Dean Moor
Solar Farm

Environmental Statement: Appendix 2.7 – PEIR Chapter 10: Socio Economics

on behalf of **FVS Dean Moor Limited**

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Dean Moor Solar Farm

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Prepared on behalf of FVS Dean Moor Limited

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10 Socio-Economics

10.1 Introduction

10.1.1 This chapter reports on the preliminary assessment that has been undertaken of the likely significant effects of the Proposed Development on the environment with respect to socio-economics.

10.1.2 The following figure supports this chapter:

- Figure 10.1: Local and Wider Study Area.

10.2 Legislation and Planning Policy Context

10.2.1 There is no legislation that is relevant to the assessment of socio-economic effects, but national planning and economic development policy are relevant consideration in the scoping assessment for socio-economic effects.

National Planning Policy

National Policy Statement for Energy

10.2.2 The Overarching National Policy Statement (NPS) for Energy (EN-1) (January 2024)[1] (NPS EN-1), recognises at paragraph 5.13.4 that the construction, operation, and decommissioning of energy infrastructure may have socio-economic impacts at local and regional levels, which may include:

- *'the creation of jobs and training opportunities…;*
- *the contribution to the development of low-carbon industries at the local and regional level as well as nationally;*
- *the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities;*
- *any indirect beneficial impacts for the region hosting the infrastructure, in particular in relation to use of local support services and supply chains;*
- *effects (positive or negative) on tourism and other uses of the area impacted; and*
- *the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure. This could change the local population dynamics and could alter the demand for services and facilities in the*

[1] Department for Energy Security & Net Zero (January 2024) Overarching National Policy Statement for Energy (EN-1), Available at https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1]. Accessed January 2024.

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

10.2.3 The socio-economic impacts assessed within this chapter meet the requirements of NPS EN-1.

10.2.4 Paragraph 5.13.5 of the NPS EN-1 states that *'Applicants should describe the existing socio-economic conditions in the areas surrounding the proposed development and should also refer to how the development's socio-economic impacts correlate with local planning policies.'* This chapter outlines baseline socio-economic conditions for an identified local and wider study area (defined later in this chapter) and relates the assessment to local planning policies.

10.2.5 Paragraph 5.13.6 recognises that '*Socio-economic impacts may be linked to other impacts, for example visual impacts*' which may have an impact on tourism and local businesses. This chapter cross-references the assessments presented in PEIR Chapter 7 - Landscape and Visual and the accompanying Preliminary Noise Impact Assessment ('NIA') (Appendix 2.7) and Transport Statement ('TS') (Appendix 2.6), and the findings that relate to socio-economic receptors.

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

10.2.6 The Overarching NPS for Renewable Energy Infrastructure (EN-3) (January 2024)[2] (NPS EN-3) states (paragraph 2.6.2) applicants should '*to the best of their knowledge, assess the likely worst-case environmental, social and economic effects of the proposed development to ensure that the impacts of the project as it may be constructed have been properly assessed.'*

Local Plan

10.2.7 Although from 1 April 2023, Cumberland Council (the Council) is the administrative authority in which the Site is located, the relevant local

[2] Department for Energy Security & Net Zero (January 2024) Overarching National Policy Statement for Renewable Energy Infrastructure (EN-3), [Available at https://www.gov.uk/government/publications/national-policy-statement-for-renewable-energy-infrastructure-en-3]. Accessed January 2024

planning policy for this assessment remains the Allerdale Local Plan (Part 1) 2014[3]. The West Cumbria Economic Blueprint[4] (June 2012) is also of relevance.

Allerdale Local Plan (Part 1) 2014

10.2.8 The Local Plan's vision is that by 2029, '*Allerdale's communities will be sustainable, prosperous, safe, healthy and vibrant. The economy will be strong, diversified and well connected, with a growing and highly skilled population, with high employment, capitalising on skills and opportunities in the nuclear, energy and tourism sectors.'* (Page 12)

10.2.9 Strategic Objectives of the Local Plan relevant to the socio-economic assessment are:

- *'SO1f: Promote renewable and local carbon energy production in the Plan Area;*
- *SO3a: Diversify the urban and rural economic base of Allerdale to enable a prosperous mixed, low carbon economy, including creative knowledge based industries, specialist engineering, energy and tourism sectors;*
- *SO4d: Improve sustainable access to jobs, services, education, leisure opportunities and the wider countryside; and*
- *SO5f: Protect and enhance the quality of the environment and amenity'.*

10.2.10 The strategic objectives are carried forward into local policies. Policies relevant to the socio-economic assessment are:

- *S2: Sustainable Development Principles. The economic element of which states that the Council will 'encourage the development of renewable or low carbon energy resources in appropriate locations given the potential for wider environmental, community and economic benefits'. The social element of which states that the Council will "ensure a good standard of amenity for existing and future residents.';*
- *S14: Rural Economy states that the Council is 'committed to supporting the economic prosperity and sustainable of rural communities by enabling appropriately scaled economic development.' And that 'to support the continued economic viability of farming and other land based enterprises, the Council will support proposals a) for the diversification of activities that are of a scale and nature appropriate to the location.';*
- *S19: Renewable Energy and Local Carbon Technologies. States that the Council will take a positive view where:*

  'a) Proposals (either in isolation or cumulatively);

[3] Allerdale Borough Council (July 2014) The Allerdale Local Plan (Part 1) 2014 – Strategic and Development Management Policies. [Available at: https://www.allerdale.gov.uk/en/planning-building-control/planning-policy/local-plan-part-1/]

[4] Britain's Energy Coast Cumbria (June 2012) The West Cumbria Economic Blueprint. [Available at: https://democracy.allerdale.gov.uk/documents/s82708/]

i) do not have an unacceptably adverse impact on the amenity of local residents (such as air quality/emissions, noise, odour, water pollution, shadow flicker);…..

e) Potential benefits to the local economy are the local community including agriculture and other land based industries are considered.'

- *S20: Nationally Significant Infrastructure Projects, seeks to ensure,*

'b) that appropriate mitigation measures are considered to reduce the potential impact on the day-to-day activities of the local community and businesses as a result of the proposed development. This would include the impact on local infrastructure and services….. e) The maximisation of the local socio-economic opportunities for the West Cumbrian economy in terms of increased training and employment opportunities, improvements to local infrastructure and the development of local business opportunities.'

S32: Safeguarding Amenity, states that 'support will be given for proposals which make a positive contribution to the area by maintaining or improving the quality of the environment and amenity.'

The West Cumbria Economic Blueprint

10.2.11 The West Cumbria Economic Blueprint (June 2012) ('the Blueprint') sets out the vision for the development of the economy in West Cumbria over the 15-year period 2012 to 2027. The Blueprint recognises the significant role that West Cumbria will play in delivering the nation's future energy needs alongside the delivery of the Government's local carbon agenda.

10.2.12 The Blueprint is a strategic document which prioritises actions to diversify and strengthen the business base of West Cumbria and to ensure that people are able to access jobs, training and other economic opportunities. The Blueprint states that it provides '*an opportunity to deliver over unprecedented investment value and over 3,000 jobs in the next 15 years, as well as doubling our contribution to the UK GVA levels*' (page 41).

10.3 Assessment Methodology

Technical Scope

10.3.1 The scope of this socio-economic assessment is in accordance with the EIA Scoping Report submitted by the Applicant to the Planning Inspectorate (PEIR Appendix 2.1), and the subsequent EIA Scoping Opinion adopted by the Planning Inspectorate (PEIR Appendix 2.2).

10.3.2 Likely significant effects during the construction, operational and maintenance, and decommissioning phases of the Proposed Development on the following social and economic receptors have been assessed:

Construction and Decommissioning Phases

- Job creation (direct and indirect);
- Economic contribution (measured in Gross Value Added ('GVA');
- Workforce expenditure; and
- Local amenities (residential properties, tourism, recreation and businesses).

Operational and Maintenance Phase

- Contribution to renewable energy generation; and
- Local amenities (residential properties, tourism, recreation and businesses).

Consultation

10.3.3 Table 10.1 summarises the consultation undertaken in respect of the socio-economic assessment:

Table 10.1: Consultation Summary

Consultee	Type and Date	Summary of Consultation Response	Response to Consultee
Planning Inspectorate	EIA Scoping Opinion (14th September 2023)	*Subject to confirmation of the number and types of jobs created during operation, content to scope out operational phase employment and associated workforce expenditure on the basis that effects are unlikely to be significant.*	Once the Proposed Development is complete and operational it is anticipated that employment will be limited to a maximum of five part-time jobs to monitor the Proposed Development and undertake maintenance and cleaning of the solar PV panels and landscape management of the Site.
		Agreed that effects on local accommodation during the operational phase can be scoped out as the impact on local accommodation would be limited given that the operational phase is	Noted, scoped out.

Consultee	Type and Date	Summary of Consultation Response	Response to Consultee
		anticipated to result in a maximum of five jobs.	
		Agreed that impacts on energy generation during the construction and decommissioning phases can be scoped out on the basis that electricity would not be generated during these phases.	Noted, scoped out.
		Requires professional judgment to be clearly stated and suitably justified where it is applied, with reference to supporting evidence.	Noted and where professional judgement is applied in this chapter, this is clearly stated and justified. The same approach will be taken for the ES.
		Requires clear justification as to why the selected study areas used within the socio-economic assessment were chosen and requires the study areas and receptors to be depicted on corresponding figures to aid understanding.	The rationale for the study areas used within this assessment are explained within the 'Spatial Scope' section of this chapter and visually depicted on Figure 10.1.

Spatial Scope

10.3.4 The likely significant effects of the Proposed Development will be experienced at varying spatial levels, dependent on the socio-economic receptor.

10.3.5 A Wider Study Area, comprising the Council area in which the Site is located is considered appropriate to assess the economic related effects of the Proposed Development, namely job creation, economic contribution, and renewable energy contribution. Analysis of travel to work patterns[5] identifies a high level of labour self-containment, with 89% of people who work in the Council area, also living in the Council area. This area is therefore considered to represent an appropriate functional economic

[5] Office for National Statistics (ONS), 2011 Census, Table WU01UK. Available at [redacted] Accessed July 2023

market area for assessing economic related effects of the Proposed Development. The Council area comprises the former local authority areas of Allerdale, Carlisle, and Copeland.

10.3.6 A Local Study Area, comprising the four electoral wards of Cockermouth South (Allerdale), Harrington (Allerdale), Howgate (Copeland), and Cleator Moor East & Frizington (Copeland), is considered appropriate to assess social related effects of the Proposed Development (namely effects on expenditure, residential communities, tourism and recreational uses), as such effects may be felt more closely in the area immediately surrounding the Site. The Local Study Area encompasses the villages of Gilgarran (to the west of the Site), Lillyhall, Distington, and Branthwaite to the north/ north-east, and Asby and Lamplugh to the south.

10.3.7 Figure 10.1 illustrates the Wider and Local Study Areas used within the socio-economic assessment.

Baseline Data Sources

10.3.8 The data sources used to establish the existing socio-economic baseline are detailed in Table 10.2.

Table 10.2: Baseline Socio-Economic Data Sources

Socio-Economic Indicator	Data Source
Homes	Office for National Statistics ('ONS'), 2021 Census Table RM204[6].
Resident Population	ONS, 2021 Census Table TS007[6]. ONS, 2018-based Sub National Population Projections ('SNPP')[7].
Economic Activity of Residents	ONS, 2021 Census Table TS066[6].
Skills and Occupation Profile of Residents	ONS, 2021 Census Tables TS063 and TS0067[6].
Commuting (Travel to Work Patterns)	ONS, 2011 Census Table WU01UK[6]. ONS, 2021 Census Table ODWP01EW_LTLA[8].

[redacted] Accessed November 2023.

7 Available at: Subnational population projections for England: 2018-based - Office for National Statistics. Accessed November 2023.

8 Office for National Statistics (ONS), 2021 Census, Table ODWP01EW. Available at [redacted] Accessed January 2024.

Socio-Economic Indicator	Data Source
Jobs by Industrial Sector (Workplace-based)	ONS, 2022 Business Register and Employment Survey ('BRES')[6].
Business Enterprises	ONS, 2023 UK Business Counts[6].
GVA	Oxford Economics, UK Local Area District Forecasts October 2023[9].
Convenience Expenditure	Experian, Retail Planner 2021, Total Convenience Expenditure Per Person[10].
Renewable Energy Generation	Department for Energy Security & Net Zero ('DESNZ'), Renewable Electricity by Local Authority 2014-2022[11].
Tourism	Visit Britain, Domestic Overnight Survey (GBTS) and Domestic Day Visits Survey (GBDVS) April 2021 to March 2023[12]. Visit Britain, Accommodation Occupancy 2023[13].

Topic Specific Methodologies

10.3.9 The methodology used for each identified effect is as follows:

Job Creation

10.3.10 The number of direct jobs supported during the construction phase has been informed by the TS (Appendix 2.6).

10.3.11 Guidance from the Homes and Communities Agency ('HCA') 'Additionality Guide'[14] and the more recent HM Treasury 'Green Book for Economic Appraisal and Evaluation'[15] ('the Green Book') establishes that direct jobs created by developments may be subject to a degree of '*displacement*' (the level of existing employment likely to be lost, moved or adversely affected by the employment created as a result of the Proposed Development); '*leakage*' (referring to the number of jobs likely to be taken up by people who live outside of the Wider Study Area), and; *'multiplier effects'* (the additional economic benefit that will be created as a direct

[9] Available [redacted] Accessed November 2023.
[10] Available at: [redacted] Accessed November 2023.
[11] Available at: https://[redacted].gov.uk/government/statistics/regional-renewable-statistics. Accessed November 2023.
[12] Available at [redacted]. Accessed December 2023.
[13] Available at: [redacted] Accessed December 2023
[14] HCA, Additionality Guide, 4th Edition, 2014
[15] HM Treasury, The Green Book: Central Government Guidance on Appraisal and Evaluation, 2020

result of the income earned by the new employment as an indirect result of the supply chain linkages). These factors are collectively known as '*additionality*' and have been applied to the total number of direct jobs created by the Proposed Development. This has enabled the quantification of the employment effect to the Wider Study Area, comprising the net increase in the number of employed Wider Study Area residents attributable to the Proposed Development.

10.3.12 For this assessment, displacement has been assumed to be zero, as it is not anticipated that the Proposed Development would displace existing jobs from elsewhere in the Wider Study Area due to the specialised nature of the Proposed Development. Furthermore, existing employment on the Site related to the current agricultural uses will not be displaced or lost as existing employees will be retained by the farmer to support the existing farm enterprises' wider farming activities off of the Site.

10.3.13 Labour containment within the Wider Study Area is between 89% and 95% (as established in section 10.4 'Baseline Conditions' of this chapter), identifying a leakage factor of between 5% and 11% from the Wider Study Area (representing the proportion of jobs in the Wider Study Area that are undertaken by people who live outside of the Wider Study Area). Until a contractor is appointed, it is not known from where the construction workforce will be sourced. Whilst endeavors will be made to source construction workforce from the Wider Study Area, it is unlikely that the Proposed Development's construction workforce will be sourced from the Wider Study Area at a rate aligned within the labour containment of the Wider Area, given the specialised nature of the Proposed Development. A more realistic scenario would be for the appointed contractor to bring in its own team of workers for the duration of the construction period who are likely to originate from outside of the Wider Study Area. A realistic, yet 'worst-case' scenario for assessing employment effects is to therefore assume that the labour will not be sourced from within the Wider Study Area. On this basis, a leakage factor of 100% has been applied to calculate the likely significant effects on construction employment.

10.3.14 With regards to multipliers, the Green Book classifies employment sectors as either tradable (their outputs are delivered mainly outside the Wider Study Area) and non-tradeable (their outputs are delivered mainly inside the Wider Study Area). Outputs delivered by the Proposed Development will be tradeable. For example, the energy created by the Proposed Development will feed into the local distribution network. High, central, and low place-based employment multipliers are provided by the Green Book to reflect a different extent of supply-chain 'spin-off' employment effects. The reasonable 'worst-case' scenario has been derived from application of the 'low' employment multipliers for the tradable sector (applying 0.1 to establish non-tradeable indirect jobs and 0.3 to establish tradeable indirect jobs supported by the Proposed Development), those being the multipliers that result in the lowest level of 'spin-off' employment in the supply chain and in turn, results in the lowest representation of indirect job creation.

Economic Contribution

10.3.15 Economic contribution is measured through the creation of GVA, which in turn is a measure of economic impact, distributed through retained profit and wages.

10.3.16 GVA resulting from gross job creation and the net additional employment effect to the Wider Study Area from the Proposed Development has been calculated by applying the average GVA per worker estimates sourced from Oxford Economics (as reported in Table 10.2 and detailed in the 'Baseline Conditions' section of the chapter).

Workforce Expenditure

10.3.17 Workforce expenditure is derived from average annual convenience expenditure per person, specifically expenditure on food and non-alcoholic beverages, in the Wider Study Area, sourced from Experian (refer to Table 10.2), applied to the number of direct jobs created by the Proposed Development.

Contribution Towards Renewable Energy Generation

10.3.18 The Proposed Development's contribution towards energy generation has been assessed using the capacity (MW) of the Proposed Development within the context of the existing installed capacity (MW) of solar PV across the Wider Study Area and England, according to the DESNZ data (refer to Table 10.2) established in section 10.4 'Baseline Conditions' of the chapter.

Local Amenities

10.3.19 The Proposed Development's effect on local amenities has been assessed through reference to other assessments supporting the application, namely visual effects have been assessed in PEIR Chapter 7 - Landscape and Visual; the effects of noise have been assessed in the NIA (Appendix 2.7); and traffic effects have been assessed in the TS (Appendix 2.6). However, these are appropriately considered in this chapter to assess the socio-economic effect on local amenities that could be caused by these effects in-combination.

10.3.20 Effects on tourism local amenities, in particular tourist accommodation, has been assessed within the context of the number of construction workers and available capacity within the identified accommodation enterprises as established in section 10.4 'Baseline Conditions' of this chapter using data sourced from Visit Britain (refer to Table 10.2).

Determining the Significance of Effects

10.3.21 There are no technical significance criteria relating to the assessment of socio-economic effects from a proposed development on human populations other than those that relate specifically to other technical areas such as noise, etc. and these are dealt with in separate PEIR chapters / assessments and cross-referenced within this chapter where appropriate.

10.3.22 Accordingly, the approach adopted for the socio-economic assessment has been based on professional experience, having regard to the existing baseline position and the planning policy context described earlier.

10.3.23 The identified sensitivity of the socio-economic receptors takes account of the importance attached to each receptor in policy terms and draws on measurable indicators such as the scale of these receptors identified in the baseline, to gauge the receptor's sensitivity. Table 10.3 details the sensitivity criteria that have been applied to this assessment.

Table 10.3: Sensitivity Criteria for Socio-Economic Receptors

Sensitivity	Criteria
High	Evidence of direct and significant socio-economic challenges relating to receptor. The receptor is of significant importance to the Wider/Local Study Area economy and/or accorded a high priority in local or national policy.
Medium	Some evidence of socio-economic challenges linked to receptor, which may be indirect. The receptor is of some importance to the Wider/Local Study Area economy and/or has medium priority in local or national policy.
Low	Little evidence of socio-economic challenges relating to receptor. The receptor is of little/no importance to the Wider/Local Study Area economy and/or accorded a low priority in local or national policy.
Very Low	No socio-economic issues relating to receptor. Receptor is not considered a priority in local and national policy.

10.3.24 The magnitude of change upon each receptor has been determined by considering the change experienced from the baseline conditions. The criteria used for the assessment of magnitude of change, which can either be positive (beneficial) or negative (adverse) are detailed in Table 10.4.

Table 10.4: Magnitude of Change Criteria for Socio-Economic Receptors

Magnitude	Criteria
High	The Proposed Development would cause a large change to existing socio-economic conditions in terms of absolute and/or percentage change.
Medium	The Proposed Development would cause a moderate change to existing socio-economic conditions in terms of absolute and/or percentage change.
Low	The Proposed Development would cause a minor change to existing socio-economic conditions in terms of absolute and/or percentage change.
Very Low	The Proposed Development would cause minimal/no change to existing socio-economic conditions in terms of absolute and/or percentage change.

10.3.25 The level of effect attributed to each socio-economic receptor has been assessed based on the evaluation of the sensitivity of the affected

receptor (set out in Table 10.3) and the magnitude of change due to the Proposed Development (set out in Table 10.4) and using the significance of effect matrix detailed in Table 10.5.

Table 10.5: Significant of Effect Criteria (Socio-Economics)

Magnitude	Sensitivity			
	High	Medium	Low	Very Low
High	Major Adverse / Beneficial	Major Adverse / Beneficial	Moderate Adverse / Beneficial	Minor Adverse / Beneficial
Medium	Major Adverse / Beneficial	Moderate Adverse / Beneficial	Minor Adverse / Beneficial	Negligible
Low	Moderate Adverse / Beneficial	Minor Adverse / Beneficial	Negligible	Negligible
Very Low	Minor Adverse / Beneficial	Negligible	Negligible	Negligible

10.3.26 Effects which are moderate, major beneficial, or adverse are considered as significant and where effects are established as significant adverse, appropriate mitigation measures have been identified to inform the assessment of the Proposed Development's residual effects.

Limitations and Assumptions

10.3.27 The assessment relies on secondary survey data published by various third parties as detailed in Table 10.2. Each source has methodological limitations related to data collection, and surveys only represent the socio-economic context at a specific point in time.

10.3.28 Decommissioning of the Proposed Development will generate further direct and indirect socio-economic effects similar to those during the construction phase. However, the scale of these impacts is not possible to assess quantitatively due to the uncertainty over the nature and costs of this activity, particularly as the energy sector and associated engineering technologies are expected to evolve over the lifetime of the Proposed Development. Effects during the decommissioning phase are therefore assumed to be the same as those assessed during the construction phase.

10.4 Baseline Conditions

Homes

10.4.1 The 2021 Census reported that there are 136,385 homes in the Wider Study Area, of which 11,359 (8%) are in the Local Study Area.

10.4.2 There are no homes on the Site. There are a number of residential properties located in close proximity to the Site which have been assessed as Noise Sensitive Receptors ('NSRs') in the NIA (refer to Table 5.2 and Figure 5.1 of Appendix 2.7).

Resident Population

10.4.3 The 2021 Census reported that 273,244 people live within the Wider Study Area, of which, 23,723 (9%) live within the Local Study Area.

10.4.4 The Local Study Area has a similar age profile to the Wider Study Area with the same proportion of children aged 0 to 15 years (17%), working age population aged 16 to 64 years (60%) and older people aged 65+ years (23%) as shown in Table 10.6. The Local and Wider Study Areas have an older age profile than in comparison to the national average, with a higher proportion of residents aged 65+ and a lower proportion of children and working age residents.

Table 10.6: Resident Population Profile by Broad Age Group

Age (years)	Local Study Area	Wider Study Area	England
0 to 15	4,113 (17%)	45,388 (17%)	19%
16 to 64	14,107 (60%)	164,641 (60%)	63%
65+	5,503 (23%)	63,215 (23%)	18%
Total	**23,723 (100%)**	**273,244 (100%)**	100%

Economic Activity of Residents

10.4.5 The 2021 Census recorded that there are 129,953 residents in the Wider Study Area aged 16 and over who are classified as economically active (this includes all people in employment or available to work, for example, the unemployed). Of those, 11,114 live within the Local Study Area. This

equates to 55% of the population (aged 16+) within the Wider Study Area and 54% within the Local Study Area. The national average is 61%.

10.4.6 Of those economically active residents in the Wider Study Area, 127,756 are in employment which is equivalent to 56% of 16+ year olds; again, lower than the national average (57%). The equivalent rate for the Local Study Area is 55% (10,857 people).

10.4.7 5,477 economically active residents of the Wider Study Area are unemployed. This represents 2.4% of all residents aged 16+, which is marginally lower than the proportion of unemployed residents in England (3.5%). The equivalent rate for Local Study Area is 2.5% (484 people).

Skills and Occupation Profile of Residents

10.4.8 A higher proportion of residents of the Wider Study Area (21% of all 16+ year olds) have no qualifications compared to the national average (18%) according to the 2021 Census. The proportion of residents with no qualifications in the Local Study Area is 19%.

10.4.9 Aligned to this, a smaller proportion of residents of the Wider Study Area are educated to degree level or higher (28%) compared to the average for England (34%). The proportion of residents aged 16+ in the Local Study Area is 31%.

10.4.10 The occupational profile of residents in employment in the Wider Study Area is comparable to the national average and the Local Study Area, as shown in Table 10.7. The largest proportion of residents in all three areas work in professional occupations, although the proportion is lower in the Wider Study Area (16%), compared to the average for the Local Study Area (19%) and national average (20%).

Table 10.7: Occupational Profile of Residents

Occupation	Local Study Area	Wider Study Area	England
Managers, directors, and senior officials	1,209 (11%)	12,997 (10%)	13%
Professional occupations	2,062 (19%)	20,084 (16%)	20%
Associate professional and technical occupations	1,389 (13%)	14,187 (11%)	13%
Administrative and secretarial occupations	818 (8%)	10,661 (8%)	9%
Skilled trades occupations	1,470 (14%)	18,250 (14%)	10%
Caring, leisure, and other service occupations	1,038 (10%)	12,881 (10%)	9%
Sales and customer service occupations	708 (7%)	10,008 (8%)	7%
Process, plant, and machine operatives	974 (9%)	13,506 (11%)	7%
Elementary occupations	1,182 (11%)	15,177 (12%)	10%
Total	**10,850 (100%)**	**127,751 (100%)**	**100%**

Note: Percentages are individually rounded and may not sum

10.4.11 Overall, residents of the Local and Wider Study Area have a varied skill set. However, residents of the Wider Study Area tend to work in lower skilled occupations, such as elementary occupations and process plant and machine operatives, in comparison to the Local Study Area and national average where a greater proportion of residents work in higher skilled occupations such as managers, directors and senior officials, professional occupations, and associate profession and technical occupations.

Number of Jobs by Industrial Sector (Workplace-based)

10.4.12 The 2022 BRES estimates there to be 134,250 jobs in the Wider Study Area, of which 10,250 (8%) are within the Local Study Area. Table 10.8 provides a breakdown of these jobs by broad industrial sector.

Table 10.8: Employment by Broad Industrial Sector

Industry	Local Study Area[16]	Wider Study Area	England
Agriculture, forestry, and fishing	10 (>1%)	7,000 (5%)	1%
Mining, quarrying, and utilities	255 (2%)	1,650 (1%)	1%
Manufacturing	1,135 (11%)	22,000 (16%)	7%
Construction	696 (7%)	9,000 (7%)	5%
Motor trades	515 (5%)	3,250 (2%)	2%
Wholesale	440 (4%)	3,850 (3%)	4%
Retail	760 (7%)	11,750 (9%)	8%
Transport & storage (incl postal)	320 (3%)	6,350 (5%)	5%
Accommodation and food services	1,140 (11%)	12,250 (9%)	8%
Information and communication	65 (1%)	1,450 (1%)	5%
Financial and insurance	55 (1%)	1,325 (1%)	3%
Property	205 (2%)	4,225 (3%)	2%
Professional, scientific, and technical	780 (8%)	8,750 (7%)	10%
Business administration and support services	525 (5%)	6,000 (4%)	9%
Public administration and defense	265 (3%)	5,250 (4%)	4%
Education	1,495 (15%)	8,250 (6%)	8%
Health	1,075 (10%)	17,000 (13%)	13%
Arts, entertainment, recreation and other services	515 (5%)	4,900 (4%)	4%
Total	**10,250 (100%)**	**134,250 (100%)**	**100%**

Note: Percentages are individually rounded and may not sum

[16] BRES 2022 data is only available for electoral wards as of 2019 and for this reason the Local Study Area for this data set has been defined using the following 2019 electoral wards which provide a best-fit to the 2022 electoral wards: Moresby, Arlecdon and Ennerdale, Distington, Lowca and Parton, Harrington and Salterbeck, Stainburn and Clifton, Dalton, All Saints, Christchurch, and Broughton St Bridgets.

10.4.13 The largest employing industrial sector in the Local Study Area is education (15%), in the Wider Study Area it is manufacturing (16%), and in England is it health (13%).

10.4.14 The key industries that are relevant to the assessment of the likely significant effects of the Proposed Development comprise construction; accommodation and food services; arts, entertainment, recreation, and other services; and mining, quarrying, and utilities.

10.4.15 Construction accounts for 7% of all employment in the Wider Study Area (circa 9,000 jobs), which is higher than the national average (5%). Of the 9,000 construction jobs in the Wider Study Area, circa 700 are within the Local Study Area, where the sector accounts for 7% of all employment.

10.4.16 Accommodation and food services account for 9% of all employment in the Wider Study Area (circa 12,250 jobs), which is marginally higher than the national average (8%). Of these 12,250 jobs, 1,140 are within the Local Study Area, where the sector accounts for 11% of all employment.

10.4.17 Arts, entertainment, recreation, and other services account for 4% of all employment in the Wider Study Area (circa 4,900 jobs), which is comparable to the national average. Of these 4,900 jobs, 515 are within the Local Study Area, where the sector accounts for 5% of all employment.

10.4.18 Mining, quarrying, and utilities account for 1% of employment in the Wider Study Area (circa 1,650 jobs), which is comparable to the national average (1%). Of these 1,650 jobs, 255 are within the Local Study Area, where the sector accounts for 2% of all employment.

10.4.19 Currently the Site is predominantly agricultural farmland and used for livestock farming (sheep grazing). The existing farming activities currently support employment for circa 3 FTE jobs.

Commuting (Travel to Work Patterns)

10.4.20 Travel to work data from the 2021 Census identifies that 95% of jobs within the Wider Study Area are undertaken by people who also live in the Wider Study Area, indicating a high level of labour self-containment.

However, the 2021 Census was undertaken during the COVID-19 pandemic, when a large proportion of the population were working from home, as advised by the Government. Therefore, the identified number of people who live and work in the Wider Study Area according to the 2021 Census is thought to be high and not necessarily representative of the longer-term trends pre- and post-pandemic. For this reason, data from the 2011 Census is also considered.

10.4.21 Data from the 2011 Census identifies that 89% of jobs within the Wider Study Area were undertaken by people who also lived in the Wider Study Area, indicating a comparable, high level of labour self-containment to the 2021 Census data. This would suggest that 2021 Census travel to work data was less affected by the COVID-19 pandemic in the Wider Study Area due to the industrial profile of employment in the Wider Study Area (for example, the highest proportion of employment is in the manufacturing sector as indicated in Table 10.8) which tends not to facilitate home working as much as other industries. The remaining 11% of jobs are taken up by people who live elsewhere, including Eden (3%), Dumfries and Galloway (2%), and Barrow-in-Furness (1%). The 2011 Census data is considered to be more representative of longer-term travel to work patterns.

Businesses

10.4.22 Employment across the Wider Study Area is supported by 11,000 business enterprises, according to the ONS 2023 estimate, of which 1,040 are within the Local Study Area. Table 10.9 provides a count of business enterprises by broad industrial sector.

Table 10.9: Business Enterprises by Broad Industrial Sector

Industry	Local Study Area[17]	Wider Study Area	England
Agriculture, forestry, & fishing	220 (21%)	2,245 (20%)	4%
Mining, quarrying, & utilities	5 (>1%)	65 (1%)	1%
Manufacturing	45 (4%)	485 (4%)	5%
Construction	135 (13%)	1,400 (13%)	14%
Motor trades	35 (3%)	360 (3%)	3%
Wholesale	25 (2%)	230 (2%)	4%
Retail	60 (6%)	665 (6%)	8%
Transport & storage (incl postal)	40 (4%)	555 (5%)	5%
Accommodation & food services	85 (8%)	1,000 (9%)	6%
Information & communication	15 (1%)	220 (2%)	7%
Financial & insurance	5 (>0%)	710 (6%)	2%
Property	30 (3%)	360 (3%)	4%
Professional, scientific & technical	120 (12%)	900 (8%)	16%
Business administration & support services	90 (9%)	645 (6%)	9%
Public administration & defense	10 (1%)	95 (1%)	>1%
Education	20 (2%)	165 (1%)	2%
Health	40 (4%)	315 (3%)	4%
Arts, entertainment, recreation & other services	70 (7%)	690 (6%)	7%
Total	**1,040 (100%)**	**11,100 (100%)**	**100%**

Note: Percentages are individually rounded and may not sum

[17] The smallest geographical unit for which UK Business Counts 2023 data is available is Middle Super Output Areas and for this reason the Local Study Area for this data set has been defined using the following four MSOAs which provide a best-fit to the 2022 electoral wards: Allerdale 006 and 011, and Copeland 001 and 004.

10.4.23 The largest proportion of business enterprises in the Local and Wider Study Areas (21% and 20% respectively) are within the agriculture, forestry and fishing industry, the national average is 4%. Although this industry represents a considerably higher proportion of businesses in the Local and Wider Study Areas, the BRES data presented earlier (Table 10.8) illustrated that employment associated with this industry is much lower (representing less than 5% of all employment in the Local and Wider Study Areas).

10.4.24 Circa 13% of all business enterprises in both the Local and Wider Study Areas are within the construction industry, comparable to the national average (14%).

10.4.25 Across the Wider Study Area there are a total of 1,690 enterprises associated with the 'tourism' industry (defined as comprising accommodation and food services and arts, entertainment, and recreation industries) representing 15% of all business enterprises, higher than the national average (13%). Of those, 155 tourism enterprises are located within the Local Study Area, representing 15% of all enterprises.

10.4.26 Further exploration of the business enterprise data for the 'tourism' industries identifies further detail of the type of tourism industry. Table 10.10 summarises the specific industries identified in the Local Study Area.

Table 10.10: 'Tourism' Business Enterprises by Detailed Subclass (5 Digits)

Industry	Local Study Area[18]	Wider Study Area	England
55100: Hotels and similar accommodation	10 (6%)	110 (7%)	2%
55300: Camping grounds, recreational vehicle parks and trailer parks	5 (3%)	35 (2%)	1%
56101: Licensed restaurants	20 (13%)	125 (7%)	9%
56102: Unlicensed restaurants and cafes	5 (3%)	95 (6%)	7%

[18] The smallest geographical unit for which UK Business Counts 2023 data is available is Middle Super Output Areas and for this reason the Local Study Area for this data set has been defined using the following four MSOAs which provide a best-fit to the 2022 electoral wards: Allerdale 006 and 011, and Copeland 001 and 004.

Industry	Local Study Area[18]	Wider Study Area	England
56103: Take away food shops and mobile food stands	20 (13%)	220 (13%)	12%
56210: Event catering activities	5 (3%)	35 (2%)	4%
56301: Licensed clubs	5 (3%)	60 (4%)	2%
56302: Public houses and bars	20 (13%)	205 (12%)	8%
93130: Fitness facilities	5 (3%)	15 (1%)	1%
93199: Other sports activities	5 (3%)	40 (2%)	2%
Total 'tourism'	**155 (100%)**	**1,690 (100%)**	**100%**

Note: Figures are individually rounded and may not sum

GVA

10.4.27 Average GVA in the Wider Study Area between 2016 and 2020 was £6,150 million per annum contributing 3.4% of the North West region's total GVA. This equates to an average GVA per worker of £42,686 per annum, which is lower than the regional and national average GVA per worker of £48,520 and £54,170 per annum respectively. GVA data for the Local Study Area is not available.

10.4.28 Average GVA (total and per worker) for industries relevant to the Proposed Development are detailed in Table 10.11.

Table 10.11: Average GVA (2016 to 2020) Per Annum

Industry	Wider Study Area		North West Region	UK
	Total GVA	GVA per worker	GVA per worker	GVA per worker
Electricity, gas, steam, and air conditioning supply	£57m	£261,397	£135,315	£203,339
Construction	£486m	£43,309	£49,643	£52,778
Accommodation and food services	£212m	£19,359	£20,954	£22,791

Industry	Wider Study Area		North West Region	UK
	Total GVA	GVA per worker	GVA per worker	GVA per worker
Arts, entertainment, and recreation	£66m	£20,465	£26,481	£27,095
'Tourism'*	£279m	£19,611	£22,539	£24,062
All industries	£6,150m	£42,686	£48,520	£54,170

Note: * Tourism industry defined as accommodation and food services, and arts, entertainment, and recreation combined.

10.4.29 The average GVA per worker generated by the electricity, gas, steam, and air conditioning sector is significantly higher than the average for all industries. This sector has the second highest GVA per worker of all sectors in the Wider Study Area, North West region, and UK (real estate activities have the highest), indicating it is a valuable sector to the economy. However, the electricity, gas, steam, and air conditioning sectors only represent 0.9% of the total GVA in the Wider Study Area, lower than both the regional and national averages (1.2% and 1.6% respectively).

10.4.30 Similarly, the construction sector is also an important sector to the Wider Study Area's economy, contributing 7.9% to the total average GVA, higher than the regional and national averages (6.1% and 6.4% respectively). Average GVA per worker for the construction industry is £43,309 per annum in the Wider Study Area, lower than the regional and national averages of £49,643 and £52,499 per worker per annum respectively.

10.4.31 The tourism sector in the Wider Study Area generates a lower average GVA per worker compared to the regional and UK averages (£19,611 compared to £22,539 and £24,062 per worker respectively), and the value per worker is one of the lowest of all sectors. Nonetheless, the tourism sector contributes 4.5% of total GVA in the Wider Study Area, higher than both the regional and national averages (both 4.5% respectively).

Expenditure

10.4.32 Retail expenditure data published by Experian, estimates that on average residents of the Wider Study Area spend £2,951 per annum on

convenience goods (including items bought frequently such as staples for example, food, drink, and newspapers). Convenience expenditure in the Wider Study Area is higher than the national average (£2,723 per person per annum).

10.4.33 63% of the total convenience spend in the Wider Study Area (equivalent to £1,860 per person per annum) is specifically spent on food and non-alcoholic beverages, which is comparable to the national average (£1,847 per person per annum).

10.4.34 Expenditure on food and non-alcoholic beverages is considered appropriate to use as a proxy for workforce expenditure, which typically involves buying food and drink for lunch. The average number of days spent working by a FTE worker is 260 days per annum. Applied to the annual average spend on food and non-alcoholic beverages per person in the Wider Study Area (£1,860) this equates to £7.15 per day. However, an independent survey undertaken by Moneypenny (2021)[19] reports that the average UK worker spends between £15 and £20 a week on lunch, which suggests a daily expenditure of between £3 and £4 per worker. To assess a worst-case scenario, a daily expenditure of £3 per worker has been applied within this assessment, which is equivalent to £780 per annum (on the bass that the average FTE worker works 260 days per annum).

10.4.35 On the basis that the BRES estimates there to be circa 134,250 jobs in the Wider Study Area, this would suggest a current workforce expenditure of £104.7m per annum in the Wider Study Area, of which £8.0m within the Local Study Area (on the basis of 10,250 jobs).

Renewable Energy Generation

10.4.36 DESNZ reports than in 2022, solar PV capacity in the Wider Study Area was circa 68MW, contributing 9.9% of the North West region's overall solar PV capacity (687MW), and 0.5% of the UK's solar PV capacity (14,651MW).

[19] [redacted] Accessed February 2024

10.4.37 Solar PV represents 23% of all renewable energy capacity in the Wider Study Area (301MW); higher than the regional average (19%) but lower than the national average (27%).

Tourism

10.4.38 In addition to the tourism economy data already presented herein (within business enterprises and GVA analysis), data published by Visit Britain identifies that between April 2021 and March 2023 (the latest date for which data is available), an average of 1.0 million overnight trips were taken each year to the Wider Study Area equating to a total spend of £272 million.

10.4.39 In addition, on average a further 586,000 holidays equating to a total spend of £182 million, and 8.19 million day-visits equating to £192 million, were taken per year in the Wider Study Area.

10.4.40 Visit Britain data also identifies that in October 2023 (the latest date for which data is available) serviced accommodation within the North West region (data unavailable for the Local or Wider Study Area) was operating at 80% occupancy, comparable to the national average. There is seasonal fluctuation, with occupancy rates varying in different months of the year as illustrated in Table 10.12. Over the last 12-months, the serviced accommodation occupancy rate in the North West region peaked at 82% (in September 2023) with a low of 64% (in January 2023).

Table 10.12: Serviced Accommodation Occupancy Rates

Date	North West Region	England
October 2022	81%	80%
November 2022	78%	78%
December 2022	68%	71%
January 2023	64%	65%
February 2023	73%	73%
March 2023	74%	75%
April 2023	77%	77%
May 2023	76%	78%
June 2023	80%	83%
July 2023	80%	84%
August 2023	79%	80%

Date	North West Region	England
September 2023	82%	83%
October 2023	80%	80%

Future Baseline Conditions

10.4.41 In the absence of the Proposed Development being implemented, the Site would remain in its existing use (sheep grazing).

10.4.42 Construction of the Proposed Development is anticipated to commence, at the earliest, in 2026. The ONS 2018-based SNPP project that from the current baseline year (2021), the Wider Study Area's population is projected to decrease by -0.2% by 2026. This is a slower rate of population growth than projected for England (+2.3% by 2026). The SNPP are not available for the Local Study Area.

10.4.43 The SNPP also indicate that the population is projected to age over the coming years. This is a trend seen locally and nationally. The Wider Study Area's population aged 65+ years is projected to increase by +8.5% between 2021 and 2026, which is a lower rate of growth than the national average (+9.5%).

10.4.44 In contrast, the working age population in the Wider Study Area is projected to decrease by -2.5% between 2021 and 2026, whereas a +1.3% increase is projected for the national average.

10.4.45 Oxford Economics forecast that employment in the Wider Study Area will increase by +1.0% from the current baseline to 2026, lower than the national average (+5.9%). Forecasts for the Local Study Area are not available.

10.4.46 Similarly, Oxford Economics forecast that GVA within the Wider Study Area will increase over the coming years. The average GVA per worker across all sectors is forecast to increase by +0.3% from the current baseline to 2026, lower than the national average (+2.8%).

10.4.47 Without the Proposed Development, the future baseline in respect of tourism and recreation by 2026 is anticipated to remain the same as the current baseline.

10.5 Likely Significant Effects

Embedded Mitigation

10.5.1 Relevant measures described in other chapters of this PEIR (for example, Landscape and Visual) and the accompanying NIA (Appendix 2.7) and TS (Appendix 2.6) will serve to reduce the potential for adverse effects on socio-economic aspects, such as the amenity impact of the Proposed Development, and are not repeated here.

Construction Phase

Effects on Job Creation

10.5.2 Baseline conditions identified that the Site currently supports employment for 3 FTE jobs. It is anticipated that existing employment on the Site will not be lost as a result of the Proposed Development because existing employees will be retained to support the existing farm enterprises' wider farming activities off of the Site.

10.5.3 The construction phase will generate employment directly associated with the construction of the Proposed Development. It is estimated within the TS (Appendix 2.6) that employment for up to 150 construction workers will be required on-site during the peak construction period, with the average number of workers on-site expected to be between 50 to 80 per day (direct jobs).

10.5.4 As explained in section 10.3 'Assessment Methodology' of this chapter, it is not considered that the Proposed Development will displace jobs from elsewhere in the Wider Study Area.

10.5.5 The direct on-Site construction jobs would be required for land preparation, equipment installation, and electrical connection, and therefore will provide employment for a range of occupation and skill levels. Contractors will endeavour to source local labour where possible, and baseline conditions identified that there is a resident labour supply within the Wider Study Area with a range of skills, occupations, and industries to meet this demand. However, a realistic 'worst-case' scenario for construction employment assumes that all of the construction

workforce will be sourced from outside of the Wider Study Area and therefore a 100% leakage factor is applied within this assessment.

10.5.6 In addition to those jobs created as a direct effect of the construction and management of the Proposed Development, further indirect employment will be supported as a result of spin-off and multiplier effects in the supply-chain, for example, in the manufacturing and supply of the solar PV panels. Whilst it is anticipated that the solar PV panels themselves will be produced and imported from outside of the UK, there will be further indirect employment effects once the panels arrive in the UK, associated with transportation and logistics, for example.

10.5.7 As detailed at 10.3 ‘Assessment Methodology’ of this chapter, application of the Green Book low employment multipliers to the direct number of jobs created by construction of the Proposed Development, estimates that a further 60 indirect jobs could be supported during the construction phase. The indirect jobs could be within supporting supply chains across the Wider Study Area, region and nationally.

10.5.8 It is therefore considered that the Proposed Development will support 150 direct and 60 indirect jobs during the construction phase. Whilst endeavors will be made to ensure that a proportion of these jobs will be available to residents of the Wider Study Area, until a contractor is appointed the exact number of local jobs that will be supported cannot be guaranteed. Therefore, to avoid over-reporting, a worst-case scenario assumes that none of these jobs will provide employment for residents of the Wider Study Area and therefore there will be a zero net employment effect to the Wider Study Area from the Proposed Development during the construction phase.

10.5.9 The sensitivity of construction employment in the Wider Study Area is considered to be moderate, noting that there are 9,000 construction jobs in the Wider Study Area currently, representing 7% of all employment, of which 695 are within the Local Study Area. The magnitude of change is considered to be very low in the context of no net employment effect to the Wider Study Area, despite the Proposed Development supporting 150

direct and 60 indirect jobs, based on an assumption that they will be filled by labour sourced from outside the Wider Study Area (worst-case scenario). As such, the Proposed Development is considered to have a temporary **negligible** effect on employment in the Wider Study Area during the construction phase, which is **not considered significant**.

Effects on GVA (Economic Output)

10.5.10 Jobs supported by the Proposed Development during the construction phase will generate GVA totaling circa £11.1 million per annum as detailed in Table 10.13. This figure is derived by applying the average GVA per worker for the construction industry to the direct jobs and average GVA per worker for 'all industries' to the indirect jobs (as established in Table 10.11) because the indirect jobs will be supported through the supply chain and therefore could be in any industry. UK average GVA per worker figures are used because both the direct and indirect jobs supported by the Proposed Development could be nationwide.

10.5.11 Over an assumed 18-month construction period this would generate total GVA of £16.7m.

Table 10.13: GVA Created by Proposed Development's Construction Jobs

Industry	Number of workers	GVA per worker per annum (UK average)	GVA
Construction	150	£52,778	£7.9m
All industries	60	£54,170	£3.2m
Total	210	n/a	£11.1m

10.5.12 The sensitivity of economic output during the construction phase is considered to be moderate in the Wider Study Area, noting that the construction industry contributes 7.9% of the Wider Study Area's total GVA. The magnitude of change is considered to be very low because despite the Proposed Development creating GVA of £11.1m per annum, it is assumed that this GVA will be created outside of the Wider Study Area (worst-case scenario). On this basis, the Proposed Development is considered to have a **negligible** effect on economic output in the Wider Study Area during the construction phase, which is **not considered significant**.

Effects on Workforce Expenditure

10.5.13 The Proposed Development's 150 direct construction workers will spend money in local shops purchasing food and drink, for example, whilst working on the construction of the Proposed Development.

10.5.14 Baseline conditions identified that an individual worker in the Wider Study Area could generate convenience expenditure of £780 per annum. Applied to the 150 direct jobs supported by the Proposed Development, this equates to a workforce expenditure of £117,000 per annum over the duration of the construction period. Further expenditure could be generated from the construction workforce via accommodation costs.

10.5.15 The sensitivity of workforce expenditure is considered to be moderate, noting that convenience expenditure per person in the Wider Study Area is higher than the national average. The magnitude of change is considered to be low in the context of the Proposed Development's creation of £117,000 of expenditure per annum, increasing current workforce expenditure in the Wider Study Area of £104.7m per annum by just 0.1%, and increasing current workforce expenditure in the Local Study Area of £8.0m by 1.5%. On this basis, the Proposed Development is considered to have a temporary **minor beneficial** effect on workforce expenditure in the Wider and Local Study Areas during the construction phase, which is **not considered significant**.

Effects on Local Amenity

10.5.16 Given that the realistic worst-case scenario for construction employment is to assume that all of the direct construction workers will originate from outside of the Wider Study Area, it is anticipated that the construction workforce will have to temporarily relocate to within proximity of the Site, thereby placing demand on accommodation within the Local Study Area. Baseline conditions (Tables 10.9 and 10.10) identified that there are 1,000 business enterprises located within the Wider Study Area related to accommodation and food services, with 85 of these located within the Local Study Area. Specifically, a total of 10 hotels and similar accommodation have been identified within the Local Study Area.

Furthermore, baseline conditions also identified that serviced accommodation within the North West region typically operates at between 64% and 82% occupancy across a 12-month period, thereby indicating that there is stock, with capacity, to accommodate the Proposed Development's construction workforce.

10.5.17 PEIR Chapter 7 - Landscape and Visual considers changes to the landscape that will have an effect on visual amenity during the construction phase. Likely significant adverse effects to residents, walkers, and cyclists, who live and are using roads and PRoW within proximity to the Site are identified due to open partial views of construction activities. However, significant visual effects diminish with distance from the Site and all visual effects are identified as short-term and reversible. Furthermore, the implementation of best practice measures in accordance with the OCEMP (Appendix 5.1) will seek to reduce the visual effects.

10.5.18 The TS (Appendix 2.6) identifies that the impact of vehicle movements associated with construction of the Proposed Development will have a negligible impact on the road network and as such are also considered to not have a significant impact on walking or cycling activity in the area. The TS also identifies that whilst there are no PRoW within the Site, it is understood that some pedestrians walk through/utilise sections of the Site for dog-walking or leisure purposes. During construction it may be possible to maintain local community pedestrian access to informal paths or PRoW should any new PRoW be established in advance of construction. The potential for maintaining pedestrian access routes will be confirmed in the detailed CTMP secured by DCO Requirement.

10.5.19 The NIA (Appendix 2.7) has not assessed effects from construction noise. In relation to construction noise, further information on construction techniques, locations, routes, machinery, and duration is provided in Chapter 5 - Construction and Decommissioning Methodology and Phasing which rules out the likelihood of significant effects occurring.

10.5.20 Therefore, in light of the findings of PEIR Chapter 7 - Landscape and Visual and the TS, it is considered that the effect of the Proposed

Development on local amenity in the Local Study Area during the construction phase will be **major adverse**, which is considered **significant** and therefore requires mitigation.

Operational and Maintenance Phase

Effects on Renewable Energy Generation

10.5.21 The Proposed Development will have an export capacity of 150MW.

10.5.22 Baseline conditions identified that currently the solar PV capacity from other sites in the Wider Study Area is circa 68MW and all types of renewable energy is 301MW. Therefore, the Proposed Development will increase solar PV capacity in the Wider Study Area by 221% and will increase all types of renewable energy generation in the Wider Study Area by 50%.

10.5.23 The sensitivity of renewable energy in the Wider Study Area is considered to be high, noting the UK government's commitment towards renewable energy generation. The magnitude of change is considered to be high in the context of the Proposed Development increasing renewable electricity capacity (across all forms of generation) in the Wider Study Area by 50%. On this basis, it is considered that the Proposed Development will have a **major beneficial** effect on renewable energy generation in the Wider Study Area during the operational and maintenance phase, which is considered **significant**.

Effects on Local Amenity

10.5.24 PEIR Chapter 7 -Landscape and Visual considers changes to the landscape that will have an effect on visual amenity during the operational and maintenance phase. Likely significant adverse effects to residents, walkers, and cyclists, who live and are using roads and PRoW within proximity to the Site are identified due to open partial views of the Site. However, significant visual effects diminish with distance from the Site and all visual effects are identified as medium to long-term and reversible. Furthermore, planting proposals and their ongoing maintenance will seek

to reduce the visual effects on local amenity over the lifetime of the Proposed Development.

10.5.25 The TS (Appendix 2.6) identifies that the impact of vehicle movements associated with the operation of the Proposed Development will have a negligible impact on the road network and PRoW network. The TS also identifies that whilst there are no PRoW within the Site, it is understood that some pedestrians walk through/utilise the Site for dog-walking or leisure purposes. As such the Proposed Development is concluded not to have a significant impact on walking or cycling activity in the area during the operational and maintenance phase. It is understood that the approach to pedestrian access during the operational and maintenance phase is subject to further discussion as this stage.

10.5.26 The NIA (Appendix 2.7) reports that based on equipment being appropriately mitigated and located in accordance with the minimum distances cited in the NIA, significant effects from operational noise are not anticipated.

10.5.27 In light of the findings of PEIR Chapter 7 - Landscape and Visual, the TS, and NIA, it is considered that the effect of the Proposed Development on local amenity in the Local Study Area during the operational and maintenance phase will be **major adverse**, which is considered **significant** and requires mitigation.

Decommissioning Phase

10.5.28 As stated in the 'limitations and assumptions' section of this chapter, decommissioning of the Proposed Development is assumed to generate the same socio-economic effects to those during the construction phase.

10.5.29 Direct jobs will be created on-Site through the requirement to remove all of the generating station infrastructure, including modules, mounting structures, cabling, and ancillary equipment. There is also the potential for indirect jobs to be created resulting from the disposal/recycling of the generating station infrastructure, dependent on the good practice requirement/market conditions at that time. Whilst it is not possible to quantify job creation during the decommissioning phase, it is not

anticipated that the number of jobs will be higher than the number created during the construction phase. On this basis, it is considered that there will be a temporary, **negligible** effect on job creation in the Wider Study Area during the decommissioning phase which is **not significant**.

10.5.30 On the basis that the number of jobs created during the decommissioning phase will be comparable to the construction phase, it is anticipated that the effects on GVA and workforce expenditure will be the same during the decommissioning phase and in the construction phase; for GVA this is a temporary, **negligible** effect in the Wider Study Area which is not significant; and for workforce expenditure, this is a temporary, **minor beneficial** effect in the Local Study Area which is **not significant**.

10.5.31 Effects on local amenity during the decommissioning phase will be **major adverse**, which is considered **significant**, as accommodation, noise, traffic, and visual effects will again be comparable in the decommissioning to the construction phase.

10.6 Mitigation Measures

10.6.1 Significant adverse socio-economic effects have been identified in relation to local amenity during the construction, operational and maintenance, or decommissioning phases. As the significant adverse effects are related to visual amenity, no further mitigation beyond the mitigation identified in the Landscape and Visual PEIR chapter is required.

10.7 Residual Effects

10.7.1 The residual effects for all socio-economic receptors are as follows:

Construction Phase

- Negligible effect on job creation which is not significant;
- Negligible effect on economic output which is not significant;
- Minor beneficial effect on workforce expenditure which is not significant; and
- **Major adverse** effect on local amenity which is **significant**.

Operational and Maintenance Phase

- **Major beneficial** effect on renewable energy generation which is **significant**; and
- **Major adverse** effect on local amenity which is **significant**.

Decommissioning Phase

- Negligible effect on job creation which is not significant;
- Negligible effect on economic output which is not significant;
- Minor beneficial effect on workforce expenditure which is not significant; and
- **Major adverse** effect on local amenity which is **significant**.

10.8 Cumulative Effects

Construction Phase

10.8.1 There is likely to be a beneficial cumulative effect associated with direct and indirect employment opportunities, economic output, and workforce expenditure during the construction phase from the identified cumulative schemes and the Proposed Development combined. Further details on the cumulative schemes are set out in PEIR Chapter 2 - EIA Methodology.

10.8.2 A review of the supporting documentation submitted alongside the planning application or DCO application for each of the cumulative schemes identifies that such socio-economic effects are not quantified consistently (or in some cases, at all) within the documentation. For this reason, the cumulative effect on job creation, economic output, and workforce expenditure cannot be quantified.

10.8.3 Furthermore, it is not known whether the construction phase of the cumulative schemes will overlap with each other or the Proposed Development. To provide a worst-case assessment for employment, economic output, and workforce expenditure (that being the scenario which results in the fewest jobs created and the least economic output and workforce expenditure), it is assumed that the construction phases do not overlap and therefore the same construction workforce could work on the Proposed Development and the cumulative schemes. On this basis, it is considered that the cumulative schemes and the Proposed Development combined during the construction phase will have a temporary, **negligible** cumulative effect on job creation and economic output and a temporary,

minor beneficial cumulative effect on workforce expenditure in the Wider Study Area, which is **not considered significant**.

10.8.4 There is the potential for temporary adverse cumulative effects on local amenity resulting from noise, traffic and visual impacts of the cumulative schemes and Proposed Development combined. However, it is expected that any potential adverse effects related to this will be mitigated by each individual scheme and therefore any adverse cumulative effects would not be significant.

Operational and Maintenance Phase

10.8.5 One of the identified cumulative schemes (Ref: 4/23/2198/0F1) will produce renewable energy. However, the scheme comprises the erection of only two micro wind turbines and therefore the cumulative effect on renewable energy generation in the Wider Study Area during the operational and maintenance phase would remain the same as assessed for the Proposed Development (**major beneficial**).

10.8.6 There is the potential for adverse cumulative effects on local amenity resulting from noise and visual impacts of the cumulative schemes and Proposed Development combined. However, any effects will be mitigated by each individual scheme and therefore any adverse effects would not be significant.

Decommissioning Phase

10.8.7 It is anticipated that the socio-economic cumulative effects during the decommissioning phase will be the same as those assessed for the construction phase, that being: a temporary, negligible cumulative effect on job creation and economic output and a temporary, minor beneficial cumulative effect on workforce expenditure in the Wider Study Area. Such effects are not considered significant. There is the potential for temporary adverse cumulative effects on local amenity resulting from noise, traffic, and visual impacts but which would not be significant.

10.9 Progressing to the ES Stage

10.9.1 Based on this assessment, which does not predict any significant socio-economic effects apart from those relating to landscape and visual (which are assessed in Chapter 7 – Landscape and Visual), it is proposed to scope out socio-economics from the ES as a separate chapter and include the PEIR conclusions as a technical appendix.

10.10 Summary

10.10.1 The socio-economic assessment has considered the likely significant effects of the Proposed Development on job creation; economic contribution (measured through the creation of GVA); workforce expenditure; and local amenity (residential properties, local businesses, tourism, and recreation uses).

10.10.2 The existing agricultural use of the Site (sheep grazing) will temporarily cease during construction of the Proposed Development, but during this period the existing three FTE employees can work on the farmer's wider land holding. Nonetheless, it is anticipated that a degree of farming activity (sheep grazing) can occur the Site over the operational lifespan of the Proposed Development. No existing employment will therefore be lost as a result of the Proposed Development.

10.10.3 Additional jobs will be created by the Proposed Development. During construction, 150 FTE jobs will be supported directly through construction of the Proposed Development related to land preparation, installation, and grid connection. Such roles will require a varied occupation and skill set. Best endeavors will be made by the appointed contractor to source labour from the Wider Study Area. However, a worst-case scenario is that the majority, if not all, of these jobs will be sourced from outside of the Wider Study Area. In addition to the 150 direct jobs, a further 60 indirect jobs will be supported as a result of spin-off and multiplier effects in the supply chain. Whilst the solar PV panels themselves will be produced and imported from outside the UK, indirect employment will be supported once the panels arrive in the UK, associated with transportation to the Site In the context of the number of jobs created and existing employment levels,

it is considered that the Proposed Development will have a temporary, negligible effect on job/employment creation at the Wider Study Area level during the construction phase which is not considered significant.

10.10.4 The jobs created by the construction of the Proposed Development will generate economic output in the form of GVA. It is estimated that the Proposed Development would create GVA of £11.1m per annum over the anticipated 18-month construction period. However, as GVA is aligned with employment, a worst-case scenario assumes that this GVA will be created outside of the Wider Study Area. On this basis, it is considered that construction of the Proposed Development will have a temporary, negligible effect on economic output at the Wider Study Area level during the construction phase which is not considered significant.

10.10.5 The 150 direct construction workers will generate estimated expenditure of £117,000 per annum through spending on food, fuel, and potentially leisure activities. Such spending will support local services to the Site, including shops and eateries The Proposed Development will therefore have a minor beneficial effect on workforce expenditure during the construction phase.

10.10.6 It is anticipated that the construction workforce will temporarily relocate to the area whilst working on the Proposed Development, placing additional demand on local accommodation. However, effects on local amenity in respect of accommodation services are not anticipated to be significant, given that a stock of accommodation facilities, operating with capacity, has been identified in the Local Study Area.

10.10.7 Effects on local amenity during the construction phase will be major adverse. This is in relation to visual amenity as assessed in PEIR Chapter 7 - Landscape and Visual. However, adverse visual effects diminish with distance from the Site and implementation of best practice measures will seek to minimise visual amenity effects. Effects on local amenity from traffic will be negligible to minor adverse in light of the findings of the TS.

10.10.8 Once operational, the Proposed Development will have a major beneficial effect on renewable energy generation in the Wider Study Area increasing

the solar PV capacity in the Wider Study Area by 221% and increasing all types of renewable energy generation in the Wider Study Area by 50%.

10.10.9 Nonetheless, the operational and maintenance phase will continue to see significant adverse effects on local amenity, namely adverse visual effects experienced by residents, walkers and cyclists, who live and are using roads and PRoW within proximity to the Site, but these will diminish over time as the new planting is established.

10.10.10 Decommissioning of the Proposed Development will generate similar socio-economic effects to those during the construction phase. The effects during decommissioning are therefore generally beneficial and associated with employment. However, some adverse amenity effects are expected due to disturbance from noise and traffic.

10.10.11 Table 10.14 contains a summary of the preliminary assessment of the likely significant effects of the Proposed Development.

Table 10.14: Table of Significance – Socio-Economics

Potential Effect	Nature of Effect	Significance	Secondary / Tertiary Additional Mitigation	Geographical Importance						Residual Effect
				I	UK	E	R	UA	L	
Construction Phase										
Job Creation	Temporary	Negligible	Not required					X		Negligible (**not significant**)
Economic Output	Temporary	Negligible	Not required					X		Negligible (**not significant**)
Workforce Expenditure	Temporary	Minor beneficial	Not required					X	X	Minor beneficial (**not significant**)
Local Amenity	Temporary	Major adverse	Implementation of best practice measures in accordance with CEMP, to be secured by DCO Requirement.						X	Major adverse (**significant**)
Operational and Maintenance Phase										
Renewable Energy Generation	Temporary	Major beneficial	Not required					X		Major beneficial (**significant**)
Local Amenity	Temporary	Major adverse	A comprehensive landscape mitigation strategy implemented in accordance with the LEMP to be secured by DCO requirement.						X	Major adverse (**significant**)
Decommissioning Phase										
Job Creation	Temporary	Negligible	Not required					X		Negligible (**not significant**)
Economic Output	Temporary	Negligible	Not required					X		Negligible (**not significant**)

Workforce Expenditure	Temporary	Minor beneficial	Not required					X	X	Minor beneficial (**not significant**)
Local Amenity	Temporary	Major adverse	Implementation of best practice measures in accordance with the DEMP to be secured by DCO Requirement.						X	Major adverse (**significant**)
Cumulative Effects										
Construction Phase										
Job Creation	Temporary	Negligible	Not required					X		Negligible (**not significant**)
Economic Output	Temporary	Negligible	Not required					X		Negligible (**not significant**)
Workforce Expenditure	Temporary	Minor beneficial	Not required					X	X	Minor beneficial (**not significant**)
Local Amenity	Temporary	Negligible to minor adverse	Not required						X	Negligible to minor adverse (**not significant**)
Operational and Maintenance Phase										
Renewable Energy Generation	Permanent	Major beneficial	Not required					X		Major beneficial (**significant**)
Local Amenity	Permanent	Negligible	Not required						X	Negligible (**not significant**)
Decommissioning Phase										
Job Creation	Temporary	Negligible	Not required					X		Negligible (**not significant**)
Economic Output	Temporary	Negligible	Not required					X		Negligible (**not significant**)

Workforce Expenditure	Temporary	Minor beneficial	Not required					X	X	Minor beneficial (**not significant**)
Local Amenity	Temporary	Negligible to minor adverse	Not required						X	Negligible to minor adverse (**not significant**)

Nature of Effect *	Permanent or Temporary Short-term, Medium-term, or Long-term
Significance**	Major/ Moderate/ Minor/ Negligible Beneficial/ Adverse
Geographical Importance ***	I = International; UK = United Kingdom; E = England; R = Regional; UA = Unitary Authority; L = Local
Residual Effects ****	Major / Moderate / Minor / Negligible Beneficial / Adverse.