Glöyn Byw | Butterfly Solar Farm

Environmental Statement
Non-Technical Summary

Prepared for

RWE Renewables UK

September 2025
3456-01-NTS

Document Control

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1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

1.1.1 The Environmental Statement (ES) has been prepared in support of a planning application made by made by RWE Renewables UK ('the Applicant') for a new solar energy generating station and an associated on-site Battery Energy Storage System (BESS) ('the Proposed Development') on land to the north of the B5426, Wrexham ('the Site'). The Proposed Development also includes the associated infrastructure and connection to the Legacy National Grid substation.

1.1.2 The location of the Proposed Development Site is presented on ES Figure 1.1.

1.1.3 This document is the Non-Technical Summary (NTS) of the ES and provides a review of the development proposals and the possible environmental implications, in concise non-technical language.

1.1.4 The ES has been prepared in accordance with guidance and legislation that requires the likely significant environmental effects of developments to be assessed during construction, operation and decommissioning.

1.2 The Applicant

1.2.1 The Applicant, RWE Renewables UK, is part of the RWE group, the largest energy producer in Wales, and the country's number one renewable energy generator. RWE are currently involved in over 3 GW of power generation in Wales across 12 sites, of which around 1 GW is renewable, and have invested over £3bn in the country since 2010. The company's existing renewable energy portfolio already generates one third of Wales' renewable energy production – enough to power 550,000 homes. RWE plays a critical role in driving Wales' decarbonisation, working in partnership with Welsh Government and wider partner organisations. Through its past and future investments RWE is helping to create a clean, affordable and secure power system, which will act as the springboard to the decarbonisation of wider economic sectors across Wales, such as industry and transport.

1.2.2 The Applicant places a special focus on improving local biodiversity of sites, with an average biodiversity net gain of over 50% on its sites and has a strong record of

engaging with and winning the support of local communities, who in turn help to shape their developments. As a result, they have a 98% success rate in planning.

1.3 The Site

1.3.1 The Site is divided into three principal areas referred to as the Western, Central and Eastern Array Areas (the WAA, CAA and EAA respectively), each of which is described below. Each of the array areas are separated by approximately 1.8km and they would be connected to each other via underground cabling, which in turn would link to a main onsite substation located within the WAA. All array areas would accommodate a solar array and supporting infrastructure.

1.3.2 The application also includes an underground cable connection from the onsite substation to the Legacy National Grid Sub-Station, which is located approximately 1.3km to the north of Rhosllannerchrugog.

1.3.3 The entirety of the Site covers an area of approx. 146ha. (of which around 102 ha of this will be fenced/panelled area and 16 ha would be dedicated wildflower meadow or wildlife enhancement areas).

1.3.4 The predominant land use across the Site is agriculture. An Agricultural Land Classification Survey (ALC) has been undertaken which has shown that the vast majority of the Site is classified as being Grade 3b or Grade 4. Approximately 11% (14.4ha) of the Site is classified as Grade 3a.

1.3.5 The following sections describe key environmental features relevant to each array area.

Western Array Area (WAA)

1.3.6 The WAA covers approximately 21 ha and comprises agricultural fields bound by hedgerows, some of which contain mature trees. The WAA is located to the immediate east of the A483, approximately 1 km to the east of Johnstown.

1.3.7 There is a private road leading through the WAA which provides access from Hafod Road in the west (west of the A483) to a private residential dwelling, Hafod y Bont in the east. The road is also a Public Right of Way (PRoW), footpath RUA/119. This private road is not proposed as an access route into the WAA. Access would be gained into the WAA from the B5426 to the south.

1.3.8 The nearest residential property to the Site is Hafod y Bont, located adjacent to the eastern boundary of the WAA. The property is well screened in all directions by mature trees. The Hafod House Rest Home is located approximately 220 m to the west of the Site, to the west of the A483. The Hafod Industrial Estate is also located to the west of the A483, approximately 300m from the WAA boundary.

1.3.9 The WAA is at very low risk to flooding from rivers and sea. The WAA is intersected by 2no. ditches (ordinary watercourses) which flow in an easterly direction through the Site. The Site is predominantly at very low risk to flooding from surface water and small watercourses, aside from corridors of Flood Zone 2 and 3 associated with the watercourses.

1.3.10 There are a number of cultural heritage assets within the vicinity of the WAA. The Grade II listed properties 'Hafod House' and 'Hafod House Farmhouse' are located approximately 220 m to the west of the Site and form part of the aforementioned Hafod House Rest Home. There is a Grade II listed 'Signpost at SW End' located approximately 715 m to the north and there are two more listed buildings further north of the signpost. The Grade II listed 'Old Sontley Hall' is located approximately 1.2 km to the east. The Wat's Dyke scheduled monument is located approximately 260 m to the east of the WAA, which is also a PRoW and forms part of the Wat's Dyke Way Heritage Trail (footpath RUA/120 and MAR/41).

Central Array Area

1.3.11 The Central Array Area (CAA) covers approximately 66 ha and comprises agricultural fields bound by hedgerows, some of which contain mature trees. Marchwiel Hall Road runs up the centre of the CAA which would be used to access the CAA.

1.3.12 There are narrow areas of Ancient Woodland outside but adjacent to the boundary of the CAA and these areas are also locally designated wildlife sites.

1.3.13 There are several properties close to the southern boundary of the CAA, to the north and south of the B5426. These properties form part of the settlement of Eyton. Eyton Primary School is also located in this area, to the south of the B5426. Residential properties are located along Marchwiel Hall Road and lie close to the boundary of

the CAA. A golf course and the Plassey Holiday Park is located to the east of the CAA.

1.3.14 Bwgan Ddu Lane runs east west approximately 200 m to the north of the CAA, the cable connection between the CAA and the EAA runs along Bwgan Ddu Lane.

1.3.15 The Sontley Marsh SSSI and the Erddig Park Country Park are located approximately 1.35 km and 1.7 km to the north of the Site respectively.

1.3.16 The nearest cultural heritage assets to the CAA are the Grade II listed 'Former House at The Groves' and 'The Groves', located along the eastern boundary of the northern part of the CAA. The Grade II listed 'Kiln Farmhouse' including former Malthouse to rear' is located approximately 400m to the north.

1.3.17 The CAA is predominantly at very low risk to flooding however, there are a small number of areas adjacent to the watercourses with the site which are shown to be at high risk from flooding from surface water and small watercourses.

1.3.18 No PRoW are located within the CAA. Footpath MAR/7 connects the B5426 with Marchwiel Hall Road and runs along a section of the southern boundary of the CAA.

Eastern Array Area

1.3.19 The EAA covers approximately 43 ha and comprises agricultural fields bound by hedgerows, some of which contain mature trees. An area of woodland, approximately 30 m in width and 350 m in length, is located centrally within the EAA, this woodland is not designated as Ancient Woodland. Two blocks of Ancient Woodland are found adjacent to the boundary of the EAA, forming part of land associated with Gerwyn Hall. Kiln Lane, a minor road, forms the northern boundary of the EAA. This would be used to gain access into the EAA.

1.3.20 There are a number of residential properties located along Kiln Lane, on its northern side. The aforementioned Gerwyn Hall is located immediately to the east of the EAA. A residential property and commercial premises are located to the south of the EAA. The nearest settlement to the EAA is the village of Cross Lanes, approximately 850 m to the northeast. The village of Bangor-on-Dee is located approximately 1.5 km to the southeast.

1.3.21 The B5426 runs east west approximately 600 m to the south.

1.3.22 The River Dee SSSI is located approximately 635 m to the south, as is the River Dee SAC.

1.3.23 There is little presence of cultural heritage assets within the immediate vicinity of the EAA. The Grade II listed ‘Ivydale’ is located approximately 870 m to the northwest.

1.3.24 The EAA is predominantly at very low risk to flooding. There are some small areas within Flood Zones 2 and 3, these are generally constrained to the ditch which intersects the EAA.

1.3.25 Footpath SES/6 runs through the eastern most parcel of the EAA. Footpath SES/9 runs along the southern boundary of the EAA and connects to footpath SES/6. There are a number of other footpaths within the vicinity of the EEA.

2.0 ALTERNATIVES

2.1.1 There is no specific mandatory requirement for applicants to address the issue of alternatives, during the preparation of an ES. Where they have been considered the EIA Regulations indicate that the ES should include an outline of the main alternatives and the reasons they were discounted, taking into account environmental effects.

2.1.2 Whilst no alternatives are considered as part of the assessment undertaken for the Proposed Development, in an EIA context, details of the design development process is set out in the Design and Access Statement, submitted in support of the planning application.

3.0 SCHEME DESCRIPTION AND CONSTRUCTION METHODS

3.1 The Proposed Development

3.1.1 The Proposed Development is shown on ES Figures 1.2a-c.

3.1.2 The Applicant is seeking planning consent for "*the installation and operation of a solar photovoltaic electricity generating station comprising ground-mounted photovoltaic solar arrays and battery-based electricity storage containers together with substation, grid connection cable, inter-array area cabling, Site access, internal access tracks, security measures, access gates, other ancillary infrastructure and landscaping and biodiversity enhancements.*"

3.1.3 This solar photovoltaic electricity generating station (or 'solar farm') would have a maximum export capacity of approximately 99.9 MW, with battery storage co-located strategically within the Site. The electricity generated would be enough to meet the needs of over 34,755 typical Welsh homes and result in an approximate saving of over 2.3 million tonnes of CO_2, compared with generation from fossil fuels. The inclusion of batteries ensures the maximum efficiency of the Site, working with the electricity distribution system to enable surplus energy to be stored and released as needed, and provide vital balancing services to the grid network, avoiding intermittency of supply, and allowing a transition to a net zero renewable energy future.

Key components of the Proposed Development

3.1.4 The main components of the Proposed Development are:

i) Photovoltaic solar panels and associated support frames
ii) Hybrid Inverter Container Compounds including Battery Energy Storage Systems (BESS) containers, DC-DC converters and associated hybrid inverters
iii) Onsite electrical cabling
iv) An electrical substation compound (132kV) comprising a new substation and control building
v) Spare parts storage container(s)
vi) Wooden post deer/stock fencing
vii) In-ward facing infrared CCTV cameras on 3 m poles
viii) Landscaping and ecological enhancements

ix) Electrical cabling between the solar array areas
x) Electrical cabling to the National Grid Legacy Sub-Station
xi) Ecological and landscape enhancements across the three areas

Landscaping

3.1.5 The soft landscape proposals build on the existing landscape features and comprise new native tree / hedge planting and new permissive paths. In additional to the ecological enhancements described above, further wildlife habitat enhancements are outlined below:

i) Diverse wildflower meadows provide a vital food source for pollinators, helping to fight the decline in insect populations and improve biodiversity and food production.
ii) Improved pond habitats to protect great crested newts.
iii) The proposed woodland edge habitat would provide an abundance of fruiting trees and a vital food source for many bird species. Additional bird boxes will also be placed throughout the Site.
iv) Bat boxes placed throughout the site to provide suitable roosting, breeding, and hibernating areas for bats.
v) Enhanced woodland edge habitat providing a habitat for small mammals such as the dormouse.

3.1.6 Further details of the components and landscaping associated with the Proposed Development is included on ES Figures 1.2a-c.

3.2 Construction

3.2.1 The general construction activities are summarised as follows:

i) Erection of tree protection fencing.
ii) Establishment of site compound.
iii) Construction of site access tracks.
iv) Erection of deer / stock fencing and gates to site perimeter.
v) Installation of solar panels and frames.
vi) Installation of solar farm electrical infrastructure such as hybrid inverter and BESS compounds.

vii) Installation of WAA substation.
viii) Installation of CCTV poles and cameras.
ix) Installation of drainage infrastructure.
x) Installation of cabling between array areas.
xi) Grid connection installation.
xii) Cultivation and seeding; and
xiii) Hedgerow and tree planting.

3.2.2 Construction activities would take place six days per week, during the following hours in line with WCBC guidelines:

i) Monday to Friday 07:30 – 18:00 and Saturday 08:00-14:00; with
ii) No works on Sundays or Bank Holidays.

3.2.3 Construction traffic would access the Site from the six access points across the three array areas. Construction traffic would route to all parts of the Site via the A483 Junction 2 (SRN) and the B5426. Access to the WAA will then be achieved directly from the B5426 with access to the CAA and EAA being via Marchwiel Hall Road (CAA) and the B5426 / A528 Overton Road / B5130 Kiln Lane (EAA).

3.2.4 Construction plant to be used is likely to comprise of:

i) A number of small-scale mechanical pile driving rigs for frame supports.
ii) 360° excavators.
iii) Dumper trucks and rollers for access tracks.
iv) Trenching machines.
v) Telehandlers.
vi) Cranes for transformers and battery containers.

3.2.5 A draft Outline Construction Environmental Management Plan (OCEMP) has been developed for the Proposed Development, the purpose of which would be to manage and report environmental effects of the project during construction.

4.0 SUMMARY OF EFFECTS

4.1 Scope of Assessment

4.1.1 The Applicant has undertaken environmental assessment and Environmental Impact Assessments (EIAs) for a number of PV Solar Array and battery energy storage facilities. The potential for significant environmental effects from such developments is limited and it was determined that the Proposed Development was unlikely to result in significant environmental effects in relation to:

i) Air Quality.
ii) Population and Human Health.
iii) Geology and Soils.
iv) Material Assets and Waste.
v) Climate Change.
vi) Traffic and Transport.
vii) Major Accidents and Disasters.
viii) Lighting / Glare.
ix) Hydrology and Flood Risk.

4.1.2 On this basis the Environmental Statement (ES) assessed the following topics in detail, the findings of which are summarised below:

i) Ecology
ii) Landscape and Visual.
iii) Cultural Heritage.
iv) Noise.

4.2 Ecology

4.2.1 Chapter 5.0 of the ES, together with the supporting figures and appendices, sets out an assessment of the likely significant effects of the Proposed Development upon ecology and nature conservation assets at the Site and within the surrounding area.

4.2.2 A comprehensive series of ecological surveys were undertaken for the Site to determine whether the Proposed Development has the potential to give rise to any significant adverse effects on the existing ecology resources.

4.2.3 Johnstown Newt Sites SAC and the underlying Stryt Las a'r Hafod SSSI are located immediately adjacent to the Cable Route and are designated for presence of great crested newt.

4.2.4 Yorke's Dingles and Well Wood WSW and Oak Wood WSW are located partially within and immediately adjacent to the CAA, while Hopyard Wood WSW is located immediately adjacent to the EAA.

4.2.5 Ancient woodland is located immediately adjacent to the CAA and EAA. In addition, 17 veteran trees have been identified within the Site.

4.2.6 The assessment confirms that during construction and operation of the Proposed Development there would be negligible impacts on the statutory designated sites of Johnstown Newt Sites SAC or Stryt Las a'r Hafod SSSI, and their mobile qualifying features. It also confirms that there would be negligible impacts to Non-statutory Designated Sites for Nature Conservation during the construction and operational phases. The assessment concludes the construction and operation of the Proposed Development would not result in any significant residual adverse effects upon ecological receptors, including statutory or non-statutory sites designated for nature conservation.

4.2.7 During construction, the Proposed Development may result in non-significant short term and temporary minor adverse effects to on-site habitats as a result of disturbance and small scale removal associated with construction.

4.2.8 Through operation, the Proposed Development would result in a minor beneficial effect to priority habitats, on-site habitats and foraging and commuting bats through the implementation of the embedded landscape design. The landscape design would provide an overall enhancement to wildlife within the Site.

4.2.9 Wildlife enhancement measures such as bird boxes and bat boxes would further enhance the site for wildlife.

4.3 Landscape and Visual

4.3.1 A detailed Landscape and Visual Assessment (LVIA) has been prepared in accordance with the Guidelines for Landscape and Visual Assessment (Third

Edition, 2013) and is contained within Chapter 6.0 of the Environmental Statement (ES) submitted in support of this application.

4.3.2 The landscape is predominantly rural and agricultural in character. The array areas comprise agricultural fields of various sizes, shapes and topography. Field boundaries generally comprise mature hedgerows, some including mature trees. In the EAA field boundaries are typically open, with some mature tree cover located along them.

4.3.3 The Clwydian Range and Dee Valley National Landscape (previously known as an Area of Outstanding Natural Beauty (AONB)) (CRDV National Landscape) is approximately 0.8 km west of the western extent of the proposed underground cable grid connection route at its closest point and is approximately 3.5 km southwest of the closest solar array area, the WAA, at its closest point. ES Figure 6.1 shows land approximately 175 m south of the EAA at its closest point, designated as a Special Landscape Area (SLA), a non-statutory local landscape designation. This SLA is from the now unadopted LDP referred to in Section 4.4 above.

4.3.4 This SLA is identified in WCBCs 'Special Landscape Areas Study'69, dated January 2017 as SLA 004: Lower Dee Floodplain.

4.3.5 Land within and between the proposed solar array areas generally falls west to east and land within the EAA falls southwards towards the Dee floodplain. The western edge of the WAA is at approximately 100 m above ordnance datum (AOD) and land within the most-eastern part of the EAA and Site overall falls to approximately 15 m AOD. There are minor undulations within and between each proposed solar array area, and the topography of the Site is most varied within the CAA.

4.3.6 A Zone of Theoretical Visibility (ZTV) was undertaken as part of the LVIA. ZTV mapping at ES Figure 6.2a-j shows that theoretical visibility of the proposed solar arrays in the WAA and the CAA is localised with only small areas of theoretical visibility further afield in the 2.5 km Study Area, to the south and southwest in relation to the WAA and to the northeast and east in relation to the CAA.

4.3.7 Theoretical visibility of the proposed solar array in the EAA extends across a wider area compared to the WAA and CAA, predominantly south and southeast of the CAA.

4.3.8 ZTV mapping also indicates that there are very few locations outside of the Site boundary where more than 20% of any of the three proposed solar arrays are predicted to be visible.

4.3.9 Theoretical visibility of the Proposed Development in the CRDV National Landscape over 2.5 km from the Site, is shown on ES Figures 6.2b and 6.2g-j and analysed in ES Chapter 6, Section 6.5.

4.3.10 The Proposed Development would introduce solar development into the predominantly rural, agricultural landscape resulting in a noticeable change to character within the Site, but resulting in a limited and generally localised influence on landscape character beyond the proposed solar array areas.

4.3.11 Following the establishment and maturing of proposed hedgerow and tree planting in the short and medium-term, the level of effect to the LCA 13a: Welsh Maelor would reduce to Not Significant (as defined in ES Chapter 6.0). 6.7.47 The Proposed Development would not alter the characteristics of other Landscape Character Areas within the 2.5km study area. Therefore it is concluded that the Propsoed Development would not result in an unacceptable impact on any designated landscape.

4.3.12 Effects on the character of the landscape within the Lower Dee Floodplain SLA and on the special valued qualities of this designated landscape would be not significant.

4.3.13 None of the statutory purposes or special qualities of the Clwydian Range and Dee Valley National Landscape would be materially affected by any change in landscape character or visual change arising as a result of the Proposed Development. Nor would the natural beauty of land within the designation boundary be affected by change resulting from the Proposed Development.

4.4 Cultural Heritage

4.4.1 Chapter 7.0 and its figures and appendices present the findings of an assessment of the likely significant impacts on the historic environment occurring as a result of the Proposed Development.

4.4.2 All identified archaeological heritage assets within 1 km of the Site have been included as they contribute to an understanding of the historic environment baseline.

As set out in the methodology, Study Areas of a 3km and 5km radius around the Site have been used for the assessment of effects on the settings of designated assets.

4.4.3 The assessment identifies that there are 31 Listed Buildings, 14 Scheduled Monuments and a Grade I Registered Historic Park and Garden located within 1km of the Site. The impacts of the Proposed Development on these features, and other features located further afield, has been assessed as ranging from a Negligible to a Minor Adverse (Not Significant) effect following the implementation of mitigation (in the form of additional landscaping measures along existing hedgerow boundaries in the west of the CAA).

4.4.4 Potential for impacts on buried archaeological remains has also been assessed and is presented in ES Chapter 7.0. Geophysical survey of the Site identified a concentration of anomalies of archaeological origin which potentially date from later prehistory through to the medieval period. A suite of archaeological investigation work and mitigation is proposed to ensure that direct impacts upon buried archaeological remains being mitigated allowing for any remains to be 'preserved by record' and for an enhancement of the current levels of knowledge regarding the survival and composition of the anomalies identified during geophysical survey. In view of the extensive survey work undertaken on this Site, it is envisaged that the trial trench evaluation could be undertaken post-determination with the proviso that if significant remains are identified, further mitigation such as the application of a 'no dig' design, would be implemented. The mitigation proposed would ensure that impacts on these features, and other archaeological features, would not be significant.

4.5 Noise and Vibration

4.5.1 Chapter 8.0 of the ES, together with the supporting figures and appendices, sets out the likely significant noise and vibration effects of the Propsoed Development. It describes the methods used to assess the effects, the existing sound climate and the assessment of future baseline sound levels in the vicinity of the Site.

4.5.2 The Noise and Vibration assessment considers the effects resulting from noise and vibration caused by the construction, operational and decommissioning phases of the development on the nearest noise sensitive receptors (NSRs).

4.5.3 The potential for effects on existing dwellings resulting from changes in road traffic noise and vibration caused by construction and operation activities, were considered and deemed unlikely to be significant. Therefore detailed assessment of these impacts was not required.

4.5.4 The potential effects on existing dwellings as a result of noise from construction works and sound from commercial plant during the operational phase were subject of detailed assessment.

4.5.5 The assessment considered noise sensitive receptors located adjacent to the Site that are anticipated to experience a potential noise impact as a result of the construction, operation and decommissioning of the Proposed Development. The assessment considers the nearest NSRs to the Site, which are broadly located within Middle Sontley, Gyfelia, Stryt-yr-hwch, Crabtree Green, Eyton, Cock Bank, Royton, Porthwgan and surrounding areas. This incorporates an area within approximately 500m from the Site boundary. NSRs located at a greater separation distance from the Site boundary would expect to be subject to lower noise and vibration effects than those assessed. All identified NSRs are residential properties.

4.5.6 During the construction phase and decommissioning phases, best practice measures (BPM) would be employed to minimise and control the noise and vibration generated by construction and decommissioning activities.

4.5.7 For the operational phase of the Proposed Development, a 4m high acoustic barrier would be provided around a hybrid inverter container in the EAA, in addition to the acoustically appropriate specification of the equipment and acoustically sympathetic design.

4.5.8 The assessment has determined that during the construction and decommissioning of the Proposed Development, there would be no significant impacts in terms of noise and vibration.

4.5.9 The adoption of BPM measures is expected to provide additional reductions in noise and vibration levels at the nearest NSRs. Such measures are set out in the OCEMP developed for the Proposed Development.

4.5.10 The assessment has determined that during operation of the Proposed Development, noise effects would expect to be ‘not significant’ at the nearest NSRs.

4.6 Cumulative Effects

4.6.1 A search was undertaken of schemes with potential to result in cumulative effects. This search identified three schemes to be considered for cumulative assessment, as detailed in Table 4.1 below. No additional schemes were identified as being relevant to the consideration of cumulative effects by the specialists in each ES topic.

Table 4.1 – Cumulative Developments

Name of Development	Description of Development
Plas Power Estate Solar Farm – Land at Planning ref: DNS/3253253 (PEDW)	Proposed ground mounted photo voltaic solar farm, including battery energy storage system, together with associated equipment, infrastructure and ancillary works.
Glasshouse Development – Land at Sesswick Way Planning ref: P/2020/0363 (Wrexham Borough Council)	Proposed glasshouse with packing facility and offices, energy centre, recovery plant and reservoirs.
Cefn Park Solar - Land at Five Fords Wastewater Treatment Works, LL13 0PA Planning ref: P/2022/0541 (Wrexham Borough Council)	Proposed installation of a solar farm with battery storage facility, substation and associated works at land at Cefn Park.

4.6.2 The potential for cumulative effects to arise with regard to each topic considered in the ES is considered under the topic headings below.

Ecology

4.6.3 Cumulative effects are assessed only for ecological features for which the potential for an adverse effect has been identified. Potentially adverse effects were identified in relation to on-Site habitats during construction.

4.6.4 It is assumed that if granted consent, any cumulative scheme would include standard best practice and regulatory pollution prevention measures.

4.6.5 In the event construction of the Proposed Development and any of the identified cumulative schemes is concurrent, no cumulative impacts to on-Site habitats are anticipated by virtue of separation distances involved (circa 480m at the closest point) and mitigation measures contained within the OCEMP.

Landscape and Visual

4.6.6 With respect to cumulative landscape and visual effects, the addition of the Proposed Development, in combination with other renewable energy schemes in the study area would be not significant. The presence of the Proposed Development in combination with identified cumulative developments would not result in any notable or significant cumulative effects on landscape character or views.

Cultural Heritage

4.6.7 With respect to cumulative effects in terms of cultural heritage, the assessment considered potential for an increased impact, either additive or synergistic, upon the setting of heritage assets.

4.6.8 The assessment identified potential for a negligible level of cumulative effect with regard to the Glasshouse Development at Sesswick Way. The forthcoming of both the aforementioned development and the Propsoed Development would together result in an increase in the land in the wider landscape that is occupied by modern development. However, this would not impact the ability to understand, appreciate and experience the contribution that the wider rural setting makes to the character of Marchwiel Conservation Area. Therefore a negligible level of cumulative effect is considered likely.

4.6.9 There are sections of the Offa's Dyke Scheduled Monument that would be intervisible with the Proposed Development. The potential for these sections to also be intervisible with the Plas Power Estate Solar Farm has been considered and the potential for intervisibility with both schemes from the Offa's Dyke Scheduled Monument does not exist. However, there is potential for a minor synergistic cumulative effect to the way in which Offa's Dyke is appreciated and experienced. owing to an increase in land occupied by solar development in its wider vicinity.

4.6.10 Neither of the cumulative effects identified would be significant.

Noise

4.6.11 The potential for cumulative noise effects to arise during the construction phase is considered to be minimal. However, careful co-ordination would be undertaken with developers for any proposed development on land adjacent to the Site, if appropriate during the construction phases, should they overlap. This would ensure that work

phasing is appropriately scheduled so as to minimise concentrations of work in any given area and spikes in construction traffic.

4.6.12 The noise assessment has considered noise effects during the operational phase of the Proposed Development in cumulation with cumulative schemes included within the scope. Further assessment of cumulative effects was not deemed necessary, either due to the distance between the schemes and the Proposed Development (at least 1km) and/or the schemes having incomparable noise impact profiles with the Proposed Development. Operating solar farms are not known to vibrate significantly. Therefore, vibration was scoped out of the cumulative assessment.

4.6.13 Cumulative noise and vibration effects are therefore considered likely to be 'not significant'.

Conclusion

4.6.14 Given the assessment of cumulative effects, reported in the technical chapters of the ES and summarised above, it is unlikely that the Proposed Development would lead to significant cumulative effects when considered with other cumulative developments.

5.0 CONCLUSION

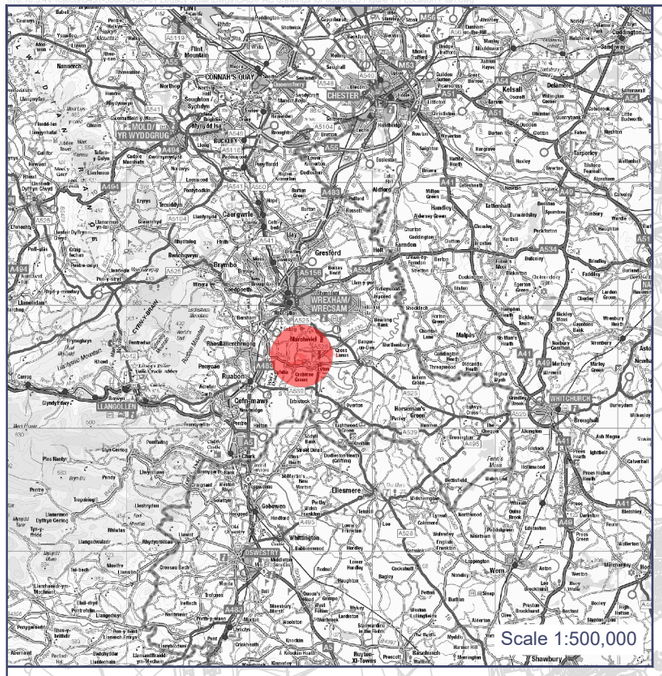
5.1.1 The ES provides a detailed description of the construction, operation and decommissioning of the Proposed Development and provides an assessment of likely significant effects, which could arise in relation to the following topics:

i) Ecology.
ii) Landscape and Visual.
iii) Cultural Heritage.
iv) Noise and Vibration.

5.1.2 The ES has assessed and evaluated the potential significant, direct, indirect, cumulative and in-combination environmental effects of the Proposed Development. Where adverse effects have been identified, measures envisaged to prevent, reduce, and if appropriate offset these effects have been described.

5.1.3 A range of mitigation and enhancement measures are proposed which would ensure any adverse environmental effects from the Proposed Development are minimised. Several of the measures proposed would result in positive environmental effects including a substantial gain in the biodiversity value of the Site.

\\10.10.3.4\Projects\3451-3500\3456-01 Legacy Solar\Dwgs\CAD\PAC drawings for fourth\ES Figure 1.1 Location Plan.dwg



Application Boundary

Site Location

Solar Array Areas

Grid Route - Northern option

Grid Route - Western option

Western Array Area

Central Array Area

Eastern Array Area

A483

B5426

B5130

N

0 0.5 1 1.5 2 3km

RWE

0344 8700 007
axis.co.uk

axis

Project

Glöyn Byw / Butterfly Solar Farm

Figure Number

ES Figure 1.1

Figure Title

Location Plan

Scale

1:30,000 @A3

Date

September 2025

Ty Côch Farm

Middle Sontley Farm

Bonc-Yr-Hafod Country Park

Infill hedge planting to reinforce existing hedgerow

Caretaker House

Infill hedge and tree planting

Infill hedge and tree planting to reinforce existing hedgerows and trees

Existing woodland screens residents views towards the WAA. Additional woodland proposed to reinforce existing vegetation screening and to provide additional habitat

Existing tree cover restricts views into the WAA from the footpath and residents access track. Existing woodland to be managed and enhanced to reinforce its screening, landscape and biodiversity value

Factory

Hafod House Farm

Substation

Enhanced woodland edge planting

Edisbury Grange

One Oak Cottage West

KEY

Site Boundary

Existing Landscape

- Woodland (in the Site)
- Ancient Woodland (15m offset applied)
- Individual trees
- Hedgerow (to be managed and enhanced to maximise screening and landscape and ecological value)
- Public Rights of Way

Proposed Landscaping Enhancements

- Grassland grazing mix
- Species-rich wildflower grassland
- Wet woodland mix
- Individual native trees *More mature tree stock (6-10ft) to be used to bolster screening*
- Orchard Trees (Apple, Pear, Plum)
- Mixed native hedgerow
- Access track
- Areas of existing hedgerow to be removed
- Permissive footpaths
- Accessible Gates

Proposed Infrastructure

- Access Gate
- Solar Panels
- Hybrid Inverter-Battery Station
- Switchgear Container
- Spares Container
- Acoustic Fencing
- Deer Fencing *With mammal gates every 50m*
- Indicative CCTV Locations
- Temporary Construction Compound

N

revision: desc: date:

0 100 200 300 400 500m

0344 8700 007
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Client
RWE

Project
Glöyn Byw / Butterfly Solar Farm

Drawing Title
Planning Layout - Western Array

Scale
1:5000 @A3

Status
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Date
September 2025

Drawn
SR

Checked
LH

Dwg no
ES Figure 1.2a

Rev

Old Sontley Farm
Oakley House
The Groves
Proposed tree planting to provide canopy filtering and screening in property views, above existing hedgerow screening
Existing hedgerows to be maintained at a minimum height of 2.5m to mitigate impacts on the setting of the listed building at 'The Groves'
Proposed hedgerow and tree planting in property views from the south
Proposed Hedgerow
Proposed Orchard
Woodlands Cottage
Proposed tree planting in property views southeast
Proposed infill tree planting
Proposed tree planting and hedgerow reinforcement providing additional filtering and screening in views from the east
Infill hedgerow and tree planting within existing gappy field boundary
Proposed tree planting providing additional filtering and screening in property views from the southeast and south
New accessible gate for existing footpath
Proposed infill hedgerow and tree planting to reinforce existing boundary vegetation
Proposed hedgerow and tree planting within gaps in vegetation along the boundary of this property
Proposed Orchard
Shropshire Cottages

KEY

Site Boundary

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- Permissive footpaths
- Accessible Gates

Proposed Infrastructure

- Access Gate
- Solar Panels
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- Switchgear Container
- Spares Container
- Acoustic Fencing
- Deer Fencing *With mammal gates every 50m*
- Indicative CCTV Locations
- Temporary Construction Compound

N

revision: desc: date:

0 100 200 300 400 500m

0344 8700 007
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Client
RWE

Project
Glöyn Byw / Butterfly Solar Farm

Drawing Title
Planning Layout - Central Array

Scale
1:5000 @A3

Status
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Date
September 2025

Drawn
SR

Checked
LH

Dwg no
ES Figure 1.2b

Rev

-ffrwd

Marsh Farm

Peppercroft Barn

The Bungalow

Proposed hedgerow and trees

Proposed access to permissive path via new accessible gate

Bryn Afon Hall

Proposed tree planting and infill planting along existing hedgerow

Proposed hedge screening to both sides of the existing footpath

Proposed tree planting alongside existing hedgerow

The Coach House

Gerwyn Hall

Proposed hedgerow and tree screening along property edge

Proposed hedge and tree planting

Proposed hedge and tree planting

Orchard House

Proposed hedgerow and trees

Proposed infill tree planting

Tanglewood

Proposed hedge and tree planting to provide screening in footpath views

Proposed hedge and tree planting

Gerwyn Fechan

Rosemead

N

revision: desc: date:

0 100 200 300 400 500m

KEY

Site Boundary

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- Mixed native hedgerow
- Access track
- Areas of existing hedgerow to be removed
- Permissive footpaths
- Accessible Gates

Proposed Infrastructure

- Access Gate
- Solar Panels
- Hybrid Inverter-Battery Station
- Switchgear Container
- Spares Container
- Acoustic Fencing
- Deer Fencing *With mammal gates every 50m*
- Indicative CCTV Locations
- Temporary Construction Compound

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Client

RWE

Project

Glöyn Byw / Butterfly Solar Farm

Drawing Title

Planning Layout - Eastern Array

Scale

1:5000 @A3

Status

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Date

September 2025

Drawn

SR

Checked

LH

Dwg no

ES Figure 1.2c

Rev