

5 LANDSCAPE AND VISUAL

5.1 INTRODUCTION

5.1.1 This chapter of the ES considers the landscape and visual effects of the Proposed Development (outlined in ES Chapter 4). It assesses the likely significant effects associated with the existing physical landscape and potential changes to its character and the visual amenity:

- Landscape elements associated with the Application Site.
- Landscape character and landscape designations within the study area.
- Visual amenity of receptors associated with the study area.

5.1.2 The main objectives of the assessment are as follows:

- Identify, evaluate, and describe the current landscape character of the Application Site and its surroundings.
- Determine the sensitivity of the landscape to the type of development proposed.
- Identify potential visual receptors (i.e. people who would be able to see the development) and representative viewpoints, and evaluate their sensitivity to the type of changes proposed.
- Identify and describe any likely effects of the development on identified landscape and visual receptors, and evaluate their significance.
- Identify and integrate any mitigation measures that may help in offsetting or reducing adverse effects.
- Assess the residual effects upon the identified landscape and visual receptors.

5.1.3 This chapter is supported by the following figures and appendices:

5.1.4 Figures

- **5.1:** Site Location and Context Plan.
- **5.2:** LANDMAP Cultural Landscape.
- **5.3:** LANDMAP Geological Landscape.
- **5.4:** LANDMAP Historic Landscape.
- **5.5:** LANDMAP Landscape Habitats.
- **5.6:** LANDMAP Visual and Sensory.
- **5.7:** Landscape Designations and Visual Receptors Plan.
- **5.8:** Topography Plan.
- **5.9:** Screened Zone of Theoretical Visibility (SZTV) and Viewpoint Location Plan.
- **5.10:** Viewpoints 1-13 (Context Baseline Panoramas and Photoviews).
- **5.11:** Planting Plan.
- **5.12:** Photomontage Viewpoints 3, 6, 7, 9 and 10.

5.1.5 Appendices

- **5.1: Methodology**

5.2 ASSESSMENT APPROACH**Methodology**

5.2.1 The methodology for this assessment can be found at **Appendix 5.1**. To confirm this LVIA has been written with regards to the current best practice:

- Guidelines for Landscape and Visual Impact Assessment (2013). Third Edition, Landscape Institute and the Institute for Environmental Management and Assessment (GLVIA3);
- LANDMAP Methodology 2016 for each of the five layers.

5.2.2 Although a series of guidance documents on LANDMAP had been published in the past it appears that there is no specific guidance that would deal with solar energy infrastructure in the context of LANDMAP assessment.

5.2.3 The assessment is based on information from LANDMAP datasets available on Natural Resources Wales website:

- Geological Landscape – 25/02/2019.
- Landscape Habitats – 06/03/2019.
- Visual and Sensory – 15/01/2019.
- Historic Landscape – 14/12/2018.
- Cultural Landscape Services – 05/07/2018.

Assessment – General Comments

5.2.4 Solar farms tend to give rise to effects within the landscape by virtue of a number of attributes specific to both their individual form and to the location and grouping of solar arrays. These attributes include:

- Strong linear and repetitive form.
- Contrast with sinuous landscape pattern.
- Location (often within elevated landscape or south facing landform).
- Relationship to the scale and nature of the existing landscape.

5.2.5 These attributes may affect different components of the landscape in different ways, or may combine to result in an effect. This assessment of the effects of the Proposed Development on the landscape does not consider the balance of public attitudes towards solar farms. The assessment concentrates instead on the change that the Proposed Development will bring to the different attributes of the landscape on the basis of the magnitude of that change and the sensitivity of the receptor, as assessed by qualified professionals.

5.2.6 The extent of the study area, considered in this LVIA, has been informed by Pegasus' earlier work namely the Landscape & Visual Appraisal (February 2020). The Appraisal had been prepared in support of Pegasus' Screening Request and contains various figures and site photographs. Specifically, it illustrates the topography across the local landscape and includes so called 'screened' Zone of Theoretical Visibility (SZTV). The SZTV plan

illustrates that the theoretical visibility of the Proposed Development terminates on the rising ground to the north east and east, and that to the south west. This coupled with the visual assessment provided in the Appraisal (February 2020) confirms the suitability of the study area. Based on the height of the proposed solar panels, being the main element of the Proposed Development, the 5km study area is considered proportionate and appropriate for the purpose of this LVIA.¹

5.2.7 The study area is not intended to provide a boundary beyond which the Proposed Development will not be seen, but rather to define the area within which to assess its potential significant landscape and visual effects. Significant landscape and visual effects are more likely to include effects on close proximity views, the change in character of the Application Site and the area in close proximity to it, as a result of a change in the landscape pattern or the perception of the solar farm.

5.2.8 Physical effects are restricted to the area within the Application Site and along the grid connection route. They consist of direct effects on the fabric of the Application Site, such as the removal of existing ground cover and landscape elements.

Susceptibility and Value – General Comments

5.2.9 Sensitivity is defined in GLVIA3 as

“...a term applied to specific receptors, combining judgments of susceptibility of the receptor to a specific type of change or development proposed and the value related to that receptor.”²

5.2.10 Sensitivity is determined by a combination of the value that is attached to a receptor (be it a landscape element, landscape character receptor or view) and the susceptibility of that receptor to changes that would arise as a result of the Proposed Development. Both value and susceptibility are assessed on a scale of high, medium or low. The criteria for assessing the value and susceptibility of landscape elements, landscape character receptors and visual receptors are set out later in this section.

5.2.11 Various factors in relation to the value and susceptibility of landscape elements, landscape character, visual receptors or representative viewpoints are described in the Detailed Methodology **Appendix 5.1** and are cross referenced to determine the overall sensitivity as shown in **Table 5.1**.

¹ Refer to The Planning Inspectorate, *DNS: EIA Scoping Direction 3247619: Elwy Solar Farm*, Section 6.1, Table 1, ID.15, p. 10.

² Glossary, Page 158, GLVIA, 3rd Edition.

Table 5.1 Overall sensitivity of landscape and visual receptors

| Term | Description | | | |
|-----------------------|---------------|-------------|---------------|------------|
| | Value | | | |
| Susceptibility | | High | Medium | Low |
| | High | High | High | Medium |
| | Medium | High | Medium | Medium |
| | Low | Medium | Medium | Low |

Magnitude of Change– General Comments

5.2.12 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.”³

5.2.13 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**. The magnitude of change is assessed on a scale of high, medium or low.

Nature of Effects – General Comments

5.2.14 The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (as amended) requires that the description of the likely significant effects should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development.

5.2.15 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 LVIA that assumes all landscape and visual effects are considered to be negative or adverse unless otherwise stated.

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

³ Glossary, Page 158, GLVIA, 3rd Edition.

Assessment of Significance

5.2.17 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.

5.2.18 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 is reviewed holistically to inform the professional judgement of significance.

5.2.19 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 differs from **Diagram 5.1** in **Chapter 2: Assessment Scope and Methodology**, and reflects Pegasus' interpretation of landscape and visual assessment.

Table 5.2: Significance Matrix

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

5.2.20 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 sensitivity of the landscape or view, magnitude of change, 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.

5.2.21 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.

5.2.22 In the LVIA, those effects described as Major may be regarded as significant effects as required by the EIA Regulations and a summary justification is provided as to whether the effect in question is significant or not significant. These are the effects which the authors of the LVIA consider to be most material in the decision making process. 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.

5.2.23 In determining the level of residual effects, all mitigation measures are taken into account.

Significance of cumulative effects

5.2.24 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 site itself. However, the definition of a significant cumulative effect is different from a significant effect in the assessment of the site itself, and this means that the magnitude of change is also assessed in a different way as described in **Appendix 5.1**.

Consultation

5.2.25 This LVIA uses the information provided in Pegasus' Landscape & Visual Appraisal (February 2020). The Appraisal was used to inform Pegasus' Screening Request, and no other viewpoints have been suggested or specifically requested by the Council or statutory consultees.

5.2.26 Consultation feedback was received from Natural Resources Wales dated 09/10/2020 and advised that the following points be included within the report:

- An assessed view from the ridgeline of Y Foel within the AONB – This has been assessed and included at **Figure 5.10**, Viewpoint 10.
- A photomontage view from the ridgeline of Y Foel within the AONB – This has been included at **Figure 5.12**, Photomontage Viewpoint 10.
- Development visibility from Y Foel to be factored into the detailed planting proposals. - The planting plan has considered visibility from the AONB. Mitigation is limited to the extent of the redline boundary and available developable area.
- In relation to glint and glare - Views from the AONB in an easterly and south easterly location, at public vantage points Moel Maenefa and Cefn Du (from Offa's Dyke Trail). – These have been assessed and included at **Figure 5.10**, Viewpoints 11-13.

5.2.27 These comments have been addressed within the visual assessment.

Legislative and Policy Framework

5.2.28 This assessment has been undertaken with reference to national and local planning policy including the Welsh Government's Planning Policy Wales. The Planning Statement details the overall planning policy context. Those policies that are relevant in terms of landscape and visual issues are described in the following paragraphs.

Planning Policy Wales, Edition 11 (February 2021)

5.2.29 National Policy is set out within the Welsh Government's Planning Policy Wales, Edition 11 (PPW11). Landscape is addressed within Chapter 6 Distinctive

and Natural Places of PPW11 which covers environmental and cultural components of placemaking.

5.2.30 PPW Paragraph 6.3.3 states that:

"all the landscape of Wales are valued for intrinsic contribution to a sense of place, and local authorities should protect and enhance their special characteristics, whilst paying due regard to the social, economic and cultural benefits they provide, and to their role in creating valued places."

5.2.31 Paragraph 6.3.2 acknowledges varied and iconic Welsh landscapes, the character and special qualities of which form designated AONBs such as the Clwydian Range AONB.

5.2.32 PPW Paragraph 6.3.12 states that:

"planning authorities should provide for the conservation and, where appropriate, enhancement of local landscapes... LANDMAP and any associated landscape character assessments (including the register of historic landscapes in Wales) should be used to inform local landscape policies and SPG and help to help identify or revise SLAs."

5.2.33 The proposed development is not located within any international or national statutory or non-statutory landscape designations.

5.2.34 PPW Paragraph 6.3.20 states that:

"LANDMAP is an important information resource, methodology, and monitoring baseline for the landscapes of Wales, which can help inform planning for the sustainable management of natural resources in an area. LANDMAP describes and evaluates the physical, ecological, visual, cultural and historic aspects of Wales, and provides the basis of consistent, quality assured approach to landscape assessment."

Denbighshire Local Development Plan 2006-2021

5.2.35 Planning applications in Denbighshire are currently considered against the Denbighshire Local Development Plan 2006-2021 (adopted 4th June 2013), while a new Local Development Plan is being prepared for the period 2018-2033.

5.2.36 Policy RD 1: Sustainable development and good standard design

"Development proposals will be supported within development boundaries provided that all the following criteria are met:

Respects the site and surroundings in terms of the siting, layout, scale, form, character, design, materials, aspect, micro-climate and intensity of use of land/buildings and spaces around and between buildings; ...

Protects and where possible enhances the local natural and historic environment;

Does not unacceptably affect prominent public views into, out of, or across any settlement or area of open countryside..." (extract only)

5.2.37 Policy VOE 1: Key areas of importance

"The following areas will be protected from development that would adversely affect them. Development proposals should maintain and, wherever possible, enhance these areas for their characteristics, local distinctiveness, and value to local communities in Denbighshire:

Statutory designated sites for nature conservation;

Local areas designated or identified because of their natural landscape or biodiversity value;

Sites of built heritage; and

Historic Landscape, Parks and Gardens."

5.2.38 Policy VOE2: Area of Outstanding Natural Beauty and Area of Outstanding Beauty

"In determining development proposals within or affecting the Area of Outstanding Natural Beauty (AONB) and Area of Outstanding Beauty (AOB), development that would cause unacceptable harm to the character and appearance of the landscape and the reasons for designation will not be permitted."

5.2.39 Policy VOE 10: Renewable energy technologies

"Development proposals which promote the provision of renewable energy technologies may be supported providing they are located so as to minimise visual, noise and amenity impacts and demonstrate no unacceptable impact upon the interests of nature conservation, wildlife, natural and cultural heritage, landscape, public health and residential amenity. In areas that are visually sensitive, including the AONB, Conservation Areas, World Heritage Site and Buffer Zone and in close proximity to historic buildings, visually intrusive technologies will not be permitted unless it can be demonstrated that there is no

negative impact on the designation or there is an overriding public need for the development."

Supplementary Planning Guidance

Clwydian Range and Dee Valley Area of Outstanding Natural Beauty SPG

5.2.40 Development located outside of the Clwydian Range and Dee Valley AONB is considered within the 'Clwydian Range and Dee Valley Area of Outstanding Natural Beauty' (June 2018) SPG. Regarding visibility from the AONB the SPG states that (para 8.41):

"...Higher ground opens wider vistas over the surrounding countryside allowing the eye to scan greater distances. Very often the visibility of development from greater distances is overlooked and although scale is diminished by distance, from certain viewpoints, development can look out of place and prominent. The same can apply when looking up at higher ground which is visible from valley bottoms. Care should therefore be taken to steer development away from the skyline, open elevated ground or sites overlooked from higher ground. The visible impact of new development will be minimised if sited in more enclosed landscapes, hidden by existing landforms and a screen of hedgerows, trees and woodland. Development should work with the contours/flow of the landform and prevailing patterns of land cover to minimise disturbance. Whilst elements of the landscape may be locally changed to accommodate development, the prevailing character of the landscape should remain intact. Visual prominence is when development forms new focal point in the landscape which detracts from the general scene, visual focus and sense of place."

Renewable Energy SPG

5.2.41 The Council published its SPG on renewable energy in April 2016. It is primarily concerned with the assessment of renewable energy developments under 50MW output; however, it is useful in confirming the approach and likely scope of work in relation to solar energy schemes

Scoping Criteria

5.2.42 The Assessment considers the following potential effects in relation to landscape elements, character, and visual amenity during the following development phases:

- Construction Phase – 7 months.
- Operational Phase - Year 1.
- Operational Phase - Year 15.
- Decommissioning Phase – 6 months.

5.2.43 The Construction Phase will be assessed in the context of landscape elements present within the Application Site, landscape character and visual receptors within the study area. With regards to the Operational Phase, effects upon the character of the local landscape and visual amenity will be considered at Year 1 i.e. post completion with all landscape mitigation measures being implemented, and at Year 15 once the proposed planting has matured. The Decommissioning Phase is likely to have similar or comparable effects upon landscape character and visual amenity as those assessed during the Construction Stage. Where relevant specific effects during the Decommissioning Phase have been identified.

Limitations to the Assessment

5.2.44 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:

- The baseline assessment has been based on information readily available at the time of undertaking the assessment.
- The Screened Zone of Theoretical Visibility (SZTV) has been used to understand the extent of potential visibility to identify receptors. The SZTV does not demonstrate absolute visibility and is therefore refined through field work with the assessed potential visibility of the Proposed Development.
- During site visits, weather conditions, the time of day, and seasonal factors have influenced the visual assessment and photographic record of the Application Site and its surroundings. Every effort has been made to ensure that the photographs and their locations are "representative" of the variety of receptors and views from a range of distances and directions.
- Winter views (illustrating deciduous trees devoid of leaf) have been obtained for the baseline views. Summer views have not been recorded.
- Access to assess the predicted visual effects from private individual properties outside the Application Site has not been obtained. As a result, the assessment of likely effects has been made from vantage points with representative views taken from the nearest available public viewpoint. GLVIA 3 (Paragraph 6.17) suggests that effects of development on private property are dealt with separately from the LVIA as a 'Residential Amenity Assessment'. This level of assessment has not been part of the scope of this Chapter.
- The assessed development is based on planning application drawings that accompany the planning application. Full details of proposed layout are provided on the planning application drawings at **Figure 4.1**. The assessment has been carried out on the assumption that the Development is delivered in line with these drawings and associated timescales; and
- The Proposed Development is of a long-term nature (up to 37 years) therefore all effects are assumed to be temporary unless otherwise stated.

5.3 BASELINE CONDITIONS

Site Description and Context

5.3.1 The Site is located to the north of the A55 (**Figure 5.1**), west of the A525 and east of Nant-Y-Faenol Road. The fields within the Site vary in scale and form. The eastern part is characterised by geometric and strongly rectilinear field, medium to large scale. Some of the fields in the western part, west of Gwernigrion Farm, are slightly elongated with their boundaries more sinuous. Internally, the field boundaries are formed of a mix of post and wire fencing and hedgerows of varying quality. Other vegetation located within the Site includes standalone trees and broadleaved woodland. There are a number of small ponds, located across the Site.

5.3.2 The Scoping Direction issued by the Planning Inspectorate confirms that the site "...is not subject to any statutory designations relating to its environmental or historic value".⁴

5.3.3 The southern boundary of the Site, adjacent to the A55, is formed of a well-established belt of trees. The western boundary of the Site is formed by a ditch which is lined by hedgerow vegetation, reinforced in places by hedgerow trees. Along the western boundary trees become more frequent along the southern extent of the boundary close to the A55. Part of the Site's eastern boundary is located adjacent to the A525, vegetation is gappy in places and formed of hedgerow shrubbery and sporadic trees. The northern boundary of the Site follows existing field boundaries, Glyn Derw Farm is situated adjacent to the northeast corner of the Site set within a generous amount of curtilage bound by vegetation.

5.3.4 A number of trees and hedgerows are present across the Site along with several ponds. An area of Ancient Semi Natural Woodland is located within the Site to the north-west of Gwernigrion Farmhouse. According to the Council's on-line map none of the vegetation within the Application Site is covered by any Tree Preservation Order (TPO).⁵

5.3.5 There are currently three PRoW that cross the Site, a footpath DE/201/8 crosses the northern extent of the Site between the A525 and Pengwern Farm located to the north northwest of the Site. The second footpath DE/208/20 runs between the residential properties located along Talardy Park/Old Walls, situated adjacent to the southwest corner of the Site. Footpath DE/208/20 crosses the Site joining with bridleway DE/208/18 near Gwernigrion Farmhouse. The route of the bridleway runs along the access track to Gwernigrion Farm before crossing the southern extent of the Site towards the A55.

5.3.6 Gwernigrion Farmhouse is located centrally within the Site, the Site boundary runs along either side of the access track to the farm, excluding both it and Plas Coch from within the Application Site. Both Gwernigrion Farmhouse and Plas Coch benefit from degree of screening provided by boundary vegetation.

⁴ The Planning Inspectorate, *DNS: EIA Scoping Direction 3247619: Elwy Solar Farm*, Section 2, p. 2.

⁵ <https://maps.denbighshire.gov.uk/MyDenbighshire.aspx> [accessed 12 June 2020].

Access

5.3.7 Various Public Rights of Way (PRoW) cross the Site and link to the wider area, namely: DE/201/8, DE/208/20 and DE/208/18. It is intended that an application will be made to re-route footpaths DE/201/8 and DE/208/20.

Topography

5.3.8 The height of the land across the Site ranges from approximately 10-20m Above Ordnance Datum (AOD) and is considered typical of the landscape of the Vale of Clwyd within which the Site is located (**Figure 5.8**). The Vale of Clwyd is a wide shallow valley where the height of the gently sloping land varies between 10-30m AOD. To the north and north west of the Site the land continues to fall towards the coast. The simple and level topography of the Vale of Clwyd characterises the majority of the landscape around the Site and the study area. The Vale is enclosed to the east and south west by rising topography, with changes to contours pronounced and visually evident from the local area.

5.3.9 To the southwest of the Site, approximately 3.42km away, the land rises to form a series of rounded hills reaching 200-250m AOD in height, that are incised by steep sided river valleys. The landscape to the east of the Site, some 3.65km away, create the chain of peaks and ridges that form part of the Clwydian Range, where the landform rises to heights in excess of c. 250m AOD. This elevated landscape is part of the Clwydian Range and Dee Valley AONB.

Watercourses

5.3.10 Within the Site there are a number of watercourses which flow within ditches along field boundaries. The River Elwy is located approximately 150m east from the eastern Site boundary. The River Clwyd confluence with the River Elwy c.750m to the northeast of the Site. Across the landscape between the Site and the coastal town of Rhyl, the wide river valley floodplain is crossed by a large number of small scale tributary watercourses. These watercourses frequently flow within ditches and form the boundaries between the network of medium scale pastoral fields located across the valley floor.

Vegetation

5.3.11 Within the wider study area, large blocks of woodland and field trees are characteristic features. The field pattern is generally defined by hedgerows, ditches and other linear belts of vegetation. Hedgerows tend to be trimmed low, but some are taller and thicker as a result of less frequent management. Hedgerow and field trees are reasonably widespread.

Land Use

5.3.12 Land use across the wider area is predominately agricultural, although various settlements are concentrated along the A55 and along the coast, to the north and north west. Agriculture is a mixture of arable and pasture uses as small to medium sized and occasionally larger fields of broadly irregular shape. The built-up area of St Asaph is located south of the A55 and extends to the south eastern corner of the Site. The St Asaph Business Park, accessed off the

A55, is located near the south western corner of the Site but is not contiguous with the settlement. Further west lies Bodelwyddan, which comprises residential and relatively extensive areas of industrial/commercial uses.

5.3.13 Pylons supporting overhead power lines cross the landscape to the south and west of the wider study area and are locally prominent features in the low landscape. The A55 dual carriageway crosses broadly east to west, south of the Site boundary. The A252 (St Asaph Road) passes broadly north to south, along the eastern edge of the Site. Other incongruous features include large, modern agricultural buildings and large scale industrial units in Bodelwyddan and the St Asaph Business Park.

Baseline Survey Information

Published Landscape Character Assessments

National Landscape Character Areas

5.3.14 National Landscape Character Areas (NLCA) form the broadest scale of landscape character assessment in Wales. The Site is covered by both NLCA 08: North Wales Coasts and NLCA 11: Vale of Clwyd.

5.3.15 The northern and western extent of the Site falls within NLCA 08: North Wales and Coasts, key characteristics that are relevant to the Site and its setting include:

"... a broad flat coastal plain centred on Rhyl, including the small estuary of the River Clwyd, including a network of medium scale pastoral fields of regular pattern, with ditches and, to a lesser extent mixed, managed hedgerow, and occasionally interspersed with small stands of mixed farm woodland."

5.3.16 The eastern and southern extent of the Site falls within NLCA 11: Vale of Clwyd, which is described as:

"The area is largely rural and agricultural, whose patchwork of mixed pastures and arable fields are enclosed with mature and often well-managed hedgerows. There are many hedgerow trees and in places parkland trees too..."

5.3.17 Due to wide scope of the NLCA assessment, Pegasus proposed to omit this national level assessment. The Planning Inspectorate's EIA Scoping Direction, however, has requested that NLCA are included in the LVIA.⁶ The effects upon the host NLCA 08: North Wales Coasts and NLCA 11: Vale of Clwyd are therefore discussed in **Section 5.4** of this LVIA.

⁶ The Planning Inspectorate, *DNS: EIA Scoping Direction 3247619: Elwy Solar Farm*, Section 6.1, Table 1, ID.16, p. 10.

LANDMAP

5.3.18 The LANDMAP landscape character assessment approach is descriptive and seeks to identify and define distinct characteristics and qualities of landscapes that make up the country. The landscape character is defined collectively by five layers/aspects of information; cultural, geological, historical, habitat and visual and sensory. This GIS based landscape resource is organised in a hierarchical system that separates different aspects of landscape into geology, biodiversity, visual and sensory, history and archaeology and culture. The assessment allows to describe the landscape at different levels of accuracy:

- Geological Landscape: "Identifies those landscape qualities which are linked to the control or influence exerted by bedrock, surface processes, landforms and hydrology".
- Landscape Habitats: "Focuses on recording habitat features, characteristics and their spatial relationships within the context of the wider landscape".
- Visual & Sensory: "Maps landscape characteristics and qualities as perceived through our senses, primarily visually (...) The physical attributes of landform and land cover, their visible patterns and their interrelationship".
- Historic Landscape: identifies "Landscape characteristics that depend on key historic land uses, patterns and features. Identifies only those classes of historic land uses, patterns and features that are prominent and contribute to the overall historic character of the present landscape".
- Cultural Landscape Services: "Describes the links between landscape and people, from the way in which cultural, or human activity shapes the landscape, to the way in which culture shapes the way we respond to landscape."⁷

5.3.19 LANDMAP also includes evaluation scores which are defined as follows:

- Outstanding evaluation – nationally important.
- High evaluation – regional or county importance.
- Moderate evaluation – local importance.
- Low evaluation – little or no importance.

5.3.20 The description of each landscape is used as a basis for evaluation to make judgements to guide, for example, development or landscape management. **Figures 5.2-5.6** illustrate the extent of Aspect Areas covering and in the vicinity of the Site.

5.3.21 **Table 5.3** lists all LANDMAP Layers, relevant Aspect Areas and their Overall Evaluation, that cover the Application Site.

⁷ Natural Resources Wales, *LANDMAP Methodology Overview* (June 2017), pp. 7 – 11.

Table 5.3: LANDMAP Aspect Areas within the Application Site

| LANDMAP Layer | Aspect Area Number | Aspect Area Name | Overall Evaluation |
|-----------------------------|--------------------------------|------------------------------------|---------------------------|
| Cultural Landscape Services | DNBGHCL014 | Area North and East of Bodelwyddan | Not applicable |
| Geological Landscape | DNBGHGL016 (western fields) | Bodelwyddan | Moderate |
| | DNBGHGL017 (eastern fields) | The Roe | Moderate |
| Historic Landscape | DNBGHHL042 (north of the PRow) | Pengwern | Not available |
| | DNBGHHL043 (south of the PRow) | Bodelwyddan | Not available |
| Landscape Habitats | DNBGHLH019 | Bodelwyddan Fields | Low |
| Visual & Sensory | DNBGHVS014 | Area North and East of Bodelwyddan | Moderate |

Cultural Landscape

5.3.22 The Site falls within the 'Area North and East of Bodelwyddan' (DNBGHCL014) aspect area which falls north of the A55 and Bodelwyddan (**Figure 5.2**). The sense of place and local distinctiveness is described as weak, with attractive views **"neither in or out"**. The area is given a moderate visual and sensory landscape value.

"Despite the ongoing neglect in land management the aspect has the potential to improve through relatively simple changes in management and enhancement and still functions as an important transition between settlement, industrial and rural areas = Moderate"

Geological Landscape

5.3.23 The eastern fields of the site are within 'The Roe' (DNBGHGL017) which covers a narrow strip of land north to south broadly along the A525 (**Figure 5.3**). The overall evaluation is moderate due to its **"river terraces, active fluvial processes"**. Long term guidelines are to:

"Ensure that other significant features of geological or geomorphological significance in the area are not lost/damaged due to development"

5.3.24 The western fields of the Site are within 'Bodelwyddan' (DNBGHGL016) which is a large area stretching west to Bodelwyddan and south of the A55 along the western edge of the River Elwy.

5.3.25 The overall evaluation is moderate due to its **“Classic glacial terrain transition from limestone upland to estuarine/floodplain. Extensive drift cover”**. The condition of the glacial terrain geomorphology has been altered by development including the A55 and industrial development.

Historic Landscape

5.3.26 The Site north of the PRow (DE 208/18) is part of ‘Pengwern’ (DNBGHHL042), and is a small area covering the northern fields of the Site and fields east and south of Pengwern (**Figure 5.4**). The area is identified as the ‘designed’ parkland setting of the estate house. It is a ‘mixed fieldscape’ with ‘ancient and semi-ancient woodland’. The Site itself has areas of woodland and demonstrates the mixed fields which display large specimen trees typical of designed estates.

5.3.27 There is a lack of a detailed assessment on Natural Resources Wales’ website.

5.3.28 The Site south of the bridleway is within ‘Bodelwyddan’ (DNBGHHL043) which is part of a larger area which wraps around the ‘Pengwern’ historic landscape. The area is described as rural, agricultural, regular fieldscapes with nucleated settlement, processing and manufacturing.

5.3.29 There is lack of detail assessment on Natural Resources Wales’ website.

Landscape Habitats

5.3.30 The Site is within ‘Bodelwyddan Fields’ (DNBGHLH019) which covers the area north of the A55 and Bodelwyddan (**Figure 5.5**).

“Largely improved grassland with significant arable, with poor hedges, few trees, occasional streams and ditches, and scattered pockets of mixed woodland.”

5.3.31 The area is a mix of improved grassland, arable, amenity grassland, semi-natural broadleaved woodland and buildings. As highlighted within the Ecology chapter the area is important for Great Crested Newts. Features described as significantly influencing biodiversity are streams and wet ditches. Intensive farming is identified as reducing potential for biodiversity.

5.3.32 Opportunities for biodiversity improvement are stated as:

“Through additional woodland planting, appropriate management and planting up of gaps in hedgerows, creation of ponds. Also through less intensive farming in areas of biodiversity potential including fields corners and alongside rivers and streams...”

5.3.33 The value of the area is assessed as low; “a significant area of improved grassland and arable with overall low biodiversity interest.”

Visual and Sensory

5.3.34 The Site is within Aspect Area, 'Area North and East of Bodelwyddan' (DNBGHVS014) (**Figure 5.6**). The area is described as:

"Degraded agricultural landscape at north end of Vale of Clwyd with neglected tree cover with most hedgerow trees lost although some estate woods provide partial tree cover... The area is bisected by the A55 dual carriageway and is dominated by the surrounding settlement edges and light industrial development at Bodelwyddan and St Asaph... Field patterns are open and predominantly turned over to intensive arable and livestock farming, though relatively well defined by hedgerow boundaries this is being degraded through lack of management and inappropriate maintenance... Settlements are scattered and comprise mainly of farms with sometimes large associated ranges of low rise modern agricultural buildings..."

5.3.35 Aesthetic qualities are assessed as medium. Views are described as being dominated by the A55 corridor. The condition of the aspect area is classified as poor, with **"poorly maintained field boundaries and poorly diversified vegetation"** noted as contributing factors within what is described as poorly neglected agricultural landscape.

5.3.36 Due to inappropriate methods of field boundary management, the principle management recommendation for the aspect area is the:

"Enhancement and diversification of boundary features and species types... Additional small scale broadleaf woodland planting would also be beneficial"

5.3.37 Woodland blocks are described as providing important visual links through the area. It also highlights development impinging on vegetation pattern and that care should be taken to protect and enhance the existing hedgerow boundaries.

LANDMAP – Study Area

5.3.38 With regard to the study area, the LANDMAP Aspect Areas for all five layers have been mapped as separate plans (**Figures 5.2 – 5.6**) and reviewed in order to establish those that are relevant and may be subject to potentially significant effects. The guidance available on Natural Resources Wales' website does not specifically advise on how to assess solar energy scheme in the context of LANDMAP aspect areas. It was therefore necessary to devise a transparent and coherent system to allow for such assessment. The process and principles established in the LANDMAP Guidance Note 3 (devised for onshore wind turbines) have been used as a starting point, taking into account the different type, scale, and nature of the proposed solar farm.

5.3.39 This scoping process⁸ is a fundamental part of this assessment and allows for the short listing of those areas that are relevant for the purpose of this assessment. The initial step is to identify:

- Whether the aspect area is wholly / partially within the Application Site or is adjacent to it.
- The Proposed Development is theoretically visible from the aspect area.
- Include only those Aspect Areas where theoretical visibility is consistent, excluding Aspect Areas where ZTV coverage is very limited, and the visibility has been confirmed on site.
- Consider type and number of potential receptors experiencing the change.
- Shortlist those aspect areas (within all five Layers) with an outstanding or high overall evaluation.
- Analysis of the baseline resource against Collector Survey data, i.e. what makes those aspect areas special and consider elements/features that contribute to their high or outstanding evaluation.
- Ascertain whether those elements/features can be affected by the Proposed Development, directly and indirectly through visual competition.

5.3.40 There are a number of aspect areas associated with the Visual & Sensory Layer and located in relatively close proximity to the Proposed Development, that are covered by large areas of theoretical visibility. These include DNBGHVS015 River Valley of Clwyd/Elwy-North of St Asaph and DNBGHVS016 Vale Wooded Estate-South of Dyserth. The review of the published detailed assessment, however, suggests that these landscapes are well wooded / trees, views are contained and often medium to short range. Although there may be views across the Site towards the elevated and more distant landscape of Cefn Meiriadog to the south west or the Snowdonia National Park to the west, the Proposed Development is unlikely to be easily identifiable or visible at all. With regards to the more elevated DNBGHVS028 Clwydian Slopes South of Rhualt, this aspect area falls within the AONB. Due to the distance and relatively limited areas of theoretical visibility, the introduction of the Proposed Development is unlikely to have any significant effects upon this aspect area. For the same reason, the slightly elevated landscape of DNBGHVS037 Limestone Valley-Cefn has also been excluded from further assessment.

5.3.41 In the most recent revision to LANDMAP assessment, aspect areas associated with the Cultural Landscape Services have not been classified based on their evaluation. The scoping process used on this LVIA, and which allows to focus on aspect areas that have been classified as being of high to outstanding overall evaluation, cannot be applied. Furthermore, it is important to note that LANDMAP assessment for the Cultural Landscape Services Layer is very limited and largely relies on the reference to value/ evaluation of other Layers such as

⁸ This refers to LANDMAP aspect areas, not to be confused with the EIA scoping process as described in Chapter 2.

Habitat or Visual & Sensory.⁹ It was considered that there is a considerable duplication of information and overlap between the Cultural Landscape Services aspect areas and the aspect areas associated with the remaining Layers. Therefore, the Cultural Landscape Services are not assessed as a specific landscape receptor.

5.3.42 The steps outlined above allow to establish which aspect areas are potentially affected by the Proposed Development and whether they should be taken forward for further assessment. **Table 5.4** below lists all aspect areas taken forward for the final assessment.

Table 5.4 Summary of potentially affected aspect areas (outside the Application Site)

| Geological Aspect Areas | |
|------------------------------------------|---------------------------------------|
| None shortlisted | |
| Landscape Habitats Aspect Areas | |
| None shortlisted | |
| Visual & Sensory Aspect Areas | |
| DNBGHVS035 | Wooded Parkland and Parkland Remnants |
| Historic Landscape Aspect Areas | |
| DNBGHHL005 | Bodelwyddan Park |

Landscape Designations

5.3.43 There are three ways in which landscape designations are relevant to the assessment:

- The presence of a designation can give an indication of a recognised value that may increase the sensitivity of a landscape character receptor or viewpoint, and may therefore affect the significance of the effect on that receptor or viewpoint;
- The presence of a relevant designation can lead to the selection of a viewpoint within the designated area, as the viewpoint will provide a representative outlook from that area; and
- Designated areas may be included as landscape receptors so that the effects of the Proposed Development on these features of the landscape that have been accorded particular value can be specifically assessed.

5.3.44 The Site is not located within any statutory or non-statutory landscape designations (**Figure 5.7**). This has been confirmed by the Scoping Direction issued by the Planning Inspectorate, which states that the site “...is not subject to any statutory designations relating to its environmental or historic value”.¹⁰

⁹ Based on the review of LANDMAP on-line service the description of Cultural Landscape Services Layer Aspect Areas was very limited [accessed 23 June 2020].

¹⁰ The Planning Inspectorate, *DNS: EIA Scoping Direction 3247619: Elwy Solar Farm*, Section 2, p. 2.

5.3.45 The Clwydian Range and Dee Valley Area of Outstanding Natural Beauty is located approximately 3.6km to the east of the Site at its closest point. It covers the elevated landscape to the north east and east and the majority of the AONB falls outside of the 5km study area.

5.3.46 The 'Clwydian Range AONB Management Plan 2014 – 2019' lists a number of Special Qualities of the AONB, which are grouped into themes:

- Landscape Character and Quality:
 - Tranquillity.
 - Remoteness and Wildness, Space and Freedom.
- Habitats and Wildlife:
 - Heather Moorland and Rolling ridges.
 - Broadleaved woodlands and Veteran trees.
 - River Valleys and the River Dee.
 - Limestone grasslands, cliffs and screes.
- Historic Environment:
 - Historic Settlement and Archaeology.
 - Industrial Features and the World Heritage Site.
 - Historic Defence Features.
 - Small historic features.
 - Traditional boundaries.
- Access Recreation and Tourism:
 - Iconic Visitor and Cultural Attractions.
 - The Offa's Dyke National Trail and Promoted Routes.
- Culture and People:
 - The Built Environment.
 - People and Communities.

5.3.47 The AONB Management Plan also outlines policies specific to 'Landscape Quality and Special Character'.

5.3.48 Policy PolSQ1:

"Conserve and enhance the Special Qualities and distinctive character of the AONB's landscape and associated features including the historical built form."

5.3.49 Policy PolSQ2:

"Safeguard the panoramic views, tranquillity and environment quality of the AONB for the generations of today and the future."

5.3.50 Policy PolSQ3:

"Secure the equitable, sustainable use of the area's natural resources to conserve and enhance the special qualities of the AONB."

5.3.51 Policy PolSQ4:

“Protect and promote traditional cultural distinctiveness within the AONB including the Welsh language”.

5.3.52 The Objectives LQCO2 – LQCO5 are the relevant objectives that relate to the above quoted Policies, and that are informative to this LVIA. They, broadly speaking, relate to cumulative effects, tranquillity, and visual amenity.

5.3.53 The ‘Clwydian Range and Dee Valley Area of Outstanding Natural Beauty’ (June 2018) SPG refers to the ‘setting’ of the AONB and vistas from the higher ground, and views from valley bottoms. The AONB Management Plan, as part of their Action Plan (Part Three of the Management Plan) identifies that fix point photography will be conducted of key viewpoints across the AONB with a 3-year timescale.

5.3.54 The AONB Partnership’s website, however, does not include or identify any specific locations, protected views, or the above mentioned photographic survey. A list of walking routes with maps is provided on the AONB website but again, these do not identify any specific viewpoints or vistas.

Visual Receptors

5.3.55 There are a number of visual receptors, consisting of settlements, routes and features/attractions in the study area that require consideration in the assessment, as views from them may be affected by the Proposed Development. In order to focus on those receptors that may be potentially affected to a significant degree a screened ZTV (SZTV) has been overlaid onto the OS 1:25,000 Explorer map.

Zone of Theoretical Visibility

5.3.56 In order to assist with understanding the potential visibility of the scheme from the surrounding landscape, a digital Screened Zone of Theoretical Visibility (SZTV) model has been created shown at **Figure 5.9**. This provides a starting point for visual investigation to illustrate the geographical area within which views of development would be theoretically possible. The model is based on an ‘screened’ scenario whereby the existing screening effect of substantive areas of existing vegetation or built features in the landscape are taken into account (assuming a height of 15m for woodland and 8m for buildings).

5.3.57 The screened ZTV has been produced using ArcGIS and generated using OS Terrain 5 data combined with OS Open Map Local data. This uses terrain data and considers the screening effects of woodlands, groups of trees and buildings in the landscape. It does not include smaller hedgerows and individual trees or other vertical elements within the landscape. It presents an estimate in terms of theoretical visibility and the actual extent of the area from which the proposed solar farm would be visible is likely to be much smaller.

5.3.58 The ZTV is modelled at a maximum height of 4m across the entire area within the Site’s boundary to represent a ‘worst case’ scenario. The ZTV is carried out to inform initial site visits, before the detailed layout is fixed and the location of individual elements such as the ancillary structures are known (refer

to Chapter 3 for details and elevation drawings). It is acknowledged that ancillary structures such as the antenna/satellite dishes may exceed 4m, however, such structures would be relatively minor elements in the context of the overall scheme. It is important to note that the solar panels themselves would be maximum 3m in height.

Settlements

5.3.59 The Site is located at the northwest edge of St Asaph which extends southeast of the A55. Bodelwyddan to the west, and Rhuddlan to the north, both over 1.5km away. These settlements are enclosed by a combination of boundary vegetation, roadside vegetation, and intervening field boundary vegetation. In addition, intervening built form adds to the screening and sense of separation, for example views from the eastern edge of Bodelwyddan and the Marble Church are interrupted and screened by the built form of Ty-mawr and evergreen trees along its boundary. Similarly, views from St Asaph are screened by the tree and hedgerow vegetation along the A55 and the highway infrastructure. Further to the north west and north lie the coastal towns of Kinmel Bay / Towyn and Rhyl, largely beyond the 5km study area.

5.3.60 The SZTV plan indicates that the theoretical visibility extends to edges of these settlements but due to their low lying topography views from within these settlements would not be theoretically gained. On that basis the settlements within the stud area have not been considered relevant to this LVIA, i.e. have been scoped out as unlikely to be subject to significant visual effects.

5.3.61 In close proximity to the Site there are a number of relatively isolated properties:

- Gwernigrn Farmhouse which is positioned centrally but outside of the Application Site boundary.
- Plas Coch Nursing Home and Wern Bach to the east, near the vehicular entrance to Gwernigrn Farmhouse from the A525.
- properties at Old Walls / Talardy Park, to the south east, near the junction of the A55 with the A525.
- Glyn Derw Far to the north east.
- Pengwern Farm and Pengwern Hall College to the northwest.
- Properties located along the western boundary of the site on Nant-Y-Faenol Road.

5.3.62 More distant properties have not been considered in this LVIA due to the limited potential for significant visual effects.

Route corridors

5.3.63 None of the major public highways have been identified as subject to potentially significant effects. The A55 and A525 form, in parts, the boundaries to the Site but benefit from a considerable amount of vegetative screening, which is not reflected in the SZTV. Occasional and incidental views may do exist, where boundary vegetation is weaker or lower, but such views would be of relatively short duration and the overall experience of travelling along these major highways would not be significantly changed.

5.3.64 With regards to minor and local roads, the majority of them, particularly those in close proximity to the Site, follow the low lying vale landscape associated with the River Clwyd. They benefit from screening provided by roadside hedgerows and views are either screened or restricted, with views towards the Site being incidental and not frequent or prolonged.

5.3.65 Further away the rising landform does provide, in theory, opportunities for more elevated views across the vale landscape but views become increasingly distant and influenced by other elements of infrastructure present in the mid and distant parts of the landscape. The SZTV indicates that views from these elevated routes would be limited to relatively short sections and on-site survey confirmed that the level of inter-visibility is very limited. At such distance the visibility and appreciation of the Proposed Development would be limited and visual effects are unlikely to be significant.

Cycle Routes

5.3.66 According to Sustrans' website the National Route No. 84 coincides with the A525 and skirts the eastern edge of the Site. As discussed above there is very limited inter-visibility between the A525 and the Site, therefore users of this National Route No. 84 are unlikely to experience significant visual effects. Other National and Link Routes connect the coastal Kinmel Bay / Towyn and Rhyl. The site visit confirmed that views from the National Route No. 84 and other Sustrans cycle routes are either screened or considerably restricted, and potential visual effects are unlikely to be significant.

Public Rights of Way / Open Access Lane / Registered Common

5.3.67 The network of Public Rights of Way (PRoW) is not untypical for this type of vale landscape with PRoW generally following vegetated field boundaries. The more distant south western part of the study area and the associated rising landscape of Cefn Meiriadog is largely devoid of PRoWs, with occasional and generally short sections of Public Footpaths between minor roads. The landscape to the north east and east includes some PRoWs which generally terminate on the edge of the AONB.

5.3.68 With regards to PRoW, those that are adjacent to the Application Site and the immediate area around it are assessed in detail later in this LVIA. More distant PRoW have been visited and assessed in the round with the viewpoint selection reflecting the locations of these routes.

5.3.69 The National Trail Offa's Dyke Path crosses the eastern part of the study area and is largely associated with the elevated AONB landscape. In addition, the North Wales Path dissects the northern part of the study area, between the coast, the settlement of Rhuddlan, and the AONB. The Wales Coast Path is associated with the coastal landscape, skirting the edge of Kinmel Bay / Towyn and Rhyl and linking with North Wales Path in Rhyl and Prestatyn further north east. Based on the SZTV plan (**Figure 5.9**) none of these promoted long distance recreational routes have the potential to be significantly affected by the Proposed Development.

5.3.70 There are no Open Access Land arrangements or Registered Common Lands adjacent or in close proximity to the Site. Apart from the small and

isolated area on the outskirts of Kinmel Bay (National Trust land) and Y Foel to the north east (within the AONB) there are no other areas of public access that would be located within the 5km study area. Moel Maenefa to the south east (within the AONB) has an area of Open Access Land, beyond 5km, outside of the study area.

Cadw / ICOMOS Register of Parks and Gardens of Special Historic Interest in Wales

5.3.71 There are no Registered Parks and Garden's, Registered Historic Landscapes, located within or immediately surrounding the Site. Bodelwyddan Park is the closest such feature and is located approximately 1km away to the south west at its closest point. Kinmel Park is located further west and falls within the 5km study area. Both historic parks are located to the south of the A55. The on-site assessment confirmed that, despite the presence of theoretical visibility, views from these areas are unlikely to be affected to a significant degree.

5.3.72 With regards to Bodelwyddan Park, views to the north and north east may be gained from the wider parkland. These include the AONB landscape in the distance, but the low lying vale is screened or restricted and the eye is drawn towards the elevated horizon. Views also tend to be directed away from the Site. Furthermore, the intervening belts of trees and areas of woodland, that delineate the eastern edges of Bodelwyddan Park and Kinmel Park, provide a considerable screening and sense of separation from the Site. For that reason, these two registered parks/gardens are not considered further in this LVIA.

Viewpoints

5.3.73 The viewpoint selection has been guided by Pegasus' earlier Landscape & Visual Statement, which was prepared in support of the Screening Direction Request, issued on 26th of February 2020. An on-site landscape and visual impact assessment has been carried out to determine the relationship of the Site with its surroundings and its approximate extent of visibility within the wider landscape from publicly accessible locations. The Site visit to record viewpoint photography was carried out in February 2020. A Site visit was carried out in November 2020 to record additional views. These winter views provide a worst-case baseline view when vegetation is out of leaf, and illustrate maximum visibility.

5.3.74 A series of representative views surrounding the Site have been identified through desk-top and field studies. The viewpoints represent a selection of views experienced by a range of receptor groups. They do not intend to cover every possible view of the Site, but rather they are representative of a range of receptor types located at varying distances and orientations to the Site.

5.3.75 Visual receptors have been identified as:

- Residents.
- Road users.
- ProW users.
- Users within the Clwydian Range AONB including areas of open access.

5.3.76 The representative viewpoints demonstrate the relative visibility of the Application Site (and existing features or development on it) and its relationship with the surrounding landscape and built forms. The selection of the key viewpoints is based on the following criteria:

- The requirement to provide an even spread of representative viewpoints within the visual envelope;
- The requirement to provide representative viewpoints that consider a human's normal field of vision (i.e. panoramic views);
- From locations which represent a range of near (local views), middle, and long-distance views;
- Whilst private views are relevant, public viewpoints, i.e. from roads and public rights of way and other areas of open public access, are selected since they tend to have a higher incidence of receptors affected; and
- Views from sensitive receptors within designated landscapes.

5.3.77 Viewpoints from ProW within the Proposed Development layout boundary have not been included within the selection of views as it is assumed that there would be a direct significant impact to receptors with such a direct view. As discussed earlier in this LVIA, the AONB Management Plan does not identify any specific locations or designated viewpoints that would fall within the AONB and 5km study area. The OS Explorer map 1:25,00 indicates that panoramic views can be gained from Graig Fawr, north of Dyserth, but this location lies outside of the study area. Furthermore, the National Trail Offa's Dyke Path also lacks any specific recognition in terms of designated viewpoints or annotations on the available OS mapping.

Table 5.5 Selected Viewpoints

| Vp number | Name |
|--------------|----------------------------------------------------------------------------------------|
| Viewpoint 1 | View from bridleway 208 18, looking west, north, to east. |
| Viewpoint 2 | View from ProW Bridleway 208 18, within the site, looking north to north east. |
| Viewpoint 3 | View from ProW footpath 201 7, looking north east to south east |
| Viewpoint 4 | View from ProW footpath 201 13, looking south west. |
| Viewpoint 5 | View from layby of A525, looking south. |
| Viewpoint 6 | View from Twt Hill, looking south. |
| Viewpoint 7 | View from Groesffordd Marli, looking northeast. |
| Viewpoint 8 | View from ProW footpath 203 11, within the AONB, looking west. |
| Viewpoint 9 | View from ProW footpath 203 2, within the AONB, looking south west. |
| Viewpoint 10 | View from Y Foel access land, within the AONB, looking south west |
| Viewpoint 11 | View from Moel Maenefa access land ProW footpath 209 16, within the AONB, looking west |

| | |
|--------------|------------------------------------------------------------------------------------------|
| Viewpoint 12 | From Moel Maenefa Offa’s Dyke Path, PRoW footpath 209 21, within the AONB, looking west |
| Viewpoint 13 | From Cefn Du Offa’s Dyke Path, PRoW footpath 209 28, within the AONB, looking north west |

5.3.1 The viewpoint assessment is used to inform and illustrate the assessment of effects on LANDMAP aspect areas (landscape character) and the assessment of effects on views. An initial viewpoint assessment and potentially significant effects on viewpoints are assessed in detail in this LVIA. The relevant information is extrapolated in the assessment of effects on LANDMAP aspect areas and the assessment of effects on views.

5.4 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

5.4.1 Potential effects are those which could result from the construction, operation and decommissioning of the Proposed Development, according to the project, site and receptor characteristics and their interactions. The inclusion of a viewpoint in **Table 5.5** does not imply that predicted effects will occur, or will be significant for the Proposed Development. A variety of landscape and visual mitigation measures have been incorporated through the iterative design process in order to prevent, reduce or offset potential landscape and visual effects. Residual effects of the Proposed Development – those effects remaining after mitigation are also assessed in this Chapter. The below table identifies the elements of the Proposed Development, potential change, and potentially affected receptors as a guide for the detailed assessment (**Table 5.6**).

Table 5.6 Potential effects during construction, operation and decommissioning

| Activity | Element | Potential Effect | Potential Sensitive Receptors |
|-----------------|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Construction | Construction plant. Temporary construction facilities. | Temporary physical effects on landscape elements. Temporary effects on landscape character – LANDMAP. Temporary effects on views. Temporary cumulative effects. | Physical landscape features, e.g., trees, hedgerows, ground cover. Landscape character receptors – LANDMAP, designated landscapes. Views – experienced by different receptors e.g. residents, road users, walkers. |
| Operation | Solar arrays, fencing and ancillary facilities. | Long term effects on landscape character – LANDMAP. Long term effects on views. Long term | Physical landscape features, e.g., trees, hedgerows, ground cover. Landscape character receptors – LANDMAP, designated landscapes. |

| | | | |
|-----------------|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | cumulative effects. | Views – experienced by different receptors e.g. residents, road users, walkers. |
| Decommissioning | Construction plant. Temporary construction facilities. | Temporary physical effects on landscape elements. Temporary effects on landscape character – LANDMAP. Temporary effects on views. Temporary cumulative effects. | Physical landscape features, e.g., trees, hedgerows, ground cover. Landscape character receptors – LANDMAP, designated landscapes. Views – experienced by different receptors e.g. residents, road users, walkers. |

5.4.2 The effects of the Proposed Development on the landscape and visual resource will arise principally from the construction, operation and decommissioning of the solar panels, access tracks, hardstandings, transformers, switchgear substations etc. The temporary construction facilities, construction vehicles, construction compound and delivery vehicles required during the construction of the Proposed Development will have effects on the landscape and visual resource. The construction effects assessed in this section are predicted to end at the start of the operational stage. It is anticipated that the Proposed Development will be in operation for approximately 37 years. On completion of its operational life the site will be decommissioned and the site, except access tracks will return to its previous character. All adverse landscape and visual effects will therefore reverse to the previous state with the mitigation planting remaining as a permanent element and enhancing the landscape character.

5.4.3 The construction, operation and decommissioning of the Proposed Development may affect the landscape and visual resource in four ways:

- the physical effect on the fabric of the Application Site;
- the effect on the landscape character of the Application Site and study area;
- the effect on views from throughout the study area; and
- the cumulative effects that may arise from the addition of the Proposed Development and other solar farms in the area.

5.4.4 The physical effects of the Proposed Development may occur during the construction and decommissioning stages, but can have longer term effects, and will be restricted to the area within the Application Site. They are the direct effects on the fabric of the site, such as the removal of trees, hedgerows and alteration to ground cover that may take place during the construction of the proposed development.

5.4.5 Effects on landscape character will arise either through the introduction of new elements during the construction and operational stage, that alter the

distinct and recognisable pattern of elements in a particular type of landscape, or through visibility of the Proposed Development, which may alter the way in which the pattern of elements is perceived. This category of effects considered effects on LANDMAP and designated areas.

5.4.6 Effects on views are the changes to specific views and visual receptors that will result during the construction, operation and decommissioning of the Proposed Development. The assessment of effects on views (of the various stages of the Proposed Development) is carried out through an assessment of visual receptors, e.g. settlements, route corridors and visitor attractions, and at a series of viewpoints that are selected to represent the outlook towards the proposed development from around the study area, at a range of distances and from various directions.

5.4.7 Cumulative effects arise as a result of more than one development being under construction, operation or decommissioning, giving rise to combined effects, so that both developments are experienced at proximity where they may have a greater incremental effect.

Proposed Development Summary

5.4.8 Details of the Proposed Development, construction and decommissioning works are outlined within **Chapter 4** of the ES and illustrated at **Figures 4.1**. Below is a summary of the proposed components.

- All PV modules will be south facing.
- The framework and arrays would be static.
- PV modules would be dark blue, grey or black in colour.
- PV module frame would be constructed of anodized aluminium alloy.
- The maximum top height of the solar panels fixed onto the framework would be 3.0m.
- The minimum standard height of the lowest part of the solar modules fixed onto the framework will be 0.8m. The exception to this would be in identified flood risk areas where the minimum height would be up to 1.35m.
- Indicative uniform slope of solar PV from horizontal would be between 15 to 35 degrees.
- The distance between the arrays would respond to topography but would typically be between 3 metres to 6 metres.
- Internal access tracks of permeable construction;
- Typical minimum distance between edge of panels perimeter fencing would be 5m.
- A galvanised steel post mounting system will support the PV module frame which in turn supports the PV modules.
- Inverter boxes would be mounted on the underside of the framework.
- Battery storage facilities.
- The electrical cabling from each array will be concealed through shallow trenches linking the modules to the transformers and then

to the main substation on in protective surface-laid cable troughs. The cable trench will typically be between 0.5m to 1,1m in depth and around 0.5m wide.

- CCTV system mounted on poles would be positioned at intervals along the inside face edge of the perimeter fencing.
- Land between and beneath the panels would be used for biodiversity enhancements and seasonal sheep grazing.
- Reinforcement of existing hedgerows.
- Introduction of new hedgerows and hedgerow trees.

Scheme layout response to potentially significant effects

5.4.9 As a consequence of the EIA process there have been a number of changes to the scheme design to avoid and/or minimise landscape and visual impact. These have been informed by Pegasus' earlier Landscape & Visual Statement prepared in February 2020.

5.4.10 More information on scheme design is contained in Chapter 4 of this ES. The key landscape and visual considerations were:

- Relationship to and conservation of designated landscapes, the Clwydian Range and Dee Valley AONB, and associated viewpoints.
- Relationship to landscape character, in particular to scale and landscape pattern;

Response to landscape character (topography and scale)

5.4.11 The Application Site is located on a low lying and level ground, exhibiting the same landscape characteristics as the majority of the surrounding vale landscape. The Proposed Development has been designed around the retained boundary vegetation to retain and protect its function as a strong landscape framework, both in terms of wider green infrastructure and landscape character. During the iterative design stage the layout has been adjusted to allow for Root Protection Zone around the retained tree and hedgerow vegetation. In addition, certain areas of solar panels have been omitted from the developable area, for example in the north western field and to the east, near the vehicular access off the A525.

Response to designated landscape and viewpoints/views

5.4.12 The retained vegetation provides a considerable amount of screening, particularly in terms of close to medium range views. The more distant locations, within the more elevated landscapes, overlook the Application Site theoretically offering views of the Proposed Development. In reality, however, the level of inter-visibility is limited. Views from such locations, for example the AONB to the north east and east, are increasingly distant and expansive encompassing wide panoramas of low lying vale, rising landscape to the south east, and the seascape to the north and north west.

5.4.13 The additional mitigation planting associated with field boundaries within the Application Site would help to limit the inter-visibility and would be more successful in limiting views from the edge of the Clwydian Range and Dee

Valley AONB. This mitigation planting would include hedgerows and hedgerow tree planting to reinforce the existing vegetation and compartmentalise the Site, physically and visually.

Construction

5.4.14 The construction methodology is detailed in **Chapter 4** of this ES and has been used to inform the assessment of likely effects.

5.4.15 A temporary construction compound would be located near the existing vehicular access to Gwernigrn Farmhouse with a secondary compound located in a field, north of Plas Coch. The construction period is expected to last approximately 7 months and will include the following activities, in the anticipated order (some of the work may be carried out concurrently):

- Vehicle and plant movements within the Application Site.
- Clearance and set up for temporary construction compound.
- Installation of fencing and CCTV cameras.
- Construction and upgrade of access tracks.
- Laying of connecting cables for solar strings.
- Work on grid connection and excavations for underground cables.
- Installation of switchgear substations, transformers, AC boxes and other ancillary facilities.
- Installation of metal frames and solar panels.
- Commissioning.
- Reinstatement works.
- Landscape planting.

5.4.16 The location and management of these elements has been carefully considered to minimise the landscape and visual effects. At this stage it is predicted that the construction phase and delivery of aforementioned components will not require any off-site works that would be relevant from a landscape/visual point of view.

5.4.17 Ground disturbance within the Application Site would be restricted as far as practicable to some of the construction activities and elements. The proposed solar panels would be pile driven into the ground thus direct effects on the ground contours would be limited, reversible and not considered to be significant.

5.4.18 Measures that have been taken to mitigate the effects on landscape and visual resource during construction would include:

- Design to minimise vegetation removal (refer to Arboricultural Survey Report).
- Control of construction night lighting to minimise effects on sensitive views.
- Maintenance of construction compound.
- Design to minimise land take.
- Spreading of topsoil and reseeded and planting as soon as sections of work are complete.

5.4.19 Professional judgment has been used to establish the potential level of visibility of all elements, including movement of plant and erecting the individual elements of the Proposed Development, and the significance of their impact, as detailed below.

Potential Effects on Landscape Elements

5.4.20 Physical effects are found only within the Application Site, where existing landscape elements may be removed, altered or added by the Proposed Development. As stated previously the Application Site falls within the DNBGHLH019 Bodelwyddan Fields aspect area of the Landscape Habitats layer. Its overall evaluation has been identified in LANDMAP assessment as being low. It predominantly comprises improved pastures and arable land with streams and wet ditches assessed as contributing to the biodiversity in this area. The condition of these water features, however, is not confirmed in the published LANDMAP assessment. On that basis the value of this vegetation is assessed as being low, with its susceptibility also low. Overall, the ground cover associated with the Site is assessed as being of low sensitivity to the Proposed Development and reflects the time needed to establish such type of vegetation.

5.4.21 The principal physical effect of the Proposed Development would be on the ground cover associated with the Site within which the proposed infrastructure will be located. The assessment of the effects on these elements is described below. The existing tracks would be improved to maintain safe and suitable width of 3.5m, with additional sections of internal tracks required to connect to various parcels of the Site.

5.4.22 In order to quantify the potential effects upon landscape elements the total area of the Application Site was calculated in order to establish the total resource available.

5.4.23 Implementation of the Proposed Development would result in some change to approx. 84.6ha of ground cover based on the extent of the proposed perimeter security fencing. It is important to note that not all of this area would be physically disturbed with the Proposed Development mainly comprising solar panels which are of light footprint and allow grass cover to thrive underneath the solar arrays. The grassland beneath the solar panels would be supplemented by an appropriate grass mix to enhance biodiversity, and this could be regarded as a beneficial change in landscape character terms. With regards to the proposed solar panels, due to their light footprint only the metal frames would have direct effect on the ground cover. Only a relatively small proportion of the Site would be utilised for associated transformers, switchgear substation, other ancillary facilities and infrastructure, and this would equate to approximately 0.7ha.

5.4.24 The temporary construction compounds would cover an area of approximately 0.7ha with the temporary access tracks including additional 0.3ha (approximately). In addition, approx. 1.25ha would be lost to create the new internal access tracks. These would be constructed with a local stone to reflect the geology of the local landscape, and resemble the existing access track that links the various parcels of the Application Site. Most importantly the internal access track would utilise the existing field gates, where possible, to minimise vegetation removal. The proposed areas of grazed grassland would represent a

modest beneficial change from ephemeral arable crop and intensive agriculture to permanent pastures. This would balance any adverse direct effects brought about by the proposed temporary and permanent infrastructure.

5.4.25 It is important to note that the temporary construction compound located to the north of Plas Coch falls within the area intended for solar panels. Therefore, the construction compound would be restored to grassland with solar panels installed afterwards. The second temporary construction compound located to the south of Plas Coch falls outside of the developable area. It would be restored and maintained as grassland through the operational life of the Proposed Development.

5.4.26 When judged against the overall resource within the Application Site the introduced infrastructure would result in a negligible magnitude of change upon the ground cover. This would result in negligible neutral effects, which would not be significant.

5.4.27 With regard to tree and hedgerow vegetation, as stated in the Arboricultural Impact Assessment some very limited removal of structural vegetation would be required to accommodate short sections of the proposed access tracks. This would equate to approx. 10m for hedgerows H7, H9, and H12. With regards to perimeter fencing it is envisaged that it would be routed around the existing and retained trees. Some very limited tree removal may be necessary within the western group of trees, G14, to accommodate the access track.

5.4.28 The Site's boundaries are characterised by hedgerows, hedgerow trees and woodland planting/ belts of trees. Some of the trees within the Site's boundaries appear to be protected by Tree Preservation Order (TPO) and include veteran trees as stated in the Arboricultural Impact Assessment. The hedgerow vegetation represents a traditional but typical field boundary treatment, and some of them are noted for their well developed structure. For this reason, the value of tree vegetation is considered to be high, and value of hedgerows is taken as medium. In terms of susceptibility of the hedgerows vegetation this is considered to be medium to the proposals with this type of vegetation requiring some time to mature and establish as a landscape element. Trees, as a landscape feature are generally more difficult to replace and require long time to establish, thus are judged to be of high susceptibility. Overall, the sensitivity of hedgerow vegetation is medium and tree vegetation high.

5.4.29 Based on the information provided in the Arboricultural Impact Assessment the removed vegetation would represent a very small amount of the Application Site's overall hedgerow and tree resource.

5.4.30 Most importantly, the Proposed Development would include hedgerow and tree planting, partly to mitigate the potential visual effects but also to enhance the landscape framework across the Site. In terms of direct change to the fabric of the Site the proposed planting would result in medium beneficial change upon the tree and hedgerow resource. This would result in major beneficial effects upon the tree resource and moderate beneficial effects upon the hedgerow resource within the Application Site. This would translate to

significant beneficial effects upon the tree resource associated with the Proposed Development.

5.4.31 In terms of topography of the Application Site, this is best described a simple, level, and low lying, forming part of the wider surrounding vale landscape. The Site falls within the following Aspect Areas: DNBGHGL016 Bodelwyddan (western fields) and DNBGHGL017 The Roe (eastern fields).

5.4.32 The LANDMAP assessment for DNBGHGL016 Bodelwyddan states that **“Industrial development and forestry can damage...”** this aspect area and the rarity/uniqueness and overall evaluations are moderate.¹¹ With regards to DNBGHGL017 The Roe its rarity/uniqueness and overall evaluations has been described in LANDMAP as being moderate.¹² On that basis the value and susceptibility, and the sensitivity of these two aspect area is assessed as being medium. As described above, the majority of the proposed infrastructure would be of light footprint or would require limited land intake. The construction of some of the infrastructure including access tracks would require some limited excavation but the overall topographical profile of the Site would be retained and respected. The magnitude of change is assessed as being low, with effects minor adverse and not significant. Such effects would be reversible.

5.4.33 With regards to other features and landscape elements associated with the Site, the water features would be retained, and it is envisaged that there would be no direct effects upon them. New water feature will be created within the Site, and this is explained in the Ecology Chapter. In terms of PRowS crossing the Site, these would be partly rerouted.

Potential Effects on Landscape Character / LANDMAP

5.4.34 The potential effects on the LANDMAP aspect areas and overall landscape character of the local area, and indeed the character and perception of the AONB would be temporary. The most relevant would be the construction works themselves, movement across the Application Site, and potential influence on the perceptual qualities of the landscape /LANDMAP aspect areas.

5.4.35 Considering the enclosed nature of the Application Site, low profile of the proposed solar panels, and required construction plant, it is unlikely that such construction activities would have a significant effect on the character of the local landscape. For this reason the effects of the construction stage on LANDMAP are not considered any further in this assessment but the degree of effects can be extrapolated from the assessment of the operational stage of the Proposed Development.

Potential Effects on Visual Receptors

5.4.36 The site visit confirmed that due to the distance, nature and complexity of views the construction phase would not form a feature or be easily identifiable from the majority of the identified and analysed visual receptors within the study area.

¹¹ Q23, Q31 and Q33 of the Collectors Sheet.

¹² Q31 and Q33 of the Collectors Sheet.

5.4.37 The majority of the identified viewpoints, however, are separated by layers of vegetation, change in landscape character, and more distant. It is envisaged that the erection of solar panels would be carried out in sequence, rather than simultaneously across the whole Site. This would limit their visual influence with only some parts of the Site affected and potentially visible from the study area. From the wider study area, the Application Site and its associated construction phase would be perceived as a relatively small component in the overall panorama. Furthermore, such change would be temporary.

5.4.38 In some cases, for example close range locations or views from PRowS within the Site, the receptors would overlook the Application Site, and would gain direct views of the construction activities. Movement of plant across the Application Site, construction work, erection of solar panels and fencing etc would be visible.

5.4.39 It is predicted that none of the identified visual receptors would be significantly affected except for the users of the PRowS that cross and abut the Application Site. Views of the proposed construction works experienced from PRowS within the Site and Gwernigrn Farmhouse (**Viewpoints 1 and 2**), would cause significant adverse effects on these high sensitivity receptors at year 1. This is due to the proximity to and extent of the Proposed Development visible. Receptors of properties at the edges of the Site including Plas Coch Nursing Home at the entrance to Gwernigrn Farmhouse, properties at Old Walls and along Nant-Y-Faenol Road, Gly Derw Farm may also experience significant effects at year 1.

5.4.40 Details of the construction work, plant movement and operational hours are provided in **Chapter 4** where the effects of traffic upon the users of PRowS are also assessed. Overall, the magnitude of change is considered to be high as one passes the Application Site. The visual effects therefore would be major adverse and significant at the site level but not experienced beyond the immediate environs of the Application Site and nearby locations. This is further explained in the assessment of the operational phase of the Proposed Development.

Operation Year 1

Potential Effects on Landscape Character / LANDMAP

5.4.41 Effects on landscape character are the changes to areas of distinctive landscape character that result from the introduction of the Proposed Development. The assessment of effects on landscape character i.e. LANDMAP aspect areas is carried out in two parts:

- The assessment of effects on current landscape character through analysis of LANDMAP Aspect Areas.
- The assessment of effects on the landscape of the AONB through the analysis of its LANDMAP Aspect Areas, and special qualities.

5.4.42 It is important to note that all the Aspect Areas within the 5km study area have been reviewed against the SZTV plan, verified as part of the on-site assessment, and site photography. Based on this information a number of

Aspect Areas have been shortlisted for further review (with the remaining Aspect Areas omitted from further assessment. This is due to the visual context, presence of urban environment or elements of infrastructure in the foreground or wider panorama, distance and /or limited potential for views to be gained. This step has been carried out as part of the baseline review with the shortlisted Aspect Areas identified in **Table 5.3** LANDMAP Aspect Areas within the Application Site and **Table 5.4** Summary of potentially affected aspect areas (outside the Application Site).

LANDMAP – Geological Landscape

DNBGHGL016 Bodelwyddan and DNBGHGL017 The Roe

5.4.43 The sensitivity of these aspect areas has been taken as medium to reflect the adopted methodology for this assessment and moderate overall evaluation listed in the collector sheet. Both aspect areas are considered together due to their similarities and are included in the detailed assessment as they fall within the Application Site.

5.4.44 The Proposed Development is unlikely to cause any significant adverse effects upon these aspect areas. Due to their low-lying profile the solar panels tend to follow and reflect the landform thus this aspect of the Application Site and the DNBGHGL016 Bodelwyddan and DNBGHGL017 The Roe would not be changed. The medium to large scale of the landform, being part of the larger vale landscape, is capable of absorbing the Proposed Development. There would be no visual competition between the solar arrays and other associated infrastructure, and the landform of the DNBGHGL016 Bodelwyddan and DNBGHGL017 The Roe aspect areas. The solar panels would respond to the underlying topography, following the level and simple landform. The perception of the scale and experience of the landform would not be significantly changed. It is considered that due to the characteristics of the Proposed Development the magnitude of change would be low and effects minor adverse and not significant.

5.4.45 No other Geological Landscape aspect areas have been considered to have the potentially to be significantly affected. This is due to the low profile of the Proposed Development, lack or very limited theoretical inter-visibility, and predicted lack of visual competition with features and landform of these aspect areas.

LANDMAP – Landscape Habitats

DNBGHLH019 Bodelwyddan Fields

5.4.46 The sensitivity of this aspect area has been taken as low to reflect the adopted methodology for this assessment and low overall evaluation listed in the collector sheet. This aspect area is included in the detailed assessment as it falls within the Application Site.

5.4.47 The physical effects upon this aspect area have already been analysed as part of the assessment of the construction phase. The introduction of the Proposed Development would have negligible neutral effects upon the ground cover, high beneficial effects upon the tree resource, and moderate beneficial effects upon the hedgerow resource. The description of this aspect area notes

that semi-natural broadleaf woodland forms only 1.6% of the total extent of this aspect area. The proposed hedgerows and hedgerow trees would add to this resource and remain in place once the scheme has been decommissioned. The Alder woodland on floodplains is noted as habitat of international importance, but does not contain any BAP habitats. Streams and wet ditches are noted as contributing to the biodiversity of the aspect area and have been taken into account as part of the ecological enhancements to the Site.

5.4.48 The intensive farming is recognised as limiting the biodiversity potential and the principal management recommendation states: "Less intensive farming in areas of biodiversity potential such as along waterways, and more sympathetic management of hedges. Establish additional broadleaved woodland or groups of trees." This has been recognised in the Arboricultural Survey Report which states (para 5.3): "As is noted within the survey schedule under 'General Observations' Many of the significant trees, particularly those located within the field interiors are within fields that have been heavily ploughed in the past within up to two meters from the bases of trees. This will undoubtedly have been regularly causing a damage to roots located within the top 20cm to 30cm of soil. There is therefore an opportunity here to greatly improve the rooting areas associated with these important trees through the amelioration of grass/ wild flower pasture within their RPAs and VTB's potentially providing a long term benefit to the health of these trees."

5.4.49 The proposed hedgerow and hedgerow tree planting, coupled with change to permanent pastures, would respond positively to the guidelines outlined in the LANDSMAP assessment for this aspect area. The introduced change, in the context of the whole aspect area would bring about a medium beneficial magnitude of change. This would translate to minor long term beneficial effects upon DNBGHLH019 Bodelwyddan Fields.

LANDMAP – Visual & Sensory

DNBGHVS014 Area North and East of Bodelwyddan

5.4.50 The sensitivity of this aspect area has been taken as medium to reflect the adopted methodology for this assessment and moderate overall evaluation listed in the collector sheet. This aspect area is included in the detailed assessment as it falls within the Application Site.

5.4.51 This aspect area has been classified in the LANDMAP assessment as flat open lowland farmland. It goes on to state that it is visually linked with adjacent aspect areas but stops short from identifying which one. There are no attractive views in and out, according to LANDMAP assessment with detractive views in and out: **"Views are dominated by the surrounding settlement areas and the A55 corridor. Some detractive views are seen from within the aspect area of industrial development and highway corridors."** The landscape is settled and ordinary. The evaluation of this aspect area refers to poorly maintained field boundaries, poorly diversified vegetation and intensive agriculture. The published assessment states: **"Neglect of field boundaries and margins has led to an overly degraded agricultural landscape that has further detractors in the form of highway and light industrial/settlement edges."**

5.4.52 Although the Proposed Development would add to the complexity of this aspect area, being a new form of development, such development is not incompatible with agricultural landscape. The Site is located adjacent to the A55 corridor and very close to the settlement edge of St Asaph, thus it utilises the least visually sensitive parts of this aspect area. Its visibility from the remaining parts of this aspect areas and indeed the surrounding aspect areas is very limited, despite the theoretical screened visibility.

5.4.53 The improvements to field boundary vegetation, including additional hedgerow and tree planting, would directly respond to the management objectives of this aspect area. The retained tree vegetation would continue to contribute to the well treed character of this aspect area providing visual links throughout the area. The LANDMAP assessment describes this aspect area as being of medium scale and the Proposed Development would aim to retain the current landscape scale. By subdividing the scheme into parcels, curtailed by retained hedgerows and blocks of tree vegetation, the field pattern would continue to characterise the Site and this aspect area. This would be further strengthened by the additional sections of hedgerows and hedgerow trees. The sense of enclosure would increase locally but this would reinforce the existing aesthetic qualities of this aspect area. Although the pattern of the landscape would change to a degree, the Proposed Development would not redefine it, with the underlying agricultural land use still evident and contributing to the overall character of this aspect area.

5.4.54 With regards to the form of the landscape this is described as straight with medium texture. The Proposed Development would add to this but not redefine the overall character of the landscape. The visual and perpetual qualities of this aspect area would not be redefined. There would be no additional permanent lighting that would add to the current level of light pollution. Furthermore, the movement associated with the operational stage would be limited and not too dissimilar to the current movement associated with the nearby properties.

5.4.55 With regards to views in and out, the Proposed Development would not compete visually with any features or landmarks. When seen, it would appear as part of a low lying and well vegetated area where views are filtered and restricted, and the Proposed Development is unlikely to be seen at its full extent. On balance, the magnitude of change is assessed as low, with the effects being minor adverse. This is considered not to be significant.

DNBGHVS035 Wooded Parkland and Parkland Remnants

5.4.56 The sensitivity of this aspect area has been taken as high to reflect the adopted methodology for this assessment and high overall evaluation listed in the collector sheet. This aspect area lies outside of the Application Site.

5.4.57 The Proposed Development would not be located in this aspect area thus any potential effects will relate to the perception of this particular landscape. According to the SZTV plan (**Figure 5.9**) the Proposed Development would be theoretically visible across a relatively large tracts of this aspect area. In reality however, and as confirmed by the site visit, views from the Site towards this aspect area and Bodelwyddan Castle are very difficult to gain.

Conversely, views of the Proposed Development would not be easily gained or gained at all being partially screened by the woodland vegetation that forms the eastern edge of this aspect area.

5.4.58 The more elevated parts of this landscape may offer some restricted views towards the Proposed Development, but views would be considerably restricted and likely to be limited to small areas within the northern and western parcels rather than the whole of the Proposed Development. Views would include other forms of infrastructure, the electricity pylons, Glan Clwyd Hospital to the north, and offshore wind turbines. In comparison, the Proposed Development, if visible, would read as part of the low lying vale landscape, physically and visually segregated from the DNBGHVS035 Wooded Parkland and Parkland Remnants. It would not detract or interrupt views towards the elevated AONB landscape to the north east. Overall, the magnitude of change is assessed as being negligible, and the landscape character effects as negligible neutral and not significant.

LANDMAP – Historic Landscape

DNBGHHL042 Pengwern

5.4.59 The sensitivity of this aspect area has been taken as medium to reflect the adopted methodology for this assessment and the moderate overall evaluation, based on LANDMAP data. This aspect area lies within the Application Site.

5.4.60 The LANDMAP description is scant and the detailed collectors survey sheet was not available at the time of writing this LVIA.¹³ The published assessment notes the parkland and designed landscape associated with Pengwern, parkland setting to the house, woodland and evolved/mixed fieldscape. Pengwern, however, lies on the northern outskirts of this aspect area with the Proposed Development located its southern part, thus away from this asset, which appears to be the main focus of this aspect area. Interestingly, the analysis of various historic maps from late 19th up to mid 20th century clearly indicates Pengwern and its parkland as shaded area or a collection of scattered parkland trees, but not across the Site.¹⁴ Indeed, the Proposed Development would lie outside of the boundaries of Pengwern and its parkland, as identified on the above mentioned historic maps.

5.4.61 The existing landscape framework and proposed additional hedgerow and hedgerow tree planting would ensure that any limited inter-visibility is further reduced. The introduction of solar panels is unlikely to be evident from around Pengwern and its adjacent fields. There are a number of isolated trees within the north western and north eastern most part of the Site. These, however, do not fall within the parkland, and are not shown on the historic maps. Furthermore, these trees would be retained and protected, and would continue to contribute to the character of this landscape. The magnitude of

¹³ LANDMAP on-line database: <https://naturalresources.wales/evidence-and-data/maps/wales-environmental-information/?lang=en> and https://landmap-portal.naturalresources.wales/view_survey?ID=11200 was last checked on 25 June 2020. The issue was raised with Natural Resources Wales.

¹⁴ <https://maps.nls.uk/view/102180321> [accessed 25 June 2020].

change is assessed as low, and effects minor adverse. This is considered not to be significant.

DNBGHHL043 Bodelwyddan

5.4.62 The sensitivity of this aspect area has been taken as low to reflect the adopted methodology for this assessment and low overall evaluation listed in the collector sheet. This aspect area lies within the Application Site.

5.4.63 Similarly to the above assessed aspect area, the detailed collectors assessment was not available at the time of writing this LVIA.¹⁵ The LANDMAP description states: **“Regular, ie probably recent enclosures north of Bodelwyddan, flat land, once part of Morfa Rhuddlan marshland, drained from the late 18th century onwards thus the dominant historic interest is recent.”**

5.4.64 The Proposed Development would fall within the south eastern most part of this aspect area. This is a relatively isolated parcel, with the majority of the aspect area separated by the adjacent DNBGHHL042 Pengwern, assessed in the previous paragraphs. The Proposed Development would not affect the existing field boundaries and in that respect the field pattern and its contribution to the historic dimension of this landscape would be retained. The subdivision of fields in this part of the aspect area appears to be relatively recent, late 20th to early 21st century with belts of young tree planting. No further permanent subdivision is being proposed as part of the Proposed Development. The magnitude of change is assessed as low, and effects minor adverse. This is considered not to be significant.

National Landscape Character Areas

5.4.65 Based on the above assessment it transpires that any potential landscape character effects upon the NLCA 08: North Wales Coast and NLCA 11: Vale of Clwyd would not be significant. Due to their scale and varied character, the magnitude of change is likely to be negligible, with the effects negligible and neutral.

Clwydian Range and Dee Valley AONB

5.4.66 The ‘Clwydian Range AONB Management Plan 2014 – 2019’ appears to be out of date and the AONB Partnership’s website does not state whether work on the new draft is ongoing. With regards to landscape character, the AONB Partnership’ relies on LANDMAP assessment rather than its own landscape character assessment.

5.4.67 The preliminary review of the aspect areas associated with the AONB landscape, and falling within the 5km study area, has been carried out at the baseline stage of this LVIA. As stated before, there is lack of specific guidance on assessing LANDMAP aspect areas in the context of solar farms. Therefore, Pegasus has carried out its own appraisal and scoping out process to establish

¹⁵ LANDMAP on-line database: <https://naturalresources.wales/evidence-and-data/maps/wales-environmental-information/?lang=en> and https://landmap-portal.naturalresources.wales/view_survey?ID=11201 was last checked on 25 June 2020. The issue was raised with Natural Resources Wales.

which of the aspect areas have the potential to be significantly affected by the Proposed Development. This is explained in para 5.3.39 of this LVIA. This initial scoping out process has established that none of the aspect areas associated with the Clwydian Range and Dee Valley AONB would be significantly affected by the introduction of the Proposed Development. Although there may be some visual effects experienced by visual receptors at specific locations within the AONB, these do not directly translate to landscape character effects.

5.4.68 With regard to the AONB's Special Qualities, these have been categorised in the Management Plan and the majority of them relate to historic environment, ecology, public access / tourism and cultural aspect of the landscape. With regards to landscape character and landscape quality the Management Plan identifies the following Special Qualities: Tranquillity; Remoteness and Wildness, Space and Freedom.

5.4.69 The Proposed Development, by being positioned away from the AONB, approx. 3.6km at its closest point, would not have any direct effects upon its landscape and Special Qualities. There is evident change in landscape character terms between the rising slopes and elevated, and often exposed, uplands of the AONB. The level and low lying vale associated with the River Clwyd is unmistakably different.

5.4.70 The fieldscape of the vale is characterised by hedgerows and frequent hedgerow trees, with tree belts particularly frequent along the river corridor, and roads are often lined with trees. Built form, of varied scale and mass, and elements of infrastructure are present across the landscape that surrounds the AONB. This, coupled with the evident changes in the topographical profile of the landscape creates strong separation between the AONB and the Proposed Development. Any visual change introduced by the Proposed Development would read as part of a different landscape. The low profile and enclosure provided by the field boundaries of the Application Site would ensure that the Proposed Development would be visually curtailed. The operational activities of the Proposed Development would only require limited management with infrequent vehicular access and movement across the Site. This would be imperceptible from the AONB. In addition, there would be no additional night time lighting as part of the operational phase of the Proposed Development.

5.4.71 The proposed mitigation planting, along the eastern and northern boundaries, would respond positively to the AONB policies and objectives namely Policy PoISQ2, which relates to safeguarding panoramic views and tranquillity. The Proposed Development would be well screened and curtailed, with very limited inter-visibility thus not adding significantly to the cumulative views of other forms of infrastructure.

5.4.72 It is considered that the landscape character of the AONB and its Special Qualities would not be changed to a significant degree.

Visual Amenity

5.4.73 The site visit established that the landscape framework that surrounds the Application Site screens and controls views. It also confirmed that the Proposed Development would not be visible from the majority of the visual

receptors associated with the local landscape. A set of 9 no. of viewpoint has been selected to inform this LVIA and these are listed earlier in this LVIA at **Table 5.5**. For consistency, these viewpoints are based on the earlier works prepared as part of the Screening Request: Pegasus' Landscape & Visual Statement (February 2020). The Landscape & Visual Statement (February 2020), however, did not provide any written assessment with regards to the potential visual effects, which would inform the scoping out process of this LVIA. The scoping out process helps to identify these locations from where the visibility of the Proposed Development may potentially affect the receptors to a significant degree. This is carried out in **Table 5.7** below.

Table 5.7 Selected Viewpoints - Scoping out process

| Vp number | Potential for significant visual effects | Taken for further assessment / justification |
|-------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Viewpoint 1 | Yes, located within the Site. | No, views would be direct, close range and effects would be significant at Year 1. |
| Viewpoint 2 | Yes, located within the Site. | No, views would be direct, close range and effects would be significant at Year 1. |
| Viewpoint 3 | No. | Only small parts of the Proposed Development would be visible in the western most fields. This part of the Site would be largely left for grazing and benefits from screening provided by frequent trees. The remaining parts of the Proposed development would be screened or considerably restricted, and more distant. Built form along the A525 is visible in the distance, sitting low and largely screened. The same would be true for the Proposed Development. |
| Viewpoint 4 | Yes. | Yes , direct and close range views into the Site from PRow that need further assessment. |
| Viewpoint 5 | No. | No, some limited effects would occur, but these would not be significant. Views interrupted by layers of intervening field boundary hedgerows. Vegetation along the Site's northern boundary varies in height but is generally 3m or taller: hedgerow (H13; 3m in height) and tree group (G29; 4-9m height). Gaps in boundary vegetation would allow for some limited and restricted views. The solar panels, however, would sit low and their scale and mass would be foreshortened by level landform. They would not compete visually with any features or landmarks perceptible in this view. |
| Viewpoint 6 | Yes. | Yes . Distant view but located on higher ground and at tourist/ recreational asset. Further assessment required to confirm whether significant effects would occur. |

| | | |
|--------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Viewpoint 7 | No. | No, some limited effects would occur, but these would not be significant due to context and screening with the majority of the Site not visible or easily identifiable. |
| Viewpoint 8 | Yes. | Yes , viewpoints located within the AONB. Viewpoints taken for further assessment to confirm whether significant effects would occur. Viewpoints located to the north east are assessed in the round, due to similar distance, context, and direction of view. |
| Viewpoint 9 | Yes. | |
| Viewpoint 10 | Yes. | |
| Viewpoint 11 | Yes. | |
| Viewpoint 12 | Yes. | Yes , viewpoints located within the AONB. Viewpoints taken for further assessment to confirm whether significant effects would occur. Viewpoints located to the south west are assessed in the round, due to similar distance, elevation, context, and direction of view. |
| Viewpoint 13 | Yes. | |

5.4.74 Based on the on-site assessment and review of the site photographs the following viewpoints have been considered relevant and assessed in detail:

- Viewpoint 4.
- Viewpoint 6.
- Viewpoints 8-10.
- Viewpoints 11-13.

5.4.75 In terms of Viewpoint 1 and Viewpoint 2, due to proximity and direct nature of views, the effects are predicted to be significant despite the proposed mitigation measures.

5.4.76 With regards to the sensitivity of the shortlisted visual receptors this is assessed as high. This is on the basis of the medium value of the views with the landscape being an undesignated countryside and high susceptibility, with receptors being associated with PRowWs.

Viewpoint 4: View from ProW footpath 201/13, looking south west

Figure 5.9 and 5.10

5.4.77 This viewpoint is located in close proximity to the Proposed Development, approximately 200m away at its closest point. The traffic along the A525 is visible and audible, and exerts some negative influence over the perception of this landscape. Vegetation along the highway and various properties, visible in the foreground, screens the majority of the Site. Gwernigron Farm House is considerably restricted by the intervening roadside hedgerows and changes in the topography, and gives evidence of the limited inter-visibility between this location and the majority of the Site. The landscape appears settled and level, with a high level of inter-visibility with the AONB to the east and the rising ridge of Cefn Meiriadog, and more elevated landscape beyond.

5.4.78 The north eastern field of the Site, adjacent to the south of Glyn Derw Farm is visible through a gap in roadside hedgerows. This gap has been identified as the relatively short section located near the existing field access gate. This gate would be closed off and hedgerow allowed to establish and grow to close the gap. In addition, the slightly elevated fields in the southern part of the site, are also visible, seen immediately to the left of Gwernigrn Farm House. The visibility of the southern fields is considerably restricted by the intervening tree canopies, lining the A525.

5.4.79 Receptors would be located at a similar elevation and would be looking at the back of the panels, which would appear dark and recessive in this view. Their low profile would follow the local topography reducing any perceived change. They would benefit from the screening provided by the existing vegetation along the A525, and within the Site, with views foreshortened by the level landform. Its boundary planting would help retain the separation between the Application Site and the adjacent countryside, and indeed the elevated landscape to the south west. The closest parcel of the Proposed Development would contain solar panels only, with other ancillary infrastructure located in the neighbouring fields, which are screened by hedgerows. There would be no visual competition with any of the features present and visible in this view. The AONB landscape is located behind the receptor, thus not visible simultaneously, and reads as different landscape, visually and physically separated from the Proposed Development. One of the internal hedgerows is visible in this view (identified as H11, refer to the Tree Survey Report), and is approx. 2m in height. This indicates that with minor changes to the management regime, the height of the hedgerow can be easily increased, providing effective screening that would be wholly in keeping with the existing landscape character. The solar panels located in the southern part of the Proposed Development would be difficult to identify due to the distance. The intervening vegetation largely screens this part of the Site with only small areas of solar panel theoretically visible. In reality, the panels would be seen *en masse* and would appear as a small and low lying dark element, enclosed and curtailed by the tree and hedgerow vegetation. The magnitude of change is assessed as low and effects of the Proposed Development would be moderate and not significant.

Viewpoint 6: View from Twt Hill, looking south

Figure 5.9 and 5.10

Figure 5.12

5.4.80 This location illustrates views from the southern edge of Rhuddlan, in close proximity to Rhuddlan Castle, with the viewpoint overlooking the River Clwyd. The landscape is low lying and receptors overlook the settled agricultural vale. The rising Cefn Meiriadog to the south, and more elevated landscape beyond encloses the vale with views to the west stretching towards the Snowdonia National Park. The view does not have one particular focus and the eye travels across the vale, towards the elevated horizon and distant landscapes. The foreground is characterised by medium scale fields with belts of trees along the river and adjacent fields boundaries. The A525 is largely screened by roadside hedgerows but the associated vehicle movement and noise are perceptible.

5.4.81 The landscape further away, and around the Site, appears well treed with layers of tree and hedgerow vegetation restricting views of individual fields. Gwernigrn Farm House is considerably screened and provides evidence of the very limited inter-visibility between the Site and this elevated area around Rhuddlan. Pengwern Farm and Glyn Derw Farm are visible, and help identify the extent of the Site.

5.4.82 The Site is located approx. 1.5km away at its closest point. The majority of the Proposed Development would be screened or restricted by the intervening tree canopies which form a strong feature in this view. This screening is particularly effective around the eastern and south southern part of the Proposed Development. Some of the solar panels in the southern, western, and northern fields would be visible due to the less frequent tree cover along the associated field boundaries and elevated nature of this view. At such distance, however, the Proposed Development would appear as a small element in the overall composite landscape, associated with the low lying and level vale landscape, curtailed by the tree vegetation along the A55 and Nant-Y-Faenol Road. The solar panels and ancillary infrastructure would be seen as a narrow dark element, with panels seen *en masse* and not as individual strings. Their geometry would be lost and not evident, with panels appearing dark and recessive. The winter landscape is characterised by greens and browns of pastoral fields and leafless broadleaf vegetation, and the dark solar panels would not attract attention or be easily identifiable. When vegetation is in leaf, the screening would be considerable, and the Proposed Development difficult to identify at such distance. The magnitude of change is assessed as low and effects of the Proposed Development would be moderate and not significant.

Viewpoint 8: View from ProW footpath 203/11, within the AONB, looking west, Viewpoint 9: View from ProW footpath 203/2, within the AONB, looking south west, and Viewpoint 10: View from Y Foel access land, within the AONB looking south west

Figure 5.9 and 5.10

Figure 5.12 (Viewpoints 9 and 10 only)

5.4.83 These viewpoints are assessed in the round and simultaneously due to their, direction of view, and context. Considering the distance, approx. 3.9km at its closest point, the Site is distant and the Proposed Development unlikely to be easily identifiable. Due to the high sensitivity of this landscape, being the AONB, and to confirm the degree of visual effects, both viewpoints are considered below. The below assessment also helps inform the assessment upon the AONB landscape and its special qualities. Viewpoint 8 is located at approx. 122m AOD, Viewpoint 9 at approx. 180m AOD, Viewpoint 10 at a higher elevation of approx.. 263m AOD and receptors overlook the vale landscape, which appears settled yet with evident influence of large scale built form. This includes the Glan Clwyd Hospital, the former Hotpoint site and Kinmel Park Industrial Estate, both located south of Bodelwyddan, and built form in St Asaph. Gwernigrn Farm House is identifiable in the distant landscape and helps locate the centre of the Site. The northern edge of the Site is marked by what appears to be the fluvial terraces of the River Clwyd, rising towards Pengwern Farm and Pengwern Hall.

Tree vegetation and isolated properties along Nant-Y-Faenol Road mark the western edge of the Site, but are barely perceptible due to the distance.

5.4.84 The visibility of the Proposed Development would be largely limited to the areas located in the northern fields, north of Gwernigron Farm House and one of the southern fields. The eastern fields, which abut the A525 and near Glyn Derw Farm, sit slightly lower and is unlikely to be visible. The River Clwyd and the A525 are largely screened by intervening topography and the same would be true for the eastern most parts of the Proposed Development. Although some parts of the Proposed Development would be visible it is important to reiterate that at such distance, being nearly 4km away, the solar panels, fencing, and other ancillary infrastructure, would form a very small and inconspicuous element in these composite views. It would be low lying and would not break the horizon or compete visually with any landscape features within the Site or in the wider landscape. The surrounding tree vegetation already provides a strong sense of visual curtailment, as seen from these elevated views and indeed the remaining parts of the AONB. Most importantly, the solar panels would be seen *en masse*, and their geometry and layout would not be conspicuous.

5.4.85 The panels of the Proposed Development, in good weather conditions, would appear as blue to dark blue and unlikely to reflect any light given that they are designed to absorb light. Any potential glint and glare are unlikely to occur for a prolonged period of time, and likely to be affected by changing weather conditions, and visibility, with receptors travelling through landscape and not focused on the site itself. The Proposed Development would appear as a narrow dark line in the distant landscape, seen amongst the browns and greens of the winter landscape. Summer views would be considerably screened.

5.4.86 The inter-visibility and contribution of the elevated Snowdonia National Park and Cefn Meiriadog would not be redefined or affected. The magnitude of change is assessed as low and effects of the Proposed Development would be moderate and not significant.

Viewpoint 11: View from Moel Maenefa access land ProW footpath 209 16, within the AONB, looking west, Viewpoint 12: From Moel Maenefa Offa's Dyke Path, PROW footpath 209 21, within the AONB, looking west, and Viewpoint 13: From Cefn Du Offa's Dyke Path, PROW footpath 209 28, within the AONB, looking north west

Figure 5.9 and 5.10

5.4.87 These viewpoints are assessed in the round and simultaneously due to their elevation, direction of view, and context. Considering the distance beyond 5km, the Site is distant and the Proposed Development unlikely to be easily identifiable. Due to the high sensitivity of this landscape, being the AONB, and to confirm the degree of visual effects, both viewpoints are considered below. The below assessment also helps inform the assessment upon the AONB landscape and its special qualities. Viewpoint 11 is located at approx. 266m AOD with Viewpoint 12 at approx. 251m AOD, and Viewpoint 13 at approx. 253m AOD, and receptors at both locations overlook the vale landscape towards the coast, which appears settled yet with evident influence of large scale built form. This

includes the A55, Glan Clwyd Hospital, the former Hotpoint site and Kinmel Park Industrial Estate, both located south of Bodelwyddan, and built form in St Asaph. Gwernigrion Farm House is barely perceptible in the distant landscape at this distance.

5.4.88 The visibility of the Proposed Development would be largely limited to the areas located in the northern fields, north of Gwernigrion Farm House and one of the southern fields close to the A55. Although some parts of the Proposed Development would be visible it is important to reiterate that at such distance, between approx. 5-7km, the solar panels, fencing, and other ancillary infrastructure, would be barely perceptible and inconspicuous elements in these distant views. The Proposed Development would be low lying and would not break the horizon or compete visually with any landscape features within the Site or in the wider landscape. The surrounding tree vegetation provides a strong sense of visual curtailment, as seen from these and other AONB elevated views and indeed the remaining parts of the AONB not assessed. Most importantly, the solar panels would be seen *en masse*, and their geometry and layout would not be conspicuous.

5.4.89 The panels of the Proposed Development, where visible, in good weather conditions, would appear as blue to dark blue and unlikely to reflect any light given that they are designed to absorb light. Any potential glint and glare are unlikely to occur for a prolonged period of time, and likely to be affected by changing weather conditions, and visibility, with receptors travelling through landscape and not focused on the site itself. Summer views would be considerably screened.

5.4.90 The inter-visibility and contribution of the elevated Snowdonia National Park and Cefn Meiriadog would not be redefined or affected. The magnitude of change is assessed as negligible and effects of the Proposed Development would be negligible and not significant.

PRoWs

5.4.91 Considering the intervening boundary vegetation and low lying profile of the Proposed Development it is assessed that views from the surrounding network of PRoWs would be considerably screened and any adverse visual effects would not be significant. Views from the PRoWs that cross the Site, Public Footpath DE/201/8; Public Footpath DE/208/20; and Public Bridleway DE/208/18, would be subject to significant adverse visual effects.

Residential Receptors

5.4.92 Access to private properties was not gained, as part of the on-site assessment. Based on the location of some of the properties, however, their orientation, number of storeys, and nature and character of their curtilage it is predicted that significant visual effects may occur at the properties associated with the Gwernigrion Farm House, Plas Coch, Wern Bach, and the properties overlooking the south eastern corner of the Proposed Development. Once the proposed mitigation measures have matured, however, it is predicted that the proposed hedgerow and tree planting would mitigate against these significant effects.

Decommissioning

5.4.93 Details of the decommissioning methodology are detailed in Chapter 3 (The Application Site and Proposed Development) of this ES and have been used to inform the assessment of likely effects.

Landscape Elements and Character of the Site

5.4.94 It is expected that the short term, localised enabling and ancillary works and decommissioning activities would not cause significant adverse effects on landscape features of the Application Site. The implemented planting and enhancement strategy would remain in place as a long term legacy, contributing to the biodiversity, character, and visual amenity associated with this part of the landscape.

Visual Amenity

5.4.95 Potential visibility of the Application Site is limited throughout the surrounding landscape by intervening landform, vegetation and the availability of views from PRow, residential areas and roads.

5.4.96 It is expected that the short term, localised decommissioning period would not cause significant effects on views experienced by the identified visual receptors (including high sensitivity AONB receptors) and associated representative views.

5.5 MITIGATION AND ENHANCEMENT

5.5.1 This section describes the landscape and visual mitigation measures which have been incorporated through the iterative design of the Proposed Development in order to prevent, reduce or offset potentially adverse landscape and visual effects caused by the construction, operation, and decommissioning phase.

Mitigation by Design**Construction and Decommissioning Phases**

5.5.2 Standard measures and the adoption of construction best practice methods to avoid, minimise or manage adverse environmental effects, or to ensure realisation of beneficial effects, have been incorporated into the design of the Proposed Development and the methods of its construction and decommissioning from the outset. These are described in Chapter 3 (The Application Site) and Chapter 4 (Proposed Development) of the ES. The further measures outlined below will be incorporated into the Proposed Development.

5.5.3 General mitigation measures to minimise/avoid potential temporary landscape and visual effects during the construction and decommissioning phase include:

- Controlling the lighting of construction compounds and machinery to minimise upward and outward light pollution through lantern design, direction and baffling and ensuring that the minimum area only is lit, for the minimum period;

- Limiting the compaction and disruption to the soil structure within the previously undeveloped areas, so that soil permeability is not reduced;
- Restricting the movement of materials to minimise vehicle tracking across the Application Site; and
- Protecting vegetation (where appropriate) during construction/decommissioning by fencing, installed before the commencement of construction/decommissioning in compliance with BS5837:2012 Trees in relation to design, demolition and construction - Recommendations.

Operational Phase

5.5.4 The Proposed Development will seek to incorporate a number of mitigation principles. Mitigation measures that have been incorporated into the layout of the Proposed Development as 'embedded mitigation' as part of the iterative design process. Generally, the Proposed Development will seek to retain and enhance existing landscape elements that make a positive contribution to the local landscape character and will incorporate opportunities to enhance the landscape features of the Application Site.

5.5.5 The mitigation measures therefore seek to achieve the following overall objectives:

- To retain and enhance existing landscape elements, particularly the hedgerow field boundaries.
- Promote the use of traditional field hedges and diversity of native hedgerow species.
- To minimise any unnecessary overshadowing of the solar panels.

5.5.6 The access tracks are routed where possible to follow the line of the land with minimal use of cuttings and embankments, whilst utilising the existing field gates and farm access. Following the initial landscape input, informed by Pegasus' Landscape & Visual Statement February 2020), the solar panels have been offset from the boundary vegetation. This will ensure long term retention and good condition of this vegetation.

5.5.7 The associated infrastructure, such as individual substations, the exporting substation, and battery storage facilities, AC boxes, could be painted a dark recessive colour, to minimise their visibility and help blend with the prevailing colours of the Application Site and the nearby woodland trees. In addition, this ancillary infrastructure has been positioned near field boundaries, as far as practical, in order to reduce their visibility and reduce potential visual effect upon views from the nearest public footpath and all other close and medium range viewpoints.

5.5.8 A detailed survey of tree and hedgerow vegetation, within and around the Application Site, has been carried out to inform the layout. Consequently, the location of the solar panels has been adjusted to avoid the Root Protection Zone of the boundary vegetation.

5.5.9 During the assessment it was considered beneficial to reinforce the landscape framework within and around the Application Site by providing additional areas of hedgerow planting. Improvements to the quality and condition of the field boundary vegetation and responding to the management guidelines included in the collector sheets for the LANDMAP relevant aspect areas.

5.5.10 The following measures will be incorporated as summarised in **Chapter 4 Development** (and as shown on **Figure 5.11**):

- The land beneath the panels will be maintained as grazed meadow;
- Appropriate retention and set back of panels and infrastructure from trees and hedgerows, including consideration of Root Protection Areas;
- Locating the main construction compound within the existing farm yard to minimise visual intrusion;
- The existing bridleway running through the Site would be maintained, with the two public footpaths diverted to provide least visually affected route.
- Internal access tracks have been designed to utilise existing gateways and farm tracks wherever possible to minimise the need for localised hedgerow removal;
- The batteries will be enclosed within its own compound to minimise visual impact;
- Additional planting and hedgerows enhancements include gapping up / strengthening of existing hedgerows using native species that respond to local landscape character and context. Additional planting is included as part of the Proposed Development to provide hedgerow reinforcements and habitat connectivity;
- It is proposed that external hedgerows and internal hedgerows be maintained at minimum 3m in height (including new planting once established).

5.5.11 Compared to other power generation technologies, solar energy installations can be easily decommissioned and removed from Application Site at the end of their economic life. Consequently, the panels are ephemeral in nature and could be removed from the Application Site with negligible residual landscape or visual effects. The Application Site could therefore be returned to its original condition. However, the landscape enhancement measures outlined above would remain, providing long-term benefits to the local landscape character of the area.

Residual Effects

5.5.12 The above outlined mitigation measures have been incorporated into the layout with additional measures accounted for during the assessment process. Following the implementation of the proposed mitigation measures the effects have been re-assessed in order to establish the residual effects. These are outlined below. It is envisaged that the effectiveness of the proposed hedgerow and hedgerow tree planting and reinforced hedgerow boundaries

would be evident at Year 5. The residual effects, however, have been assessed at Year 15, due to the long term operational stage of the Proposed Development.

Table 5.8: Mitigation

| Ref | Measure to avoid, reduce or manage any adverse effects and/or to deliver beneficial effects | How measure would be secured | |
|-----|-------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------|
| | | By Design | By Condition |
| 1. | Arrangement of solar panels and offset from Root Protection Zone | X | - |
| 2. | Layout of access track. | X | - |
| 3. | Location of ancillary infrastructure, batter storage etc. | X | - |
| 4. | Management of existing hedgerows, along the eastern boundary / the A525, to improve condition and increase height to min. 3m. | - | X |
| 5. | Management of existing internal hedgerows, to increase height to min. 3m. | - | X |
| 6. | Planting new hedgerows along PRow, and adjacent field boundaries, in the southern part of the Site. | - | X |
| 7. | Planting new hedgerows near Gwernigron Farm House. | - | X |
| 8. | Planting new hedgerows with hedgerow trees along the A525, and the Site's northern boundaries. | - | X |

Enhancements

5.5.13 The change from arable, as the predominant land cover within the Application Site, to species rich grassland maintained for biodiversity, is considered to be an enhancement. The beneficial effects, however, relate to ecology and not landscape or visual issues.

5.6 CUMULATIVE AND IN-COMBINATION EFFECTS

5.6.1 Based on the preliminary review and knowledge of the local it transpires that there are no other solar farm developments within the study area.

5.6.2 Natural Resources Wales provided its Screening Response in late February 2020 stating: "There is potential for the solar farm to add to the extent and coalescence of development already planned for this area. Urbanising

effects, if clearly visible from the AONB, could erode its setting. The distance of 3.5km between the site and the AONB has the potential to moderate the prominence of visual change. However, we would require further information about glint and glare effects upon elevated AONB viewpoints to the east and south-east of the proposed development to confirm this."

5.6.3 With regard to the Council's feedback, their Screening Opinion states: "Cumulative effects should also be considered in the proposal. The solar farm, would result in the gap between the St. Asaph settlement boundary and the Bodelwyddan key strategic site becoming development, which in combination may result in more significant impacts on landscape character and visual amenity than indicated in the Appraisal" (reference to Pegasus' earlier Landscape & Visual Statement dated February 2020).

5.6.4 The above quoted Screening Responses refer to the allocation site, located east of Bodelwyddan and subject to Policy BSC5 – Key Strategic Site – Bodelwyddan. The published 'Site Development Brief: Bodelwyddan Key Strategic Site', forms part of the Local Plan and explains the vision for this area with indicative masterplan illustrating the spatial organisation of the site. The site would include (refer to its para 3.4): "... **B1, B2, B8 employment land, education and health provision, infrastructure improvements, open space, community facilities and other associated elements.**" It goes on to say in para 3.6: "**This Development Brief will form the basis for the submission and determination of any planning applications for development on the site.**" It does, however, stop short of identifying any landscape or visual constraints that would guide future development within this allocation site, such as visual issues, inter-visibility, relationship to the AONB landscape, or nearby areas of built environment, including cumulative issues. The 'Site Development Brief' is also silent on the anticipated massing or height of future built form. Based on the description, however, it transpires that it would include local centre, employment, and residential development thus is likely to include a variety of built form and varied heights.

Methodology for Cumulative Assessment

5.6.5 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 potential to undergo significant cumulative effects as result of the addition of the Proposed Development.

5.6.6 A significant cumulative effect will occur where the addition of the Proposed Development to the above mentioned development within the allocation site will result in a landscape character / aspect areas or view that is characterised primarily by the presence of built form, so that other patterns and components are no longer definitive.

5.6.7 It should be noted that even if the Proposed Development is assessed to have a significant effect on a landscape character receptor or view, it does not necessarily follow that the cumulative effect will also be significant.

5.6.8 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 in isolation. However, the cumulative magnitude of change is assessed in a different way, as described in the Methodology to this LVIA.

Effects during construction

5.6.9 Review of the current planning applications within the Council did not reveal any relevant planning applications that would relate to the allocated site at Bodelwyddan. Therefore, it is predicted that the construction of the Proposed Development is likely to occur in isolation, and would not result in any significant cumulative effects upon landscape character / aspect areas or visual receptors.

Effects during operational phase - Assessment of cumulative effects on landscape receptors

5.6.10 The assessment of cumulative effects on aspect areas uses the same receptors as the assessment of effects on aspect areas carried out previously in this LVIA. It is divided into:

- Assessment of aspect areas – limited to the Visual & Sensory Layer.
- Assessment of effects upon the Clwydian Range and Dee Valley AONB.

Effects during operational phase - Assessment of cumulative effects on Visual & Sensory layer

5.6.11 There is no scoping process developed by Natural Resources Wales that would help guide the cumulative assessment of LANDMAP aspect areas. It is useful to note that the Site and the allocation site Policy BSC5 – Key Strategic Site – Bodelwyddan are located in the same aspect areas, at least partially, for all five Layers. With regards to the Historic Landscape and Geological Landscape the Site is covered by more than one aspect area.

5.6.12 Considering the above and the fact that none of the host aspect areas, across all five Layers, have been assessed as subject to significant effects when judged in isolation, only the host aspect area of the Visual & Sensory Layer was considered relevant. This allows to focus on the sensory and perceptual qualities of the landscape where the potential cumulative change could be most experienced.

5.6.13 It is predicted that the effects upon the adjacent aspect areas of the Visual & Sensory Layer may be subject to some adverse effects, but these would not be significant.

5.6.14 It is also useful to state that cumulative assessment assumes that all other developments i.e. the allocation site at Bodelwyddan has been developed, and the assessment considers the additionality of the Proposed Development to this theoretical baseline.

DNBGHVS014 Area North and East of Bodelwyddan

5.6.15 The sensitivity of this aspect area has been taken as medium to reflect the adopted methodology for this assessment and moderate overall evaluation listed in the collector sheet.

5.6.16 The allocation site at Bodelwyddan stretches across relatively large tracts of this aspect area, bridging the gap between the existing settlement boundary and St Asaph Business Park, located on the southern side of the A55. It is, however, associated with the A55 corridor which acts, to a degree, to militate against any adverse effects. The location of the Proposed Development has been guided by the same principle of utilising the least sensitive part of this landscape.

5.6.17 With regards to the Bodelwyddan allocation site, it is recognised that the proposed masterplan allows for landscape buffers, but this allocation site sits on a slightly higher ground, it is likely that this mixed use development would be seen in views from the majority of the DNBGHVS014 Area North and East of Bodelwyddan. In comparison, the Ste sits on a lower ground and due to the characteristics of this solar energy development, it would, not be seen or perceived in the same way as the above-mentioned mixed use development. The least developed parts of the landscape, those to the north west of the settlement of Bodelwyddan and north east of it, around Pengwern Farm and Pengwern Hall, would not be physically affected. Furthermore, the level of inter-visibility between these more rural parts and the Proposed Development would be very limited. The influence over the visual and sensory aspects of these areas would be almost imperceptible.

5.6.18 The published LANDMAP assessment specifically refers to field boundary treatment and potential for improved management regime, to improve the quality and integrity of this aspect area. In terms of landscape pattern, the Proposed Development would be a different type of development hence it would exhibit itself in the landscape in a different way. Visually it would be more compatible with the landscape character, its landform, and aesthetic qualities when judged against the built form of varied mass and height within the allocation site. The Proposed Development would follow the existing ground contours, reflecting the landform of the vale landscape, thus would be wholly in keeping with the physical form of this landscape. The development of the Site would also enable improvements to the existing field boundary vegetation, which in turn would enhance this aspect of the local landscape. there would be some limited and localised increase in the sense of enclosure and diversity, but the remaining part of the aspect area would remain agricultural.

5.6.19 Most importantly there are no attractive views in and out, according to the published assessment. Assuming that the development at Bodelwyddan is present the addition of the Proposed Development would not have any significant change upon the perception of this landscape. As described previously, when judged in isolation, the low profile of the solar panels would not compete visually or exacerbate the massing and height of the existing and proposed development. Views of the Proposed Development would alter the

perception of this localised part of the aspect area but the adjacent environment already exerts some negative influence across this landscape. To reiterate, these views have not been judged by LANDMAP assessment as important or attractive.

5.6.20 The reference to lighting, movement, and human access in the published LANDMAP assessment is useful. The Proposed Development, due to its nature and operational requirements, would not increase these negative influences to any perceptible degree when judged in the context of the existing infrastructure and proposed development at Bodelwyddan. The landscape across the Site would remain static with movement generally associated with the existing residential properties and agricultural activities.

5.6.21 The allocation site at Bodelwyddan would transform what is an agricultural landscape into an area of urban environment. In contrast, the Proposed Development would retain the working agricultural character of the landscape with the addition of long term yet temporary development of renewable energy. It is worth reiterating that the Proposed Development has been designed to respect and retain the existing field boundaries and vegetation pattern. This directly responds to the objectives of LANDMAP assessment for this particular aspect area.

5.6.22 Overall, there would be some limited degree of change with new form of development and additional areas of the aspect area being developed. In terms of the visual and sensory qualities, however, the Proposed Development would not manifest itself in the same way as residential or mixed use development. Its visibility would be generally very limited, and when seen it would be visually enclosed by hedgerows and trees, with eyes travelling across the area and influenced to a limited degree. It would bring about a low magnitude of change with the cumulative effects minor and not significant.

Effects during operational phase - Assessment of cumulative effects on the AONB

5.6.23 None of the aspect areas, that coincide with the AONB landscape, have been judged to be significantly affected by the Proposed Development, when assessed in isolation. Based on the assessment of the host aspect area DNBGHVS014 Area North and East of Bodelwyddan (of the Visual & Sensory Layer) it is unlikely that the AONB landscape or its Special Qualities would be affected to a significant degree, in cumulative terms.

5.6.24 To reiterate, the Proposed Development is low lying, of low profile, and does not interrupt views or compete visually with any features or landmarks located in the low lying vale, and seen from the elevated AONB landscape. Assuming that the development within the Bodelwyddan allocation site is present, the addition of the Proposed Development would exert a very limited landscape character effect. This is judged to be negligible, with the effects also negligible and neutral, and not significant.

Effects during operational phase - Assessment of cumulative effects on viewpoints

5.6.25 Cumulative visual effects can arise in four reasonably distinctive ways:

- **Simultaneously / in combination**, where two or more cumulative developments are seen together at the same time from the same viewpoint, and in the same field of view. The effects of an extension of an existing development or the positioning of a new development such that it would be seen as extending the presence of built infrastructure.
- **In succession** – where two or more developments are present in views from the same location but cannot be seen in the same field of view and the observer has to turn to see them;
- **In sequence** – where two or more cumulative developments are not seen from the same viewpoint, even if the observer turns around to extend his/her perception of the surrounding landscape. The receptor has to move to another location to see cumulative developments. The frequency of occurrence greatly depends on factors such as: distance to developments, distance to another viewpoint and speed of travel.
- **Perceived** – where the observer is unable or unwilling to gain a view of another development but is aware of its presence.

5.6.26 In order to provide for a robust assessment of potential cumulative visual effects, all 9 no. of viewpoints have been reviewed. The distance, difference in elevation, context, and screening have been taken into account, assuming that the development within the Bodelwyddan allocation site is present. None of the viewpoints, however, have been considered to be affected to a significant degree, including Viewpoints 1 and 2, which are located within the Site, and Viewpoints 8 and 9, located on the elevated edge of the AONB.

Effects during operational phase - Assessment of cumulative effects on visual receptors

5.6.27 Similarly, to the above assessment of individual viewpoints, it is considered that none of the visual receptors would be affected to a significant degree, when judged in the context of the Bodelwyddan allocation site.

5.7 SUMMARY

Introduction

5.7.1 This chapter has assessed the likely significant effects of the Proposed Development upon the receiving environment: landscape elements associated with the Application Site, LANDMAP aspect areas, the Clwydian Range and Dee Valley AONB, and visual receptors.

Baseline Conditions

5.7.2 The site is located within an area of gently undulating agricultural landscape, interspersed with numerous villages; agricultural land with hedgerow boundaries, set within the floodplains of the River Elwy and River Clwyd.

5.7.3 The Site is not located within any statutory or local/non-statutory landscape designations with the Clwydian Range and Dee Valley AONB located approx. 3.6km at its closest point to the east. Long distance views from within

the Clwydian Range and Dee Valley AONB are available from roads, PRow footpaths and bridleways, and the open access land which covers the Y Foel hill, to the south of Dyserth.

Likely Significant Effects

Construction Phase

5.7.4 The Proposed Development would include extensive hedgerow and tree planting, partly to mitigate the potential visual effects but also to enhance the landscape framework across the Site. In terms of direct change to the fabric of the Site the proposed planting would result in major beneficial effects upon the tree resource and moderate beneficial effects upon the hedgerow resource within the Application Site. These are judged to be significant.

5.7.5 Due to the characteristics of the Proposed Development, effects on the landscape character, the AONB landscape, and visual receptors, have not been considered separately for the construction stage. Any potential effects are likely to be similar or lower than those experienced during the operational phase of the Proposed Development.

Operational Phase

5.7.6 None of the aspect areas, including the host aspect areas, have been assessed as subject to significant effects. Any potential landscape character effects upon the NLCA 08: North Wales Coast and NLCA 11: Vale of Clwyd would not be significant.

5.7.7 Due to the distance, clear separation in terms of character, and nature of the Proposed Development, the Clwydian Range and Dee Valley AONB has been assessed as not experiencing any significant effects. None of its Special Qualities have been assessed as subject to significant effects either.

5.7.8 With regards to viewpoint assessment only two out of thirteen identified viewpoints have been assessed as subject to significant effects: Viewpoint 1 and Viewpoint 2. Both viewpoints are located within the Site. The proposed mitigation measures are likely to reduce the visibility of the solar panels and the associated infrastructure, but unlikely to mitigate against significant visual effects. The effects on remaining viewpoints including those from the AONB, have been assessed and are not considered significant.

5.7.9 In terms of visual receptors, none of those located within the surrounding landscape have been considered to be subject to significant visual effects. Receptors travelling along the PRow that cross the Site would experience locally some significant visual effects due to proximity and direct nature of views. This would relate to Public Footpath DE/201/8; Public Footpath DE/208/20; and Public Bridleway DE/208/18.

5.7.10 At Year 1 it is likely that significant visual effects would occur at the properties associated with the Gwernigrion Farm House, Plas Coch, Wern Bach, and the properties overlooking the south eastern corner of the Proposed Development. Once the proposed mitigation measures have matured, however,

it is predicted that the proposed hedgerow and tree planting would mitigate against these significant effects.

Mitigation and Enhancement

5.7.11 A number of mitigation measures have been implemented during the iterative design stage and these relate to the protection of boundary vegetation, location and alignment of access tracks, location of ancillary infrastructure such as substations and transformers but also the location of the construction compound.

5.7.12 In addition, a positive management of existing hedgerows and new hedgerow tree planting has been included to reduce the visual effects and reduce the potential change upon the landscape character and visual amenity of the nearby receptors. Additional hedgerow planting and hedgerow tree planting along the northern and eastern external boundaries, and some of the internal boundaries within the Site, would help strengthened the landscape framework. Most importantly, this would respond to the management guidelines for the host DNBGHVS014 Area North and East of Bodelwyddan, of the Visual & Sensory layer:

“Enhancement and diversification of boundary features and species types... Additional small scale broadleaf woodland planting would also be beneficial”

5.7.13 Following the successful implementation and establishment of the proposed planting it has been concluded that none of the LANDMAP aspect areas would experience significant landscape character effects.

Cumulative and In-combination Effects

Construction and Decommissioning Phases

5.7.14 The construction and decommissioning phase of the Proposed Development is likely to occur in isolation, and not cumulatively with any other currently known developments in the area. For that reason, there would be no significant effects.

Operational Phase

5.7.15 None of the landscape receptors: aspect areas and the Clwydian Range and Dee Valley AONB have been assessed as subject to significant cumulative effects during the operational stage of the Proposed Development.

5.7.16 With regards to visual amenity none of the viewpoints or visual receptors have been assessed as subject to significant cumulative effects.

Conclusion

5.7.17 This LVIA has been carried out with regards to the best practice and techniques for the landscape character assessment and LANDMAP aspect area. The assessment has taken into account the existing context, potential change to the receiving landscape and influence on the visual amenity of the identified

receptors. The assessment has concluded that there would be some localised significant visual effects due to proximity and direct nature of views, gained from PRoWs within the Site.

5.7.18 None of the remaining visual receptors within the study area, however, has been assessed as experiencing significant visual effects. In addition, none of the aspect areas or the Clwydian Range and Dee Valley AONB have been assessed as subject to significant effects, including cumulative landscape effects.

5.7.19 Overall, the Proposed Development has been considered as responding well to the characteristic of the receiving environment, mitigating visual effects, whilst not compromising the requirements and technical aspects of this solar energy scheme. **Table 5.9** provides a summary of significant effects, mitigation and residual effects.

Table 5.9: Summary of Significant 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 **** |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-----------------------|-------------------------|------------------------------|-----------------------------------|------------------------------------|----------------------------------------|------------------------------|
| Construction | | | | | | | | |
| Tree and hedgerow resource | Introduction of additional areas of hedgerow and hedgerow tree planting | Permanent / Direct | High to Medium | Medium | Local | Major to Moderate | n/a | Major to Moderate Beneficial |
| Viewpoint 1 | Visibility of construction work, movement, change in land use. | Temporary / Indirect | High | High | Local | Major | Mitigation in Design | Major Adverse |
| Viewpoint 2 | | Temporary / Indirect | High | High | Local | Major | Mitigation in Design | Major Adverse |
| Public Footpath DE/201/8; Public Footpath DE/208/20; and Public Bridleway DE/208/18. | | Temporary / Indirect | High | High | Local | Major | Mitigation in Design | Major Adverse |
| Residential receptors at Gwernigron Farm House, Plas Coch, Wern Bach, and those | | Temporary / Indirect | High | High | Local | Major | Mitigation in Design | Minor Adverse |

ENVIRONMENTAL STATEMENT

Landscape and Visual

| Receptor/ Receiving Environment | Description of Effect | Nature of Effect * | Sensitivity Value ** | Magnitude of Effect ** | Geographical Importance *** | Significance of Effects **** | Mitigation/ Enhancement Measures | Residual Effects **** |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------|---------------------------------------|--------------------------------------------|---------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------|
| overlooking the south eastern corner of the Site. | | | | | | | | |
| Operation | | | | | | | | |
| Viewpoint 1 | Perceptual change to the appreciation of the landscape of this aspect area, new type of infrastructure and element in the view. | Permanent / Indirect | High | Low | Local | Major | Hedgerow planting, maintenance regime changed to allow hedgerows to grow to 3m height minimum. | Moderate Adverse |
| Viewpoint 2 | Perceptual change to the appreciation of the landscape of this aspect area, new type of infrastructure and | Permanent / Indirect | High | Low | Local | Major | Hedgerow planting, maintenance regime changed to allow hedgerows to grow to 3m height minimum. | Moderate Adverse |

ENVIRONMENTAL STATEMENT

Landscape and Visual

| Receptor/ Receiving Environment | Description of Effect | Nature of Effect * | Sensitivity Value ** | Magnitude of Effect ** | Geographical Importance *** | Significance of Effects **** | Mitigation/ Enhancement Measures | Residual Effects **** |
|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------|---------------------------------------|--------------------------------------------|---------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| | element in the view. | | | | | | | |
| Public Footpath DE/201/8; Public Footpath DE/208/20; and Public Bridleway DE/208/18. | Perceptual change to the appreciation of the landscape of this aspect area, new type of infrastructure and element in the view. | Permanent / Indirect | High | Low | Local | Major | Hedgerow planting, maintenance regime changed to allow hedgerows to grow to 3m height minimum. | Moderate Adverse |
| Residential receptors at Gwernigron Farm House, Plas Coch, Wern Bach, and those overlooking the south eastern corner of the Site. | Perceptual change to the appreciation of the landscape of this aspect area, new type of infrastructure and element in the view. | Permanent / Indirect | High | Low | Local | Major | Hedgerow planting, maintenance regime changed to allow hedgerows to grow to 3m height minimum. | Moderate Adverse to Negligible Neutral, subject to direction of view and location. |
| Cumulative and In-combination | | | | | | | | |

ENVIRONMENTAL STATEMENT

Landscape and Visual

| Receptor/ Receiving Environment | Description of Effect | Nature of Effect * | Sensitivity Value ** | Magnitude of Effect ** | Geographical Importance *** | Significance of Effects **** | Mitigation/ Enhancement Measures | Residual Effects **** |
|----------------------------------------------------------------------------|----------------------------------|-------------------------------|---------------------------------|---------------------------------------|--------------------------------------------|---------------------------------------------|-------------------------------------------------|--------------------------------------|
| None of the assessed cumulative effects have been judged to be significant | | | | | | | | |