

**Proposed Solar PV Development**

# Preliminary Environmental Information Report

## Chapter 7 Landscape and Visual

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Reference: EN010139

Revision 1 | May 2023



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# 7. Landscape and Visual

## 7.1. Introduction

- 7.1.1. This chapter presents the findings of the preliminary assessment of the likely significant effects arising from the construction, operation and decommissioning of the Proposed Development on landscape and visual receptors.
- 7.1.2. This chapter details the methodology followed for the assessment, summarises the regulatory and policy framework, and describes the existing environment in the area surrounding the Proposed Development. Following this, the design, potential mitigation and potential effects without mitigation of the Proposed Development are discussed, along with the limitations of the assessment.
- 7.1.3. Landscape and visual aspects considered within the chapter for the Proposed Development include:
- Landscape fabric;
  - Landscape character;
  - Visual receptors – i.e. people in the public domain; and
  - Designated landscapes.
- 7.1.4. In considering effects on landscape fabric, this chapter considers the removal or addition of elements such as vegetation in relation to landscape change. The assessment of effects of the Proposed Development on ecological receptors is considered in Chapter 6 Biodiversity.
- 7.1.5. This chapter considers heritage assets in relation to their role in the landscape and its perceived value (for example, Conservation Areas are treated as areas where the character and views are valued). The assessment of effects of the Proposed Development on heritage receptors is considered in Chapter 8 Cultural heritage and archaeology.
- 7.1.6. Appendix 7.5 provides an initial assessment of potential effects on residential visual amenity, i.e. people within private property; which is a separate (though related) planning matter (see paragraphs 7.4.15-7.4.16).
- 7.1.7. The assessment carried as part of the PEIR, and outlined in this chapter, provides a baseline study including judgements of sensitivity for each receptor, and provides an initial indication of potentially significant effects. This assessment is based on the PEIR stage design, with a full assessment to be undertaken on the final design for the ES.

## 7.2. Competent expert advice

7.2.1. The author of this Landscape and Visual Impact Assessment (LVIA) (referred to throughout as an LVIA or this chapter) is a Chartered Landscape Architect with 22 years' experience of undertaking LVIA.

## 7.3. Legislative and policy framework

7.3.1. The relevant legislation, planning policy and guidelines which underpin the assessment methodology for the LVIA and inform the scope of the assessment are outlined in this section. A summary of relevant national planning policy for the Proposed Development is provided in Appendix 1.1 Planning Policy Framework.

### Legislation

7.3.2. The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 is the legislation that underpins the LVIA.

### Policy

7.3.3. The following national and local policies of relevance have been considered:

#### National

7.3.4. The national policies of relevance include:

- NPS EN-1 [1] with reference to paragraph 4.1.4 which discusses adverse effects and benefits, paragraphs 5.9.15-5.9.16 in relation to the scale and longevity of anticipated visual impacts and paragraphs 5.9.21-23 in relation to mitigation approaches;
- Draft NPS EN-1 [2] with reference to paragraph 4.1.6 which discusses adverse effects and benefits, paragraphs 5.10.3 – 5.10.13 in relation to the potential landscape and effects and paragraphs 5.10.24 – 5.10.26 and 5.10.34-5.10.35 in relation to mitigation and enhancement approaches;
- NPS EN-3 [3] for Renewable Energy Infrastructure is currently in the process of being updated. The current NPS does not include specific reference to solar technologies, however, the latest Draft NPS includes a section on solar photovoltaic generation which sets out requirements in relation to the retention and enhancement of vegetation cover and rights of way; and identifies the need for all elements of the Proposed Development to be considered in assessments. Key paragraphs of the draft NPS EN-3 relating to landscape are paragraph 3.10.85, paragraphs 3.10.86-88 and paragraphs 3.10.122-124.
- The NPPF [4] sets out the government's planning policies for England and how these should be applied. Whilst the policies set may be relevant to the assessment, the NPPF does not form the basis for a decision on an NSIP. The assessment would therefore focus on a number of key sections, including 'Achieving well designed places' (Section 12).
- An updated draft NPPF [5] was published for consultation in December 2022, containing some proposed amendments. The proposed changes would not alter policy relevant to this assessment.

7.3.5. Key points relevant to this assessment as set out within these policies are reviewed within Appendix 7.3.

### Local

7.3.6. The Proposed Development lies within the administrative boundaries of Darlington Borough Council, Stockton-on-Tees Borough Council and Durham County Council. Planning policy of relevance to the assessment which would be considered includes:

7.3.7. Darlington Local Plan (2016-2036) [6]:

- Policy DC 1 Sustainable Design Principles and Climate Change – which references national and local design guidance discussed below and requires that the design is informed by local character; “*responds positively to the local context, in terms of its scale, form, height, layout, materials, colouring, ...*”, and “*has taken account of the need to safeguard or enhance important views and vistas*”. In relation to landscape design, the policy further requires that: “*The layout of the proposal, associated green infrastructure, and landscaping has been developed to complement and enhance both the ecological function of the local area and character of the built environment, retaining existing features of interest*”;
- Policy DC 4 Safeguarding Amenity – which includes the requirement that “*development should be sited, designed and laid out to protect the amenity...*” of neighbouring residents from “*visual dominance and overbearing effects*”;
- Policy IN 9 Renewable Energy Infrastructure - which indicates that in relation to matters relevant to this assessment “*Solar Power developments will be granted planning permission if ... the proposal has adequately mitigated the visual impact on the landscape*”; and
- Policy ENV 3 Local Landscape Character – seeks to protect and improve local character and distinctiveness via a number of measures, including identifying a number of parklands as being locally valued for their special landscape qualities; and “*protecting and enhancing the natural quality of the rural landscape, where appropriate, reinstating traditional natural and built features.*”

7.3.8. Stockton-on-Tees Borough Council Local Plan (2019) [7], Policy ENV5 Preserve, Protect and Enhance Ecological Networks, Biodiversity and Geodiversity – which seeks to retain or replace where loss is unavoidable “*existing trees, woodlands and hedgerows which are important to the character and appearance of the local area.*”

7.3.9. There are a number of other policies along the same themes as those identified for Darlington above. However, the Proposed Development within Stockton-on-Tees includes only the installation of underground cables for which the policy ENV5 is the primary landscape policy.

7.3.10. County Durham Plan (2020) [8] Policy 39 Landscape – which seeks to prevent unacceptable harm to landscape character and important features and views; sets out an expectation of mitigation, and identifies Areas of Higher Landscape Value as having special qualities to be conserved or enhanced.

## **Guidance**

- 7.3.11. The following national planning guidance and baseline studies inform the assessment and mitigation by design:
- Planning Practice Guidance for Design: process and tools [9];
  - Planning Practice Guidance: Renewable and Low Carbon Energy [10];
  - National Design Guide [11]; and
  - NCA 23 Tees Lowlands, Natural England (2014) [12].
- 7.3.12. The following local planning guidance and baseline studies inform the assessment:
- Darlington – Revised Design of New Development SPD (2011) [13];
  - Darlington Landscape Character Assessment (2015) [14];
  - Stockton on Tees Landscape Character Assessment (2011) [15];
  - Stockton on Tees Landscape Capacity Study (2011) [16];
  - County Durham Landscape Character Assessment (2019) [17];
  - County Durham Local Landscape Designation Review (2019) [18]; and
  - County Durham Landscape Value assessment (2019) [19].
- 7.3.13. The following methodology guidance informs the assessment:
- Guidelines for Landscape and Visual Impact Assessment, (Third Edition), published jointly by the Landscape Institute and the Institute of Environmental Assessment (GLVIA 3) [20];
  - Technical Guidance Note 06/19: Visual Representation of Development Proposals [21];
  - An Approach to Landscape Character Assessment [22];
  - An Approach to Landscape Sensitivity Assessment [23];
  - TGN 2/19 Residential Visual Amenity Assessment [24];
  - TGN 02/21 Assessing landscape value outside national designations [25]; and
  - Advice Note Seventeen: Cumulative Effects Assessment [26].

## **7.4. Assessment Methodology**

- 7.4.1. This section outlines the methodology for assessing the likely significant landscape and visual effects from the construction, operation and decommissioning of the Proposed Development. Full details of the assessment methodology is described in Appendix 7.1.
- 7.4.2. The assessment is informed by initial desk study and site visits to identify receptors (landscape character areas, landscape designations and groups of people who may be affected by changes to views). The desk study includes the preparation of a Zone of Theoretical Visibility (ZTV) study to identify potential areas of visibility of the development. This information is used to aid identification of the study area and

receptors likely to be affected. Viewpoints are identified to represent a range of distances, directions and receptors, located in areas of visibility identified using the ZTV study and site survey. The viewpoint selection has also been refined via consultation (see Section 7.5). Viewpoints are used as ‘sample’ locations to inform the assessment of effects on receptors.

7.4.3. This PEIR assessment provides a full baseline study including judgements of sensitivity for each receptor, and provides an initial indication of potentially significant effects. This assessment is based on the PEIR stage design, with a full assessment to be undertaken on the final design for the ES.

7.4.4. A summary of the approach and terminology used in setting out judgements is provided below.

### Sensitivity

7.4.5. Sensitivity is judged by considering the component judgments about the value and susceptibility of the receptor as illustrated by Table 7-1 and Table 7-2.

7.4.6. Table 7-1. Where sensitivity is judged to lie between levels, an intermediate assessment will be adopted. A slightly greater weight is given to susceptibility in judging sensitivity of visual receptors as indicated by Table 7-1 and Table 7-2.

**Table 7-1 Landscape Sensitivity**

LANDSCAPE RECEPTORS		Susceptibility		
		High	Medium	Low
Value	National	High	High/Medium	Medium
	Regional	High/Medium	Medium	Medium/Low
	Community	Medium	Medium/Low	Low

**Table 7-2 Visual Sensitivity**

VISUAL RECEPTORS		Susceptibility		
		High	Medium	Low
Value	National	High	High/Medium	Medium
	Regional	High/Medium	High/Medium	Medium/Low
	Community	High/Medium	Medium	Low

### Magnitude

7.4.7. Scale of effect, (expressed as Large, Medium, Small, Negligible) or intermediate judgements between), is the primary factor in determining magnitude; which may be higher if the effect is particularly widespread and/or long lasting, or lower if it is



constrained in geographic extent and/or timescale. Plate 7-1 illustrates how this judgement is considered as a two-step process.

**Plate 7-1 Definition of Magnitude**

Scale / extent		Large	Medium	Small	Negligible
		Wide	Substantial		
Intermediate			Moderate		
Localised				Slight	
Limited					Negligible

Stage 1 Result / Duration		Substantial	Moderate	Slight	Negligible
		Permanent	Substantial		
Long-term			Moderate		
Medium-term				Slight	
Short-term					Negligible

7.4.8. Where magnitude (or other judgements) are judged to lie between levels, an intermediate assessment will be adopted and is expressed as e.g. Moderate/slight.

### Significance of Effects

7.4.9. The significance of a landscape or visual effect is assessed through professional judgement, combining the sensitivity of the receptor with the predicted magnitude of change, as summarised in Table 7-3. Table 7-3 is not used as a prescriptive tool and illustrates the typical outcomes, allowing for the exercise of professional judgement.

**Table 7-3 Significance**

		Magnitude of Change			
		Substantial	Moderate	Slight	Negligible
Receptor Sensitivity	High	Major	Major/Moderate	Moderate	Minor
	Medium	Major/Moderate	Moderate	Moderate/Minor	Minor/Negligible

<b>Low</b>	Moderate	Moderate/ Minor	Minor	Negligible
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7.4.10. The significance of any identified landscape or visual effect is assessed as Major, Moderate, Minor or Negligible. Where the effect has been classified as Major or Major/Moderate this is considered to be equivalent to likely significant effects referred to in the EIA Regulations.

### **PEIR Methodology**

7.4.11. For this PEIR stage assessment, a professional judgement has been made as to whether effects have the potential to be identified as significant based on the initial assessments of the likely scale of change and the assessed sensitivity of the receptor. Judgements of magnitude and the level of significance are not provided at this stage as the design is insufficiently developed to form a basis for those judgements, but will be provided in the ES once the mitigation design is complete.

### **Beneficial/Adverse**

7.4.12. Landscape and visual effects can be beneficial or adverse and in some instances may be considered neutral. Neutral effects are those which overall are neither adverse nor positive but may incorporate a combination of both.

7.4.13. Changes to rural landscapes involving construction of man-made objects of a large scale are generally considered to be adverse.

### **Cumulative Assessment**

7.4.14. Cumulative effects are the result of multiple actions on environmental receptors or resources over time and are generally additive or interactive (synergistic) in nature. Two categories of cumulative effects are typically considered within the cumulative effects chapter of an ES:

- In-combination effects from the interrelationship between different environmental effects of the Proposed Development (intra-project); and
- Cumulative effects from the interrelationship between different projects along with the Proposed Development (inter-project).

7.4.15. Further information relating to cumulative effects assessment for the Proposed Development is set out within Chapter 13 Cumulative Effects.

7.4.16. The approach to cumulative assessment for LVIA is set out within Appendix 7.1, and a cumulative effect assessment for LVIA will be provided within the ES.

## Night-time Assessment

- 7.4.17. The Proposed Development does not include permanent lighting. Infra-red security lighting would be used at night, and lighting would be available for emergencies. As a result, no significant effects are likely to arise at night, and night-time impacts are not assessed further.

## Residential Amenity

- 7.4.18. As set out within Landscape Institute Technical Guidance Note 02/19 Residential Visual Amenity Assessment (RVAA) [24]:

*“Changes in views and visual amenity are considered in the planning process. In respect of private views and visual amenity, it is widely known that, no one has ‘a right to a view.’ ...*

*It is not uncommon for significant adverse effects on views and visual amenity to be experienced by people at their place of residence as a result of introducing a new development into the landscape. In itself this does not necessarily cause particular planning concern. However, there are situations where the effect on the outlook / visual amenity of a residential property is so great that it is not generally considered to be in the public interest to permit such conditions to occur where they did not exist before.”*

- 7.4.19. This chapter does not include a full assessment of residential visual amenity as that will be provided in the ES once the final design and mitigation for the Proposed Development have been defined. Appendix 7.5 identifies residential properties within 100m of the solar PV modules (the agreed scope of assessment) based on the PEIR stage design and provides an initial assessment of likely effects.

## Distances

- 7.4.20. Where distances are given in the assessment, these are approximate distances between the nearest Panel Area and the nearest part of the receptor in question, unless explicitly stated otherwise.

## Visual Aids

- 7.4.21. Annotated photographs of the existing views at all viewpoints are provided in Figure 7.6. The method of visualisation selected has been informed by Landscape Institute Technical Note 06/19 Visual representation [21], with annotated photographs being the most appropriate approach at this PEIR stage before the design is finalised.
- 7.4.22. The methodology of production for the visualisations is described in Appendix 7.1. Photowires and/or photomontage visualisations will be provided in the ES for the final design for selected viewpoint locations to be agreed with consultees.

## 7.5. Scoping and Consultation

### Scoping

7.5.1. The EIA Scoping Report was submitted to PINS in October 2022, with a Scoping Opinion received in December 2022. Table 7-4 includes a summary of how this chapter of the PEIR has responded to the EIA Scoping Opinion comments relating to LVIA.

**Table 7-4 Response to the Scoping Opinion**

ID	Reference	Stakeholder	Comment	Response
3.3.1	Table 7.3	PINS	The Inspectorate is content to scope this matter out on the basis that there are no national landscape designations within 5km of the Proposed Development.	As this matter has been agreed to be scoped out, the assessment does not consider effects on nationally designated landscapes.
3.3.2, 3.3.4 and 3.3.5	Table 7.3, Figures 7.3 to 7.8	Darlington BC (and PINS)	Requested a 5km study area and/or consideration of landscape and visual receptors beyond 2km based on the areas of visibility identified in the scoping ZTV studies.	Subsequent discussion at a meeting with Darlington BC indicated that this request was based on a misunderstanding of the ZTV study – thinking that where visibility was shown it meant wide areas of the Proposed Development would be visible and not screened by intervening vegetation. It was explained that the ZTV studies reflect theoretical visibility of at least one small part of the Proposed Development, which may be screened by vegetation not modelled (such as hedgerows and individual of small groups or lines of trees). With this understood it was agreed that a 5km study area would be used for the PEIR, with a view to reducing to 2km for the ES should the PEIR establish that effects beyond 2km would not be significant.
3.3.3	Table 7.3	PINS (and Natural England)	PINS request assessment of effects on National Landscape Character Areas “where significant effects are likely to occur”.	As indicated by the Natural England scoping response and best practice as set out at paragraph 5.14 of GLVIA <sup>3</sup> , local character studies provide the most appropriate scale for detailed assessment, with the National Character Areas providing additional context to the baseline, and this is the primary approach taken within this assessment. PINS suggested further clarification with Natural England and a response was received on 11 February 2023 indicating that effects on the NCA should be considered where significant effects on local character was identified. This assessment follows that suggested approach.

ID	Reference	Stakeholder	Comment	Response
3.3.6	Paragraph 7.7.1	PINS	<i>“The ES should explain the process used to determine appropriate viewpoints through the consultation process and should take into account topography, long-distance views, views from Public Rights of Way and the setting of heritage receptors.”</i>	<p>Consultation regarding viewpoint selection is described within Appendix 7.4, and within this table.</p> <p>The ZTV studies used to inform viewpoint selection model the influence of topography on visibility.</p> <p>Viewpoints are included for a range of distances (up to 5km) and visual receptors (including PRoW users).</p> <p>The setting of heritage receptors is not a matter for LVIA and is considered in Chapter 8 Cultural Heritage and archaeology. That chapter sets out how viewpoints have informed the heritage assessment.</p>
3.3.7	Section 7.3	PINS	Expresses concern that components of the development other than the solar PV modules may be taller than the 4.35m modelled in the scoping ZTV studies and may warrant a wider study area.	<p>Most of the elements (fencing, inverters) would not be taller than the panels (see Chapter 2 for images which illustrate these elements). The substation and transmitter mast (See Chapter 2) would be taller, however given an increased 5km study area (compared to the 2km proposed at Scoping) has been used, a further increase is not required to consider these elements. The pattern of visibility identified by Figure 7.3 confirms that approach is appropriate.</p>
<b>Scoping para 7.3.3 and Table 7.1</b>	Section 7.11	Darlington BC	Requests that views from beyond 2km are considered, in particular from Sadberge, Whinney Hill, West Newbiggin and Darlington Back Lane.	<p>These locations were subsequently discussed within the context of including a wider study area as set out in relation to reference 3.3.2 above. It was agreed that viewpoints from Sadberge and Darlington Back Lane and West Newbiggin would be included (viewpoints 31 and 32). In relation to Whinney Hill it was agreed that as the ZTV studies indicate little to no visibility from the settlement, any viewpoint would need to be located on the road to the north, which is the same receptor group as represented by viewpoint 29 and that therefore an additional viewpoint was not necessary. Taking account of the need to represent views from a range of directions within the widened 5km study area, a potential viewpoint to the west of the A1 near Coatham Mundeville was also discussed and is included as viewpoint 33.</p>

ID	Reference	Stakeholder	Comment	Response
<b>Scoping para 7.3.3</b>	Chapter 13	Darlington BC	Identifies the potential for cumulative effects with solar farms consented at Gately Moor (22/00727/FUL) and Whinfield (21/00958/FUL).	These two consents are considered within the cumulative assessment in Chapter 13.
<b>Scoping para 7.5.2</b>	Table 7-6	Darlington BC	Identifies that the scoping request did not include historic parklands designated by Darlington Local Plan policy ENV3 as receptors for assessment.	These receptors are considered within this assessment at Table 7-6.
<b>Scoping para 7.6.3</b>	Section 7.11	Darlington BC	Effects on elements of the proposals other than the solar PV modules should be considered.	This assessment considers the effects of all elements of the Proposed Development.
<b>Letter dated 28/11/22</b>	Appendix 7.4	Durham CC	Suggests visibility may arise from PRoW near Foxton	Viewpoint 30 has been included to represent views from this location.
<b>Letter dated 28/11/22</b>	Section 7.11	Durham CC No response had been received as of 14/03/2023.	Indicates that <i>“effects on the county are likely to be largely restricted to local roads including Lodge Lane (C34A), C92 and the C37 from where there would be glimpsed, fleeting or intermittent sequential views of the site...”</i> but also that <i>“mitigation in the wider landscape of intervening hedgerows outside the site boundary is likely to be required to help create visual enclosure.”</i>	It is not feasible for the Proposed Development to secure change (including to vegetation management) outside of the Site Area. This assessment considers the effects which would arise without such measures.

ID	Reference	Stakeholder	Comment	Response
Letter dated 28/11/22	Section 7.10	Durham CC	Requests that viewpoints and visual representations be agreed with the Durham CC landscape officer; the inclusion of summer and winter views, and that assumptions relating to vegetation growth be detailed in relation to the assessment and photomontages.	An email was sent in January 2023 to both the planning and landscape officers in relation to agreement of viewpoints, along with a request to reconsider the need for summer views given that project timing would mean that winter views (i.e. showing the maximum likely visibility) would be provided in the first instance. No response had been received as of 24/03/2023.  The PEIR stage assessment considers potential unmitigated effects and sets out proposed mitigation measures (see section 7.10) but does not make any assumptions about the effectiveness of planting or provide photomontages, These matters will be addressed at the EIA stage.

## Consultation

7.5.2. The results of consultation carried out as part of the assessment are summarised in Table 7-5.

**Table 7-5 Response to Consultation**

Stakeholder	Comment	Response
Darlington Borough Council	A site walkover meeting was undertaken during February 2023 to review potential diversions of PROW and permissive routes. The officer was supportive of the proposals.	Proposed diversions and permissive routes are detailed within Figure 2.12.

## 7.6. Assessment Assumptions and Limitations

7.6.1. This PEIR provides preliminary information based on design development of the Proposed Development to date and the data gathered at this point in time. Some of the information gathered will be supplemented and provided in full and final form within the ES.

7.6.2. The PEIR is intended to inform consultation and a more detailed assessment of the effects on identified sensitive receptors will be undertaken in the ES.

7.6.3. Information gaps at the PEIR stage, for example the final mitigation and enhancement design, will be addressed as part of the ES.

## 7.7. Study Area

7.7.1. The study area has been defined as 5km for this PEIR assessment. As set out within Section 7.5, during scoping a 2km study area was proposed based on ZTV studies and

site work. Darlington Borough Council requested a 5km study area given that the ZTV studies identified some visibility beyond 2km, and Durham County Council requested a viewpoint location near Foxton (beyond 2km but within 5km), and the study area was increased to 5km for the PEIR stage in response to this feedback with a view to reducing to 2km for the ES should the PEIR establish that effects beyond 2km would not be significant.

## **7.8. Baseline Conditions**

- 7.8.1. Figure 7.1 illustrates the landscape context for the Proposed Development. The Site Area is located between Darlington, Stockton-on-Tees and Newton Aycliffe in an area of undulating mixed farmland with a network of local roads and rights of way and a mix of dispersed settlement, small villages and hamlets.
- 7.8.2. The Site Area does not coincide with any national or local landscape designations. The nearest national landscape designations are Registered Parks and Gardens located approximately 5km from Panel Areas A-F (as illustrated by Figures 7.4A-F), with the nearest Areas of Outstanding Natural Beauty (AONB) and National Parks located more than 20km from the Proposed Development.
- 7.8.3. The future baseline includes a number of consented developments that are likely to be operational either before or during the construction and operation of the Proposed Development (see Chapter 13 and Figure 13.1). These are referenced within the baseline descriptions where relevant.

## **Baseline Documents**

- 7.8.4. As set out at Section 7.3, there are a number of studies which have informed this assessment. Published baseline landscape character assessments (LCAs) include:
- National Character Area description for the host landscape character type; NCA 23 Tees Lowlands, Natural England (2014) [12];
  - Darlington Landscape Character Assessment (2015) [14];
  - Stockton on Tees Landscape Character Assessment (2011) [15]; and
  - County Durham Landscape Character Assessment (2019) [17].
- 7.8.5. The character areas and types identified within the study area by each of these documents are considered further below.
- 7.8.6. The Darlington LCA provides baseline description of the Landscape Character Areas within the Borough and includes a sensitivity analysis in relation to built development but not solar farms. The baseline descriptions, commentary on sensitivity and observations from site work were used to inform consideration of the sensitivity of the character areas to the Proposed Development as set out within this chapter and Appendix 7.3.



- 7.8.7. The Stockton on Tees LCA provides baseline description of the Landscape Character Areas within the Borough. It is supported by the Stockton on Tees Landscape Capacity Study (2011) [16], which provides advice in relation to development within smaller landscape units within the Borough but does not specifically consider solar farms. The baseline descriptions, commentary on sensitivity and observations from site work were used to inform consideration of the sensitivity of the landscape character areas to the Proposed Development as set out within this chapter and Appendix 7.3.
- 7.8.8. The Durham LCA provides baseline description of the landscape character areas and types within the county. There is no sensitivity assessment provided, although the County Durham Local Landscape Designation Review (2019) [18] provides analysis for landscape value within the County which has been used, with the baseline descriptions, and observations from site work, to inform consideration of the sensitivity of the landscape character areas to the Proposed Development as set out within this chapter and Appendix 7.3.
- 7.8.9. The County Durham Landscape Value assessment (2019) [19] provides a criteria based assessment of landscape value within the administrative area and is used to inform consideration of landscape value within County Durham.
- 7.8.10. The County Durham Local Landscape Designation Review (2019) [18] provides information in relation to the Areas of Higher Landscape Value (AHLVs) identified within the County and has been used to inform the consideration of the special qualities and sensitivities of the designated areas to the Proposed Development as set out within this chapter.

## **Landscape Character**

- 7.8.11. As shown by Figure 7.1, Panel Areas A-F will host the solar PV modules and lie within two Darlington Borough landscape character areas. Panel Areas A-D are within 6: Great Stainton Farmland and Panel Areas E-F are within 7: Bishopton Vale. Woodland, hedgerows and hedgerow trees are relatively frequent in the Great Stainton Farmland which along with the undulating landform serves to constrain visibility, though there are some more elevated and open locations with wider views. The lower lying and flatter area to the east (Bishopton Vale) has more arable farming and is less vegetated, with more open views.
- 7.8.12. The potential cable route options also pass through character areas within the Stockton-on-Tees Borough Council Area: 1 West Stockton Rural Fringe and 3 Billingham and Thorpe Becks.
- 7.8.13. Other character areas within the 5km study area are shown on Figure 7.1 and considered along with the host character areas identified above in the preliminary assessment.

## Visual receptors

- 7.8.14. Visual receptors include residents, visitors and those travelling within 5km of the Panel Areas A-F, or within 200m of the cable routes as set out in Table 7-6. Local roads within settlements and short routes closely associated with settlements are considered as part of the settlement, other local roads passing through the study area are considered as part of visual receptor groups including homes and rights of way.
- 7.8.15. Key road and rail routes within 5km are also identified in Table 7-6. There are no long-distance footpaths, National Cycle Routes or National Trails within the study area.

## Landscape Designations

- 7.8.16. Effects on national designations have been agreed through Scoping to be scoped out of this assessment. Landscape designations within the study area include locally designated historic parklands within Darlington and AHLVs within Durham. Those within the 5km study area are shown on Figure 7.1 and identified in Table 7-6.

## Receptor Summary

- 7.8.17. Table 7-6 summarises landscape and visual receptors grouped by distance from the nearest Panel Area.

**Table 7-6 Receptors grouped by distance from nearest Panel Area**

Receptors within 1km	Receptors 1-2km	Receptors 2-5km
<b>Landscape Character</b>		
Darlington: 5 Upper Skerne Valley	Darlington: 4 Whessoe and Dene Beck	Darlington: 1 Houghton Bank
Darlington 6: Great Stainton Farmland (host area)	Darlington: 8 Middleton Farmland	Darlington: 2 Red House Beck
Darlington 7: Bishopton Vale (host area)	Durham: 95 Newton Aycliffe urban area	Darlington: 3 Denton and Walworth Farmland
Durham: 73 Sedgfield, Windlestone and Aycliffe	Stockton-on-Tees: 5 Wynyard	Durham: 10 Bradbury Preston and Morden Carrs
Durham: 16 Butterwick and Shotton		Durham: 76 Southern Limestone Escarpment
Stockton-on-Tees: 1 West Stockton Rural Fringe		Stockton urban area
Stockton-on-Tees: 3 Billingham and Thorpe Becks		
<b>Visual Receptors</b>		
<b>Settlements</b>		
Coatham Mundeville	Beaumont Hill	Darlington

Receptors within 1km	Receptors 1-2km	Receptors 2-5km
Brafferton	Newton Aycliffe & Aycliffe Village	Stockton-on-Tees
Great Stainton	Preston-le-Skerne	
Little Stainton	Redmarshall	
Bishopton	Carlton	
Old Stillington		
Stillington		
Whitton		
<b>Rural routes and homes</b>		
Between A167, Salters Lane, Lea Hall and Little Ketton Farm	South of Little Ketton farm between A167 and Hill House Lane	West of the East Coast main line between Newton Aycliffe and Darlington
Between Lea Hall, Salters Lane, Newton Ketton, Elstob Lane and Hill House Lane	West of A167	Between Newton Aycliffe, A177 and Thorpe Leazes
Between Elstob Lane, Bleach House Bank, Stoney Flatt Farm, Gillyflatts and Long Pasture House Farm	North of Lea Hall between A167 and Elstob lane	East of A177
Between Bleach House Bank, Stillington, Redmarshall and Stoney Flatt Farm	East of Elstob Lane and north of the local road between Great Stainton and Stillington	Between A177, and Drovers Lane
	East of Whitton Road / Drovers Lane	North of A66 between Stockton-on-Tees and Sadberge
	Between Redmarshall and Hill House Lane, south of Gillyflatts and Stoney Flatt farm	Between Beaumont Hill, Bampton, Darlington and Long Newton
<b>Key Routes</b>		
A167		A66
East Coast main line		A177
A1 (M)		A68/A6072
<b>Designations</b>		
Elstob AHLV	Bradbury, Preston and Mordon Carrs AHLV	Hurworth and Embleton AHLV
Hall Garth		Wynyard Park Registered Park and Garden

## 7.9. Potential effects

### Construction

- 7.9.1. Effects during construction on landscape fabric would arise from:
- removal of short sections of hedgerow to create access tracks;
  - planting of new trees and hedgerows;
  - construction of the on-site substation, and
  - the installation of fencing, tracks, solar PV modules and other infrastructure elements within fenced areas.
- 7.9.2. Effects during construction on landscape character would arise from:
- short-term change of farmland to construction site; and
  - changes to landscape fabric as described above.
- 7.9.3. Effects during construction on visual receptors would arise from:
- short-term movement of vehicles and plant within and travelling to and from the Proposed Development to deliver and install the solar farm components, and other site infrastructure; and
  - increasing coverage of the Panel Areas with solar PV modules and other components of the Proposed Development, with similar effects to the operational stage.
- 7.9.4. Effects during construction on designated landscapes would arise from short-term changes to the special qualities as a result of the construction activity taking place in a nearby area.

### Operation

- 7.9.5. Effects during operation on landscape fabric would arise from:
- the long-term presence of the fencing, tracks, solar PV modules and other infrastructure elements within fenced areas; and
  - growth of new planting.
- 7.9.6. Effects during operation on landscape character would arise from:
- the long-term change of farmland to solar farm; and
  - changes to vegetation cover and accessibility.
- 7.9.7. Effects during operation on visual receptors would arise from changes to views towards the Panel Areas to include the fencing, tracks, solar PV modules and other

infrastructure elements within fenced areas, both from static locations and when moving along routes (both existing and proposed) through the landscape.

- 7.9.8. Effects during operation on designated landscapes would arise from changes to the special qualities as a result of visibility of the solar farm in a nearby landscape.

## **Decommissioning**

- 7.9.9. Effects during decommissioning would be short-term and similar to those arising during construction except in reverse in terms of the Panel Areas being reinstated to farmland.

## **7.10. Design, mitigation and enhancements**

### **Embedded design measures**

- 7.10.1. Figures 2.1 to 2.11, appended to Chapter 2 of this PEIR, illustrate the components of the Proposed Development as detailed below.
- 7.10.2. The solar PV modules would be no more than 4.35m in height.
- 7.10.3. Solar PV modules have been excluded from areas close to homes to mitigate potential effects on residential visual amenity and from some parts of the Panel Areas in order to mitigate effects on the views from and character of Brafferton, Bishopton and Great Stainton.
- 7.10.4. Fencing would be either a wire-mesh or deer fence (if required) and would measure between 2m and 3m in height in order to present an appearance that is appropriate to the rural context. The only exception to this would be fencing around the substation which will be metal palisade security fencing of up to 2.4m in height in order to meet Northern Power Grid Policy IMP/002 - Policy for Security Measures at Major Operational Sites [27].
- 7.10.5. CCTV columns would be placed between the fencing and the solar PV modules, oriented to look along the gap rather than beyond the Panel Areas and would be no more than 5m in height.
- 7.10.6. Access tracks and cable routes would be located to pass through existing gates and gaps in hedgerows where feasible, to avoid the need for removal of trees or hedges.
- 7.10.7. Inverters and batteries would be approximately 3m in height and would be finished in grey; these would be located amongst the solar PV modules throughout the Panel Areas. Each Panel Area would also include a 5m weather mast.

- 7.10.8. The substation would be no more than 8m in height with the exception of the communications mast which would be up to 15m. It would be screened by Square Wood and proposed planting as shown in Figure 2.12.
- 7.10.9. Components of the Proposed Development required for the operation of the solar farm, including access tracks, would be removed during decommissioning. Changes to the routes of Public Rights of Way would not be time limited and would remain in place post-operation. Permissive rights of way and vegetation within the Panel Areas would revert to the management of the landowner.

### **Construction mitigation**

- 7.10.10. No measures are proposed to mitigate the short-term effects on landscape and visual receptors that would arise during construction.

### **Operation mitigation**

- 7.10.11. Approaches to the mitigation of potential landscape and visual effects are detailed below. At the present stage of developing the design, the precise location and extent of the application of these measures is yet to be developed. This assessment identifies a 'design palette' of measures to be taken and for which receptors and effects those measures could be effectively applied to mitigate effects. A detailed mitigation design and landscape management measures to ensure the successful establishment of proposed planting (as part of the LEMP) will be developed as part of the final design for the Proposed Development.
- 7.10.12. Figures 2.12 and 2.13 illustrate the proposed landscape mitigation approaches summarised in Table 7-7.

**Table 7-7 Landscape and visual mitigation**

Measure	Description
<b>Managing existing hedgerows and panel setbacks</b>	Where local roads and PRow pass alongside fields containing panels, hedgerows would be managed and panels set back an appropriate distance to ensure that: <ul style="list-style-type: none"> <li>- The hedgerows remain of a suitable maintainable height as dense hedges and do not become over-tall and thin at the base, and;</li> <li>- Fencing and CCTV are not visible above the hedges and visibility of the solar PV modules over the hedge is minimised – noting than in some locations topography will prevent full screening.</li> </ul>
<b>Reinforcement of existing hedgerows</b>	Existing hedgerows would be ‘gapped up’ where sparse in order to provide more effective visual mitigation (and enhance the landscape fabric).
<b>Tree planting along northern boundaries</b>	Along northern Panel Area boundaries, where it would not shade the solar PV modules, tree planting would be included as visual mitigation (and enhancement of the landscape fabric and character).
<b>Seeding and management of panel areas</b>	The landscape fabric of the Panel Areas would be maintained to ensure it remains suitable for future farming whilst supporting biodiversity during operation. These measures would also permit reinstatement of the present landscape character post-operation.
<b>Diversion of Public Rights of Way (PRow)</b>	Where existing PRow would pass through the centre of fields proposed for solar PV modules, these would be re-routed around the field boundaries in order that users of the routes have established hedgerows to one side, rather than solar PV modules to both sides.

7.10.13. It should be noted that the proposed mitigation measures listed in Table 7-7 will become part of the final project design and as a result will become ‘embedded mitigation’ (included in the assessment of effects) for the ES. Within this PEIR assessment, likely unmitigated effects and the potential for effective mitigation are described.

## Enhancement

7.10.14. Figures 2.12 and 2.13 illustrate the proposed landscape and visual enhancements which are summarised in Table 7-8.

**Table 7-8 Landscape and visual enhancements**

Measure	Description
<b>Hedgerow and tree planting</b>	As well as providing visual mitigation, proposed tree and hedgerow planting would enhance the existing landscape fabric and character and contribute to the ‘landscape condition/quality’ aspect of landscape value (see Appendix 7.3).
<b>Permissive footpaths</b>	Permissive footpaths are proposed through the Panel Areas where they would provide improved access by way of connecting disjointed areas of the network of Public Rights of Way; 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; or provide improved options for circular walks. These access improvements would contribute to the ‘Amenity and recreation’ aspect of landscape value (see Appendix 7.3).
<b>Interpretation</b>	Interpretation would be provided at points of interest along the PRow network and permissive routes through the Panel Areas. These would identify information of local

Measure	Description
	landscape, biodiversity and heritage interest. In addition, some interpretation would describe aspects of the solar farm itself – primarily in areas where the Proposed Development would be more openly visible. This interpretation would contribute to the ‘Cultural heritage’ and/or ‘Cultural associations’ aspects of landscape value (see Appendix 7.3).
<b>Wayfinding and access</b>	Measures would be taken to improve access and wayfinding within the Site Area – which would include mapped and waymarked routes and improvements to stiles, gates and bridges as required, and parking areas. These access improvements would contribute to the ‘Amenity and recreation’ aspect of landscape value (see Appendix 7.3).
<b>Biodiversity net gain</b>	Biodiversity enhancements would contribute to the ‘Natural Heritage’ aspect of landscape value (see Appendix 7.3).

7.10.15. It should be noted that the proposed enhancements listed in Table 7-8 will become part of the final project design and as a result will be included in the assessment of effects for the ES. Within this PEIR assessment, likely effects without enhancement and the potential for enhancement are described.

## 7.11. Assessment of likely significant effects

7.11.1. Apart from the on-site substation and associated communications mast, the solar PV modules would be the most visible elements of the solar farm. The description of potential effects primarily focusses on these larger elements, but takes account of all elements of the Proposed Development in considering the potential effects.

### Construction

#### Landscape Fabric

7.11.2. Effects on landscape fabric during construction would consist of localised removals of hedgerows for access and cable laying and the gradual change of arable or pasture fields to accommodate solar PV modules. New planting would also be undertaken to seed panels areas, gap up or reinstate removed hedgerows and provide new hedgerows. The net change at this stage would result in short term removals of some sections of mature hedgerow before the new planting has matured and would result in some localised adverse effects which would not be significant.

#### Landscape Character and Visual Receptors

7.11.3. Construction would take place over a period of 1 year in total, a short-term duration. Construction activity would take place simultaneously across the Site Area but would only be obviously different from farming activities in closer views and towards completion of the panel installation, at which stage effects would become similar to those during operation.



7.11.4. Large and Medium scale effects would arise within the Site Area and to distances of approximately 0.5km as a result of the construction activity. Given the short-term duration these would be **potentially significant** within character area 6 Great Stainton farmland and for users of public rights of way within 0.5km of the Panel Areas.

## Operation

### Landscape Fabric

7.11.5. Effects on landscape fabric during operation would consist of increasing maturity of the proposed hedgerow and tree planting, along with the continued maintenance of the grassland within the panel areas. There would be localised non-significant positive effects on the landscape fabric as a result of the hedgerow and tree planting both in the medium term (as hedges mature) and permanently as the trees mature.

### ZTV studies

7.11.6. ZTV Studies have been prepared to identify the theoretical visibility of the Proposed Development, as follows:

- Figure 7.2 indicates how many of the six Panel Areas can be seen across the 5km study area and was used to assist in siting viewpoints to show effects from areas where more than one Panel Area can be seen.
- Figure 7.3 indicates how many of the ZTV points (spaced 100m apart within Panel Areas A-F) analysed are visible across the 5km study area – providing an indication of how much of the Proposed Development would be visible. This study clearly indicates that for much of the 5km study area either none, or 15% or less, of the development would be theoretically visible. Locations with greater theoretical visibility are focussed within open fields between the Panel Areas and in more distant areas along the slopes facing towards the Panel Area between Sadberge and Redmarshall; and in areas of higher ground to the northeast and west of the Panel Areas. These latter areas are represented within this assessment by additional viewpoints requested by consultees during scoping.
- Figures 7.4 A-F show visibility of the individual Panel Areas and have been used to inform the viewpoint selection and analysis.

7.11.7. The areas of visibility identified have been verified during site visits and it was noted that local hedgerow and tree cover markedly reduces the extent of visibility from that shown on the ZTV studies, with visibility generally extending in practice to no more than 1-1.5km from Panel Areas A-F apart from:

- occasional distant elevated views from beyond 2km (e.g. at Foxton), where the Proposed Development is typically seen as small areas of narrow horizontal strips within the landscape, filtered through intervening tree cover in the winter and largely screened in the summer; and
- views from the southeast of Panel Areas C and D where the panels occupy slopes facing towards this direction and would be seen looking across low lying land towards the skyline.

## Viewpoint Analysis

7.11.8. Appendix 7.4 provides a review of the likely visibility of the Proposed Development from the viewpoints shown on Figures 7.2-7.4. The summary of the preliminary judgements in relation to the scale of visual effects at each viewpoint is provided in Table 7-9, effects are judged to be adverse unless explicitly stated otherwise.

**Table 7-9 Preliminary Viewpoint Analysis Summary**

VP	Location	Distance from nearest panel area	Potential scale of effects	Potential scale of effects with mature mitigation planting
1	Lime Lane (near A1)	0.3km	Medium	Medium
2	Brafferton	0.2km	Medium/small in winter Small in summer	Medium in winter Small in summer
3	Footpath west of High House	0.2km	Small	Small
4	Lime Lane (near Ricknall Lane)	0.3km	Medium	Medium/small
5	Bridleway near East Ketton	0km	Large, Adverse	Large, Neutral
6	Bridleway near Ketton Hall	0.2km	Medium in winter Medium/small in summer	Medium in winter Medium/small in summer
7	Beaumont Hill	1.5km	Negligible	Negligible
8	Footpath near Moor House	1.2km	Negligible	Negligible
9	Newton Ketton	0.3km	Small in winter, Negligible in summer	Small in winter, Negligible in summer
10	Salters Lane / Catkill Lane	0.5km	Negligible	Negligible
11	Salters Lane	0.1km	Large/medium in winter, Medium in summer	Large/medium in winter, Medium in summer
12	Bridleway near Stainton Hill House	0km	Large	Large
13	Footpath near Hauxley Farm	0.1km	Large	Large/medium
14	Footpath northeast of Hauxley Farm	0.2km	Large	Large/medium
15	Lodge Lane	0.2km	Small	Small
16	Footpath northwest of Viewley Hill Farm	0.1km	Large/medium	Medium
17	Footpath east of Great Stainton	0.1km	Large	Large
18	Great Stainton, Elstob Lane	0.2km	Medium/small	Medium/small
19	Elstob Lane	0.1km	Large	Large/medium
20	Catkill Lane	0km	Large scale at this specific location (a gap in the woodland edge), typically Small in winter and Negligible in summer.	Large scale at this specific location (a gap in the woodland edge), typically Small in winter and Negligible in summer.

VP	Location	Distance from nearest panel area	Potential scale of effects	Potential scale of effects with mature mitigation planting
21	Local Road west of Bishopton	0.1km	Large	Large/medium
22	Footpath, Folly Bank	0km	Large	Large
23	Footpath southwest of Bishopton	0.4km	Small	Small/negligible
24	Bishopton Recreation Ground	0.1km	Large, Adverse	Large, Neutral
25	Old Stillington	0.7km	Medium	Negligible
26	Footpath near Mill Lane	0.1km	Large	Large
27	Bridleway between Stillington and Whitton	0.8km	Medium/small	Medium/small
28	Footpath near Redmarshall	1.1km	Small	Small
29	Local Road south of Bishopton	1.2km	Negligible	Negligible
30	Foxton	2.3km	Negligible	Negligible
31	Darlington Back Lane near Newbiggin	2.6km	Small/negligible	Small/negligible
32	Sadberge	2.9km	Negligible	Negligible
33	Footpath near Coatham Lane	2.3km	Small/negligible	Small/negligible

7.11.9. As shown by Figure 7.3, which illustrates the unmitigated scale of effects in winter at each viewpoint, the distribution of potential effects would be as follows:

- Large and Large/medium scale effects would arise at locations within 0.2km of the solar PV modules;
- Medium and Medium/small scale effects would arise up to 0.8km from the solar PV modules, identifying a pattern of open and elevated views from the north and northeast and views from Brafferton and Great Stainton towards the nearby areas of panels;
- Small scale effects would arise up to approximately 1.1km from the solar PV modules in the south and southeast of the study area from the solar PV modules; and
- beyond this area, effects tend toward Negligible scale.

7.11.10. For each receptor, effects are judged to be adverse unless explicitly stated otherwise, and this preliminary assessment indicates whether effects are:

- firmly expected to be Significant;
- firmly expected to be not Significant; and
- expected to be in the middle ground between these (potentially Significant).

7.11.11. The ES assessment will consider those effects identified as significant or potentially significant. It is proposed that effects identified at this stage to be not significant are not considered further within the ES.

- 7.11.12. During operation the cables will be underground and vegetation will quickly re-establish (including any hedgerows that may need to be removed and reinstated). There would be no effects arising from cable routes during operation and the assessment which follows therefore focuses on the effects that would arise from the solar PV modules and other above ground infrastructure.

### **Landscape character – host areas**

- 7.11.13. **Darlington: 6 Great Stainton Farmland (includes Panel Areas A, B and C)** – As shown by Figure 7.1, this character area lies between Newton Aycliffe, Barmpton and Bishopton, occupying most of the area within 1km of Panel Areas A, B and C, extending up to 2km to the south. It has rolling hills of mixed pasture and arable farmland divided by hedgerows with trees and woodland. It is crossed by a number of lanes and rights of way and with few roads and limited settlement. Appendix 7.3 provides a detailed review of landscape sensitivity identifying that the area is of Community value (undesigned with limited historic, cultural and biodiversity interest, but with good access, rural scenic interest and relatively tranquil). The rolling landform and medium scale which reduces around villages, and the mix of visual containment and openness with some areas forming local skylines have been taken into account in judging the area to be of High/medium susceptibility and **Medium sensitivity**.
- 7.11.14. As illustrated by Figures 7.1 and 7.4A-C, Panel Areas A, B and C would physically occupy an Intermediate extent of this character area, and there would be frequent, close views resulting in a sense of proximity and ubiquity of the solar PV modules when travelling through the area, except within the southernmost part of the character area where visibility would be largely screened. The solar farm would become one of the key characteristics of this area, giving rise to **significant effects**. Mitigation planting in this character area would include reinforcement, reinstatement and the addition of hedgerows and tree lines, which would be both in keeping with the character and a minor improvement to the landscape condition.
- 7.11.15. **Darlington: 7 Bishopton Vale (includes Panel Areas D, E and F)** – As shown by Figure 7.1, this character area lies between Stillington, Whinney Hill and Sadberge, including Panel Areas D, E and F within its northern end. It is a gently undulating, more intensively farmed and lower lying landscape than the adjacent Great Stainton Farmland, which forms the skyline to the northwest. Appendix 7.3 provides a detailed review of landscape sensitivity identifying that the area is of Community value (undesigned with historic villages, limited cultural and biodiversity interest and intensive large-scale farming). The large scale which reduces around villages, openness and expansive views and low-lying landform contained by higher ground have been taken into account in judging the area to be of Medium susceptibility and **Medium/low sensitivity**. The character area description also notes that the northern end of the character type marks a transition to a more varied landscape around Stillington.

- 7.11.16. As illustrated by Figures 7.1 and 7.4D-F, Panel Areas D, E and F would physically occupy a Localised extent of this character area, and there would be occasional, close views resulting in a sense of proximity to the solar PV modules when travelling through the northern end of the area between Stillington, Bishopton and Little Stainton. These effects would diminish with distance and occasional limited views from areas beyond 1km, such as from viewpoints 29, 31 and 32 would have negligible effects on the perceived character as seen from those locations. The consented Gately Moor solar farm is located within this character area, approximately km to the south of Panel Area F.
- 7.11.17. The placement of the solar PV modules in the more varied northern transition area would result in a notable change to the character north of Little Stainton and have the effect of increasing the differences between this northern part of the character area and the rest of the character area. The main body of the character area would be largely unaffected and effects would be **potentially Significant**. Mitigation planting in this character area would include reinforcement, reinstatement and the addition of hedgerows and tree lines, which would be both in keeping with the transitional character of the northern part of the character area and a minor improvement to the landscape condition.

#### Landscape character – nearby areas

- 7.11.18. Effects on non-host character areas would arise from views of the solar PV modules and would have the potential to give rise to significant effects on character where the scale of visual change would be Medium/small or greater, given such changes may result in a sense of proximity to the solar farm and changes to the way in which the character is perceived (e.g. it may be perceived as being more developed). Small scale changes or less would not be significant as such a limited change to the appearance of a neighbouring landscape would have little influence on character. Based on the viewpoint analysis provided in Table 7-9 and section 7.11.4, such effects would extend up to 0.8km from the Panel Areas, potentially affecting the character areas considered below. Effects on more distant landscape character areas (as listed within Table 7-6) would be Negligible and are not considered further.
- 7.11.19. **Darlington: 5 Upper Skerne Valley (0.1km, west)** – This is an incised valley landscape with small scale and complex pattern of fields, trees and settlement and is contained by the valley sides. Indicators of landscape value include the Conservation Area and locally designated historic parkland at Coatham Mundeville and Hall Garth, the Green Gaps identifying locally important landscape function at Barmpton and Great Burdon, and recreational facilities including golf courses and PRow. The area is judged to be of Regional value. The small scale landscape and complex patterns indicate higher sensitivity, while the enclosure, limited intervisibility and presence of the A167, mainline railway and urban edge of Darlington reduce sensitivity to modern development. The area is judged to be of Medium susceptibility and **Medium sensitivity**.

- 7.11.20. As shown by the ZTV studies in Figures 7.4A-F, this LCA would have patchy theoretical visibility of Panel Areas B (2.5km, northeast) and D (2.5km, northeast) and more extensive visibility, particularly from the northern end of the LCA, of Panel Area A (0.1km, northeast). In practice as indicated by viewpoints 7 (within the LCA), 6 and 8 (nearby to the northwest) – Panel Area B would be barely perceptible (if visible). The main area of visibility would arise in the area between Coatham Mundeville and Skerningham Manor. In this area views of the solar farm would be screened by a series of lines of trees along field boundaries, the railway and the River Skerne as well as the tree belts within the golf course at Hall Garth, confining effects to the fields east of the railway line which would lie within 0.4km of the nearest panels resulting in a sense of proximity to the solar farm and **potentially significant** effects.
- 7.11.21. **Durham: 73 Sedgefield, Windlestone and Aycliffe (0km, north)** – This area forms part of the Tees Lowland character type and is a broadly undulating lowland plain with open large scale arable fields divided by low hedges with occasional hedgerow trees. The area closest to the Site Area is sparsely settled with a network of lanes and increasingly affected by the A1, railway and Newton Aycliffe to the west. The County Durham Landscape Value assessment (2019)<sup>21</sup> identifies this area as being of variable value, with the areas closest to the Site Area being identified as typically High-medium/medium value (Grindon Lane unit); Low-medium (Preston South unit). Taking account of the AHLV designation and the higher assessed value of the character type where it adjoins Panel Area B, the area is judged to be of Regional value. The area is judged to be of Medium susceptibility and **Medium sensitivity**.
- 7.11.22. As shown by the ZTV studies in Figures 7.4A-F, this LCA would have theoretical visibility of Panel Areas A (0.2km, south) and B (0km, south), primarily of Panel Area B in the area between the main line railway and Grindon Lane, with more limited and distant views of other Panel Areas. In practice the combination of gently undulating ground and hedgerows with trees further restricts visibility and the effects would mainly arise in areas closest to the Panel Areas, such as near viewpoints 4 and 12. The area around viewpoint 4 near Whinfield House will be host to the consented Whinfield solar farm which lies within this character area, and the addition of the Proposed Development would not give rise to additional effects on character in this context. The main area of effects would arise near Preston Lodge and Stainton Hill House as a result of close proximity to panels in Panel Area B and would give rise to effects which would be **potentially Significant**.
- 7.11.23. **16 Butterwick and Shotton (0km, N)** - This area forms part of the Tees Lowland character type and is a broadly undulating lowland plain with open large scale arable fields divided by low hedges with occasional hedgerow trees. The area closest to the Site Area is sparsely settled with a network of lanes and affected by the railway and Lambs Hill wind farm near Merton Grange. The County Durham Landscape Value assessment (2019)<sup>21</sup> identifies this area as being typically Low-Medium value in the areas closest to the Site Area, with an area of High-medium/medium value (Elstob unit) coinciding with the AHLV designation. Taking account of the typical value in the area

most affected (within 0.8km of the Panel Areas), the area is judged to be of Regional value. The area is judged to be of Medium susceptibility and **Medium sensitivity**.

- 7.11.24. As shown by Figures 7.4A-F, this LCA would have patchy theoretical visibility of Panel Areas C (2.3km, southwest) and E (0.7km, south) and more open and widespread views of Panel Area F (0km, south). In practice the combination of gently undulating ground and hedgerows with trees further restricts visibility and the effects would mainly arise in areas closest to the Panel Areas, such as near viewpoints 4 and 12. The area around viewpoint 4 near Whinfield House will be host to the consented Whinfield solar farm which lies within this character area, and the addition of the Proposed Development would not give rise to additional effects on character in this context. The main area of effects would arise near Preston Lodge and Stainton Hill House as a result of close proximity to Panel Area B and would give rise to effects which would be **potentially Significant**.
- 7.11.25. **Stockton-on-Tees: 1 West Stockton Rural Fringe (0.7km, SE)** – This area is similar in character to the adjacent area within Darlington (7 Bishopton Vale). It consists of flat, open arable farmland with enlarged fields divided by fragmented hedgerows and fences and limited settlement. It is more affected by urban influences, with open urban edges and continued expansion to the west of Stockton (as shown on Figure 7.7). Infrastructure is also more prevalent with Teesside airport the A66 and large substations and transmission lines across the area. There are no designations covering the area, which is judged to be of Community value. The area is judged to be of Medium/low susceptibility and **Medium/low sensitivity**.
- 7.11.26. As shown by the ZTV studies in Figures 7.2 and 7.4A-F, this LCA would have patchy theoretical visibility of all of the Panel Areas but would mostly have no visibility beyond the rising ground between Whinney Hill and Redmarshall, with the only close views arising of Panel Area F from areas near Redmarshall. In practice, as illustrated by viewpoint 28, visibility would be further restricted by vegetation which increases within this character area compared to the more open vale to the northwest. The Small scale changes to views would be limited in extent and would not affect how the character is perceived. Effects would be **not Significant**.
- 7.11.27. **Stockton-on-Tees: 3 Billingham and Thorpe Becks (0.5km, E)** - This area is described as a 'green corridor' following the beck valley between Stockton and Billingham, which extends into the rural area to encompass Stillington and Old Stillington. The field pattern varies, but are typically irregular reflecting the meandering beck, and used for pasture. Field boundaries are typically hedge and small woodlands occur frequently. The valley landform and vegetation typically restricts visibility from lower-lying areas whilst offering more open cross-valley views elsewhere (e.g. viewpoints 25 and 27). Larger rectilinear fields occur more frequently towards the west where there is a transition to the larger scale adjacent character areas. There are no designations covering the area, which is judged to be of Community value. The area is judged to be of High/medium susceptibility and **Medium sensitivity**.



7.11.28. As shown by the ZTV studies in Figures 7.4A-F, this LCA would have areas of relatively open views of solar PV modules within Panel Area F near Old Stillington (approx. 0.5km), between Stillington and Whitton at distances of 0.7-1.2km and north of Carlton (1.5-2.5km), with more distant theoretical views of Panel Areas B-E. As illustrated by viewpoints 25, 27 and 28, the greatest effects would arise near Old Stillington and Whitton where relatively close and elevated views towards panels in Panel Area F would give rise to Medium and Medium/small changes to views. The nearby presence of Stillington and its visible industrial area, along with the railway and nearby Lambs Hill wind farm bring influences of modern development to this location. The localised changes to views would be limited in extent and would not affect how the character is perceived. Effects would be **not Significant**.

### **Landscape character – National Character Area**

7.11.29. In response to a scoping clarification, Natural England requested that effects on the National Character Area be considered if significant effects on the local character areas were identified. The preliminary assessment above indicates likely significant effects on Area 6 Great Stainton Farmland, and potential significant effects on 7 Bishopton Vale, 5 Upper Skerne Valley, 73 Sedgfield, Windlestone and Aycliffe and 16 Butterwick and Shotton.

7.11.30. All of these character areas lie within NCA 23 Tees Lowlands which covers most of the study area, and extends southwards to the Cleveland Hills and east to the coast between Redcar and Hartlepool. The exception is a small area in the northwest around Newton Aycliffe, which is neither within NCA 23 nor identified as receiving potentially significant effects. The area (NCA 23) is described as “*a broad, low-lying and open plain of predominantly arable agricultural land, with low woodland cover and large fields*” with key characteristics including urban and industrial areas around the Tees estuary key transport links and power lines along with wooded river valleys and “*quieter rural areas*” including around the Site Area. The carr landscape to the east of Newton Aycliffe is also identified as a key characteristic.

7.11.31. The majority of the character area has no particular indicators of value and is judged to be of Community value within the study area. Given the large scale, flat and developed nature of the character area, along with the more prevalent vegetation cover and undulating landform within the study area, and the proximity to the carr landscape of the River Skerne susceptibility to the Proposed Development is judged to be Medium/low, and sensitivity **Medium/low**.

7.11.32. Based on the effects identified for the local character areas, there would be likely to be an area of Large and Medium scale effects within 0.8km of the Panel Areas, extending from the East Coast mainline between Beaumont Hill and Lime Lane, to Stillington, Whitton and near Redmarshall – an area approximately 10km east-west and 4km north-south. In the context of the extensive character area, this would be a Limited extent of effects which would be **not Significant**.



## Visual receptors

- 7.11.33. The highest sensitivity receptors within the study area would be local residents and users of local recreational routes (who would have high susceptibility) where views would be of at most Regional value (within locally designated landscapes), indicating High/medium sensitivity. Taking this into account there would be the potential for significant visual effects where the scale of visual change would be Medium/small or greater. Based on the viewpoint analysis provided in Table 7-9 and section 7.11.4, such effects would extend up to 0.8km from the Panel Areas, potentially affecting the visual receptors considered in detail below. Unless stated otherwise, receptors are judged to be of High/medium sensitivity.
- 7.11.34. Small scale changes to views would arise up to approximately 1.1km from the solar PV modules potentially giving rise to effects which would be **not Significant** for the following visual receptors:
- Little Stainton – although this settlement lies among the closer receptor group between Elstob Lane, Bleach House Bank, Stoney Flatt Farm, Gillyflatts and Long Pasture House Farm – it is well screened by vegetation and more distant.
  - Redmarshall.
  - South of Little Ketton farm between A167 and Hill House Lane.
  - North of Lea Hall between A167 and Elstob Lane.
  - East of Elstob Lane and north of the local road between Great Stainton and Stillington.
  - East of Whitton Road / Drovers Lane (in the area north of Carlton).
  - Between Redmarshall and Hill House Lane, south of Gillyflatts and Stoney Flatt farm.
- 7.11.35. Effects on distant visual receptors beyond 1.1km would be Negligible and are not considered further. This includes all visual receptors listed as being 1km in Table 7-6.
- 7.11.36. **Coatham Mundeville (0.6km, west)** – is a linear settlement along the A167 with the rear of properties facing out over the Skerne Valley towards Panel Area A. Westward views are screened by housing and rising ground. From publicly accessible areas (the A167, Brafferton Lane, Coatham Lane and the footpath across the golf course) visibility towards Panel Area A is screened by hedges, trees and houses and would be restricted to glimpsed views of small parts of the development (if any). At most effects would be Medium/small scale for a Limited extent and would be **not Significant**. Properties on the east side of the A167 are likely to have views of the solar PV modules in Panel Area A from upstairs windows, and from downstairs windows and more elevated areas of the gardens where not screened by vegetation.
- 7.11.37. **Brafferton (0.1km, west)** – is a linear village located close to the A1(M). Views out from the village are relatively open to the south and southeast looking across lower lying ground towards the rising ground within Panel Area A. Views to the northwest similarly look out over lower lying ground towards Lime Lane and Newton Aycliffe. To the northeast, views are contained by slightly higher ground within Panel Area A.

Visibility of the Proposed Development would be screened from public areas within the core of the village, with views of the solar PV modules only becoming available upon leaving the village via the footpaths which radiate from the eastern end of the village (e.g. viewpoint 2). At most effects would be Medium scale for a Limited extent and would be **not Significant**. Houses on the north and northeast part of the village would have some close views of the solar PV modules in the field to the east of the Back Lane track from east facing windows and from gardens with the remainder of this part of the Panel Area being screened by hedgerows, trees and terrain which falls to the north. Houses on the south side of the village would have views towards solar PV modules on rising ground with filtering and screening by trees breaking up the panel areas and screening some parts of the Proposed Development in summer.

7.11.38. **Great Stainton (0.1km, northwest)** – is a small village set around a village green in an elevated position which allows for extensive views across the lower-lying vale to the east and southeast. Views to the west are contained by vegetation and rising ground. Visibility of the Proposed Development would be screened from public areas within the core of the village, with views of the solar PV modules only becoming available upon leaving the village on one of the roads or footpaths (e.g. viewpoints 17 and 18). Effects would be Large scale for a Localised extent and would be **potentially Significant**. Houses on the eastern edge of the village would have more limited visibility of the Proposed Development than is indicated by viewpoint 17 as the panels have been set downslope to mitigate effects and the houses are set further back than the viewpoint and have views partly screened by sheds and garden vegetation. solar PV modules on the south side of the village have also been set back beyond existing hedges and a gentle ridgeline to mitigate effects by avoiding views of panels on slopes facing towards the village and to increase the screening effectiveness of new hedgerow and tree planting to the north of the panels.

7.11.39. **Bishopton (0.1km, southwest)** – is a village set within the lower lying vale landscape. The village is closely associated with the nearby scheduled castle mound and is covered by a Conservation Area designation. Views from the southwest side of the village include slightly elevated outlooks from the footpath (see viewpoint 23) and from rear gardens and windows of properties over the nearby beck valley to rising ground at Castle Hill and within Panel Area E. Views from the north side of the village are similarly over lower lying ground towards the higher ground of Bulmerside Hill and Panel Area F around Downlands Farm (see viewpoint 24), with the turbines at Lambs Hill wind farm seen beyond. Views to the southeast are contained by rising ground. Visibility of the Proposed Development would be screened from public areas within the core of the village, with views of the solar PV modules only becoming available upon leaving the village on one of the roads or footpaths (e.g. viewpoints 23 and 26), or when visiting the recreation ground or school where there would open views of nearby panels (see viewpoint 24).

7.11.40. Effects would be Large scale for a Localised extent and would be **potentially Significant**. It is proposed that effects on the recreation ground and school be mitigated via a belt of planting which would also be accessible for recreational

purposes. Houses on the southwest edge of the village would have more limited visibility of the Proposed Development than is indicated by viewpoint 23 as there are trees behind the houses which filter views. Houses on the north side of the village would similarly have filtered views of the panels from rear windows and gardens.

- 7.11.41. **Old Stillington (0.5km, north)** – is a small linear settlement to the west of Stillington. It is situated with open views to the south over the beck valley from the eastern edge of the settlement and footpath as shown by viewpoint 25. Homes, barns and garden vegetation screen the majority of southward views towards Site Area F from other parts of the settlement. The northern edge of Panel Area F would be seen across the skyline for a wide arc of the view. Mitigation via hedgerow and tree planting would be effective at limiting visibility to the eastern end of the array. Effects would be Medium scale for an Intermediate extent and would be **potentially Significant**.
- 7.11.42. **Stillington (0.6km, north)** – is a larger village with an established industrial area and a country park to the northwest edge. Housing on the southwest edge descends into the nearby beck valley from the village core with views towards Panel Area F typically screened by a mix of buildings, terrain and vegetation. Visibility of the Proposed Development would be screened from public areas within the core of the village, with views of the solar PV modules only becoming available upon leaving the village via South Street, roads or the footpath towards Whitton (see viewpoints 25 and 27). Effects would be Medium scale for a Limited extent and would be **not Significant**.
- 7.11.43. **Whitton (0.7km, east)** – is a small nucleated village. Some additional dwellings are currently under construction at the northeast edge of the settlement. Outward views from streets within the village are generally contained by rising ground, buildings and/or vegetation and there would be no visibility of the Proposed Development from public spaces within the village, except for potential filtered views in winter of the edges of Panel Area F solar PV modules along the skyline from Mill Lane before it descends towards the beck, and from the footpath heading towards Stillington (see viewpoint 27). A small number of homes near the western edge of the village location would have similar views from west facing windows and gardens. Effects would be Medium/small scale for a Limited extent and would be **not Significant**.
- 7.11.44. **Between A167, Salters Lane, Lea Hall and Little Ketton Farm (includes Panel Area A)** – As shown by Figures 7.5A-C, this area has a general lack of local road access with only Lime Lane, the western end of Lodge Lane and the southern end of Ricknall Lane all located to the north of the area. A network of public rights of way, some of which are hedged green lanes, run across the area connecting between the roads, rural properties and farms. The undulating terrain, hedgerows and trees within this area mean that the nature of views varies from contained to open and elevated (see viewpoints 1-6 and 9-11).
- 7.11.45. Drivers using Lime Lane and Lodge Lane, particularly in taller vehicles, would have occasional views of the solar PV modules within Panel Area A which would be located to the north and northeast of Brafferton, with parts of the Proposed Development in

these fields on slopes facing towards the road which has an elevated outlook over a shallow valley in this area (see viewpoints 1 and 4). Close views of the consented Whinfield solar will be a more dominant influence closer to Whinfield House. Effects for road users would be Localised in extent and at most Medium scale.

- 7.11.46. For users of the PRoW network, any walking route would be likely to include either passing through or close to the solar PV modules at some point on the route (e.g. viewpoint 5), along with views of panels at a greater distance, often filtered through trees, in the more open and elevated areas (e.g. viewpoints 2,3,6 and 9). In many places tall hedges and lines of trees alongside the routes would screen views of the panels. Effects for PRoW users would range from Large scale in the closer and more expansive views, to Medium and Medium/small scale in the more distant open and elevated views. Whilst the occurrences of each of these effects would be localised, views of the Proposed Development would be unavoidable whilst using the routes in the area and the extent effects is judged to be Wide.
- 7.11.47. Taking the distribution and scale of effects described above into account, effects of this receptor group would be **Significant**. Mitigation proposals would include setting panels back from hedgerows; allowing hedges to grow to reduce views of panels over hedges; planting tree lines along northern boundaries of panel areas and reinforcing, replacing or adding hedges where they are sparse or non-existent along the Panel Area A boundaries. The footpath which crosses the fields between Brafferton and High House is also proposed to be re-routed so that it does not pass between panel areas.
- 7.11.48. **Between Lea Hall, Salters Lane, Newton Ketton, Elstob Lane and Hill House Lane (includes Panel Areas B and C)** - As shown by Figures 7.5B-D, this area has a general lack of local road access with only Lodge Lane and Elstob Lane/Hill House Lane located towards the north and east edges of the area. A network of public rights of way, some of which are hedged green lanes, run across the area connecting between the roads, rural properties and farms. The undulating terrain, hedgerows and trees within this area mean that the nature of views varies from contained to open and elevated (see viewpoints 8 and 10-19).
- 7.11.49. Drivers using Lodge Lane, particularly in taller vehicles, would have close views of the solar PV modules within Panel Area B as they pass the Proposed Development near Stainton Hill House. Drivers using Elstob Lane would have close views of panels to either side of the road to the south of Great Stainton, with the effects being particularly noticeable for southbound drivers as they descend the hill. Views of the substation building and solar PV modules in the southern area of Panel Area C would also be available as the road passes the driveway entrance to the Mount (see viewpoint 19). Effects for road users would be Localised in extent and Large scale.
- 7.11.50. For users of the public right of way network, any walking route would be likely to include either passing through or close to the solar PV modules at some point on the route (e.g. viewpoints 13, 14 and 20), along with views of panels at a slightly greater distance but occupying a relatively wide arc of view, in the more open and elevated

views (e.g. viewpoints 10 and 16). In many places tall hedges and lines of trees alongside the routes would screen views of the panels – particularly along most of Salters Lane and Catkill Lane (see viewpoint 11). Effects for PRoW users would be Large scale in the open views and routes which pass through the panels areas near Hauxley Farm, Viewley Hill Farm and Square Wood. Taking account to the limited visibility from the key routes of Catkill Lane and Salters Lane, and similarly limited effects on views from the footpath between Catkill Lane and Barmpton (see viewpoint 8) these effects are judged to be of Intermediate extent.

- 7.11.51. Taking the distribution and scale of effects described above into account, effects of this receptor group would be **Significant**. Mitigation proposals would include setting panels back from hedgerows; allowing hedges to grow to reduce views of panels over hedges; planting tree lines along northern boundaries of panel areas; reinforcing, replacing or adding hedges where they are sparse or non-existent along the Panel Area B and C boundaries, and enclosing the substation within a tree belt to form an extension to Square Wood.
- 7.11.52. **Between Elstob Lane, Bleach House Bank, Stoney Flatt Farm, Gillyflatts and Long Pasture House Farm (includes Panel Areas D and E)** – As shown by Figures 7.5D-F, road access in this area includes local routes radiating from Bishopton to Great Stainton, Little Stainton, Whinney Hill and Mordon. The routes are often tree and/or hedge lined with limited outward views, though there are occasional more elevated and open sections and areas where hedges are clipped low (e.g viewpoints 22 and 29). Effects for road users would include sequential effects when passing both Gately Moor solar farm and the Proposed Development and close views of panels above hedges within Panel Area E from roads to the west of Bishopton (see viewpoints 21 and 22) and within Panel Area D from the road which connects Great Stainton and Bishopton giving rise to Localised Large scale changes to views. There would also be more distant views of panels within Panel Area F from more open and elevated sections of roads - near the junction of Bleach House Bank with the local load to Old Stillington, and near viewpoint 29 (adjacent to Gately Moor solar farm), giving rise to a limited extent of Medium to Negligible scale changes to views.
- 7.11.53. For users of the PRoW wnetwork in this area, there would be close views of the solar PV modules in Panel Area D from the routes which passes through that Panel Area near Great Stainton, and within Panel Area E from the route which passes through that Panel Area, giving rise to an Intermediate extent of Large scale effects. From the route which follows Little Stillington Beck between Elstob Lane and Little Stainton there would be more limited visibility, primarily close to Panel Area D where views would be filtered through the nearby trees along the beck. Figure 7.2 indicates views of up to five of the Panel Areas from a short section of the route which connects Bishopton to Pitfield Farm although in practice Panel Areas A and B are unlikely to be visible (as illustrated by viewpoints 29 and 31) and the most noticeable effects would arise from close views of panels within Panel Area E as the route approaches Folly Bank. Views of panels within Panel Area F from the route between Stoney Flatt Farm and the Castle Mound are indicated by Figure 7.5F, though in practice these would be limited by the

nearby roadside hedges on slightly higher ground and are likely to give rise to Negligible scale effects in the context of the route passing through Gately Moor solar farm.

- 7.11.54. Taking the distribution and scale of effects described above into account, effects of this receptor group would be **Significant**. Mitigation proposals would include setting panels back from hedgerows; allowing hedges to grow to reduce views of panels over hedges; planting tree lines along northern boundaries of panel areas; reinforcing, replacing or adding hedges where they are sparse or non-existent along the Panel Area D and E boundaries, and re-routing footpaths which pass through panel areas so that they run around field boundaries.
- 7.11.55. **Between Bleach House Bank, Stillington, Redmarshall and Stoney Flatt Farm (includes Panel Area F)** – As shown by Figure 7.5F, road access in this area primarily consists of local routes connecting the nearby settlements which would have occasional views of the solar PV modules within Panel Area F at distances of 0.5km or more giving rise to a Limited extent of Medium scale effects between Stillington and Old Stillington, where the northern edge of the Panel Area would be visible in views across the nearby beck valley (see viewpoint 25). Some Small scale effects may also arise on views from Redmarshall Road near The Garth. Otherwise, visibility from these roads would generally be restricted by buildings, terrain and/or vegetation. Mill Lane (see nearby viewpoint 26) which connects Bishopton to Whitton is a notable exception and drivers would have close views of the solar PV modules above the roadside hedges as they pass the Panel Area, giving rise to Localised Large scale effects.
- 7.11.56. For users of the PRow network in this area, there would be close views of the solar PV modules in Panel Area F from the route which passes through that Panel Area between Bishopton and Old Stillington (see viewpoint 25), and views of the panels from the footpath between Redmarshall and Stillington as illustrated by viewpoints 26 and 28, giving rise to Large and Medium scale effects. There would also be more distant views from the elevated bridleway route connecting Whitton and Stillington (see viewpoint 27) and views over hedges from the bridleway near West House Farm. Taken together these changes to views would affect a Wide extent of rights of way in the area.
- 7.11.57. Taking the distribution and scale of effects described above into account, effects of this receptor group would be **Significant**. Mitigation proposals would include setting panels back from hedgerows; allowing hedges to grow to reduce views of panels over hedges; planting tree lines along northern boundaries of panel areas; re-routing the footpaths which passes through the panel area so that it runs around field boundaries; and the inclusion of a block of tree and/or scrub planting in the corner of the field that descends towards the beck near West House Farm (see Figure 2.12).
- 7.11.58. **A167 (0.5km, west)** – As shown by Figure 7.3, the A167 passes through the western side of the study area connecting Darlington and Newton Aycliffe. The route has a mix of single and dual carriageway sections and variable speed limits and users of this route would have a Medium susceptibility to changes to views which would be of Community



value. Sensitivity of route users would be **Medium**. Some limited and distant visibility of the proposals is indicated by the ZTV study from the area north of Aycliffe Village however this would be both distant and filtered through intervening layers of vegetation across level ground such that noticeable views for drivers would be unlikely to arise. South of the A1(M) junction, the route passes close to the west of Panel Area A, however this section of the route is lined by trees and houses between the A1(M) and Darlington as the route passes through Coatham Mundeville and Beaumont Hill, with the exception of a short stretch close to viewpoint 7, which has views similar to those illustrated for viewpoint 7, with limited or no visibility of the Proposed Development. Effects on this route would be of Negligible scale and **not Significant**.

- 7.11.59. **East Coast main line (0.1km, west)** – Views from this main line rail route are particularly valued through some stretches, but not within the study area, where views are of Community value. Rail users on fast main line routes have a Low susceptibility to changes, although trains in this stretch would generally be travelling at lower speeds either slowing down towards or accelerating from Darlington Station and susceptibility is judged to be Medium/low. Sensitivity of rail users would be **Medium/low**.
- 7.11.60. As illustrated by Figure 7.2, there may be theoretical views of up to 3 Panel Areas as the route leaves Darlington heading north past Beaumont Hill. The main area of close theoretical views would be as the route passes Panel Area A near Brafferton and Coatham Mundeville. The train route is lined by trees and scrub as it passes through these parts of the study area and any views would be restricted to brief glimpses of panels in the western edge of Panel Area A where the fields slope westwards towards the rail line. The area of theoretical visibility to the north near Morden where the route is less lined by vegetation and has more open views would not in practice give rise to views of the solar PV modules as the development would be ahead of/behind the direction of travel and not seen from the side-facing train windows. Localised effects would be no more than Small scale and would be **not Significant**.
- 7.11.61. **A1(M) (0.5km, northwest)** – Road users on the A1(M) will typically be undertaking longer distance journeys and travelling through the area at speed. Views are judged to be of Community value and road users would have a Low susceptibility and **Low** sensitivity to the Proposed Development.
- 7.11.62. Whilst there are open views across the Carr landscape from just south of Bradbury (beyond the study area to the north) views as the route passes through the study area are typically enclosed by hedges and/or embankments and in practice there are not likely to be any noticeable views of the Proposed Development as the route passes through the study area. Effects on this route would be of Negligible scale and **not Significant**.

### **Designations**

- 7.11.63. As set out above, changes to character would be negligible beyond 0.8km and changes to views would be negligible beyond 1.1km. Given this, changes to the special qualities

of designated areas would be expected to also be negligible beyond 1.1km. This includes all locally designated landscapes identified as being beyond 1km in Table 7-6

- 7.11.64. **Elstob AHLV (0km, north)** – As illustrated by Figures 7.4A-F, this designated area is located to the north of Lodge Lane and spanning Elstob Lane near Great Stainton. The County Durham Local Landscape Designation Review (2019)<sup>35</sup> identifies this area as being of higher landscape value due to its “*scenic value, condition (reflecting recent enhancement in the west of the area) and representativeness*”. The condition of the area would not be affected by the Proposed Development, which is not within the AHLV. Effects on character (representativeness) in this area would be potentially Significant (as set out at sections 7.11.21 - 7.11.24 above). The scenic value may also be affected by views of the nearby solar PV modules within Panel Areas B-F as illustrated by Figures 7.5A-F. Public access within the area is limited to three north-south aligned routes – Elstob Lane, a bridleway along Grindon Lane, and a footpath between Elstob Hall and Great Stainton church. Some visibility of solar PV modules from these routes is likely to arise although the more open views are indicated to be of more distant Panel Areas (C, E and F) which would be more screened and filtered by intervening vegetation, rather than the more nearby Panel Areas B and D.
- 7.11.65. Taking account of the likely effects on representativeness and scenic value it is judged that effects on the AHLV would be **potentially Significant**. Effects on this area would be mitigated by tree and hedgerow planting along the northern boundaries of nearby Panel Areas B and D.
- 7.11.66. **Hall Garth (0.5km, west)** – This locally designated historic parkland is a golf course at Coatham Mundeville. Parts of nearby Panel Area A slope west towards the designated area which lies beyond the railway and River Skerne valley. The ZTV study in Figure 7.4A indicates some visibility of the solar PV modules from parts of Hall Garth, however this does not take account of vegetation along the railway line, river banks and within the golf course (as shown on Figure 7.5A. In practice there is unlikely to be visibility of the Proposed Development from the designated area, and effects would of Negligible scale and **not Significant**.

## **Decommissioning**

- 7.11.67. It is assumed that underground cables and vegetation planted as part of the proposals will be left in situ and solar PV modules and other infrastructure within the Panel Areas, including tracks, would be removed. The substation would become part of the District Network Operator’s network and may remain permanently.

## **Landscape Fabric**

- 7.11.68. Effects on landscape fabric during decommissioning would consist of the removal of infrastructure within the panel areas and the return to arable or pasture. Permanent beneficial effects would continue beyond this stage as a result of the maturation of planting implemented as part of the Proposed Development.



## **Landscape Character and Visual Receptors**

- 7.11.69. Decommissioning would take place over a period of 12 months in total, a Short-term duration. Activity would take place simultaneously across the Site Area, but would only be obviously different from farming activities in closer views and at the start of the panel removal, at which stage effects would be similar to those during operation.
- 7.11.70. Large and Medium scale effects would arise within the Site Area and to distances of approximately 0.5km as a result of the activity. Given the short-term duration these would be **potentially significant** within character area 6 Great Stainton farmland and for users of public rights of way within 0.5km of the Panel Areas.

### **Cumulative effects**

- 7.11.71. Developments meeting the scoping criteria (EIA projects within 3km, and area based or linear projects within 2km), or requested for inclusion by consultees have been considered in relation to potential cumulative effects as set out within Chapter 13 Cumulative Effects. Figure 13.1, appended to Chapter 13 Cumulative Effects, identifies potential cumulative developments which meet the criteria agreed via the EIA Scoping Report.
- 7.11.72. Site observations in relation to the potential for visibility of cumulative developments are provided within Appendix 7.4.

### **7.12. Monitoring**

- 7.12.1. There is no monitoring proposed in relation to the landscape and visual effects. The LEMP will include measures to ensure the successful establishment of mitigation planting.

### **7.13. Summary**

- 7.13.1. This chapter has considered:
- effects on landscape fabric;
  - effects on local and national landscape character areas;
  - effects on visual receptors including people within settlements, travelling along transport and recreational routes and within recreational areas;
  - effects on local landscape designations.
- 7.13.2. Effects on people within their homes are considered within the preliminary residential visual amenity assessment provided in Appendix 7.5 and the potential for cumulative effects in combination with other existing, consented and proposed developments is considered in Chapter 13 and Appendix 7-4.

## Preliminary Construction Assessment

7.13.3. Construction of the Proposed Development would have the following effects on landscape and visual receptors:

- short-term adverse effects on landscape fabric within the Panel Areas arising from the removal of short sections of hedgerow for access and cable installation and the change from arable and pasture fields to solar farm. New planting to reinforce, reinstate and create hedgerows and tree lined hedgerows would also be undertaken; and
- short-term adverse effects which would potentially be significant on character area 6 Great Stainton Farmland and visual receptors within 0.5km of the Panel Areas arising from construction activity within the Panel Areas and along cable routes.

## Preliminary Operational Assessment

7.13.4. During operation, significant or potentially significant effects would arise on the receptors listed in Table 7-10 (below). These include landscape receptors within 0.8km of the Panel Areas and visual receptors within just over 1km from the Panel Areas.

**Table 7-10 Significant and potentially significant effects**

Receptor	Distance, direction	Effects
Landscape Character Areas		
6 Great Stainton Farmland	Includes Panel Areas A, B and C	Significant
7 Bishopton Vale	Includes Panel Areas D, E and F	Potentially significant
5 Upper Skerne Valley	0.1km, west	Potentially significant
73 Sedgfield, Windlestone and Aycliffe	0km, north	Potentially significant
16 Butterwick and Shotton	0km, north	Potentially significant
Visual Receptors		
Great Stainton	0.1km, northwest	Potentially significant
Bishopton	0.1km, southwest	Potentially significant
Old Stillington	0.5km, north	Potentially significant
Visual receptors between A167, Salters Lane, Lea Hall and Little Ketton	Includes Panel Area A	Significant
Visual receptors between Lea Hall, Salters Lane, Newton Ketton, Elstob Lane and Hill House Lane	Includes Panel Areas A, B and C	Significant
Visual receptors between Elstob Lane, Bleach House Bank, Stoney Flatt Farm, Gillyflatts and Long Pasture House Farm	Includes Panel Areas D and E	Significant
Visual receptors between Bleach House Bank, Stillington, Redmarshall and Stoney Flatt Farm	Includes Panel Area F	Significant
Designated Areas		
Elstob AHLV	0km, north	Potentially significant

7.13.5. For all other receptors effects would be not significant.

7.13.6. Effects on people within settlements have been a focus for the initial design and solar PV modules have been set back to mitigate views such that the greatest effects (without taking account of any mitigation planting) would be potentially significant. Significant effects would arise on users of local roads and public rights of way within approximately 1km of the Panel Areas with some close views being unavoidable when travelling through the area either by car or on foot. The most open and close views from roads would arise from Elstob Lane just south of Great Stainton as the route passes between Panel Areas C and D; from Mill Lane as it passes Panel Area F to the east of Bishopton and from Folly Bank as it passes Panel Area E to the southwest of Bishopton. Otherwise views from roads would tend to be less open or more distant. Mitigation measures such as growing, gapping up, reinstating and planting hedges and tree belts and re-routing of rights of way will provide some mitigation of these effects but is unlikely to avoid significant effects given the extensive nature of both the Proposed Development and the local ProW network, and the need to keep hedges at a readily maintainable height.

### **Preliminary Decommissioning Assessment**

- 7.13.7. Decommissioning of the Proposed Development would have the following effects on landscape and visual receptors:
- permanent beneficial effects on landscape fabric as a result of the continued maturation of planting undertaken as part of the Proposed Development.
  - short-term adverse effects which would potentially be significant on character area 6 great Stainton Farmland and visual receptors within 0.5km of the Panel Areas arising from decommissioning activity within the Panel Areas.

**Table 7-11 Summary of effects**

Receptor type	Description of potential impact	Embedded design, mitigation, and enhancement measures	Sensitivity of receptor	Duration and reversibility	Magnitude of impact	Significance of effect
<b>Construction</b>						
Landscape Fabric	Removal of short sections of hedgerow for access and cable routes.	To be designed – see section 7.10	N/A	Short-term (during construction period and re-establishment of replacement planting)	To be assessed after mitigation design in ES.	Not significant
6 Great Stainton Farmland	Changes to host landscape character area due to construction activity.	None	Medium	Short-term (during construction period)	To be assessed after mitigation design in ES.	Potentially significant
Visual receptors within 0.5km of Panel Areas	Changes to views due to construction activity.	None	Medium	Short-term (during construction period)	To be assessed after mitigation design in ES.	Potentially significant
All other landscape and visual receptors	Changes to views due to construction activity.	None	Varies	Short-term (during construction period)	No further assessment required	Not significant
<b>Operation</b>						
Darlington: 6 Great Stainton Farmland	Changes to host landscape character area – see 7.11.13-7.11.14.	To be designed – see section 7.10	Medium	Operation – 40 years	To be assessed after mitigation design in ES.	Significant
Darlington: 7 Bishopton Vale	Changes to host landscape character area – see 7.11.15-7.11.17.	To be designed – see section 7.10	Medium/low	Operation – 40 years	To be assessed after mitigation design in ES.	Potentially significant
Darlington: 5 Upper Skerne Valley	Changes to adjacent character area – see 7.11.19-7.11-20.	To be designed – see section 7.10	Medium	Operation – 40 years	To be assessed after mitigation design in ES.	Potentially significant

Receptor type	Description of potential impact	Embedded design, mitigation, and enhancement measures	Sensitivity of receptor	Duration and reversibility	Magnitude of impact	Significance of effect
Durham: 73 Sedgefield, Windlestone and Aycliffe	Changes to adjacent character area – see 7.11.21-7.11-22.	To be designed – see section 7.10	Medium	Operation – 40 years	To be assessed after mitigation design in ES.	Potentially significant
Durham: 16 Butterwick and Shotton	Changes to adjacent character area – see 7.11.23-7.11-24.	To be designed – see section 7.10	Medium	Operation – 40 years	To be assessed after mitigation design in ES.	Potentially significant
Stockton-on-Tees: 1 West Stockton Rural Fringe	Changes to nearby character area – see 7.11.25-7.11-26.	To be designed – see section 7.10	Medium/low	Operation – 40 years	No further assessment required	Not significant
Stockton-on-Tees: 3 Billingham and Thorpe Becks	Changes to nearby character area – see 7.11.27-7.11-28.	To be designed – see section 7.10	Medium	Operation – 40 years	No further assessment required	Not significant
NCA 23 Tees Lowlands	Changes to host national character areas – see 7.11.29-7.11-32.	To be designed – see section 7.10	Medium/low	Operation – 40 years	No further assessment required	Not significant
Coatham Mundeville	Changes to views for residents of and visitors to settlement. See 7.11.36.	To be designed – see section 7.10	High/medium	Operation – 40 years	No further assessment required	Not significant
Brafferton	Changes to views for residents of and visitors to settlement. See 7.11.37.	To be designed – see section 7.10	High/medium	Operation – 40 years	To be assessed after mitigation design in ES.	Not significant
Great Stainton	Changes to views for residents of and visitors to settlement. See 7.11.38.	To be designed – see section 7.10	High/medium	Operation – 40 years	To be assessed after mitigation design in ES.	Potentially significant

Receptor type	Description of potential impact	Embedded design, mitigation, and enhancement measures	Sensitivity of receptor	Duration and reversibility	Magnitude of impact	Significance of effect
Bishopton	Changes to views for residents of and visitors to settlement. See 7.11.39-7.11.40.	To be designed – see section 7.10	High/medium	Operation – 40 years	To be assessed after mitigation design in ES.	Potentially significant
Old Stillington	Changes to views for residents of and visitors to settlement. See 7.11.41.	To be designed – see section 7.10	High/medium	Operation – 40 years	To be assessed after mitigation design in ES.	Potentially significant
Stillington	Changes to views for residents of and visitors to settlement. See 7.11.42.	To be designed – see section 7.10	High/medium	Operation – 40 years	No further assessment required	Not significant
Whitton	Changes to views for residents of and visitors to settlement. See 7.11.43.	To be designed – see section 7.10	High/medium	Operation – 40 years	No further assessment required	Not significant
Between A167, Salters Lane, Lea Hall and Little Ketton Farm	Changes to views residents and users of local roads and footpaths. See 7.11.44-7.11.47.	To be designed – see section 7.10	High/medium	Operation – 40 years	To be assessed after mitigation design in ES.	Significant
Between Lea Hall, Salters Lane, Newton Ketton, Elstob Lane and Hill House Lane	Changes to views residents and users of local roads and footpaths. See 7.11.48-7.11.51.	To be designed – see section 7.10	High/medium	Operation – 40 years	To be assessed after mitigation design in ES.	Significant
Between Elstob Lane, Bleach House Bank, Stoney Flatt Farm, Gillyflatts and Long Pasture House Farm	Changes to views residents and users of local roads and footpaths. See 7.11.52-7.11.54.	To be designed – see section 7.10	High/medium	Operation – 40 years	To be assessed after mitigation design in ES.	Significant

Receptor type	Description of potential impact	Embedded design, mitigation, and enhancement measures	Sensitivity of receptor	Duration and reversibility	Magnitude of impact	Significance of effect
Between Bleach House Bank, Stillington, Redmarshall and Stoney Flatt Farm	Changes to views residents and users of local roads and footpaths. See 7.11.55-7.11.57.	To be designed – see section 7.10	High/medium	Operation – 40 years	To be assessed after mitigation design in ES.	Significant
A167	Changes to views for main road users. See 7.11.58.	To be designed – see section 7.10	Medium	Operation – 40 years	No further assessment required	Not significant
East Coast Main line	Changes to views for main road users. See 7.11.59-7.11.60.	To be designed – see section 7.10	Medium/low	Operation – 40 years	No further assessment required	Not significant
A1(M)	Changes to views for main road users. See 7.11.61.	To be designed – see section 7.10	Low	Operation – 40 years	No further assessment required	Not significant
Elstob AHLV	Changes to valued qualities. See 7.11.64-7.11.65.	To be designed – see section 7.10	To be considered in detail within ES.	Operation – 40 years	To be assessed after mitigation design in ES.	Potentially significant
Hall Garth	Changes to valued qualities. See 7.11.66.	To be designed – see section 7.10	N/A	Operation – 40 years	No further assessment required	Not significant
All other landscape and visual receptors	Changes due to presence of operational solar farm	To be designed – see section 7.10	Varies	Operation – 40 years	No further assessment required	Not significant
<b>Decommissioning</b>						
6 Great Stainton Farmland	Changes to host landscape character area due to decommissioning activity.	None	Medium	Short-term (during construction period)	To be assessed after mitigation design in ES.	Potentially significant
Visual receptors within 0.5km of Panel Areas	Changes to views due to decommissioning activity.	None	Medium	Short-term (during construction period)	To be assessed after mitigation design in ES.	Potentially significant

Receptor type	Description of potential impact	Embedded design, mitigation, and enhancement measures	Sensitivity of receptor	Duration and reversibility	Magnitude of impact	Significance of effect
All other landscape and visual receptors	Changes due to construction activity.	None	Varies	Short-term (during construction period)	No further assessment required	Not significant



## Further work

7.13.8. Further assessment and development of mitigation measures will be undertaken as part of the ES and through the completion of the following surveys, assessments and management plans:

- detailed mitigation design based on the final design for the Proposed Development;
- further design of enhancement measures;
- assessment of effects (via desk and site work) including embedded mitigation and enhancement measures – focussing on those receptors identified as receiving significant or potentially significant effects within this PEIR stage assessment;
- further photography (summer views) – only if required by consultees, otherwise winter photography will be used for the ES;
- visualisation of the proposals from selected viewpoints. Viewpoint locations and visualisation formats (photowire/annotated photograph/photomontage/photomontage including mitigation planting) to be agreed with consultees; and
- preparation of landscape design drawings and LEMP.

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