



# Great Harmeston Solar Farm

## Environmental Statement

### Chapter 5 Landscape and Visual



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## 5. Landscape and Visual

### 5.1. Executive Summary

5.1.1. This Landscape and Visual Impact Assessment **Chapter 5** seeks to determine the landscape and visual effects, brought about by the Proposed Development, upon the identified receptors and whether such effects are significant or not.

5.1.2. It is important to acknowledge that significant effects on landscape character and visual amenity are an inherent consequence of a new development of this type and scale. However, in this case, the potential adverse effects have been determined to be limited by the existing vegetation that characterises the close to medium range landscape, distance, and large scale of the landscape, which collectively diminish the perception of scale and mass of the Proposed Development. The proposed mitigation planting has the potential to reduce the identified significant effects, which would be geographically highly limited, both in character and visual terms.

5.1.3. Whilst certain elements of the Proposed Development would, inevitably, be more visible, for a scheme of its scale, the residual landscape and visual effects are considered to be highly limited. Those effects which have been identified as being significant should therefore be balanced against the benefits of the Proposed Development.

### 5.2. Introduction

5.2.1. This chapter contains an assessment of the landscape and visual effects of the Proposed Development as described within **Chapter 4 Proposed Development and Alternatives** during the construction, operation, and decommissioning stages.

5.2.2. This chapter considers the effects on:

- Landscape elements within the area of the Site.
- Landscape designations.
- Landscape character.
- Visual amenity (views).

5.2.3. Landscape effects relate to the character of the landscape that falls within the Proposed Development and surrounding area, and are concerned with landscape elements, landscapes of regional or local distinctiveness and special interest areas including landscape designations. Visual effects are experienced by people through changes in available views. These separate but related issues form the basis of this Landscape and Visual Impact Assessment (LVIA) **Chapter 5** of the Environmental Statement (ES) that will be submitted with the Development of National Significance ("DNS") application.

5.2.4. To ensure consistency of terminology used when distinguishing different areas within the Site, definitions of terminology are broadly defined below (also refer to **Chapter 2**

EIA Assessment Scope and Methodology for terminology description). Further details of the Site, Proposed Development and operational components can be found in **Chapter 3 Application Site** and **Chapter 4 Proposed Development and Alternatives** of this ES:

- Application Site / the Site: the boundary of the Proposed Development, included with the application red line.
- Proposed Development: areas within the Site that are proposed primarily for the ground mounted solar photovoltaic (PV) electricity generation; a substation compound; a number of central inverters (inverters and transformers housed together in prefabricated containers) at various locations around the arrays; boundary fencing (e.g. deer fencing) around the edge of the solar farm at a maximum height of 2.4 m above original ground level; a CCTV system, either pole or fence-mounted, located at strategic points around the Site perimeter for security and maintenance reasons, maximum height of 4 m; associated internal service tracks; relevant communications (potential communications mast up to 15 m) and monitoring equipment in substation area; landscaping and biodiversity enhancements; temporary construction areas; and a number of separate access points into the Site for construction, operation and decommissioning purposes, predominantly utilising existing farm access points – see **Figure 4.2 General Arrangement Drawing Pack**.
- Underground cable point of connection into an existing overhead powerline pole within the Site boundary.
- Habitat Enhancement Areas: areas within the Site that are proposed for green infrastructure and habitat creation – refer to **Chapter 7 Ecology**.
- The operational phase to be 40 years.
- The construction phase is expected to be approximately six to nine months.
- Fields within the Site have been given a unique code, to aid the assessment and the same referencing has been utilised in this **Chapter 5** and **Chapter 7 Ecology**.

5.2.5. **Figure 4.1 Site Layout Plan** illustrates the location, extent, and geographical relationship between the above listed elements.

5.2.6. The following elements within the Proposed Development have been identified as having the potential to result in adverse landscape and visual effects, and have been used as height and massing parameters to determine the degree of change and significance of effects:

- Photovoltaic (PV) panels based on a simple metal framework ('table') to form an 'array' which is pile driven into the ground, avoiding the need for substantial foundations. The arrays will operate on a fixed panel system to make efficient use of the sun's energy and would have a maximum height of approximately 3m above

original ground level and will be spaced circa 3.5m in rows, and an angle of 10–25 degrees.

- Underground cable point of connection into an existing overhead powerline pole, to the south of the Site boundary.
- Substation within the Site boundary.
- A number of central inverters (inverters and transformers housed together in prefabricated containers) at various locations around the arrays.
- Boundary fencing (e.g. deer fencing) around the edge of the solar farm at a maximum height of 2.4m above original ground level.
- A CCTV system, either pole or fence-mounted, located at strategic points around the Site perimeter for security and maintenance reasons, maximum height of 4m.
- Associated internal service tracks.
- Relevant communications (potential communications mast up to 15m) and monitoring equipment in substation area.
- Landscaping and biodiversity enhancements.
- Temporary construction areas.
- A number of separate access points into the Site for construction, operation and decommissioning purposes, predominantly utilising existing farm access points.
- The point of connection is on-Site, through a buried underground cable connecting to an overhead power line pole within the Site boundary. The underground cabling will be laid via surface dug trenches of approximately 1m deep and 50cm wide, and backfilled. Where the solar panels straddle both sides of the existing railway line, two options for the connecting cabling are put forward. Option 'A' is to directional drilling the cable under the railway line. Option 'B' is to lay the cable in an open-cut trench along a section of the A477 and the A477 bridge (or its service duct) which crosses the railway line. Due to the nature of the cable route as below ground infrastructure, once the cable route is operational, effects would be minor or negligible.
- Several existing access points will be used for access for the construction, maintenance and decommissioning of the solar farm. If necessary, some minor modifications to enable access to the Site by all vehicles anticipated to visit it will be undertaken. Existing farm tracks will be used for internal access within the Site wherever possible. New access tracks, where required, will be formed, using a layer permeable crushed stone. Visibility splays will need to be designed and agreed in accordance with the requirements of the local highway authority.

- 5.2.7. This **Chapter 5** considers the Proposed Development in terms of its maximum parameters: the extent and height of the solar modules, substation elements, fencing etc., as listed above.
- 5.2.8. This Chapter also considers the potential landscape and visual mitigation measures that will be implemented to prevent, reduce and offset the identified landscape and visual effects, where appropriate, and whether such mitigation measures are compatible with the local landscape. It is important to note that all of the proposed mitigation measures are 'built-in' into the Proposed Development.
- 5.2.9. This **Chapter 5** should be read in conjunction with:
- Figure 1.1 Site Location Plan.
  - Figure 2.1 Cumulative Sites Plan.
  - Figure 3.1 Environmental Designations Plan.
  - Figure 4.1 Site Layout Plan
  - Figure 5.1 Site Location, Context and Topography Plan.
  - Figure 5.2 Site Context Views.
  - Figure 5.3 Landscape Masterplan.
  - Figure 5.4 Landscape Character Plan.
  - Figure 5.5 LANDMAP Plans – (5 categories).
  - Figure 5.6 – not in use.
  - Figure 5.7 Bare Earth Zone of Theoretical Visibility.
  - Figure 5.8 Screened Zone of Theoretical Visibility.
  - Figure 5.9 LVIA Viewpoint Location Plan
  - Figure 5.10 Site Context Viewpoint Location Plan
  - Figure 5.11 Context Baseline Views and Photoviews.
  - Figure 5.12 Photomontages.
  - Appendix 5.1 LVIA Methodology.
  - Appendix 5.2 Preliminary Views Location Plan.
  - Appendix 5.3 Preliminary Views – photographs.
  - Appendix 5.4 Preliminary Views – scoping out.

- Appendix 5.5 Arboricultural Survey, Impact Assessment and Protection Plan.
- Appendix 5.6 Scoping Out – Visual Assessment.
- Appendix 5.7 Detailed Visual Assessment.
- Appendix 5.8 Detailed Landscape Character Assessment – excluding LANDMAP
- Appendix 5.9 Detailed LANDMAP Character Assessment

### 5.3. Assessment Approach

- 5.3.1. The assessment considers the effect on the landscape resource (both direct effects and effects on how the landscape character is perceived) and the effect on visual amenity (views) in construction, operation, and decommissioning. Cumulative effects, arising from the effect of the Proposed Development in conjunction with the identified cumulative schemes are also considered, where applicable.
- 5.3.2. With regards to the LVIA issues, Pegasus' Screening Report and Pembrokeshire County Council's (PCC's) Screening Response (see EIA Screening Direction in **Appendix 1.1**) identify that potential significant cumulative landscape and / or visual effects may occur given the number of solar farms within the 3 km study area along with the construction of 56 holiday lodges 1.5 km to the north of the Site's northern boundary.
- 5.3.3. In their Screening Response PCC confirmed that effects upon the Pembrokeshire Coast National Park are unlikely to be significant: *"Pembrokeshire Coast National Park is located approximately 4 km east and west of the Site at its nearest points. However, NRW is satisfied that due to the distance, topography and intervening landscape features and vegetation, the Proposed Development is not likely to have any impacts on the landscape and sensory qualities of the National Park. I therefore do not consider significant effects likely on features of high landscape or scenic value"*
- 5.3.4. With regards the visual receptors, PCC's Screening Opinion refers to residential buildings to the southeast, east, south, and northeast; the village of Johnston to the north, the Johnston Community Primary School to the east; Milford Haven School to the south; various Public Rights of Way (PRoWs), the highway network and railway line, the village of Steynton 1.1 km south and Milford Haven 2.9 km south of the Site, concluding that significant effects cannot be ruled out.
- 5.3.5. PCC's Screening Report concludes (PDF page 23):
- "a. Significant adverse visual and landscape character effects are likely. The substantial spread of the development is noted. There are a number of potential sensitive receptors in the area, most notably from publicly accessible routes including public footpaths. The wide extent of the Zone of Theoretical Visibility is also noted. (...)*
- c. There are nearby existing similar developments that would, having regard to in-combination impacts, may be likely to result in the Development having significant*

*adverse cumulative environmental effects. These developments are referenced in the EIA Screening Report. These significant adverse cumulative environmental effects would relate to visual and landscape, and ecological considerations. Fragmentation in the landscape with potential to create a 'barrier' effect to the detriment of biodiversity is a significant concern, as is the cumulative visual as well as landscape character impact that has the potential to be significantly adverse."*

5.3.6. Following PEDW'S decision that the Proposed Development constitutes an EIA development, Pegasus have submitted a Scoping Report (**Appendix 2.1**). The Scoping Report included the LVIA methodology, a list of identified LANDMAP aspect areas, bare earth and Screened Zone of Theoretical Visibility (ZTV) plans, and a plan identifying cumulative solar schemes, the aforementioned Holiday Lodges scheme 23/O560/PA – Land to rear of The Larder, Vine Road, identified by their application number and letters A – I, and a number of wind energy schemes.

5.3.7. These are discussed later in **Paragraphs 5.7.5–5.8** of this Chapter, associated **Appendix 5.4, Appendix 5.6** and **Appendix 5.7**, and shown at **Figure 2.1** Cumulative Sites Plan.

#### Scoping Criteria

5.3.8. The proposed scope of work, including the approach to the landscape and visual assessment were submitted for comments as part of the Scoping Report (**Appendix 2.1**), submitted to Planning and Environment Decisions Wales (PEDW) on 26 August 2025 – as discussed in the paragraph above.

5.3.9. The assessment of the likely significant effects of the Proposed Development, presented in this Chapter 5, has taken into account all of the attributes of the local landscape, and this helped to guide the extent of the study area. This was informed by a review of published documents, including relevant landscape character assessments, and field surveys (June 2025 and February 2026), with the February 2026 site visit used to review additional locations suggested by PCC's landscape consultant – as discussed below, and to confirm the findings of the assessment.

5.3.10. The assessment has been informed by a review of published landscape characterisation studies such as the draft Landscape Character Assessment Final Report for Consultation May 2022, LANDMAP assessment, and field surveys (June 2025 and February 2026).

5.3.11. In accordance with best practice, the assessment considers the following potential effects:

- Construction Phase – landscape elements within the Site boundary; effects on landscape character of the study area; and effects on visual receptors associated with the study area.
- Operational Phase – landscape elements within the Site boundary; effects on landscape character of the study area; effects on visual receptors associated with the study area.

- Decommissioning Phase –effects on landscape character of the study area; effects on visual receptors associated with the study area. With regards the landscape elements within the Site it is difficult to predict future scenario and whether the implemented landscaping will be deemed suitable for removal. For this reason, this element of the assessment is proposed to be scoped out at this stage.

### Summary of Consultation

- 5.3.12. Prior to the Scoping Direction being issued, a virtual consultation meeting had been held with a Landscape Officer and a Planning Officer PCC on 10 February 2026. The informal consultation covered the following topics: preliminary viewpoints, cumulative schemes, and mitigation planting along the perimeter of the Site.
- 5.3.13. A set of preliminary viewpoints, identified through desktop research and the Screened Zone of Theoretical Visibility (SZTV) plan (based on the layout available at the time) and verified during a site visit in June 2025, were briefly discussed. The discussion concluded that distant views are unlikely to offer views of the Site, and in any case any visual relationship would be very limited. PPC’s landscape officer suggested that any subsequent assessment ought to focus on the sequential views along the highways converging at Johnston, views from the PRoW and cycle route to the north and north west of Johnston – that towards Boltonhill Quarry as it forms a short circular route likely to be frequented by the residents of Johnston, views from north western section of The Old Rosemarket Road leading south east of Johnston and connecting to Rosemarket – as it is expected to be used by dog walkers or causal walkers given its rural character. PCC’s landscape officer acknowledged the proximity of Bridleway PP81/2 and Public Footpath PP81/1 at the south eastern edge of the Site. With regards Public Footpath PP84/3 to the north west of the Site – that skirts the edge of the operational solar farm at Rose Cottage Farm, Woodson Farm, Tierson Farm, Tiers Cross (Operational Solar Site B, application number: 13/O214/PA & 14/O670/PA), PCC’s landscape officer considered it relevant but given the limited connectivity with the wider network it was not considered to attract a high number of visitors. Notwithstanding this, the PRoW route coincides with an agricultural track which allows easy access in various weather conditions. During the meeting, views from the southern edge of Johnstone and visitors to the Church of Jesus Christ of Latter-day Saints were discussed but it was noted that the roadside hedgerow already breaks the line of sight. PPC’s landscape officer encouraged internal hedgerow planting along the perimeter of the Site to avoid the reliance of roadside hedgerows, which are subject to regular maintenance and often heavy trim. With regards to the southern study area, it was noted visual receptors are distant.

### Study Area

- 5.3.14. The landscape and visual section of the Scoping Report (**Appendix 2.1**) submitted to PEDW in December 2025, was based on a preliminary 3 km radii study area, which was analysed through desktop studies. It was judged that beyond this distance, even with good visibility, the Site and Proposed Development would not be easily discernible in

the wider landscape due to a combination of intervening vegetation, topography and distance.

- 5.3.15. This exercise was supported by a preliminary Screened Zone of Theoretical Visibility (SZTV), which illustrated the visibility of the proposed solar modules only, assumed to be 3 m in height, being the main and geographically most extensive component of the Proposed Development during its operational phase. At that stage, this was considered to be appropriate and proportionate approach, given the overall physical footprint of the solar modules and likelihood of their permanence in terms of future design iterations. Therefore, the preliminary SZTV plan excluded other taller elements of infrastructure within the Proposed Development such as the communications tower, which would be slender in its form, and largely inconsequential in views. This initial preliminary SZTV was based on the LiDAR OS dataset, which includes surface features (such as built form and vegetation) over 1 m in height, as screening features.
- 5.3.16. The preliminary SZTV plan used to inform the June 2025 Site visit indicated that the Proposed Development would be theoretically visible across the local area:
- partially extending onto the southern slopes of Bolton Hill, c. 100 m Above Ordnance Datum (AOD), but excluding Tiers Cross and terminating on the southern edge of Johnston;
  - largely terminating at the minor road leading south east from Johnston to Rosemarket – the Old Rosemarket Road, but with isolated patches of theoretical visibility further north east and east: across the Rosemarket Gold Course (c. 60 m AOD), localised higher ground around the junction of Langford Road and Targate Road near Upper Bastleford (c. 90 m AOD), and around Dirty Corner off Troopers Inn road (c. 70 m AOD);
  - largely excluding Rosemarket but with limited patches of theoretical visibility on its northern and eastern edge (c. 60 m – 50 m AOD) with localised areas of theoretical visibility further away towards Sardis to the east (c. 60 m – 85 m AOD) and south east around Westfield Hill (c. 35 m – 50 m AOD) and extending towards Burton (c. 35 m – 50 m AOD) beyond the preliminary 3 km radii;
  - extending south but largely terminating along the road between Rosemarket (c. 40 m AOD), Sentry Cross (c. 70 m AOD), and skirting the northern edge of Steynton (c. 70 m AOD) with a localised area covering the higher ground near and around Scoveston Fort (between c. 60 m – 80 m AOD);
  - small and localised areas north of Llddeston (c. 40 m – 60 m AOD) to the south west on the periphery of the 3 km radii study area;
  - incidental very small areas at Robeston Cross (c. 65 m OD) and at the southern parcel of Operational Solar Scheme B (Rose Cottage Farm; Woodson Farm; Tierson Farm, Tiers Cross (c. 60 m AOD) to the east;
  - and in the medium range landscape to the east and south east largely terminating on the nearby localised higher ground (sloping from c. 80 m to 50

m AOD), which coincides with a minor road leading from Tierston and Operational Solar Scheme B towards Steynton to the south.

- 5.3.17. Based on the preliminary SZTV it transpired that the Proposed Development, considered at the Screening stage, would potentially be visible from up to 0.7 km to the north at Bolton Hill, largely one to two fields away from its eastern edge and up to some 0.5 km away, potentially localised areas on the edge of Rosemarket and towards the junction of Langford Road and Targate Road near Upper Bastleford up to c. 1.5 km away, with more distant west of Rosemarket, up to c. 1 km to the south, and in close to medium range landscape up to c. 0.5 km to the west.
- 5.3.18. It is important to note that the SZTV is a binary modelling which identifies areas from where the Proposed Development would be theoretically visible. It does not necessarily follow that the entirety of the Proposed Development would be visible, and does not identify the extent of that visibility or which parts of the Proposed Development would be visible. Such modelling also does not take into account any screening features below 3 m high.
- 5.3.19. Subsequently, the layout of the Proposed Development was subject to a number of design iterations with the ZTV and SZTV plans updated to reflect the refinements to the layout. The overall extent of the ZTV and SZTV, however, remains broadly similar to that considered during the Screening and Scoping stages.
- 5.3.20. The site visit in June 2025 established that, in distant views from the edge of the preliminary 3 km study area, the interior of the Site (the Site Land) is not perceptible to an unaided eye. Even in medium range views, the Site Land was often screened or substantially restricted. The site visit in February 2026 confirmed that the actual visibility of the Site Land – where the change to the view would be apparent or easily identifiable, is limited to a surprisingly low number of publicly accessible locations such as the western end of Bridleway PP48/8 and western section of Public Footpath PP84/7 near the Water Treatment Works at Bolton Hill; southern edge of Johnston – views from the highways and associated footways, and occasional views from dwellings facing the road; sequential views from A477, the A4076 / Milford Road, and Bulford Road Diversion; north western section of The Old Rosemarket Road only, very limited visibility from Bridleway PP81/2 and Public Footpath PP81/1 at the south eastern edge of the Site; and Public Footpath PP84/3 to the north west of the Site – on the edge of the Operational Solar Scheme B.
- 5.3.21. In summary, the above identified areas are taken as the ‘core’ study area appropriate for further analysis in any subsequent assessment. It does not follow, however, that potentially significant effects would be experienced across the whole of the core area. This core study area is illustrated in **Figure 5.9**.
- 5.3.22. Whilst distant views from the higher ground in the distant southern study area have been identified the change is not considered to be significant – this is explained later in this **Chapter 5**, under the heading of Visual Baseline Survey Information.

5.3.23. Subsequently, based on the observation in situ it is considered that the assessment ought to focus on the core study area of c. 1 km radii in order to identify the potentially significant effects.

Surveys

5.3.24. A preliminary two-day site visit was carried out in June 2025. The site photography included a selection of distant views on the edges of the preliminary 3 km study area, with the focus on medium and close range views around the Site and on the edge of Johnston. These views were then discussed during the informal consultation with PCC's landscape officer during an on-line meeting on 10 February 2026.

5.3.25. A single day site visit was then carried out in late February 2026 to review the preliminary 'summer' views obtained in June 2026 and to identify additional views, with a further site visit carried out at the end of February to capture photomontage photography. These preliminary viewpoints are illustrated at **Figure 5.9** and the selected viewpoints are illustrated at **Figure 5.10**.

5.3.26. It is envisaged that during the consultation stage further viewpoints and visual receptors may be identified, to inform the assessment, and these will be captured during subsequent site visits, as appropriate.

**5.4. Methodology**

Guidance

5.4.1. This **Chapter 5** has been undertaken with regard to the current best practice, as outlined within the following publications, and identified in Pegasus' LVIA methodology Appendix 5.1:

- Guidelines for Landscape and Visual Impact Assessment (3rd Edition, 2013) – Landscape Institute / Institute of Environmental Management and Assessment (hereafter referred to as GLVIA3).
- GLVIA3 Statements of Clarification.
- Revised LVIA Guidance (ISEP & Landscape Institute)
- Landscape Sensitivity Assessment Guidance for Wales (2023) – Natural Resources Wales.
- Technical Guidance Note (TGN) 06/19 Visual Representation of Development Proposals, 17 September 2019 by the Landscape Institute.
- Technical Guidance Note (TGN) 1/20 Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs), 10th January 2020 by the Landscape Institute.
- Technical Guidance Note (TGN) 2/21 Assessing landscape value outside national designations, May 2021 by the Landscape Institute.

- Planning Policy Wales Edition 11 (PPW11), February 2021.
- LANDMAP Methodology, 2024 by Natural Resources Wales.
- LANDMAP Guidance Note 1: LANDMAP and Special Landscape Areas, 2017 by Natural Resources Wales.
- LANDMAP Guidance Note 46: Using LANDMAP in Landscape and Visual Impact Assessments (GN46) by Natural Resource Wales

5.4.2. The full list of guideline documents is included in Pegasus' methodology (see **Appendix 5.1 Pegasus' LVIA Methodology**). Further clarification has been sought in late February with regards the viewpoint selection and methodology.

#### Assessment of Effects

5.4.3. Landscape and visual effects are assessed through professional judgements on the sensitivity of landscape elements, landscape character, visual receptors and representative viewpoints combined with the predicted magnitude of change arising from the proposals.

5.4.4. The effects on landscape elements are limited to the area which would be occupied by the Proposed Development and include the direct physical change to the fabric of the landscape within the Site limits, such as the addition or removal of buildings, machinery and lighting.

5.4.5. In general terms, the presence or lack of landscape designations is relevant to the assessment as they provide an indication of recognised value and help to inform the identification of landscape and visual receptors or representative viewpoints.

5.4.6. Landscape character is defined as the *"...distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse."* Effects on landscape character arise either through the introduction of new elements that physically alter the existing pattern, or through the visibility of the Proposed Development that changes the way in which landscape character is perceived. The published assessments by Natural Resources Wales and the Pembrokeshire County Character Assessment, prepared by White Consultants for Pembrokeshire County Council constitute the baseline landscape character within the local area and the basis for the landscape character assessment. The various character areas identified in the above mentioned publications are illustrated on **Figures 5.4 – 5.5**.

5.4.7. The assessment of the effects on views considers the indirect effects of the Proposed Development on the appreciation of the local landscape as experienced by key visual receptors associated with settlements, transport routes and PRoWs. **Figure 3.6** and **Figure 5.1** illustrate the location and alignment of the various public highways, settlements, and PRoWs present in the local landscape.

5.4.8. Various factors in relation to the value and susceptibility of landscape elements, landscape character, visual receptors or representative viewpoints are described in the

Methodology (see **Appendix 5.1**) and are cross referenced to determine the overall sensitivity as shown in **Table 5.1**.

**Table 5.1 Overall sensitivity of landscape and visual receptors**

Susceptibility of Receptor	Value of Receptor			
		High	Medium	Low
High	High	High	Medium	Low
Medium	High	Medium	Medium	Low
Low	Medium	Medium	Medium	Low

#### Magnitude of Change– General Comments

5.4.9. Magnitude of change is defined in GLVIA3 as:

*“a term that combines judgements about the size and scale of the effect, the extent over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration.”*

5.4.10. Various factors contribute to the magnitude of change on landscape elements, landscape character, visual receptors and representative viewpoints as set out in **Appendix 5.1**.

#### Nature of Effects – General Comments

5.4.11. Under the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017, any development that is classified as “EIA development” must be accompanied by an Environmental Statement (ES) when an application for planning permission is submitted. The Environmental Statement shall include a description of the likely significant effects of the development on the receiving environment and a description of any features of the development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment.

5.4.12. GLVIA3 includes an entry that states “effects can be described as positive or negative (or in some cases neutral) in their consequences for views and visual amenity.” GLVIA3 does not, however, state how negative or positive effects should be assessed, and this therefore becomes a matter of subjective judgement rather than reasoned criteria. Due to inconsistencies with the assessment of negative or positive effects a precautionary approach is applied to this **Chapter 5** that assumes all landscape and visual effects are considered to be negative or adverse unless otherwise stated.

5.4.13. The approach to this (and the interpretation of positive, negative, or neutral effects) in the context of GLVIA3 and this **Chapter 5** is set out in detail in **Appendix 5.1**.

#### Duration of Effects

- 5.4.14. The duration of the effects of the Proposed Development would vary. The construction phase of the Proposed Development would last up to 9 months from commencement with the construction activities expected to be limited to typical working hours, and likely to include Saturdays.
- 5.4.15. At this stage an indicative phasing plan is not available, but it is expected that the construction works would start furthest from and progressive move closer to the construction compounds identified on **Figure 4.21 Site Layout Plan** and **Figure 5.3 Landscape Masterplan**.
- 5.4.16. The operational phase of the Proposed Development would be 40 years. The Proposed Development would be continuously operational throughout its lifecycle except for planned maintenance. The Proposed Development is proposed to be decommissioned at the end of its operational life and the indicative decommissioning period likely to be of similar duration to the construction period.
- 5.4.17. During the operational stage, the built elements of the Proposed Development including the solar modules, ancillary features such as inverters / transformer, on-site Substation and O & M Spares & Storage areas / containers, perimeter security fencing, and internal access tracks would be visible in the long term.
- 5.4.18. The grid connection would be underground and would not be visible during the operational stage. For that reason, this particular component is excluded from the assessment of the operational phase of the Proposed Development.
- 5.4.19. Other activities and movement, including construction traffic, including mobile cranes and excavators, and compound areas, would only be visible in the construction and decommissioning stages and are considered to be short term temporary effects. It is predicted that no more than two or three mobile cranes would be present at any given time within the Energy Park.
- 5.4.20. The lighting associated with the construction and decommissioning phases would be limited where practical, subject to the timing of the construction activities and time of the year, and is considered to be short term effect. There is no permanent lighting proposed as part of the Proposed Development except for the localised emergency security lighting in proximity to the Substation. Such lighting would be triggered by movement only or manually turned on, and so would not be active for all hours of darkness. Downward facing external lighting will be installed at the onsite 132kV substation compound for emergency work during hours of darkness, the substation will not be continuously lit. CCTV to be installed along the security fencing associated with the Substation would utilise infrared technology.
- 5.4.21. Comprehensive description of the Proposed Development is provided in **Chapter 4 Proposed Development and Alternatives**.

Assessment of Significance

- 5.4.22. The purpose of an LVIA when produced in the context of an EIA is to identify any significant effects on landscape and visual amenity arising from the Proposed

Development. The likely significance of effects is dependent on all of the factors considered in the sensitivity and the magnitude of change, upon the relevant landscape and visual receptors. These factors are assimilated to assess whether or not the Proposed Development will have a likely significant or not significant effect. The variables considered in the evaluation of the sensitivity and the magnitude of change are reviewed holistically to inform the professional judgement of significance.

5.4.23. The sensitivity of the landscape and visual receptor and the magnitude of change arising from the Proposed Development are cross referenced in **Table 5.2** to determine the overall degree and significance of landscape and visual effects. This deviates from **Tables 2.2 to 2.4.** in **Chapter 2.**

**Table 5.2: Significance Matrix**

Magnitude of Change	Sensitivity of Receptor				
		High	Medium	Low	Negligible
	High	Major	Major	Moderate	Negligible
	Medium	Major	Moderate	Minor to Moderate	Negligible
	Low	Moderate	Minor to Moderate	Minor	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible	

5.4.24. It is important to note that the matrix above is intended to act as a guide to the assessment rather than a formulaic approach. The level (relative significance) of the landscape and visual effects is determined by combining judgements regarding the sensitivity of the landscape or view, the magnitude of change, the duration of effect, and the reversibility of the effect. In LVIA, any judgement about what constitutes a significant effect is ostensibly a subjective opinion expressed as in this case by a competent and appropriately qualified professional assessor.

5.4.25. The level (relative significance) of effect is described as Major, Moderate, Minor, or Negligible. No Effect may also be recorded as appropriate where there are no effects.

5.4.26. In the LVIA, those effects described as Major may be regarded as material in the decision making process as required by the EIA Regulations It should be noted that whilst an individual effect may be significant, it does not necessarily follow that the Proposed Development would be unacceptable in the planning balance.

5.4.27. It is understood that certain landscape assessors, may consider ‘moderate’ effects to be also significant to the decision-making process. Pegasus’ methodology (**Appendix 5.1**) recognises that major adverse effects are a high bar and relate to the change in landscape character or view that would cause such variation in the landscape character, or its value, change in the sense of place, or degrade or diminish the integrity of a range of characteristic features and elements, or cause a major deterioration in the view, that the landscape or view would no longer be defined by its characteristics evident prior to the introduction of the Proposed Development.

5.4.28. In determining the level of residual effects, all mitigation measures are taken into account. The assessment considered residual effects at Year 15, on the basis that the proposed planting has been successfully established and the vegetation reached the desired height.

Cumulative effects

5.4.29. Cumulative effects arise where the study areas for two or more solar farms or other infrastructure, considered relevant to the assessment, overlap so that the cumulative schemes are experienced at proximity where they may have a greater incremental effect. This means that the addition of the Proposed Development to a situation where other solar developments, or other infrastructure, are apparent may result in a greater effect than where the Proposed Development is seen by itself. There are no legislative or policy requirements which set out how a cumulative effects assessment should be undertaken. The cumulative assessment includes existing identified schemes, those that are consented, and those for which planning applications have been submitted, or at scoping stage. A list of relevant cumulative schemes has been provided by PCC. The location of the identified cumulative schemes and their geographical relationship to the Proposed Development is illustrated on **Figure 2.1 Cumulative Sites Plan**.

5.4.30. The cumulative assessment covers the potential cumulative effects on landscape character receptors and views. Cumulative effects on the landscape elements will be generally avoided, given that the extent of the Site does not overlap with any of the identified cumulative schemes, as illustrated on **Figure 2.1 Cumulative Sites Plan**.

5.4.31. As with the assessment of effects of the Proposed Development, the significance of cumulative effects is determined through a combination of the sensitivity of the landscape receptor or view and the magnitude of change upon it. The sensitivity of landscape receptors and views is the same in the cumulative assessment as in the assessment of the Proposed Development itself. However, the definition of a significant cumulative effect is different from a significant effect in the assessment of the Proposed Development itself, and this means that the magnitude of change is also assessed in a different way.

5.4.32. Further details are provided in **Appendix 5.1**.

Graphic Techniques

5.4.33. Computer modelling is used to assist in the assessment process and to illustrate the effects of the Proposed Development through the production of SZTV plans. The SZTV plans illustrate the theoretical extent of where the proposed solar modules may be visible from, assuming 100% atmospheric visibility. As explained in the preceding paragraphs, the updated SZTV plans include the screening provided by various surface features extracted from LiDAR data, based on the following assumptions:

- Surface features including vegetation and built form over 1m in height.
- The viewer height is set at 1.7m.

- Calculations include earth curvature and light refraction.
- 5.4.34. The SZTV plans have been generated using a Digital Terrain Model of OS Terrain 5 combined with LiDAR data to create a Digital Surface Model (DSM).
- 5.4.35. Weather conditions and visibility were considered important aspects of the Site visits for the photography. Where possible, visits were planned around clear sunny days with good visibility. Viewpoint locations were then, where possible, visited according to the time of day and the orientation of the sun to avoid front lit scenes. Photographs facing into the sun were avoided where possible to prevent the silhouette effect. Adjustments to lighting were made in the rendering software, when preparing photomontages, to allow the Proposed Development to appear realistic in the view under the particular lighting and atmospheric conditions present at that time.
- 5.4.36. A number of guidance documents have been published that deal with Site photography and photomontage techniques in general, with the Landscape Institute's Technical Guidance Note 06/19 Visual Representation of Development Proposals (2019), being the most recent one. Specific guidance in relation to wind farms has been available from the Scottish Natural Heritage since the early 2000s, but there is a lack of similar guidance for solar energy developments. In the absence of such guidance Pegasus has developed its own guidance with regard to the published documents.
- 5.4.37. The photographic evidence and photomontages supporting this **Chapter 5** were produced in the following way:
- The photograph locations were GPS recorded. These single photographs were then stitched together using PTGui to create a panoramic image of 75 degrees in planar projection.
  - The details of the development were modelled in 3d Studio Max from elevation and Site layout plans provided by the client.
  - The stitched photograph was then used as a backdrop within 3d Studio Max at full resolution. Using the known photograph location and then picking out features on the photograph these were cross-referenced with the same points taken from a number of sources including aerial imagery, Mastermap base mapping and survey points to accurately create a camera with 3d Studio Max and Vray to match the camera height, location and image field of view and resolution, a process known as camera matching. These 'survey' points are taken across the image both foreground and distant in order to allow for increased accuracy. Where necessary additional features were created as 3d models within 3d Studio Max to allow for better alignment.
  - Once the alignment was correct the completed 3D model was then rendered onto the photography to complete a seamless image.
  - For the images produced as photomontages these were taken into Photoshop in order to apply the masking. Masking is where the foreground objects and features or features which may 'mask' the development within the original

photography are redrawn in front of the rendered image in order to simulate how the development will look within the existing landscape.

- Once all the masking has been applied the image is then placed into the template within InDesign and the final pdf output is produced.

5.4.38. The precise location of each photograph is recorded using a hand-held GPS device and bearings from this location to prominent vertical features within the view (such as transmission masts) are also recorded using Google Earth software.

5.4.39. Whilst every effort has been made to ensure the accuracy of the photomontages, it must be appreciated that no photomontage could ever claim to be 100% accurate as there are a number of technical limitations in the model relating to the accuracy of the information available from Ordnance Survey and from the GPS. For a detailed discussion regarding the limitations of photomontages, please refer to Visual Representation of Wind farms – Good Practice Guidance (SNH commissioned report FO3 AA 308/2).

5.4.40. The photographs and photomontages used in this assessment are for illustrative purposes only and, whilst useful tools in the assessment, are not considered to be completely representative of what will be apparent to the human eye. The assessments are carried out from observations in the field rather than from photographs.

### Limitations to the Assessment

5.4.41. In undertaking the landscape and visual assessment in relation to the Proposed Development, there are limitations and constraints affecting the outputs from this work. These include:

- Photography for the selected viewpoints was taken from publicly accessible places and not private land.
- The baseline assessment has been based on the information readily available at the time of undertaking the assessment.
- The SZTV plan has been used to understand the potential visibility of the Proposed Development and help identify relevant receptors. The SZTV plan does not demonstrate absolute visibility and are therefore refined through field work.
- During the Site visits, weather condition, the time of day, and seasonal factors have influenced the assessment and photographic record of the landscape associated with the Site and its surroundings.
- Baseline views were taken in June with broadleaved structural vegetation in leaf. Further Site photography was carried out in mid-February to capture so called 'winter' views and indicate the worst-case scenario of visibility.

- Access to private properties has not been sought as a separate Residential Visual Amenity Assessment was not noted as a necessary requirement.
- The assessment of the Proposed Development is based on the parameters outlined in **Chapter 4** and application drawings that accompany this ES, and is assessed on the assumption that the Proposed Development is delivered in line with these drawings and associated timescales.
- Where distances and measurements are given, these are approximate and generally calculated from the nearest point of the Proposed Development (or as otherwise stated) to the receptor in question.
- Night-time effects are not assessed as no lighting is proposed apart from motion activated security lighting around the on-Site Substation, it will not be continuously lit. It is considered that the principal visual receptors would experience the local landscape in the daytime.
- All effects are assumed to be temporary unless otherwise stated.

#### Vegetation Growth Rates

- 5.4.42. The residual effects, assessed in this Chapter 5 are based on the assumption that the proposed mitigation planting has been implemented in accordance with **Figure 5.3 Landscape Masterplan**, current best practice, and has been subject to active and appropriate management regime, and that the vegetation has established successfully and developed into strong positive landscape features.
- 5.4.43. The precise growth rate is difficult to establish as it depends on the species, soil type, nutrients and water availability, ongoing management, and competition for other planting, and indeed the effects of climate change. For the purpose of this **Chapter 5**, the growth of the proposed hedgerows is assumed to be approximately 0.5 m per annum.

#### **Legislative and Policy Framework**

- 5.4.44. This **Chapter 5** has been undertaken with regard to the following policy documents:
- National Planning Policy:
    - Planning Policy Wales (July 2024)
    - Future Wales: The National Plan 2040
    - Landscape and Visual Impact Assessment – GOV.WALES (2020)
    - LANDMAP – The Welsh Landscape Baseline (Natural Resources Wales)
    - Designing for Renewable Energy in Wales (WG, 2023)
  - Local Planning Policy:

- Pembrokeshire County Council Local Development Plan Planning Pembrokeshire's Future (up to 2021).

Pembrokeshire County Council Local Development Plan Planning Pembrokeshire's Future (up to 2021)

5.4.45. The Pembrokeshire County Council Local Development Plan Planning Pembrokeshire's Future (up to 2021) (hereafter referred to as 'the adopted Development Plan') forms part of the Development Plan for PCC.

5.4.46. According to the adopted Development Plan and associated Proposals Map the Site is not covered by any specific policies that would relate to landscape quality, character, or natural beauty.

5.4.47. Strategic Policy SP 16 'The Countryside' states:

*"The essential requirements of people who live and work in the countryside will be met whilst protecting the landscape and natural and built environment of Pembrokeshire and adjoining areas. Development which minimises visual impact on the landscape and relates to one of the following will be promoted:*

- 1. Enterprises for which a countryside location is essential;*
- 2. Opportunities for rural enterprise workers to be housed in suitable accommodation that supports their employment; and*
- 3. The re-use of appropriate existing buildings."*

5.4.48. At Paragraph 5.84 and 5.85, the adopted Development Plan states:

*"Pembrokeshire and its wider context, has a range of important environments and landscapes, some of which are shown on the Proposals Maps as nature designations. In addition to the specific environments that are protected by a range of designations, there are a number of non designated landscapes, woodlands, hedgerows, trees and species that occur across the Plan area and contribute to making Pembrokeshire a special place. (...)*

*Pembrokeshire's outstanding natural and historic environments are part of what attracts huge numbers of visitors every year and are a valuable resource for the County as a whole. As well as being a working environment the countryside offers a range of diverse recreational opportunities for residents and visitors. This Plan aims to protect the countryside and manage its use, so that these important elements can be provided."*

5.4.49. The above is supported by Policy GN.1 'General Development Policy':

*"Development will be permitted where the following criteria are met:*

- 1. The nature, location, siting and scale of the Proposed Development is compatible with the capacity and character of the Site and the area within which it is located;*

2. It would not result in a significant detrimental impact on local amenity in terms of visual impact, loss of light or privacy, odours, smoke, fumes, dust, air quality or an increase in noise or vibration levels;

3. It would not adversely affect landscape character, quality or diversity, including the special qualities of the Pembrokeshire Coast National Park and neighbouring authorities;

4. It respects and protects the natural environment including protected habitats and species;

(...)

9. It would neither contribute to the coalescence of distinct settlements nor create or consolidate ribbon development."

With regard the development of renewable energy projects Policy GN.4 'Resource Efficiency and Renewable and Low-carbon Energy Proposals' states:

*"(...)Developments which enable the supply of renewable energy through environmentally acceptable solutions will be supported."*

5.4.50. At Paragraph 6.31, the supporting text clarifies the Council's approach: *"Landscape impact, alone and in-combination, will be a material consideration in the evaluation of renewable energy proposals, with LANDMAP providing a valuable landscape analysis tool."*

5.4.51. With regards to visual amenity Policy GN.35 'Protection of Open Spaces with Amenity Value' states: *"Development which would adversely affect the appearance, character or local amenity value of areas of public and private open space will not normally be permitted. In exceptional circumstances, where the proposal will bring clear social and/or economic benefits to the local community and make a positive contribution to the built environment, development may be permitted where it can be demonstrated that no suitable alternative Site is available."*

5.4.52. Policy GN.4 'Resource Efficiency and Renewable and Low-carbon Energy Proposals' states:

*"Development proposals should seek to minimise resource demand, improve resource efficiency and seek power generated from renewable resources, where appropriate.*

*They will be expected to be well designed in terms of energy use.*

*Developments which enable the supply of renewable energy through environmentally acceptable solutions will be supported."*

5.4.53. Policy GN.37 'Protection and Enhancement of Biodiversity' states:

*"All development should demonstrate a positive approach to maintaining and, wherever possible, enhancing biodiversity. Development that would disturb or*

*otherwise harm protected species or their habitats, or the integrity of other habitats, sites or features of importance to wildlife and individual species, will only be permitted in exceptional circumstances where the effects are minimised or mitigated through careful design, work scheduling or other appropriate measures.”*

Pembrokeshire Supplementary Planning Guidance – Renewable Energy (2016).

- 5.4.54. The purpose of the Supplementary Planning Guidance (SPG) is to elaborate on the Local Development Plan policies, seeking to balance the benefits that renewable energy development can have against the need to protect the natural and historic environment. It focuses primarily on solar, wind and biomass energy.
- 5.4.55. The aims of the SPD include to assist and guide applicants and agents regarding information required at pre-application and planning application stages for solar energy, wind energy and biomass proposals.

## **5.5. Baseline Conditions**

- 5.5.1. This section of the LVIA identifies and describes the existing landscape features, and landscape and visual resource found within the Site and the identified study area. This study helps to gain an understanding of what makes the landscape distinctive, what its important components or characteristics are, and how it is changing prior to the introduction of the Proposed Development. The baseline study is instrumental in the identification of the landscape receptors and visual receptors / views to be assessed. This chapter should be read in conjunction with the Site description and context as set out in **Chapter 3** of the ES.
- 5.5.2. The character of the local landscape is discussed in the context of the published landscape character assessments. With regard to the visual receptors, these have been identified based on the analysis of local mapping, during the Site surveys and work carried out during the preliminary stage in June 2025, through the consultation with PCC’s landscape officer, and in early 2026 as part of work on this **Chapter 5**.

### **Baseline Landscape Designations**

- 5.5.3. The Proposed Development is not located within any national statutory protected landscape designations. It does not lie within any regional or local non-statutory landscape designations, either.

### **Baseline Landscape Character**

- 5.5.4. The character of the landscape within the study area has been analysed and described on two levels:
- National level assessment provided by Natural Resources Wales
    - National Landscape Character Areas (NCLA).
    - LANDMAP Aspect Areas

- Local level based on the assessment published by White Consultants for Pembrokeshire County Council – Pembrokeshire County Landscape Character Assessment (2022)

5.5.5. The geographical extent of the identified landscapes in relation to the Site are shown on **Figure 5.4 Landscape Character Plan** and **Figure 5.5 LANDMAP Plans**. These are considered to be the relevant landscape character receptors for the purpose of this **Chapter 5**. A preliminary review of the landscape receptors within the wider 3km study area is carried out to determine whether significant effects are likely to occur, and to inform the subsequent cumulative landscape character assessment – **Section 5.7** of this LVIA.

#### National Landscape Character Areas

5.5.6. On the national level, the landscape associated with the Site falls within the National Landscape Character Area (NLCA) 48 Milford Haven. This NCLA covers the area to the south of Haverfordwest, east of Milford Haven, west of Narbeth and encompasses Pembroke in the south; and encompasses land which falls within the boundary of the Pembrokeshire National Park.

5.5.7. The Key characteristics of relevance to the Site are quoted as follows:

- *“Mixed fields and hedgerows – a rolling lowland agricultural landscape with a mosaic of mixed fields bounded by hedgerows...”*
- *Mixed and conifer plantations fringe the upper ria and estuaries – with frequent copses and riparian (riverside) woodlands found on slopes throughout. Ancient semi-natural sessile oak woodlands are also among the area’s valued habitats...*
- *Towns and villages – The area is served by the towns of Haverfordwest, Milford Haven and Pembroke. Elsewhere, villages and hamlets are dispersed along roads, their intersections or at former landing places for cross-Haven ferries.*
- *Industry by the lower ria – Oil refineries and their jetties, and a power station dominate the coastal landscape at the mouth of the Haven.*
- *Tranquil rural upper ria and estuaries – contrasting to the lower ria, the upper ria and estuaries and their surrounding woodland and farmland are intimate and rural. Renowned scenic qualities – The upper ria and estuaries have long been admired for its scenic qualities, with the Haven being mentioned in Shakespeare’s Cymbeline.”*

5.5.8. The landscape character assessments carried out at a national level represent a broad-brush approach and are often too coarse to be informative to the LVIA process. The description of the NLCA 48 Milford Haven has been reviewed and used to inform **Chapter 5**.

5.5.9. With regard to visual and sensory elements of the NCLA 48, the text within the Milford Haven profile highlights the contrast between the landform associated with the rias,

estuaries and rolling lowland, which is described as having few visual elements which detract from the 'visual appeal', its character is described as tranquil, with woodland fringed banks running downland to the water, and the most sheltered places noted as being the upper estuaries. These aforementioned characteristics are attributed to the area of the NLCA, which is located within the boundary of the Pembrokeshire Coast National Park.

- 5.5.10. The presence of the tributary estuaries and their associated valleys is noted as limiting access across the area, with the local roads and lanes serving 'peninsulas', rather than through roads, resulting in a very quiet and rural character. The modern Cleddau (road) Bridge at Pembroke which crosses the Cleddau Ddu is described as marking a distinctive change in character for the area downstream, to the west.
- 5.5.11. This character is in contrast to the part of the lower ria around Milford Haven town and Pembroke Dock, which is noted as having a busier, urban and industrial character, which in places transforms the area entirely. The estuary of the Cleddau Ddu (river) is described as being wide, open, deep water, which has been embellished by huge, geometric gantries of jetties and dock apparatus. Enormous oil tankers that slowly travel in and out of the estuary are noted as frequent visitors, with rows of bulky oil storage tanks also lining the adjacent horizon. The once rolling farmland skyline is described as now being broken by a collection of tall industrial buildings, and a complicated assortment of towers and chimneys, from which a network of electricity pylons radiates across the surrounding landscape. During the hours of darkness, the occasional flare from the chimney stack is visible.
- 5.5.12. The value of NCLA 48 is varied. Designated features within the NLCA include Open Access Areas, Ancient Woodland and Historic Landscape Areas; it also contains areas which are located within the Pembrokeshire National Park, areas of the NLCA which fall outside of the National Park also contribute, to varying degrees to its setting. In contrast, the NLCA also encompasses the substantial industrial areas at Milford Haven and Waterstone on the northern side of the estuary, and; Pembroke Dock, Pwllcrochan and Rhoscrowther on the southern side. These industrial areas not only have a substantial footprint, covering a considerable area, their grey, and pale tones contrasting with the adjacent farmland. Visually, the upper elements of the chimneys and other taller infrastructure elements have a detrimental effect on the landscape character of the area. On balance, the value of NCLA 48 is considered to be **Medium**.
- 5.5.13. The susceptibility of NCLA 48 to the type of development proposed is considered to be **Medium**, due to existing references of developments of a similar type and the key characteristic features would have some scope to accommodate the type of development proposed without undue consequences on its overall integrity. A **Medium** value and **Medium** susceptibility result in a **Medium** sensitivity.

LANDMAP – Aspect Area

- 5.5.14. The methodology adopted with regard to filtering the Aspect Areas is described at **Appendix 5.9**.

*Sensitivity of LANDMAP Aspect Areas to be Assessed.*

5.5.15. Description of the three Geological Landscape Aspect Areas that remain following the filtering process.

**Table 5.3: LANDMAP Geological Landscapes Aspect Area identification and description**

Aspect Area UID, Name	LANDMAP Sensitivity of the Geological Landscapes Aspect Area (Value x Susceptibility)
PMBRKGL142  Herbrandston	<p>The LANDMAP overall evaluation of the Aspect Area is assessed as Moderate. With regards to the criteria which evaluates the value, this is assessed as Moderate – noting there are no nationally significant Sites of landforms present, and the geology and geomorphology is considered to be typical of the feature or process (river valley), and is either widespread, better exposed elsewhere or not currently known to be exceptional.</p> <p>Based on the LVIA methodology, the value is assessed as <b>Medium</b>, noting there are no nationally significant Sites of landforms present, and geology is typical of the locality.</p> <p>The type of development proposed would likely follow the existing terrain, require very limited changes to the landform for elements such as the creation of access roads or the hardstanding for elements such as the substation, with the supports for the panels also requiring very limited earthworks. The susceptibility is therefore considered to be <b>Low</b>.</p> <p>A <b>Medium</b> value and <b>Low</b> Susceptibility result in a <b>Medium</b> sensitivity.</p>
PMBRKGL159  Johnston	<p>The LANDMAP overall evaluation of the Aspect Area is assessed as High. With regards to the criteria, the assessment notes that the Aspect Area is a key area of an outcrop of Precambrian Johnston Complex.</p> <p>Based on the LVIA methodology, the value is assessed as <b>High</b>, noting the Aspect Area contains an outcrop of Precambrian Johnston Complex which is geographically linked to the settlement of Johnston and does not occur elsewhere.</p> <p>The type of development proposed would likely follow the existing terrain, require very limited changes to the landform for elements such as the creation of access roads or the hardstanding for elements such as the substation, with the supports for the panels also requiring very limited earthworks. The susceptibility is therefore considered to be <b>Low</b>.</p>

	A <b>High</b> value and <b>Low</b> Susceptibility result in a <b>Medium</b> sensitivity.
PMBRKGL162 Hayston Bridge	<p>The LANDMAP overall evaluation of the Aspect Area is assessed as Moderate. With regards to the criteria which evaluates the value, this is assessed as Moderate – noting there are no nationally significant Sites of landforms present, and the geology and geomorphology is considered to be typical of the feature or process (river valley), and is either widespread, better exposed elsewhere or not currently known to be exceptional.</p> <p>Based on the LVIA methodology, the value is assessed as <b>Medium</b>, noting there are no nationally significant Sites of landforms present, and geology is typical of the locality.</p> <p>The type of development proposed would likely follow the existing terrain, require very limited changes to the landform for elements such as the creation of access roads or the hardstanding for elements such as the substation, with the supports for the panels also requiring very limited earthworks. The susceptibility is therefore considered to be <b>Low</b>.</p> <p>A <b>Medium</b> value and <b>Low</b> Susceptibility result in a <b>Medium</b> sensitivity.</p>

5.5.16. Description of the two Landscape Habitats Aspect Areas that remain following the filtering process.

**Table 5.4: LANDMAP Landscape Habitats Aspect Areas identification and descriptions**

Aspect Area UID, Name	LANDMAP Sensitivity of the Landscape Habitats Aspect Area (Value x Susceptibility)
PMBRKLH342 N. of Neyland	The LANDMAP overall evaluation of the Aspect Area is assessed as Moderate. With the assessment noting that the areas of broadleaved woodland that exist within the Aspect Area are considered to be a valuable habitat, and that the area of running water is covered by a SSSI and SAC designation, but is rated as Moderate as it is felt that there are more valuable areas of broadleaved woodland habitat within the Aspect Area, and the woodland that does exist, only covers a small part of the Aspect Area.

	<p>Based on the LVIA methodology, the value is assessed as <b>Medium</b>.</p> <p>The Site is able to accommodate the type of development proposed with little consequence upon its overall integrity.</p> <p>The majority of the existing landscape features/habitats within the Site will be retained; a few trees and hedgerows will be removed for access (details in the Arboricultural Impact Assessment at <b>Appendix 5.5</b>). Any higher value areas of broadleaved woodland situated within the Aspect Area are outside of the Site. The susceptibility of the Aspect Area is assessed as <b>Medium</b>.</p> <p>A <b>Medium</b> value and <b>Medium</b> Susceptibility result in a <b>Medium</b> sensitivity.</p>
<p>PMBRKLH943 N. of Milford Haven</p>	<p>The LANDMAP overall evaluation of the Aspect Area is assessed as Low. With the explanatory text stating that whilst the Aspect Area could have been assessed as Moderate, as it does have some ecological value, particularly in the hedgerows, the main habitats present are generally of low ecological value, with the area dominated by improved grassland.</p> <p>Based on the LVIA methodology, the Aspect Area is assessed as <b>Low</b> value, as the grassland present across the area is common and unremarkable.</p> <p>The susceptibility of the grassland is considered to be <b>Low</b>, as it easily replaceable, and generally quick to establish as a land cover crop and habitat.</p> <p>A <b>Low</b> value and <b>Low</b> susceptibility result in a <b>Low</b> sensitivity.</p>

5.5.17. Description of the Cultural Landscape Services Aspect Area that remains following the filtering process.

**Table 5.5: LANDMAP Cultural Landscapes Services Aspect Areas identification and descriptions**

Aspect Area UID, Name	LANDMAP Sensitivity of the Cultural Landscapes Aspect Area (Value x Susceptibility)
<p>PMBRKCLS129 Hill Mountain</p>	<p>As set out within LANDMAP, the Aspect Area is tranquil with attractive views within. The visual and sensory landscape evaluation is moderate (of sub-regional importance), with a moderate sense of place / local distinctiveness, moderate</p>

	<p>scenic quality and moderate character. The historic landscape evaluation is high or outstanding and the geological landscape is moderate.</p> <p>Overall, the Aspect Area is considered to be of predominantly local value particularly in the vicinity of the Site and is therefore <b>Medium</b> value.</p> <p>The type of development proposed would likely have some localised effects on the visual and sensory landscape elements of the Aspect Area but is likely to have a limited effect on the geological and historic landscape elements.</p> <p>Overall, the Aspect Area is considered to have <b>Medium</b> susceptibility.</p> <p>A <b>Medium</b> value and <b>Medium</b> Susceptibility result in a <b>Medium</b> sensitivity.</p>
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5.5.18. Description of the two Visual and Sensory Aspect Areas that remain following the filtering process.

**Table 5.6: LANDMAP Visual and Sensory Aspect Areas identification and descriptions**

Aspect Area UID, Name	LANDMAP Sensitivity of the Visual and Sensory Aspect Area (Value x Susceptibility)
PMBRKVSO68 Hill Mountain	<p>The summary description for the Aspect Area notes that it is a rolling plateau landscape, formed of gentle hills and valleys between Haverfordwest and Milford Haven. With regards to land use, it identifies it as a mixed farmland, dominated by pastoral farming. Vegetation is identified as a mix of hedgebanks, some low cut and some outgrown, with trees and woodland belts in valleys. With regards to built form, it notes that the area is interspersed with scattered village settlements and farmsteads and there are busy A roads – the A4076 and A477, linking Haverfordwest with Milford Haven and Neyland/Pembroke Dock as well as a network of quiet lanes. With regards to views, it notes that there are views south to oil refineries which dominate open southerly views as well as wind turbines and pylons in places. A change to the Aspect Area was acknowledged in 2014 where the description was updated to note that there has been additional erosion of rural character with increases in industrial developments, quarry and landfill and wind turbines and; a increase in noise and dust.</p>

	<p>The LANDMAP assessment assesses the Aspect Area as Moderate.</p> <p>With regards to character, the Aspect Area is described as having a modest sense of place as undulating farmland with scattered settlement, with a sense of place increasing to the south due to proximity to the Milford Haven and to the refineries. With regards top rarity, the assessment is Low, as the area is of farmland character which is similar to many others within the study area.</p> <p>Part of the Aspect Area is designated as National Park east and west, with the remainder largely undesignated.</p> <p>Overall, the Aspect Area is considered to be of predominantly local value, particularly in the vicinity of the Site, with areas of higher value towards the periphery of the Aspect Area, and therefore <b>Medium</b> value.</p> <p>The Aspect Area has a settled character and medium scale fields over a rolling plateau landscape, formed of gentle hills and valleys. Some intrusive elements are present, including the A4076, A477, railway lines, pylons and overhead power lines. Therefore, the Aspect Area is considered to have <b>Medium</b> susceptibility to the type of development proposed.</p> <p>A <b>Medium</b> value and <b>Medium</b> Susceptibility result in a <b>Medium</b> sensitivity.</p>
<p>PMBRKVS092 Milford Haven</p>	<p>The descriptive text note that the Aspect Area of Milford Haven contains a large coastal town well positioned on the edge of The Haven. The town displays a built up urban character and has developed with growing oil industry in the area to a large sprawling area which contains mostly modern buildings with some traditional terraces evident. The borrowed views of Milford Haven Estuary add to sense of place. A change to the Aspect Area was acknowledged in 2014 where the description was updated to note the new housing in north, conspicuous on high point, links to industrial estate at Thornton, and the expansion of town.</p> <p>The LANDMAP assessment assesses the Aspect Area as Low, with the explanatory text noting that the town is set in an attractive location on the edge of the Haven, of which it enjoys borrowed views yet the majority of the town is dominated by modern mixed development. The explanatory text continues and states that, the area has been given an overall "low" evaluation due to its "low" scenic quality and integrity despite having "moderate" character and rarity as a</p>

	<p>large town dominated by industry. Overall, the value of the Aspect Area is considered to be <b>Low</b>.</p> <p>With regards to susceptibility, due to the presence of detracting features, this is assessed as <b>Low</b>.</p> <p>A <b>Low</b> value and a <b>Low</b> susceptibility result in a <b>Low</b> sensitivity.</p>
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5.5.19. Description of six Historic Landscape Aspect Areas that remain following the filtering process.

**Table 5.7: LANDMAP Historic Landscape Aspect Areas identification and descriptions**

Aspect Area UID, Name	LANDMAP Sensitivity of the Historic Landscape Aspect Area (Value x Susceptibility)
<p>PMBRKHL43876 Milford Haven</p>	<p>With regards to the description of the Aspect Area, the LANDMAP assessment highlights the most significant archaeological elements as being the 18th-century street grid pattern of town, the buildings, and industrial archaeology of docks. The overall evaluation is assessed as outstanding with the assessment stating that the assessment is based on the diversity of the archaeological record for this area, with evidence of human activity from the Iron Age period up to the present day, including some components of considerable historic and architectural importance, including the Site of Pill Priory, the late 18th century planned town of Milford Haven, the well-preserved mid-19th century artillery battery at Fort Hubberston and the late 19th century dockyard complex.</p> <p>The Aspect Area is acknowledged as falling within a Registered Historic Landscape (HLCA 307 within the Milford Haven Waterway Registered Historic Landscape). The LANDMAP assessment assigns the Aspect Area outstanding as a classification.</p> <p>Overall, the Aspect Area is considered to be <b>High</b> value.</p> <p>The Aspect Area comprises the historic town, and associated dockland frontage which with regard to the survival of historic assets is considered to be outstanding. The Aspect Area also encompasses areas of recent development, most notably around the marina. Most of the historic landscape components in this character area are recorded as being in a reasonable state of preservation.</p>

	<p>The susceptibility to the type of development proposed is considered to be <b>High</b>.</p> <p>A <b>High</b> value and a <b>High</b> susceptibility result in a <b>High</b> sensitivity.</p>
<p>PMBRKHL43890 Herbrandston</p>	<p>This is a relatively small historic landscape character area lying to the west and north of the town of Milford Haven and to the east of a dismantled oil refinery. Its southern part runs down to the sea at Gelliswick Bay. To the north it comprises undulating farmland between 30m and 60m above sea level. Essentially, it is a mixed area of agricultural land and urban fringe. This area has been covered by a detailed historic landscape characterisation, forming HLCA 344 within the Milford Haven Waterway Registered Historic Landscape. The analysis text for the Aspect Area assesses it as having an overall value of moderate, reflecting the extent to which modern industrial and housing development has disrupted the coherence of the regular fieldscape and pattern of settlement.</p> <p>Overall, the Aspect Area is considered to be <b>Medium</b> value.</p> <p>The Aspect Area is noted as having a deteriorating historic character, an agricultural landscape which is now turning into one of leisure, service and light industry. A recommendation is listed as the careful management of all existing historic landscape components. As well as maintain the character and settlement pattern through planning to control new developments, and to maintain boundary hedges. The rural character of the Aspect Area is a quality of the historic landscape (noting it is in decline), which is considered to be of <b>Medium</b> susceptibility to the type of development proposed</p> <p>The Aspect Area has a diverse settlement pattern and field pattern. The rural character of the Aspect Area is a quality of the historic landscape, which is considered to be of <b>Medium</b> susceptibility to the type of development proposed.</p> <p>A <b>Medium</b> value and <b>Medium</b> Susceptibility result in a <b>Medium</b> sensitivity.</p>
<p>PMBRKHL43896 Rosemarket</p>	<p>The Aspect Area is assessed by LANDMAP as having a high overall value, due to the fact that it represents a well-preserved example of a medieval planned settlement, with its key components (linear street plan, parish church and possible castle Site) surviving intact and relatively unaffected</p>

	<p>by 20th century housing development, unlike other neighbouring settlements such as Johnston. The assessment goes on to note that, Rosemarket retains its agricultural village aspect, although much of its agricultural function has been eroded. Other components of the landscape are classified as being in fair condition. With regards to development, it notes that this will require careful management if this characteristic is not to be lost. Some consideration to woodland management is noted as maybe being required in the medium- to long-term.</p> <p>Rosemarket historic landscape character area essentially consists of a small village together with its neighbouring fields, and deciduous woodland on steep valley sides. It lies across and to the north of a steep sided valley. Land above the valley is undulating, but with a south-facing aspect and many of the hedges that surround the fields are overgrown, and this together with woodland provides a wooded aspect to the area.</p> <p>The value of the Aspect Area is assessed as <b>High</b>, noting it is located within the area covered by the Historic Landscape Area designation.</p> <p>Rosemarket retains its agricultural village aspect, although much of its agricultural function has been eroded. Other components of the landscape are in a fair condition. Overall, the Aspect Area is considered to be of <b>Medium</b> susceptibility to the type of development proposed.</p> <p>A <b>High</b> value and <b>Medium</b> Susceptibility result in a <b>High</b> sensitivity.</p>
<p>PMBRKHL43899 Scoveston &amp; Burton</p>	<p>The description of the Aspect Area notes that, this very extensive historic landscape character area which extends from the town of Milford Haven in the west, along the northern shore of the waterway past Neyland and up to and past the village of Llangwm. Despite its size it is described as being a remarkably coherent landscape consisting of large farms, dispersed houses and large, regular fields. Pasture is the dominant land-use, with a little arable land particularly in the western part of the are, and except for isolated trees or woodland in a limited number of locations, this is not a landscape characterised by woodland. Occasional trees are also present in some hedgerows. Earth banks topped with hedges are the main boundary type. Hedges are generally well-maintained, although in the northern part of the area some are becoming overgrown and a few are derelict. Apart</p>

	<p>from Burton village the settlement pattern is one of dispersed farms and houses and, there are several mansions and large farms within this area. Attached to most of these large houses are ranges of stone-built, 19th century, and sometimes earlier, outbuildings, often arranged around a courtyard, and sometimes set some distance from the dwelling. There is a small windfarm and several individual wind turbines within the aspect area.</p> <p>This Aspect Area has been assigned an overall value of high based on the diversity of the archaeological resource, which includes remains of prehistoric ritual/funerary and settlement/defensive activity and fortifications of medieval and mid-19th century date, which show evidence of later reuse. There are also a number of substantial post-medieval houses and associated landscape gardens. The Victorian Scoveston Fort is considered to have potential as a visitor attraction and educational resource.</p> <p>The value of the Aspect Area is assessed as <b>High</b>, noting that the majority of the historic landscape components in this area are well managed and in good condition.</p> <p>The rural character of the Aspect Area and the careful management which is noted as being required for the urban fringe areas and aims to monitor the condition of field boundaries mean that it is considered to be of <b>Medium</b> susceptibility to the type of development proposed.</p> <p>A <b>High</b> value and a <b>Medium</b> susceptibility result in a <b>High</b> sensitivity.</p>
<p>PMBRKHL46054 Tiers Cross - Camrose</p>	<p>The Aspect Area is described as a very large, but homogeneous area, comprising an exposed plateau, with regular and irregular fields which vary from small to large in size. There is very little woodland on the windswept plateau itself but many of the numerous incised valleys, and the inland sheltered hollows, are wooded. Settlement is mainly dispersed, but there are a number of nucleations, largely with medieval origins. All farm types and all housing types are represented, including gentry houses, one of which, Great Harmeston, has a Registered Park and Garden, and there are further designed landscapes. The area is crossed by several railway lines and main roads. There are a very large number of archaeological Sites, from all periods. Characteristic are the many medieval churches, including a number of landmark churches, and medieval earthwork castles. There are a number of listed buildings. Scheduled Ancient Monuments</p>

	<p>include bronze age funerary and ritual Sites and stone monuments, iron age defended Sites and medieval motte castles. The most significant archaeological elements include prehistoric funerary and ritual monuments, iron age hillforts, medieval earthwork castles. There are also numerous individual wind turbines in this aspect area.</p> <p>The Aspect Area is assessed by LANDMAP as having a High overall evaluation, with the justification mentioning the presence of a multi-period archaeological record and a number of post-medieval designed landscapes. Overall, the Aspect Area is considered to be <b>High</b> value.</p> <p>With regards to susceptibility, this is assessed as <b>Medium</b>, owing to the presence of a mix of designed landscapes and the presence of infrastructure such as the railway and the main roads.</p> <p>A <b>High</b> value and a <b>Medium</b> susceptibility result in a <b>High</b> sensitivity.</p>
<p>PMBRKHL46211 Johnston</p>	<p>This Aspect Area has not been covered by a detailed historic landscape characterisation. With regards to the LANDMAP assessment, the area is assigned a Moderate evaluation. With the explanatory text noting that this assessment reflects the relatively limited scope of the archaeological record and the extent to which 20th century housing and industrial development has significantly diminished the coherence of the aspect area. With regards to the value of the Aspect Area, this is considered to be <b>Low</b>, reflecting that the settlement of Johnston represents one of many nucleated settlements in south-west Pembrokeshire.</p> <p>The susceptibility to the type of development proposed is considered to be <b>Low</b>.</p> <p>A <b>Low</b> value and a <b>Low</b> susceptibility result in a <b>Low</b> sensitivity.</p>

Pembrokeshire County Landscape Character Assessment

5.5.34. The published assessment identifies 29 Landscape Character Areas (LCA), the boundaries and descriptions of which are primarily derived from the LANDMAP information, with the Visual and Sensory aspect is the primary source of information guiding the extents of LCAs. The Site is located entirely within LCA 9 Johnston Lowlands, located in central Pembrokeshire, south of Haverfordwest, north of Milford Haven and west of the Western Cleddau and Daugleddau where it extends to the National Park boundary, covering approximately half of the 3km radius study area.

5.5.35. The Key Characteristics are:

- *“Gently undulating ridge and valley landform comprising of east west parallel low ridges with the highest being around 100m AOD to the west and 90mAOD to the east, falling to 14m AOD near the Daugleddau around Hook and sea level to the south by Cleddau Reach.*
- *The underlying geology is complex and comprises from the north bands of Silurian and Carboniferous mudstones, Precambrian igneous rock across the central area (which is still quarried to the west of Johnston) and Devonian and Silurian sandstones to the south, overlain with minor glacial deposits.*
- *Complex drainage with short watercourses running east to the Daugleddau/Cleddau Reach and longer streams flowing towards St Bride’s Bay to the west and south to Milford Haven in small enclosed and sheltered valleys with wooded sides (some steep) and narrow floors, including some ancient woodland.*
- *The enclosed and intimate Westfield Pill to the south is within Pembrokeshire Marine SAC/Milford Haven Waterway SSSI.*
- *The majority of the area is covered in high quality, productive pastoral farmland managed by scattered farmsteads of improved grassland with some arable set in a strong field pattern of small and medium sized irregular and regular fields, including areas of medieval strip fields, bounded by often well trimmed hedgebanks and hedgerows.*
- *Farmland is interspersed with semi-natural broadleaved and coniferous woodland blocks, marshy and rough grassland, scrub, streams and ponds on poorer quality land.*
- *The main settlement is Johnston associated with several quarries and located on the Haverfordwest/Milford Haven Road which with the A477 form busy road corridors with related development.*
- *Single medium-sized turbines and large solar farms tend to be related to this corridor or to the south west.*
- *To the east the area becomes more tranquil and rural with a series of scattered rural village settlements such as Llangwm and Hook characterised by their visual and physical interrelationship with the Daugleddau river, with the National Park forming the boundary.*
- *There are a large number of archaeological Sites from all periods and listed buildings including Medieval churches, and scheduled monuments include prehistoric, medieval and 18th century defence features.*
- *There are scheduled monuments related to Rosemarket- the Rath and Jordanston Farm Promontory Fort and the listed Church of St Ismael. Llangwm has a Conservation Area with Church of St Jerome as a listed building.*

- *Milford Haven Waterway Landscape of Outstanding Historic Interest to the south around Rosemarket and to the east bordering the Cleddau.*
- *There are scenic views to the east around the Daugleddau and in the enclosed valleys such as around Rosemarket and Westfield Pill. There is also potential for views across the relatively open landscape on higher ground.*
- *Views to the south are dominated by industrial and renewable energy developments, as well as pylons in some places.*
- *National Cycle Route 47 runs north to south, largely on dismantled railway.*
- *Culturally, this area lies south of the Landsker Line and forms part of a rich pastoral landscape of the English-speaking communities of Southern Pembrokeshire."*

5.5.36. A summary description for LCA 9 Johnston Lowlands states that:

*"This LCA is a rolling plateau landscape of gentle hills and wooded valleys. Farmland is dominated by high quality pastoral agriculture with hedgebanks and some arable, rough grassland and woodland blocks. The area is interspersed with scattered village settlements and farmsteads some of which have a strong historic character such as Rosemarket or Llangwm linked by quiet rural lanes. Busy A roads run north south, the A4076 and A477, between Haverfordwest to the north and Milford Haven and Pembroke Dock to the south. Johnston is the largest settlement and hosts both commercial and industrial/business uses. The area to the east is more tranquil and rural in character closer to the Western Cleddau, Daugleddau and the National Park. Views south to the Haven are dominated by refineries and wind turbines and pylons in places and solar farms lie to the south west."*

5.5.37. Under the heading of landscape change the following factors are noted:

- *"Exploitation of mineral resources at Bolton Hill hard rock quarry continues and former small scale old coal workings have marked the landscape.*
- *The A4076 and A477 and rail line traverse the area and form focuses for development.*
- *Haverfordwest and Johnston have expanded significantly and there is pressure to continue.*
- *Pressure for further energy related developments in addition to refineries and LNG storage to the south and wind turbines, solar farms and pylons within the area.*
- *Intrusive light pollution exists around settlements, particularly at school and recreational facilities, from energy installations to the south, quarries and at some farm complexes.*

- *Potential intensification of agriculture on poorer quality land especially wetland and valleys.”*

5.5.38. With regards to landscape guidelines for the LCA 9 Johnston Lowlands of relevance to the Site and Proposed Development include:

- *“Site renewable energy including wind turbines and solar arrays away from the National Park setting in discreet locations and avoid adverse cumulative impacts...”*
- *Conserve and enhance hedgebanks and hedgerows allowing trees to grow in places...*
- *Conserve and enhance the areas of rough grass, heath, scrub and woodland outside the valleys to optimise linkages in green infrastructure....*
- *Avoid any substantial development towards the east and in particular in the setting of the National Park...*
- *Minimise further light pollution in the area...”*

5.5.39. Another landscape guideline for the LCA, which is also considered relevant, although it specifically mentions the expansion of the settlements, is to **“...avoid development along the Western Cleddau, on ridges and locate below or away from skylines and soften with appropriate planting mitigation materials.”**

5.5.40. Overall, the value of LCA 9 is assessed as **Medium**, whilst parts of the western and eastern extent of the LCA abut the boundary of the National Park with the closest parts of the LCA forming part of the setting, the area also contains busy A roads with the published assessment referencing both the A4076 and A477, which run through the Site, or adjacent to it. Views south within the LCA are noted as being dominated by refineries, wind turbines, pylons and solar farms in the south west.

5.5.41. The susceptibility of LCA 9 to the type of development proposed is considered to be **Medium**; this is due to the landscape containing existing references to the type of development proposed. The Site occupies land within the LCA, which is noted as being less tranquil, and the opportunity to reinforce existing landscape features, in line with the guidelines for the LCA, including to conserve and enhance hedgerows allowing trees to grow and; to conserve and enhance the areas of rough grass, and woodland outside the valleys to optimise linkages in green infrastructure.

5.5.42. A **Medium** value and a **Medium** susceptibility result in a **Medium** sensitivity.

#### Description of the Site, Associated Features, and Immediate Context

5.5.43. The Site comprises a number of parcels of arable and pastoral field enclosures. These are numbered F1 – F41 as shown on Figure 5.3.x **Landscape Masterplan**, with the field numbering consistent with **Chapter 6 Cultural Heritage and Archaeology** and **Chapter 7 Ecology**. The field numbering is not consecutive with a number of fields

omitted from the Proposed Development during the iterative design process in late 2025.

- 5.5.44. Public highways form in parts the boundaries and split the Site into three parcels: western, central, and eastern. Bulford Road Diversion forms the northern edge of the western parcel and separates the Site from Johnston. The A4076 / Milford Road connects Johnston with Steynton and then leads to Milford Haven, and abuts the western parcel to the south east. The A477 forms the southern edge to Johnston and separates it from the central parcel and segregates the Site's central and eastern parcels. The Old Rosemarket Road abuts, in parts, the Site's eastern parcel to the north east and follows a localised higher ground reaching c. 60 m AOD.
- 5.5.45. Topographically, the Site forms part of the undulating landform and largely slopes from the north / north east around Johnston at c. 75 m AOD descending into a narrow and wooded valley near Great Harmeston and Hayston Bridge / Lower Hayston reaching c. 30 m – 40 m along its southern edge. The eastern part of the Site slopes east descending to c. 60 m AOD along its eastern edge – refer to **Figure 5.1 Site Location, Context and Topography Plan**.
- 5.5.46. The field enclosures within the Site are best described as medium scale delineated by hedgerows, which appear to be well maintained. The existing structural vegetation within the Site is identified in a tree survey – refer to **Appendix 5.5 Arboricultural Impact Assessment**.
- 5.5.47. The perimeter and internal hedgerows have been predominantly identified as species-poor (refer to **Chapter 7**), are occasionally gappy and include low trimmed sections but overall their arboricultural condition appears to be good (refer to **Appendix 5.5 Arboricultural Impact Assessment**). The hedgerows along the highways are of reasonable height and condition, sufficient to break the line of sight albeit in winter months views into the interior of the Site can be gained from these highways and associated footways (where applicable) – refer to **Figure 5.11 Context Baseline Views and Photoviews** for reference.
- 5.5.48. Woodland is prevalent in narrow incise valleys across the local landscape, and is characteristic of the Site's western parcel and its southern edge. This woodland effectively forms a continuous line of vegetation extending from the north western edge of the Site (northern edge of Fields F12 and F13, north western edge of Field F14 and western edge of F10 and towards F5), across its western part (between Fields F1 / F2 and F3 / F4 / F5), then across the railway lines, and then runs along the southern edge of the central parcel (Fields F34 and F35) and eastern parcel (Field F39), and then continuing south east past Rosemarket towards the valley of Westfield Pill. This provides a reference point for mitigation planting and the appropriateness of such planting, from an LVIA point of view.
- 5.5.49. There are no PRoWs within the Site, albeit the available OS maps indicate that Public Footpath PP81/1 skirts along the southern edge of Field F39 and partially enters the Site before quickly leaving it again. However there is no presence of this route on the ground and the accuracy of the above assumption has not been verified. This footpath

continues east as Bridleway PP81/2 connecting with the Old Rosemarket Road. Due to its relative elevation and change in levels the Site has a variable sense of enclosure. This indicates that reciprocal views from the south west, south, and east would be potentially gained, in addition to views from the adjacent roads the A4076 / Milford Road, A477, Bulford Road Diversion, and other minor roads in the locale. The Site visit in June 2025 and February 2026 confirmed that some distant and medium range views can be gained but in these views the Site did not form an important element or was not easily appreciated. This guided the selection of viewpoints, discussed later and evidenced in **Appendix 5.4**.

- 5.5.50. The landscape, both close and medium range does not contain any high sensitivity receptors apart from aforementioned Public Footpath PP8/1 and Bridleway PP81/2, and Public Footpath PP84/3. Other PRowWs in the wider area, some of which are relatively distant with field boundary hedgerows interrupting the views – for example PRowWs south of the A477 / Neyland Road. Similar, views from Neyland Road and Steynton to the south are considerably restricted, albeit the northern most part of the Site comes in and out in glimpsed views along the road. With regards the A4076 / Milford Road and the A477 the roadside hedgerows successfully screen the Site Land with localised glimpses in summer months but in winter views are more frequently gained due to gaps in the roadside vegetation or the hedgerow being low in height. Bulford Road Diversion sits relatively high in the landscape and views overlook the sloping landform and the Site, with views towards the distant landscape around Milford Haven occasionally gained. Close range views of the infrastructure are expected to be gained from certain sections of this road.
- 5.5.51. In terms of high sensitivity receptors, Public Footpath PP84/6 to the north west of the Site is considered to be the most relevant receptor from a design perspective. The receptors overlook large parts of the Site with woodlands in the valleys and tree belts interrupting the expanse of undulating arable fields. This provides reference for mitigation planting and it is envisaged that extensive tree planting could help integrate the scheme into the receiving landscape and help to diminish any adverse effects.
- 5.5.52. With reference to Bridleways PP51/21, PP81/2, and Public Footpath PP81/1 near the south eastern edge of the Site (see **Figure 3.1e**), these cross a local narrow wooded valley. The route of the Bridleway is no longer apparent on the ground with no posts indicating its alignment, and fencing interrupting the route. According to anecdotal knowledge this route has not been in use for a number of decades due to issues with crossing the watercourse and surrounding marsh grassland.
- 5.5.53. With regards the Site's eastern parcel the closest PRowWs are located some distance away and the views investigated in situ do not reveal any high degree of inter-visibility.
- 5.5.54. Pembrokeshire Coast National Park is located approximately 2.4 km to the west and 3.16 km to the north east at its closest points but the majority of the designation lies well over 3 km distance – refer to **Figure 3.1 Environmental Designations Plan**.

- 5.5.55. The Park encompasses a diverse coastal landscape, including dramatic cliffs, sandy beaches, and the Milford Haven waterway. The Screened ZTV of the Proposed Development (**Figure 5.8**) extends south west towards Robeston Cross (c. 65 m AOD) on the outskirts of the oil refinery and north of Liddeston (c. 62 m AOD), but does not breach the boundary of the National Park on the periphery of the preliminary 3 km study area. The eastern areas of the National Park are more distant and the higher ground between Rosemarket and Sardis curtails the theoretical visibility, with the Site survey confirming the inter-visibility with the Site land is inconsequential (refer to **Appendix 5.4 Preliminary Views – scoping out**).
- 5.5.56. The landscape associated with the Site is medium to large scale and is geographically extensive, thus any features within it tend to appear isolated and small, and their function is somewhat diminished. There are, however, a number of features within and around the Site that are worth noting as they assist in the discussion of the potential visual effects and are referenced throughout this LVIA. These are, with reference to **Appendix 5.5 Arboricultural Impact Assessment**:
- A linear block of woodland along the north western edge of the western parcel (northern edge of Fields F12 and F13, and north western edge of Field F14).
  - Farm buildings with a silo, just north of Field F7.
  - Internal hedgerow, located centrally within Field F15.
  - A single wind turbine in Field F5 (excluded from the Site’s boundary).
  - Farm buildings at Deemshill, on the western edge of Field F1, indicating the western access route.
- 5.5.57. Overhead lines supported on wooden poles cross the central and eastern parcels with a separate line of overhead lines on double poles running along the southern edge of the central and eastern parcels.

#### Surrounding Landscape

- 5.5.58. It is accepted that the character of the local landscape may vary where the change from one landscape type or area to another occurs. Inevitably, there may be some localised variations and a transitional zone where characteristics of one LCT, LCA or Aspect Area are evident in the neighbouring areas and vice versa. The information presented in the preceding paragraphs provides the most relevant information as evidenced in the published landscape character assessments. The following paragraphs analyse the landscape character of the Site and that of the surrounding wider landscape, based on on-Site assessment, and aims to verify it against the published reports mentioned in the previous paragraphs, and aim to establish whether there are any localised variations in the local area that are not reflected in the above quoted published landscape character assessment or should be specifically acknowledged in this LVIA. By doing so this LVIA aims to identify the landscape value and landscape susceptibility to the Proposed Development (the associated typologies: solar modules, substation, and ancillary infrastructure).

*Landscape Value*

- 5.5.59. The landscape associated with the Site represents a typical example of a managed mixed agricultural landscape with a dispersed settlement pattern. The Site is not subject to any statutory landscape designations (such as National Park or National Landscape), nor is it subject to any non-statutory landscape designations. The boundary of the Pembrokeshire Coast National Park is located approximately 2.4 km to the west and 3.16 km to the north east at its closest points (as illustrated on **Figure 3.6**), but the majority of the designation lies well over 3 km away.
- 5.5.60. Being undesignated farmland, the value of the local landscape (beyond the boundary of the National Park) has been assessed in line with the GLVIA3 and the Landscape Institute’s Technical Guidance Note O2/21: Assessing landscape value outside national designations (TGN O2/21). This assessment is set out in **Table 5.8** below.

**Table 5.8: Assessment of Landscape Value (after GLVIA3 Box 5.1 and TGN O2/21)**

Asset	Pegasus’ Analysis
Natural Heritage	<p>The local area comprises actively managed pastoral and arable farmland and is not covered by any statutory or non-statutory nature conservation designations. The pastoral and arable fields, largely separated hedgerows and trees are characteristic of the local landscape. Tree vegetation is present in the form of areas woodland within valleys and as riparian vegetation alongside tributary watercourses, blocks of woodland, clumps of trees, tree shelterbelts, and occasional hedgerow trees. Trees are also frequent around farmsteads, settlements and transport routes such as the railways.</p> <p>None of the trees within the Site are protected by any Tree Preservation Order (TPO) or are part of a designed or designated landscape.</p> <p>Analysis of the geological landscape LANDMAP Aspect Area which covers much of the study area identifies an outcrop of Precambrian Johnston Complex which is geographically linked to the settlement of Johnston and does not occur elsewhere.</p>
Cultural Heritage	<p>The landscape to the south of the Site is located within a Historic Landscape Area. Beyond this, no specific cultural or heritage connections, beyond the ordinary, managed agricultural landscape or that associated with cultural heritage (refer to <b>Chapter 6</b> for details).</p>
Landscape Condition	<p>The local landscape is considered to be generally in good condition; albeit altered by the negative influence of the A4076,</p>

Asset	Pegasus' Analysis
	A477 and railway. Hedgerows are the predominant field boundary type and are generally considered to be in good condition.
Associations	No well-known specific associations with notable people, events or the arts.
Distinctiveness	The local landscape is not noted for being distinctive, and the Site is not considered to be atypical of the local area. Noting that other areas beyond the immediate vicinity of the Site exhibit more dramatic topography, with incised valleys frequently associated with the tributary watercourse which flow towards the Cleddau Ddu. It forms part of a large scale and geographically extensive NLCA 48 Milford Haven.
Recreational	There are no PRowS within the Site, the OS mapping indicates that a PRowS footpath (PP81/1) which skirts along the southern edge of Field F39 however, there is no presence of this route on the ground, there are also no national Trails or long-distance promoted paths with the exception of the Pembrokeshire Coast Path on the coastline near Milford Haven, or cycle routes in the immediate vicinity.
Perceptual - Scenic	<p>The Site and its environs are of moderate scenic quality being a pleasant working countryside. Church spires / towers are perceptible, but their function and contribution to the local landscape is greatly diminished due to the distances between receptors and settlements, or limited visibility.</p> <p>The existing energy related infrastructure such as the large scale high voltage pylons and industrial areas within and near Milford Haven do exert a strongly negative influence across large parts of the study area.</p>
Perceptual - Wildness and Tranquillity	The local landscape is settled and managed for agriculture. There are areas of heightened sense of remoteness and relative tranquillity experienced across less populated areas served by more minor local roads, but this diminishes around the A417, A4076, railway line and periphery of settlements, and most notably around Milford Haven.

Asset	Pegasus' Analysis
	Visually, receptors in the locality can experience views of the existing wind turbines, pylons and substantial industrial areas along the river estuary at Milford Haven.
Functional	The local landscape does not provide a particular function in relation to the nearby settlements, beyond the ordinary agricultural landscape, it could, however, provide the setting for the Pembrokeshire Coast National Park.

5.5.61. On the basis of this analysis, the Proposed Development and its environs are considered to be of medium value; not exhibiting any special functional or visual relationship with any statutory landscape designations or exhibiting demonstrable physical attributes that would elevate it from the ordinary countryside.

Landscape Susceptibility

5.5.62. The landscape associated with the Site and surrounding landscape is considered to be medium in scale. The NLCA assessment notes that the once rolling farmland skyline is now broken by a collection of tall industrial buildings, and a complicated assortment of towers and chimneys, from which a network of electricity pylons radiates across the surrounding landscape. Such characteristics suggest a lower susceptibility to change, when compared to a more intimate and fine-grained landscape or a more dramatic, undulating and rolling landform which is associated with the Pembrokeshire National Park.

5.5.63. There are no prominent historic landmarks or other features in the local area except for distant views towards church towers. These are often obscured by the vegetation around the settlements or are seen at such distance that their contribution to the character of the local landscape is somewhat diminished.

5.5.64. The landscape appears settled and remote in places. However, the area near the Site exhibits a reduced sense of tranquillity and increased intrusion from noise and built form, with the Pembrokeshire County Landscape Character Assessment confirming the most tranquil area is to the east of Johnston.

5.5.65. Within the vicinity of the Site there are views south to oil refineries which dominate open southerly views, as well as wind turbines and pylons in places. These features can be described as exerting negative influence over the local landscape. Their presence, whilst evident and prominent in certain views, however, is somewhat diminished by the scale and openness of the landscape, giving evidence of its capacity to accommodate large scale infrastructure.

5.5.66. It is evident that the landscape within and around the Site does vary. The landscape east of Johnston and in the western quadrant of the study area, has a highted sense of ruralness and tranquillity but nevertheless is affected by the visibility of the large-scale energy infrastructure the industrial tower and chimneys at Milford Haven and large-

scale pylons. The landscape in the central and southern quadrants of the study area exhibits characteristics that suggest a lower susceptibility, due to the increasing negative influence of the aforementioned existing large scale energy infrastructure.

- 5.5.67. On balance and for simplicity, the susceptibility of the local landscape to this type of development is assessed as **medium**.

#### Landscape sensitivity

- 5.5.68. Based on the above analysis it transpires that the local landscape is of **medium** sensitivity to the Proposed Development.

#### Visual Baseline Survey Information

- 5.5.69. A preliminary visual appraisal was conducted in early June 2025 to determine the relationship of the Site with its surroundings and the approximate extent of its visibility within the wider landscape from publicly accessible locations. Additional single day site visit was then carried out in February 2026 to verify the updated SZTV and help identify any additional receptors that may gain views towards the Site in winter months when the level of vegetative screening is the lowest. The visual survey informed the extent of the study area, as discussed in the preceding section of this LVIA – section Study Area. Thus, the following paragraphs focus on those visual receptors that have been considered the most relevant and informative to the LVIA process.

- 5.5.70. As part of the preliminary studies two separate ZTV plans were prepared at the Scoping Stage, and these have been updated to reflect the current layout of the Proposed Development (**Figure 5.7** and **Figure 5.8**). The extent of the SZTVs is reflective of the undulating landform and strong presence of woodlands and trees in the landscape.

- 5.5.71. With regard to the Site, as illustrated on **Figure 5.1** and as informed by the feedback from the Council's landscape officer, the closest visual receptors include the residential properties on the southern edge of Johnston, PRowS north west of Johnston, Bulford Road Diversion, the A4076 / Milford Road, north western section of The Old Rosemarket Road only, Bridleway PP81/2 and Public Footpath PP81/1 at the south eastern edge of the Site; and Public Footpath PP84/3 to the north west of the Site

- 5.5.72. The following paragraphs provide a detailed analysis of the inter-visibility and further justify the extent of the study area.

#### *Visual Context and Reciprocal Views towards the Site*

- 5.5.73. As illustrated on **Figure 5.2 Site Context Views**, views from within the Site do not appear to include the land within the National Park. Views looking west include the nearby operational Solar Site B and its immediately surrounding fields, some 2 – 3 fields away from the western edge of the Site, but the rising topography around Tierson curtails views and the land then falls away from the Site with areas of 'visual shadow' illustrated by the SZTV plan (**Figure 5.8**). Similarly, looking east the localised higher ground extending between Johnston and Rosemarket – marked by the Old Rosemarket

Road, and then towards Trooper's Inn on the edge of the preliminary 3 km study area, curtails views of the low lying areas of the National Park around the Western Cleddau.

- 5.5.74. Looking north from the Site's western parcel, the built form in Lower Bulford and Sunnyhill along Bulford Road Diversion come in and out of the view along with some of the dwellings in the south western part of Johnston – those along Bulford Close and at the the A4076 / Milford Road Roundabout. The background is formed of undulating agricultural landscape and views terminate on this higher ground – southern slopes of Bolton Hill around the Water Treatment Works / quarry and edge of the settlement. With regards the central parcel, views from its northern edge looking north, are interrupted by the A477 roadside hedgerow. Dwellings along the A477 (small cul-de-sac at Ayston View) terminate the views with their first floor windows clearly visible over the roadside hedgerow. The eastern parcel abuts a number of residential dwellings to the north (Fairviews and No. 44), and here the inter-visibility is high with views direct and with little in the form of vegetative screening. The Old Rosemarket Road is vegetated and segregates the Site's eastern parcel from the landscape north and north east.
- 5.5.75. Looking south and south west, particularly from the elevated northern areas of the Site's western parcel, views are distant and include the distant residential development on the easter edge of Steynton (c. 70 m AOD) parts of which are still under construction and that towards Milford Haven. In the distance, large scale wind turbines are evident depending on the weather condition. The contrast and verticality of the oil refinery infrastructure is quite stark. These features, however, read as being part of a different landscape and are not associated with the core study area. The vegetation along the A477 / Neyland Road helps define the distant skyline, with a tree group enclosing its large lay-by, easily identifiable on the horizon – refer to Preliminary View 21.
- 5.5.76. The nearby operational Solar Site B (**Figure 2.1**, Site B) sits relatively high (extending onto the higher ground at c. 94 m AOD) covering the undulating landscape between the Site and Tiers Cross. The undulating landform helps reduce its visibility with views largely including its eastern most fields, and the majority of this cumulative scheme is not visible from within the Site or nearby public vantage points.
- 5.5.77. Views east, looking from the western parcel are controlled by the landform and vegetation along the A4076 / Milford Road.
- 5.5.78. Views from the central parcel are similar to those gained from the eastern parcel, and are characterised by undulating and well treed pastoral landscape gently rising. A number of residential properties are identifiable such as the isolated properties around St. Mary's Park.
- 5.5.79. With regards the Site's eastern parcel, Rosemarket is visible in the distance with Hill Mountain identifiable on the distant elevated horizon. The lower lying medium range landscape, and indeed much of The Old Rosemarket Road, is screened or the level of inter-visibility is heavily restricted. The elevated section of the A477 at Sentry Cross is visible on the rising horizon and this higher ground continues west towards Steynton, segregating the core study area and wider countryside from the more distant and heavily transformed coastal landscape around Milford Haven.

*Representative and Illustrative Viewpoints*

- 5.5.80. A series of Preliminary Views surrounding the Site and the wider study area have been identified through the desktop studies and Site survey works in June 2025 and February 2026. Following this, the Preliminary Views have been reviewed to verify the inter-visibility with the Site Land and its relationship – refer to **Appendix 5.4**. This process helped to confirm the extent of the core study area, and led to shortlisting 18 no. of Viewpoints considered informative to this **Chapter 5** either due to heightened visibility with the Site Land or considered to be informative to the decision making process – refer to **Appendix 5.6**. The list of shortlisted Viewpoints along with the plan identifying their locations was then issued to the Council at the end of February to agree the scope of visual assessment.
- 5.5.81. It is worth noting that no specific or designated viewpoints have been identified within the core study area. The OS Explorer map 1:25,000 (see **Figure 5.1**) does not identify any such features. The Site is not in close proximity to any publicly accessible heritage assets such as Registered Parks and Gardens or scheduled monuments that could be regarded as visual receptors, or similar assets, that would enable public vantage points. Heritage assets and effects upon them are discussed in **Chapter 6 Cultural Heritage and Archaeology**.
- 5.5.82. The selected viewpoints are not intended to cover every possible view of the Proposed Development, but rather they are representative of a range of receptor types or illustrative of a particular informative view. Due to the extent of the SZTV and availability of public vantage points their distribution is concentrated in certain parts of the local landscape to capture more than just one type of receptor. The viewpoints represent views experienced by a range of receptor groups, in line with the GLVIA3, such as:
- Residents/local community.
  - PRow users.
  - Road users.
- 5.5.83. The selected viewpoints are highly localised and generally close to medium range. Long range viewpoints are illustrated by the selected Preliminary Views (**Appendix 5.3**) proving that views from the wider countryside would be largely inconsequential.
- 5.5.84. It is expected that not all of those viewpoints and associated receptors would experience significant visual effects. In order to focus on those viewpoints and visual receptors that have the potential to be significantly affected, a scoping out process has been applied and this is presented in **Appendix 5.6**. The scoping out process provides a preliminary assessment of the potential visual effects and helps shortlist those viewpoints and receptors that may be subject to potentially significant effects and should be assessed in detail. It also helps guide the selection of other visual receptors and whether those visual receptors should be assessed in detail.

**Table 5.9 Shortlisted viewpoints**

No.	Viewpoint name	Relevant part of the Proposed Development	Rationale
1.	Northwestern section of Old Rosemarket Road.	Views limited to the higher ground in Fields F28 and F31.	Medium range but restricted and gained in transition. Shortlisted to confirm the lack of significant effects upon medium range views in the eastern study area.
2.	Northwestern section of Old Rosemarket Road (railway overbridge).	Direct to slight oblique views overlooking the northern part of the eastern parcel.	Close range and relatively open views.
3.	Northwestern end of Old Rosemarket Road.	Direct to slight oblique views overlooking the northern part of the eastern parcel.	Very close range views.
4.	PRoW Footpath PP811/1	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
5.	A477 to and from Johnston	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
6.	A477 to and from Johnston	Restricted views into Field F31. Very restricted views through roadside hedgerow into Field F28.	Very close range into the Site's eastern parcel and filtered views into its central parcel past the railway bridge.
7.	A477 and Milford Road roundabout	Very restricted views through roadside hedgerow into Field F15 and F41.	Potentially significant given the proximity and extent of Field 15. High sensitivity residential receptors.
8.	A477 / Neyland Road leading to Steynton.	Not taken for detailed assessment. <b>Appendix 5.6.</b>	

No.	Viewpoint name	Relevant part of the Proposed Development	Rationale
9.	A477 / Neyland Road at Edge of Steynton.	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
10.	PRoW Footpath PP65 35/1 near Upper Scoveston.	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
11.	A4076 / Milford Road to and from Johnston.	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
12.	A4076 / Milford Road to and from Johnston.	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
13.	A4076 / Milford Road to and from Johnston.	F7 (very restricted but close range), F1, F3, F4,	Close range and relatively open views over the roadside hedgerows gained along this section of the A477 / Neyland Road
14.	Rural lane linking the A4076 / Milford Road with Tierson & PRoW.	Majority of western parcel.	Initial views gained by PRoW users traveling east. Medium to distant views across the western parcel.
15.	Public Footpath PP84/6 north west of the Site.	Majority of western parcel.	Close range and expansive view across much of the Site's wester parcel.
16.	Bridleway PP84/8, south of Boltonhill Quarry.	Field F15, F12, F5 (very restricted) F6, F7 of the western parcel.	Multiple fields in the western parcel are visible. Whilst the slope of the land assist in reducing inter-visibility, the degree of change ought to be analysed further.
17.	Public Footpath PP84/7, southeast	Majority of western parcel.	Multiple fields in the western parcel are visible. Whilst the slope of the land assist in reducing inter-

No.	Viewpoint name	Relevant part of the Proposed Development	Rationale
	of Boltonhill Water Works.		visibility, the degree of change ought to be analysed further.
18.	Bulford Road, southeast of Johnston.	Field 15 and Field 12 (very restricted).	Close range views gained by a variety of receptors.

#### *Settlements*

- 5.5.85. Based on the Site survey work and review of the preliminary views (**Appendix 5.3** and **Appendix 5.4**) it is considered that Johnston is the only settlement relevant for the purpose of this LVIA.
- 5.5.86. Whilst the SZTV extends to the north eastern edge of Rosemarket and northern edge of Steynton, the Site visits confirmed that views of the Site, are substantially restricted and distant, and the preliminary and shortlisted viewpoints were not considered to be significantly affected – see Viewpoint 8 and Viewpoint 9 (**Appendix 5.6**), and Preliminary View 3 and Preliminary View 26 (**Appendix 5.3** and (**Appendix 5.4**).

#### *Transport Routes*

- 5.5.87. The A4076 / Milford Road, A477, Bulford Road, and parts of the old Rosemarket Road are the only transport corridors offering close range views of the Site Land.
- 5.5.88. Other public highways are more distant, and views screened or considerably restricted by landform or vegetation. A number of viewpoints from other routes, offering views towards the Site, have been identified and analysed through the review of Preliminary Views or Scoping Out of the selected Viewpoints.

#### *Railways*

- 5.5.89. The railway line between Johnston and Milford Haven has not been analysed as the majority of its corridor is heavily vegetated. It is accepted that views from the train, as one passes Field F32, are likely to include some areas of solar panels in this particular field. This view would be gained in transition and along c. 220 m long section which is considered too short to warrant any significance effects given the overall length of the journey and expected user experience. For this reason, this visual receptor is not considered in this **Chapter 5**.

#### *SUSTRANS Cycle Network*

- 5.5.90. SUSTRANS Cycle Route No. 4 leads through Johnston and past Rosemarket and coincides with a disused railway line. Its corridor is heavily vegetated / wooded and often skirts the lower slopes i.e., land of lower relative elevation. As indicated by the

SZTV plan (**Figure 5.8**) this route is free from any theoretical visibility. The Bare Earth ZTV (**Figure 5.7**) confirms the screening offered by the intervening landform with the analysis of Preliminary Views along The Old Rosemarket Road proving the lack of inter-visibility along the lane and proving the accuracy of the SZTV. For this reason, this visual receptor is not considered in **Chapter 5**.

#### *Long Distance Trails & Promoted Walking Routes*

- 5.5.91. The review of OS Explorer map 1:25,000 (**Figure 5.1**) did not reveal any promoted long distance walking routes or National Trails in the study area.

#### *Public Rights of Way*

- 5.5.92. The Screening Direction (Appendix 1.1) confirms that any direct effects upon the PRowS are unlikely to be significant:

*“Yes. A Public Right of Way (PRow) lies adjacent to the boundary of the south-eastern parcel and runs within the Site boundary for a small section along its route. There are also further PRow near the Site. There would inevitably be some visual change for users of these routes.*

*Whilst there are footpaths within the Site and wider area, the SR does not indicate that these would be stopped up or otherwise significantly impacted by the development. Visual impact is considered below. I therefore consider that the impact of the Proposed Development is unlikely to be significant.”*

- 5.5.93. As described in the preceding paragraphs there are a number of PRowS in the vicinity of the Site. These have been analysed during the Site surveys to establish the level of inter-visibility between these linear receptors and the Site. As confirmed on Site and through the preliminary visual analysis and scoping out of the identified viewpoints, the only relevant PRowS are Bridleway PP48/8 and western section of Public Footpath PP84/7 near the Water Treatment Works at Bolton Hill; southern edge of Johnston – views from the highways and associated footways being part of a logical loop leading to and from the settlement, Bridleway PP81/2 and Public Footpath PP81/1 at the south eastern edge of the Site; and Public Footpath PP84/3 to the north west of the Site.
- 5.5.94. With reference to Bridleways PP51/21, PP81/2, and Public Footpath PP81/1 near the south eastern edge of the Site, these cross a local narrow wooded valley. The route of the Bridleway is no longer apparent on the ground with no posts indicating its alignment, and fencing interrupting the route. According to anecdotal knowledge this route has not been in use for a number of decades due to issues with crossing the watercourse and surrounding marsh grassland. In any case, Preliminary Views 13 and 14 (**Appendix 5.3**) have been investigated in situ with Preliminary View 13 taken for further assessment as Viewpoint 4 (**Appendix 5.4**) and then discounted on the basis of very limited inter-visibility and given the offset between the solar panels and southern boundary of Field F39.
- 5.5.95. It is acknowledged that the remaining PRowS in the wider landscape may offer incidental views towards the Site. Such views, however, would be distant and

considerably restricted or screened. For that reason, it is considered that significant visual effects are unlikely to occur. This conclusion is supported by the preliminary visual analysis **Appendix 5.4** and scoping out assessment of the selected viewpoints included in **Appendix 5.7**.

#### Implications of Climate Change

- 5.5.96. The published draft *Landscape Character Assessment Final Report for Consultation May 2022* provides general advice with regards the potential changes to the landscape character at paragraphs 4.4 and 4.5. Out of these the most informative, in the context of the Proposed Development, are quoted below:

*"Increase quality and extent of hedgerows and Pembrokeshire hedgebanks including fallow margins/headlands.*

*Conservation and increase of semi-natural habitat patches and corridors including Green Infrastructure links, watercourses, riparian corridors, woodland, hedgerows, rough grazing, common, and patches of wetland and heathland."*

- 5.5.97. The draft *Landscape Character Assessment Final Report for Consultation May 2022* then goes on to identify a number of management guidelines referring to landscape character, conservation and enhancement of structural planting such as hedgerows, woodlands, Green Infrastructure etc but none of them provide any directly advice with regards climate change.
- 5.5.98. The description of the host LCA 9 'Johnston Lowlands' does not provide any advice with regards climate change and its potential implications on the character of the local area either.
- 5.5.99. Notwithstanding the above it is informative to note that the Proposed Development would bring about a net gain in the hedgerow and woodland resource within the Site thus, would respond positively to the management guidelines referenced above.
- 5.5.100. It is envisaged that through the creation of new and enhancement to the existing field boundary vegetation habitat connectivity would be strengthened. The increase in semi-natural habitats and increased connectivity allow adaptation to climate change and is one way of creating a resilient environment supporting pollinators required to maintain productive arable land.
- 5.5.101. The ground beneath the solar modules would be sown with a suitable grass mix to suit the ground condition and local climate. It is envisaged that the grassland mix would be able to sustain any prolonged period of wetness or other changes in the local climate and would continue to characterise the land within the Site and local landscape. It is also envisaged that grassland species of local provenance, already present in the local area, may have the ability to naturally colonise the Site, should the shift in the weather pattern and climate be so severe to halt or impede the growth of the proposed grassland.

- 5.5.102. In addition, the proposed hedgerow and woodland planting would act as carbon sinks, assisting in sequestering more carbon than the structural vegetation currently present within the land associated with the Site.
- 5.5.103. The change from arable to permanent pastures, within the operational phase of the Proposed Development would also assist in regulating soil erosion by limiting the potential for the soil to be compacted through machinery and reducing chemical run-off. Grazing could potentially be introduced across the Site subject to ecological considerations, allowing land to rest. A rise in temperatures may have an effect on the growth rates of vegetation. Slight increase in temperature would typically stimulate growth but prolonged periods of drought are likely to stump the vegetation. It is not possible, however, to predict to any degree of accuracy the future scenario as there are many variables that may affect the future baseline: water availability, temperature, resilience, or vulnerability to pathogens as their habitat suitability shifts or expands. In other words, the future growth of the existing and proposed vegetation is difficult to predict, but it is envisaged that it will continue to provide screening.
- 5.5.104. Whilst the proposed grassland mix, hedgerow and woodland planting may be sensitive to the increased frequency of extreme weather events, the selected species would be native and of local provenance / or a suitable substitution. These are considered to be better suited to the local soil and climate and are likely to adapt and be more resilient to the climate change. Any non-native species may be regarded as incongruous to the local landscape character, with the risk of becoming invasive due to the unknown aspects and effects of climate change.

## 5.6. Assessment of Likely Significant Effects

- 5.6.1. **Table 5.14**, included at the end of this **Chapter 5**, summarises the significant landscape and visual effects identified in this assessment.
- 5.6.2. It is noted that **Chapter 8 Glint & Glare** identifies possible low to no impact upon the users of the A4076 / Milford Road – mainly the central and northern section as one drives past the Site's western parcel, moderate impact at the eastern end of Bulford Road Diversion, moderate impact upon from the A477 around the southern part of the Site's central parcel. The **Solar Photovoltaic Glint and Glare Study** at paragraph 5.5.1 states:

### *"Road Mitigation*

*A moderate impact has been predicted upon 100m sections of Bulford Road Bypass and the A477.*

*The locations identified for proposed screening is shown as the pink line in Figures 12 and 13 on the following pages. This screening could be in the form of planting or a fence and should be of a height such that views of the reflecting panels are obscured from the view of the affected sections of road for a typical road user.*

*If vegetation is used, it should be ensured that the screening significantly obstructs the reflecting panels during the periods when solar reflections are geometrically possible."*

5.6.3. It is informative to note that **Chapter 8** has not identified any impacts upon the assessed residential receptors.

### **Construction Phase**

5.6.4. A description of the construction programme and construction activities is provided in **Chapter 4** of this ES. Construction activities with the potential to affect the landscape and visual amenity include Site clearance and preparation including the construction of access tracks, movement of vehicles, the tall plant used for driving the supports for the solar arrays/tables, cranes used for lifting the substations/components into position. Construction would last 6 to 9 months from commencement and potentially would be carried out in phases.

5.6.5. Construction activity potentially evident on the land within the Site extents would include:

- Temporary construction compound, Site office, cabins, and lighting.
- Removal of non-retained crop (if present at the time) and grassland, and protective fencing to retained structural vegetation: trees and hedgerows.
- Excavation, groundworks, and cable runs (including access tracks).
- Temporary storage of materials, vehicles, and machinery.
- Vehicle and plant movements.
- Construction of solar arrays, ancillary infrastructure, on-site Substation, etc.
- Reinstatement of areas following completion of the construction phase.

### Landscape Elements within the Site

5.6.6. This part of the LVIA analyses the effect of the Proposed Development on those landscape elements and features including topography, vegetation, and other features that help characterise the land of the Site, and provide the structural integrity of its environment.

5.6.7. The existing landscape features and elements within and immediately surrounding the Site are identified on the Tree Survey (**Appendix 5.5**) (and are shown on **Figure 5.3 Landscape Strategy Plan** along with the proposed planting. At this stage, it is envisaged that there would be no need to remove any existing vegetation along the delivery route or construction access that would fall outside of the boundary of Site.

### *Effect upon the ground cover*

5.6.8. Agricultural land is a common feature in the immediate, local, and wider landscape. Much of the Site comprises arable/pastural fields and as such exhibit no particular scenic or perceptual qualities and is characterised by a predominantly undulating

agricultural landscape near to the settlement edge of Johnston. The arable/pastoral fields make some positive contribution to landscape character

- 5.6.9. The Proposed Development would introduce a new type of development into what is, at the time of the Site visits, used as both arable and pastoral land. There is also a field of marshy grassland, which was recorded in Field F37 in the southeast of the Site and a field of neutral grassland occupying Field F35. The proposed location of the new substation in Field F38 is currently improved/ modified grassland, as set out in the Ecology chapter (Chapter 7)
- 5.6.10. The existing ephemeral arable ground cover and grass margins are considered to be of medium value and low susceptibility, with arable crops being a managed vegetation replaced annually and the grassland easily reinstated. In terms of its sensitivity to the Proposed Development, it is considered to be low.
- 5.6.11. The existing ephemeral arable crops and pastoral grassland that characterise the Site would be removed, albeit temporarily, or potentially in some cases retained and enhanced. Construction activities will require minimal earthworks and areas of hard standing for the substation compound and access tracks, but the rest of the Development will involve the erection of ground mounted solar panels over the existing agricultural areas. This will retain some of the existing character of the fields, which may continue to be used for grazing depending on ecological considerations. Following the completion of the construction stage, the area beneath and between the panels, along the perimeter fencing, etc., would be sown with a suitable grassland mix to benefit biodiversity. Any open grassland areas are also proposed for skylark mitigation. The grassland mix is detailed in the LEMP and discussed in **Chapter 7 Ecology**. The existing grassland margins along field boundaries are expected to be retained, and any disturbance would be temporary, with the vegetation able to recolonise the disturbed land. New grass margins would be sown with a species rich grassland mix (refer to **Figure 5.3 Landscape Masterplan** for details).
- 5.6.12. Overall, the Proposed Development would replace the ephemeral vegetation with permanent grassland, resulting in a high adverse magnitude of change. The effects are therefore considered to be **moderate adverse**. The proposed On-site Substation would introduce areas of hardstanding, but this would be as small as practical and would be dictated by technical requirements. Given the overall extent of the Proposed Development, this would represent a very small land intake.

#### *Effect upon the topography*

- 5.6.13. The gently undulating landform of the Site is considered to be uncomplicated and forms part of the wider rolling landscape which is present in the locality. Its value is considered to be **medium**, as the Site is located within a gently undulating plateau, with more dramatic incised valleys associated with the river tributaries, located beyond the boundary of the Site. With limited changes in levels and simple landform, its susceptibility is also assessed as **low**, overall giving it a **medium** sensitivity.
- 5.6.14. Due to the light footprint of the proposed solar panels and their character, the prevailing ground levels and indeed the perception of the landform would continue as currently

experienced. The arrangement of the solar panels would reflect the level topography of the Site. Some ground disturbance would occur during the construction of the access track and foundations for the ancillary elements including the fencing, with the panels pile driven into the ground and not requiring any footings or foundations. The construction of the Cable Route would result in some disturbance, but the ground levels would be reinstated and these components of the Proposed Development would not require any engineering embankments or retaining walls.

- 5.6.15. In summary, any changes would be minimal and limited, with the area reinstated to the existing ground levels. The magnitude of change is therefore assessed as **negligible** resulting in **negligible** neutral effects across the landscape associated with the Site limits.

#### *Drainage*

- 5.6.16. The requirement for drainage works would be limited to the construction of a swale system at field edges to slow run-off and improve water quality) as set out in the Flood Risk Assessment that is submitted in support of this DNS planning application. The swales would provide temporary storage/attenuation and/or intercept potential surface water run-off and would be grass-seeded and maintained by mowing or grazing. The swales would be established at the beginning of construction works. There would be no change to existing drainage features, which would be protected during construction works.

#### *Effect upon tree and hedge resource*

- 5.6.17. None of the trees within the Site are protected by any Tree Preservation Order (TPO) or are part of a designed or designated landscape. Whilst there are no recorded ancient woodlands or veteran trees on Site according to published documents, two trees were, however, identified as veteran during the tree survey (T84, T85) as confirmed in **Appendix 5.5 Arboricultural Impact Assessment**. Native hedgerows on the Site are neither designated nor rare and are unlikely to have any wider recognition of value. Their layout broadly follows the historic field pattern and are an important element of local landscape character, reinforcing the irregular field pattern and undulating landform. The condition of hedgerows across the Site varies, with areas of decline and loss. They support a number of woody species and tree standards. Overall, the hedgerow makes some positive contribution to the landscape character. For this reason, the value of tree and shrub vegetation is considered to be **medium**. In terms of susceptibility of hedgerow vegetation, this is considered to be **medium**. In general, native hedgerows are considered to be readily replaceable and to have a good potential for retention within a solar development structure. The native hedgerow is likely to be able to accommodate development without undue consequences upon its overall integrity. Trees, as a landscape feature, are generally more difficult to replace and require a longer time to establish, thus are judged to be of **high** susceptibility. Overall, the sensitivity of hedgerow vegetation is **medium** and tree vegetation is **high**.

- 5.6.18. With reference to **Appendix 5.5 Arboricultural Impact Assessment** there is potential that some tree and hedgerow vegetation may need to be removed to accommodate the proposals.
- 5.6.19. This is considered to represent a fraction of the overall tree and hedgerow resource within the Site boundary. Any risk from the construction work can be mitigated against through an appropriate management strategy and protective fencing.
- 5.6.20. The new areas of proposed low to medium level biodiversity planting would comprise a mix of shrub/scrub and native tree species, set within grassland to benefit biodiversity.
- 5.6.21. Given the proposed mitigation planting **Figure 5.3 Landscape Masterplan Plan**, the Proposed Development would bring about a net gain in the hedgerow resource with the magnitude of change assessed as **high** and bringing about **major significant beneficial** effects. With regard to the tree resource, the magnitude of change is considered to be **medium** bringing about **major significant beneficial** effects.

*Public Rights of Way (PRoWs)*

- 5.6.22. PRoWs are considered to be **high** sensitivity receptors given their function as a recreational asset. There are no PRoWs within the Site. The closest PRoW Footpath PP81/1 lies adjacent to the south eastern Field F39 and continues east as Bridleway PP81/2 connecting with the Old Rosemarket Road. PRoWs as a recreational resource would not be affected by the Proposed Development. The Proposed Development would not include any means of access by the general public, such as the implementation of a permissive path. Therefore, the magnitude of change is **negligible**, which translates into **negligible** effects.

*Effect upon water features*

- 5.6.23. The Proposed Development has been designed to allow a separation buffer between the existing drains and ditches, and the proposed infrastructure. The proposed culverts would not affect the physical alignment of the retained features albeit they will obscure their presence locally. In short, the existing water features would be retained and not physically affected, and thus **no significant effects** are predicted.

Landscape Character Effects

*National Landscape Character Area 48 Milford Haven*

- 5.6.24. It is predicted that the construction stage would cause some limited adverse effects within the Site's boundary, but such effects would not be significant given the geographical extent of this NLCA 48, its characteristics, and the temporary nature of the construction phase.

LANDMAP

- 5.6.25. It is predicted that the construction stage would cause some limited adverse effects within the Site's boundary, but such effects would not be significant given the

geographical extent of several of the Aspect Areas, the limited intervisibility, their characteristics, and the temporary nature of the construction phase. A detailed assessment of all the relevant Aspect Areas is set out at **Appendix 5.9**.

Pembrokeshire County Council

- 5.6.26. The published assessment identifies that the Site falls within LCA 9 Johnston Lowlands. The construction phase will cause some limited and temporary, and geographically localised effects upon the host landscapes.
- 5.6.27. Within the boundary of the Site and its immediate environs, the landscape which is assessed as **medium** sensitivity, would be subject to a **medium** degree of change and **moderate** not significant short-term temporary effects during the construction stage. Temporary, short-term construction activities would locally affect the tranquillity, but this would be very localised and would diminish beyond the immediate area; the degree of change is expected to diminish rapidly to low, resulting in minor, not significant effects.
- 5.6.28. With reference to the more distant parts of the host landscapes, the degree of direct and indirect change arising from the construction work within the Site would be reduced but would influence the perception of the ruralness to a degree. The landform, landscape structure and scale of field patterns, and distant views are unlikely to be affected to any noticeable degree given the nucleated form of the Proposed Development and relatively narrow and linear corridor of the Cable Route Corridor.
- 5.6.29. It is predicted that a **medium** degree of change, which when combined with a **medium** sensitivity and **moderate** not significant landscape character effects would be experienced within the Site and its immediate environs. Beyond this distance, the degree of change is expected to diminish rapidly to **low** resulting in **minor**, thus not significant, effects.

Visual Receptors

- 5.6.30. The assessment of temporary effects brought about by the construction phase is based on the assessment carried out *in situ* and assessment of the selected viewpoints.

Representative and Illustrative Viewpoints

- 5.6.31. The following **Table 5.10** provides a summary of the predicted effects experienced by static visual receptors at Viewpoints 1 – 18. Detailed assessment is included in **Appendix 5.7**.

**Table 5.10 Summary of assessment of the selected viewpoints – construction phase**

No.	Viewpoint name	Relevant part of the Proposed Development	Predicted effects
1.	Northwestern section of Old Rosemarket Road.	Views limited to the higher ground in Fields F28 and F31.	No significant effects predicted.
2.	Northwestern section of Old Rosemarket Road (railway overbridge).	Direct to slight oblique views overlooking the northern part of the eastern parcel.	<b>Yes, major significant short-term and temporary</b> – for recreational receptors only.
3.	Northwestern end of Old Rosemarket Road.	Direct to slight oblique views overlooking the northern part of the eastern parcel.	<b>Yes, major significant short-term and temporary</b> – for some residential receptors only.
4.	PRoW Footpath PP81 1/1	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
5.	A477 to and from Johnston	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
6.	A477 to and from Johnston	Restricted views into Field F31. Very restricted views through roadside hedgerow into Field F28.	<b>Yes, major significant short-term and temporary.</b>
7.	A477 and Milford Road roundabout	Very restricted views through roadside hedgerow into Field F15 and F41.	No significant effects predicted.

No.	Viewpoint name	Relevant part of the Proposed Development	Predicted effects
8.	A477 / Neyland Road leading to Steynton.	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
9.	A477 / Neyland Road at Edge of Steynton.	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
10.	PRoW Footpath PP65 35/1 near Upper Scoveston.	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
11.	A4076 / Milford Road to and from Johnston.	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
12.	A4076 / Milford Road to and from Johnston.	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
13.	A4076 / Milford Road to and from Johnston.	F7 (very restricted but close range), F1, F3, F4,	<b>Yes, major significant short-term and temporary.</b>
14.	Rural lane linking the A4076 / Milford Road with Tierson & PRoW.	Majority of western parcel.	No significant effects predicted.
15.	Public Footpath PP84/6 north west of the Site.	Majority of western parcel.	<b>Yes, major significant short-term and temporary.</b>
16.	Bridleway PP84/8, south of Boltonhill Quarry.	Field F15, F12, F5 (very restricted) F6, F7 of the western parcel.	No significant effects predicted.
17.	Public Footpath PP84/7, southeast of Boltonhill Water Works.  (Note: PRoW diverted around quarry)	Majority of western parcel.	<b>Yes, major significant short-term and temporary.</b>

No.	Viewpoint name	Relevant part of the Proposed Development	Predicted effects
18.	Bulford Road Diversion, southeast of Johnston.	Field 15 and Field 12 (very restricted).	No significant effects predicted.

#### *Settlements*

- 5.6.32. Views of the construction activities would be theoretically gained from the edge of Johnston and some of the dwellings on its southern edge. It is predicted that in majority of cases views would be interrupted by roadside hedgerows and frequent traffic along the highways which form the foreground to such views. Views from within Johnston do not include the Site thus there is no potential for any significant visual effects.
- 5.6.33. With regards the residents at No. 44 and Fairviews (assessed by proxy based on Viewpoint 2 and Viewpoint 6) the effects have been judged to be **major adverse significant** due to the partial openness of their curtilage / boundaries and proximity.
- 5.6.34. It is important to recognise that the phasing of the construction works allows the construction traffic and movement to move across the proposed Site thus limiting its visual envelope and influence over the residential receptors.

#### *Transport Routes*

- 5.6.35. Based on the assessment of static viewpoints and observations in situ, the construction work would be perceptible to a varying degree by the closest road receptors.
- 5.6.36. With regards views from The Old Rosemarket Road, as illustrated by Preliminary Views 8 and 9 views from the overwhelming majority of this lane are screened. At Viewpoint 1 (Preliminary View 10) views have been judged not to be significant. Views however become temporarily less screened at the point where the road crosses a railway overbridge – Viewpoint 2. These views have been judged not to be significant due to glimpsed nature of the view and existing screening, which continues to control views as one drives into Johnston.
- 5.6.37. Receptors travelling along the elevated A477 (c. 70 m AOD) would initially gain distant views as one leaves Sentry Cross and travels north – no viewpoint provided due to the lack of safe stopping place. The visible parts of the Site include the elevated parts of the central and eastern particles: Fields F28, F29 and in parts F30, and F31 and F32, seen c. 1.6 km away. Such views, however, quickly disappear for fast moving receptors and after c. 500 m the road dips around Hayston Hall and Hayston Bridge (c. 50 m and 30 m AOD respectively) and views of the Site Land are not gained. Past Hayston Bridge, the road sits in a cut and views continue to be screened as one drives past Fields F39, F38, and F34. Heavily restricted views into Field F38 and the proposed Substation might be gained through the roadside vegetation or through a field gate. Such views are

accidental and substantial restricted, very oblique to right angle and would be inconsequential. Viewpoint 5 illustrates views from this section of the road where the landform starts to gently rise at c. 45 m AOD. For completeness, it is worth noting that Viewpoint 8 has not been shortlisted as it has been judged there is limited potential for significant visual effects to occur at this location or section of the road. Further along the road, c. 300 m north, as one approaches the railway over bridge views start to include areas within Field F30 and F29, and F31 and shortly after views become elevated and very close range – Viewpoint 6 where **major adverse significant** have been identified due to the proximity, extent of the solar panels being located either side of the road, and modest height of the roadside hedgerow. Past Fairviews, views would mainly include the activities in Field F28, being heavily filtered by the roadside hedgerows and the visual effects are not predicted to be significant.

5.6.38. With regards the A4076 / Milford Road as receptors leave Stenytton (c. 65 m AOD) views are orientated due north due to the alignment of the road. The road quickly dips some 20 m lower as it crosses a local watercourse (c. 46 m AOD) and views out are screened – the focus is on the road and surrounding vegetation. As the road climbs the rising ground a small lay-by on the left hand side allows for the opportunity to pull in and observe the surrounding landscape – refer to Viewpoint 11 (**Appendix 5.6, Figure 5.9 and Figure 5.11**). Views in winter include parts of Fields F15 (very restricted), F12, F14 and F10 but overall views are restricted, and the eye wants to travel towards the horizon and Bolton Hill. Dwellings on the edge of Johnston catch the viewers attention with the operational Wind Scheme No. 9 seen just over 1 km distance. Views from this lay-by have been judged not to be significant. Views become enclosed and screened as the road leads through a small woodland and then open up again as one drives past Field F5. Views into Field F5 are screened by the roadside hedgebanks with highly restricted and right angle views into the interior of the Site gained through an access gate – Viewpoint 12 (**Appendix 5.6 and Figure 5.11**). The visual effects here have also been judged not to be significant. Receptors then quickly start gaining views into the Site's western parcel with the road reaching c. 60 m – 70 m AOD, as illustrated by Viewpoint 13 (**Appendix 5.6, Appendix 5.7, and Figure 5.11**) where the construction phase has been judged to bring about **major adverse significant** visual effects, which temporarily disappear just north of Viewpoint 13 and maintain to be non-significant as one approaches Johnston.

5.6.39. With regards Bulford Road Diversion, the SZTV plan (**Figure 5.8**) illustrates that the western section of the road is free from any theoretical visibility of the Proposed Development. Patches of theoretical visibility occur around Lower Burford, but the Site visit has not revealed any evident inter-visibility. As one drives past Bulford and Preliminary View 25, the Site starts to come into the view. At this point, however, views have been judged not to be significant and remain as such across the easter section of the road as one approaches the settlement and roundabout with the A4076 / Milford Road.

#### *Public Rights of Way*

5.6.40. A number of PRowWs have been identified as being informative to this **Chapter 5**. Based on the preliminary and detailed assessment of the selected receptors (**Appendix 5.4,**

Appendix 5.6 and Appendix 5.7) it is concluded that the overwhelming majority of PRowS in the medium and distant wider study area would not be subject to any significant visual effects during the construction phase. Some localised **major adverse significant** effects would occur along certain sections of Public Footpath PP84/6 – Viewpoint 15 (Appendix 5.7). The following Table 5.11 provides a succinct summary of the predicted effects.

**Table 5.11 Summary of assessment of PRowS users – construction phase**

PRow	Corresponding Viewpoint	Are the predicted effects significant?
Public Footpath PP84/6	Viewpoint 15	<b>Yes, major significant short-term and temporary.</b>

- 5.6.41. It transpires that the construction stage of the Proposed Development would result in some **major significant adverse visual effects**. Such effects, however, would be highly localised and limited to certain static viewpoints and sections of the identified PRowS and largely experienced in close range views.

## Operation

### Landscape Elements

- 5.6.42. The operational stage of the Proposed Development is not expected to bring about any additional effects beyond those already assessed during the construction phase, for all elements other than the tree and hedgerow resource. For the tree and hedgerow resource, which are assessed as being high and medium sensitivity respectively, with the tree resource subject to a medium magnitude of change and for the tree resource, the magnitude of change is considered to be medium, operational effects for both trees and hedgerows are assessed as **major significant beneficial**. For all other landscape elements, there are **no significant effects**.

### Landscape Character Effects

#### *National Landscape Character Area 48 Milford Haven*

- 5.6.43. The Proposed Development would influence the character of the NLCA 48 Milford Haven to a degree. Whilst being long term the temporary nature of the Proposed Development is unlikely to alter the pattern, scale, and its other characteristics to any significant degree.

### *LANDMAP*

- 5.6.44. It is predicted that the operational stage would cause some limited adverse effects within the Site's boundary, but such effects would not be significant given the geographical extent of several of the Aspect Areas, the limited intervisibility and their

characteristics, and the temporary nature of the construction phase. A detailed assessment of the all the relevant Aspect Areas is set out at **Appendix 5.9**.

- 5.6.45. The effects on the landscape character would include the physical and visual effects of the Proposed Development. To a lesser degree the Proposed Development would also affect those landscapes that are located beyond the boundary of the Site and study area depending on the degree of intervisibility, and the surrounding context. Such effects are not considered to be significant.

### Pembrokeshire County Council

- 5.6.46. The Proposed Development is likely to cause geographically limited yet significant effects upon the character of LCA 9 Johnston Lowlands. The effects on the landscape character would include the physical and visual effects of the Proposed Development. To a lesser degree, the Proposed Development would also affect those landscapes that are located beyond the boundary of the Site and study area depending on the degree of intervisibility, and the surrounding context. Such effects are not considered to be significant.
- 5.6.47. The local landscape is considered to have a degree of capacity to accommodate the Proposed Development without any effects upon its large scale character. The Proposed Development would change the perception of the primary land use from arable and pastoral farmland to a large scale solar energy scheme, thus influencing locally the character of the host landscape. The agricultural land use and ruralness of the landscape, however, would be retained in parts through the grassland grazing and additional hedgerow planting. The sense of openness would decrease locally, but this would be limited to the Proposed Development itself.
- 5.6.48. The proposed solar panels would be of low profile, being up to 3m in height, and would echo the gently undulating landform across the Site. This in turn would respond to the topography of the surrounding area and allow this characteristic of the local landscape to prevail. Due to this low lying profile of the solar modules, and sensitive location of the proposed on-Site Substation, the Proposed Development would not affect views of any features or elements that may be regarded as eye catching or familiar to local residents and indeed views of more distant church spires. The areas of woodland, dispersed across the surrounding fenland landscape would continue to perform their function as attractive landscape elements and skyline features.
- 5.6.49. The very limited inter-visibility with the landscape would help preserve the character, appreciation, and ruralness of the landscape. The sense of openness and remoteness would not be redefined or affected to any noticeable degree.
- 5.6.50. Similarly, the local landscape where there is intervisibility would be primarily affected by the change to its perceptual and experiential qualities. Whilst the SZTV plans indicate large patches of theoretical visibility, in reality, the perception of the Proposed Development would be surprisingly limited. The sense of openness and ruralness, and big skies, coupled with the undulating landform, would considerably diminish the scale and mass of the Proposed Development or any perceived contrast with the grain and scale of the landscape.

- 5.6.51. The Proposed Development is respectful of the existing field pattern and its defining features. The layout of the Proposed Development utilises the existing field subdivision, would not require their consolidation, and the legibility of the historic landscape and its evolution.
- 5.6.52. On balance, the operational stage of the Proposed Development would bring about highly localised significant landscape character effects within the Site itself; a result of a **high** magnitude of change and a sensitivity assessment of **medium** for the Site.
- 5.6.53. Beyond the immediate context and close range visibility, the degree of change upon the character of the local landscape, which is assessed as medium sensitivity, and its understanding would quickly diminish to a **low** magnitude of change resulting in **minor, thus not significant, effects**.
- 5.6.54. Once the proposed mitigation planting has established it is predicted that the Proposed Development would not manifest itself visually in the landscape, being largely screened and compartmentalised. Therefore, the perception of the ruralness, remoteness and tranquillity would be restored. In terms of landscape pattern within the Site, with the Proposed Development in situ, the pattern of the landscape elements would still present. It is considered that such mitigation planting would be in keeping with the local landscape. With the reduction in the visibility of the Proposed Development, the **magnitude** of change, which is assessed as **medium** sensitivity, is assessed as medium magnitude of change and a **moderate adverse effect**, beyond the immediate environs of the Site is considered to be **low** with **minor effects**.

Visual Receptors

*Representative and Illustrative Viewpoints*

- 5.6.55. The below **Table 5.12** provides a summary assessment of the predicted effects experienced by static receptors during the operational phase of the Proposed Development at Year 1. Further details can be found in **Appendix 5.6** and **Appendix 5.7**.

**Table 5.12 Summary assessment of the selected viewpoints – operational phase**

No.	Viewpoint name	Relevant part of the Proposed Development	Predicted effects
1.	Northwestern section of Old Rosemarket Road.	Views limited to the higher ground in Fields F28 and F31.	No significant effects predicted.

No.	Viewpoint name	Relevant part of the Proposed Development	Predicted effects
2.	Northwestern section of Old Rosemarket Road (railway overbridge).	Direct to slight oblique views overlooking the northern part of the eastern parcel.	<b>Yes, major significant long-term and temporary</b> – for recreational receptors only.
3.	Northwestern end of Old Rosemarket Road.	Direct to slight oblique views overlooking the northern part of the eastern parcel.	<b>Yes, major significant short-term and temporary</b> – for some residential receptors only.
4.	PRoW Footpath PP81 1/1	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
5.	A477 to and from Johnston	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
6.	A477 to and from Johnston	Restricted views into Field F31. Very restricted views through roadside hedgerow into Field F28.	<b>Yes, major significant short-term and temporary.</b>
7.	A477 and Milford Road roundabout	Very restricted views through roadside hedgerow into Field F15 and F41.	No significant effects predicted.
8.	A477 / Neyland Road leading to Steynton.	Not taken for detailed assessment. <b>Appendix 5.6</b>	
9.	A477 / Neyland Road at Edge of Steynton.	Not taken for detailed assessment. <b>Appendix 5.6</b>	

No.	Viewpoint name	Relevant part of the Proposed Development	Predicted effects
10.	PRoW Footpath PP65 35/1 near Upper Scoveston.	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
11.	A4076 / Milford Road to and from Johnston.	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
12.	A4076 / Milford Road to and from Johnston.	Not taken for detailed assessment. <b>Appendix 5.6.</b>	
13.	A4076 / Milford Road to and from Johnston.	F7 (very restricted but close range), F1, F3, F4,	<b>Yes, major significant short-term and temporary.</b>
14.	Rural lane linking the A4076 / Milford Road with Tierson & PRoW.	Majority of western parcel.	<b>Yes, major significant short-term and temporary.</b>
15.	Public Footpath PP84/6 north west of the Site.	Majority of western parcel.	<b>Yes, major significant short-term and temporary.</b>
16.	Bridleway PP84/8, south of Boltonhill Quarry.	Field F15, F12, F5 (very restricted) F6, F7 of the western parcel.	No significant effects predicted.
17.	Public Footpath PP84/7, southeast of Boltonhill Water Works.	Majority of western parcel.	<b>Yes, major significant short-term and temporary.</b>
18.	Bulford Road Diversion, southeast of Johnston.	Field 15 and Field 12 (very restricted).	No significant effects predicted.

### Settlements

- 5.6.56. It is predicted that residential receptors on the southern edge of Johnston will be subject to significant visual effects at Year 1 – refer to the viewpoint assessment for Viewpoint 3 and Viewpoint 6 (**Appendix 5.7**).

*Transport Routes*

- 5.6.57. With regards views from The Old Rosemarket Road, as illustrated by Preliminary Views 8 and 9 views from the overwhelming majority of this lane are screened. At Viewpoint 1 (Preliminary View 10) views are not judged to be significant during the operational phase of the Proposed Development. Views become temporarily less screened at the point where the road crosses a railway overbridge – Viewpoint 2. These views have been judged not to be significant due to glimpsed nature of the view and existing screening, which continues to control views as one drives into Johnston.

- 5.6.58. Receptors travelling along the A477 as they skirt the Site’s central and eastern parcels have been judged to be subject to **major adverse significant** effects due to proximity and modest height of the roadside hedgerow. Past Fairviews, views would mainly include the solar panels in Field F28, being heavily filtered by the roadside hedgerows and the visual effects are not predicted to be significant.

- 5.6.59. With regards the A4076 / Milford Road **major adverse significant** effects have been predicted at the point where the receptors skirt the edge of Fields F5 – F7, as illustrated by Viewpoint 13 (**Appendix 5.7** and **Figure 5.11**). Views of the Proposed Development are then predicted to temporarily disappear or be substantially screened, and the effects are not considered to be significant.

- 5.6.60. The road receptors associated with Bulford Road Diversion – Preliminary View 25 (**Appendix 5.4**) and Viewpoint 18 (**Appendix 5.7** and **Figure 5.11**) are not predicted to be subject to any significant visual effects during the operational phase of the Proposed Development.

*Public Rights of Way*

- 5.6.61. The below **Table 5.13** provides a summary of the predicted effects experienced by PRow users during the operation phase of the Proposed Development. Further details can be found in **Appendix 5.6** and **Appendix 5.7**.

**Table 5.13 Summary assessment of PRow users – operational phase**

PRow	Corresponding Viewpoint	Are the predicted effects significant?
Public Footpath PP84/6	Viewpoint 15	<b>Yes, major significant short- term and temporary.</b>
Public Footpath PP84/7	Viewpoint 17	<b>Yes, major significant short- term and temporary.</b>

### Decommissioning

- 5.6.62. It is predicted that the decommissioning stage of the Proposed Development is likely to bring about similar and comparable effects to those assessed at the construction stage, with regard to movement, activities within the Site, and human presence in the landscape, albeit these would be more restricted given the presence of the mature perimeter hedgerows and internal vegetation. It is important to note, however, that at its completion the decommissioning phase would reverse the identified adverse visual effects. Most importantly, the identified adverse effects upon the local landscape would also be reversed.
- 5.6.63. The predicted effects of the decommissioning stage upon the identified viewpoints are described in **Appendix 5.7 Visual – Detailed Assessment**. Based on the assumption that the residual adverse effects identified during the operational phase form the future baseline, the decommissioning work would generally bring about a beneficial change to the views, removing the visible parts of the Proposed Development, with the retained vegetation continuing to exert positive influence over the landscape character and visual amenity.
- 5.6.64. With regard to the PRoWs assessed as subject to major adverse and significant effects during the operational phase: Public Footpath PP84/6 and Public Footpath PP84/7 the user experience of the associated receptors would potentially revert to the current baseline. The decommissioning works would remove the fencing, CCTV, solar panels and associated infrastructure such as inverters.
- 5.6.65. Most importantly, the adverse significant effects upon the landscape character within the Site and its immediate environs would be reversed with the land restored to agricultural use. The retained mature hedgerows within the Site would exert a positive influence over the local landscape.

## 5.7. Mitigation and Enhancement

### Mitigation by Design

- 5.7.1. The proposed layout incorporates a number of built-in mitigation measures such as reduction in the extent of the proposed solar modules and refinements to the layout to provide physical separation from the nearby residential properties, and public highways.
- 5.7.2. Offsets from internal and boundary watercourses and vegetation are proposed to safeguard these features and to ensure continued maintenance access. Existing trees would be protected throughout construction and operation of the Proposed Development (**Appendix 5.5 Arboricultural Survey, Impact Assessment and Protection Plan**).
- 5.7.3. The following embedded mitigation measures are incorporated into the layout of the Proposed Development:

- Offsets from internal and boundary watercourses and vegetation are proposed to safeguard these features and to ensure continued maintenance access.
- Increased offset from residential properties on the south eastern edge of Johnston: No. 44 and Fairviews.
- Improve condition of perimeter roadside hedgerows and increase in height to c. 2.5 m to control views but retain a degree of inter-visibility with the wider distant landscape, where applicable.
- Improved condition of the internal hedgerows.

### Additional Mitigation

- 5.7.4. Following the assessment no further added mitigation measures have been judged necessary.

### **Cumulative and In-Combination Effects**

- 5.7.5. This section of the LVIA presents an assessment of the potential cumulative landscape and visual effects of the Proposed Development when considered in the context of other solar and wind developments, and other infrastructure identified as relevant and informative to the decision making process.

- 5.7.6. Cumulative effects arise as a result of more than one development being present, under construction or operation, giving rise to combined effects, so that the cumulative developments influence the landscape character and/ or are experienced at proximity where they may have a greater incremental effect.

- 5.7.7. With respect to cumulative effects on landscape resources the GLVIA3 states in its paragraph 7.19:

*“Cumulative landscape effects may result from adding new types of change or from increasing or extending the effects of the main project when it is considered in isolation. For example, the landscape effects of the main project may be judged of relatively low significance when taken on their own, but when taken together with the effects of other schemes, usually of the same type, the cumulative landscape effects may become more significant.”*

- 5.7.8. With respect to visual matters, cumulative effects arise where the visibility of other proposals overlaps with that of the Proposed Development to incur an incremental effect. Cumulative effects relate to landscape character and visual amenity. Within cumulative assessment, the proposals may be viewed in combination, in succession, or sequentially. The methodology is presented in **Appendix 5.1 LVIA Methodology**.

- 5.7.9. With reference to **Chapter 2**, the intra-project effects are excluded from this LVIA, as none are predicted.

- 5.7.10. The first step in the cumulative assessment is an initial assessment to ascertain which of the landscape character receptors, representative viewpoints and principal visual receptors have the potential to undergo significant cumulative effects as result of the addition of the Proposed Development. It should be noted that even if the Proposed Development is assessed to have a significant effect on a landscape character receptor or view, when judged in isolation, it does not necessarily follow that the cumulative effect will also be significant.
- 5.7.11. A significant cumulative effect will occur where the addition of the Proposed Development to other existing and proposed solar and / or wind energy developments or other energy related infrastructure would result in a landscape character or view that is defined by the presence of more than one solar farm and/or energy related infrastructure, and is characterised primarily by such typology so that other patterns and components are no longer definitive.
- 5.7.12. As with the assessment of effects of the Proposed Development in isolation, the significance of cumulative effects is determined through a combination of the sensitivity of the landscape receptor or view and the magnitude of change upon it. The sensitivity of landscape receptors and views is the same in the cumulative assessment as in the assessment of the Proposed Development, when judged in isolation. However, the cumulative magnitude of change is assessed in a different way, as described in the methodology sub-section and **Appendix 5.1**.
- 5.7.13. To avoid unnecessary repetition, the landscape character and visual receptors that were found to undergo no effect or minor adverse effects as a result of the Proposed Development by itself have not been included in the cumulative assessment. In other words, where the Proposed Development would have no effect or a limited effect on these receptors, there is no potential for it to lead to a significant cumulative effect, in combination with other development, regardless of the typology.

#### Review of Cumulative Schemes

- 5.7.14. **Figure 2.1 Cumulative Sites Plan** illustrates the locations of the identified cumulative schemes, informed by feedback from PCC, along with their planning application numbers (solar schemes only).

#### *Operational Schemes*

- 5.7.15. With regard to the identified cumulative energy developments, the operational Solar Site B, operational Wind Scheme No. 9, and indeed other large scale wind turbines around Milford Haven are existing developments, which influence the character of the local landscape and amenity of the associated receptors. Therefore, these schemes have been considered as forming part of the existing baseline and taken into account when making judgments with regards to the effects of the Proposed Development in isolation.
- 5.7.16. Those turbines that are most visually evident or identifiable in the analysed Preliminary Views (**Appendix 5.2**) and Viewpoints (**Appendix 5.3**) have been specifically identified.

- 5.7.17. Similarly, the distant operational Solar Site A on the edge of Liddeston forms part of the baseline. During the Site work in June 2026 and February 2026 no views of this scheme have been identified, although it is acknowledged that residents in Milford Haven are likely to experience this scheme. This scheme is not considered further in this **Chapter 5**.
- 5.7.18. With regard to the distant operational Solar Site C, at Pope Hill north of Johnston, the solar panels are offset from the A4076 and this scheme is not seen as part of sequential experience along the A4076 when travelling south. For this reason, this scheme is not considered further in this **Chapter 5**.
- 5.7.19. PCC also suggested the operational Site D Holiday Lodges ought to be included in the cumulative assessment. The scheme is operational and is of different typology to the Proposed Development. Most importantly it is not visible from any of the analysed preliminary Views or Viewpoints. For this reason, this scheme is not considered further in this **Chapter 5**.
- 5.7.20. With regards to the distant operational Solar Site E, this scheme falls on the very edge of the preliminary 3 km radii study area. The Bare Earth ZTV Plan (**Figure 5.x**) does not indicate any theoretical visibility in this part of the wider study area past Tiers Cross. The more detailed SZTV Plan (**Figure 5.x**) confirms the lack of views. The Site visit has not identified any views of this scheme from around the Site or the Preliminary Views.
- 5.7.21. In terms of the solar schemes F and G are associated with existing industrial facilities and are considered too small scale to warrant the inclusion this **Chapter 5**.

#### *Proposed Schemes*

- 5.7.22. The cumulative Solar Site I is too distant, being located south east of Pembroke c. 10 km distance.
- 5.7.23. The cumulative Solar Site H is considered the only one to be informative in cumulative terms to this Chapter 5. A Scoping Report has been issued for the cumulative Solar Site H (reference no.: CAS\_03107\_C5X9W1) with a SZTV plan showing Viewpoints 1 – 9 (drawing reference no.: EIA Scoping Figure 5, Landscape and Visual Context, July 2025). The review of the baseline photographs revealed that views on the periphery of the SZTV, i.e. those closest to Johnston and the Proposed Development (Viewpoints 2, 3, and 8) allow views into the western array of the cumulative Solar Site H – that around Mount Pleasant farm. These views fall outside of the SZTV of the Proposed Development (**Figure 5.8**) and Viewpoint 8, located on the A4076 north of Johnston, offer very restricted views through a field gate.
- 5.7.24. It is informative to note that the wider northern and north eastern study area was deemed not relevant to the Proposed Development due to the lack of any visual relationship. None of the analysed distant and elevated Preliminary Views in the wider eastern study area offer views of the Site or the inter-visibility was deemed inconsequential (Preliminary Views 1 – 7, **Appendix 5.3** and **Appendix 5.4**) and in any case they do not offer views towards the cumulative Solar Site H due to the intervening higher ground around Trooper's Inn / Langford Road.

- 5.7.25. Whilst some sequential experience may be gained along the roads, the distance and change in context, coupled with the vegetative screening around both schemes would ensure that any visual effects are unlikely to be significant.
- 5.7.26. With regards the PRoWs, the distance ensures that any experience would be gained over a substantial distance that cannot be realistically completed over a single day. When traveling between the two schemes, recreational receptors would have to cross A class roads, multiple minor roads, settlements and smaller clusters of built form. Any sequential cumulative effects are not deemed to be significant.
- 5.7.27. With regards the proposed wind energy schemes, there are currently no 'in planning' schemes. There are a number of single wind turbines applications at the scoping stage. Not all of the scoping stage applications were accessible, at the time of writing. Those that have been accessed indicate that the wind turbine applications are for small scale single turbines. These are not expected to bring about any significant effects given their distance and location relative to the Proposed Development.

## 5.8. Summary

### Introduction

- 5.8.1. This **Chapter 5** has sought to determine the effects upon the identified landscape character and visual receptors, and determine whether such effects would be significant. In line with best practice it considers the effects during the construction, operation, and decommissioning stages.
- 5.8.2. This **Chapter 5** has considered the Proposed Development in terms of its maximum parameters: the extent and height of the solar modules, substation elements, and fencing, as described within **Chapter 4**. This **Chapter 5** has also sets out the main policies and guidance relevant to landscape and visual matters based on the published guidance and relevant planning policies. The provided assessment is based on established best practice methodologies.
- 5.8.3. The following **Table 5.14 Table of Summary Effects, Mitigation and Residual Effects** identifies only those receptors that have been assessed as subject to significant effects and takes into account the proposed mitigation measures.

### Baseline Conditions

- 5.8.4. The Proposed Development is not located within any national statutory protected landscape designations. It does not lie within any regional or local non-statutory landscape designations, either. It is not considered to be of high value in the context of the NPPF.
- 5.8.5. The landscape associated with the Site falls entirely within National Character Landscape Area 48 Milford Haven.
- 5.8.6. The Pembrokeshire County Landscape Character Assessment has been reviewed. The Site is located entirely within LCA 9 Johnston Lowlands, located in central

Pembrokeshire, south of Haverfordwest, north of Milford Haven and west of the Western Cleddau and Daugleddau where it extends to the National Park boundary.

5.8.7. The LANDMAP Aspect Areas for the five datasets relevant to the Site have been reviewed. For Aspect Areas beyond the boundary of the Site, a filtering process was undertaken in line with the Natural Resources Wales guidance note which used SZTV to ascertain if there would be intervisibility with the Proposed Development; these findings were then verified during the Site visits.

5.8.8. A preliminary visual appraisal was conducted in early June 2025 to determine the relationship of the Site with its surroundings and the approximate extent of its visibility within the wider landscape from publicly accessible locations. Additional single day site visit was then carried out in February 2026 to verify the updated SZTV and help identify any additional receptors that may gain views towards the Site in winter months when the level of vegetative screening is the lowest.

### Likely Significant Effects

#### *Construction Phase*

5.8.9. The construction phase has been judged to result in some highly localised visual effects upon receptors present at Viewpoint 2, Viewpoint 3, Viewpoint 6, Viewpoint 13, and Viewpoint 15.

5.8.10. No significant effects to landscape elements or the landscape character, including LANDMAP, have been identified for the construction phase.

#### *Operational Phase*

5.8.11. The operational phase has been judged to result in some highly localised visual effects upon receptors present at Viewpoint 2, Viewpoint 3, Viewpoint 6, Viewpoint 13, Viewpoint 14, Viewpoint 15, and Viewpoint 17.

5.8.12. With regards to landscape elements, the operational phase is judged to result in significant, beneficial effects with regard to the hedgerow and tree resource.

5.8.13. With regards to landscape character, the Site and its immediate environs are judged to experience significant effects during the early years of the Proposed Development, prior to the establishment of the landscape proposals.

### Mitigation and Enhancement

5.8.14. The Proposed Development has incorporated a number of built-in mitigation measures developed through the iterative design process and additional mitigation measure addressing the assessment of potential significant effects carried out in this **Chapter 5**. From an LVIA point of view the following mitigation measures are considered to be the most relevant:

5.8.15. Embedded mitigation measures:

- Offsets from internal and boundary watercourses and vegetation are proposed to safeguard these features and to ensure continued maintenance access.
- Increased offset from residential properties on the south eastern edge of Johnston: No. 44 and Fairviews.
- Perimeter and internal hedgerows to be managed to improve their condition and increase height.
- Hedgerow trees and perimeter planting to control views from Johnston and the adjacent highways.

### Cumulative and In- Combination Effects

- 5.8.16. The Proposed Development has been judged against the proposed and at scoping cumulative schemes. No potential significant effects have been identified.

### **Conclusion**

- 5.8.17. It is important to acknowledge that significant effects on landscape character and visual amenity are an inherent consequence of a new development of this type and scale. However, in this case, any potential for adverse effects has been judged to be considerably limited by the landform and existing vegetation that characterises the core study area and indeed the wider landscape. The proposed mitigation planting has the potential to reduce such significant effects, which would be geographically highly limited, both in character and visual terms. Whilst certain elements of the Proposed Development would, inevitably, be more visible, for a scheme of its scale the residual landscape and visual effects arising are considered to be highly limited. Those effects which have been identified as being significant should therefore be balanced against the benefits of the Proposed Development.

Table 5.14: Summary of Effects, Mitigation and Residual Effects

Receptor / Receiving Environment	Description of Effect	Nature of Effect *	Sensitivity Value**	Magnitude of Effect**	Geographical Importance ***	Significance of Effects ****	Mitigation Enhancement / Measures	Residual Effects ****
<b>Construction</b>								
Hedgerow resource	Infilling and enhancement of the existing hedgerow resource.	Long-term direct	Medium	High	Local	Major Beneficial Significant	None required	Major Beneficial <b>Significant</b>
Tree resource	Additional tree planting. Increase in quantum.	Long-term direct	High	Medium	Local	Major Beneficial Significant	None required	Major Beneficial <b>Significant</b>
Viewpoint 2	Change to views	Temporary Short Term and Indirect	High	High	Local	Major Adverse Significant	Mitigation by Design	Major Adverse <b>Significant</b>
Viewpoint 3 (residents at No. 44 only)	Change to views	Temporary Short Term and Indirect	High	High	Local	Major Adverse Significant	Mitigation by Design	Major Adverse <b>Significant</b>

Viewpoint 6	Change views to	Temporary Short Term and Indirect	High to Medium	High	Local	Major Adverse Significant	Mitigation Design by	Major Adverse <b>Significant</b>
Viewpoint 13	Change views to	Temporary Short Term and Indirect	Medium	High	Local	Major Adverse Significant	Mitigation Design by	Major Adverse <b>Significant</b>
Viewpoint 15	Change views to	Temporary Short Term and Indirect	High	Medium	Local	Major Adverse Significant	Mitigation Design by	Major Adverse <b>Significant</b>
<b>Operation</b>								
Landscape character of the Site and its immediate environs	Change landscape character to	Temporary Long term and Direct	Medium	High	District and Local	Major Adverse Significant	Hedgerow enhancement, tree/shrub/scrub planting and enhancement of grassland field margins.	Moderate Adverse <b>Not Significant</b>
Viewpoint 2	Change views to	Temporary Long Term and Indirect	High	High	Local	Major Adverse Significant	Mitigation Design by	Major Adverse <b>Significant</b>

**Environmental Statement**

**Landscape and Visual**

Viewpoint 3 (residents at No. 44 only)	Change views to	Temporary Long Term and Indirect	High	High	Local	Major Adverse Significant	Mitigation Design by	Negligible
Viewpoint 6 (residents at Fairviews only and road users)	Change views to	Temporary Long Term and Indirect	High to Medium	High	Local	Major Adverse Significant	Mitigation Design by	Moderate Adverse <b>Not Significant</b> (Fairviews) to Minor Adverse <b>Not Significant</b> (road users)
Viewpoint 13	Change views to	Temporary Long Term and Indirect	Medium	High	Local	Major Adverse Significant	Mitigation Design by	Minor Adverse <b>Not Significant</b>
Viewpoint 14	Change views to	Temporary Long Term and Indirect	High	Medium	Local	Major Adverse Significant	Mitigation Design by	Major Adverse <b>Significant</b>
Viewpoint 15	Change views to	Temporary Long Term	High	High	Local	Major Adverse Significant	Mitigation Design by	Major Adverse <b>Significant</b>

		and Indirect						
Viewpoint 17	Change views to	Temporary Long Term and Indirect	High	Medium	Local	Major Adverse Significant	Mitigation Design by	Major Adverse Significant
<b>Decommissioning</b>								
Viewpoint 15	Change views to	Temporary Short Term and Indirect	High	Medium	Local	Major Adverse Significant	Mitigation Design by	Major Adverse Significant