Environmental Statement Volume 1: Main Report

St Asaph Solar Farm

April 2025

Prepared for:
Anesco Ltd

Prepared by:
Lucy Baker and Christina Dawkins

Project Number:
333101373

Revision	Description	Author	Date	Quality Check	Date	Independent Review	Date
0	DRAFT	LB	March 25	CD	April 25	KH	April 25
1							

The conclusions in the Report titled **ENVIRONMENTAL STATEMENT VOLUME 1: MAIN REPORT** are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from Anesco Ltd (the "Client") and third parties in the preparation of the Report to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

This Report is intended solely for use by the Client in accordance with Stantec's contract with the Client. While the Report may be provided by the Client to applicable authorities having jurisdiction and to other third parties in connection with the project, Stantec disclaims any legal duty based upon warranty, reliance or any other theory to any third party, and will not be liable to such third party for any damages or losses of any kind that may result.

Prepared by: _____
Signature

_____
Lucy Baker

Reviewed by: _____
Signature

_____
Christina Dawkins

Approved by: _____
Signature

_____
Kevin Herman

Contents

Tables

1 Introduction

1.1 Project Background

1.1.1 This Environmental Statement (ES) has been prepared by Stantec UK Limited (Stantec) on behalf of Anesco (the 'Applicant') in relation to a full Development of National Significance (DNS) application for a ground mounted photovoltaic (PV) solar farm, together with associated equipment, infrastructure, and ancillary works (the 'Proposed Development') on Land at Cefn Meiriadog, St Asaph (the 'Site'). A Site Location Plan is provided in **Appendix A.1,** and a full description of the Proposed Development is provided in **Chapter 3** of this ES.

1.1.2 This ES presents the findings of an Environmental Impact Assessment (EIA) undertaken in accordance with the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (as amended)[1] (referred to as the 'EIA Regulations'),and identifies the likely significant environmental effects of the Proposed Development during construction, operation and decommissioning.

1.1.3 The 35.42 ha Site is located entirely within Denbighshire and therefore within the jurisdiction of Denbighshire County Council (DCC).

1.2 Terms and Definitions

1.2.1 For ease of reference the following terms have been used in the ES (unless the context dictates otherwise):

- 'the Site' – land on which the Proposed Development is located (the extent of which is shown on the Site Location Plan at **Appendix A.1**). References to the Site in the ES refer to both the Solar Site and Cable Route Site together, which are defined below:
  - The 'Solar Site' – the area of the Site where the solar farm and associated infrastructure will be located. This forms the majority of the Site and is split into two parcels approximately 250 m apart (see further detail in **Chapter 2**); and
  - The 'Cable Route'' – the area of the Site required to deliver the cable route connection to St Asaph substation.
- 'the Proposed Development' – the construction, operation, and decommissioning of a ground mounted photovoltaic solar farm, together with associated equipment, infrastructure, and ancillary works which full planning permission is sought (as set out in **Chapter 3)**.
- 'PEDW' – Planning and Environment Decisions Wales. The Welsh Ministers decide planning applications for Developments of National Significance (DNS). PEDW handle DNS applications on behalf of the Welsh Ministers.
- 'Denbighshire County Council (DCC)' – the local planning authority;
- 'the Applicant' – Anesco Ltd.

EIA Terms:

- Primary Mitigation – modifications to the location or design of the development made during the pre-application phase that are an inherent part of the project, and do not require additional action to be taken;

[1] The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017

- Secondary Mitigation – actions that will require further activity in order to achieve the anticipated outcome. These may be imposed as part of the planning consent, or through inclusion in the ES; Tertiary Mitigation – actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects;

- Impact – in relation to the outcome of the project (e.g. the removal of habitat or the generation of emissions to air);

- Effect – the consequent implication in environment terms (e.g. the loss of a potential breeding habitat for a protected species or the reduction in local air quality);

- Detailed Plans – the plans that define the Proposed Development on which the EIA has been based, shown in **Appendix A.2**.

1.3 The Environmental Statement and Other Documents

1.3.1 EIA is a process by which development proposals deemed likely to have significant environmental effects are appraised. EIA is a means of drawing together, in a systematic way, an assessment of a development's likely significant environmental effects. This helps to ensure that the importance of the predicted significant environmental effects, and the scope for reducing them, are properly understood before a decision is made. Information on the likely significant effects of the Proposed Development has been gathered and is presented in this document, the ES. The ES will inform the decision-maker (in this case DCC) of the likely significant environmental effects of the Proposed Development both during construction and operation, and proposes mitigation measures to prevent, reduce or offset any significant adverse effects on the environment.

1.3.2 An EIA Screening Opinion Request was submitted to PEDW in December 2024 and a subsequent EIA Screening Direction (Ref. DNS CAS-01392-D2T3F3) was received in February 2025 and is provided in **Appendix A.3.** The EIA Screening Direction concluded that the project was EIA development and therefore an ES is required. This ES therefore presents the findings of an EIA undertaken in accordance with the EIA Regulations.

1.4 Organisation of the EIA Report

1.4.1 Regulation 17 of the EIA Regulations sets out the information an ES should include. **Table 1.1** below shows where the Regulation 17 information has been provided in this ES.

Table 1.1: Location of Information Required by Regulation 17 of the EIA Regulations

Specified Information		Location within ES
Reg 17 (3) An Environmental Statement is a statement which includes at least—		
(a)	a description of the proposed development comprising information on the site, design, size and other relevant features of the development;	Chapter 3
(b)	a description of the likely significant effects of the Proposed Development on the environment;	Chapter 7
(c)	a description of any features of the Proposed Development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment	Chapters 3 and 7
(d)	a description of the reasonable alternatives studied by the applicant or appellant, which are relevant to the proposed development and its specific characteristics, and an indication of	Chapter 3

Specified Information		Location within ES
	the main reasons for the option chosen, taking into account the significant effects of the development on the environment;	
(e)	a non-technical summary of the information referred to in sub-paragraphs (a) to (d);	Separate standalone NTS
(f)	any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.	Chapters 7
Reg 17 (4) An Environmental Statement must---		
(a)	be prepared by persons who in the opinion of the relevant planning authority or the Welsh Ministers, as appropriate, have sufficient expertise to ensure the completeness and quality of the statement;	A 'statement of expertise' as required by Regulation 17 (4)(b) of the EIA Regulations is provided in Chapter 1.
(b)	contain a statement by or on behalf of the applicant or appellant describing the expertise of the person who prepared the environmental statement;	Chapter 1
(c)	where a scoping opinion or direction has been issued in accordance with Regulation 14 or 15, be based on the most recent scoping opinion or direction issued (so far as the Proposed Development remains materially the same as the Proposed Development which was subject to that opinion or direction);	Chapter 5
(d)	include the information reasonably required for reaching a reasoned conclusion on the significant effects of the development on the environment, taking into account current knowledge and methods of assessment; and	Chapter 7
(e)	take into account other relevant environmental assessments required under Union legislation or any other provision of domestic legislation, with a view to avoiding duplication of assessment.	Chapter 7

1.5 ES Structure

1.5.1 Volume 1 of this ES comprises 9 Chapters and is supported by Figures and Technical Appendices (which are located within a separate Volume 2). A Non-Technical Summary (NTS) of the full ES is provided as a separate standalone document.

1.5.2 The structure of the ES is set out below:

- **Volume 1:** Main Report (this document);

  Chapter 2: Description of the Site and surrounding area;

  Chapter 3: Summary of the Proposed Development;

  Chapter 4: Description of the demolition and construction works, and the site management arrangements;

  Chapter 5: Methodology adopted to undertaken EIA;

  Chapter 6: Summary of the planning and policy context;

  Chapter 7: Landscape and Visual;

  Chapter 8: Summary and conclusion; and

Chapter 9: Glossary of abbreviations used in the ES.

- **Volume 2:** Appendices
- **Non-Technical Summary.**

1.6 Other Documents

1.6.1 A number of other documents have been submitted in support of the planning application. These include:

- Planning, Design, and Access Statement;
- Ecological Impact Assessment and associated protected species survey reports;
- Transport Statement;
- Construction and Traffic Management Plan (CTMP);
- Noise Assessment;
- Arboricultural Impact Assessment;
- Flood Consequences Assessment and Surface Water Drainage Strategy;
- Glint and Glare Assessment;
- Historic Environment Desk-Based Assessment;
- Geophysical Survey Report; and
- Agricultural Land Classification (ALC) Assessment

1.7 Project Team

1.7.1 Regulation 17(5)(a) of the EIA Regulations requires that an ES must '*be prepared by persons who in the opinion of the relevant planning authority or the Welsh Ministers, as appropriate, have sufficient expertise to ensure the completeness and quality of the statement'*. Regulation 17(4)(b) requires an environmental statement to be accompanied by '*a statement by or on behalf of the applicant or appellant describing the expertise of the person who prepared the environmental statement*'.

1.7.2 This ES has been prepared by Stantec. On behalf of the Applicant and in accordance with the EIA Regulations, a statement outlining the relevant expertise and qualifications of competent experts appointed to prepare the ES are provided in **Table 1.2** below.

Table 1.2. EIA Team Expertise and Qualifications

EIA Topic	Company	Expertise
EIA Coordination	Stantec	Stantec is a founder member of the Institute of Environmental Management and Assessment's (IEMA) EIA Quality Mark scheme for quality in EIA. Stantec has a dedicated EIA team that specialises in leading the EIA process for development projects, including land development, regeneration, energy and infrastructure projects. Stantec typically leads 10-20 EIA projects each year. Each of Stantec's EIA team have suitable academic and professional qualifications, with professional qualifications including Principal EIA Practitioner, Practitioner

EIA Topic	Company	Expertise
		and Associate membership of IEMA, member of Royal Town Planning Institute and Chartered Environmentalist.
Landscape and Visual	Stantec	Stantec's Landscape team provides consultancy services related to landscape planning, and design. The team specialises in, amongst other things, Landscape and Visual Impact Assessment, including as technical chapters for EIA applications, for residential, commercial, industrial and energy infrastructure projects. Members of Stantec's Landscape team hold suitable academic qualifications and memberships with professional bodies, including Fellowship and Chartered Membership of the Landscape Institute.

Individual	Pen Profile	Role
Kevin Herman	Qualifications: M.Sc. MIEnvSc. C.Env Relevant Experience and Expertise: Kevin is a Director who leads Stantec's Environmental Planning team. Kevin, has over fifteen years' experience and has led numerous EIA projects, including major urban regeneration, strategic land, employment, energy (generation and transmission) and transport schemes. He has experience of working under different Regulations including England, Wales and the Channel Islands.	EIA Coordinator
Daisy Parsons	*Qualifications:* BA (Hons), MSt, MA, CMLI Relevant Experience and Expertise: She has over ten years' post-qualification experience in landscape design and planning, having worked on residential projects up to 1,400 new homes as well as commercial, industrial and energy infrastructure projects. She has worked with sites associated with Green Belt and National Landscapes, covering both ES and non-ES assessment, contributing to full, outline and reserved matters applications and discharge of conditions	Landscape and Visual

1.7.3 The wider planning application documents as detailed in Section 1.6 have been prepared by a consultant team, including:

- The Applicant;
- SLR Consulting;
- Motion;
- Land Research Associates;
- BWB Consulting;
- Pager Power; and
- 34/7 Communications.

1.8 ES Availability

1.8.1 Electronic copies of the ES can be made available. Requests can be made from:

Environmental Planning Team
Stantec UK Limited
Lakeside House, Blackbrook Business Park, Blackbrook Park Avenue
Taunton, UK
TA1 2PX

e-mail: taunton.uk@stantec.com Tel: 018 2321 8940

1.8.2 The ES should be made available for public viewing. A hard copy of the ES can be issued to PEDW and can be reviewed in person via appointment. Comments on the planning application can also be made via PEDWs' website (Planning Casework).

2 Site and Surrounding Area

2.1 The Site and Surrounding Area

2.1.1 The boundary of the Site is shown on the Site Location Plan provided in **Appendix A.1.**

2.1.2 Within this ES, reference is made to the Solar Site and Cable Route, which are defined in **Section 1.2**. For avoidance of doubt, any references to 'the Site' in this ES refer to both the Solar Site and Cable Route together.

2.1.3 The 35.42 ha Site is located entirely within Denbighshire and therefore within the jurisdiction of DCC. The Site is located within the Cefn Estate, to the south-west of the settlement of St Asaph (700m to the north-east of the Solar Site) and to the south-east of St Asaph Business Park (770m to the north-west of the Solar Site). Eryl Hall Caravan Park lies 410m to the north-east.

2.1.4 In addition to the St Asaph Business Park, the Site's northern context includes Gwynt y Mor Offshore Wind Farm Electrical Distribution Station (580m to the north-west) and its onshore substation (380m to the north-west), as well as a photonics factory (760m to the north-west).

2.1.5 The Site is situated within close proximity to a network of electricity transmission pylons which follow a broadly east-west alignment; with pylon strings passing directly across the Site.

2.1.6 To the south of the Site, built form comprises scattered farmsteads, isolated residences and a few small villages including Cefn (1km to the south) and Groesffordd Marli (1.1km to the west). Other settlements further from the Solar Site include the town of Rhuddlan (4.6km to the north) and the villages of Bodelwyddan (3km to the north-west), Trefnant (2.7km to the south-east) and Henllan (3.6km to the south). Rhyl is located approximately 6.6 km to the north of the Site.

2.1.7 The Solar Site is split into two parcels approximately 250 m apart: a western parcel (approximately 13.22 ha) and an eastern parcel (approximately 20.32 ha). The approximate centre of the of the western parcel is at grid reference SJ 02050 72643 and the approximate centre of the eastern parcel is at grid reference SJ 02647 72288. Within the ES, these two parcels are referred to as the 'eastern parcel' and the 'western parcel'.

2.1.8 The Solar Site is largely rural and agricultural, with a patchwork of mixed pastures and arable fields enclosed with hedgerows, interspersed with trees and small pockets of woodland.

2.1.9 The Cable Route is limited to highways that connect the Solar Site to St Asaph Substation. This includes the track to Tyn Y Coed, Glascoed Road, and Cwttir Lane.

2.1.10 The landform of the immediate context of the Solar Site slopes gently up toward the south-west, such that main extents of the eastern and western parcels are at broadly similar elevations (45-65m AOD and 50-68m AOD respectively). At its lowest the Solar Site reaches 45m AOD at the northern corner of the eastern parcel, and extends to 68m AOD at the southern corner of the western parcel.

2.1.11 At a regional scale, the Site is located within the wide valley associated with the Elwy and Clwyd Rivers. The valley is enclosed to the east by the Clwydian Range and to the west and south by the Rhos Hills. Locally the ridge of Cefn Meiriadog encloses the Site to the south-west.

2.2 Environmental Context

Transport and Access

2.2.1 The Solar Site is accessed off a track to Tyn Y Coed, which runs between the western and eastern parcels, to which the national speed limit applies. The recorded vehicle movements on the track to Tyn Y Coed suggest the road is lightly trafficked and accommodates Heavy Goods Vehicles (HGV's), and there is no pedestrian infrastructure or street lighting.

2.2.2 The wider road network surrounding the Site includes the A55 (North Wales Expressway) crossing broadly east/west 1.5km to the north of the Solar Site, and the A525 running broadly north/south 1.3km to the east of the Solar Site. Other roads in the vicinity of the Site include the A541 2.9km to the south-east of the Solar Site and the A547 4.7km to the north of the Solar Site. No railway lines are present within 5km of the Site.

2.2.3 There are no PRoW within the Site boundary. PRoW within the surrounding area are described in **Section 7.5.8.**

2.2.4 A Transport Statement (Motion, 2025) has been submitted in support of the planning application.

Landscape and Visual

2.2.5 There are no statutory designated landscape sites within or adjacent to the Site boundary. The nearest statutory site is the Clwydian Range and Dee Valley National Landscape which covers 390 square km and is located approximately 5 km to the east. The majority of the Site lies within the Vale of Clwyd National Landscape Character Area 11, and the north western extents of the western parcel lie just within the Rhos Hills National Landscape Area 9.

2.2.6 A detailed description of the landscape and visual baseline conditions is provided in **Chapter 7**.

Heritage and Archaeology

2.2.7 There are no designated historic assets located within the Site.

2.2.8 There are no recorded non-designated historic assets within the Site. Geophysical surveys, covering the entire Site, have not recorded any anomalies of an archaeological origin within the Site boundary. The geophysical survey has recorded both post-medieval and modern agricultural features within the Site, which include ridge and furrow, drainage features, and modern cultivation remains. Such remains would retain little, if any, evidential interest and would be of accordingly low significance. The examination of such remains under archaeological conditions would contribute little further to our understanding of the agricultural practices of these periods and / or of local land-use. Such remains would not be anticipated to comprise assets of the highest significance, and they would not warrant preservation in situ or otherwise preclude development within the Site.

2.2.9 The Lower Elwy Valley is a Registered Historic Landscape within North Wales, located to the south of St. Asaph and the Site. The boundary of the Registered Historic Landscape is approximately 400 m to the south of the Site.

2.2.10 There are several listed buildings within 1 km of the Site. The Church of St Mary, Grade II listed, is approximately 900 m to the south of the western parcel of the Proposed Development. The Scheduled Monument Bedd-y-Cawr hillfort is located approximately 675 m to the southwest.

2.2.11 A Historic Environment Desk-Based Assessment has been submitted in support of the planning application.

Land and Soils

2.2.12 In terms of the agricultural land quality within the Site, the Welsh Government's Predictive Agricultural Land Classification (ALC) Map indicated that the land is classified as Grade 3b.

2.2.13 An agricultural land quality survey was undertaken in January 2022, with additional surveys in September 2023 and December 2024. The soils were found to be highly uniform across the Site, mainly comprising medium clay loam topsoil over dense slowly permeable reddish clay, usually with a thin moderately permeable clay loam upper subsoil. Slight variations comprised heavy rather than medium clay loam topsoil at a small number of points, and occasionally a deeper permeable upper subsoil layer. All of the soils were found to show evidence of seasonal waterlogging at shallow depth.

2.2.14 The agricultural quality of the land is primarily limited by wetness. It has been assessed that all of the agricultural land within the Solar Site is classified as Subgrade 3b. As such, the land does not qualify as Best and Most Versatile (BMV) agricultural land.

2.2.15 An ALC Assessment has been submitted in support of the planning application.

Air Quality

2.2.16 According to the Air Quality in Wales online interactive map, the Site is not located within an Air Quality Management Area (AQMA), and there are no AQMA's within Denbighshire or any of its neighbouring local authorities.

Flood Risk and Drainage

2.2.17 With reference to Natural Resources Wales (NRW) Flood Maps for Planning, the Site lies entirely within an area with Less than 1 in 1000 (0.1%) (plus climate change) chance of fluvial or coastal/tidal flooding in a given year (Flood Zone 1).

2.2.18 The main hydrology feature within the vicinity of the Site is the River Elwy, which is found approximately 750 m to the east of the Site boundary at its closest point, which runs in a northerly direction towards the northern coast of Wales.

2.2.19 Within the western parcel of the Site, some drainage ditches are present along field boundaries and there are two ponds. Within the eastern parcel of the Site, a drainage ditch is present, and an un-named watercourse runs along the field boundary to the northeast. No existing drainage systems are present across the Site, and runoff currently drains via a combination of infiltration into the subsoil with any excess flow conveyed overland following local topographic gradients.

2.2.20 The Warwickshire Group beneath the Site has been designated as a 'Secondary A' Aquifer, defined as '*permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers'.*

2.2.21 A Flood Consequences Assessment (SLR, 2025) has been submitted in support of the planning application.

Biodiversity

2.2.22 There are no statutory designated ecological sites within or adjacent to the Site boundary. The closest statutory designated nature conservation sites are Coedydd ac Ogofau Elwy a Meirchion Site of Special Scientific Interest (SSSI) and Coedwigoedd Dyffryn Elwy / Elwy Valley Woods Special Area of Conservation (SAC) which are located approximately 865m from the southern boundary. Additionally, there is one Special Protection Area (SPA) within 10km of the Site boundary, namely the Liverpool Bay / Bae Lerpwl (Wales) SPA, and three SSSIs which list bats as a qualifying feature. The Dee Estuary SPA and Ramsar Site is within 15km of the Site boundary.

2.2.23 Habitats within the Solar Site include mixed deciduous woodland, streams, ponds, modified grassland, trees, neutral grassland, native hedgerow, and ditches. The Cable Route is restricted entirely to road surfaces.

2.2.24 Ecological and Arboricultural Impact Assessments have been submitted in support of the planning application.

Noise and Vibration

2.2.25 A baseline noise survey has been undertaken to determine the existing ambient noise levels at two noise sensitive receptors in the vicinity of the Site. The noise climate was noted to be dominated by distant road traffic noise from the surrounding road network and occasional noise from farmers in nearby fields.

2.2.26 The Noise Impact Assessment shows that the proposed plant is at a distance from sensitive receptors and sound levels are considerably below the background sound levels, as such it is considered unlikely any acoustic features will be perceptible. Therefore, operations associated with the Proposed Development have the potential to result in a low impact at existing noise sensitive receptors, and no mitigation is required. Based on the results of the assessment, it has been demonstrated that the Site is suitable for the proposed use.

2.2.27 A Noise Assessment (BWB, 2025) has been submitted in support of the planning application.

3 The Proposed Development

3.1 Introduction

3.1.1 This chapter sets out the description of the Proposed Development for which full planning permission is sought.

3.2 Description of the Development

3.2.1 The description of the Proposed Development is:

"Ground mounted photovoltaic solar farm, together with associated equipment, infrastructure and ancillary works".

3.2.2 Full planning permission is sought for the construction, operation, and decommissioning of the Proposed Development. Once operational, the Proposed Development will have an operational lifespan of up to 40 years.

3.2.3 The Proposed Development will have a total installed capacity of 18.44MW.

3.3 Proposed Infrastructure

3.3.1 The Proposed Development will include the following key elements of infrastructure:

- Solar panel modules mounted on a piled metal framework (array);
- 50 string inverters;
- 5 Low Voltage (LV) Switch / Transformer substations;
- 2 Point of Connection (POC) Customer substations;
- A District Network Operator (DNO) substation;
- On-Site cabling and an underground cable to the St Asaph substation;
- Deer fencing;
- Site accesses, access gates, and internal access tracks; and
- Landscape planting and ecological enhancements.

Solar PV Panels

3.3.2 The Proposed Development will include solar panel modules. The solar panels will be mounted on metal frames, at a tilt angle of between 15-20 degrees on a framework system secured to the ground by metal piles (piling depths typically between 1.5 m and 2 m).

3.3.3 The maximum height of the panels will be 3 m above ground level. The panels will face due south and will be dark blue or black in appearance. The lowest edge of the panels will be a minimum of 90 cm above the ground, and they will be positioned in rows with approximately 4.5 m of space from front to back, so that the land can remain in agricultural use (grazing).

String Inverters and Transformer Stations

3.3.4 Inverters convert direct current ('DC') generated by the solar PV panels into alternating current ('AC'). Transformers then convert low voltage output from the inverters to high voltage suitable for feeding into the local electric distribution network.

3.3.5 The Proposed Development will require the installation of 50 string inverters and 5 transformer stations in order to convert the generated electricity and ensure its compatibility with the electricity network.

3.3.6 The transformer stations will be approximately 2.5m in height, measure 6.1m x 2.5m, and are located at various locations throughout the Site.

3.3.7 The string inverters will be located underneath the solar arrays.

DNO Substation

3.3.8 A DNO substation is required to facilitate the connection to the grid. The DNO substation building will be built on concrete foundations, will be approximately 4m in height, and measure 5.7m x 5.7m. The DNO substation building and associated infrastructure including and will be enclosed by 2 m high palisade fencing.

Customer Substation

3.3.9 The customer substation buildings include the switchgear that receives electricity from the inverters and transformers before transferring it to the DNO substation via underground electrical cables.

3.3.10 The two customer substations will be approximately 4m in height and measure 6.5m x 2.4m. One customer substation will be located in both the western and eastern parcels of the Site.

Electrical Cabling

3.3.11 In order to connect the eastern and western parcels of the Site, a connection cable will be installed below ground, with directional drilling in certain areas where tree roots are to be avoided.

3.3.12 The solar panels will be electrically connected to the St Asaph substation by means of 33kV cables. Within the Solar Site, these would be laid underground in trenches running adjacent to the on-Site access tracks. Along the cable route, which includes the track to Tyn Y Coed, Glascoed Road, and Cwttir Lane (as shown on the Site Location Plan in **Appendix A.1**), the cables will be laid in trenches underneath the roads. The cables will be surrounded by a minimum of 75mm sand backfill and the cables will be in a 150mm duct in accordance with DNO requirements.

Lighting

3.3.13 No structures on-Site would be permanently lit. Emergency lighting will be present on the DNO substation.

Fencing, Security and other Ancillary Development

3.3.14 For health and safety, and to secure the Solar Site to prevent theft and criminal damage during both the construction, operation and decommissioning phases of the Proposed Development, the installation of a new 2 m high 'deer fence' is proposed within the Site boundary. Fencing will have a minimum of 150mm gap at the base, allowing for the safe passage of badgers and other wildlife.

3.3.15 The perimeter of the Solar Site would be protected by a system of fixed security and monitoring CCTV cameras mounted on approximately 3 m tall columns and would be inward facing at intervals along the boundary for security purposes to provide full 24-hour surveillance around the internal perimeter. Cameras would only monitor inside the Site and not record any public of private land outside the perimeter. An intelligent sensor management system would manage the cameras.

Access

3.3.16 The Solar Site will be accessed via two existing accesses off the track to Tyn y Coed. The southern of which will be widened.

3.3.17 Construction vehicles will turn off the A55 onto the A525 and travel southbound until the roundabout between the A525 and B5381 is reached. Construction vehicles will take the B5381 exit and travel southwest until the junction with the track to Tyn y Coed is reached. Construction vehicles will turn left onto the track to Tyn y Coed and travel southbound until the two site accesses are reached.

3.3.18 Internal access tracks made of crushed, permeable stone will be developed across the Solar Site, with widths typically ranging between 4-5 m.

3.3.19 As there are no PRoW's within the Site, no closures or diversions will be required during construction and operation.

Temporary Infrastructure and Enabling Works

3.3.20 The following components would form temporary features throughout the construction phase of the Proposed Development:

- Temporary enabling works and construction compound; and
- Hardstanding for lay down areas

3.3.21 Enabling works are erected at the beginning of the construction period. The location(s), size, and indicative individual structures contained within the enabling works and construction compound(s) are shown in **Appendix A.2**. Further details on the proposed construction activities and programme are provided in **Chapter 4.**

Operational Maintenance

3.3.22 The Proposed Development has a proposed operational lifespan of 40 years. During the operational phase maintenance activities, including servicing of plant and equipment and vegetation management, will be undertaken.

3.3.23 It is anticipated that will vehicle movements will be minimal and comprise 1 car / van visiting the Site once every two weeks, equivalent to 4 two-way movements per month.

3.4 Primary Mitigation

3.4.1 In accordance with Regulation 17(3)(c) of the EIA Regulations and guidance for the Institute for Environmental Management and Assessment (IEMA) Delivering Quality Development (IEMA, 2016), the assessment has taken account of primary mitigation which is inherent in the scheme design. The key primary mitigation which forms part of the Proposed Development include the following:

- A minimum 15m buffer is established between any of the Site infrastructure and the designated sites or areas of ancient woodland, accounting for Root Protection Areas;

- Native buffer planting of trees and scrub is proposed to widen the woodland habitat along the western boundary of the Eastern Parcel, improving habitat connectivity between Glascoed LWS and Pig-y-fran ancient woodland;
- Where possible existing gaps (gateways) have been used for the positioning of the access track and security fence. Removal of hedgerow habitat, where necessary, shall involve only short sections, and this will be undertaken outside of the nesting bird season (March – August);
- Two of the Site's ponds will undergo re-instatement/ improvement, deepening and widening them as appropriate, a further seven will be created. Spoil generated from the reinstatement or forming of ponds shall be used to create a series of hibernacula;
- Setting panels and other built features back from adjacent highways to limit the potential for close range views from sensitive receptors;
- Consideration of the height and scale of development to limit the potential for impacts on landscape character areas outside the Solar Site and on views experienced by sensitive receptors;
- Retention and reinforcement of the existing vegetation along Site boundaries;
- Retaining as far as possible the existing structure of vegetation within the Solar Site and managing vegetation and grassland to encourage improved biodiversity;
- Creation of 1.19ha of native tree planting within the Solar Site;
- Creation of 0.65ha of native shrub planting between the proposed native tree planting and the security fencing to provide new habitat opportunities through a transition from woodland to grassland;
- Provision of 0.09ha of waterbody enhancement through wildflower meadow wetland seeding across 10m buffers to the ponds, streams and ditches within and adjacent to the Solar Site for biodiversity enhancements and benefits to visual amenity;
- Existing grassland areas within the fence will be mown or grazed regularly, while that outside the fence will be allowed to grow to a tall sward and mowed infrequently, resulting in improved habitat potential across 26.75ha of grassland
- A hedgerow improvement strategy totalling 173 linear metres of new hedgerow and 2.8 linear kilometres of reinforcement of existing hedgerow with an appropriate species-rich native planting palette.
- Implementations of a Sustainable Drainage System (SuDS). Runoff from hardstanding areas will be collected and treated by a lined filter drain and conveyed towards an attenuation swale through a conveyance swale. Discharge of surface water runoff from the swale will be controlled using a hydrobrake to a maximum rate of 1 l/s;
- Noise-emitting infrastructure (i.e. transformers) are sufficiently distanced from noise sensitive receptors, such that the predicted noise levels would have a low impact; and
- No excavated materials will require removal from the Site. Any excavated soil will be reused for backfilling or in the creation of banks.

3.4.2 Further details of the proposed ecological mitigation can be found in the Ecological Impact Assessment (SLR, 2025) provided in **Appendix A.5**.

3.4.3 The proposed drainage strategy is detailed in the Flood Consequence Assessment and Surface Water Drainage Strategy (SLR, 2025) provided in **Appendix A.6.**

3.5 Tertiary Mitigation

3.5.1 The key tertiary mitigation includes the Construction and Traffic Management Plan (CTMP) prepared by the Applicant to support this application (**Appendix A.4**). The CTMP sets out the environmental management procedures to be adopted during the construction works on Site to help control potential temporary adverse impacts to the environment and local community.

3.6 Consideration of Alternatives

3.6.1 Regulation 17(3)(d) of the EIA Regulations require an applicant to provide:

> *"A description of the reasonable alternatives studied by the applicant or appellant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the significant effects of the development on the environment*".

3.6.2 Schedule 4 (2) is worded slightly differently and requires:

> *"A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the applicant or appellant which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects."*

3.6.3 This legal requirement is expressed in very general and high-level terms, requiring only the inclusion of "reasonable" alternatives and an "indication" of "main" reasons. Although a full description of alternatives and a full assessment of their likely environmental effects are not required, sufficient detail should be provided to allow for a meaningful comparison between the alternatives and the Proposed Development.

3.6.4 Alternatives should only be considered where they are feasible, realistic, and genuine. This may depend on various factors, including planning policy, land ownership, financial viability, technical feasibility, and design quality. Options which are unlikely to be acceptable or deliverable are not realistic alternatives and so do not need to be considered.

3.6.5 Whilst environmental effects are relevant when choosing between alternatives, other factors are also relevant. The main selection criteria which the Applicant has used when choosing between the alternatives which it has considered include planning policy, viability, design quality, market requirements, site constraints and opportunities and environmental effects.

3.6.6 The following provides an outline of the reasonable alternatives considered in relation to the Proposed Development and the main reasons for choosing the Proposed Development in preference to them, including a comparison of the environmental effects.

No Development

3.6.7 The 'do nothing' alternative refers to the option of leaving the Site in its current state, as described in **Chapter 3**, and the Proposed Development would not be progressed. In this scenario, the existing configuration of the land would remain the same in the form of agricultural fields that are predominately used for agricultural purposes. As such, the significant impacts (both adverse and beneficial) highlighted in this ES would not occur.

3.6.8 The generation of solar energy is one of the key elements towards the UK achieving net zero carbon, therefore not adding to the total amount of greenhouse gases in the atmosphere. Under current legislation and policy, the UK Government is obligated by law to reduce carbon emissions and to achieve net zero carbon emissions by 2050. These obligations underpin the need for renewable energy, such as solar. The Proposed Development will have an export capacity of 18.44MW. Should the Proposed Development not be taken forward, its energy-generating potential and potential carbon savings would not be achieved. The 'do nothing'

alternative would result in the loss of the generation of this renewable energy in line with UK Government targets, therefore the Applicant did not consider this to be an acceptable or realistic alternative option.

Alternative Locations and Forms of Development

3.6.9 The Site selection exercise has been undertaken with regard to a number of different planning policy, environmental, and technical criteria including:

- The availability of utilities and a viable grid connection;
- Landowner willingness to release land for the Proposed Development on agreeable commercial terms;
- Likely irradiance of the area to power the panels;
- Proximity to local population;
- Topography;
- Field size;
- Non-BMV land;
- Flood risk;
- Access;
- Presence of ecological designations; and
- Landscape designations.

The Availability of Utilities and Viability of a Grid Connection

3.6.10 The Proposed Development must be located near an existing grid connection to ensure that renewable electricity generated can be exported to the National Grid. The Applicant has a Bilateral Connection Agreement which provides a suitable POC into the existing 33 kV network which is fed from the St Asaph Grid Supply Point. The Applicant therefore has a viable POC which can facilitate the Proposed Development and enable the project to energise in Q4 2028.

Proximity to Local Population

3.6.11 The Site has been selected with regard to distance and visibility between the Proposed Development and the surrounding residential settlements. As concluded in **Chapter 7,** by year 15 none of the visual receptors will experience significant adverse effects as a result of the Proposed Development.

Topography

3.6.12 Flat or gently undulating land is preferred for solar development as construction is more straightforward, shading between arrays is limited and more consistent and flat land is generally less visible than slopes, where the surrounding topography is also flat or has gentle gradients.

3.6.13 The overall topography of the Site is generally flat or gently undulating which makes it suited to a large-scale solar development due to the large open area of undeveloped land which would provide uniform exposure to irradiance.

Field Size

3.6.14 For maximum efficacy in solar installations, large open fields are preferable. However, smaller fields with established field boundaries will help to visually contain a solar proposal, where needed, and be more sympathetic to local landscape character. Therefore, a balanced approach to field size and boundary treatment is needed.

3.6.15 The Site includes a range of field sizes allowing delivery of a substantial solar farm scheme while still leaving portions of the Site for landscape and biodiversity enhancements and mitigation.

Agricultural Land Classification

3.6.16 National level guidance on the deployment of ground mounted solar expresses a preference to avoid 'Best and Most Versatile (BMV) Agricultural Land' where possible. Grades 1, 2 and 3a of the Agricultural Land Classification (ALC) survey are considered to be BMV land, whilst Grades 3b, 4 and 5 do not constitute BMV.

3.6.17 It has been assessed that all of the agricultural land within the Solar Site is classified as Subgrade 3b. As such, the land does not qualify as Best and Most Versatile (BMV) agricultural land, and the selected Site will not result in the loss of any BMV land.

Ecological Designations

3.6.18 Ecological designations have been considered throughout the Site selection process. There are no statutory designated ecological sites within or adjacent to the Site boundary. The closest designated nature conservation site of international importance is Coedwigoedd Dyffryn Elwy / Elwy Valley Woods Special Area of Conservation (SAC) which is located approximately 1 km from the southern boundary. As concluded in the EcIA, the Proposed Development will not result in any significant adverse effects on designates sites.

Landscape Designations

3.6.19 During the Site selection process, consideration of potential impacts to landscape designations have been considered, notably the Clwydian Range and Dee Valley National Landscape. The Site selected is not covered by any designations for landscape or scenic beauty.

Design Evolution

3.6.20 The redline boundary of the Site has been amended since submission of the EIA Screening Report in May 2022 to avoid ancient woodland and remove land which due to shading issues, placing solar arrays would have entailed some cropping / coppicing of mature trees primarily within the hedgerows and field margins within the Site. The changes to the Site boundary are summarised as follows:

- A slight change to the total Site area from 33.8ha to 35.42ha;
- A field, previously furthest to the east has been removed from the proposed Site (the field is adjacent to woodland);
- A field, previously furthest to the northwest has been removed from the proposed Site (this field is surrounded by ancient woodland);
- Additional fields have been added to the northwest of the Site; and
- Additional fields have been added to the northeast of the Site.

3.6.21 Amendments to the Site boundary have been made to minimise potential environmental impacts and also maximise the opportunities for providing mitigation and enhancement with the Site. This enhancement includes creation of woodland (off-site and on-site) and pond improvements.

3.6.22 More recently, the Proposed Development has further evolved to provide finer detail revisions following Site specific feedback and technical reports. For example, internal access tracks and fencing has been revised to avoid hedgerow and trees thereby enabling greater tree and hedgerow retention. Ecologically sensitive landscaping and planting is also proposed. Furthermore, the access arrangements have been reviewed to provide sufficient visibility whilst also retaining hedgerows and trees wherever possible.

4 Construction, Site Management, and Decommissioning

4.1 Introduction

4.1.1 This chapter provides information on the anticipated construction methodology of the Proposed Development, Site management measures, and the decommissioning phase.

4.1.2 Given the nature of the Proposed Development, planning for construction is necessarily broad at this stage and may be subject to modification. This initial assessment is based on reasonable assumptions and experience and allows assessment of the realistic “worst-case” construction phase effects.

4.2 Construction Programme

4.2.1 It is currently anticipated that the construction phase will commence in Q1 2028 and complete in Q4 2028, with a construction period of 36 weeks.

4.2.2 All construction works will be undertaken between the hours of Mon-Fri 07:00 to 18:00 and Sat 08:00-14:00 only unless otherwise specified in writing by DCC. There will be no working on Sundays or Bank Holidays.

4.3 Construction Activities

4.3.1 The activities on-Site during the construction phase are expected to include the following:

- Site establishment and enabling works for construction, including the erection of perimeter fencing and implementing any required ecological / environmental protection measures;
- Implementation of temporary construction facilities, temporary security measures and internal access track;
- Deliveries and construction of the solar farm, including the installation of mounting framework, solar panels and ancillary units;
- Deliveries and construction of the substations;
- Cable trenching, ducting and backfilling to connect solar generating equipment to the POC equipment;
- Testing Commissioning of the generating station equipment and grid connection equipment; and
- Landscaping and biodiversity enhancements.

4.3.2 Environmental effects associated with the construction phase will be managed through a Construction and Traffic Management Plan (CTMP) prepared by the Applicant. The CTMP outlines, as appropriate, the measures to be implements during construction to mitigate environmental effects.

4.3.3 The CTMP will provide a framework to govern the construction works including further information on the roles, responsibilities and communications during construction, construction management and methodology, and mitigation measures associated with construction traffic, air quality and dust, noise and vibration, and contamination and ground conditions.

4.4 Construction Traffic

4.4.1 During the construction phase, it is estimated that there will be 4 two-way HGV movements per day and 30 two-way Light Goods Vehicle (LGV) / car movements per day.

4.4.2 To manage construction traffic (both LGVs and HGVs) and to ensure traffic does not travel on inappropriate roads, construction vehicle access routes have been identified for the Proposed Development. Construction vehicles will reach the Site as follows:

- Construction vehicles will turn off the A55 onto the A525 and travel southbound until the roundabout between the A525 and B5381 is reached;
- Construction vehicles will take the B5381 exit and travel southwest until the junction with the track to Tyn Y Coed is reached; and
- Construction vehicles will turn left onto the track to Tyn Y Coed and travel southbound until the two site accesses are reached.

4.5 Construction Management

4.5.1 As stated in **Chapter 3**, the Proposed Development will include temporary infrastructure during the construction phase including a construction compound. The temporary compound will be formed of a temporary permeable hardcore / gravel base atop a mesh membrane to facilitate ease of removal when construction is complete. Compounds will include:

- Temporary gated security fencing (e.g. Heras Fencing) and temporary CCTV cameras;
- Temporary portable buildings to be used for offices, welfare, and toilet facilities;
- Materials and equipment storage areas;
- Parking and turning areas for delivery vehicles and workers' vehicles; and
- Wheel washing facilities.

4.5.2 In order to avoid potential significant environmental effects during the construction phase, best practice measures will be implemented through the CTMP, which has been prepared by the Applicant to support this application (**Appendix A.4**). Management measures include:

- Construction traffic routeing (as detailed in **Section 4.4**);
- Any excavated soil will be reused for backfilling or in the creation of banks;
- There will be no contact with muddy / dirty ground as all delivery vehicles traverse the hard standing and therefore none or very little debris should be tracked out on to the road outside, with no field plant tracking on to road outside. There will be road sweeping and wheel washing services available should the need arise;
- A Banksman will be used to aid HGV deliveries arriving and leaving the site where required;
- Where possible labour will be resourced locally;
- Delivery restrictions;
- The vehicles will be serviced and kept to a road / work worthy state through regular inspections;

- Fuels are to be stored within the fuelling area / diesel bowser where they must be stored in double skinned bunded tanks with drip trays and spill kits. Fuelling is prohibited elsewhere on Site;

- Contractors will be required to conform to the construction noise code of practice BS 5228; and

- Incident and Pollution prevention measures and emergency response procedure.

4.5.3 Construction phase mitigation measures are also detailed in the EcIA (SLR, 2025) submitted with the planning application. Key measures include:

- Good practice environmental and pollution control measures will be employed with regard to current best practice guidance such as, but not limited to, the following:

    - CIRIA C532, 'Control of water pollution from construction sites: guidance for consultants and contractors' (2001).

    - CIRIA C741, 'Environmental good practice on site guide' (2015 4th Ed.).

- Precautionary measures to be employed during construction, include:

    - Any excavations to be in-filled within the same day, or if not possible, excavations should be covered or provided with a sloping side (>45%) or ramp to allow wildlife to escape; and

    - Exclusion zones to be maintained around Root Protection Areas (RPA) of retained trees and hedgerows.

- Work during the construction phase will be undertaken in the daytime to avoid the need for lighting at night.

- Dependant on the final construction programme and site design, it may be possible to avoid impacts on GCN through the careful timing of the works and precautionary methods of working. If this is not possible a European Protected Species Licence (EPSL) would need to be sought from NRW ahead of the proposed works. The conditions of the EPSL would be specified to ensure that construction and continued presence of the solar farm does not result in significant adverse impacts to the local population of GCN. The EPSL Method Statement will include the measures that will be implemented and will be submitted to NRW once surveys for GCN are completed.

- Vegetation clearance during bird nesting season (March - August) would be avoided, or if clearance is required during nesting season, this would commence following a check for nesting birds by a suitably qualified ecologist.

- A pre-commencement badger check would be undertaken by an Ecological Clerk of Works (ECoW) prior to the start of each phase of construction, to check for any new badger setts and signs.

- A pre-commencement water vole survey shall be carried out by an ECoW, as a precaution.

- A Precautionary Working Method Statement shall be implemented for the removal of the sections of hedgerow, including details on appropriate timing of the works, requirement for pre-commencement checks or ECoW supervision.

4.6 Construction Waste

4.6.1 During the construction period, measures will be put in place to ensure that waste will be minimised and opportunities for recycling maximised, including through implementation of the CEMP. All relevant recycling and waste regulations and policy will be followed at all times, which will include the Waste Electrical and Electronic Equipment Regulations 2013[2].

4.6.2 Construction waste will be managed and minimised in line with the Waste Hierarchy. The waste management methods in order of preference are as follows:

- Waste Prevention – Through good design and procurement mechanisms.
- Preparation for Reuse – To provide design features to the Proposed Development to use materials in their current state and form, this can occur either on or off site.
- Material Recovery – By using waste materials found on site and recycling / recovering them into an alternative form that can be used for construction purposes.
- Other Recovery – Energy recovery from biodegradable or combustible materials.
- Disposal – The least preferred option where the waste stream would be subject to a final disposal route, such as landfill.

4.7 Decommissioning

4.7.1 Following the operational period of 40 years, the Development will be decommissioned, and the Site could be returned to its current agricultural use. All solar array infrastructure including modules, mounting structures, cabling, inverters and transformers would be removed and recycled or disposed of in accordance with good practice available at the time.

4.7.2 Prior to decommissioning, a Decommissioning Environmental Management Plan (DEMP) will be prepared and submitted to DCC for approval.

[2] The Waste Electrical and Electronic Equipment Regulations 2013

5 Assessment Method

5.1 Introduction

5.1.1 This chapter describes the process by which the EIA has been carried out. It includes a discussion of the relevant regulations, the EIA process, consultations and the over-arching assessment methods applied.

5.1.2 The ES has been prepared in accordance with the EIA Regulations and reference has also been made to currently available good practice guidance on EIA.

5.2 EIA Regulations

5.2.1 The EIA Regulations implement EC Directive 85/337/EEC, as amended, into domestic legislation. The initial Directive and its three amendments have been codified by Directive 2011/92/EU. A new Directive 2014/52/EU was implemented in 2014 and the provisions and requirements were enacted in the UK on 16th May 2017 to form the EIA Regulations.

5.2.2 The EIA Regulations set out the procedures for undertaking an EIA and the information which is required in an ES and such procedure has been followed in this assessment.

5.3 EIA Process

5.3.1 In general terms the main stages in the EIA are as follows:

- **Screening** – determining whether a proposed project falls within the remit of the EIA Regulations;
- **Scoping** – determining the extent of issues to be considered in the assessment and reported in the ES;
- **Establishing Baseline** – drawing together and reviewing existing available data and undertaking surveys to determine the existing and future baseline conditions;
- **Assessment and Iteration** – assess likely significant effects of development, evaluate alternatives, provide feedback to design team on potential adverse impacts, modify development or impose parameters, incorporate mitigation, assess effects of mitigated development; and
- **Preparation of the ES**.

5.4 Screening

5.4.1 An EIA Screening report was previously submitted to PEDW, as authorised by the Welsh Ministers to provide the screening direction on 13th May 2022 with regards to this Site . PEDW responded on the 26th January 2023 (Ref: DNS CAS-01392-D2T3F3) that the application was not EIA development within the meaning of the Regulations and that there are unlikely to be any significant environmental effects.

5.4.2 The conclusion stated:

> "*the proposal will be sufficiently distanced from historic assets and coupled with inclusion of mitigation measures in the CEMP, any impact on adjoining land and the majority of ecological features can be appropriately mitigated and minimised. Whilst there are likely to be cumulative Landscape and Visual Impacts with other proposed infrastructure projects in the vicinity, I do not consider that they are likely to be significant*".

5.4.3 Following receipt of the non-EIA Screening Direction, some amendments were made to the Proposed Development in order to avoid cropping / coppicing of ancient woodland.

5.4.4 Subsequently, an EIA Screening Opinion Request was submitted to PEDW in December 2024 in relation to the updated proposals and an EIA Screening Direction (Ref. DNS CAS-01392-D2T3F3) was received in February 2025 (provided in **Appendix A.3)**. The EIA Screening Direction concluded that the project was EIA development and therefore an ES is required.

5.4.5 PEDW considered the Proposed Development to require an EIA on the following grounds:

> *"On* the *basis of the information available in the Screening Report and the consultation responses by Denbighshire County Council and NRW, I consider that significant effects are likely in relation to landscape character and visual amenity, particularly on the Clwydian Range and Dee Valley Area of Outstanding Natural Beauty/ National Landscape. In addition, due to the concentration of renewable energy infrastructure within the immediate area, significant cumulative landscape and visual effects are also considered likely. As such, the proposed development represents EIA development, and an ES is required to accompany any future DNS development."*

5.5 Scoping

5.5.1 Under the EIA Regulations, EIA Scoping is not currently mandatory. The Applicant has elected not to undertake formal EIA Scoping in respect of this EIA and therefore a Scoping Opinion has not been sought from PEDW.

5.5.2 The Scope of the ES has been informed by the Screening Direction received from PEDW, which identified that significant effects are likely in relation to landscape character and visual amenity only. A such, the scope of the ES is limited to landscape character and visual amenity. For the remainder of the environmental topics, no likely significant environmental effects are anticipated, and where appropriate these are assessed in standalone assessment submitted with the application.

5.6 Consultation

5.6.1 In addition to pre-application engagement through the EIA screening process, consultation with relevant statutory and non-statutory bodies has been undertaken throughout the EIA and design process.

5.6.2 The following consultees have been consulted to agree the detailed scope of the assessment, to provide information, to discuss assessment methods and findings, and / or agree mitigation measures and design responses. A summary of key consultees and the key technical areas that were consulted on is included below:

- NRW and DCC – to agree the developments to be included within the cumulative assessment;
- DCC – pre-application advice was provided in May 2022. **Table 7.1** details how issues raised have been addressed within this ES;
- NRW – agreement of ecology survey approaches with Senior Species Advisor; and
- DCC – consultation was undertaken with the Environmental Health Officer to agree the noise assessment methodology.

5.7 Assessment Assumptions

5.7.1 The following assumptions have been used to ensure that the EIA provides a robust assessment of likely significant effects of the Proposed Development:

- Assessments assume the baseline conditions at the time of ES preparation (2025);
- Baseline conditions have been established through site surveys and desk-based assessment of the current conditions onsite;
- It is assumed that current surrounding land uses will not change, with the exception of the cumulative schemes identified;
- Assessments are based on published sources of information and primary data collections. Sources are provided as necessary;
- Information received by third parties is complete and up to date;
- Assessments conclude the "worst case" effects that would arise from the Proposed Development as defined in **Chapter 3**;
- The Proposed Development will be constructed broadly in accordance with the programme and construction practices documented in **Chapter 4**;
- The Proposed Development will be delivered in accordance with the Detailed Drawings (shown in **Appendix A.2**);
- The assessment of likely significant cumulative effects has assumed that the approved and / or existing developments identified in **Appendix A.7**. will be built out as set out in the documents supporting those applications; and
- Suitable planning conditions or planning obligations will be imposed as identified in this ES to secure appropriate mitigation measures.

5.8 Uncertainty and Limitations

5.8.1 The studies undertaken within the ES have been progressed in a transparent, impartial and unbiased way with equal weight attached, as appropriate, to beneficial and adverse effects. Where possible, this has been based upon quantitative and accepted criteria together with the use of value judgements and expert interpretations.

5.8.2 The prediction of future effects inevitably involves a degree of uncertainty. Where necessary, the technical chapter describes the principal factors giving rise to uncertainty in the prediction of likely environmental effects and the degree of the uncertainty.

5.8.3 Confidence in the predictions has been achieved by employing accepted assessment methodologies. Uncertainty inherent within the prediction has been described. The ES has sought to provide a robust assessment of the likely significant effects of the Proposed Development.

5.8.4 Further limitations in preparing this ES are noted in **Chapter 7 Landscape and Visual**.

5.9 Assessing Effects

Establishing Baseline Conditions

5.9.1 A range of Site surveys and data collection exercises have been used to identify environmental conditions at the Site and in the surrounding area to provide a basis for the subsequent assessment work. This has included site visits, ecological surveys, and geophysical surveys. The surveys and data collection activities undertaken to support the Landscape and Visual assessment are reported in **Chapter 7**.

5.9.2 The EIA has assessed the likely significant effects of the Proposed Development against baseline conditions in the same year (i.e. providing an assessment of 'do something' and 'do

nothing'). As required by the EIA Regulations, **Chapter 7** has also considered as appropriate the likely evolution of current baseline conditions without implementation of the Proposed Development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of available environmental information and scientific knowledge.

Assessing Construction and Decommissioning Effects

5.9.3 Construction and decommissioning effects will be temporary and intermittent, i.e. works will not occur in one location throughout the entire duration of the construction and decommissioning works. The potential duration and intermittency of effects is identified as appropriate in **Chapter 7** based on the information provided in **Chapter 4**.

5.9.4 In judging the significance of construction effects, it has been assumed that CTMP (submitted with the application) and DEMP (that will be secured via a suitably worded condition) will adequately address mitigation measures in relation to construction effects.

Assessing Operational Effects

5.9.5 The EIA has focused on assessing the likely environmental effects of the Proposed Development. This approach ensures that the full environmental effects of the full planning application have been considered.

5.10 Mitigation and Enhancement

5.10.1 The incorporation of mitigation measures, which are measures to avoid minimise or compensate for adverse effects, is an integral part of the design and EIA processes. The primary mitigation for the Site is set out in **Section x.6** and within **Chapter 7**.

5.10.2 The EIA Regulations require an ES to contain: *"A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment".*

5.10.3 The ES will identify mitigation measures for construction, operation, and decommissioning the of the Proposed Development. There is a distinction between primary, secondary, and tertiary mitigation:

- Primary mitigation is defined as the measures which are designed to be an inherent part of the Proposed Development;
- Tertiary mitigation are measures that would be undertaken to meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects. Tertiary mitigation would occur with or without input from the EIA in the design process; and
- Mitigation that is subsequently identified in order to prevent, reduce or offset any remaining significant adverse effect is defined as secondary mitigation.

5.10.4 The primary and tertiary mitigation measures are set out in **Sections 3.4** and **3.5**.

5.10.5 A hierarchy of methods for mitigating significant adverse effects will be followed; these are, in order of preference:

- **Avoidance** – designing a development in such a way that avoids effects on the environment (e.g. avoiding siting residents in areas that could be affected by flood risk);
- **Reduction** – design the Proposed Development or employ construction methodologies such that significant effects identified are reduced (e.g. employment of sustainable drainage to mitigate the effects of development on surface water run-off); and

- **Compensation** – providing off-site enhancement in order to compensate for where onsite mitigation has not been possible.

5.10.6 Where the effectiveness of the mitigation proposed has been considered uncertain, or where it depends upon assumptions of operating procedures, data and / or professional judgement has been introduced to support these assumptions.

5.10.7 Mitigation recommended during the construction phase would be set out in the Construction Environmental Management Plan (CEMP) to be agreed with DCC prior to the commencement of work and implemented throughout the duration of the works. Outline mitigation measures to be included in a future CEMP are set out in **Chapter 4** of the ES.

5.10.8 Mitigation to be implemented during the operational phase would be secured through planning conditions and obligations.

5.10.9 Environmental effects remaining after mitigation measures have been incorporated are termed "residual effects" and these are fully described in the ES.

5.11 Assessment of Cumulative Effects

5.11.1 The EIA Regulations require the assessment to consider the likely significant effects of the Proposed Development in the context of other existing and / or approved projects, as well as the cumulative effects that may result from the Development and these other developments.

5.11.2 'Approved developments' are considered to be planning permissions that are partially built out and extant planning permissions. Planning applications that have been submitted but not yet determined have also been considered where there is a likelihood that the application may be granted planning permission before this application is determined.

5.11.3 The list of developments to be considered in the cumulative assessment have been agreed through consultation with NRW and DCC.

5.11.4 The schedule of cumulative developments is provided in **Appendix A.7**.

5.12 Impact Interactions

5.12.1 Impact interactions looks at receptors being affected by more than one environmental effect and therefore potentially being subject to a more significant combined effect. As only one environmental topic has been scoped into the ES, impact interactions have not been considered within the ES.

5.13 Significance Criteria

5.13.1 The EIA Regulations stipulate that an ES should identify, describe and report the likely significant effects of a development on the environment. Therefore, this ES identifies and reports the likely significant effects of the Proposed Development in relation to the proposed construction, operational and decommissioning phases as necessary. Environmental effects have been evaluated with reference to definitive standards and legislation where available. Where it has not been possible to quantify effects, qualitative assessments have been carried out, based on available knowledge, guidance, and professional judgement. As noted previously, where uncertainty exists, this has been noted in the technical assessment.

5.13.2 The two principal criteria for determining significance of an environmental effect are the magnitude of the effect and the sensitivity of the receptor, in addition the likelihood of the effect occurring is also considered as appropriate.

5.13.3 The approach to assessing and assigning significance to an environmental effect has relied upon such factors as consideration of the EIA Regulations, guidelines, standards or codes of practice, the advice and views of statutory consultees and other interested parties, and professional judgement.

5.13.4 The following questions are relevant in evaluating the significance of likely environmental effects:

- Is the effect direct, indirect or cumulative?
- Does the effect occur over the short, medium or long term?
- Is the effect permanent or temporary?
- Is it positive, neutral or adverse effect?
- Is the effect reversible or irreversible?
- Does the effect increase or decrease with time?
- Is the effect of local, regional, national or international importance?
- Are health standards or environmental objectives threatened?
- Are mitigating measures available and is it reasonable to require these?

5.13.5 Specific significance criteria have been prepared for each specialist topic, based on the generic criteria, for adverse and beneficial effects, set out in **Table 5.1**.

Table 5.1: Generic Significance Criteria

	Level of Effect	**Criteria**
Significant	Substantial	These effects are assigned this level of significance as they represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites and features of national or regional importance. A change at a borough scale site or feature may also enter this category.
	Major	These effects are likely to be important considerations at a local scale and may become key factors in the decision-making process.
	Moderate	These effects, while important at a local scale, are not likely to be key decision-making issues. Nevertheless, the cumulative effect of such issues may lead to an increase in the overall effects on a particular area or on a particular resource.

	Level of Effect	Criteria
Not significant	Minor	These effects may be raised as local issues but are unlikely to be of importance in the decision-making process. Nevertheless, they are of relevance in enhancing the subsequent design of the project and consideration of mitigation or compensation measures.
	Negligible or No Effect	Either no effect or effect which is beneath the level of perception, within normal bounds of variation or within the margin of forecasting error. Such effects should not be considered by the decision-maker.

5.13.6 The assessments reported in the ES, including judgements on significance, have been used within the Planning Statement to inform the planning balance for the application. A substantial or major adverse does not, in itself, indicate than an application should be refused, just as a substantial or major beneficial effect does not indicate that an application should be approved.

5.14 Monitoring

- The EIA Regulations introduce the requirement for the monitoring of significant adverse environmental effects where appropriate and that a schedule of proposed monitoring should be set out in an ES.

- **Chapter 7** of the ES therefore identifies the proposed monitoring arrangements, as required. As stated in Regulation 25(3)(b) effort should be made to ensure that *"…the type of parameters to be monitored and the duration of the monitoring are proportionate to the nature, location and size of the proposed development and the significance of its effects on the environment."*

6 Planning Policy and Context

6.1 Introduction

6.1.1 In accordance with Section 38(6) of the Planning and Compulsory Purchase Act 2004[3], the application should be determined in accordance with the Development Plan, unless material considerations indicate otherwise. Under Section 38(4) of that Act, the Development Plan in Wales comprises the following:

- The National Development Framework for Wales;
- The Strategic Development Plan (SDP) for any strategic planning area that includes all or part of that area; and
- The Local Development Plan (LDP) for that area.

6.1.2 There is no SDP currently in force that is of relevance to the Site.

6.2 National Planning Policy Context

Future Wales: the national plan 2040 (February 2021)

6.2.1 Future Wales: the national plan 2040 (February 2021) is the current national development framework for Wales. The plan sets the direction for development in Wales to 2040 and presents a strategy for addressing key national priorities through the planning system including sustaining and developing a vibrant economy and achieving decarbonisation and climate resilience.

6.2.2 Future Wales is the highest tier of the development plan hierarchy. It is one of a number of policy documents concerned with infrastructure and development in Wales.

6.2.3 Future Wales recognises the challenges climate change poses and recognises the significant impacts on the wellbeing of both current and future generations. It sets out that increasing temperatures and extreme weather events caused by climate change are putting pressure on infrastructure and the built environment, which all contribute to social and economic resilience. Future Wales:

- supports a low carbon economy and the decarbonisation of industry, and the growth of sustainable and renewable energy; and
- supports infrastructure development, including transport, energy and digital communications.

6.2.4 Future Wales recognises that Wales can become a world leader in renewable energy technologies. The Welsh Government recognises the country's potential, and provides unequivocal support, for the development of renewable energy projects. It is committed to ensuring the planning system in Wales provides a strong lead for renewable energy development.

6.2.5 Policies 17 and 18 of Future Wales will be the most relevant policies for the determination of the DNS application for the Proposed Development. Policy 17 (Renewable and Low Carbon Energy and Associated Infrastructure) provides in principle support for renewable energy development at all scales. The policy states:

[3] Planning and Compulsory Purchase Act 2004

> *"…in determining planning applications for renewable and low carbon energy development, decision-makers must give significant weight to the need to meet Wales' international commitments and our target to generate 70% of consumed electricity by Renewable means by 2030 in order to combat the climate emergency."*

6.2.6 Policy 18 (Renewable and Low Carbon Energy Developments of National Significance) sets out the criteria against which renewable energy projects will be assessed, as follows:

> *'Proposals for renewable and low carbon energy projects (including repowering) qualifying as Developments of National Significance will be permitted subject to policy 17 and the following criteria:*
>
> *Outside of the Pre-Assessed Areas for wind developments and everywhere for all other technologies*
>
> *The proposal does not have an unacceptable adverse impact on the surrounding landscape (particularly on the setting of National Parks and Areas of Outstanding Natural Beauty)*
>
> *There are no unacceptable adverse visual impacts on nearby communities and individual dwellings*
>
> *There are no adverse effects on the integrity of Internationally designated sites (including National Site Network sites and Ramsar sites) and the features for which they have been designated (unless there are no alternative solutions, Imperative Reasons of Overriding Public Interest (IROPI) and appropriate compensatory measures have been secured)*
>
> *There are no unacceptable adverse impacts on national statutory designated sites for nature conservation (and the features for which they have been designated), protected habitats and species*
>
> *The proposal includes biodiversity enhancement measures to provide a net benefit for biodiversity*
>
> *There are no unacceptable adverse impacts on statutorily protected built heritage assets*
>
> *There are no unacceptable adverse impacts by way of shadow flicker, noise, reflected light, air quality or electromagnetic disturbance*
>
> *There are no unacceptable impacts on the operations of defence facilities and operations (including aviation and radar) or the Mid Wales Low Flying Tactical Training Area (TTA-7T)*
>
> *There are no unacceptable adverse impacts on the transport network through the transportation of components or source fuels during its construction and/or ongoing operation*
>
> *The proposal includes consideration of the materials needed or generated by the development to ensure the sustainable use and management of resources*
>
> *There are acceptable provisions relating to the decommissioning of the development at the end of its lifetime, including the removal of infrastructure and effective restoration.'*

Planning Policy Wales (February 2024)

6.2.7 Alongside Future Wales, Planning Policy Wales (PPW) will also carry weight in the determination process. The current edition was issued in February 2024.

6.2.8 PPW establishes the energy hierarchy for Wales and is a material consideration in the decision-making process. PPW enshrines the Welsh Government's targets for renewable energy and decarbonisation in planning policy and includes policy to deliver these. It seeks to reduce fossil fuel usage in energy generation but recognises the need for an appropriate mix of energy provision, which maximises benefits to the economy and communities whilst minimising potential environmental and social impacts.

6.3 Local Planning Policy and Guidance

Denbighsire County Council Local Development Plan (2006-2021) (Adopted June 2013)

6.3.1 The DCC Local Development Plan (LDP), adopted in June 2013, will also be given weight in the planning balance. The LDP outlines a vision for how Denbighshire should develop, stating:

> *"That Denbighshire, through sustainable development, will have a vibrant urban coast, with thriving market towns and rural areas. The housing and employment needs of the County will be met, the high quality environment protected and enhanced and a high quality of life maintained for all communities with full recognition that we have a strong Welsh language and culture that should be maintained and protected throughout the County*."

6.3.2 In addition, a series of objectives are set out within the LDP which identify issues and needs within Denbighshire. The LDP policies aim to address these objectives. Objective 11 refers to 'Energy' and indicates that:

> *"The Local Development Plan will ensure that Denbighshire makes a significant contribution to reducing greenhouse gases through both supporting the principle of large wind farm development within identified zones and other suitable renewable energy technologies, and ensuring that all new developments are built to minimise their carbon footprint. "*

6.3.3 LDP Policy VOE10 Renewable Energy Technologies is of particular relevance to the Proposed Development, stating:

> *"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 development."*

6.3.4 A number of other LDP polices are relevant to the Proposed Development, including:

- Policy PSE15 – Safeguarding development and good standard design;
- Policy RD1 – Sustainable development and good standard design;
- Policy RD5 – The Welsh language and social and cultural fabrics of communities;
- Policy PSE5 – Rural economy;

- Policy VOE1 – Key Areas of importance;
- Policy VOE2 – Area of Outstanding Natural Beauty;
- Policy VOE5 – Conservation of natural resource; and
- Policy VOE6 – Water Management.

Replacement Denbighshire Local Development Plan

6.3.5 At the time of writing, we are aware that the Council is in the process of preparing its Replacement LDP. The Denbighshire replacement LDP 2018 – 2033 is being progressed with the Preferred Strategy having been approved by the Council on 9th May 2023. The Council is working towards the next formal consultation stage for the LDP which will be the Deposit Plan. The Deposit LDP will contain detailed policies and land allocations.

6.4 Supplementary Planning Documents

6.4.1 DCC have produced several Supplementary Planning Guidance notes, those of most relevance to the Proposed Development include:

- Archaeology;
- Clwydian Range and Dee Valley Area of Outstanding Natural Beauty: Planning for the Dark Night Sky;
- Conservation and Enhancement of Biodiversity;
- Planning and the Welsh Language;
- Renewable Energy; and
- Trees Landscaping.

6.4.2 The Renewable Energy Supplementary Planning Guide (April 2016) has been prepared to assist in the consideration of Policy VOE9 and VOE10 of the DCC LDP. The guide includes land use planning consideration in relation to solar energy schemes, this includes:

- Landscape and visual impact;
- Land management;
- Noise;
- Ecology;
- Historic Environment;
- Aviation;
- Sire security, safety, and lighting; and
- Glint and glare.

7 Landscape and Visual

7.1 Introduction

7.1.1 This Chapter assesses the likely landscape and visual effects associated with the Proposed Development. This section sets out the relevant policies, proposed approach and methodology used within this Landscape and Visual Impact Assessment (LVIA).

7.1.2 The LVIA was carried out by chartered landscape architects at Stantec UK Limited, a Registered Practice with the Landscape Institute and a corporate member of the Institute of Environmental Management and Assessment (IEMA).

7.1.3 In accordance with Regulation 17(4)(b) of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017, (as amended), (referred to as the 'EIA Regulations') a statement outlining the relevant expertise and qualifications of competent experts appointed to prepare this ES is provided in **Table 1.2.**

7.1.4 This chapter presents an assessment of the likely significant effects of the Proposed Development with respect to landscape and visual receptors. Mitigation measures are identified, where appropriate, to avoid, reduce or offset any significant adverse effects identified and/or enhance likely beneficial effects. Taking into account the mitigation measures, the nature and significance of the likely residual effects are reported.

7.1.5 This chapter is supported by the following illustrative material and technical appendices:

- Appendix 7.1: Policy and Guidance Extracts;
- Appendix 7.2: Published Evidence Extracts;
- Appendix 7.3: LVIA Methodology;
- Appendix 7.4: Site Appraisal Photographs A to P;
- Appendix 7.5: Site Context Photographs 1 to 15;
- Appendix 7.6: Landscape Effects Table;
- Appendix 7.7: Visual Effects Table;
- Appendix 7.8: Cumulative Effects Table;
- Appendix 7.9: Landscape and Ecological Management Plan; and
- Appendix 7.10: Glint and Glare Study.
- Appendix 7.11: Figures

7.1.6 The Site is located to the west of the Clwydian Range and Dee Valley National Landscape. Until 2023 this was known as the Clwydian Range and Dee Valley Area of Outstanding Natural Beauty (AONB), when all AONB were renamed as National Landscapes. Within this Chapter, all references use 'National Landscape', except where quoting document titles or contents that use 'AONB'.

7.2 Policy Context, Legislation, Guidance and Standards

7.2.1 Extracts from relevant planning policy and published evidence are set out **in Appendix 7.1: Policy and Guidance Extracts** and **Appendix 7.2: Published Evidence Extracts**. A summary of the key policies, legislation, and guidance relevant to the Proposed Development is provided in this section.

Legislation Context

7.2.2 The following legislation is relevant to the Proposed Development:

- Planning (Wales) Act 2015[4];
- Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017[5]
- Countryside Act 1968[6]
- Countryside and Rights of Way Act 2000[7]
- The Planning (Listed Buildings and Conservation Areas) (Wales) Regulations 2012[8]
- Conservation of Habitats and Species (Wales) Regulations 2017[9]
- Local Government and Elections (Wales) Act 2021[10]
- Wildlife and Countryside Act 1981[11];
- National Parks and Access to the Countryside Act 1949[12];

[4] *Planning (Wales) Act 2015*. Available at: https://www.legislation.gov.uk/anaw/2015/4/contents (Accessed 14 April 2025).

[5] *Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017*. Available at: https://www.legislation.gov.uk/wsi/2017/567/contents (Accessed 14 April 2025).

[6] Countryside Act 1968. Available at: https://www.legislation.gov.uk/ukpga/1968/41/contents (Accessed 14 April 2025).

[7] Countryside and Rights of Way Act 2000. Available at: https://www.legislation.gov.uk/ukpga/2000/37/contents (Accessed 14 April 2025).

[8] *The Planning (Listed Buildings and Conservation Areas) (Wales) Regulations 2012*. Available at: https://www.legislation.gov.uk/wsi/2012/793/contents/made (Accessed 14 April 2025).

[9] *Conservation of Habitats and Species (Wales) Regulations 2017*. Available at: https://www.legislation.gov.uk/uksi/2017/1012/contents (Accessed 14 April 2025).

[10] *Local Government and Elections (Wales) Act 2021*. Available at: https://www.legislation.gov.uk/asc/2021/1/contents (Accessed 14 April 2025).

[11] *Wildlife and Countryside Act 1981*. Available at: https://www.legislation.gov.uk/ukpga/1981/69/contents (Accessed 14 April 2025).

[12] *National Parks and Access to the Countryside Act 1949*. Available at: https://www.legislation.gov.uk/ukpga/Geo6/12-13-14/97 (Accessed 14 April 2025).

- The National Park Authorities (Wales) Order 1995[13]
- Environment Act 2021[14]; and
- Environment (Wales) Act 2016[15].

National Planning Policy

7.2.3 The following national planning policy is relevant to the Proposed Development:

- Future Wales: The National Plan 2040 (2021)[16]; and
- Planning Policy Wales (2024)[17].
- Designing for Renewable Energy in Wales[18]

Local Planning Policy

7.2.4 The following local planning policy is relevant to the Proposed Development:

- Denbighshire County Council Local Development Plan 2006-2021 (2013)[19].

Guidance

7.2.5 The following guidance is relevant to the Proposed Development:

- Guidelines for Landscape and Visual Impact Assessment' Third Edition (2013)[20];
- LANDMAP GN46: Using LANDMAP in Landscape and Visual Assessments (2024)[21];
- TGN 06/19 Visual Representation of Development Proposals (2019)[22];

[13] *The National Park Authorities (Wales) Order 1995*. Available at: https://www.legislation.gov.uk/uksi/1995/2803/contents/made (Accessed 14 April 2025).

[14] *Environment Act 2021*. Available at: https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted (Accessed 14 April 2025).

[15] *Environment (Wales) Act 2016*. Available at: https://www.legislation.gov.uk/anaw/2016/3/contents (Accessed 14 April 2025).

[16] Ministry of Housing and Local Government (2021). *Future Wales: The National Plan 2040*. Available at: https://gov.wales/sites/default/files/publications/2021-02/future-wales-the-national-plan-2040.pdf (Accessed 14 April 2025).

[17] Welsh Government (2024). *Planning Policy Wales, Edition 12*. Available at: https://www.gov.wales/sites/default/files/publications/2024-07/planning-policy-wales-edition-12.pdf (Accessed 14 April 2025).

[18] Design Commission for Wales/Comisiwn Dylunio Cymru, November 2023. Designing for Renewable Energy in Wales.

[19] Denbighshire County Council (2013). *Local Development Plan 2006-2021*. Available at: https://www.denbighshire.gov.uk/en/documents/planning-and-building-regulations/ldp/adopted-ldp/adopted-local-development-plan-2006-2021.pdf (Accessed 14 April 2025).

[20] Landscape Institute and I. E. M. A. (2013). *Guidelines for Landscape and Environmental Impact Assessment*. Third Edition. Hoboken: Taylor and Francis.

[21] Natural Resources Wales (2024) *Using LANDMAP in Landscape and Visual Impact Assessments GN46*. Available at: https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/evidence-to-inform-development-planning/using-landmap-in-landscape-and-visual-impact-assessments-gn46/?lang=en (Accessed 14 April 2025).

[22] Landscape Institute (2019). *Visual Representation of Development Proposals*. Available at: https://www.landscapeinstitute.org/wp-content/uploads/2019/09/LI_TGN-06-19_Visual_Representation-1.pdf (Accessed 14 April 2025).

- TGN 02/21 Assessing the Value of Landscapes Outside National Designations (2021)[23];
- Denbighshire County Council Clwydian Range and Dee Valley AONB Supplementary Planning Guidance Note (2018)[24];
- Denbighshire County Council Renewable Energy Supplementary Planning Guide (2016)[25];
- Denbighshire County Council Trees & Landscaping Supplementary Planning Guidance Note (2016)[26]; and
- Clwydian Range and Dee Valley Management Plan 2014-2019 (2016)[27].

Published Evidence Base

7.2.6 The following published evidence is relevant to the Proposed Development:

- National Landscape Character Area Profile 11 Vale of Clwyd (2014)[28];
- National Landscape Character Area Profile 09 Rhos (2014)[29];
- Denbighshire Landscape Strategy (2003)[30]; and
- LANDMAP[31].

7.3 Consultation

7.3.1 The following information was submitted to Denbighshire County Council (DCC) in December 2024 as part of the EIA Screening Report:

- Image showing location of full complement of photographs taken during field work across the whole study area;

[23] Landscape Institute (2021). *Assessing the Value of Landscapes Outside National Designations*. Available at: https://www.landscapeinstitute.org/publication/tgn-02-21-assessing-landscape-value-outside-national-designations/ (Accessed 14 April 2025).

[24] Denbighshire County Council (2018). *Clwydian Range and Dee Valley AONB Supplementary Planning Guidance Note*. Available at: https://www.denbighshire.gov.uk/en/documents/planning-and-building-regulations/ldp/supplementary-planning-guidance/adopted-spg-documents/clwydian-range-and-dee-valley-area-of-outstanding-natural-beauty.pdf (Accessed 14 April 2025).

[25] Denbighshire County Council (2016). *Renewable Energy Supplementary Planning Guide*. Available at: https://www.denbighshire.gov.uk/en/documents/planning-and-building-regulations/ldp/supplementary-planning-guidance/adopted-spg-documents/renewable-energy.pdf (Accessed 14 April 2025).

[26] Denbighshire County Council (2016) *Trees & Landscaping Supplementary Planning Guidance Note*. Available at: https://www.denbighshire.gov.uk/en/documents/planning-and-building-regulations/ldp/supplementary-planning-guidance/adopted-spg-documents/trees-landscaping.pdf (Accessed 14 April 2025).

[27] Clwydian Range and Dee Valley Joint Committee (2016). *Clwydian Range and Dee Valley Management Plan 2014-2019*. Available at: https://www.clwydianrangeanddeevalleyaonb.org.uk/wp-content/uploads/2020/07/979717185-Clwydian-Range-and-Dee-Valley-AONB-Mgt-Plan-2016.pdf (Accessed 14 April 2025).

[28] National Resources Wales (2014). *NLCA11 Vale of Clwyd*. Available at: https://cdn.cyfoethnaturiol.cymru/media/682566/nlca11-vale-of-clwyd-description.pdf?mode=pad&rnd=131550578850000000 (Accessed 14 April 2025).

[29] National Resources Wales (2014). *NLCA09 Rhos*. Available at: https://naturalresourceswales.gov.uk/media/682563/nlca09-rhos-description.pdf (Accessed 14 April 2025).

[30] Denbighshire County Council (2003). *Denbighshire Landscape Strategy*.

[31] LANDMAP (2025). Available at: https://nrw.maps.arcgis.com/apps/MapSeries/index.html?appid=c7770d2881394c899123bae210afe370 (Accessed 14 April 2025).

- Image showing location of full complement of photographs taken during field work across the localised area around the Site;
- Site Appraisal Plan showing the locations of the proposed selection of Site Appraisal Photographs taken within the Solar Site to accompany the LVIA;
- Visual Appraisal Plan showing the locations of the proposed selection of Site Context Photographs taken outside the Solar Site to accompany the LVIA; and
- Zone of Theoretical Visibility Plan showing the areas from which the Proposed Development will theoretically be visible in relation to the study area and the National Landscape.

7.3.2 Pre-application advice was provided by Denbighshire County Council on 5 May 2022 and 25 February 2025. An EIA Screening Direction was provided by PEDW on 21 February 2025 and included comments from consultees, including Natural Resources Wales (NRW) (dated 10 February 2025).The EIA Screening Direction is provided as **Appendix A.3**. The advice and comments are summarised in **Table 7.1**.

Table 7.1: Summary of Consultation

Consultation	Issues Raised	Addressed in Chapter	Reference
NRW 10/02/25	An LVIA, including landscape mitigation plan should be submitted in support of the planning application.	This Chapter comprises an LVIA. A landscape strategy plan has been included.	See Figure 7.6 Landscape Strategy Plan
DCC 05/05/22 and 25/02/25	The LVIA should be carried out by a Chartered Landscape Architect in accordance with the Guidelines for Landscape and Visual Assessment (Third Edition).	The LVIA has been carried out by a Chartered Landscape Architect in accordance with the Guidelines for Landscape and Visual Assessment (Third Edition).	See Table 1.2 EIA Team Expertise and Qualifications and Appendix 7.3: LVIA Methodology.
DCC 05/05/22 and 25/02/25	The LVIA should also draw upon Welsh Government LANDMAP data.	The LVIA has drawn upon LANDMAP data.	See section 7.5 Baseline Conditions, sub-heading 'Published Landscape Character and Guidance'
DCC 05/05/22	The ZTV should be based on all component parts of the Proposed Development and not just the solar arrays (i.e. the tallest components of the development should be factored in).	The ZTV has been based on all component parts of the Proposed Development. The tallest components of the Proposed Development have been factored in.	See Figure 7.6: Visual Appraisal Plan
DCC 05/05/22	The study area should extend to at least 5km around the Site.	The study area covers a radius of 5km from the Solar Site boundary.	See Figure 7.1: Site Context Plan

Consultation	Issues Raised	Addressed in Chapter	Reference
NRW 10/02/25	NRW Guidance Note 46 Using LANDMAP in Landscape and Visual Impact Assessments should be used together with site-based experience of likely impacts to confirm the search and study areas and selection of an asymmetric study area as necessary to include the National Landscape and elevated viewpoints as highlighted by the ZTV.	NRW Guidance Note 46 Using LANDMAP in Landscape and Visual Impact Assessments has been used together with site-based experience of likely impacts to confirm the study area. An asymmetric study area was not considered necessary and as such has not been selected, but viewpoints from the National Landscape have been included, and effects on the National Landscape itself and on visual receptors within it have been assessed.	See 7.5 Baseline Conditions, sub-heading section 'Published Landscape Character and Guidance', Figure 7.1: Site Context Plan, Figure 7.6: Visual Appraisal Plan, Appendix 7.6: Landscape Effects Table and Appendix 7.7: Visual Effects Table
DCC 05/05/22	Viewpoint selection should be informed by a Zone of Theoretical Visibility. Viewpoint selection should represent the full range of sensitive receptors from within the immediate locale of the Site and from the wider area within the ZTV.	Viewpoint selection has been informed by a Zone of Theoretical Visibility. Viewpoint selection covers a proportionate number of representative viewpoints from within the immediate locale of the Site and from the wider area within the ZTV.	See Figure 7.6: Visual Appraisal Plan
DCC 05/05/22	The rationale for selecting the proposed viewpoints should be clearly explained.	The rationale for selecting the proposed viewpoints has been clearly explained.	See section 7.5 Baseline Conditions, sub-heading 'Visual Appraisal'
DCC 05/05/22 and 25/02/25	Photomontages / visualisations should be provided.	The Site Context Photographs will be represented using Type 1 visualisations, i.e., annotated viewpoint photographs. Type 4 visualisations (Accurate Visual Representations) will not be submitted as part of the PAC submission, but will be submitted as part of the final DNS application.	See section 7.5 Baseline Conditions, sub-sections 'Visual Appraisal' and 'Accurate Visual Representations'
DCC 05/05/22 and 25/02/25 and NRW 10/02/25	A representative viewpoint from higher ground within the AONB should be provided so that the impact on views from the statutory landscape and impact on setting can be fully assessed.	A representative viewpoint from higher ground within the National Landscape has been provided. The impact on views from the National Landscape and the impact on setting has been assessed.	See Figure 7.6: Visual Appraisal Plan, Site Context Photographs 12, 14 and 15 in Appendix 7.5: Site Context Photographs, and Appendices 7.6: Landscape Effects Table, 7.7: Visual Effects Table and 7.8: Cumulative Effects Table

Consultation	Issues Raised	Addressed in Chapter	Reference
NRW 10/02/25	Viewpoint photography from within the National Landscape should include viewpoints that look down and across the lowland setting of the Site from the western fringes of the Clwydian Range.	Viewpoint photography from within the National Landscape includes viewpoints that look down and across the lowland setting of the Site from the western fringes of the Clwydian Range.	See Figure 7.6: Visual Appraisal Plan and Site Context Photographs 12, 14 and 15 in Appendix 7.5: Site Context Photographs
DCC 05/05/22 and 25/02/25	The LVIA should include a cumulative assessment.	The LVIA includes a cumulative assessment.	See Appendix 7.8: Cumulative Effects Table
DCC 05/05/22	The application should also be accompanied by a comprehensive landscaping masterplan which identifies sites for planting to assist with screening the Site and/or improving the quality of the landscape as mitigation for the development's impact. The masterplan should distinguish between mitigation / compensation planting and enhancement planting.	The LVIA includes a Landscape Strategy Plan that identifies sites for planting to assist with screening the Solar Site and improving the quality of the landscape as mitigation for the impact of the Proposed Development. The Landscape Strategy Plan does not distinguish between mitigation / compensation planting and enhancement planting as all of the proposed planting is designed to serve both purposes.	See Figure 7.7: Landscape Strategy Plan
DCC 25/02/25	The proposal should retain (as far as possible) and managing the existing vegetation on the Site.	The Proposed Development retains as far as practicable the existing vegetation on the Solar Site and proposes measures for managing existing and proposed vegetation through the Landscape and Ecological Management Plan (LEMP).	See Figure 7.7: Landscape Strategy Plan and Appendix 7.9: LEMP
DCC 25/02/25	The proposal should position panels so as to limit the potential for close range views from sensitive receptors.	The Proposed Development positions panels so as to limit the potential for close range views from sensitive receptors as far as practicable.	See Figure C0002452_02-V4: Site Layout Plan and Appendix 7.7 Visual Effects Table
DCC 25/02/25	The proposal should provide a comprehensive hedgerow improvement strategy, including reinforcement of existing hedgerow field boundaries with an appropriate species rich native planting palette.	The Proposed Development includes proposed hedgerows and reinforcement of existing hedgerow field boundaries with a species rich native planting palette	See Figure 7.7: Landscape Strategy Plan
DCC 25/02/25	The proposal should create native tree belts and native scrub areas within the Site.	The Proposed Development creates native tree belts and native scrub areas within the Solar Site.	See Figure 7.7: Landscape Strategy Plan

Consultation	Issues Raised	Addressed in Chapter	Reference
DCC 25/02/25	The proposal should provide waterbody enhancement through wildflower meadow wetland seeding across 10m buffers to the ponds, streams and ditches within and adjacent to the Site.	The Proposed Development provides waterbody enhancement through wildflower meadow wetland seeding to the ponds within the Solar Site.	See Figure 7.7: Landscape Strategy Plan
DCC 05/05/22	A planting schedule should also be provided specifying the number and species type, with native species being prioritised.	A planting schedule has been provided specifying the plant numbers and species. The planting palette prioritises native species.	See Figure 7.7: Landscape Strategy Plan
DCC 05/05/22	A long term Landscape Management Plan should also be provided.	A LEMP has been provided.	See Appendix 7.9: Landscape and Ecological Management Plan
DCC 05/05/22 and 25/02/25	The impact of the proposal on the residential visual amenity of residential properties in close proximity to the Site should be assessed.	The LVIA does not comprise a Residential Visual Amenity Assessment, but it assesses effects on residential visual receptors.	See Appendix 7.7: Visual Effects Table
DCC 05/05/22 and 25/02/25	An assessment of the impact of glint and glare on residential receptors should be undertaken.	The LVIA does not comprise a Glint and Glare Assessment, but it refers to one produced by Pager Power to support the planning application.	See section 7.6 Primary and Tertiary Mitigation, sub-heading 'Glint and Glare' and Appendix 7.10: Glint and Glare Study

7.4 Methodology

7.4.1 A detailed LVIA methodology is set out in **Appendix 7.3.**

Study Area

7.4.2 The study area for this assessment broadly equates to the extents shown in **Figure 7.1: Site Context Plan**, which provides an overview of the location of the Site within its landscape context. The study area includes all land within 5km of the Solar Site, as well as land within the Clwydian Range and Dee Valley National Landscape .

7.4.3 The construction phase is anticipated to take approximately 36 weeks, with commencement expected in Q1 2028 and completion of the Proposed Development expected in Q4 2028.

7.4.4 The anticipated year of completion, 2028, was taken as the period for the assessment of effects at Year 1 of the operational phase. Year 15 of the operational phase, 2043, was taken as the period for the assessment of residual effects of the operational phase.

Assessment Scope

7.4.5 It is acknowledged that, in addition to the operational effects, the construction and decommissioning phases will result in a number of alterations to landscape character and visual amenity through the addition of plant, machinery and construction traffic movements in the landscape together with the construction and decommissioning of the facility and operations relating to the implementation of the landscape proposals. In this regard the effects

that will occur during construction and decommissioning will typically be adverse in nature and fluctuating in intensity as operations progress through the Site. However, due to the limited duration of the construction programme these effects will only be experienced for a brief period, thereby reducing their impact. As such, they have been scoped out of the assessment as they are unlikely to result in significant effects.

7.4.6 Operational effects associated with the cable route are scoped out of the assessment since the cable will be below ground, and as such will not have the potential for significant effects on either landscape or visual receptors.

Baseline Data Collection

7.4.7 The baseline environmental conditions used for the assessment are those observed during the desktop study and field work undertaken during 2022 and 2024.

7.4.8 A desktop review of the study area was undertaken, including a review of published landscape character evidence (including LANDMAP) and relevant landscape and visual policy, and analysis of landscape context, landform, landscape features and landscape designations. This information was used as the initial basis against which to appraise the Site. Visits to the Site and surroundings were subsequently undertaken to verify findings of the desk-based review and underpin the understanding of the landscape and visual context of the Site. These were undertaken in January and June 2022, and April and July 2024.

Assessment

7.4.1 The methodology used for the assessment is set out in **Appendix 7.3: LVIA Methodology**, which draws from the 'Guidelines for Landscape and Visual Impact Assessment' Third Edition (GLVIA3), prepared by the Landscape Institute and Institute of Environmental Management and Assessment, 'An approach to Landscape Character Assessment', prepared by Natural England, the Landscape Institute TGN 02/21 'Assessing the Value of Landscapes Outside National Designations', the Landscape Institute TGN 06/19 'Visual Representation of Development Proposals', published Planning Practice Guidance from the Government, and professional experience.

Limitations and Assumptions

7.4.2 In undertaking the landscape and visual assessment, there are a number of 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;
- During Site visits, weather conditions, the time of day and seasonal factors have influenced the visual assessment and photographic record of the Site. The photographs and their locations are representative of the Site and its surroundings;
- Access to assess the predicted visual effects from individual private properties outside the Site has not been obtained. As a result, the assessment of likely visual effects has been made from vantage points with representative views taken from the nearest available public viewpoint in combination with the views available from the Site itself;
- The assessment of the Proposed Development at Year 1 of operation (the year of completion) is based on: **Figure C0002452_02-V4: Site Layout Plan**; **Figure C0002452_04 Rev D: Typical Buildings Plans and Elevations**; **Figure C0002452_08 Rev D: Typical Section Through Array**; **Figure C0002452_09 Rev A: Typical Cable Ladder Details**; **Figure C0002452_10 Rev B: Deer Fence Detail**; **Figure C0002452_12 Rev C: Welfare Area**; **Figure 7.7: Landscape Strategy Plan**, and the Year 1 AVRs which will not be submitted as part of the PAC submission, but will be submitted as part of the final DNS application. The assessment of the Proposed Development at Year 15 is

based on the above items, as well as factoring in the establishment, growth and appearance of proposed planting by Year 15, this will be depicted in the Year 15 AVRs to be provided with the final DNS application. Residual effects at Years 1 and 15 also take into account the measures described in the LEMP.

7.5 Baseline Conditions

The Surrounding Area

7.5.1 The context of the Site is shown on **Figure 7.1: Site Context Plan**.

Location and Land Use

7.5.2 The Site is located within the Cefn Estate, to the south-west of the settlement of St Asaph (700m to the north-east of the Solar Site) and to the south-east of St Asaph Business Park (770m to the north-west of the Solar Site). Eryl Hall Caravan Park lies 410m to the north-east.

7.5.3 The study area is predominantly agricultural, but in places strongly influenced by energy infrastructure and industrial built development. In addition to the St Asaph Business Park, the Solar Site's northern context includes the large scale and massing of Gwynt y Mor Offshore Wind Farm Electrical Distribution Station (580m to the north-west) and its onshore substation (380m to the north-west), as well as a photonics factory (760m to the north-west), and the landscape is crossed by pylons and overhead power lines.

7.5.4 Toward the south the landscape is less influenced by such elements, with built form in this area comprising scattered farmsteads, isolated residences and a few small villages including Cefn (1km to the south) and Groesffordd Marli (1.1km to the west). Other settlements further from the Solar Site include the town of Rhuddlan (4.6km to the north) and the villages of Bodelwyddan (3km to the north-west), Trefnant (2.7km to the south-east) and Henllan (3.6km to the south).

7.5.5 The agricultural landscape within the study area is characterised by a predominantly pastoral use, with some arable use scattered throughout. The scale of the fields varies from small to large, and their form is variously rectilinear and irregular.

Transport and Rights of Way

7.5.6 The study area is strongly influenced by transport routes, with the A55 (North Wales Expressway) crossing it broadly east/west 1.5km to the north of the Solar Site, and the A525 running broadly north/south 1.3km to the east of the Solar Site. Other principal roads within the study area include the A541 2.9km to the south-east of the Solar Site and the A547 4.7km to the north of the Solar Site. No railway lines are present within the study area.

7.5.7 The aforementioned areas of settlement and industrial built development are also linked by a further network of secondary roads, including:

- The B5381 (Lower Denbigh Road / Glascoed Road / Roman Road), which runs broadly east/west between Trefnant and Conwy, at its nearest 740m to the north of the Solar Site;
- An unnamed lane, which runs broadly north/south between the eastern and western parcels;
- A second unnamed lane, which runs broadly east/west 410m to the south of the eastern parcel; and
- A third unnamed lane, which runs along the eastern slopes of the Cefn Meiriadog ridge, 400m to the west of the western parcel.

7.5.8 No Public Rights of Way (PRoW) are present within the Site. A number of PRoW are present within the study area, with those of particular relevance to this assessment listed below:

- PRoW 208/3, a bridleway, which extends broadly north-east/south-west 65m north of the western parcel. However, it appears to be a remnant PRoW that is not connected to any other publicly accessible routes or locations;
- PRoW 105/3, a short distance local footpath, which extends broadly north-east/south-west between the unnamed lane on the eastern slopes of the Cefn Meiriadog ridge opposite 1 and 2 Camrau and another unnamed lane to the south-west, 730m to the south-west of the Solar Site;
- PRoW 105/4, a short distance local footpath, which extends broadly north-west/south-east between the unnamed lane on the eastern slopes of the Cefn Meiriadog ridge opposite 1 and 2 Church View and the Church of St Mary in Cefn Meiriadog, 750m to the south-west of the Solar Site; and
- PRoW 105/6, a short distance local footpath, which extends broadly north-west/south-east between two points on the unnamed lane on the eastern slopes of the Cefn Meiriadog ridge at Pentre Mawr and Tyddyn Meredydd, 840m to the west of the Solar Site.

7.5.9 The lane between the two parcels of the Solar Site is part of a long distance recreational route, the North Wales Pilgrims Way. This is a 'route' rather than a PRoW and therefore does not appear in the Rights of Way Dataset.

Topography and Hydrology

7.5.10 **Figure 7.2: Topography Plan** shows the topographical context of the Site.

7.5.11 At a regional scale, the Site is located within the wide valley associated with the Elwy and Clwyd Rivers, respectively 1km and 2km to the east of the Solar Site. Both rivers are north-flowing at their nearest points to the Solar Site, meeting 3.5km to the north of the Solar Site and discharging into the Irish Sea at Rhyl. The valley is enclosed to the east by the Clwydian Range and to the west and south by the Rhos Hills. Locally the ridge of Cefn Meiriadog encloses the more immediate landscape context of the Site to the south-west, separated from the Rhos Hills by the valley of the River Elwy as its route advances from the west.

7.5.12 The principal features of the study area are the valley associated with the two rivers and the lower slopes of the Rhos Hills rising to the south-west. The landform is locally level to undulating, incised by minor valleys created by small watercourses draining the higher land and discharging into the Elwy and Clwyd.

7.5.13 Settlement within the study area is concentrated predominantly within the lower-lying land, with some located on the sloping valley sides, with hilltops and ridge peaks generally free of settlement. Elevations within the study area range from 0-5m Above Ordnance Datum (AOD) along the course of the River Clwyd after it has been joined by the River Elwy, to 308m AOD toward the Rhos Hills on the south-western boundary of the study area.

Vegetation

7.5.14 The vegetative structure of the wider agricultural landscape of the study area is defined by a network of hedgerows with frequent mature hedgerow trees. Woodland belts and blocks occur throughout the study area, and are associated particularly with the minor valleys and the routes of the Elwy and Clwyd, as well as occurring along ridges and wider valley slopes. These areas of hedgerow trees and woodland provide a high level of screening in many places, particularly from within the lower-lying landscape.

7.5.15 Agricultural land is chiefly pastoral, with a patchwork of fields creating a simple rural backdrop to the many industrial facilities, which are themselves often bounded by belts and blocks of

trees. Tree cover is also associated with the edges of settlement and the historic estate landscape.

7.5.16 An appreciable proportion of the tree cover, particularly that further from the settlement edge, is Ancient Semi Natural Woodland, Restored Ancient Woodland and Plantation on Ancient Woodland.

Designations

7.5.17 The Site is not covered by any designations for landscape or scenic beauty, but the study area is subject to the following designations:

- The Clwydian Range and Dee Valley National Landscape, which covers 390 square kilometres and is the largest National Landscape in Wales, 5km to the east of the Solar Site;
- Elwy Valley Woods / Elwy and Meirchion Woods and Caves SSSI and SAC, which covers 83ha and is one of three sites selected to represent the Tilio-Acerion forest Annex I habitat, 1km to the south of the Solar Site;
- Pontnewydd Cave Geological Conservation Review (GCR) site, 1.4km to the south of the Solar Site, and Cefn & Galltfaenan Caves GCR site, 1.6km to the south of the Solar Site;
- Rhuddlan Pond Local Nature Reserve (LNR), which covers 3.4ha on the southern settlement edge of Rhuddlan, 4.4km to the north of the Solar Site;
- Cefn Meiriadog Regionally Important Geodiversity Site (RIGS), 580m to the south-west of the Solar Site, Bodfari Trefnant Moraine RIGS, 1.5km to the south of the Solar Site, Nant y Croen llwm RIGS, 1.5km to the south-west of the Solar Site, and Nant y Graig, Elwy Tributary RIGS, 1.6km to the south-west of the Solar Site;
- The Lower Elwy Valley Registered Historic Landscape, which covers 571ha, 410m to the south of the Solar Site and is immediately adjacent to the access point to the eastern parcel, and the Vale of Clwyd Registered Historic Landscape, which covers 148 square kilometres, 2.5km to the south-east of the Solar Site;
- Many Scheduled Monuments, the nearest of which is the Bedd y Cawr Hillfort, a rectangular defended enclosure 600m to the south-west of the Solar Site;
- Five Registered Parks and Gardens, the nearest of which is the Grade II listed Bodelwyddan Castle, an eighteenth and nineteenth century landscape park, with later Arts and Crafts garden, 1.7km to the north-west of the Solar Site;
- Five conservation areas, including St Asaph (the nearest, 1.2km to the north-east of the Solar Site) Rhuddlan, Bodelwyddan, Trefnant and Henllan;
- Many listed buildings, the nearest of which are the Grade II listed Church of St Mary and the Grade II* listed Wigfair Hall, respectively 910m and 920m to the south of the Solar Site.

7.5.18 No World Heritage Sites, National Parks, National Nature Reserves, Ramsar sites or Special Protection Areas are present within the study area.

Published Landscape Character and Guidance

7.5.19 Landscape character is the combination of physical, perceptual, cultural and historic features of a particular area which together create the unique and distinctive experiential qualities of a given landscape.

7.5.20 Landscape character assessment is a descriptive approach that seeks to identify and define the distinct character of landscapes that make up the country. This approach recognises the intrinsic value of all landscapes, not just 'special' landscapes, as contributing factors in people's quality of life, in accordance with the European Landscape Convention.

7.5.21 Landscape Character Areas (LCAs) and Aspect Areas (AAs) are identified in published landscape character assessments and LANDMAP interactive mapping data at a national and regional level.

7.5.22 NRW has developed a series of National Landscape Character Areas (NLCAs). These NLCA profiles include an outline of the key characteristics that define broad landscape character areas. The majority of the Solar Site is located within NLCA11: Vale of Clwyd, with the north-western extents of the western parcel lying just within NLCA09: Rhos Hills.

7.5.23 Due to the extensive area of each NLCA in relation to the Solar Site, and the wide range of landscape characteristics found within them, it is considered highly unlikely that the Proposed Development has the potential to result in appreciable effects on the character of either of the NLCAs as a whole, and they are therefore scoped out of the assessment.

7.5.24 The Clwydian Range and Dee Valley National Landscape was designated and extended between 1985 and 2011. It is 5km to the east of the Solar Site.

7.5.25 The Denbighshire Landscape Strategy is informed by the all-Wales LANDMAP system. It identifies the area within which the Solar Site falls as LCA D/LC/6: Vale of Clwyd North.

7.5.26 The LANDMAP interactive mapping tool maps and classifies landscapes into AAs) from the perspective of five spatial datasets. The assessment process set out in 'LANDMAP GN46: Using LANDMAP in Landscape and Visual Assessments' was undertaken in order to filter the aspect areas and identify those aspect areas that should be included within the scope of the assessment. The guidance defines a search area and study area for development proposals dependent on their height, measured from the Site boundary. For proposals below 25m (including the Proposed Development), the area of search is 3km and the study area is 2km. However, the pre-application advice received from DCC dated 5 May 2022 stated that "the study area should extend to at least 5km around the site". As such, this assessment has been undertaken on the basis of a study area of a 5km radius around the Solar Site, and for the purposes of the LANDMAP filtering exercise, the search area has also been set at a radius of 5km.

7.5.27 The description and key characteristics of each landscape character receptor are used as a basis for evaluation in order to inform proposed mitigation of landscape and visual effects and to make judgements regarding the significance of those effects. The extents of published LCAs in the vicinity of the Site are illustrated on **Figure 7.3: Landscape Character Plan**. The extent of AAs within the study area are shown on **Figure 7.4: LANDMAP Aspect Areas Plan**. The key characteristics and guidance relating to the National Landscape and the published LCAs are provided in **Appendix 7.2: Published Evidence Extracts**, along with the filtering process and entry descriptions for the AAs.

Landscape and Visual Appraisal of the Solar Site

7.5.28 A landscape and visual appraisal has been undertaken to ascertain the existing character of the Solar Site and to determine the relationship of the Solar Site with its surroundings. This is accomplished through recording and analysing the existing landscape features and characteristics, the way the landscape is experienced, and the value or importance of the landscape and visual resources in the vicinity of the Solar Site. The elements of the landscape that contribute to landscape character include the built and natural form, the pattern of features, detailing, scale, planting, land use and human perception. In this regard, landscape character is derived as a result of the perception of, and action and interaction between, natural and human factors.

7.5.29 The potential visibility of the Solar Site is largely determined by the intervening landform, as topographic features such as ridgelines and subtle undulations may curtail views towards the Solar Site. In addition, land cover plays an important role in determining potential visibility as areas of woodland, tree belts or built form may contribute to additional blocking, filtering or curtailing of views.

7.5.30 **Appendix 7.4: Site Appraisal Photographs A to P** illustrates the character of the Solar Site and its constituent elements. The visual context of the Solar Site is illustrated in **Appendix 7.5: Site Context Photographs 1 to 15**. The locations of the photographs are shown in **Figure 7.5: Site Appraisal Plan** and **Figure 7.6: Visual Appraisal Plan**. The Site Appraisal Photographs were taken in April and July 2024. The Site Context Photographs were taken in April 2024, with the exception of **Site Context Photograph 12**, which was taken in June 2022. Across the dates at which the photographs were taken, cloud cover was variable but visibility was good. The photographs from April 2024 were taken when the majority of deciduous vegetation was not in leaf.

Landscape Appraisal

7.5.31 The Site, with an area of 35.42 hectares (ha), comprises the Solar Site, two parcels either side of an unnamed lane running broadly north/south, and the Cable Route, which runs between the Solar Site and St Asaph Substation. The western parcel (13.22ha) is formed of two small scale fields and two large scale fields, all irregular in shape and currently in use as pasture. The eastern parcel (20.32ha) is formed of three large scale fields of irregular shapes and in use as pasture. Both parcels are accessed by existing farm tracks adjoining the unnamed lane that runs between them.

7.5.32 The landform of the immediate context of the Solar Site slopes gently up toward the south-west, such that main extents of the eastern and western parcels are at broadly similar elevations (45-65m AOD and 50-68m AOD respectively). At its lowest the Solar Site reaches 45m AOD at the northern corner of the eastern parcel, and extends to 68m AOD at the southern corner of the western parcel.

7.5.33 The Solar Site boundaries are predominantly defined by native hedgerows with hedgerow trees, mature tree belts, and woodland blocks. Part of the northern boundary of the western parcel is unvegetated and marked only by the existing farm access track. The woodland blocks adjacent and near to the Solar Site boundaries are predominantly Plantation on Ancient Woodland, with some Ancient Semi Natural Woodland and some Restored Ancient Woodland. Internally, the fields of each of the parcels are separated by existing hedgerows in varying conditions. These internal hedgerows follow the courses of ditches, and streams follow parts of the boundaries to both parcels. Small ponds are present within or immediately adjacent to both parcels.

7.5.34 The eastern parcel is well contained by the adjacent woodland vegetation to the north, east and west, which combines with the relatively level topography to limit intervisibility with the immediate landscape in these directions. Similarly, woodland blocks are present to the north of the western parcel, providing enclosure and limiting intervisibility with the wider landscape in this direction. To the south, however, more open views toward the immediate and wider landscape context are available from both parcels.

7.5.35 The western parcel has a lower level of enclosure to the east and west, since it is not flanked in these directions by woodland blocks or belts and is surrounded only by hedgerows with mature hedgerow trees. However, the frequent hedgerows and hedgerow trees within its landscape context heavily filter the intervisibility between this parcel and its immediate context.

7.5.36 Both parcels have some intervisibility with Clwydian Range and Dee Valley National Landscape to the east, as well as with the Cefn Meiriadog, the locally prominent ridge to the south-west.

7.5.37 Existing industrial development is prominent both within the Solar Site and in views from the Solar Site, notably the overhead power lines within and near to the eastern parcel and the

pylons that cross the eastern and western parcels and the adjacent landscape. The electricity distribution stations to the north-west of the western parcel are entirely screened from the Solar Site by the intervening woodland vegetation.

Landscape Value

7.5.38 Landscape Institute Technical Guidance Note 02/21 provides in its Table 1 a range of factors that can be considered when identifying landscape value. These are set out below with commentary relating to the Solar Site:

- Natural heritage – The Solar Site itself does not contain surviving semi-natural habitat, although Plantation on Ancient Woodland, Ancient Semi Natural Woodland and Restored Ancient Woodland are present adjacent to the boundary and within close proximity. The canopy cover within and adjacent to the Solar Site is a natural capital asset that contributes to ecosystems services and makes a contribution to the wider green infrastructure network, although this is to a limited extent, since the majority of the Solar Site itself comprises open agricultural fields.

- Cultural heritage – There are no historic landmark structures or designed landscape elements within or adjacent to the Solar Site. The Solar Site forms part of the setting of some heritage assets, including the Lower Elwy Valley Registered Historic Landscape and the listed buildings of the Church of St Mary and Wigfair Hall. The landscape of the Solar Site offers a dimension of time depth insofar as it retains some of the historic field patterns.

- Landscape condition – The canopy trees within and adjacent to the Solar Site appear to be in a good physical condition, being relatively mature. However, there is limited landscape structure within the Solar Site itself, since it predominantly comprises open fields. Typical character is represented in individual areas and it has a moderate level of intactness. The condition of individual elements is highly variable, with some hedgerows being low or poorly maintained in places, and improved grassland throughout much of the Solar Site.

- Associations – The Solar Site has no known associations with well-known literature, poetry, art, TV/film or music that contribute to perceptions of the landscape. As part of the Cefn Estate, the Solar Site's links to historical events and people may be of local significance.

- Distinctiveness – The Solar Site does not contain elements or features that are rare within its wider context. It makes a contribution to sense of place and is representative of the wider landscape, but does not contain particular characteristics, features or elements that are considered particularly important examples.

- Recreational – The Solar Site does not contribute to recreation as there are no PRoW within it and there is no other public access to it. Whilst the bridleway PRoW 208/3 runs just north of the western parcel, it appears to be a remnant PRoW that is not connected to any other publicly accessible routes or locations. There is no evidence that the landscape of the Solar Site is valued for recreational activity where experience of the landscape is important, as it is not publicly accessible. However, it forms part of views experienced from locally and regionally important PRoW, and it forms a very small proportion of vistas experienced from important publicly accessible areas, including the Clwydian Range and Dee Valley National Landscape.

- Perceptual (scenic) – The scenic quality of the Solar Site itself is moderate, being relatively simple in structure and comprising intensively farmed agricultural land. There are medium and long distance views available toward the Cefn Meiriadog ridge to the south and the Clwydian Range and Dee Valley National Landscape to the east.

- Perceptual (wildness and tranquillity) – The Solar Site is of moderate perceptual value, as it exhibits limited wildness, comprising intensively farmed agricultural land with limited

canopy cover, albeit woodland is present immediately adjacent to the Solar Site and throughout the wider landscape, introducing perceptual value into the Solar Site's immediate context. The sense of tranquillity and remoteness experienced within the Solar Site is partially limited by detractors including the visual intrusion from the pylons visible either within or from each parcel, and the overhead power lines within the eastern parcel.

- Functional – The existing vegetation within and adjacent to the Solar Site makes some contribution to the healthy functioning of the wider landscape. Its canopy cover forms part of the wider green infrastructure network, although this is to a limited extent. It forms part of the wider setting of the Clwydian Range and Dee Valley National Landscape, albeit it is not readily distinguishable in views from the National Landscape.

7.5.39 On the basis of a review of published landscape character assessments, the LANDMAP data and analysis of the landscape character of the Solar Site and its context, the following landscape character receptors, set out in **Table 7.2**, have been identified against which effects resulting from the Proposed Development have been assessed.

Table 7.2: Summary of Sensitivity of Landscape Character Receptors

Receptor	**Sensitivity**
Clwydian Range and Dee Valley National Landscape	Very High
LCA D/LC/6: Vale of Clwyd North	Medium
The character of the Solar Site	Medium
Geological Landscape AA Bodelwyddan (DNBGHGL016)	Medium
Geological Landscape AA Cefn Meiriadog (DNBGHGL031)	High
Geological Landscape AA Tytywyrch (DNBGHGL015)	Medium
Geological Landscape AA The Roe (DNBGHGL017)	Medium
Geological Landscape AA Elwy Gorge (DNBGHGL032)	High
Geological Landscape AA Henllan (DNBGHGL035)	High
Geological Landscape AA Waen Gloeugoed (DNBGHGL019)	High
Landscape Habitats AA Cefn Improved Grassland (DNBGHLH023)	Medium
Landscape Habitats AA Bodelwyddan Lowland Parkland (DNBGHLH021)	Medium
Landscape Habitats AA Vale of Clwyd North Improved Grassland (DNBGHLH017)	Medium
Cultural Landscape Services AA Cefn Estate (DNBGHCLS030)	Medium
Cultural Landscape Services AA Limestone Valley-Cefn (DNBGHCLS035)	Medium
Cultural Landscape Services AA Wooded Parkland and Parkland Remnants (DNBGHCLS033)	Medium
Cultural Landscape Services AA Limestone Plateau-Denbigh/Henllan (DNBGHCLS037)	Medium
Cultural Landscape Services AA Vale of Clwyd-North of Denbigh (DNBGHCLS029)	Medium
Cultural Landscape Services AA Vale Wooded Estate-South of Dyserth (DNBGHCLS017)	Medium

Receptor	Sensitivity
Historic Landscape AA Pentre-mawr (DNBGHHL041)	Medium
Historic Landscape AA Bont-newydd (DNBGHHL021)	High
Historic Landscape AA Plas Heaton (DNBGHHL039)	Medium
Historic Landscape AA Brynbella (DNBGHHL026)	Medium
Historic Landscape AA Bodelwyddan Park (DNBGHHL005)	Medium
Visual and Sensory AA Cefn Estate (DNBGHVS033)	Medium
Visual and Sensory AA Vale of Clwyd-North of Denbigh (DNBGHVS031)	High
Visual and Sensory AA Vale Wooded Estate-South of Dyserth (DNBGHVS016)	High

7.5.40 On the basis of the Site Appraisal the following landscape features, set out in **Table 7.3**, have been identified as receptors for the assessment of effects arising from the Proposed Development, including an assessment of their value, susceptibility, and resultant sensitivity to development of the type proposed:

Table 7.3: Summary of Sensitivity of Landscape Features

Receptor	Sensitivity
Open fields	Medium
Native hedgerow	Low
Canopy trees	Medium
Waterbodies	Medium

7.5.41 The commentary for the value, susceptibility, and resultant sensitivity of the landscape receptors to the Proposed Development is set out in **Appendix 7.4: Landscape Effects Table**.

Visual Appraisal

7.5.42 A visual appraisal was undertaken to determine the relationship of the Solar Site with its surroundings and the approximate extent of its visibility within the wider landscape as experienced from publicly accessible viewpoints (roads, footways, PRoW and open spaces). Where appropriate, views from private houses have also been considered as part of description of visibility set out below.

7.5.43 The visibility of the Solar Site is predominantly influenced by landform and the extent and type of vegetation cover and built elements within the surrounding landscape. Baseline studies of these features enabled the identification of the potential visibility of the Solar Site from the surrounding area to be tested through fieldwork.

7.5.44 A ZTV was prepared to assist in the selection of viewpoints and inform the assessment of likely visual effects. The ZTV is based on a digital terrain model made from Natural Resources Wales Lidar data, and accounts for the screening effect of vegetation (assuming woodland blocks to be 12m high) and existing buildings (assumed to be 8.5m high). It should be noted that the ZTV does not take into account the screening effect of other structures and smaller areas of vegetation including hedgerows and is therefore only an indication of potential

visibility. The ZTV was used to inform and guide field surveys, which have been carried out to robustly and accurately assess the visual effects of the Proposed Development in accordance with the GLVIA3.

7.5.45 It should also be noted that in order to account for a worst case scenario, the ZTV is based on the full extent of the Solar Site being proposed for panels. For this reason it is also based on the height of the tallest structure proposed within the Solar Site, which in this case is the DNO substation enclosure, 3.95m in height. This enclosure will be limited to one small area of the Solar Site and the majority of the structures within the Solar Site (the panels) will instead reach up to 3m in height. As part of the iterative design process, the design of the Proposed Development has been amended to address particular landscape and visual sensitivities, and the layout is also constrained by the easements for existing utilities. As a result of these factors the actual extent of visibility of the Proposed Development is likely to be smaller than indicated on the ZTV.

7.5.46 On the basis of the ZTV and field surveys, a series of representative views (Site Context Photographs) have been selected to support the assessment of the potential visual effects arising from the Proposed Development. The ZTV is presented on **Figure 7.6: Visual Appraisal Plan**.

7.5.47 As requested by DCC in their pre-application advice dated 5 May 2022, the Site Context Photographs have been taken from locations that are considered to represent the full range of sensitive receptors in publicly accessible locations within the immediate locale of the Solar Site and from the wider area within the ZTV, based on both desk and field study. They have also been selected for inclusion based on their use in illustrating the visual envelope of the Solar Site and for conveying an understanding of the Solar Site's context. The rationale for selecting the viewpoints is set out in further detail below:

- **Site Context Photographs 1** to **4** – representative of views from the unnamed lane that runs broadly north/south between the eastern and western parcels, as well as similar views from residences off this lane;
- **Site Context Photograph 5** – representative of views from Glascoed Road and the south-western edge of St Asaph;
- **Site Context Photograph 6** – representative of views from the nearest PRoW (208/3) and Coed yr Esgob;
- **Site Context Photograph 7** – representative of views from nearby PRoW (105/6) and similar views from nearby residences;
- **Site Context Photographs 8** and **9** – representative of views from the lane that runs along the eastern slopes of the Cefn Meiriadog ridge, as well as similar views from residences off this lane;
- **Site Context Photograph 10** – representative of views from nearby PRoW (105/4) and similar views from PRoW 105/3 and the churchyard of the Church of St Mary in Cefn Meiriadog;
- **Site Context Photograph 11** – representative of views from the lane that runs broadly east/west to the south of the eastern parcel, as well as similar views from residences off this lane and from the entrance to Wigfair Hall;
- **Site Context Photographs 12, 14** and **15** – representative of views from the Clwydian Range and Dee Valley National Landscape; and
- **Site Context Photograph 13** – representative of views from the wider landscape to the north of the Solar Site.

Near Distance Views – Up to 500m

7.5.48 Near distance, transient views of the western parcel are available from the bridleway PRoW 208/3, which north-east from the track that forms the northern boundary of this parcel. Views of this parcel are glimpsed at best, as they are heavily filtered by the intervening unmanaged hedgerow along the boundary and its mature hedgerow trees, as well as other intervening hedgerows and hedgerow trees. These glimpsed views are available in very few places where the hedgerow is somewhat gappy and at the northern end of the route where there is a farm access opening. Where the western parcel is visible at all, it is sometimes seen in the context of the overhead power lines that cross the intervening fields. The eastern parcel is not visible from this route. As mentioned above, PRoW 208/3 appears to be a remnant PRoW that is not connected to any other publicly accessible routes or locations, and as such it is unlikely that receptors will be present to experience views from this route.

7.5.49 Similar views, although fixed, are likely to be available from the private residence, Coed yr Esgob, 430m to the north of the Solar Site.

7.5.50 Near distance, transient views of the eastern and western parcels are available from the north/south lane that runs between the parcels. Views of both parcels are heavily filtered and screened by the intervening field boundary vegetation. Glimpses and occasional partial views are limited to a few discrete locations along this route. Where visible at all, these parcels are often seen in the context of residential or agricultural built form, and always in the context of the pylons within them and nearby.

7.5.51 Similar views, although fixed, are likely to be available from the private residences and farmsteads situated along this lane, including Tyn y Ffordd Fawr, Squirrels Lodge, Tyn y Ffordd Bach, Tyn y Ffordd Newydd and Rhos Aber.

7.5.52 Near to medium distance, transient views of the eastern parcel are available from the east/west lane that runs to the south of this parcel. Glimpses of the parcel are available through the intervening field boundary vegetation, though this is limited to places where the poorly maintained hedgerow along the lane's verge is occasionally lower in height. The woodland blocks adjacent to the parcel screen parts of it altogether. In all cases, where the parcel is seen it is in the context of residential and agricultural built form, the pylons within and near to the parcel, and the Clwydian Range and Dee Valley National Landscape forming the skyline. No views of the western parcel are available from this route.

7.5.53 Similar views, although fixed, are likely to be available from the private residences and farmsteads situated along this lane, including Greystones, The Paddock, Glascoed Fawr and Glascoed Fawr Cottage. These will be limited a very small portion of the south-eastern extents of the parcel. Other similar views, also fixed, may be available from Wigfair Hall, a Grade II* listed building used as a wedding venue, and Wigfair Home Farm.

7.5.54 Near to medium distance, transient views of both parcels are available from the lane that runs along the eastern slopes of the Cefn Meiriadog ridge. These are partial views, often heavily filtered by intervening tree belts, woodland blocks and hedgerows with frequent mature hedgerow trees, and are limited to relatively short sections of the route. the Solar Site is seen in the context of energy infrastructure, including overhead power lines and pylons, isolated residences and farmsteads, settlements including St Asaph and Dyserth, and the Clwydian Range and Dee Valley National Landscape forming the skyline.

7.5.55 Similar views, although fixed, are likely to be available from the private residences and farmsteads situated along this lane, including Isfryn, Ty Celyn, Cefn Farm, Caubwll, 1 and 2 Camrau, 1 and 2 Church View and Rhewl.

7.5.56 Near distance, fixed views of the western parcel are likely to be available from the residences and farmsteads of Tan y Bryn and Tan y Bryn Uchaf which are located to the west of the western parcel. Views of this parcel are likely to be filtered by the intervening field boundary vegetation, and seen in the context of the pylons within them and nearby. No views of the eastern parcel are likely to be available from this location.

7.5.57 No intervisibility between the Solar Site and other near distance receptors has been identified, including the residence and farmstead of Glascoed Bach to the south of the eastern parcel, the residence and farmstead of Ty'n y Coed and the Eryl Hall Caravan Park to the east of the eastern parcel, and the electricity distribution stations to the north-west of the western parcel. the Solar Site is likely to be entirely screened from these locations by intervening woodland blocks and built form. Receptors at these locations have therefore been scoped out of the assessment in accordance with GLVIA3.

Medium Distance Views – 500m to 1km

7.5.58 Other than the medium distance views of the Solar Site identified above, i.e. from the east/west lane that runs to the south of the eastern parcel and the lane that runs along the eastern slopes of the Cefn Meiriadog ridge, medium distance views of the Solar Site have been identified from very few locations.

7.5.59 Medium distance, transient views of both parcels are available from the short distance local footpaths PRoW 105/3, 105/4 and 105/6 to the south and west of the Solar Site. These are glimpsed views, heavily filtered and screened by intervening hedgerow vegetation. the Solar Site is seen in the context of energy infrastructure, including overhead power lines and pylons, isolated residences and farmsteads, settlements including St Asaph and Dyserth, and the Clwydian Range and Dee Valley National Landscape.

7.5.60 Similar views, although fixed, are available from within the northern extents of the churchyard of the Church of St Mary in Cefn Meiriadog a Grade II listed building to the south of the Solar Site, and may be available from the upper storeys of the residence of Tyddyn Meredydd to the west of the Solar Site.

7.5.61 No intervisibility between the Solar Site and other medium distance receptors has been identified, including the village of Cefn, the St Asaph Business Park, Glascoed Road and PRoW to the north of the Solar Site, residences on the settlement edge of St Asaph, Lower Denbigh Road/B5381, or other roads, PRoW and properties. the Solar Site is likely to be entirely screened from these locations by intervening woodland blocks and built form, in combination with the topographical character of the landscape. They have therefore been scoped out of the assessment in accordance with GLVIA3.

Long Distance Views – Over 1km

7.5.62 Long distance views in which the Solar Site is visible are limited to locations on the western slopes of the Clwydian Range and Dee Valley National Landscape to the east and north-east of the Solar Site, and a small number of PRoW, lanes and residential properties slightly lower on these slopes just outside the boundary of the AONB. These views are predominantly transient, though in some cases fixed. In all cases they are very heavily filtered and screened by intervening vegetation. the Solar Site is seen in the context of energy infrastructure including pylons and substations, isolated residences and farmsteads, settlements including St Asaph and Bodelwyddan, commercial built form including the St Asaph Business Park, and the wide agricultural landscape of the Clwyd Valley. In all cases, the Solar Site is barely perceptible, since it is seen at a distance of over 5km.

7.5.63 No intervisibility between the Solar Site and other long distance receptors has been identified, including those indicated on the ZTV as having theoretical visibility of the Solar Site. the Solar Site is likely to be entirely screened from these locations by intervening woodland blocks and built form, in combination with the topographical character of the landscape. They have therefore been scoped out of the assessment in accordance with GLVIA3.

Accurate Visual Representations

7.5.64 Type 4 Accurate Visual Representations (AVRs) have been produced for eight viewpoints by Realm Communications, a specialist visualisation consultancy, in order to assist in understanding the visual effect of the Proposed Development as it will be seen within the landscape. These visualisations are generated using geometrically accurate photographs and

accompanying verifiable data, taken from viewpoints on highways and PRoW, camera matched with a 3D digital model of the landscape and the Proposed Development. The AVRs will not be submitted as part of the PAC submission, but will be submitted as part of the final DNS application. The AVRs have been produced for Site Context Photographs 2, 3, 6, 7, 8, 11 and 12. Three images have been produced for each of these eight viewpoints:

- Baseline views: These show the current baseline condition as experienced from each viewpoint;
- Type 4 rendered AVRs with Year 1 planting: These show the proposed built form in accordance with **Figure C0002452_02-V4: Site Layout Plan**, as well as the anticipated appearance of proposed planting at Year 1. Typical heights of plant specimens at the time of planting are between 1m and 4m; and
- Type 4 rendered AVRs with Year 15 planting: These are as the above, but showing the anticipated planting at Year 15. Whilst species vary considerably, for the purpose of the exercise growth is assumed to be at an average rate of one metre every three years, such that the height of trees at Year 15 is expected to range between 6m and 9m. The effects of the growth and enhanced management of the existing planting is not shown.

7.5.65 The AVRs and associated methodology will be provided within the final DNS application. The viewpoints selected for AVRs will provide a range of view directions and distance and are considered proportionate to the scale of development proposed, in accordance with GLVIA3.

Visual Receptors

7.5.66 On the basis of the visual appraisal, a series of visual receptors, set out in **Table 7.4**, have been identified, against which the effects of the Proposed Development on visual amenity have been assessed. This is not intended to be an exhaustive list, as any visual receptors considered unlikely to experience visual effects have been scoped out based on Site assessment and professional expertise. The visual receptors are set out below:

Table 7.4: Summary of Sensitivity of Visual Receptors

Receptor	**Sensitivity**
Users of the bridleway PRoW 208/3	Low
Residents at Coed yr Esgob	Medium
Users of the north/south lane that runs between the parcels	Very High
Residents at Tyn y Fford Fawr, Squirrels Lodge, Tyn y Ffordd Bach, Tyn y Fford Newydd and Rhos Aber	Medium
Users of the east/west lane that runs to the south of the eastern parcel	Low
Residents at Greystones, The Paddock, Glascoed Fawr, Glascoed Fawr Cottage and Wigfair Home Farm	Medium
Users of Wigfair Hall	High
Users of the lane that runs along the eastern slopes of the Cefn Meiriadog ridge	Medium
Residents at Isfryn, Ty Celyn, Cefn Farm, Caubwll, 1 and 2 Camrau, 1 and 2 Church View and Rhewl	Medium
Residents at Tan y Bryn and Tan y Bryn Uchaf	Medium
Pedestrians on the short distance local footpaths PRoW 105/3, 105/4 and 105/6	Medium
Users of the churchyard of the Church of St Mary in Cefn Meiriadog	High

Receptor	Sensitivity
Residents at Tyddyn Meredydd	High
Users of PRoW and lanes within and immediately adjacent to the Clwydian Range and Dee Valley National Landscape	Very High
Residents of properties within and immediately adjacent to the Clwydian Range and Dee Valley National Landscape	Very High

7.5.67 The commentary for the value, susceptibility, and resultant sensitivity of the visual receptors to the Proposed Development is set out in **Appendix 7.5: Visual Effects Table**.

Baseline Evolution

7.5.68 In the absence of the Proposed Development coming forward the Solar Site would remain agricultural and likely managed as per its current management processes.

7.6 Primary and Tertiary Mitigation

Primary Mitigation

7.6.1 This section sets out the attributes that are included within the design of the Proposed Development and are key elements of primary mitigation that have been taken into account in the assessment of landscape and visual effects. Primary, or 'embedded, mitigation is defined in GLVIA3 as measures that are *"developed through the iterative design process, which have become integrated or embedded into the project design"*. GLVIA3 also states that primary mitigation measures *"should ideally be included in the project description/specification"*.

7.6.2 In accordance with best practice guidelines, the primary mitigation measures have been listed below in advance of the assessment of effects.

7.6.3 The design of the Proposed Development has evolved as part of an iterative process and has been informed by the findings of the baseline landscape and visual amenity conditions. Consideration of the baseline conditions has informed the proposed layout, the scale and massing of introduced built elements, and the extent and arrangement of different landscape treatments. The design of the Proposed Development has also been informed by co-ordination with technical consultants appointed by the Applicant, including ecological consultants.

7.6.4 On the basis of a review of the Solar Site's context, character and visual characteristics, as well as relevant policy and landscape character information, a landscape mitigation strategy has been developed and coordinated with the ecological consultant, SLR. The mitigation strategy is illustrated on **Figure 7.7: Landscape Strategy Plan**.

7.6.5 The primary mitigation of particular relevance to landscape and visual matters is summarised below:

- Setting panels and other built features back from adjacent highways to limit the potential for close range views from sensitive receptors, including offsetting proposed panels a minimum of 15m from the North Wales Pilgrims Way to limit the potential for close range views for these receptors immediately adjacent to the eastern parcel;
- Consideration of the height and scale of development to limit the potential for impacts on landscape character areas outside the Solar Site and on views experienced by sensitive receptors;

- Retention and reinforcement of the existing vegetation along Site boundaries providing additional enclosure;

- Retaining as far as possible the existing structure of vegetation within the Solar Site and managing vegetation and grassland to encourage improved biodiversity;

- A hedgerow improvement strategy totalling 173 linear metres of new hedgerow and 2.8 linear kilometres of reinforcement of existing hedgerow with an appropriate species-rich native planting palette. The proposed new hedgerow and hedgerow reinforcement planting will assist in visually screening the Proposed Development from near and medium distance viewpoints and will enhance the habitat value and connectivity on the Solar Site, as well as responding to the Denbighshire Landscape Strategy management objectives for the Vale of Clwyd North LCA, including to *"encourage maintenance of hedgerow boundaries"*.

- Creation of 1.19ha of native tree planting within the Solar Site to extend and reinforce the wooded character in the Solar Site's context and further contain the Solar Site visually, as well as responding to the Denbighshire Landscape Strategy management objectives for the Vale of Clwyd North LCA, including to *"maintain and enhance tree and woodland cover, protect and manage broadleaved woodland and encourage new planting, particularly of oak and occasional black poplar, to eventually replace mature and ageing hedgerow trees"*.

- Creation of 0.65ha of native shrub planting between the proposed native tree planting and the security fencing to provide new habitat opportunities through a transition from woodland to grassland and to assist in integrating and assimilating the Proposed Development within the landscape.

- Provision of 0.09ha of waterbody enhancement through wildflower meadow wetland seeding across 10m buffers to the ponds, streams and ditches within and adjacent to the Solar Site for biodiversity enhancements and benefits to visual amenity, as well as responding to the Denbighshire Landscape Strategy management objectives for the Vale of Clwyd North LCA, including to *"promote their [ponds] conservation… [and] protect and encourage creation of a diversity of habitat features, including linear wetland…within farmland landscape"*.

- Existing grassland areas within the fence will be mown or grazed regularly, while that outside the fence will be allowed to grow to a tall sward and mowed infrequently, resulting in improved habitat potential across 26.75ha of grassland.

7.6.6 The above landscape proposals will provide appropriate mitigation for the scheme through reducing visual impact, improving the experience of users of the PRoW network within the landscape context, and through the potential for improvements to the structure and quality of the fabric of the landscape.

Tertiary Mitigation

7.6.7 Tertiary mitigation is not applicable to this chapter's assessment of the effects of the Proposed Development.

Glint and Glare

7.6.8 A Glint and Glare Study has been prepared by Pager Power to assesses the potential effects arising from the Proposed Development on surrounding receptors including road users and dwellings. The study is provided at **Appendix 7.10**.

7.6.9 The study states that *"reflections produced [by solar panels] are of intensity similar to or less than those produced from still water and significantly less than reflections from glass and steel."*

7.6.10 The study notes that the separation distance to the panel area is relevant to the assessment of effects, since *"larger separation distances reduce the proportion of an observer's field of view that is affected by glare"*. The assessment area for the glint and glare study is set at 1km from the Solar Site. The study excludes the local roads from assessment since traffic densities are likely to be relatively low, and solar reflections from the Proposed Development experienced by users of these roads would be considered low impact in accordance with the relevant guidance.

7.6.11 The study includes 48 residential receptors, to the north, east, south and west of the Solar Site, with the results presented in Sections 5.3 and 6.2 and Figures 7 to 14 of the study. The analysis shows that reflections from the Proposed Development are geometrically possible from 40 of these receptors, with no effects predicted for 36 of these due to the presence of existing screening in the form of vegetation, buildings and intervening terrain. Three of the four remaining residential receptors are situated along the lane that runs between the two parcels (Tyn-y-ffordd-fawr, Squirrells Lodge and Tyn-y-ffordd-bach) and one is situated to the west of the Site (Tan-y-bryn/Tan y Bryn Uchaf). The predicted impact classification on these four receptors is *"low impact"*, since reflections are geometrically possible for more than three months each year but less than 60 minutes on any given day. The study does not recommend mitigation for these dwellings, in accordance with the methodology set out in the study's Appendix D.

7.6.12 The study scopes out road receptors on the B5381 (Lower Denbigh Road) to the east of the Solar Site, since *"solar reflections are predicted to be obstructed by existing vegetation and intervening terrain, such that no impact is predicted upon road users…and mitigation is not required."*

7.6.13 Whilst the study concludes that no mitigation is required, any reflectivity perceived by visual receptors has the potential to make the Proposed Development more noticeable at certain times of the day. On this basis, the potential for solar reflections has been taken account in the assessment of visual effects for residents at Tyn-y-ffordd-fawr, Squirrells Lodge, Tyn-y-ffordd-bach, Tan-y-bryn and Tan y Bryn Uchaf.

7.6.14 The visual effects on the aforementioned receptors included within this assessment are addressed with consideration for solar reflectivity where relevant. In line with the findings of the Glint and Glare Study, the remaining visual receptors are considered highly unlikely to experience visual effects as a result of solar reflectivity.

7.6.15 The perception of solar reflection is not anticipated to cause any appreciable change to the landscape effects resulting from the Proposed Development.

7.7 Assessment of Likely Significant Effects

Operational Phase – Year 1

Effects on Landscape Receptors

7.7.1 Full explanatory commentary on the magnitude and significance of effects for the receptors is set out in **Appendix 7.4: Landscape Effects Table**. A summary of the effects identified, including key narrative for any significant effects, is set out below.

7.7.2 At Year 1, four landscape receptors will be subject to significant effects as a result of the Proposed Development, in each case, **moderate adverse**:

- Geological Landscape AA Cefn Meiriadog (DNBGHGL031);
- Historic Landscape AA Bont-newydd (DNBGHHL021);
- The character of the Solar Site; and

- Open fields.

7.7.3 There will be change to a high proportion of each of these receptors, which will result in a noticeable change in their integrity and key characteristics. Whilst the Proposed Development is expected to remain in place for an extended temporary period (up to 40 years), at Year 1 the planting will have yet to establish, and as such the effects will be significant. On balance, the effects will result in damage to the integrity and key characteristics of these receptors.

7.7.4 The remaining 27 landscape receptors will not be subject to significant adverse effects as a result of the Proposed Development.

7.7.5 Eight landscape receptors will be subject to **minor adverse** effects:

- Geological Landscape AA Bodelwyddan (DNBGHGL016);
- Geological Landscape AA Waen Gloeugoed (DNBGHGL019);
- Landscape Habitats AA Cefn Improved Grassland (DNBGHLH023);
- Cultural Landscape Services AA Cefn Estate (DNBGHCLS030);
- Historic Landscape AA Pentre-mawr (DNBGHHL041);
- Visual and Sensory AA Cefn Estate (DNBGHVS033);
- Visual and Sensory AA Vale of Clwyd-North of Denbigh (DNBGHVS031); and
- Visual and Sensory AA Vale Wooded Estate-South of Dyserth (DNBGHVS016).

7.7.6 Ten landscape receptors will be subject to **negligible adverse** effects:

- Clwydian Range and Dee Valley National Landscape;
- LCA D/LC/6: Vale of Clwyd North;
- Cultural Landscape Services AA Limestone Valley-Cefn (DNBGHCLS035);
- Cultural Landscape Services AA Wooded Parkland and Parkland Remnants (DNBGHCLS033);
- Cultural Landscape Services AA Limestone Plateau-Denbigh/Henllan (DNBGHCLS037);
- Cultural Landscape Services AA Vale of Clwyd-North of Denbigh (DNBGHCLS029);
- Cultural Landscape Services AA Vale Wooded Estate-South of Dyserth (DNBGHCLS017);
- Historic Landscape AA Plas Heaton (DNBGHHL039);
- Historic Landscape AA Brynbella (DNBGHHL026); and
- Historic Landscape AA Bodelwyddan Park (DNBGHHL005).

7.7.7 Six landscape receptors will be subject to **no** effects:

- Geological Landscape AA Tytywyrch (DNBGHGL015);
- Geological Landscape AA The Roe (DNBGHGL017);

- Geological Landscape AA Elwy Gorge (DNBGHGL032);
- Geological Landscape AA Henllan (DNBGHGL035);
- Landscape Habitats AA Bodelwyddan Lowland Parkland (DNBGHLH021); and
- Landscape Habitats AA Vale of Clwyd North Improved Grassland (DNBGHLH017).

7.7.8 Three landscape receptors will be subject to **negligible beneficial** effects:

- Native hedgerow;
- Canopy trees; and
- Waterbodies.

Effects on Visual Receptors

7.7.9 Full explanatory commentary on the magnitude and significance of effects for the receptors is set out in **Appendix 7.5: Visual Effects Table**. A summary of the effects identified, including key narrative for any significant effects, is set out below.

7.7.10 At Year 1, one visual receptor will experience significant effects as a result of the Proposed Development, in this case, **moderate adverse**:

- Users of the north/south lane that runs between the parcels.

7.7.11 There will likely be a noticeable change in the composition of the view for this receptor, close the viewer and occupying a sizeable extent of the view. Whilst the Proposed Development is expected to remain in place for an extended temporary period (up to 40 years), at Year 1 the planting will have yet to establish, the effects will be significant from a landscape and visual perspective. On balance, the effects will result in damage to the composition of the viewing experience.

7.7.12 The remaining 14 visual receptors will not experience significant effects as a result of the Proposed Development.

7.7.13 Ten visual receptors will experience **minor adverse** effects:

- Residents at Coed yr Esgob;
- Residents at Tyn y Fford Fawr, Squirrels Lodge, Tyn y Ffordd Bach, Tyn y Fford Newydd and Rhos Aber;
- Users of Wigfair Hall;
- Users of the lane that runs along the eastern slopes of the Cefn Meiriadog ridge;
- Residents at Isfryn, Ty Celyn, Cefn Farm, Caubwll, 1 and 2 Camrau, 1 and 2 Church View and Rhewl;
- Residents at Tan y Bryn and Tan y Bryn Uchaf;
- Users of the churchyard of the Church of St Mary in Cefn Meiriadog;
- Residents at Tyddyn Meredydd;
- Users of PRoW and lanes within and immediately adjacent to the Clwydian Range and Dee Valley AONB; and

- Residents of properties within and immediately adjacent to the Clwydian Range and Dee Valley AONB.

7.7.14 Four visual receptors will experience **negligible adverse** effects:

- Users of the bridleway PRoW 208/3;
- Users of the east/west lane that runs to the south of the eastern parcel;
- Residents at Greystones, The Paddock, Glascoed Fawr, Glascoed Fawr Cottage and Wigfair Home Farm; and
- Pedestrians on the short distance local footpaths PRoW 105/3, 105/4 and 105/6.

Operational Phase – Year 15

Effects on Landscape Receptors

7.7.15 Full explanatory commentary on the magnitude and significance of effects for landscape receptors at Year 15 is set out in **Appendix 7.4: Landscape Effects Table**. A summary of the effects identified, including key narrative for any significant effects, is set out below.

7.7.16 By Year 15, none of the landscape receptors will be subject to significant effects as a result of the Proposed Development.

7.7.17 Four landscape receptors will be subject to **minor adverse** effects:

- Geological Landscape AA Cefn Meiriadog (DNBGHGL031);
- Historic Landscape AA Bont-newydd (DNBGHHL021);
- The character of the Solar Site; and
- Open fields.

7.7.18 17 landscape receptors will be subject to **negligible adverse** effects:

- Clwydian Range and Dee Valley National Landscape;
- LCA D/LC/6: Vale of Clwyd North;
- Geological Landscape AA Bodelwyddan (DNBGHGL016);
- Geological Landscape AA Waen Gloeugoed (DNBGHGL019);
- Cultural Landscape Services AA Cefn Estate (DNBGHCLS030);
- Cultural Landscape Services AA Limestone Valley-Cefn (DNBGHCLS035);
- Cultural Landscape Services AA Wooded Parkland and Parkland Remnants (DNBGHCLS033);
- Cultural Landscape Services AA Limestone Plateau-Denbigh/Henllan (DNBGHCLS037);
- Cultural Landscape Services AA Vale of Clwyd-North of Denbigh (DNBGHCLS029);
- Cultural Landscape Services AA Vale Wooded Estate-South of Dyserth (DNBGHCLS017);

- Historic Landscape AA Pentre-mawr (DNBGHHL041);
- Historic Landscape AA Plas Heaton (DNBGHHL039);
- Historic Landscape AA Brynbella (DNBGHHL026);
- Historic Landscape AA Bodelwyddan Park (DNBGHHL005);
- Visual and Sensory AA Cefn Estate (DNBGHVS033);
- Visual and Sensory AA Vale of Clwyd-North of Denbigh (DNBGHVS031); and
- Visual and Sensory AA Vale Wooded Estate-South of Dyserth (DNBGHVS016).

7.7.19 Six landscape receptors will be subject to **no** effects:

- Geological Landscape AA Tytywyrch (DNBGHGL015);
- Geological Landscape AA The Roe (DNBGHGL017);
- Geological Landscape AA Elwy Gorge (DNBGHGL032);
- Geological Landscape AA Henllan (DNBGHGL035);
- Landscape Habitats AA Bodelwyddan Lowland Parkland (DNBGHLH021); and
- Landscape Habitats AA Vale of Clwyd North Improved Grassland (DNBGHLH017).

7.7.20 Four landscape receptors will be subject to **minor beneficial** effects:

- Landscape Habitats AA Cefn Improved Grassland (DNBGHLH023);
- Native hedgerow;
- Canopy trees; and
- Waterbodies.

Effects on Visual Receptors

7.7.21 Full explanatory commentary on the magnitude and significance of effects for visual receptors at Year 15 is set out in **Appendix 7.5: Visual Effects Table**. A summary of the effects identified, including key narrative for any significant effects, is set out below.

7.7.22 By Year 15, none of the visual receptors will experience significant effects as a result of the Proposed Development.

7.7.23 Three visual receptors will experience **minor adverse** effects:

- Users of the north/south lane that runs between the parcels;
- Users of PRoW and lanes within and immediately adjacent to the Clwydian Range and Dee Valley AONB; and
- Residents of properties within and immediately adjacent to the Clwydian Range and Dee Valley AONB.

7.7.24 Eight visual receptors will experience **negligible adverse** effects:

- Residents at Coed yr Esgob;
- Residents at Tyn y Fford Fawr, Squirrels Lodge, Tyn y Ffordd Bach, Tyn y Fford Newydd and Rhos Aber;
- Users of Wigfair Hall;
- Users of the lane that runs along the eastern slopes of the Cefn Meiriadog ridge;
- Residents at Isfryn, Ty Celyn, Cefn Farm, Caubwll, 1 and 2 Camrau, 1 and 2 Church View and Rhewl;
- Residents at Tan y Bryn and Tan y Bryn Uchaf;
- Users of the churchyard of the Church of St Mary in Cefn Meiriadog; and
- Residents at Tyddyn Meredydd.

7.7.25 Four visual receptors will experience **no** effects:

- Users of the bridleway PRoW 208/3;
- Users of the east/west lane that runs to the south of the eastern parcel;
- Residents at Greystones, The Paddock, Glascoed Fawr, Glascoed Fawr Cottage and Wigfair Home Farm; and
- Pedestrians on the short distance local footpaths PRoW 105/3, 105/4 and 105/6.

7.8 Secondary Mitigation and Enhancement

7.8.1 Secondary, or 'further', mitigation measures, are defined within GLVIA3 as *"those that are not built into the final development proposals and are considered in relation to the assessment of the landscape and visual effects of the final development proposals and are considered in relation to the assessment of the landscape and visual effects of the scheme as the means of addressing the significant adverse effects identified"*.

7.8.2 A Landscape and Ecological Management Plan (LEMP), provided at **Appendix 7.9**, has been prepared. The LEMP sets out the measures required for the successful establishment of proposed hard and soft landscape features and areas, as well as details of management proposals for the retention and enhancement of existing features within the Solar Site including trees and hedgerows.

7.8.3 The LEMP provides a strategy for the overall management and maintenance of the landscape features of the Proposed Development, including existing features, hard and soft landscape proposals, newly-created habitats including native tree, scrub, grassland, and wetland planting, and natural colonisation.

7.9 Residual Effects

Operational Phase – Year 1

Residual Effects on Landscape and Visual Receptors

7.9.1 At Year 1, the secondary mitigation (the LEMP) will not yet have been implemented over a period sufficient to change the significance of effects. As such, the residual effects experienced by both landscape and visual receptors at Year 1 of operation remain the same as the likely significant effects at Year 1 set out in Section 7.7 above.

Operational Phase – Year 15

7.9.2 By Year 15, the planting and habitats resulting from the landscape strategy, as primary mitigation, will have had sufficient time to establish. The management measures set out in the LEMP, as secondary mitigation, will also have had time to create a positive impact on the quality and condition of the existing and proposed features within the Solar Site. However, this positive impact will not be sufficient to alter the level of the significance of non-residual effects. As such, the residual effects experienced by both landscape and visual receptors at Year 15 of operation are the same as the likely significant effects at Year 15 set out in section 7.7 above.

7.10 Cumulative Effects

7.10.1 This section sets out the results of the assessment that has been undertaken to determine the likely cumulative landscape and visual effects resulting from the Proposed Development and other committed or anticipated developments ('Cumulative Schemes').

7.10.2 GLVIA3 sets out two main approaches to inter-project effects between any given Proposed Development and cumulative schemes:

> *"The first approach is to focus primarily on the additional effects of the main project under consideration…on top of the cumulative baseline*
>
> *The second approach is to focus on the combined effects of all the past, present and future proposals together with the new project."*

7.10.3 This assessment takes the second approach, and determines the likely cumulative landscape and visual effects on the existing and future baseline resulting from the Proposed Development in combination with other landscape and visual effects of the Cumulative Schemes.

7.10.4 For the purposes of this assessment, cumulative effects on landscape features (i.e. open fields, native hedgerow, canopy trees and waterbodies) are considered holistically within the cumulative assessment as they are the constituent elements of the landscape character of the Solar Site and its immediate surroundings, as well as of the wider LCA. As such, consideration of them as individual receptors has been scoped out of the cumulative assessment.

7.10.5 Six landscape character receptors have been scoped out of the cumulative assessment as no effect resulted from the Proposed Development alone, and as such, no cumulative effects resulting from the Proposed Development and any Cumulative Scheme can occur. These receptors are:

- Geological Landscape AA Tytywyrch (DNBGHGL015);
- Geological Landscape AA The Roe (DNBGHGL017);
- Geological Landscape AA Elwy Gorge (DNBGHGL032);
- Geological Landscape AA Henllan (DNBGHGL035);
- Landscape Habitats AA Bodelwyddan Lowland Parkland (DNBGHLH021); and
- Landscape Habitats AA Vale of Clwyd North Improved Grassland (DNBGHLH017).

7.10.6 One visual receptor, users of the bridleway PRoW 208/3, has been scoped out of the cumulative assessment. No views of any Cumulative Schemes are available from this route, and as such, no cumulative effects resulting from the Proposed Development and any Cumulative Schemes can occur.

7.10.7 The 14 Cumulative Schemes assessed in relation to the Proposed Development are set out in **Appendix A:6** and summarised in **Table 7.5** below.

Table 7.5: Summary of Sensitivity of Visual Receptors

Cumulative Scheme Reference	Cumulative Scheme Description	Application Reference
A	Bodelwyddan BESS and Solar Farm	40/2024/1575/EIA-SCO
B	Awel y Mor Offshore Wind Farm	EN010112
C	Mona Offshore Wind Farm	EN010137
D	Bodelwyddan Substation Extension	31/2023/0525
E	Bryn Morfa Residential	40/2023/0627
F	Opposite Glan Clwyd Hospital Residential	40/2021/0825
G	St Asaph Business Park Care Home	40/2021/0309
H	Glan Clwyd Hospital Unit and Car Park	40/2023/0473
I	Cil Y Coed Residential	28/2023/0851
J	Former Welsh Ambulance Service Dwellings Residential	46/2023/0480
K	Vista Site Commercial	46/2021/0159
L	Upper Denbigh Road Residential	46/2021/1161
M	Bod Haulog Residential	46/2025/0047/PR
N	Maes Owen Abergele Road Residential	40/2024/1079/PF

7.10.8 The remaining Cumulative Schemes set out in **Appendix A.6** have been scoped out of the assessment of cumulative landscape and visual effects:

- Kinmel Solar (0/40999), Burbo Bank Extension and Gwynt y Mor Substation are scoped out of the cumulative assessment as they are operational developments and as such are included within the baseline against which the Proposed Development is assessed;
- Green Gates Nature Reserves (46/2024/1200/PF and 46/2024/1084/MD) are scoped out of the cumulative assessment since their impacts are anticipated to be appreciably beneficial, whereas the cumulative assessment assumes a worst-case scenario;
- Tremeirchion Integrated Constructed Treatment Wetland (47/2024/1557/MD) is scoped out of the cumulative assessment as it the proposals are predominantly at or below ground level. Those that are above ground level will have a very limited visual relationship with the surrounding landscape, and much of the proposals are beneficial.

7.10.9 The extent to which mitigation relating to the Cumulative Schemes is committed is unknown. As such, the assessment of non-residual and residual cumulative effects is based on a worst-

case scenario, whereby no mitigation is implemented for any of the Cumulative Schemes, and only the mitigation relating to the Proposed Development is accounted for.

7.10.10 A cumulative ZTV has been generated to compare ZTVs for the cumulative schemes against that of the Proposed Development. The ZTVs have been combined in a single plan in order to assess where the effects of the Proposed Development and the cumulative schemes may theoretically combine, and this is shown on **Figure 7.8: Cumulative ZTV Plan**. The plan demonstrates three conditions: locations from which only the Proposed Development is theoretically visible; locations from which the Proposed Development and at least one cumulative scheme are theoretically visible concurrently; and locations from which only cumulative schemes are visible. Only those cumulative schemes considered to have the potential for significant cumulative visual effects were factored into the cumulative ZTV plan.

7.10.11 Full explanatory commentary on the magnitude and significance of landscape and visual cumulative effects is set out in **Appendix 7.8: Cumulative Effects Table**. A summary of the significant cumulative effects (on receptors that are not subject to significant effects as the result of the Proposed Development alone) is set out below.

Operational Phase – Year 1

Cumulative Effects on Landscape Receptors

7.10.12 At Year 1 of the operational phase, there will be **moderate to major adverse** cumulative effects on five landscape receptors (where the effects of the Proposed Development alone are not significant):

- Geological Landscape AA Bodelwyddan (DNBGHGL016);
- Landscape Habitats AA Cefn Improved Grassland (DNBGHLH023);
- Cultural Landscape Services AA Cefn Estate (DNBGHCLS030;
- Historic Landscape AA Pentre-mawr (DNBGHHL041); and
- Visual and Sensory AA Cefn Estate (DNBGHVS033).

7.10.13 At Year 1 of the operational phase, there will be **moderate adverse** cumulative effects on two landscape receptors (where the effects of the Proposed Development alone are not significant):

- Geological Landscape AA Waen Gloeugoed (DNBGHGL019); and
- Visual and Sensory AA Vale Wooded Estate-South of Dyserth (DNBGHVS016).

7.10.14 At Year 1 of the operational phase, there will be **minor to moderate** adverse cumulative effects on two landscape receptors (where the effects of the Proposed Development alone are not significant):

- LCA D/LC/6: Vale of Clwyd North; and
- Visual and Sensory AA Vale of Clwyd-North of Denbigh (DNBGHVS031).

Cumulative Effects on Visual Receptors

7.10.15 At Year 1 of the operational phase, there will be **major adverse** cumulative effects on one visual receptor (where the effects of the Proposed Development alone are not significant):

- Users of the north/south lane that runs between the parcels.

7.10.16 At Year 1 of the operational phase, there will be **moderate to major adverse** cumulative effects on five visual receptors (where the effects of the Proposed Development alone are not significant):

- Users of the lane that runs along the eastern slopes of the Cefn Meiriadog ridge;
- Residents at Isfryn, Ty Celyn, Cefn Farm, Caubwll, 1 and 2 Camrau, 1 and 2 Church View and Rhewl;
- Residents at Tyddyn Meredydd;
- Users of PRoW and lanes within and immediately adjacent to the Clwydian Range and Dee Valley National Landscape; and
- Residents of properties within and immediately adjacent to the Clwydian Range and Dee Valley National Landscape.

7.10.17 At Year 1 of the operational phase, there will be **moderate adverse** cumulative effects on three visual receptors (where the effects of the Proposed Development alone are not significant):

- Users of Wigfair Hall;
- Residents at Tan y Bryn and Tan y Bryn Uchaf; and
- Users of the churchyard of the Church of St Mary in Cefn Meiriadog.

7.10.18 At Year 1 of the operational phase, there will be **minor to moderate** adverse cumulative effects on three visual receptors (where the effects of the Proposed Development alone are not significant):

- Residents at Coed yr Esgob;
- Residents at Tyn y Fford Fawr, Squirrels Lodge, Tyn y Ffordd Bach, Tyn y Fford Newydd and Rhos Aber; and
- Pedestrians on the short distance local footpaths PRoW 105/3, 105/4 and 105/6.

Operational Phase – Year 15

Cumulative Effects on Landscape Receptors

7.10.19 At Year 15 of the operational phase, there will be **moderate adverse** cumulative effects on three landscape receptors (where the effects of the Proposed Development alone are not significant):

- The character of the Solar Site;
- Geological Landscape AA Cefn Meiriadog (DNBGHGL031);
- Historic Landscape AA Bont-newydd (DNBGHHL021).

7.10.20 At Year 15 of the operational phase, there will be **minor to moderate** adverse cumulative effects on five landscape receptors (where the effects of the Proposed Development alone are not significant):

- LCA D/LC/6: Vale of Clwyd North;
- Geological Landscape AA Bodelwyddan (DNBGHGL016);

- Cultural Landscape Services AA Cefn Estate (DNBGHCLS030);
- Historic Landscape AA Pentre-mawr (DNBGHHL041);
- Visual and Sensory AA Cefn Estate (DNBGHVS033).

Cumulative Effects on Visual Receptors

7.10.21 At Year 15 of the operational phase, there will be **moderate to major adverse** cumulative effects on two visual receptors (where the effects of the Proposed Development alone are not significant):

- Users of PRoW and lanes within and immediately adjacent to the Clwydian Range and Dee Valley National Landscape; and
- Residents of properties within and immediately adjacent to the Clwydian Range and Dee Valley National Landscape.

7.10.22 At Year 15 of the operational phase, there will be **moderate adverse** cumulative effects on one visual receptor (where the effects of the Proposed Development alone are not significant):

- Users of the north/south lane that runs between the parcels.

7.10.23 At Year 15 of the operational phase, there will be **minor to moderate** adverse cumulative effects on three visual receptors (where the effects of the Proposed Development alone are not significant):

- Users of the lane that runs along the eastern slopes of the Cefn Meiriadog ridge;
- Residents at Isfryn, Ty Celyn, Cefn Farm, Caubwll, 1 and 2 Camrau, 1 and 2 Church View and Rhewl; and
- Residents at Tyddyn Meredydd.

Residual Cumulative Effects

7.10.24 Since the extent to which mitigation relating to the Cumulative Schemes is committed is unknown, the assessment of residual cumulative effects is based on a worst-case scenario, whereby no mitigation is implemented for any of the Cumulative Schemes. As such, since the residual effects resulting from the Proposed Development alone remain unchanged from the assessment of likely significant effects, the residual cumulative effects remain the same as the cumulative effects identified in Sections 7.10.2-7.10.23.

7.11 Monitoring

7.11.1 The monitoring of effects is particularly valuable in ensuring that the mitigation proposed is effective and worthwhile, in line with the relevant legislation.

7.11.2 The long-term maintenance and management of the landscape is the mechanism for monitoring the delivery of the design intent in line with the submission drawings and documents, including the anticipated effects.

7.11.3 A LEMP, provided at **Appendix 7.9**, has been prepared. The LEMP provides an integrated approach to the management of the landscape and ecology associated with the Proposed Development. As a dynamic document it should be renewed on a regular basis and amended as circumstances change with the evolving condition of the Solar Site.

7.12 Conclusions

Introduction

7.12.1 An assessment of the likely landscape and visual effects arising from the Proposed Development has been undertaken in accordance with the Guidelines for Landscape and Visual Impact Assessment, Third Edition. It has taken account of key policies within Future Wales: The National Plan 2040, Planning Policy Wales and the Denbighshire County Council Local Development Plan 2006-2021.

7.12.2 The Site is located within the Cefn Estate, to the south-west of the settlement of St Asaph. It covers 35.42 hectares and comprises the Solar Site, two parcels either side of an unnamed lane running broadly north/south, and the Cable Route, which runs between the Solar Site and St Asaph Substation. It is surrounded by open agricultural land with field boundaries of hedgerows and hedgerow trees, with tree belts and blocks of woodland. Both parcels are influenced by energy infrastructure (pylons and overhead power lines) within them and throughout the wider landscape. Both parcels have intervisibility with the Clwydian Range and Dee Valley National Landscape to the east.

7.12.3 A visual appraisal has been undertaken which demonstrated that the Solar Site is visible in primarily glimpsed to partial, near to long distance views. Views are available from the lane between the two parcels, and two other lanes to the south and west of the Solar Site, as well as residences off these lanes. Glimpsed to partial views are available form PRoW 105/3, 105/4 and 105/6, as well as from Wigfair Hall and the Church of St Mary in Cefn Meiriadog. Glimpsed views are available from PRoW 208/3, although this is not connected to other publicly accessible routes. Very long distance views are available from elevated land within the National Landscape, although the Solar Site is barely perceptible given the distance of more than 5km.

Operation Effects

7.12.4 The Proposed Development comprises construction, operation and decommissioning of a ground mounted photovoltaic solar farm, together with associated equipment, infrastructure and ancillary works. The landscape proposals include tree and hedgerow planting, construction of new ponds, and management of existing modified grassland to produce a variety of grassland habitats as biodiversity enhancements.

7.12.5 A series of mitigation measures have been embedded in the design of the Proposed Development from the outset, with the aim of reducing adverse effects resulting from its introduction into the surrounding landscape and visual context. These mitigation measures include both the landscape proposals and the layout of the proposed panels and ancillary structures. The design of the Proposed Development has evolved as part of an iterative process and has been informed by the findings of the baseline landscape and visual amenity conditions.

7.12.6 An assessment of the likely landscape, townscape and visual effects of the Proposed Development has been undertaken for Years 1 and 15 of operation. The residual effects at Year 15 of operation are summarised in **Table 7.6** below.

7.12.7 At Year 1, four landscape receptors will be subject to significant effects (in this case, moderate adverse) as a result of the Proposed Development: Geological Landscape AA Cefn Meiriadog; Historic Landscape AA Bont-newydd; the character of the Solar Site; and open fields. The remaining 27 landscape receptors will not be subject to significant effects at Year 1, and three of these will be subject to negligible beneficial effects: native hedgerow; canopy trees; and waterbodies. One visual receptor will experience significant effects (in this case, moderate adverse) as a result of the Proposed Development at Year 1: users of the north/south lane that runs between the parcels. The remaining 14 visual receptors will not experience significant effects at Year 1. Effects on the National Landscape and visual receptors within it will not be significant at Year 15.

7.12.8 At Year 15, following the establishment of the proposed landscape strategy, none of the landscape receptors will be subject to significant effects as a result of the Proposed Development. Four landscape receptors will be subject to minor beneficial effects at Year 15: Landscape Habitats AA Cefn Improved Grassland; native hedgerow; canopy trees; and waterbodies. None of the visual receptors will experience significant effects at Year 15. Effects on the National Landscape and visual receptors within it will not be significant at Year 15.

7.12.9 The residual effects experienced by both landscape and visual receptors at Year 1 of operation are the same as the non-residual effects at Year 1, and the residual effects experienced by both landscape and visual receptors at Year 15 of operation are the same as the non-residual effects at Year 15.

7.12.10 At Year 1, nine landscape receptors will be subject to significant cumulative effects where the effects of the Proposed Development alone are not significant. The remaining 12 landscape receptors scoped into the cumulative assessment will not be subject to significant cumulative effects at Year 1. 12 visual receptors will experience significant cumulative effects where the effects of the Proposed Development alone are not significant at Year 1. The remaining two visual receptors scoped into the cumulative assessment will not experience significant cumulative effects at Year 1.

7.12.11 At Year 15, eight landscape receptors will be subject to significant cumulative effects where the effects of the Proposed Development alone are not significant. The remaining 13 landscape receptors scoped into the cumulative assessment will not be subject to significant cumulative effects at Year 15. Six visual receptors will experience significant cumulative effects where the effects of the Proposed Development alone are not significant at Year 15. The remaining eight visual receptors scoped into the cumulative assessment will not experience significant cumulative effects at Year 15.

7.12.12 While the Proposed Development will result in some significant adverse landscape and visual effects, these are related to effects experienced at Year 1, before the primary landscape mitigation measures are factored in. Neither residual nor non-residual effects on the National Landscape and visual receptors within it will be significant, either at Year 1 or Year 15. At Year 1, there will be significant cumulative effects on just under two thirds of the landscape and visual receptors scoped in to the cumulative assessment. By Year 15 this will reduce to just over one third of the landscape and visual receptors scoped in to the cumulative assessment.

7.12.13 On the basis of the above, and the findings of this assessment, it is considered that the Site has the capacity to accommodate the Proposed Development without undue harm on the landscape character and visual amenity of the Site and the wider area. It is further considered that the Proposed Development will lead to tangible long term benefits on the landscape features of the Solar Site.

Table 7.6: Significance Table

Topic	Stage of Development	Receptor	Duration of Effect	Geographical Importance							Significance of Residual Effect
				I	UK	W	R	C	B	L	
Landscape and Visual	Year 1 of Operation	Clwydian Range and Dee Valley National Landscape	Medium		x						Negligible Adverse
Landscape and Visual	Year 1 of Operation	LCA D/LC/6: Vale of Clwyd North	Medium					x			Negligible Adverse
Landscape and Visual	Year 1 of Operation	The character of the Solar Site	Medium							x	Moderate Adverse
Landscape and Visual	Year 1 of Operation	Geological Landscape AA Bodelwyddan (DNBGHGL016)	Medium				x				Minor Adverse
Landscape and Visual	Year 1 of Operation	Geological Landscape AA Cefn Meiriadog (DNBGHGL031)	Medium				x				Moderate Adverse
Landscape and Visual	Year 1 of Operation	Geological Landscape AA Tytywyrch (DNBGHGL015)	Medium				x				No Effect
Landscape and Visual	Year 1 of Operation	Geological Landscape AA The Roe (DNBGHGL017)	Medium				x				No Effect
Landscape and Visual	Year 1 of Operation	Geological Landscape AA Elwy Gorge (DNBGHGL032)	Medium				x				No Effect
Landscape and Visual	Year 1 of Operation	Geological Landscape AA Henllan (DNBGHGL035)	Medium				x				No Effect
Landscape and Visual	Year 1 of Operation	Geological Landscape AA Waen Gloeugoed (DNBGHGL019)	Medium				x				Minor Adverse
Landscape and Visual	Year 1 of Operation	Landscape Habitats AA Cefn Improved Grassland (DNBGHLH023)	Medium				x				Minor Adverse
Landscape and Visual	Year 1 of Operation	Landscape Habitats AA Bodelwyddan Lowland Parkland (DNBGHLH021)	Medium				x				No Effect
Landscape and Visual	Year 1 of Operation	Landscape Habitats AA Vale of Clwyd North Improved Grassland (DNBGHLH017)	Medium				x				No Effect
Landscape and Visual	Year 1 of Operation	Cultural Landscape Services AA Cefn Estate (DNBGHCLS030)	Medium				x				Minor Adverse
Landscape and Visual	Year 1 of Operation	Cultural Landscape Services AA Limestone Valley-Cefn (DNBGHCLS035)	Medium				x				Negligible Adverse
Landscape and Visual	Year 1 of Operation	Cultural Landscape Services AA Wooded Parkland and Parkland Remnants (DNBGHCLS033)	Medium				x				Negligible Adverse

Topic	Stage of Development	Receptor	Duration of Effect	Geographical Importance							Significance of Residual Effect
				I	UK	W	R	C	B	L	
Landscape and Visual	Year 1 of Operation	Cultural Landscape Services AA Limestone Plateau-Denbigh/Henllan (DNBGHCLS037)	Medium				x				Negligible Adverse
Landscape and Visual	Year 1 of Operation	Cultural Landscape Services AA Vale of Clwyd-North of Denbigh (DNBGHCLS029)	Medium				x				Negligible Adverse
Landscape and Visual	Year 1 of Operation	Cultural Landscape Services AA Vale Wooded Estate-South of Dyserth (DNBGHCLS017)	Medium				x				Negligible Adverse
Landscape and Visual	Year 1 of Operation	Historic Landscape AA Pentre-mawr (DNBGHHL041)	Medium				x				Minor Adverse
Landscape and Visual	Year 1 of Operation	Historic Landscape AA Bont-newydd (DNBGHHL021)	Medium				x				Moderate Adverse
Landscape and Visual	Year 1 of Operation	Historic Landscape AA Plas Heaton (DNBGHHL039)	Medium				x				Negligible Adverse
Landscape and Visual	Year 1 of Operation	Historic Landscape AA Brynbella (DNBGHHL026)	Medium				x				Negligible Adverse
Landscape and Visual	Year 1 of Operation	Historic Landscape AA Bodelwyddan Park (DNBGHHL005)	Medium				x				Negligible Adverse
Landscape and Visual	Year 1 of Operation	Visual and Sensory AA Cefn Estate (DNBGHVS033)	Medium				x				Minor Adverse
Landscape and Visual	Year 1 of Operation	Visual and Sensory AA Vale of Clwyd-North of Denbigh (DNBGHVS031)	Medium				x				Minor Adverse
Landscape and Visual	Year 1 of Operation	Visual and Sensory AA Vale Wooded Estate-South of Dyserth (DNBGHVS016)	Medium				x				Minor Adverse
Landscape and Visual	Year 1 of Operation	Open fields	Medium							x	Moderate Adverse
Landscape and Visual	Year 1 of Operation	Native hedgerow	Medium							x	Negligible Beneficial
Landscape and Visual	Year 1 of Operation	Canopy trees	Medium							x	No Effect
Landscape and Visual	Year 1 of Operation	Waterbodies	Medium							x	Negligible Beneficial
Landscape and Visual	Year 1 of Operation	Users of the bridleway PRoW 208/3	Medium							x	Negligible Adverse
Landscape and Visual	Year 1 of Operation	Residents at Coed yr Esgob	Medium							x	Minor Adverse

Topic	Stage of Development	Receptor	Duration of Effect	Geographical Importance							Significance of Residual Effect
				I	UK	W	R	C	B	L	
Landscape and Visual	Year 1 of Operation	Users of the north/south lane that runs between the parcels	Medium				x				Moderate Adverse
Landscape and Visual	Year 1 of Operation	Residents at Tyn y Fford Fawr, Squirrels Lodge, Tyn y Ffordd Bach, Tyn y Fford Newydd and Rhos Aber	Medium							x	Minor Adverse
Landscape and Visual	Year 1 of Operation	Users of the east/west lane that runs to the south of the eastern parcel	Medium							x	Negligible Adverse
Landscape and Visual	Year 1 of Operation	Residents at Greystones, The Paddock, Glascoed Fawr, Glascoed Fawr Cottage and Wigfair Home Farm	Medium							x	Negligible Adverse
Landscape and Visual	Year 1 of Operation	Users of Wigfair Hall	Medium							x	Minor Adverse
Landscape and Visual	Year 1 of Operation	Users of the lane that runs along the eastern slopes of the Cefn Meiriadog ridge	Medium							x	Minor Adverse
Landscape and Visual	Year 1 of Operation	Residents at Isfryn, Ty Celyn, Cefn Farm, Caubwll, 1 and 2 Camrau, 1 and 2 Church View and Rhewl	Medium							x	Minor Adverse
Landscape and Visual	Year 1 of Operation	Residents at Tan y Bryn and Tan y Bryn Uchaf	Medium							x	Minor Adverse
Landscape and Visual	Year 1 of Operation	Pedestrians on the short distance local footpaths PRoW 105/3, 105/4 and 105/6	Medium							x	Negligible Adverse
Landscape and Visual	Year 1 of Operation	Users of the churchyard of the Church of St Mary in Cefn Meiriadog	Medium							x	Minor Adverse
Landscape and Visual	Year 1 of Operation	Residents at Tyddyn Meredydd	Medium							x	Minor Adverse
Landscape and Visual	Year 1 of Operation	Users of PRoW and lanes within and immediately adjacent to the Clwydian Range and Dee Valley National Landscape	Medium		x						Minor Adverse
Landscape and Visual	Year 1 of Operation	Residents of properties within and immediately adjacent to the Clwydian Range and Dee Valley National Landscape	Medium		x						Minor Adverse
Topic	**Stage of Development**	**Receptor**	**Duration of Effect**	**Geographical Importance**							**Significance of Residual Effect**
				I	UK	W	R	C	B	L	
Landscape and Visual	Year 15 of Operation	Clwydian Range and Dee Valley National Landscape	Medium		x						Negligible Adverse

Topic	Stage of Development	Receptor	Duration of Effect	Geographical Importance							Significance of Residual Effect
				I	UK	W	R	C	B	L	
Landscape and Visual	Year 15 of Operation	LCA D/LC/6: Vale of Clwyd North	Medium					x			Negligible Adverse
Landscape and Visual	Year 15 of Operation	The character of the Solar Site	Medium							x	Minor Adverse
Landscape and Visual	Year 15 of Operation	Geological Landscape AA Bodelwyddan (DNBGHGL016)	Medium				x				Negligible Adverse
Landscape and Visual	Year 15 of Operation	Geological Landscape AA Cefn Meiriadog (DNBGHGL031)	Medium				x				Minor Adverse
Landscape and Visual	Year 15 of Operation	Geological Landscape AA Tytywyrch (DNBGHGL015)	Medium				x				No Effect
Landscape and Visual	Year 15 of Operation	Geological Landscape AA The Roe (DNBGHGL017)	Medium				x				No Effect
Landscape and Visual	Year 15 of Operation	Geological Landscape AA Elwy Gorge (DNBGHGL032)	Medium				x				No Effect
Landscape and Visual	Year 15 of Operation	Geological Landscape AA Henllan (DNBGHGL035)	Medium				x				No Effect
Landscape and Visual	Year 15 of Operation	Geological Landscape AA Waen Gloeugoed (DNBGHGL019)	Medium				x				Negligible Adverse
Landscape and Visual	Year 15 of Operation	Landscape Habitats AA Cefn Improved Grassland (DNBGHLH023)	Medium				x				Minor Beneficial
Landscape and Visual	Year 15 of Operation	Landscape Habitats AA Bodelwyddan Lowland Parkland (DNBGHLH021)	Medium				x				No Effect
Landscape and Visual	Year 15 of Operation	Landscape Habitats AA Vale of Clwyd North Improved Grassland (DNBGHLH017)	Medium				x				No Effect
Landscape and Visual	Year 15 of Operation	Cultural Landscape Services AA Cefn Estate (DNBGHCLS030)	Medium				x				Negligible Adverse
Landscape and Visual	Year 15 of Operation	Cultural Landscape Services AA Limestone Valley-Cefn (DNBGHCLS035)	Medium				x				Negligible Adverse
Landscape and Visual	Year 15 of Operation	Cultural Landscape Services AA Wooded Parkland and Parkland Remnants (DNBGHCLS033)	Medium				x				Negligible Adverse
Landscape and Visual	Year 15 of Operation	Cultural Landscape Services AA Limestone Plateau-Denbigh/Henllan (DNBGHCLS037)	Medium				x				Negligible Adverse
Landscape and Visual	Year 15 of Operation	Cultural Landscape Services AA Vale of Clwyd-North of Denbigh (DNBGHCLS029)	Medium				x				Negligible Adverse

Topic	Stage of Development	Receptor	Duration of Effect	Geographical Importance							Significance of Residual Effect
				I	UK	W	R	C	B	L	
Landscape and Visual	Year 15 of Operation	Cultural Landscape Services AA Vale Wooded Estate-South of Dyserth (DNBGHCLS017)	Medium				x				Negligible Adverse
Landscape and Visual	Year 15 of Operation	Historic Landscape AA Pentre-mawr (DNBGHHL041)	Medium				x				Negligible Adverse
Landscape and Visual	Year 15 of Operation	Historic Landscape AA Bont-newydd (DNBGHHL021)	Medium				x				Minor Adverse
Landscape and Visual	Year 15 of Operation	Historic Landscape AA Plas Heaton (DNBGHHL039)	Medium				x				Negligible Adverse
Landscape and Visual	Year 15 of Operation	Historic Landscape AA Brynbella (DNBGHHL026)	Medium				x				Negligible Adverse
Landscape and Visual	Year 15 of Operation	Historic Landscape AA Bodelwyddan Park (DNBGHHL005)	Medium				x				Negligible Adverse
Landscape and Visual	Year 15 of Operation	Visual and Sensory AA Cefn Estate (DNBGHVS033)	Medium				x				Negligible Adverse
Landscape and Visual	Year 15 of Operation	Visual and Sensory AA Vale of Clwyd-North of Denbigh (DNBGHVS031)	Medium				x				Negligible Adverse
Landscape and Visual	Year 15 of Operation	Visual and Sensory AA Vale Wooded Estate-South of Dyserth (DNBGHVS016)	Medium				x				Negligible Adverse
Landscape and Visual	Year 15 of Operation	Open fields	Medium							x	Minor Adverse
Landscape and Visual	Year 15 of Operation	Native hedgerow	Medium							x	Minor Beneficial
Landscape and Visual	Year 15 of Operation	Canopy trees	Medium							x	Minor Beneficial
Landscape and Visual	Year 15 of Operation	Waterbodies	Medium							x	Minor Beneficial
Landscape and Visual	Year 15 of Operation	Users of the bridleway PRoW 208/3	Medium							x	No Effect
Landscape and Visual	Year 15 of Operation	Residents at Coed yr Esgob	Medium							x	Negligible Adverse
Landscape and Visual	Year 15 of Operation	Users of the north/south lane that runs between the parcels	Medium				x				Minor Adverse
Landscape and Visual	Year 15 of Operation	Residents at Tyn y Fford Fawr, Squirrels Lodge, Tyn y Ffordd Bach, Tyn y Fford Newydd and Rhos Aber	Medium							x	Negligible Adverse
Landscape and Visual	Year 15 of Operation	Users of the east/west lane that runs to the south of the eastern parcel	Medium							x	No Effect

Topic	Stage of Development	Receptor	Duration of Effect	Geographical Importance							Significance of Residual Effect
				I	UK	W	R	C	B	L	
Landscape and Visual	Year 15 of Operation	Residents at Greystones, The Paddock, Glascoed Fawr, Glascoed Fawr Cottage and Wigfair Home Farm	Medium							x	No Effect
Landscape and Visual	Year 15 of Operation	Users of Wigfair Hall	Medium							x	Negligible Adverse
Landscape and Visual	Year 15 of Operation	Users of the lane that runs along the eastern slopes of the Cefn Meiriadog ridge	Medium							x	Negligible Adverse
Landscape and Visual	Year 15 of Operation	Residents at Isfryn, Ty Celyn, Cefn Farm, Caubwll, 1 and 2 Camrau, 1 and 2 Church View and Rhewl	Medium							x	Negligible Adverse
Landscape and Visual	Year 15 of Operation	Residents at Tan y Bryn and Tan y Bryn Uchaf	Medium							x	Negligible Adverse
Landscape and Visual	Year 15 of Operation	Pedestrians on the short distance local footpaths PRoW 105/3, 105/4 and 105/6	Medium							x	No Effect
Landscape and Visual	Year 15 of Operation	Users of the churchyard of the Church of St Mary in Cefn Meiriadog	Medium							x	Negligible Adverse
Landscape and Visual	Year 15 of Operation	Residents at Tyddyn Meredydd	Medium							x	Negligible Adverse
Landscape and Visual	Year 15 of Operation	Users of PRoW and lanes within and immediately adjacent to the Clwydian Range and Dee Valley National Landscape	Medium		x						Minor Adverse
Landscape and Visual	Year 15 of Operation	Residents of properties within and immediately adjacent to the Clwydian Range and Dee Valley National Landscape	Medium		x						Minor Adverse

8 Summary and Conclusion

8.1 Summary

8.1.1 This ES has been prepared by Stantec UK Ltd on behalf of Anesco (The Applicant) in relation to a full Development of National Significance (DNS) application for the construction, operation and decommissioning of a ground mounted photovoltaic (PV) solar farm, together with associated equipment, infrastructure, and ancillary works (the 'Proposed Development') on Land at Cefn Meiriadog, St Asaph (the 'Site').

8.1.2 This ES presents the findings of an Environmental Impact Assessment (EIA) undertaken in accordance with the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (as amended) and identifies the likely significant environmental effects of the Proposed Development during construction, operation and decommissioning.

8.1.3 The Scope of the ES has been informed by the Screening Direction received from PEDW, which identified that significant effects are likely in relation to landscape character and visual amenity only. As such, the scope of the ES is limited to landscape character and visual amenity. For the remainder of the environmental topics, no likely significant environmental effects are anticipated, and where appropriate these are assessed in standalone assessments submitted with the application. Other documents submitted with the application include:

- Planning, Design, and Access Statement;
- Ecological Impact Assessment and associated protected species survey reports;
- Transport Statement;
- Construction and Traffic Management Plan (CTMP);
- Noise Assessment;
- Arboricultural Impact Assessment;
- Flood Consequences Assessment and Surface Water Drainage Strategy;
- Glint and Glare Assessment;
- Historic Environment Desk-Based Assessment;
- Geophysical Survey Report; and
- Agricultural Land Classification (ALC) Assessment

8.2 Conclusion

8.2.1 **Chapter 7** assesses the likely significant effects of the Proposed Development on landscape character and visual amenity. A summary of the identified residual effects is provided in **Table 7.6,** and a summary is provided below.

Operational Phase – Year 1

Landscape

8.2.2 Four landscape receptors will be subject to **moderate adverse (significant)** effects as a result of the Proposed Development. This includes:

- Geological Landscape AA Cefn Meiriadog;
- Historic Landscape AA Bont-newydd;
- The character of the Solar Site; and
- Open fields.

8.2.3 The remaining 27 landscape receptors will not experience significant effects, as follows: eight landscape receptors will be subject of **minor adverse effects (not significant)**, ten landscape receptors will be subject to **negligible adverse effects (not significant)**, six landscape receptors will be subject to **no effects (not significant)**, and three landscape receptors will be subject to **negligible beneficial effects (not significant)** as a result of the Proposed Development.

Visual

8.2.4 One visual receptor will experience **moderate adverse effects (significant)** as a result of the Proposed Development, this is the uses of the north-south lane that runs between the two parcels of the Site.

8.2.5 The remaining 14 visual receptors will not experience significant effects, as follows: ten visual receptors will experience **minor adverse effects (not significant)**, and four visual receptors will experience **negligible adverse effects (not significant)** as a result of the Proposed Development.

Operational Phase – Year 15

Landscape

8.2.6 By Year 15, none of the landscape receptors will be subject to significant effects as a result of the Proposed Development. Four of the landscape receptors will be subject to **minor adverse effects (not significant)**, seventeen landscape receptors will be subject to **negligible adverse effects (not significant)**, six landscape receptors will be subject to **no effects (not significant)** and four landscape receptors will be subject to **minor beneficial effects (not significant)** as a result of the Proposed Development.

Visual

8.2.7 By Year 15, none of the visual receptors will be subject to significant effects as a result of the Proposed Development. Three visual receptors will experience **minor adverse effects (not significant)**, eight visual receptors will be subject to **negligible adverse effects (not significant)** and four visual receptors will be experience **no effects (not significant)** as a result of the Proposed Development.

Cumulative Effects

Operational Phase – Year 1

8.2.8 At Year 1 of the operational phase, where the effects of the Proposed Development alone are not significant, five landscape receptors will experience **moderate to major adverse cumulative effects,** two of the landscape receptors will experience **moderate adverse cumulative effects, and** two landscape receptors will experience **minor to moderate adverse cumulative effects.**

8.2.9 At Year 1 of the operational phase, where the effects of the Proposed Development alone are not significant, one visual receptor will experience **major adverse cumulative effects**. Five visual receptors will experience **moderate to major adverse cumulative effects**, three visual

receptors will experience **moderate adverse cumulative effects,** and three visual receptors will experience **minor to moderate adverse cumulative effects.**

Operational Phase – year 15

8.2.10 At Year 15 of the operational phase, where the effects of the Proposed Development alone are not significant, three landscape receptors will experience **moderate adverse** cumulative effects. Five landscape receptors will experience **minor to moderate adverse** cumulative effects.

8.2.11 Also, at Year 15 of the operational phase, where the effects of the Proposed Development alone are not significant, two visual receptors will experience **moderate to major adverse** cumulative effects. One visual receptor will experience **moderate adverse** cumulative effects and three visual receptors will experience **minor to moderate adverse** cumulative effects.

9 Glossary

AA	Aspect Area
AC	Alternating Current
ALC	Agricultural Land Classification
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
AQMA	Air Quality Management Area
AVR	Accurate Visual Representation
BMV	Best and Most Versatile
CA	Conservation Area
CTMP	Construction Traffic Management Plan
CEMP	Construction Environment Management Plan
DC	Direct Current
DCC	Denbighshire County Council
DEMP	Decommissioning Environmental Management Plan
DNO	District Network Operator
DNS	Development of National Significance
EIA	Environmental Impact Assessment
ES	Environmental Statement
GCN	Great Crested Newt
GCR	Geological Conservation Review
GLVIA3	Guidelines for Landscape and Visual Impact Assessment Third Edition
HGV	Heavy Goods Vehicle
IEMA	Institute of Environmental Management and Assessment
Landscape	An area, as perceived by people, the character of which is the result of action and interaction of natural and/or human factors
Landscape Character	A distinct and recognizable pattern of features that occurs consistently in a particular type of landscape and which makes one landscape different from another. It reflects particular combinations of geology, landform, soils, vegetation, land use

	and human settlement. It creates the particular sense of place of different areas of the landscape
Landscape Quality (condition)	A measure of the physical state of the landscape. It may include the extent to which typical character is represented in the individual areas, the intactness of the landscape and the condition of individual features
Landscape Value	The relative value that is attached to different landscapes by society. A landscape may be valued by different stakeholders for a variety of reasons.
LANDMAP	A tool to help sustainable decision-making and natural resource planning at a range of levels from local to national.
LCA	Landscape Character Area
LDP	Local Development Plan
LEMP	Landscape and Ecological Management Plan
LI	Landscape Institute
LNR	Local Nature Reserve
LVIA	Landscape and Visual Impact Assessment
LV	Low Voltage
NLCA	National Landscape Character Area
NTS	Non-Technical Summary
NRW	National Resource Wales
PEDW	Planning and Environment Decisions Wales
PPW	Planning Policy Wales
POC	Point of Connection
PRoW	Public Rights of Way
PV	Photovoltaic
RIGS	Regionally Important Geodiversity Site
SAC	Special Area of Conservation
SDP	Strategic Development Plan
SSSI	Sites of Special Scientific Interest
SuDS	Sustainability Drainage System

Topography	The study of the forms and features of land surfaces.
VE	Visual Envelope
Visual Amenity	The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting, or travelling through an area.
Visual Effects	Effects on specific views and on the general visual amenity experienced by people
Visualisation	A computer simulation, illustration, or other technique illustrating the predicted appearance of a development. Accurate Visual Representations (AVRs) are produced in accordance with specific methodology.
ZTV	A computer-generated tool used to identify the likely extent of visibility of a development.