winter months. The impact is predicted to be of local spatial extent.
Commuting Patterns	Motor car availability, travel to work method and time	**Low** – Average public transport links, good access to private car, high level of working from home. The impact is predicted to be of local spatial extent.

61 Where necessary, discussion around receptor sensitivity will be developed further within section 13.8.

13.6 KEY PARAMETERS AND EMBEDDED MEASURES

13.6.1 Key Parameters for Assessment

62 Maximum design scenarios, discussed below, have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. These scenarios have been selected from the 'Overview of the Development' and 'Design Parameters' sections of ES Chapter 5: Development Description [EN010162/APP/ 6.2.5] as well as paragraph 97 which uses a 50% leakage as an employment assessment worst-case scenario approach or paragraph 246 which uses the worst-case scenario when assessing long term reversable arable agricultural losses. Effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within the design limitations (*e.g.*, different infrastructure layout), to that assessed here be taken forward to construction of the Development.

63 When assessing the potential impact on job creation and economic output, the minimum extent of works and number of solar panels is considered (as explained in the 'Worst-case Design Scenarios' section), as this will result in the minimum number of jobs (as measured by person-years) and thus spend in the local economy, and a minimum investment in the local supply chain. As these are beneficial effects, these assumptions, therefore, lead to a worst-case assessment.

64 The larger the area of construction works, the more compounds needed, the longer the construction lasts and the larger the potential for impacts on

tourism receptors because of noise, traffic or visual amenities. Therefore, the maximum site area has been considered when assessing the potential impact on tourism.

65 As this is a beneficial impact, the assessment has considered the lowest solar capacity to ensure the worst-case scenario has been assessed.

66 The assessment of impact on agricultural output is based on the maximum potential loss of agricultural land at each stage of the Development, as a worst-case scenario would be present where the greatest amount of agricultural land is temporarily used for the Development, resulting in a greater loss of output.

67 Finally, when assessing the impact on commuting patterns, the maximum area of the land within the Order Limits has been considered. This is because, the larger the area of development / greater the number of construction compounds, the more opportunity for disruptions to commuting patterns as a result of traffic. Therefore, a worst-case scenario has been assessed.

13.6.2 Proposed Measures

68 For the purposes of the EIA process, the term 'Measures adopted as part of the Development 'is used to include the following types of mitigation measures (adapted from IEMA, 2016[26]):

- Primary (inherent) mitigation - measures included as part of the Development design. IEMA describes these as '*modifications to the location or design of the development made during the pre-application phase that are an inherent part of the project and do not require additional action to be taken'*. This includes modifications arising through the iterative design process. These measures will be secured through the consent itself through the description of the Development and the parameters secured in the DCO. For example, a reduction in footprint or height;
- Secondary (foreseeable) mitigation. IEMA describes these as '*actions that will require further activity in order to achieve the anticipated outcome'*. These include measures required to reduce the significance of environmental effects (such as lighting limits) and may be secured through an environmental management plan; and
- Tertiary (inexorable) mitigation. IEMA describes these as '*actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects*'. It may be helpful to secure such measures through a Code of Construction Practice or similar.

69 For the purposes of this ES, the measures set out are those considered to be appropriate for the Development at this time. They may evolve and/or be

[26] Institute of Environmental Management and Assessment (IEMA) (2015). IEMA Environmental Impact Assessment Guide to Shaping Quality Development. Available at: https://iaia.org/pdf/wab/IEMA%20Guidance%20Documents%20EIA%20Guide%20to%20Shaping%20Quality%20Development%20V6.pdf

refined in response to the statutory consultation process and/or other considerations.

70 Where relevant, measures have been identified that may result in enhancement of environmental conditions. The measures relevant to this chapter are summarised in Table 13.13.

71 Primary and tertiary measures that are intended to form part of the final design (and/or are established legislative requirements/good practice) have been taken into account as part of the initial assessment presented in Section 13.8 below (i.e., the initial determination of impact magnitude and significance of effects assumes implementation of these measures). This ensures that the measures that the Applicant are intending to commit to, are taken into account in the assessment of effects.

72 Where an assessment identifies likely significant adverse effects, further mitigation measures may be applied. These are measures that could further prevent, reduce and, where possible, offset these effects. They are defined by IEMA as actions that will require further activity in order to achieve the anticipated outcome and may be imposed as part of the planning consent, or through inclusion in the Environmental Statement (referred to as secondary mitigation measures in IEMA, 2016). For further or secondary measures both pre-mitigation and residual effects are presented.

73 In addition to mitigation measures, the assessment has also identified ‘Beneficial Recommendations’ to further emphasise positive effects. These are highlighted in Table 13.14.

Table 13.13: Proposed Control/Enhancement Measures

Mitigation Number	Measure adopted	Where in the ES this is detailed
13.1	Advertise lane closures in advance so road users are forewarned and can manage commute to work effectively.	TA A5.2 – Outline Construction Traffic Management Plan [EN010162/APP/6.4.5.2]
13.2	Make retained and new recreational routes through the Development appealing to people to encourage their use by providing information boards (*e.g.*, on wildlife and solar energy). A community orchard is also proposed as part of the Development. Design new and alter existing recreational routes to ensure compatibility with various different users. This will include 21 permissive footpaths and 6 permissive bridleways will be created that will increase access to outdoor recreation in the countryside and improve connectivity to existing PRoW networks.	Figure 5.2 Masterplan [EN010162/APP/6.3.5.2]
13.3	Ensure suitable pedestrian access is maintained for diversions of any temporary route closures and provide appropriate wayfinding information for temporary diversions during construction and decommissioning, such as being advertised online and signposting, including approximate journey times on the routes. Wayfinding for circular walks or to destinations will be clearly signposted.	TA A18.1 Recreational Routes Management Plan [EN010162/APP/6.4.18.1]

Table 13.14: Beneficial Measures to be Adopted as part of the Development

Beneficial Measure Number	Measures adopted	Where in the ES this is detailed
13.1	Work with local education and training providers to support opportunities to provide local adult learning linked to construction, operation and maintenance and decommissioning job opportunities relevant to disadvantaged adults and young people in the local and regional area who are NEET who are facing skills barriers to employment opportunities. This includes specialist Continuous Professional Development (CPD) accredited training courses for various sectors within the business, including Finance and Investment, Development and Planning, Legal and HR and Recruitment, allowing Study Area residents to develop the skills needed to work on the Development and in the wider renewable industry. The Applicant also aims to provide free access to Academy of Solar Excellence training courses. The EG Academy have started the enrolment process via their website (available at: with over 250 students registering their interest to date and over 100 course enrolments.	TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2]
13.2	Work with local education providers to support opportunities to improve educational outcomes in the Study Area. This includes providing 'Solar Activity Days' in local schools, as well as offering bursaries to PhD students where their studies relate to solar development.	TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2]
13.3	As far as reasonably practicable (*e.g.* subject to standards and security checks) provide a targeted scheme of access to construction, operation and maintenance and decommissioning training schemes, and apprenticeships for young people in the local and regional area who are NEET, as well as disadvantaged adults.	TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2]
13.4	Engage in the ethical procurement of the supply chain.	TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2]

13.7 ASSUMPTIONS AND LIMITATIONS OF THE ASSESSMENT

74 One limitation with this assessment is the age of some of the data that has been used to inform the baseline position. In some instances, this has been taken from the 2011 Census, which is now over 10 years old. This is because for some indicators comparable 2021 Census data has not been recorded. Where possible, data from the 2021 Census has been used, however, caution needs to be applied when using this data due to the fact it was undertaken during the COVID-19 pandemic. Therefore, in these instances (for example with regards to commuting patterns), although the 2011 Census data is now somewhat out-of-date, it is accepted that this is the standard and most accurate method for gathering population and demographic data. Where available and appropriate, such as Employment Data by Industry, more up to date projections have been used and thus it is concluded that this limitation does not affect the robustness of the assessment for EIA purposes.

75 In addition, there are no generally accepted criteria for assessing the significance of socio-economic effects and, in some cases, it can be difficult to quantify or measure such effects. Where the effect has been difficult to quantify, qualitative professional judgment has been applied, based on experience, best practice and in consideration of relevant planning policy.

13.8 ASSESSMENT OF EFFECTS

76 The impacts of the construction, operation and maintenance, and decommissioning phases of the Development have been assessed. The potential impacts arising from these phases are summarised in Table 13.29.

77 A description of the potential effect on receptors caused by each identified impact is given below.

13.8.1 Reduced Unemployment Levels

78 These are the effects associated with providing employment opportunities as part of the Development.

79 The below assessment has used units of ‘person years’ (also known as employment years) to report construction labour, where one construction person year represents the work done by one person in a year, comprising a standard number of working days. For the purposes of employment related GVA calculations, the assessment will convert person years into Full Time Equivalent (FTE).

13.8.1.1 Construction Phase

80 Construction is estimated to last for 24 months and based on established estimates of person years of employment per installed MW of electricity generation technologies, (20.8 person-years of employment per year per MW of installed capacity, established within the ‘Regional electricity generation and employment in UK regions’ study (2017)[27]), the Development

[27] Cardiff University (2017). Regional electricity generation and employment in UK regions. Available at: https://orca.cardiff.ac.uk/id/eprint/77013/3/Energy%20Paper%20Sept%2023rd%20%202015%20Main%20Orca.pdf [Accessed on 31/03/2025]

is expected to create up to 16,640 person years of direct and indirect employment connected to the construction phase (20.8 x 800 MW).

81 The estimates underpinning this calculation are based on structured research reviews of the employment and economic effect of different electricity technologies carried out by Cardiff University and Regeneris.

82 The research also included a series of consultations with developers/operators to gain information on spending patterns and employment.

83 The majority of socio-economic assessments of solar developments refer to the report on the growth of solar power in the UK (2014)[28]. In this report, the Centre for Economics and Business Research (Cebr) give an employment multiplier for large-scale solar PV investments of 2.33 – i.e., for every job supported on-site, 1.33 indirect/induced jobs (as measured by person-years) are supported in the wider economy. This is, however, now somewhat outdated. Low Carbon and Renewable Energy Economy employment multipliers for 2020[29] (most recent data available) estimate that solar PV developments have a multiplier of 2.08, this is the figure used for this assessment. Applying this multiplier to the total number of person years of employment results in 8,000 person years of direct employment and 8,640 person years of indirect and induced employment.

84 Based on the 2017 study into regional electricity generation and employment in UK regions[30]; 70% of these employment years (5,600) are estimated to be direct construction and manufacturing employment, with 11% of person years related to associated professional services, 10% of jobs related to wholesale/retail trade, 4% transport and communication related, 3% financial services and 2% others.

85 The 'Regional electricity generation and employment in UK regions' study states that more established technologies (e.g. Solar PV) can have a high level of employment impact, driven by the high proportion of development cost that is physical installation (often reliant on local labour), and the local sourcing of some device and ancillary elements. Although this study does not specifically split the construction and manufacturing jobs, it is considered that the construction jobs are likely to have a greater local benefit than manufacturing jobs, many of which may be outside of the Study Area.

86 The benefit could be greater than what has been assessed as the Applicant has begun the process of delivering a variety of local supply chain initiatives and opportunities, however for a worst-case scenario these are not counted as part of the assessment.

[28] CEBR (2014) Solar powered growth in the UK. Available at: https://cebr.com/reports/solar-powered-growth-in-the-uk/ [Accessed on 10/10/2024].
[29] Office of National Statistics (2022). Low carbon and renewable energy economy indirect estimates. Available at: https://www.ons.gov.uk/economy/environmentalaccounts/datasets/lowcarbonandrenewableenergyeconomyindirectestimatesdataset [Accessed on 10/10/2024].
[30] Cardiff University (2017). Regional electricity generation and employment in UK regions. Available at: https://orca.cardiff.ac.uk/id/eprint/77013/3/Energy%20Paper%20Sept%2023rd%20%202015%20Main%20Orca.pdf [Accessed on 10/10/2024].

87 Therefore, in order to estimate the direct construction employment generated by the Development, IRENA's[31] detailed breakdown of utility-scale solar PV total installed cost has been utilised. This states that direct installation employment in the United Kingdom accounted for 18.8% of the total installed cost in 2022. It also states that total installed cost per kW equated to $910.00, or circa. £739 (using the average 2022 USD to GBP exchange rate of 0.8116). Consequently, the total installed construction cost of the Development is estimated to equate to circa £590.8m. 18.8% of the total installed cost equates to £110.8m. This is the identified construction employment cost associated with the direct installation.

88 In order to assess the number of jobs (as measured by person-years) the direct installation could support, this cost (£110.8m), is divided by the average construction worker wage in the Study Area (£34,528) to arrive at an estimate of the person years required. This equates to 3,210 direct construction person years or 57.3% of the total direct construction and manufacturing jobs identified above. Consequently, it is assumed, there will be 2,390 direct manufacturing person years (this has been calculated by subtracting the 5,600 construction and manufacturing person years previously mentioned, from the 3,210 direct construction person years).

89 The impacts of displacement and leakage on the construction and manufacturing workforce also need to be considered.

90 Displacement measures the extent to which the job creation of a project is offset by reductions of employment elsewhere. Any additional demand for labour cannot be treated as a net benefit, as it removes workers from other posts, such as other construction projects, and the net benefit is reduced to the extent that this occurs.

91 The analysis considers construction employment first, then manufacturing employment.

92 *Direct person years of construction employment*

93 In terms of construction, workers typically move between projects when delays occur or to help the workforce meet construction deadlines. It is, therefore, assumed that due to the flexibility of the construction labour market, displacement effects are low. The HCA Additionality Guide[32] suggests 25% for low levels of displacements.

94 Applying this level of displacement to the total direct construction person years created, it is estimated that the Development will result in a net direct construction employment equivalent to 2,408 direct person years of construction employment.

95 Leakage measures the extent to which jobs will be taken from people living outside of the Study Area. In order to assess the appropriate level of direct

[31] IRENA (2023). Renewable Power Generation Costs in 2022. Available at: https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2023/Aug/IRENA_Renewable_power_generation_costs_in_2022.pdf [Accessed on 26/06/2024].
[32] Homes & Communities Agency (2014). Additionality Guide. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/378177/additionality_guide_2014_full.pdf [Accessed on 10/10/2024].

construction person-years of employment leakage that should be applied, it is necessary to understand the current pool of labour within the Study Area that work within the 'Construction of utility projects' and 'Electrical, plumbing and other construction installation activities' sub-sectors (1,705 person years).

96 As this pool of labour is lower than the estimated net direct construction job creation figure, a high level of leakage is expected. The HCA Additionality Guide states that a high level of leakage is when many of the benefits will go to people living outside of the Study Area and suggests a leakage percentage of 50% is expected.

97 It should be noted, however, that TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] requires that local people within the Study Area are targeted for employment opportunities and provided with the skills relevant to the development of the Project. This will allow for workers outside of the industries discussed above to be retrained, for local workers to gain opportunities and for people who are currently unemployed to potentially benefit from the construction employment generation associated with the Development. The overall leakage percentage may, therefore, be lower, however, a worst-case scenario assumption of 50% has been applied for the purposes of the ES.

98 Applying this 50% leakage to the 2,408 direct person years of construction employment results in an overall net direct local construction employment figure of 1,204 person years.

99 *Direct person years of manufacturing employment*

100 A second line of analysis considers the position for manufacturing. Manufacturing workers have less flexibility to move between roles due to the continuous nature of manufacturing processes. It is, therefore, assumed that, with greater rigidity in the manufacturing labour market, displacement effects are medium. The HCA Additionality Guide (Now Homes England) suggests 50% for medium levels of displacement.

101 Applying this level of displacement to the total direct manufacturing person-years of employment created as a result of this Development (2,390) results in a net direct manufacturing employment equivalent to 1,195 person years.

102 In order to assess the appropriate level of direct manufacturing person-years of employment leakage that should be applied, it is necessary to understand the current pool of labour within the Study Area that work within the 'Manufacture of electrical equipment' sub-sector (900 workers). As this pool of labour is lower than the estimated net direct construction job creation figure, a high level of leakage is expected. The HCA Additionality Guide states that a high level of leakage is when many of the benefits will go to people living outside of the Study Area and suggests a leakage percentage of 50%.

103 As with the construction employment, TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] requires that local people within the Study Area are targeted for employment opportunities and provided with the skills relevant to the Development. This will allow for workers outside of the industries discussed above to be retrained, for local

workers to gain opportunities and for people who are currently unemployed to potentially benefit from the construction employment generation associated with the Development. The overall leakage figure could, therefore, be lower, however, a worst-case scenario approach has been used for this ES.

104 Applying 50% leakage to the 1,195 net direct person years of manufacturing employment identified results in an overall net direct local construction employment figure of 598 person years.

105 *Construction Agricultural Loss of Employment*

106 As is standard within socio-economic assessments, it is considered that one permanent Full Time Equivalent (FTE) job is equivalent to ten person years of temporary employment. Therefore, on this basis, the construction phase is estimated to create up to around 120 local net direct construction FTE jobs and 60 local net direct manufacturing FTE jobs.

107 It is then necessary to also consider the person-years of employment lost as a result of the change of use from agriculture. Approximately 1,167 ha of agricultural land will temporarily cease operation during construction (work areas, 1, 2, 4, 5a, 5b and 7) as seen in Table 13.15. This represents c.66% of the land that falls within the Order Limits.

108 This would support approximately 7 net direct FTE employees (see section 13.8.4.2). Overall, the construction phase results in a net gain of **173 (180 – 7) direct local FTE jobs.**

Table 13.15: Agricultural Work Areas

Work Area Category	**Area (ha)**
Works Area 1 Solar PV	1025.07
Works Area 2 Cable	106.47
Works Area 4 Substations	7.84
Works Area 5a BESS	16.4
Works Area 5b 400kV Substation	4.29
Works Area 7 Staythorpe BESS Connection	7.19
TOTAL	1,167

109 It is anticipated that the estimated number of local manufacturing person-years of employment generated during construction will increase if and when the Applicant is able to place contracts to ensure that solar mounting frames are constructed using British steel. Mounting frames will be manufactured onsite, also ensuring local job generation. However, the impact has been assessed in the absence of such details.

110 *Sensitivity of the Receptor*

111 As per Table 13.12, the sensitivity of the receptor is **Medium**.

112 *Magnitude of Impact*

113 The impact of reduced unemployment levels is both direct through construction person-years of employment created as part of the Development and also indirect through person-years of employment created in supply chain or local economy.

114 The impact is predicted to be of regional spatial extent and medium-term continuous duration (see Section 13.4.7.3). TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] has been produced to ensure that the employment opportunities are available to local people and as far as reasonably practicable (*e.g.*, subject to standards and security checks) provide targeted construction training schemes and apprenticeships to disadvantaged adults, and young people in the local and regional area who are NEET. Initiatives have been located specifically to target those most deprived, in terms of both unemployment and education.

115 On this basis the magnitude is, therefore, **Medium Beneficial**.

116 *Significance of the Effect*

117 Based on the sensitivity of the receptor and the magnitude of the impact, the overall significance of the effect is considered to be **Moderate Beneficial**, which is **significant** (see section 13.4.8.1). As the current Skills, Supply Chain and Employment Plan is still in 'Outline' form and some evidence is not complete such as 'Supply Chain' opportunities there is some small uncertainty attached to this level of significance. The assessment has, however, used established methodologies to calculate the level of job creation likely from the Development as well as cross checking this employment provision with other solar schemes on a per-MW basis. Therefore, the assessment of significance can be considered robust for the purposes of this ES.

13.8.1.2 Operation and Maintenance

118 The operational stage is expected to last for 40 years. During the operational stage, the Development of 800 MW of installed solar capacity is estimated to support 320 full time equivalent direct and indirect person-years of employment. This is based on the Cardiff University study into regional electricity generation and employment in UK regions[33] (2017) which states the FTE jobs per MW installed is equivalent to 0.4.

119 This is the number of person-years of employment supported on site, in supply chains and via wage effects but does not include employment related to the sale of electricity itself. Low Carbon and Renewable Energy Economy employment multipliers[34] for 2020 estimate that solar PV developments have a multiplier of 2.08. This means that for every one job provided directly another 1.08 indirect/induced jobs are supported. This would indicate that

[33] Cardiff University (2017). Regional electricity generation and employment in UK regions. Available at: https://orca.cardiff.ac.uk/id/eprint/77013/3/Energy%20Paper%20Sept%2023rd%20%202015%20Main%20Orca.pdf [Accessed on 09/06/2025].

[34] https://www.ons.gov.uk/economy/environmentalaccounts/datasets/lowcarbonandrenewableenergyeconomyindirectestimatesdataset [Accessed on 09/06/2025].

the operational and maintenance phase would create circa 154 direct person years with the remaining circa 166 being indirect person years associated with the supply chain and wage effects.

120 Although there are not any other solar projects of a similar scale identified in the Study Area, the required jobs are likely to be highly skilled and niche in nature. It is, therefore, considered likely that the person years may remove a considerable number of workers from other posts and, therefore, a high level of displacement has been applied at 75% with the remaining 25% of roles envisaged to be filled by local employees enrolled on an employment skills plan as part of the Development. In addition, due to the nature of the highly skilled role and likely requirement for existing experience, it is also considered likely that some of these person years will be taken by people living outside of the Study Area. A high level of leakage (50%) has, therefore, also been applied.

121 On this basis the operational and maintenance stage would result in the creation of approximately **19 direct local FTE jobs** in the local economy over the full operational phase of 40 years, and a further 21 jobs in the wider economy.

122 The jobs created will be in the renewable energy sector, assisting in the UK's transition to net zero.

123 Furthermore, there is expected to be an increase in jobs associated with sheep grazing, equivalent to **8 local direct FTE jobs** (see paragraph 278).

124 It is, however, important to consider the jobs lost as a result of the change of use from agriculture. Based on a 1,167 ha area of agricultural loss[35] during operation, it is estimated that this would support approximately 7 net direct local FTE employees.

125 Therefore, the net total person-years of employment created by the Development over the operational phase would, therefore, equate to **20 net direct local FTE jobs** (27-7).

126 *Sensitivity of the Receptor*

127 As per Table 13.12, the sensitivity of the receptor is **Medium**.

128 *Magnitude of Impact*

129 The impact of reduced unemployment levels is both direct through operation/maintenance person-years of employment created as part of the Development and also indirect through person-years of employment created in supply chain or local economy.

130 The impact is predicted to be of regional spatial extent and medium-term continuous duration. TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] has been produced to ensure that the employment opportunities are available to local people and as far as reasonably practicable (*e.g.*, subject to standards and security checks) provide targeted training schemes and apprenticeships to disadvantaged

[35] Based on work area 1 (solar); work area 4 (substations); work area 5 (BESS and 400kV substation) and work area 7 (Staythorpe BESS Connection)

adults, and young people in the local and regional area who are NEET. Initiatives have been located specifically to target those most deprived, in terms of both unemployment and education.

131 However, given employment at the operational phase will be much lower intensity than during construction and decommissioning and given that there will be some loss of agricultural person-years of employment which reduces the overall net increase in employment during the operational phase to 12 direct local FTE jobs, the magnitude of impact is lower than during the construction phase.

132 On this basis the magnitude is, therefore, **Low Beneficial**.

133 *Significance of the Effect*

134 Based on the sensitivity of the receptor and the magnitude of the impact, the overall significance of the effect is considered to be **Minor Beneficial**, which is **not significant**.

13.8.1.3 Decommissioning

135 The number of construction person-years of employment created by the decommissioning stage is considered to be commensurate with the construction stage, however, it is likely the number of indirect person-years of employment created in the supply chain will be reduced as there will be no requirement for manufacturing the solar panels, although they will be recycled.

136 *Sensitivity of the Receptor*

137 As per Table 13.12, the sensitivity of the receptor is **Medium**.

138 *Magnitude of Impact*

139 The decommissioning effects are likely to be similar to the construction phase effects, though without the impacts on the supply chain in terms of sourcing of components required during construction. Given the absence of reliable baseline data at a realistic date in the future for decommissioning, and on the basis that information on the supply chain and employment generation associated with the recycling of solar panels supply chain is currently unavailable, under a worst-case scenario, the magnitude is assessed as **Low Beneficial**.

140 *Significance of Effects*

141 Based on the sensitivity of the receptor and the magnitude of the impact, the overall significance of the effect is considered to be **Minor** Beneficial, which is **not significant**.

13.8.2 Increased Economic Output

142 The effects of the Development on the economic output of the Study Area are direct through capital investment and indirect from increased spending from employment provision.

143 The economic output assessment references Gross Value Added (GVA). GVA is a measure of total production value by an employee, region or industry. The latest GVAs and GVA per employee have been calculated for

different industries as well as the whole of Newark and Sherwood as seen Table 13.16.

Table 13.16: ONS 2023 Industry GVA by Employee Data

Region	Industry	GVA (£, million)	Employee Count	GVA per Employee
Newark and Sherwood	Total	2,774	50,475	£54,958
	Construction	260	3,000	£86,667
	Manufacturing	347	6,000	£57,833
	Agriculture, forestry and fishing; mining and quarrying	92	700	£131,429
	Accommodation and food service activities	158	7000	£22,571
England	Total	1,945,256	27,495,000	£70,749
East Midlands	Agriculture, forestry and fishing; mining and quarrying	1930	15,000	£128,667

13.8.2.1 Construction Phase

144 *Capital Investment*

145 The Development proposes approximately 800 MW of Solar PV. According to the IRENA Renewable Cost Database 2022[36], the installed cost of utility scale solar PV is approximately £739 per kW, based on the average $ to £ exchange rate in 2022. Therefore, applied to the Development this would result in a direct capital investment of circa £590.8m.

146 The ONS report 'Low carbon and renewable energy economy, UK: 2019'[37] estimates that for every £1 of direct turnover in the UK's Solar PV energy sector, a further £0.70 of indirect turnover is generated. ONS has published 'Low carbon and renewable energy economy, UK: 2022'. However, they have yet to publish the revised indirect estimates for previous years and provisional 2021 and 2022 indirect estimates. Therefore, the data provided in the 2019 version is, at present, the latest available data. On that basis, a further indirect capital investment of approximately £413.6m is likely to be

[36] IRENA (2023). Renewable Power Generation Costs in 2022. Available at: https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2023/Aug/IRENA_Renewable_power_generation_costs_in_2022.pdf [Accessed on 26/06/2024].
[37] ONS (2019) Low carbon and renewable energy economy, UK: 2019. Available at: https://www.ons.gov.uk/economy/environmentalaccounts/datasets/lowcarbonandrenewableenergyeconomyindirectestimatesdataset [Accessed on 10/10/2024].

generated as a result of this Development. Overall, that equates to a direct and indirect investment into the local economy of around £1.004 billion.

147 This investment will be felt throughout the supply chain providing positive impacts, not only to manufacturing businesses but also to local business such as aggregate suppliers, security and monitoring operatives, landscaping contractors and other construction industries and suppliers.

148 *Construction Employment GVA*

149 In addition to the direct capital investment in the local economy, there will be an indirect effect on economic output through the additional construction employment generated by the Development. The Development is estimated to create 180 direct local FTE construction and manufacturing jobs in the Study Area over the 2-year construction programme, 120 in construction and 60 in manufacturing.

150 In order to be consistent with the methodology for calculating agricultural output outlined in section 13.8.4; FTE job figures have been used to calculate GVA, as opposed to person years of employment. This also ensures a worst-case assessment of economic output is presented.

151 According to the latest ONS, the current price Gross Value Added (GVA) in Newark and Sherwood generated by the construction industry equated to £260,000,000 in 2023[38].

152 In order to assess the GVA for the development this figure has been divided by the Business Register and Employment Survey's estimate of construction industry employment in the Study Area (3,000). This results in an estimate of GVA per construction worker of £86,667.

153 Over the two-year construction programme, construction employment would, therefore, result in a total contribution to GVA in Newark and Sherwood of approximately £10.4m (£86,667 x 120 construction workers).

154 According to the ONS, the current price Gross Value Added (GVA) in Newark and Sherwood generated by the manufacturing industry equated to £347,000,000 in 2023[39].

155 In order to assess the GVA for the Development, this figure has been divided by the Business Register and Employment Survey's estimate of manufacturing industry employment in Newark and Sherwood (6,000). This results in an estimate of GVA per manufacturing worker of £57,833.

156 Over the two-year construction programme, manufacturing employment would, therefore, result in a total contribution to GVA in Newark and Sherwood of approximately £3.47m.

[38] Office of National Statistics (2024). Regional gross value added (balanced) by industry: local authorities by ITL1 region. Available at: https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/regionalgrossvalueaddedbalancedbyindustrylocalauthoritiesbyitl1region [Accessed on 10/05/2025].

[39] Office of National Statistics (2024). Regional gross value added (balanced) by industry: local authorities by ITL1 region. Available at: https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/regionalgrossvalueaddedbalancedbyindustrylocalauthoritiesbyitl1region [Accessed on 10/05/2025].

157 Taking into account the GVA related to the additional 864 indirect and induced FTE jobs created by the construction stage and multiplying this by the average GVA per employee in England[40] in 2023 (£70,749) this indicates an additional GVA figure of approximately £61.12m. Overall, therefore, the total GVA associated with the direct and indirect construction person-years of employment would equate to approximately £75m. This is in addition to the direct and indirect capital investment into the local economy of around £590.8 million.

158 However, the assessment also needs to take into account the GVA lost as a result of the temporary cessation of arable agricultural output. The average GVA per Agriculture, fishing and Forestry employee in the East Midlands equates to approximately £128,667. The Development would be able to support **7 direct local FTE agricultural employees**.

159 This will result in an agricultural loss to GVA of approximately £2.18m per year or £4.37m over the 24-month construction programme.

160 *Construction Agricultural Loss*

161 There is also estimated to be a loss of agricultural production during the construction phase equivalent to £2m per annum or £4m over the 24-month construction programme. This is assessed within section 13.8.4.

162 *Construction Phase Economic Output and Employment Conclusion*

163 In conclusion, the gains in GVA associated with the Development's estimated construction employment generation (£10.4m), the GVA gain in manufacturing employment (£3.47m), the GVA associated with indirect labour (£61.12m), far outweigh the loss of GVA output associated with the cessation of agricultural labour (£4.37m) and the loss of GVA associated with the loss of agricultural production (£4m) by approximately **£66.6m** as outlined in Table 13.17.

Table 13.18: Construction GVA and Employment Summary

2 Year Construction Phase	**Net Direct Local FTE Employment Change**	**GVA (Million)**
Construction Labour	120	£10.40
Manufacturing Labour	60	£3.47
Indirect Labour	N/A	£61.12
Agriculture Labour	-17	-£4.37
Visitor Economy	N/A	-£0.08
Agricultural Output	N/A	-£4.00
Total	**163**	**£66.54**

[40] Office of National Statistics (2024). Revisions triangles: regional gross value added (balanced) in current basic prices. Available at: https://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/revisionstrianglesregionalgrossvalueaddedbalancedincurrentbasicprices [Accessed on 11/11/2024].

164 *Sensitivity of Receptor*

165 As per Table 13.12, the sensitivity of the receptor is **Medium**.

166 *Magnitude of Impact*

167 The impact on economic output is both direct through capital investment in the Development and also indirect through the GVA of person-years of employment created by the construction works.

168 The impact is predicted to be of regional spatial extent and medium-term continuous duration. The effect on GVA would be considered low accounting for less than 10% of the GVA for the Study Area. The direct capital investment would be considered high. The magnitude is, therefore, **Medium Beneficial**.

169 *Significance of Effects*

170 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Moderate** Beneficial which is **significant**.

13.8.2.2 Operation and Maintenance

171 *Operational Employment GVA Gain*

172 The contribution of the operational phase of the development to economic output has been calculated by taking the job creation associated with the Development, **19 (rounded) FTE direct local jobs** (as calculated in Section 13.8.1), and multiplying this by the average GVA per employee in the Study Area (£54,958 per annum)[41].

173 Over the full anticipated operational phase of the Development (40 years) this would equate to an additional GVA associated with the operation and maintenance of the Development of approximately £40.1m (19 FTE net jobs x £54,958). It is good practice, however, to apply a discount rate to future benefits and costs to present a current present value. The HM Treasury Green Book recommends applying a discount rate of 3.5% per annum[42] and on that basis the revised **GVA figure would be circa £22.3m**.

174 *Operational Business Rates GVA*

175 In addition to the GVA effect, the Development will also generate significant business rate revenue on an annual basis, a proportion of which will be retained by the local authorities in the Study Area. Having regard to the Photovoltaic Memorandum of Agreement Revaluation 2023 report from the

[41] Office of National Statistics (2024). Subregional productivity: labour productivity indices by local authority district. Available at: https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/labourproductivity/datasets/subregionalproductivitylabourproductivityindicesbylocalauthoritydistrict [Accessed on 10/10/2024].
[42] HM Treasury (2022). The Green Book, para 5.35. Available at: https://assets.publishing.service.gov.uk/media/6645c709bd01f5ed32793cbc/Green_Book_2022__updated_links_.pdf [Accessed on 10/10/2024].

Valuation Office Agency[43] and on the assumption that the installation is unsubsidised, the Development would be liable for business rates of £2,040 per MW per annum or £1,632,000 per annum (£2,040 per MW x 800 MW). This would equate to business rates liability over the Development lifetime of approximately £65.28m. Applying the same discount rate as discussed above, this would result in a present-day value of circa £34.85m.

176 *Operational Electricity Sale GVA*

177 Finally, the potential economic output associated with the sale of electricity generated by the Development has been estimated. In 2023 (latest available data), Newark and Sherwood consumed a total of 492.6 GWh[44] of electricity. Consequently, if it is assumed that the Development was to supply the electricity for the whole of the Study Area, the economic output as a result of the sale of the electricity would equate to approximately £24.66m per annum (492,600 MWh x £50.07/MWh[45]), or £986.57m for the full operational phase. After accounting for a discount rate of 3.5%, as discussed above, this equates to an economic output of £526.71m over the operational phase.

178 *Operational Agricultural GVA*

179 The assessment does, however, need to consider the GVA lost as a result of the temporary cessation of arable agricultural output. Based on a 1,167 ha area associated with the loss of agricultural land; it is estimated that this would support approximately **7 direct local FTE employees**. The average GVA per agriculture, fishing and forestry employee in the East Midlands equates to approximately £128,667. This would equate to £2.18m per annum over the operational period. Therefore, over the full operational phase this would result in a loss in GVA (factoring in a discount rate of 3.5%) of £19.23m.

180 The reduction in arable agricultural output (£19.23m) will, however, be mitigated by the GVA associated with the sheep grazing labour (£21.9m) proposed within the solar areas. This equates to a net agricultural labour gain of £2.67m as assessed in detail in section 13.8.4.

181 In addition, it is estimated that £2m of arable agricultural production will be lost per annum (see Section 13.8.4), equivalent to a further £80m of output. After accounting for a discount rate of 3.5%, this equates to a loss of output equivalent to £42.75m. This is assessed in detail in section 13.8.4.

182 *Operational Phase Economic Output Conclusion*

183 In conclusion, the gains in GVA associated with the Development's estimated operational employment generation (£22.3m), the gain in business rates liability (£34.9m), the GVA associated with sheep grazing labour

[43] Valuation Office Agency (2023). Revaluation 2023 – Photovoltaics – Memorandum of Agreement. Available at: https://solarenergyuk.org/wp-content/uploads/2023/06/2023-Solar-PV-Memorandum-of-Agreement-signed-by-SEUK-GE-VOA.pdf [Accessed on 10/05/2024].
[44] Department for Energy Security & Net Zero (2024). Renewable electricity by local authority 2014 – 2023. Available at https://www.gov.uk/government/statistics/regional-renewable-statistics [Accessed on 19/05/2025].
[45] This number is based on The Department for Energy Security and Net Zero's 'Contracts for Difference – Allocation Round 6 results'[45] 'final strike price' of £50.07/MWh (2024).

(£21.9m), the GVA associated with sheep sales (£11m) and the economic output associated with the sale of electricity (£526.7m) far outweigh the loss of output associated with the cessation of agricultural employment (£19.23) and the loss of GVA associated with the loss of agricultural production (£42.75m) by approximately **£554.83m** as outlined in Table 13.19.

Table 13.19: Operational GVA and Employment Summary

40 Year Operation Phase	Net Direct Local FTE Employment Change	GVA (£million, discounted)
Operation and Maintenance	19	22.30
Agriculture Labour	-7	-19.23
Agricultural Output	N/A	-42.75
Sheep Grazing	8	21.90
Sheep Sale	As above	11.00
Business Rates	N/A	34.90
Electricity Sale	N/A	526.70
Total	**20**	**554.83**

184 *Sensitivity of Receptor*

185 As per Table 13.12, the sensitivity of the receptor is **Medium**.

186 *Magnitude of Impact*

187 The impact on economic output is both direct through business rate spending and also indirect through the GVA of person-years of employment created by the operational requirements.

188 The impact is predicted to be of local spatial extent and long-term continuous duration, and the magnitude is considered to be **High Beneficial.**

189 *Significance of Effects*

190 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Major Beneficial** which is **significant.**

13.8.2.3 Decommissioning

191 The Gross Value Added created by employment associated with the decommissioning stage is considered to be similar to the construction stage. However, due to discounting effect, GVA will be slightly reduced.

192 *Sensitivity of Receptor*

193 As per Table 13.12, the sensitivity of the receptor is **Medium**.

194 *Magnitude of Impact*

195 The impact on economic output is both direct through capital investment in the Development and also indirect through the GVA of person-years of employment created by the construction works.

196 The impact is predicted to be of regional spatial extent and medium-term continuous duration. The effect on GVA would be considered low accounting for less than 10% of the GVA for the Study Area. The direct capital investment would be considered high. The magnitude is, therefore, **Medium Beneficial**.

197 *Significance of Effects*

198 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Moderate Beneficial** which is **significant**.

13.8.3 Improved Skills and Qualifications

199 The Development will put plans in place to create opportunities for the improvement and employment of local skills. An Outline Skills, Supply Chain and Employment Plan (OSSCEP) has been produced which outlines how the Development will achieve this.

13.8.3.1 Construction Phase

200 At construction stage there will be opportunities for Study Area residents to access employment opportunities. Prior to construction work commencing, the associated identified skill needs will be communicated again to local education and training providers.

201 The Applicant will provide multiple employment and training opportunities directly related to the Development during the construction phase. TA A13.2, Outline Skills, Supply Chain and Employment Plan (OSSCEP) [EN010162/APP/6.4.13.2] has been developed in order to clearly identify opportunities the Applicant is able to offer and target them towards residents of Newark and Sherwood and, specifically, areas where there are high rates of unemployment and/or educational deprivation.

202 As well as identifying opportunities, the OSSCEP outlines a strategy for marketing opportunities within local educational institutions and with local job agencies. This will ensure maximum awareness within the district.

203 The OSSCEP sets out clear objectives to be achieved in relation to employment and training.

204 A non-exhaustive list of initiatives proposed by the Applicant as part of the OSSCEP includes:

- Free EG Academy CPD Courses for Newark and Sherwood residents;
- Free access to the Academy of Solar Excellence online courses;
- Internship and work placement opportunities for university students in Newark and Sherwood;
- Co-Sponsorship of PhD students where their studies relate to solar energy / development; and

- ‘Solar Activity Days’ and ‘Solar Assemblies’ at local primary and secondary schools.

205 *Sensitivity of Receptor*

206 As per Table 13.12, the sensitivity of the receptor is **Medium**.

207 *Magnitude of Impact*

208 The impact on education and skills is direct through on the job training provided as part of an Outline Skills, Supply Chain and Employment Plan.

209 The impact is predicted to be of local spatial extent and medium-term continuous duration.

210 The successful implementation of the TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] will ensure the local benefit from job and training opportunities is maximised.

211 Consequently, the magnitude is considered to be **Medium Beneficial**.

212 *Significance of Effects*

213 Based on the sensitivity of the receptor and the magnitude of the impact, and assuming the OSSEP be implemented effectively, ensuring that employment and skills opportunities are targeted towards the most educationally deprived/ sensitive areas of the Study Area, the significance of the effect would increase to **Moderate Beneficial**, which is **significant**.

13.8.3.2 Operation and Maintenance

214 As well as covering opportunities during construction, TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] also clearly identifies opportunities the Applicant is committed to offering during the operation phase. All the initiatives listed and committed to above, will also be available during the operational phase.

215 21 permissive footpaths and 6 permissive bridleways will be created that will increase access to outdoor recreation in the countryside and improve connectivity to existing PRoW networks.

216 This will provide routes through the land that falls within the Order Limits. School trips will be encouraged to visit the routes which will feature educational boards providing detail on the biodiversity enhancements and solar electricity generation.

217 *Sensitivity of Receptor*

218 As per Table 13.12, the sensitivity of the receptor is **Medium**.

219 *Magnitude of Impact*

220 At this early stage of the Development, information on procurement strategies or employment profiles is not available and as such only a qualitative assessment of magnitude can be made. The impact is predicted to be local and long term continuous in duration.

221 Whilst direct employment generated is expected to be more modest than at the construction stage, the Applicant has committed to providing a number of education/skills courses for residents of the local Study Area, as mentioned

above. Consequently, education and skills development will be supported throughout the operational phase and provide different relevant training opportunities for residents to engage with.

222 Furthermore, the successful implementation of the TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] will ensure the local benefit from job and training opportunities is maximised.

223 Consequently, the magnitude of impact is considered to be **Medium Beneficial**.

224 *Significance of Effects*

225 Based on the sensitivity of the receptor and the magnitude of the impact, and assuming significance of the TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] be implemented effectively, ensuring that employment and skills opportunities are targeted towards the most educationally deprived / sensitive areas of the Study Area, the significance of the effect would increase to **Moderate Beneficial**, which is **significant**.

13.8.3.3 Decommissioning

226 During the decommissioning stage, educational/skills opportunities are likely to be less prevalent than during the construction and operational phases. With the operational phase coming to an end, there is likely to be less emphasis on providing technical training and the offering of industry specific education/skills courses will likely reduce back towards the baseline level.

227 *Sensitivity of Receptor*

228 As per Table 13.12, the sensitivity of the receptor is **Medium**.

229 *Magnitude of Impact*

230 The impact on education and skills is direct through on the job training provided as part of an Outline Skills, Supply Chain and Employment Plan.

231 The impact is predicted to be of local spatial extent and medium-term continuous duration. During this phase of the Development, education/skills offering is likely to be reduced, reflecting less opportunity for on-the-job training and less need to train staff for operational employment opportunities.

232 Consequently, the magnitude is considered to be **Negligible**.

233 *Significance of Effects*

234 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Negligible,** which is **not significant**.

13.8.4 Reduced Arable Agricultural Output

235 The change of use from arable agricultural to the stationing of solar panels will have the effect of reducing the arable agricultural output of the Development.

236 The land affected by the Development comprises predominantly arable land. Whilst the landownership would not change as a result of the Development,

since the land is to be leased to the Applicant and not sold, the construction, operational and decommissioning stages will have an effect on the prevailing land use and farming operations will be changed.

237 The diversification of land within the Order Limits for the implementation of the solar array will provide additional income to support the future security of the remaining agricultural enterprises. The ES Chapter 17, Agricultural Land, [EN010162/APP/6.2.17] therefore, assesses the impact on these land areas to be of all minor adverse (68% of farms) or 'negligible' (32% of farms) significance.

13.8.4.1 Construction Phase

238 During the 24 month construction phase of the Development, 1,167 ha of the total site area, comprising work areas 1, 2, 4, 5 and 7 is expected to experience a cessation of arable agricultural production which is a precautionary worst-case assessment.

239 TA A17.1 Agricultural Land Classification Survey [EN010162/APP/6.4.17.1] states that the Development land has the following agricultural land classifications[46]:

Table 13.20: The Development's Agricultural Land Classifications

Grade	Area (ha)	Proportion (%)
1	0	0
2	149.5	8.8
3	943.8	55.8
3b	595.5	35.2
4	0.5	0.03
Non-Agricultural	1.4	0.08
Total	1,690.7	100

240 There is a circa 4.4% difference in the total Agricultural Land classification area size (1,690.7 ha) when compared to the Order Limit (1,765 ha). This is due to not all land being classified for agriculture, as they were roads and a consented BESS that is part of the baseline scenario.

241 *Agricultural Employment and GVA Assessment*

242 In order to estimate the loss of GVA associated with the loss of agricultural employment, the number of person-years of employment estimated to be lost must be calculated. Labour required varies depending on what crop is to be grown.

243 During 2024 and 2025, 22 landowner interviews were conducted as seen in TA A17.3 Farm Reports [EN010162/APP/6.4.17.3]. The assessment uses a

[46] Grade 1 is excellent; Grade 2 is very good; Grade 3 is good to moderate; Grade 3a is good; Grade 3b is moderate; Grade 4 is poor; Grade 5 is very poor.

sample of seven of the most recently conducted interviews to assess the impact of a temporary cessation of arable agriculture.

244 During November and December 2024, seven in-depth landowner interviews were conducted. The landowners were asked how many staff their farms employee, out of 22 – 8 did not answer this (three stated they were family run but gave no number, two were unreachable and three did not answer). The assessment has used the averages of the staff numbers provided (2 staff) for those that did not provide a number and 3 for those quoted as "family run".

245 This gave a total staffing number of 40 across the total of 8,815 ha. However, this is not the total number of FTE jobs that will be lost due to long-term reversable arable agricultural employment cessation.

246 The 22 farms have a total land mass of 1,573 ha within the Order Limits. On average, 25% (as there are four farms with unknown total areas, this is calculated by taking the average 'Proportion of Farm Area in Order Limits' which is calculated based on the farm area within order limits divided by the total farm area) – of the total farm areas are within the Order Limits.

247 The agricultural landowners all grew a variety of arable crops. However, as they did not provide a breakdown for how much land is used to grow what crop – the assessment adopts a worst-case scenario approach by selecting the crop with the highest economic output (SWD per Ha) *e.g.* 'Most Expensive' for the purpose of employment loss assessment.

248 For the total area for which 'next crop' data has not been provided, it has been assumed within the assessment that crops will be grown in an equal proportion to what is expected in the areas for which 'next crop' data has been provided.

249 The Nix Farm Management Pocketbook (2024)[47] also provides estimates for the required Standard Workdays (SWDs) per hectare for various crop types (shown in Table 13.21). This has been used, alongside 'next crop' data, to estimate the likely SWDs lost during the construction period.

Table 13.21: Nix Farmbook Pocketbook – SWDs per Hectare

Crops	SWDs per hectare			
	Straw Incorporated		Straw Bailed	
	Average	Premium	Average	Premium
Winter Cereals - Conventional Cults	1.15	0.87	1.56	N/A
Winter Cereals - Minimum Tillage	0.97	0.73	1.38	N/A
Winter Cereals - Direct Drill	0.86	0.64	1.27	N/A
Spring Cereals	1	0.75	1.41	N/A
Winter Oilseed Rape - Desiccated	1.11	0.84	N/A	N/A

[47] Graham Redman, Nix Farm Management Pocketbook, 55th Edition (Agro Business Consultants Ltd, 2024), 206.

Crops	SWDs per hectare			
	Straw Incorporated		Straw Bailed	
	Average	Premium	Average	Premium
Winter Beans	0.93	0.7	N/A	N/A
Spring Beans	0.96	0.72	N/A	N/A
Dried Peas	1.33	1	N/A	N/A
Vining Peas	1.04	0.65	Inc. in store	
Maincrop Potatoes 3	3.65	2.74	9.25	6.94
Early Potatoes 3	5.41	4.06	N/A	N/A
Sugar beet	1.88	1.41	N/A	N/A
Herbage Seed (1st year)	0.68	0.51	N/A	N/A
Grass Production	0.93	0.7	N/A	N/A
Hay (7.5t/ha) 4	1.39	1.04	N/A	N/A
Silage (23t/ha) 4	1.19	0.89	N/A	N/A

250 Furthermore, Table 13.22 shows the 'Most Expensive Crop' that landowners shared their farms grow according to the Nix Farmbook. It shows the methodology used to calculate job loss.

Table 13.22: Landowner Interviews and Job Impact Analysis

Farm Reference	Interview Date	Total Staff	Total Farm Size (ha)	Farm Area in Order Limit	Proportion of Farm Area in Order Limits	Most Expensive Crop	SWD per ha	SWD	Work Hours	FTE Jobs Lost
A	13/11/2024	1	63	26.3	42%	wheat	1.15	30.245	242	0.11
B	12/11/2024	0	283	5	2%	potato	5.41	27.05	216	0.10
C	11/11/2024	5	400	38.9	10%	wheat	1.15	44.735	358	0.16
D	12/11/2024	0	97	24.1	25%	wheat	1.15	27.715	222	0.10
E	13/11/2024	1	380	123.6	33%	wheat	1.15	142.14	1,137	0.52
F	12/11/2024	1	400	224	56%	wheat	1.15	257.6	2,061	0.94
G	12/11/2024	0	492	70.4	14%	wheat	1.15	80.96	648	0.29
H	11/11/2024	3	110	9.2	8%	wheat	1.15	10.58	85	0.04
I	11/11/2024	2	650	62.7	10%	wheat	1.15	72.105	577	0.26
J	13/11/2024	0	350	279.8	80%	wheat	1.15	321.77	2,574	1.17
K	12/11/2024	3	85	49.1	58%	wheat	1.15	56.465	452	0.21
L	12/11/2024	3	100	17.5	18%	wheat	1.15	20.125	161	0.07
M	11/11/2024	N/A	2,000	20.7	1%	potato	5.41	111.987	896	0.41
N	13/11/2024	0	155	85.4	55%	wheat	1.15	98.21	786	0.36
O	13/11/2024	5	1,600	173.7	11%	wheat	1.15	199.755	1,598	0.73
P	Nov-24	1	105	1.6	2%	wheat	1.15	1.84	15	0.01
Q	12/11/2024	2	345	61	18%	wheat	1.15	70.15	561	0.26

Farm Reference	Interview Date	Total Staff	Total Farm Size (ha)	Farm Area in Order Limit	Proportion of Farm Area in Order Limits	Most Expensive Crop	SWD per ha	SWD	Work Hours	FTE Jobs Lost
R	01/05/2025	N/A	N/A	25.1	N/A	wheat	1.15	28.865	231	0.10
S	10/04/2024	3	1,200	170.7	14%	wheat	1.15	196.305	1,570	0.71
T	Unreachable	N/A	N/A	22.2	N/A	wheat	1.15	25.53	204	0.09
U	Brief phone call	N/A	N/A	56.3	N/A	wheat	1.15	64.745	518	0.24
V	Unreachable			26.1	N/A	wheat	1.15	30.015	240	0.11
Total								1,919	15,351	7

251 As mentioned above there is limited detail available with regards to next crop productions, adopting a worst-case scenario approach, the highest likely SWD value for each crop type (excluding 'in store maincrop potatoes'), has been assumed, where necessary ('straw incorporated' and 'average').

252 According to the Nix Farm Management Pocketbook (2024)[48], a Standard Workday (SWD) is a general estimate of the farm labour requirement for a farm enterprise. A standard work year is defined as 2,200 hours and these total hours are converted into 275 notional 8-hour standard workdays.

253 SWDs were calculated by multiplying the areas in work areas by the SWD per ha multiple for the 'Most Expensive Crop'. Across the 22 farms, this mean 1,919 SWDs would be affected as part of the Development, which equates to 15,351 Work Hours (SWD x 8). This equates to circa **7 direct local FTE jobs** (work hours divided by 2,200 work hour years) lost as part of long-term reversable arable agricultural cessation.

254 Looking locally at the Study Area it is noted from the results of the baseline assessment that the average GVA[49] per agricultural employee[50] in the East Midlands equates to approximately £128,667.

255 On that basis over the construction programme the loss of arable agricultural output will result in a loss to employment GVA of £0.9m per year or £1.8m over the 24-month construction programme. This compares to the GVA of £75m created by the construction, manufacturing and indirect workers, meaning that, there is a net employment benefit in terms of GVA of approximately £73.19. Also, in terms of employment, the construction stage would result in a net gain of approximately 173 direct FTE jobs in the local economy.

256 In addition to the impact on employment, there will also be a loss of output equivalent to the value of the crops normally produced on the development land. Using 'next crop' data received to date, the assessment calculates the value of the expected output. This involved utilising the John Nix Farm Management Pocketbook's (2024)[51] estimates of arable crop output per ha.

257 As with estimating likely job losses, as crop data is limited, and often doesn't specify what variation of a certain crop is being produced, the largest output value (£/ha) has been assumed where there is uncertainty.

258 Once again, the assessment has established the proportion of the total land that would be growing each crop type and applied this to the area of land for

[48] Graham Redman, Nix Farm Management Pocketbook, 55th Edition (Agro Business Consultants Ltd, 2024), 205.
[49] Office of National Statistics (2024). Regional gross value added (balanced) by industry: local authorities by ITL1 region. Available at: https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/regionalgrossvalueaddedbalancedbyindustrylocalauthoritiesbyitl1region [Accessed on 10/10/2024].
[50] Office of National Statistics (2022). Business Register and Employment Survey. Available at: https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=189 [Accessed on 30/04/2024]
[51] Graham Redman, Nix Farm Management Pocketbook, 55th Edition (Agro Business Consultants Ltd, 2024), 150.

which no 'next crop' data is available. Given no value is given for 'grass', 'herbal ley' and 'legume fallow', it is assumed no output is produced. This is also the case for areas of land which reported as being used for 'Countryside Stewardship',

259 Table 13.23 shows the estimated output per annum produced by each crop should construction not take place. It shows that maincrop potatoes and wheat are the most significant contributors (with circa 77% of the agricultural economic output being attributed to wheat).

260 The total output is estimated to be approximately £2m per annum or £4m for the full construction period.

Table 13.23: Nix Farmbook Pocketbook – Summary of Arable Crop Output per Hectare

Crop	Total Area, ha	Output, £/ha	Output, £
First Feed Wheat	152.5	1,799	274,363
Grain maize	0.3	1,538	530
Maincrop potatoes	16.3	12,000	195,706
Spring Linseed	0.0	840	0
Spring malting barley	73.5	1,286	94,560
Spring oats	66.5	1,134	75,363
Sugar Beet	0.2	2,541	392
Vining Peas	0.0	1,613	0
Winter Beans	23.6	1,011	23,826
Winter feed wheat	721.7	1,765	1,273,732
Winter malting barley	43.8	1,456	63,804
Winter oats	0.0	1,241	0
No Output	661.7	0	0
Total	**1760.0**	**-**	**2,001,884**

261 When comparing this to the direct and indirect GVA created by construction phase employment (£75m), the losses of agricultural employment output (£1.8m) and the losses of agricultural production output (£4m), the agricultural losses do not outweigh the construction GVA employment gains (net gain of £69.2m).

262 *Sensitivity of Receptor*

263 As per Table 13.12, the sensitivity of the receptor is **Medium**.

264 *Magnitude of Impact*

265 The impact on agricultural output is direct through the change of use of land and loss of employment and indirect in terms of the GVA associated with any agricultural person-years of employment lost as a result of the Development.

The loss in agricultural output is outweighed by the economic output and person-years of employment created by the Development.

266 The impact is predicted to be of local spatial extent and medium-term continuous duration, and the magnitude is considered to be **Negligible**.

267 *Significance of Effects*

268 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Negligible** which is **not significant**.

13.8.4.2 Operation and Maintenance

269 During the operational phase of the Development, 1,167 ha of the total site area, comprising work areas 1,2, 4, 5a, 6b and 7, is expected to see a long-term reversable arable agricultural production cessation.

270 *Operational Agricultural Employment GVA Loss*

271 The assessment has already calculated that **7 direct local FTE jobs** will be lost due to long-term reversable arable agricultural production cessation.

272 Looking locally at the Study Area it is noted from the results of the baseline assessment that the average GVA[52] per agricultural employee[53] in the East Midlands equates to approximately £128,667.

273 The long-term arable agricultural production cessation would result in a reduction in GVA of approximately £87.5m (£128,667 x 7) x 40) over the operational and maintenance phase (40 years). After applying the appropriate discount rate this would equate to a **real terms GVA loss of circa £19.23m.**

274 *Operational Agricultural Employment GVA Gain*

275 The Applicant has secured a deal with local sheep farmers, with the intention of allowing the farmers to graze the solar areas of the land that fall within the Order Limits free of charge. A best-case estimation is that up to 9,600 sheep will graze within the first year (with 4,000 Ewells and 5,600 newly born lambs), however this assessment provides a worst-case scenario approach.

276 In order to estimate the likely employment generated by the sheep grazing on site, BRE's 'Agricultural Good Practice Guidance for Solar Farms' (2014) has been reviewed. This states "between 4 and 8 sheep/hectare may be achievable" on solar farms. A conservative approach of 4 sheep per Ha has been adopted.

277 The Work Area 1 within the Order Limits is approximately 1,025 ha. Therefore, it is expected that there will be 4,100 (1,025 ha x 4) sheep grazing the solar areas of the land that falls within the Draft Order Limits.

[52] Office of National Statistics (2024). Regional gross value added (balanced) by industry: local authorities by ITL1 region. Available at: https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/regionalgrossvalueaddedbalancedbyindustrylocalauthoritiesbyitl1region [Accessed on 10/10/2024].

[53] Office of National Statistics (2022). Business Register and Employment Survey. Available at: https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=189 [Accessed on 30/04/2024]

278 According to the Nix Farm Management Pocketbook (2024)[54], the amount of Standard Workday's (SWD) required per head of sheep equates to 0.5. Consequently, 4,100 sheep would require 2,050 SWD's or approximately 8 direct local FTE jobs per year ((2,050 SWD x 8)/2,200)). Consequently, the loss in employment related to agricultural production is offset by the sheep grazing. This represents an additional agricultural employment GVA of £1.03m (£128.667 x 8 FTE workers) per annum.

279 The GVA associated with operational sheep grazing is approximately £41.1m, or **£21.9m**, after applying the appropriate discount rate.

280 Therefore, when comparing the total employment GVA lost by the cessation of agriculture (£19.23m) to the GVA created by operational and maintenance staff (circa £22.3m) and the sheep grazing employment GVA (£21.9m) there is a net real term gain of c.£25m.

281 *Operational Agricultural Output GVA Loss*

282 In addition to the GVA effects, the assessment also needs to consider the loss of agricultural output from production. Once again, utilising the Nix Farm Pocketbook (2024), £2.0m of agricultural production output will be lost per annum. A further £80m of output would be lost over the full operational period (£2m x 40 years). After applying the appropriate discount rate (3.5%) this would equate to a **real term output loss of circa £42.75m.**

283 However, operational agricultural GVA loss needs to be compared to the assessment of economic output as a result of the sale of electricity sold during the operational phase which has been estimated at £526.7m and business rates circa £34.9m generated (see section 13.8.2).

284 *Operational Agricultural Output GVA Gain*

285 There is also anticipated to be indirect output associated with lambing associated with the sheep grazing the land. As above, it is anticipated that there will be 4,100 sheep grazing on the total solar area. The John Nix Farm Management Pocketbook estimates that upland spring lambs generate an output of £126 per ewe. The output for upland spring lambs has been used, as opposed to lowland spring lambs. This is because, without knowledge of the sheep breeds proposed, the breed with the lower output must be used in the assessment, to ensure a worst-case scenario is assessed. Consequently, it is expected that a further £0.5m of indirect output associated with lambing per year, or £20.7m over the operational period. After applying the relevant discount rate, this equates to an **indirect increase in output equivalent to £11m**.

286 *Sensitivity of Receptor*

287 As per Table 13.12, the sensitivity of the receptor is **Medium**.

288 *Magnitude of Impact*

289 The impact on agricultural output is direct through the physical change of use of land and loss of employment and also indirect in terms of the GVA

[54] Graham Redman, Nix Farm Management Pocketbook, 55th Edition (Agro Business Consultants Ltd, 2024), 205.

associated with any agricultural person-years of employment lost as a result of the Development. Due to the sheep grazing and sale proposed there will actually be a small net loss per annum in agricultural operational GVA as result of the Development's operation phase.

290 The impact is predicted to be of local spatial extent and long-term continuous duration, and the magnitude is considered to be **Minor Adverse**.

291 *Significance of Effects*

292 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Negligible**.

13.8.4.3 Decommissioning

293 The reduction in agricultural output associated with the decommissioning stage is considered to be commensurate with the construction stage.

294 *Sensitivity of Receptor*

295 As per Table 13.12, the sensitivity of the receptor is **Medium**.

296 *Magnitude of Impact*

297 The magnitude of impact is assessed to be commensurate with the construction stage and, therefore, is considered to be **Negligible**.

298 *Significance of Effects*

299 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Negligible** which is **not significant**.

13.8.5 Change in Visitor Economy

300 Potential effects may arise from impacts on the tourism economy, including the operation of nearby attractions and accommodation providers, as well as users of the PRoW network. During the construction and decommissioning phases effects on tourism / recreational tourism could arise from noise, visual and air quality effects of construction, whilst during the operational phase the effects are more associated with the visual impact of the Development. It is noted that there will be no loss of any existing Public Rights of Way as a result of the Development and 21 permissive footpaths and 6 permissive bridleways will be created that will increase access to outdoor recreation in the countryside and improve connectivity to existing PRoW networks for recreational and tourist use. This could potentially have beneficial impacts on recreational tourism during operation.

13.8.5.1 Construction Phase

301 At construction stage the visual impact of construction equipment and the associated noise and traffic impacts has the potential to impact nearby tourism receptors.

302 No significant effects from construction traffic have been identified within the ES Chapter 14:Traffic and Transport [EN010162/APP/6.2.14] and all effects have been minimised. Therefore, there is not expected to be any direct impact on those using road networks to visit tourist attractions in the Study Area.

303 ES Chapter 12: Noise and Vibration [EN010162/APP/6.2.12] assesses that there will be no significant traffic noise or vibration effects during the construction period.

304 ES Chapter 7: Landscape and Visual Impact [EN010162/APP/6.2.7] finds significant effects during the construction period. The LVIA goes onto explain "*Taking account of the similar scale and extent of effects during construction and early operation (before planting matures), and during operation and decommissioning (after hedges around solar areas have reached their design height – thereby screening solar panels and subsequent decommissioning activity) – these stages are assessed together*". This means the assessment of visual receptors during "early construction" is commensurate of the assessment of visual receptors during operation.

305 Within this chapter during the operational period, there is expected to be a significant effect on the character areas of 'Mid-Nottinghamshire Farmlands / Village Farmlands with Ancient Woodlands LCT' and Trent Washlands / Village Farmlands LCT'. Significant effects would arise as a result of Medium-term changes to views for the following visual receptors:

- Users of Public Rights of Way:
  - Between Micklebarrow Hill and Kelham;
  - Between Caunton and the A617;
  - Between Caunton, Eakring and Kneesall – east of Eakring and around Maplebeck;
  - Between Kneesall, Caunton and Ossington Airfield;
  - Between the A1, Ossington and Moorhouse; and
  - Between Carlton-on-Trent, Ossington and Norwell.
- Users of local roads:
  - Between Caunton, Eakring and Kneesall;
  - Between Kneesall, Caunton and Ossington Airfield; and
  - Between Carlton-on-Trent, Ossington, Cromwell and Norwell – in the north of this area.

306 Recreation effects are assessed in Chapter 18: Recreation [EN010162/APP/6.2.18]. Tourism could be impacted should PRoW that are assessed as having significant recreation effects be well used by tourists.

307 *PRoW Usage by Tourists*

308 PRoW usage has been used as an indicator to assist in estimating the scale of impact arising from the Development on the tourism economy, which informs the professional judgement reached as to the magnitude of change and consequently any likely significant socio-economic effects. The indicator has regard to the proportion of PRoWs affected by the Development that in a worst-case may be used by tourists and which, indicatively based on locations representative of the wider area assessed in Chapter 7: Landscape and Visual Impact [EN010162/APP/6.2.7], have high degrees of visual change. It also has regard to user attitudes towards solar development from a sample of PRoW users and what proportion of these users were visitors to the area, i.e. tourists for the purposes of the assessment. The indicator is a realistic worst-case, as not all tourists engaging in general sightseeing would use the PRoW network and not all of these would forgo visiting the area due

to visual changes associated with the Development. Indeed Chapter 18, Recreation [EN010162/APP/6.2.18], the majority of potential effects on PRoW and other recreation receptors were assessed as being negligible and not significant.

309 With regards to the proportion of tourists using PRoWs, according to the Newark and Sherwood District Council Visitor Economy Strategy (2019)[55], there were 4.46m total visitors to Newark and Sherwood in the most recent year of data (2019). Of these 15% were said to have been visiting for "general sightseeing" (the most closely related visit purpose to use of PRoW footpaths available). There are a variety of types of general sightseeing such as: 1) Landmarks and Monuments (that are not attractions as this has been counted separately within the Newark and Sherwood District Council Visitor Economy Strategy); 2) Natural Beauty; 3) Cultural and Heritage Tours; 4) Architectural Tours. It cannot be known of the "general sightseeing" tourists how many of them use Newark and Sherwood's PRoW routes. However, as part of a realistic worst-case scenario this assessment assumes 50% of them use PRoW paths as part of "general sightseeing".

310 This implies 334,500 (4.46m x 0.15 x 0.5) tourists use PRoW when visiting Newark and Sherwood.

311 There are a total of 1,960 PRoWs within Newark and Sherwood. Chapter 18, Recreation [EN010162/APP/6.2.18] states that 117 PRoWs are within the Recreation Study Area (which extends 250 m from the Order Limits). Figure 7.7 of ES Chapter 7: Landscape and Visual Impact [EN010162/APP/6.2.7] identified 16 PRoW segments along the Development's PRoW network with a "large" scale of change to their visual environment. Therefore, of Newark and Sherwood's total PRoW paths, 0.8% of PRoWs (16 out of 1,960) will have a large scale of change to their visual environment.

312 Applying this 0.8% to the 334,500 estimated tourist users of Newark and Sherwood's PRoWs equates to 2,676 per annum tourist users that may use the 16 "large scale of change" PRoWs as a result of the Development.

313 As part of this SEIA Assessment, PRoW user surveys were conducted with an aim to assess potential impact on tourist users. The survey aimed to understand the usage patterns of PRoW that go through the Order Limits. The purpose is to understand to what extent, if any, the tourism economy will be impacted due to the Development.

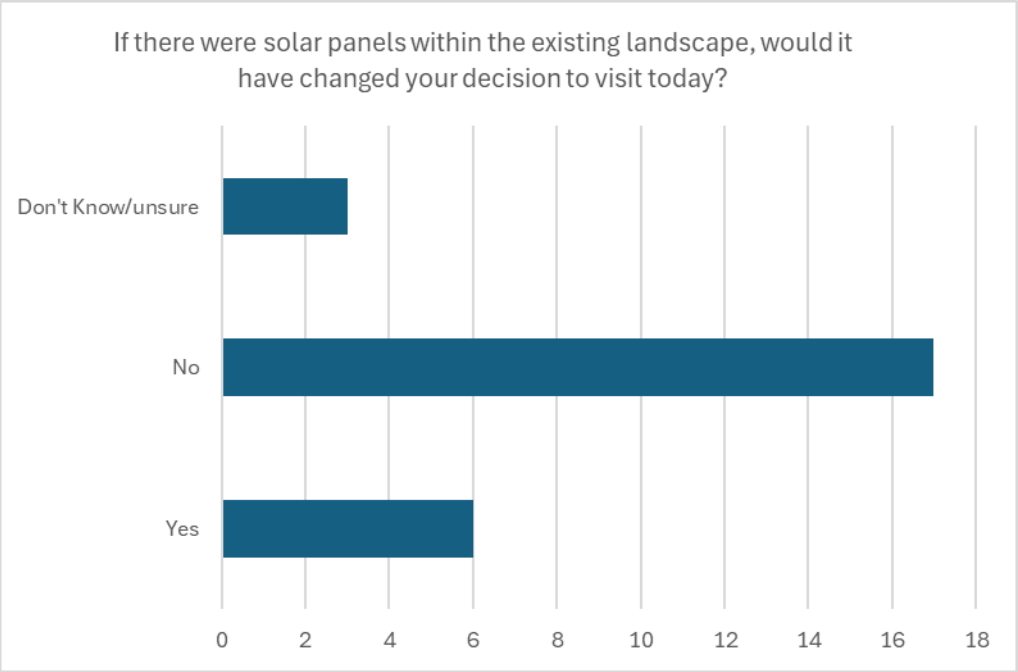
314 There was a total of 186 respondents, with 73% of respondents being residents and only 27% of respondents being visitors. 61% of people live under 2 miles away from where they were surveyed. Of the 27% respondents who identified themselves as visitors, when analysing their home postcodes or towns, circa 24 (48%) of them came from Newark and Sherwood and whilst the remaining 26 (52%) came from outside Newark and Sherwood. Therefore, for the purposes of assessing Newark and Sherwood tourism impact – a proportion of 14% (27% x 0.52) has been calculated to identify as tourists. Consequently, of total responders, c.86% of them were

[55] NSDC (2019) Newark and Sherwood District Council Visitor Economy Strategy (2019). Available at: https://www.newark-sherwooddc.gov.uk/media/newark-and-sherwood/images-and-files/strategies-and-policies/pdfs/Visitor-Economy--Strategy-2020-23---FINAL.pdf [Accessed on 04/06/2025]

Newark and Sherwood residents and c.14% of them are non-Newark and Sherwood residents (tourists for the purpose of this assessment).

315 When asked "If there were solar panels within the existing landscape, would it have changed your decision to visit today?" 6 out of the 26 (23%) of those identified as tourists (who come from non-Newark and Sherwood postcodes) said yes, whilst the majority (65%) of tourists said "no".

Inset 13.2: PRoW Solar Impact Question 1



316 A second but similar question was asked of users. When asked *"Would the installation of solar panels in this area influence your decision to visit again?"* 30% of surveyed tourists said "yes", whilst 58% said "No".

317 *PRoW Tourism Assessment Conclusions*

318 The surveyed PRoWs are used predominantly by Newark and Sherwood residents. There is a low (14%) proportion of non-Newark and Sherwood resident (tourists) users of the surveyed PRoWs.

319 Of the 26 total tourists, 23% of them would have changed their decision to visit if there were solar panels (as shown on Inset 13.2) – this is reasonably low also considering the majority (65%) answered "No" to this question, which would increase to circa 70% when counting tourists who would not have changed their decision or are unsure.

320 Applying the worst-case 23% to the estimated 2,676 tourists who have been estimated to use the 8 surveyed PRoWs, results in an estimated loss of 616 tourists per annum because of the Development. This represents a loss of 0.0138% (616 divided by 4.46m) or 14 in 100,000 of the total annual tourist visitors to Newark and Sherwood.

321 Overall, the Development is estimated, as a worst-case, to lead to a negligible percentage (0.0138%) reduction in the number of tourists to Newark and Sherwood. As a further worst-case approach, this assessment has not accounted for potential increases in tourist attraction resulting from

the 27 new permissive paths and new long distance path created by the Development (as discussed further in Chapter 18, Recreation [EN010162/APP/6.2.18].

322 *PRoW Economic Loss Implications (Construction Phase)*

323 According to the Newark and Sherwood District Council Visitor Economy Strategy (2019), the annual economic value of the visitor economy in Newark and Sherwood was £298.32m as of 2019 (most recent available data). By extrapolating the estimated loss (0.0138%) to the total annual economic value of the Newark and Sherwood visitor economy, £41,168 is estimated to be lost per annum or £82,336 over the construction period.

324 *Holiday Accommodation Attractiveness*

325 In addition to the above, the effect of construction works on the attractiveness of local holiday accommodation has also been considered.

326 It is recognised that accommodation providers would benefit from construction worker stays, particularly in the winter months when occupancy levels drop. However, this assessment will not account for the estimated accommodation income from temporary construction workers as part of a worst-case scenario assessment. Any financial reductions within the visitor economy have already been accounted for in the £82,336 loss to the Newark and Sherwood visitor economy over the construction period.

327 The baseline assessment has found that, within the area around the Order Limits, short-term rental holiday accommodation is sparsely populated. The majority (c.89%) of the short-term holiday accommodation are situated, as seen in Figure 13.3, in locations such as Newark, Southwell, Winthorpe, Ollerton, Wellow and Edwinstowe.

328 In these locations the accommodation is unlikely to be impacted by noise or visual impacts.

329 However, surrounding tourism receptors such as the PRoW network could be impacted. Businesses could experience some loss of custom due to impacts on the PRoW network during construction and the economic value of this loss has been calculated in the 'PRoW Economic Loss Implications' section, above.

330 Research into occupancy rates of accommodation providers in the East Midlands from Visit Britain[56] shows that the most popular months for stays are June, July and September. Although there may, as a worst-case, be some impact on reduced tourist visitors staying in local accommodation, this is likely to be superseded by the need for construction workers to stay overnight.

331 *Sensitivity of Receptor*

332 The tourism industry does contribute towards the Study Area economy, with annual visitor numbers of around 4,461,000 and overall visitor spend of

[56] VisitBritain (2023). England Hotel Occupancy, January – December. Available at: https://www.visitbritain.org/research-insights#latest-releases [Accessed on 11/10/2024].

£289.32m reported in 2019[57]. However, the main reasons for visiting the District were attending arts events/festivals (21%); visiting attractions (17%); and general sightseeing (15%)[58].

333 The vulnerability of the receptor is considered to be high; however, the recoverability of the receptor is also considered to be high.

334 In conclusion, as per Table 13.12, the sensitivity of the receptor is considered to be **Low**.

335 *Magnitude of Impact*

336 The effect is indirect in terms of any effect of reduced visitor numbers on local person-years of employment and spending in the local economy.

337 The impact is predicted to be of local spatial extent and medium-term continuous duration, and the magnitude is considered to be **Low Adverse**.

338 *Significance of Effects*

339 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Negligible** which is **not significant**.

13.8.5.2 Operation and Maintenance

340 As part of this assessment of tourism impacts, the conclusions of ES Chapter 7: Landscape and Visual Impact [EN010162/APP/6.2.7] have been reviewed. As mentioned earlier the LVIA chapter assesses the same effects during "early construction" as "operation" therefore, a large scale of change to the visual environment would arise as a result of Medium-term changes to views for the above 16 PRoWs.

341 No restrictions are envisaged to PRoWs at operational stage and 21 permissive footpaths and 6 permissive bridleways will be created, which will increase access to outdoor recreation in the countryside and improve connectivity to existing PRoW networks. Furthermore, Chapter 7 states mitigation of hedges will help to mitigate any visual impact related to the operation phase. Therefore, any impacts on the visitor economy at operational stage will relate to the effect of the visual change in landscape from agricultural fields to fields with ground mounted solar arrays.

342 The Recreation assessment Chapter 18: Recreation [EN010162/APP/6.2.18] has concluded that the new permissive routes proposed as part of the Development will provide "*improved access by way of connecting disjointed areas of the network of PRoW; reduce the need to walk along roads without pavements or through areas where there may be difficulties in managing the different requirements of recreation and livestock; and/or provide improved options for circular walks*."

[57] Newark and Sherwood District Council. Visitor Economy Strategy 2020-2023. Available at: https://www.newark-sherwooddc.gov.uk/media/newark-and-sherwood/images-and-files/strategies-and-policies/pdfs/Visitor-Economy--Strategy-2020-23---FINAL.pdf [Accessed on 11/10/2024].
[58] Newark and Sherwood District Council. Visitor Economy Strategy 2020-2023. Available at: https://www.newark-sherwooddc.gov.uk/media/newark-and-sherwood/images-and-files/strategies-and-policies/pdfs/Visitor-Economy--Strategy-2020-23---FINAL.pdf [Accessed on 11/10/2024].

343 *Sensitivity of Receptor*

344 Commensurate with the construction phase the sensitivity of the receptor is considered to be **Low**.

345 *Magnitude of Impact*

346 The impact is indirect in terms of any effect of changes in visitor numbers on local person-years of employment and spending in the local economy.

347 The impact is predicted to be of regional spatial extent and long-term continuous duration. While the evidence base is not conclusive, the available research suggests that wider perceptions held by tourists in relation to climate change and renewable energy play a role in how tourists weigh up the positive and negative effects of renewable energy infrastructure and may influence their reactions. This means that, even in cases where a solar farm development may have an effect on characteristics of a tourism area that visitors value, the way that this effect is assessed by visitors (and reflected in future behaviour) is influenced by wider views and perceptions. The most recent Department for Energy Security and Net Zero (DESNZ) Public Attitudes Tracker (PAT)[59] carried out in Spring 2024 found that 84% of people supported renewable energy as a general concept. Solar energy was the most supported form of renewable energy in the survey. Opposition to solar energy represented 2% of those surveyed, compared to 88% who were supportive.

348 Although there has been little research into the tourism impact of large-scale solar projects, a Welsh Government report produced in 2014[60] found that there is little evidence that wind farms have had or are having a negative effect on tourism across Wales and the UK as a whole. Therefore, given that research also conducted in 2014 which reviewed the dynamic properties of the preferences for renewable energy sources found that, in terms of the visual effects of onshore renewable energy infrastructure, there is an increased preference for biomass and solar energy solutions relative to wind power; this suggests that the negative effects on tourism may be slightly lower for solar than for wind farms. This is supported by the latest DESNZ PAT.

349 Furthermore, as assessed previously in the PRoW User Surveys, of the 26 total tourists asked, 23% of them would have changed their decision to visit if solar panels were in the area which is still reasonably low.

350 Given the above the magnitude of impact is considered to be **Low Adverse**.

351 *Significance of Effects*

352 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Minor Adverse**.

[59] Department for Energy Security & Net Zero (2024). Public Attitudes Tracker – Spring 2024. Available at: https://assets.publishing.service.gov.uk/media/6683d0774e8630de32854694/DESNZ-PAT-spring-2024-technical-overview.pdf [Accessed on 11/10/2024].
[60] Jacob Ladenburg (2014). Dynamic properties of the preferences for renewable energy sources – A wind power experience-based approach. [Accessed 11/10/2024].

13.8.5.3 Decommissioning

353 Due to a lack of available data forecasting the tourism economy at the time of decommissioning, the impacts on tourism receptors are assumed to be commensurate with the construction phase.

354 *Sensitivity of Receptor*

355 Without any definitive future data, a worst-case scenario assessment has to assume the sensitivity is similar to construction stage, the sensitivity of the receptor is considered to be **Low**.

356 *Magnitude of Impact*

357 The decommissioning effects are likely to be similar to the construction phase effects. Given the absence of reliable baseline data at a realistic date in the future for decommissioning and given that the effects are likely to be similar in nature but lesser in magnitude, the magnitude is considered to be **Low Adverse**.

358 *Significance of Effects*

359 The magnitude of the impact is low, and the sensitivity of the receptor is Low. The effect will, therefore, be **Negligible** which is **not significant**.

13.8.6 Temporary Worker Accommodation

360 Should there be a significant proportion of non-resident workers during the construction and decommissioning phases, this could impact residents within the Study Area. Therefore, the demand for temporary worker accommodation has been assessed.

361 According to the Business Register and Employment Survey (2023)[61], the construction sector is the sixth largest employer in Newark and Sherwood, employing 3,000 individuals, or 6% of the workforce. In addition, as discussed when defining the Study Area, there are significant inflows/outflows between Newark and Sherwood and Mansfield.

362 Furthermore, CITB's 'Workforce Mobility and Skills in the UK Construction Sector 2022 – East Midland's' (2023)[62] states "In the East Midlands, around one in twenty (6%) construction workers reported that they were currently staying in temporary accommodation while working at their site, in line with the national picture (5%)". The report also states that "Over a third (36%) of those providing a response travel less than 10 miles to work, three in five (61%) travel between 10 and 49 miles, and the remaining 3% travel further." This reiterates the low number of expected construction/decommissioning workers likely to require temporary accommodation to work on the Development.

[61] Office of National Statistics (2022). Business Register and Employment Survey. Available at: https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=189 [Accessed on 30/04/2024]
[62] CITB (2023). Workforce Mobility and Skills in the UK Construction Sector 2022 – East Midland's. Available at: https://www.citb.co.uk/media/ozvnfg0w/2272_bmg_workforce_mobility_and_skills__east_midlands_v1.pdf [Accessed on 11/10/2024].

363 TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] sets out initiatives to provide a targeted scheme of access to construction, operation and maintenance and decommissioning provide targeted training schemes and apprenticeships to disadvantaged adults, and young people in the local and regional area who are NEET. This emphasises the desire to provide employment/training within the local area, reducing the potential requirement to hire non-resident workers.

364 Notwithstanding the low number of workers envisaged to require accommodation, AirDNA data for short-term rentals is presented within TA A13.1 - Socioeconomic Baseline Report [EN010162/APP/6.4.13.1]. This shows that, within the Study Area, there is a modest number of short-term rental providers, with a greater density of options within the towns/villages surrounding the order limits, *e.g.* Newark-upon-Trent, Southwell, Edwinstowe and Wellow.

365 Regional room occupancy rates are measured monthly as part of the England Occupancy Survey (EOS)[63]. It shows that, in the East Midlands in 2023, room occupancy was at its lowest during the months of December, January and February (64-73%). Should there be a small proportion of non-resident workers employed during construction, they could provide consistent additional income for accommodation providers during the quieter months of the year.

13.8.6.1 Construction Phase

366 During the full two-year construction phase, it is anticipated that there will be a gain in employment equivalent to 1,204 direct local person years. Given the pool of construction employees within Newark and Sherwood (3,000) and Mansfield (2,250), as well as construction employment further afield within Mansfield and Lincoln TTWAs, there is likely to be a low proportion of the workforce who are non-resident. Furthermore, TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] ensures that training and employment opportunities are specifically targeted towards the resident population.

367 Furthermore, based on the assessment of short-term rental accommodation in the Study Area and occupancy rates regionally, it is assumed that any non-resident workforce would have an adequate number of short-term rental options that it would not impact upon Study Area residents.

368 In conclusion, it is envisaged that non-resident employment is likely to be minimal. In addition, should there be any non-resident construction employment, there is likely to be a sufficient supply of short-term rental accommodation to cater for demand.

369 *Sensitivity of Receptor*

370 The vulnerability of the receptor is considered to be low given the large number of workers within the Study Area and surrounding local authorities who work within the construction sector. There is also a modest supply of short-term rental accommodation within the Study Area to cater for an

[63] VisitBritain (2023). England Hotel Occupancy, January – December. Available at: https://www.visitbritain.org/research-insights#latest-releases [Accessed on 11/10/2024].

anticipated number of non-resident workers. Room occupancy data for the region indicates that there are likely to be vacant rooms year-round, but especially during winter months.

371 Therefore, the sensitivity of the receptor is **Low**.

372 *Magnitude of Impact*

373 The impact is predicted to be of local spatial extent and medium-term duration. Given that it is anticipated that the non-resident workforce will be very minimal, the magnitude of the impact is considered to be **Low**.

374 *Significance of Effects*

375 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Negligible**.

13.8.6.2 Decommissioning Phase

376 The effects of the decommissioning stage on temporary worker accommodation are considered commensurate with the construction stage.

377 *Sensitivity of Receptor*

378 The sensitivity of the receptor is assessed to be commensurate with the construction phase.

379 Therefore, the sensitivity of the receptor is **Low**.

380 *Magnitude of Impact*

381 The impact is predicted to be of local spatial extent and medium-term duration. Given that it is anticipated that the non-resident workforce will be very minimal, the magnitude of the impact is considered to be **Low**.

382 *Significance of Effects*

383 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Negligible**.

13.8.7 Disruption to Travel Patterns

13.8.7.1 Construction phase

384 As stated above, Within ES Chapter 14: Traffic and Access [EN010162/APP/6.2.14] no significant impacts have been identified at construction stage. Therefore, there is not expected to be disruption to travel patterns during this phase.

385 *Sensitivity of Receptor*

386 The vulnerability of the receptor is considered low given the high percentage of people in the Study Area who work from home. In addition, the recoverability is considered relatively high given the options for alternative travel routes via private car and the availability of rail as an alternative mode of transport in the local area.

387 The sensitivity of the receptor is **Low.**

388 *Magnitude of Impact*

389 The impact is predicted to be of local spatial extent and medium-term intermittent duration. The magnitude is therefore considered to be **Low Adverse** or **Negligible**.

390 *Significance of Effects*

391 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Negligible**.

13.8.7.2 Study Area Decommissioning

392 ES Chapter 14: Traffic and Access [EN010162/APP/6.2.14] states that, as with the construction phase, any effects will also be short term and temporary and are overall, considered to be negligible and not significant. The effects of the decommissioning stage on commuting patterns are considered commensurate with the construction stage.

393 *Sensitivity of Receptor*

394 The sensitivity of the receptor is likely to be commensurate with the construction phase. The sensitivity of the receptor is **Low.**

395 *Magnitude of Impact*

396 The impact is predicted to be of local spatial extent and medium-term intermittent duration. The magnitude is therefore considered to be **Low Adverse** or **Negligible**.

397 *Significance of Effects*

398 Based on the sensitivity of the receptor and the magnitude of the impact, the significance of the effect is considered to be **Negligible**.

13.8.8 Future Monitoring

399 Monitoring the scale and type of local economic benefits that the Development realises would provide intelligence about the success of particular measures proposed, as well as improving the wider evidence base about the local economic benefits associated with similar scale ground mounted solar photovoltaic generating stations.

400 It is proposed that the monitoring would include the use of the Development's supply chain and employment records. Subject to obligations under the General Data Protection Regulation (GDPR)[64], this would include anonymised information on the home and workplace locations of direct employees and additional supply chain and employment information from the main suppliers. This information would be made available to the local planning authority on request, again subject to GDPR obligations.

401 Table 13.24 below outlines the proposed monitoring measures.

[64] UK Government (2018). Data Protection Act. Available at: https://www.legislation.gov.uk/ukpga/2018/12/enacted/data.pdf [Accessed on 11/10/2024].

Table 13.24: Monitoring Measures

Mitigation Number	Measure adopted	How the measure will be secured
13.1	Monitor supply chain and employment records	DCO Requirement for a Skills, Supply Chain and Employment Plan (SSCEP) based on the Outline SSCEP, TA A13.2 [EN010162/APP/6.4.13.2]

13.9 CUMULATIVE EFFECTS ASSESSMENT

402 The assessment of cumulative effects on socioeconomics and tourism has followed the methodology set out ES Chapter 2: EIA Chapter [EN010162/APP/ 6.2.2]. As part of the assessment, all projects and plans considered alongside the Development have been allocated into 'tiers' reflecting their current stage within the planning and development process.

403 The effects scoped into the assessment of cumulative effects are limited to the effects on temporary worker accommodation, arising from the Development against a baseline that includes other developments requiring specialist construction employment.

13.9.1 Renewable Energy Cumulative Developments

404 The construction employment generated from solar developments has been assessed utilising the estimation of person-years of employment required (20.8 jobs per year per MW installed) established within the 'Regional electricity generation and employment in UK regions' study (2017).

405 Table 13.25 summarises the estimated person-years of employment required for each of the cumulative solar developments which totals to a net annual construction employment number of 2,387 person-years. This is a worst-case scenario assuming if each development had the exact same construction phasing and were constructed at the same time

Table 13.25: Renewable Energy Tier 1 Cumulative Developments

Ref	Development Name	Renewable Develop-ment Type	Status	Capacity (MW)	Gross Estimated Person Years of Employment	After 25% Displacement	Estimated Construction Period of Schemes	Estimated Person Years Created Per Annum
22/01840/FULM	Staythorpe BESS	BESS	Refused - 07/07/2023 - Appeal allowed	N/A	161	121	2	60
24/01261/FULM	Staythorpe BESS connection	BESS	Approved - December 2024	N/A				
23/00317/FULM	SSE BESS	BESS	Awaiting determination (as of 30/10/2024)	N/A	321	241	2	120
23/00810/FULM	SSE BESS cable route	BESS	Approved - 20/06/2024	N/A				
20/02501/FULM	Winkburn Solar Farm	Solar	Approved - 20/05/2021	32	666	499	0.5	499

Ref	Development Name	Renewable Develop-ment Type	Status	Capacity (MW)	Gross Estimated Person Years of Employment	After 25% Displacement	Estimated Construction Period of Schemes	Estimated Person Years Created Per Annum
22/00976/FULM	Knapthorpe Solar	Solar	Refused - 17/11/2023- Appeal submitted - awaiting decision	49.9	1038	778	1	778
22/00975/FULM	Knapthorpe Solar	Solar	Refused - 17/11/2023- Appeal submitted - awaiting decision					
23/01837/FULM	Kelham Solar	Solar	Awaiting determination (as of 30/10/2024)	49.9	1038	778	0.5	75
22/01983/FULM	Foxholes Solar	Solar	Awaiting determination (as of 30/10/2024)	49.9	1038	778	0.5	75
21/01577/FULM	Tuxford Road Solar Farm	Solar	Approved - 16/12/2021	49.9	1038	778	0.5	778
Total								2,387

Table 13.26: Non-Renewable Tier 1 Cumulative Developments

Ref	Develop-ment Name	General Construction Development Type	Status	Capacity (MW)	Gross Estimated Construction Years of Employment	After 25% Displace-ment	Estimated Construc-tion Period of Schemes	Estimated Person Years Created Per Annum
TR010065	A46 bypass	Road Widening Works	DCO application submitted	N/A	200	150	2	75
22/01249/ FULM	N/A	Road Infrastructure	Approved 09/09/2022	N/A	N/A	N/A	1	60
ES/4441	Ness Farm 1	Quarry Extension	Approved - 07/06/2023	N/A	N/A	N/A	0.5	100
ES/4690	Ness Farm 2	Quarry Extension	Awaiting determina-tion as of 11/02/2025	N/A	N/A	N/A	0.5	
V/4462	Ness Farm 3	Quarry Extension	Approved - 07/06/2023	N/A	N/A	N/A	1	
F/4395	N/A	Mineral Plant Relocation	Approved - 30/09/2022	N/A	N/A	N/A	1	125
Total								360

13.9.2 Non-Renewable Cumulative Developments

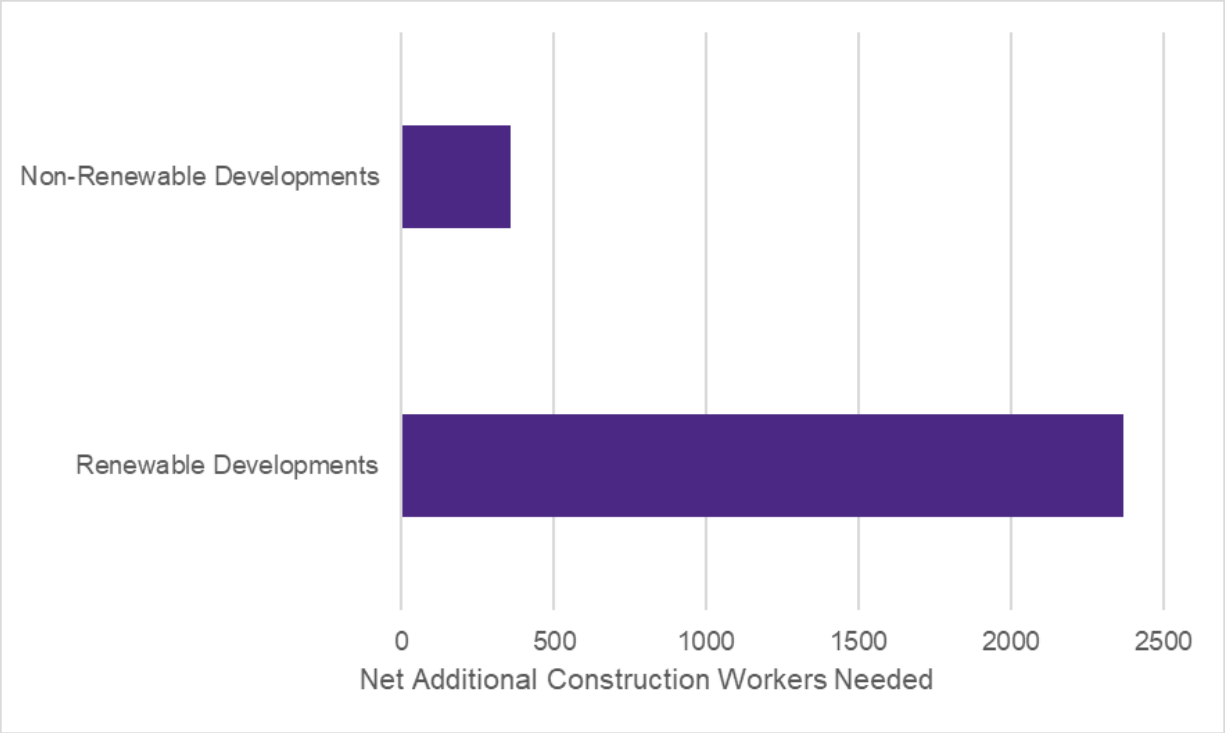
406 Table 13.26 shows a variety of general construction types. Their application documents shared construction numbers and these were also benchmarked against industry averages.

407 The total estimated person-years created per annum is 360.

13.9.3 Overall Cumulative Construction Workers Summary

408 Summarising the information above, a total net additional 2,747 construction person years have been identified (2,387 from renewable developments and 360 from non-renewable developments) across 17 unique cumulative schemes relevant to the socioeconomic, tourism and recreation assessment. The split of workers is shown in Inset 13.3.

Inset 13.3: Total Net Additional Construction Workers



13.9.4 Construction Employment Landscape

409 Table 13.27 shows according to the ONS Business Register and Employment Survey (2023), Newark and Sherwood have a higher proportion (6%) of total employees working in the construction industry, compared to England (4.7%) or the East Midlands (4.2%). Furthermore, when taking into consideration the total number of construction person years expected to be required as a result of the 16 cumulative developments (2,747) it is clear that the number of construction workers from Newark and Sherwood (3,000) is sufficient to cover this cumulative total. However, it is realistic that not all cumulative employment will occur from within the Study Area due to displacement.

410 Therefore, when considering the wider Employment Study Area, which, includes Newark and Sherwood, as well as Mansfield as the second highest

commuting inflow borough into the Study Area there are a total of 5,250 construction workers as seen in the Socio-Economic Baseline. This would appear an adequate supply of construction workers for the needs of the cumulative developments.

411 The Development will require a total of 1,204 net direct local construction person years during its 2-year construction phase, which equates to 602 construction workers per annum. In addition to the 17 cumulative developments (2,747) this equates to 3,349.

412 There is, therefore, a surplus of 1,901 construction workers when compared to the total number of construction workers available in Newark and Sherwood's wider Employment Study Area (Newark and Sherwood and Mansfield).

Table 13.27: Construction Worker Supply

ONS, 2023	**Wider Employment Study Area**				**East Midlands**		**England**	
Industry	**Newark and Sherwood**		**Mansfield**					
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Construction (F)	3,000	6	2,250	5.2	91,000	4.3	1,298,000	4.7

13.9.4.1 Temporary Accommodation Demand

413 Although a total of 3,349 annual net direct construction person years has been identified as a result of the cumulative developments (2,747) and the Development (602), Newark and Sherwood, as well as Mansfield have 1,901 more construction workers, suggesting it is possible that all workers could come from the Study Area or neighbouring local authorities and thus wouldn't require any temporary accommodation. In reality, construction workers will likely be sourced from other commuter inflow local authorities which will further mitigate any temporary accommodation pressure.

414 There is, therefore, a surplus of 1,901 construction person years when compared to the total number of construction workers available in the Employment Study Area (Newark and Sherwood and Mansfield).

415 Furthermore, CITB's 'Workforce Mobility and Skills in the UK Construction Sector 2022 – East Midland's' (2023)[65] states "In the East Midlands, around one in twenty (6%) construction workers reported that they were currently staying in temporary accommodation while working at their site, in line with the national picture (5%)".

416 Applying 6% to the 3,349 cumulative construction person-years, this would mean 201 people may need to stay in temporary accommodation.

[65] CITB (2023). Workforce Mobility and Skills in the UK Construction Sector 2022 – East Midland's. Available at: https://www.citb.co.uk/media/ozvnfg0w/2272_bmg_workforce_mobility_and_skills__east_midlands_v1.pdf [Accessed on 11/10/2024].

13.9.4.2 Accommodation Supply and Tourist Impact

417 Notwithstanding the low number of workers (201) who will require accommodation, AirDNA data for short-term rentals is presented within the TA A13.1, Socioeconomic Baseline Report [EN010162/APP/6.4.13.1]. This shows that, within the Study Area, there is a modest number of short-term rental providers, with a greater density of options within the towns/villages surrounding the Order Limits, e.g. Newark-upon-Trent, Southwell, Edwinstowe and Wellow.

418 Table 13.28 presents the supply and occupancy rate of Nottinghamshire, according to Property Market website, Property Market Intel (2025).

419 Applying the average occupancy rate (51%) to the total supply of serviced accommodation bedspaces in Nottinghamshire (558), equates to 284 unoccupied serviced accommodations throughout the year. Furthermore, this does not include 'Hotel' options would provide even more vacant accommodation spaces.

420 Occupancy rates inherently consider demand for the indicator measured. As there is an average 51% occupancy rate within Nottinghamshire's short-term accommodation this means the existing demand from staying tourists is accounted for within the 51% occupancy rate.

Table 13.28: Serviced Accommodation Supply and Occupancy

Serviced Accommodation	Nottinghamshire
Supply	558
Occupancy Rate	51%

13.9.5 Temporary Workers Accommodation Conclusion

421 Based on the above there will be at least 41% more available temporary accommodation bed spaces (284) for the 201 cumulative construction workers who may need them. Therefore, there is a **Negligible** impact, which is not significant.

13.10 SUMMARY OF IMPACTS AND MONITORING

422 Information on socioeconomics within the Study Area was collected and informed by a review of relevant evidence sources, including scientific literature, baseline data, policy and legislation and EIA scoping.

423 Table 13.29 presents a summary of the potential impacts and residual effects in respect to socioeconomics. The impacts assessed include:

- Unemployment;
- Economic Output;
- Skills and Qualifications;
- Agricultural Output;
- Changes to Visitor Economy;
- Temporary Worker Accommodation; and
- Disruption to Travel Patterns.

424 It is concluded that based on a worst-case scenario and on the information currently available there will be no significant adverse effects on socioeconomics during the construction, operation and maintenance or decommissioning phases of the Development.

425 There will be significant beneficial effects upon economic output (all phases) and employment (construction). The residual beneficial effect on education and skills during construction and operation would be commensurate with the significance of effect during construction and operation as TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2] will be effectively implemented and secured through the DCO.

Table 13.29: Summary of Potential Environmental Effects and Monitoring

Description of impact	Phase			Magnitude of impact	Sensitivity of the receptor	Significance of effects	Further mitigation	Residual effect	Proposed monitoring
	C	O	D						
The impact of employment generation on unemployment rates in the Study Area.	✓	✓	✓	C: Medium Beneficial O: Low Beneficial D: Low Beneficial	C: Medium O: Medium D: Medium	C: Moderate Beneficial O: Minor Beneficial D: Minor Beneficial	Targeted scheme of access to construction training and apprenticeships	C: Moderate Beneficial O: Minor Beneficial D: Minor Beneficial	TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2]
The impact of direct investment, supply chain investment, employment generation and sale of electricity.	✓	✓	✓	C: Medium Beneficial O: Medium Beneficial D: Medium Beneficial	C: Medium O: Medium D: Medium	C: Moderate Beneficial O: Major Beneficial D: Moderate Beneficial	-	C: Moderate Beneficial O: Moderate Beneficial D: Moderate Beneficial	
The impact of directed skills and training as part of a skills and employment plan on existing skills and qualifications.	✓	✓	✓	C: Medium Beneficial O: Medium Beneficial D: Negligible	C: Medium O: Medium D: Medium	C: Moderate Beneficial O: Moderate Beneficial D: Negligible	Targeted scheme of access to construction training and apprenticeships	C: Moderate Beneficial O: Moderate Beneficial D: Negligible	TA A13.2 - Outline Skills, Supply Chain and Employment Plan [EN010162/APP/6.4.13.2]

Description of impact	Phase			Magnitude of impact	Sensitivity of the receptor	Significance of effects	Further mitigation	Residual effect	Proposed monitoring
	C	O	D						
The impact of the change of use on agricultural output.	✓	✓	✓	C: Negligible O: Low D: Negligible	C: Medium O: Medium D: Medium	C: Negligible O: Minor Adverse D: Negligible	-	C: Negligible O: Minor Adverse D: Negligible	
The impact of traffic disruption, changes to visual amenity, noise impacts and restrictions to access on the visitor economy.	✓		✓	C: Low Adverse O: Low Adverse D: Low Adverse	C: Low O:Low D: Low	C: Negligible O: Negligible D: Negligible	Make retained and new routes through the arrays appealing to people to encourage their use by providing information boards (with details of new routes); benches and resting places; wildflowers and hedgerows (for visual screening); children's fun	C: Negligible O: Minor Adverse D: Negligible	

Description of impact	Phase			Magnitude of impact	Sensitivity of the receptor	Significance of effects	Further mitigation	Residual effect	Proposed monitoring
	C	O	D						
							trails and education boards (*e.g.* on wildlife, heritage and solar energy).		
The impact of additional workers on the demand / supply of temporary / short-term rental accommodation	✓		✓	C: Low Adverse D: Low Adverse	C: Low D: Low	C: Negligible D: Negligible	-	C: Negligible D: Negligible	
The impact of additional construction and decommissioning vehicles on to travel patterns	✓		✓	C: Low Adverse D: Low Adverse	C: Low D: Low	C: Negligible D: Negligible	-	C: Negligible D: Negligible	

[a] C=construction, O=operational and maintenance, D=decommissioning

13.11 STATEMENT OF SIGNIFICANCE

426 Taking into account the mitigation measures described above, significant effects with respect to socio-economics and tourism are likely to occur in relation to: construction phase employment; economic output, during all phases; and skills and training during construction and operational phase. These are all beneficial effects.

427 No significant cumulative effects are likely to occur with respect to socio-economics and tourism.

428 With respect to socio-economic and tourism effects, no transboundary effects are likely to occur during construction, operation and maintenance and decommissioning of the Development on the interests of European Economic Area states.