EIA Scoping Report

Development of National Significance Pre-Application Consultation

Alaw Môn Solar Farm

Land west of the B5112, 415m south of Llyn Alaw, 500m east of Llantrisant and 1.5km west of Llannerch-y-Medd, Anglesey

October 2023

Alaw Môn Solar Farm, Anglesey

Environmental Impact Assessment Scoping Report

May 2021

bartonwillmore.co.uk

BARTON WILLMORE
PLANNING / DESIGN / DELIVERY

Alaw Môn Solar Farm, Anglesey

Environmental Impact Assessment Scoping Report

Prepared on behalf of Enso Energy Ltd

Project Ref:	32518/A5/Scoping	32518/A5/Scoping	32518/A5/Scoping
Status:	Draft	Draft for Input	Final
Issue/Rev:	01	02	03
Date:	April 2021	April 2021	May 2021
Prepared by:	BK	BK	RD
Checked by:	RD	BL	BL

Barton Willmore LLP
Studio 117
The Creative Quarter, Morgan Arcade
Cardiff
CF10 1AF

Tel: 0113 2044 783

CONTENTS

APPENDICES

1 INTRODUCTION

1.1 This Environmental Impact Assessment (EIA) Scoping Report has been prepared by Barton Willmore, IEMA qualified assessors, on behalf of Enso Energy Ltd (the 'Applicant'), with regard to land at Llantrisant, Anglesey, for the installation of a ground-mounted solar photovoltaic (PV) farm, with a generating capacity of approximately 160 Mega-Watts (MW) and energy storage facility, together with associated infrastructure (the 'proposed development').

1.2 The proposed development exceeds the 10MW threshold for energy generating projects in Wales and therefore constitutes a Development of National Significance ('DNS') under the Planning (Wales) Act 2015. The Planning (Wales) Act of 2015 states that Welsh Ministers are to determine DNS projects and applications should be made directly to them. The framework for applying for a DNS is detailed within the Developments of National Significance (Procedure) (Wales) Order 2016, as amended. The DNS application process is managed by the Planning Inspectorate Wales (PINS Wales) on behalf of the Welsh Ministers. Therefore, this EIA Scoping Report has been submitted to the Welsh Ministers to assist in providing its Scoping Direction for the proposed development.

1.3 In accordance with Regulation 33 the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017[1], this Scoping Report contains:

a. a plan sufficient to identify the land;
b. a brief description of the nature and purpose of the development including its location and technical capacity;
c. a description of the likely significant effects of the development on the environment;
d. a statement that the request is made in relation to a development of national significance for the purposes of section 62D of the 1990 Act; and
e. such other information or representations as the person making the request may wish to provide or make.

The Site

Site Context and Description

1.4 The site is located on the Isle of Anglesey in North Wales, within the administrative boundary of the Isle of Anglesey County Council (IACC) and extends to approximately 300 hectares (ha)

[1] 2017 No. 567 (W.136) as amended by S.I. 2019/245

(as shown in Appendix 1). The site is located approximately 500 metres to the east of the small hamlet of Llantrisant and approximately 1.5km to the west of the village of Llannerch-y-medd. It is also to the west of the B5112.

1.5 The site is irregularly shaped. Within the central part of the site, several farm houses at Nantanog and associated buildings are present, which are encompassed by, but located outside of, the site boundary.

1.6 The Nantanog Site of Special Scientific Interest (SSSI) is designated for its nationally important geological exposure and is within the site boundary. The site is also approximately 325 metres south of Llyn Alaw, which is designated as a SSSI. A Local Wildlife Site (LWS), Cors y Bol, is present in the western part of the site.

1.7 The site boundary is adjacent to the Scheduled Monument at Cors-y-Bol Round Barrow on the north-western site boundary. The site is also approximately 1.3km to the west of the Scheduled Monument at Y Werthyr Iron Age Hillfort.

1.8 The site comprises approximately 62 individual land parcels and comprises predominantly agricultural fields, currently utilised for grazing purposes. The agricultural fields are bound by hedgerows.

1.9 The site is intersected by several Public Rights of Way (PRoW) and the National Cycle Route (NCR) 5 dissects the site in an east-west orientation.

The Proposed Development

1.10 A DNS application will be submitted for:

> *"Construction of a ground-mounted solar photovoltaic farm and associated energy storage facility, together with associated landscaping, works, infrastructure and access"*

1.11 It is anticipated that the total electricity generating capacity of the proposed development would be approximately 160 MW.

1.12 The 'solar areas' of the proposed development will likely include the following equipment:

- Photovoltaic (PV) arrays (fixed panels or tracker panels to be determined), which would be a maximum of 3m in height about existing ground levels;

- A number of inverter and transformer blocks at various locations around the arrays;
- Energy Storage Facility, comprising either a single compound or multiple smaller battery installations spread across the solar areas;
- A 132 kilovolt (kv) substation;
- Boundary fencing (e.g. deer/ stock fencing);
- A CCTV system, either pole or fence-mounted, located at strategic points around the site;
- Associated access tracks connecting inverter/transformer units;
- Storage container(s) for spare parts etc.;
- Relevant communications and monitoring equipment; and
- Creation of new or improvement of existing vehicular accesses for the construction, operation and decommissioning phases of the proposed development.

1.13 The PV arrays will either be fixed or tracker panels. Fixed panels are positioned at a 'fixed' tilt and orientation, while tracker panels automatically adjust the positions of the PV arrays so that the panels track the sun throughout the day.

1.14 The energy storage facility will be able to convert electricity into electrochemical energy that is then stored, within a solid electrolyte before being converted back to electricity for exporting into the local network.

1.15 The energy storage units proposed may be charged during periods of lower electricity demand, typically during the day when the full capacity of the solar farm is not required by demand on the network. The stored energy can be discharged during periods of high or peak demand, which is typically in the early evening. The energy storage units may also be charged by taking excess electricity from the grid at periods of very low demand, typically overnight from energy sources other than the proposed solar farm, to be released at times of higher demand, this provides a management service to the network.

1.16 The proposed development will connect to the electricity network via the National Grid Substation at Wylfa Nuclear Power Station. It is currently anticipated that the grid connection route corridor will be included as part of the DNS application. An indicative route is shown at Appendix 2 and it is considered that the connection will be provided by underground cabling located within the adopted highway. This will be subject to discussion and agreement with IACC. The ES will consider the likely significant environmental effects of the grid connection, however, the level of assessment will depend on the certainty on the specific grid connection route at the time the DNS application is submitted.

Temporary Construction Compounds

1.17 During the construction phase, construction compounds will serve the proposed development, and these will be located off the site entrances, thus reducing the distance delivery vehicles will need to travel after reaching the site's entrance.

Operation

1.18 An operational lifespan of up to 40 years would be sought. During the operational phase, the activities on site would amount to maintenance activities, including servicing of plant and equipment and vegetation management.

Decommissioning

1.19 The proposed development comprises a temporary structure with a modelled operational lifespan of up to 40 years. Following cessation of energy generation and exportation at the site, and as part of the contractual obligations with the landowner, the above ground elements would be decommissioned and removed from the site. It is anticipated that decommissioning of the proposed development would be controlled by planning condition.

2 SCOPING

2.1 This scoping exercise has been informed by desk-based research, professional judgement and other information available for the site. Table 1 provides a summary of the scoping exercise.

Table 1: EIA Scoping Summary

Topics	Potential Construction Phase Effects	Potential Operational Phase Effects	Likely Significant Effects (Pre-Mitigation)	Comments
Landscape and Visual Effects	✓ - T	✓ - P	✓	Chapter to be prepared.
Biodiversity	✓ - P/T	✓ - P	✓	Chapter to be prepared.
Water Resources and Flood Risk	✓ - T	✓ - P	✓	Chapter to be prepared.
Noise	✓ - T	✓ - P	✓	Chapter to be prepared.
Cultural Heritage	✓ - T	✓ - P	✓	Chapter to be prepared.
Agricultural Land	x	x	x	Topic scoped out of the ES
Transport & Access	x	x	x	Topic scoped out of the ES
Air Quality	x	x	x	Topic scoped out of the ES
Accidents & Disasters	x	x	x	Topic scoped out of the ES
Climate Change	x	x	x	Topic scoped out of the ES
Land Contamination	x	x	x	Topic scoped out of the ES
Population and Human Health	x	x	x	Topic scoped out of the ES
Wind Microclimate	x	x	x	Topic scoped out of the ES
Daylight, Sunlight and Overshadowing	x	x	x	Topic scoped out of the ES
Waste	x	x	x	Topic scoped out of the ES

Key: ✓ Likely Significant Effect / x No Likely Significant Effect.
T – Temporary Effect / P – Permanent Effect

Environmental Disciplines Scoped Out

2.2 Further information on the topics scoped out of the EIA in Table 1 is set out in the following sections. It is anticipated that the planning application will be accompanied by standalone statements covering the following matters:

- Agricultural Land – Agricultural Land Classification Report;
- Transport & Access – Transport Statement & Outline Construction Traffic Management Plan; and
- Population and Human Health - Economic Benefits Statement.

Agricultural Land

2.3 The Welsh Government's Predictive Agricultural Land Classification (ALC) Map[2] (refer to Appendix 3) identifies that the site is likely to comprise mainly Subgrade 3a agricultural land, with some areas of Grade 2, Subgrade 3b and Grade 4 agricultural land. As the quality of agricultural land within the site is predicted to predominantly in the Best and Most Versatile (BMV) category (i.e. at Grade 1, Grade 2 and Grade 3a), further survey work will be undertaken. This includes a detailed ALC survey at a density of 1 auger bore per hectare. The results of this survey will inform a separate ALC Report which will be submitted as part of the DNS application. Given the nature of the proposed development, effects are anticipated to be reversible and sheep grazing would still be possible at the site during the proposed development's operational phase. On this basis, significant effects on the environment with respect to agricultural land are not anticipated and therefore it is proposed to scope it out of the Environmental Statement (ES).

Transport & Access

2.4 The proposed development is situated approximately four miles to the north of the A55 (North Wales Expressway), the main strategic road in Anglesey. From Junction 5 of the A55, the main route to the Site is via the B5112. The B5112 is rural in nature, but generally wide enough for two vehicles to pass.

2.5 Given the nature of the proposed development (comprising solar farm and energy storage), significant effects on the environment with regards to transport and access are considered unlikely. The proposed development will generate very little traffic once operational, which would be limited to occasional maintenance checks (one or two maintenance checks per month, using a 4x4 or a transit style van).

2.6 During the construction phase, it is anticipated that there will be some temporary effects on transport and access, particularly given the rural nature of the site and surrounding area. Typically, for a development of this nature, there could be 10-15 deliveries by Heavy Goods Vehicles (HGV) per day throughout the construction period (typically circa 12 months), in addition to a small number of Lower Goods Vehicle (LGV) movements for the transportation of construction workers. The timing of any grid connection works within the adopted highway will be subject to discussion and agreement with IACC, as the highway authority.

[2] Welsh Government (2021). Agricultural land classification: predictive map. Available from: **https://lle.gov.wales/catalogue/item/PredictiveAgriculturalLandClassificationALCMap2/?lang=en**

2.7 A Construction Environmental Management Plan (CEMP) and Construction Traffic Management Plan (CTMP) will be implemented during the construction phase. The mitigation and management measures set out in both documents will ensure that the temporary effects during the construction phase will not be significant. A Transport Statement will be submitted as part of the application. Therefore, it is proposed to scope Transport and Access out of the ES.

Air Quality

2.8 Given the nature of the proposed development (comprising solar farm and energy storage), significant effects on the environment with respect to air quality are considered unlikely. The proposed development would not include direct point sources of emissions to the atmosphere during the operational phase. The proposed development will generate very little traffic once operational and therefore road traffic generated emissions would be non-significant. The site is not located within an Air Quality Management Area (AQMA).

2.9 During the construction phase, any potential dust emissions will be mitigated through a CEMP to be secured by planning condition. Construction vehicle movements and the associated emissions will also be managed through the CEMP/CTMP, in line with best practice methods. As no significant effects are anticipated, it is proposed to scope Air Quality out of the ES.

Accidents & Disasters

2.10 The site is not in a location which is at risk of disasters such as land instability or earthquakes. The proposed development is not considered to include substances which are hazardous. A Flood Consequences Assessment (FCA) will be prepared and appended to the Water Environment ES Chapter. During the construction phase, the contractor(s) would implement measures in accordance with Health and Safety legislation, and best practice, to minimise the risks of accidents that would have effects on people or the environment. All such measures would form part of the CEMP. For the operational development, a management plan to minimise the risk of accidents associated with the energy storage facility would be implemented and secured by planning condition. No likely significant effects are anticipated and therefore this topic is proposed to be scoped out of the ES.

Climate Change

2.11 Climate change is a global, transboundary issue. It is acknowledged that new developments must both mitigate and adapt to, climate change. Climate change is a multi-disciplinary issue affecting several technical disciplines proposed to be scoped into the EIA process including

the water environment and biodiversity. Consideration of climate change will be provided in the introductory chapters of the ES, summarising and cross-referencing other ES chapters and reports submitted in support of the DNS application, with particular consideration of proposed mitigation measures (both inherent and additional) to ensure the proposed development is resilient to a changing climate. On this basis, Climate Change as a standalone ES Chapter is proposed to be scoped out of the ES.

Land Contamination

2.12 The site comprises land predominantly used for agricultural uses, which has not been previously developed. It is not expected to be heavily contaminated given its land use. Therefore, it is considered that it is unlikely that there will be any significant effects with regards to contaminated land and this topic is proposed to be scoped out of the ES.

Population & Human Health

2.13 Given the nature of the proposed development, there will be no increased demand on local services, such as primary healthcare provision or education facilities, as no additional population will be generated. Humans as a receptor and the effects on human health will be considered within the ES, where appropriate. During the construction phase, construction jobs will be created which will benefit the local area. The impacts during the construction phase will be subject to a separate Economic Benefits Statement submitted alongside the DNS application, which will also consider the impacts generated once the proposed development is operational (including permanent employment and business rates revenue). On this basis, it is proposed to scope population and human health out of the ES.

Wind Microclimate

2.14 Likely significant wind effects are not anticipated given that energy generation uses are proposed that would not include large areas of public realm and outdoor amenity space where the public or site users would experience significant wind effects. The proposed development will not include any high-rise buildings or high-rise structures which could influence wind patterns. Therefore, likely significant wind effects are not anticipated and this topic will be scoped out of the ES.

Daylight, Sunlight and Overshadowing

2.15 The scale and massing of the proposed development will not cause changes to daylight or sunlight availability or cause overshadowing of residents or amenity space. It is therefore

proposed to scope this discipline out of the ES.

Waste

2.16 The proposed development is not anticipated to produce significant amounts of waste to the extent that the creation or disposal of which would give rise to significant effects on the environment. The CEMP (to be secured by a planning condition), will detail the mitigation measures to be implemented during the construction phase to minimise waste and ensure that it is stored, managed, collected and disposed of appropriately. There would be no waste generated during the operational phase of the proposed development. Therefore, it is proposed to scope this discipline out of the ES.

Vibration

2.17 Due to the nature of the proposed development, it is not expected to give rise to significant levels of vibration during its construction and operational phases and therefore a vibration assessment is not considered to be required. Therefore, this topic will be scoped out of the ES.

Lighting

2.18 The operational lighting for the proposed development comprises lighting for emergency use at the substation only. Therefore, due to the nature of the proposed development, it is not anticipated to produce significant lighting effects on the existing character of the night-sky. Therefore, this topic will be scoped out of the ES.

Environmental Disciplines Scoped In

2.19 For each of the topics scoped into the assessment further information on the details to be included in the assessment and the methodology to be employed are set out in the following sections.

3 LANDSCAPE AND VIEWS

3.1 An assessment of the likely significant landscape and visual effects of the proposed development will be undertaken.

Baseline

3.2 The site is located to the south of Llyn Alaw, between Llanddeusant and Llanerch-y-medd on the Isle of Anglesey. The site comprises 63 fields that extend either side of three unnamed local roads to the west of the B5112, including a section of National Cycle Route 5. The site comprises land in agricultural use, predominantly for sheep grazing.

3.3 In relation to topography, the landscape is gently undulating, with a north-east south-west grain. To the south-east, a local ridgeline rising up to approximately 110m Above Ordnance Datum (AOD) physically and visually contains the site. The north-western part of the site straddles a local ridgeline that rises up to between 85 and 90m AOD. The north-western part of the site extends along the north-west facing slopes of the Afon Alaw valley. Overall, the site ranges between approximately 40m at its lowest point to the north-west and 110m AOD at its highest point to the south-east.

3.4 The drainage pattern follows the north-east south-west grain of the landscape, and Llyn Alaw reservoir is a large waterbody to the immediate north of the site (designated as a SSSI), with Afon Alaw flowing south-west towards the coast. There are a number of watercourses and drains through and between the site; a pond within the site, and a number of ponds in the immediate vicinity of the site.

3.5 The vegetation pattern within the site and its surrounding context is generally simple and sparse, and predominantly comprises hedgerow field boundaries, although they are gappy and fragmented in places. Trees and woodland are generally sparce, and tend to be associated with settlements, farmsteads and watercourses, including mixed and broadleaf woodland planting along the Cors-y-bol watercourse in the vicinity of the site. Tree belts and woodland are more prevalent to the north-west of the site and along the south-eastern boundary. Hedgerows and cloddiau define the fields to the north-east of the site.

3.6 The site is located within National Landscape Character Area 2 (NLCA02): Central Anglesey. Key characteristics of the area that are of relevance to the site's context include:

- A distinctive geological grain follows a north-east to south-west 'grain';

- A classic 'basket of eggs' rolling drumlin landscape, especially in the north-west;
- Lowland pastoral grazing land bounded by a strongly geometric pattern of medium to large scale and, more occasionally, small scale fields;
- A number of minor rivers and streams cross the landscape, the alignment of which is influenced by the north-east to south-west trend. There are many shallow hollows and fens with wetland features including rush pasture and valley mires;
- This is a generally rolling, open landscape with a well-established pattern of field boundaries, predominantly of hedgerows but with cloddiau in some areas;
- Woodlands larger than a small copse are an exception and except in sheltered areas, individual trees are few;
- The only urban settlement is the county town of Llangefni. There are only a few villages, but numerous scattered hamlets and farms;
- Ritual and funerary monuments including cairns and round barrows, Iron Age hill forts and Early Christian churches, burial grounds and inscribed stones;
- Historic windmill towers;
- Modern wind farms; and
- The large reservoir, Llyn Alaw, is nearly 3 miles long and a notable visual feature.

3.7 With respect to the visual and sensory profile of NLCA02, the assessment notes that it is a landscape of *'large skies, which often reinforce the exposed nature of the island'.* Open views across the landscape are afforded from the nearby mountains. The assessment states that *'typically the area is seen as enclosed farmland, rural in character, tranquil in feel, with scattered farms throughout'.*

3.8 LANDMAP defines the site as falling within Geological Landscape: Llanerchymedd (YNSMNGL020), a lowland hills and valley landscape with a broadly south-west, north-east gently rolling topography. It is evaluated as:

- Value: High overall (Q33), with high rarity / uniqueness (Q31); and
- Condition: Good, dominantly rural area with limited significant development.

3.9 With respect to habitats, LANDMAP defines the site and its wider context as being an area of West Anglesey Farmland (YNSMNLH006) comprising improved grassland dominated farmland, which is ubiquitous in lowland Wales. It is evaluated as:

- Value: Moderate, comprising predominantly of improved grassland, which is generally quite a low ecological value habitat, but with a scattering of pSINC sites throughout. The networks of hedges and pockets of more valuable habitat add value. However, the area

is very low on the moderate scale.

3.10 With respect to Visual and Sensory aspects, LANDMAP defines the site as falling into two large aspect areas: the North-west drumlins (YNSMNVS008) to the west / Central smooth belt (YNSMNVS012) to the east.

3.11 The Visual and Sensory Evaluation describes the site and its context as being a rolling, undulating landform that is primarily pasture, criss-crossed by a network of mainly small roads, with many scattered houses and farms, hamlets and small villages. It is described as feeling settled and prosperous, with a quiet rural character and as pleasant, but unremarkable. There are some long views to the higher parts of Anglesey and distant views to Snowdonia, but not usually to the coast. The site and its context are evaluated as:

- Value: Moderate (Q50), Clear "basket-of-eggs" landform in parts. Intrusive elements – pylons and power stations / generally quiet pleasant rural landscape but no distinct landmarks;
- Scenic Quality: Moderate (Q46), pleasant rural landscape but generally unremarkable; and
- Character: Moderate / Low (Q48), quiet unexciting farmland / lack of distinctive features.

3.12 The Cultural Landscape Services evaluation identifies the site as falling into two large aspect areas: the North-west drumlins (YNSMNCLS010) to the west and Central smooth belt (YNSMNCLS016) to the east.

3.13 Night-time light pollution levels are slight and the landscape is described as tranquil and having a moderate sense of place / local distinctiveness to the west and a weak sense of place / local distinctiveness to the east.

3.14 With respect to the Historic Landscape, the site and its context is predominantly classified as agricultural land characterised by "irregular fieldscapes" within the Fieldscape, central eastern Mon Aspect Area (YNSMNHL016), which is the prevailing historic landscape classification within inland Anglesey. It is evaluated as:

- Value: Outstanding (Q40), being of national value, on the whole, as a broad landscape which contains many disparate patterns which illustrate and exemplify Anglesey's evolution as a primarily rural area.
- Condition: Fair, as the area is subject to the pressures of any rural landscape, including depopulation and the redundance of historic farm buildings.
- Trend: Declining, reflecting the challenges faced by Ynys Mon in particular and the

agricultural sector generally.

3.15 There are no landscape designations or designated features within the site. Nantanog SSSI, comprising a geological exposure of Ordovician sedimentary rocks in a small incised stream of farmland, runs along the Cors-y-bol tributary located adjacent to the site boundaries to the north-west.

3.16 The site is located within a landscape that is predominantly open, with limited vegetation screening views. However, it is a gently undulating landscape, and the localised ridgelines enclose the majority of the eastern part of the site, with the exception of the southern-most part of the site, which rises up to approximately 110m AOD in the vicinity of Carmel. The north-western part of the site straddles a local ridgeline of between approximately 85 to 90m AOD and lies on the north-west facing slopes of the Afon Alaw valley. Woodland vegetation defines the lower slopes along the Cors-y-bol and the north-western boundary of the site.

3.17 Farmsteads and houses in the area are typically located on higher ground and along transport routes.

3.18 Views of the site are predominantly curtailed to the south-east and east due to the localised ridgelines that physically and visually contain the site. Views of the site are predominantly afforded from the north, looking across Llyn Alaw. However, in views in the vicinity of Llyn Alaw, the site is seen in the context of the Sewage Works, a single wind turbine and existing farmsteads. There is visibility of the site from higher ground to the west. Views of the site are partial views, and visibility is varied due to the undulating nature of the landform.

Approach

3.19 The assessment will be undertaken in accordance with Landscape Institute and Institute of Environmental Management and Assessment, 'Guidelines for Landscape and Visual Impact Assessment' Third Edition, 2013 (GLVIA) and would provide a review of the existing landscape planning policy context, published sources of landscape character and visual appraisal of the study area and an assessment of the potential landscape and visual effects of the proposed development, both at the construction and operational phases.

3.20 Baseline information for the study area will be collated, which will include topography, landscape planning policy designations, published sources of landscape character, typical photograph viewpoints and any other relevant information. Guidance Note (GN) 46: 'Using LANDMAP in Landscape and Visual Impact Assessments' will be used to inform how the LANDMAP GIS based resource is used to inform the LVIA. An Arboricultural Survey will be

undertaken to inform the assessment.

3.21 Assessments will be made at the baseline year 2021, during construction; on completion; and 15 years thereafter, with the benefit of effective planting mitigation.

3.22 In accordance with current good practice, this assessment will address landscape and visual effects as separate issues. Landscape effects relate to both the effect on the physical features of the site, and on the landscape character of the site and surrounding area. Visual effects relate to typical views of the proposed development from the surrounding area.

3.23 A landscape and visual field survey was conducted in March 2021. The field survey was guided by a preliminary desk study that included the preparation of an Initial Zone of Theoretical (ZTV), provided in Appendix 4.

3.24 The Initial ZTV has been prepared on the basis of a 'bare earth' digital terrain model, and therefore does not account for the screening effect of vegetation and built form. The ZTV also encompasses an extensive initial study area (5 to 7.5km from the site boundary) and is based on coverage of the entire site with solar development to a height of 3m above existing ground levels.

3.25 On this basis, the Initial ZTV provides a worst-case scenario indication of the potential visibility of the proposed development, and the actual visual envelope over which effects are likely to be experienced is considerably reduced, as confirmed by the field survey. Following agreement of viewpoints, the study area will be reduced to an appropriate scale to support the assessment of potential significant effects within the LVIA. At this stage, an additional ZTV will be prepared based on the actual design of the proposed development and including for the screening effect of existing vegetation and built form.

3.26 Following on from the field survey and informed by the Initial ZTV, over 100 potential viewpoints have been considered and a series of Site Context Photographs (SCPs) have subsequently been selected as representative views against which the potential visual effects of the proposed development will be assessed. As shown on the Initial ZTV, a total of 22 SCPs have been identified to represent the range of visual receptors likely to experience views of the proposed development from short, medium and long distance publicly accessible vantage points, including roads and Public Rights of Way. Where possible, views have also been selected to represent fixed residential visual receptors.

3.27 In summary, the assessment will:

- Define the study area for the site, based on Zone of Theoretical Visibility (ZTV) Mapping and a visual appraisal in the field, identifying key views to be used for the visual impact assessment;
- Provide an appraisal of the landscape and visual baseline;
- Assess the susceptibility to change of the landscape and visual receptors (the receiving environment);
- Assess the magnitude of landscape and visual effects;
- Assess the significance of landscape and visual effects;
- Identify requirements for any mitigation measures;
- Summarise any residual effects following mitigation; and
- Cumulative effects of any known developments.

Summary

3.28 Table 2 summarises the landscape and visual receptors identified for inclusion in the assessment.

Table 2: Landscape and Views

Receptor	Effects	Scoped In
Typical views from publicly accessible locations, including roads, footpaths and public open spaces	Visual effects on users	✓
Landscape features, including existing vegetation	Landscape effects on the landscape resource	✓
Landscape Character	Effects on landscape character areas	✓

4 BIODIVERSITY

4.1 An assessment will be undertaken of the likely significant effects of the proposed development on the environment with respect to biodiversity.

Baseline

4.2 A desk study has been carried out which has involved obtaining data on species and designated sites from Cofnod and MAGIC.gov, and a review of aerial photographs.

Designated Sites

4.3 The are no European Protected Sites (Special Areas of Conservation (SACs)/Special Protection Areas (SPAs)) within or adjacent to the site. Corsydd Mon / Anglesey Fens SAC is the nearest European Protected Site, which is located approximately 6km to the east of the site. SPAs are present around the Anglesey coast and the nearest is Liverpool Bay / Bae Lerpwl SPA, located approximately 9km from the site. Ynys Feurig, Cemlyn Bay and The Skerries SPA is a similar distance to the north, and is located close to Wylfa nuclear power station.

4.4 Nantanog SSSI, a nationally important geological exposure, is located within the site boundary. Llyn Alaw ecological SSSI lies approximately 325m to the north of the site at its nearest point. It was notified as a SSSI as it is large mesotrophic open waterbody, and supports some species of wintering wildfowl in nationally important (or near nationally important) numbers. The species that approach the nationally important threshold are whooper swan, teal and shoveler. A variety of other waterfowl occur, and marginal vegetation features locally rare plant species.

4.5 A Local Wildlife Site (LWS), Cors y Bol, is present in the western part of the site. The LWS supports marshy grassland and wetland vegetation and scrub in a shallow valley, with a ditch/watercourse that flows into Llyn Alaw. Another LWS (Tir Pori Traian LWS) is adjacent to, but located outside of, the northern part of the site boundary.

Habitat Description

4.6 An extended Phase 1 habitat survey of the site was carried out in April and May 2020. Habitats present at the site include considerable areas of improved grassland, some marshy grassland, occasional small patches of gorse and willow scrub close to field edges. Fields are separated by hawthorn-dominated hedgerows with occasional field boundary trees. Shelterbelts and

small patches of woodland and trees are present, but infrequent, and the landscape is predominantly very open.

4.7 Ponds are a feature of the area, both within the site and in the surrounding area. Cors-y-bol, a minor stream that discharges to Llyn Alaw to the north, is one of very few running watercourses within or close to the site.

Species

4.8 There are 30 ponds within the site and a 500m perimeter area around its boundary; 17 of these were accessed and assessed for great crested newt in spring 2020; eDNA samples were taken from suitable ponds. A positive result was recorded form one pond (Pond 7); this is currently subject to further great crested newt surveys to inform the assessment.

4.9 Of the 30 ponds, 13 have not been accessed: these are all off-site, and access has not been possible. Of these, three offer no potential to support great crested newt populations, as they are managed/stocked fishing lakes; five are distant, being over 250m from the site boundary. Aerial photos suggest that of the remaining five, it appears that three may no longer be present. The assessment will consider the significance of any access limitations; overall, given the results of the survey work that has been successfully undertaken, the access limitations are considered unlikely to significantly affect the ability to carry out the assessment or to identify a proportionate mitigation approach.

4.10 Breeding bird surveys (undertaken in spring 2020) and wintering bird surveys have been carried out within the site (undertaken in winter 2020/21). The breeding bird assemblage is considered to be typical of improved pasture farmland, being dominated by common and widespread passerines typically of scrub and hedgerow habitats. Curlew that were noted were considered passage birds; foraging buzzard were occasionally recorded.

4.11 The focus of the wintering survey work was to determine whether the wildfowl species for which the Llyn Alaw SSSI was notified use the site. Twice monthly visits were completed between October 2020 and March 2021, inclusive. Whooper swan was not recorded using the fields. Small numbers of wildfowl (wigeon, teal) were found to use the larger open pond at Nantanog, Occasional small flocks of waders (golden plover and lapwing) were recorded. Snipe occurs in the wetter areas.

4.12 Further survey work for great crested newt is ongoing in spring 2021 (eDNA survey of additional ponds that are now accessible, and population class assessment survey of Pond 7, which was confirmed to support great crested newt in 2020). Further survey of water courses

for evidence of use by water vole and otter will also be carried out during May / June 2021.

Approach

4.13 A qualitative and quantitative ecological impact assessment (EcIA) will be undertaken, following the principles set out in the CIEEM publication 'Guidelines for Ecological Impact Assessment in the United Kingdom', and will include an assessment of cumulative effects, details of appropriate mitigation measures and details of any residual effects (should any exist following mitigation). The EcIA will be supported by technical survey reports detailing the baseline survey work undertaken.

Scoping

4.14 The site both includes and is adjacent to non-statutory designated ecological sites. Potential impacts on these will be considered in the assessment, and measures to avoid or minimise these identified, where necessary.

4.15 Great crested newt occurs locally, although its distribution appears to be very limited, and it was found to be absent from all but one of the ponds surveyed. Given the protected status of this species, it will be considered in the assessment, and mitigation and enhancement measures incorporated as appropriate.

4.16 Based on the survey results and the intention to retain more value habitat features, it is likely that impacts on other protected species can be scoped out of the assessment. Further confirmatory surveys are planned in 2021 to update last year's survey work (confirming and updating the Phase 1 habitat survey, and the protected species work described in paragraph 4.12 above) and confirm this approach.

4.17 Consideration will be given to the following potential effects on the above features:

- Construction:
  - Temporary Land-take;
  - Disturbance (visual, noise);
  - Hydrology and pollution (dust generation, pollution of aquatic habitats);
  - Lighting (construction); and
  - Construction site hazards.

- Operation:
  - Permanent Land-take;

- Pollution and Hydrology; and
- Permanent Lighting.

4.18 Table 3 provides a summary of the key issues to be considered in relation to biodiversity.

Table 3: Biodiversity Effects

Receptor	Effects	Scoped In
Ecological Designations	• Land-take • Disturbance (visual, noise) • Hydrology and pollution (dust generation, pollution of aquatic habitats) • Lighting • Construction site hazards	✓
Habitats		✓
Species		✓

5 WATER ENVIRONMENT

5.1 An assessment will be undertaken of the likely significant effects of the proposed development on the water environment.

Baseline

Flood Risk

5.2 A number of ordinary watercourses[3] are located throughout the site and a main river[4] is located along the south-western boundary of the site.

5.3 The site is located partially in flood Zone B. Land within flood Zone C2 is located approximately 30m to the west of the site. The majority of the site has a very low risk of fluvial flooding and a few areas have a low risk of fluvial flooding.

5.4 The majority of the site has a very low surface water flood risk, with some areas having up to a high surface water flood risk, associated with the watercourses and isolated ponding.

5.5 The Anglesey Local Flood Risk Management Strategy indicates that '*groundwater flooding usually occurs in combination with pluvial and fluvial flooding. As such groundwater flooding occurs in low lying areas …*'

Surface Water and Groundwater Quality

5.6 According to the Water Watch Wales Water Framework Directive Catchment maps, the site is located within the Western Wales River Basin District and is located within the 'Alaw-upstream Llyn Alaw' surface water river catchment. This catchment has an overall waterbody status of 'Good' (in 2018) and has an overall status objective of 'Good Potential by 2027'.

5.7 The British Geological Society (BGS) geological mapping indicates that the majority of the site is underlain by superficial deposits of the Till Devensian, comprising Diamicton[5]. The land along the south-western boundary of the site is underlain by Alluvium, comprising clay, silt, sand and gravels. The entire site is further underlain by the bedrock geology of the Ordovician Rocks, comprising mudstone and sandstone.

[3] Ordinary watercourse is defined as all watercourses that are not designated Main River and which are the responsibility of riparian owners.
[4] Main river is defined a watercourse shown as such on the Main River Map, and for which the Natural Resource Wales has responsibilities and powers.
[5] Diamicton is defined as heterogenous mixture of clay, sand, gravel and boulders varying widely in size and shape.

5.8 The Till Devensian superficial geology is classified as 'Secondary Undifferentiated Aquifer' and the Alluvium is classified as 'Secondary A Aquifer'. The bedrock geology of the Ordovician Rocks is classified as 'Secondary B Aquifer'.

5.9 These aquifer classifications are described by the Environment Agency (EA) and Natural Resources Wales (NRW) as follows:

- *'Secondary A - 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. These are generally aquifers formerly classified as minor aquifers;*
- *Secondary B - predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers; and*
- *Secondary Undifferentiated - has been assigned in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.'*

5.10 The Water Watch Wales Water Framework Directive Catchment maps also identify the site as being located within the 'Ynys Mon Secondary' Groundwater catchment area. This has an overall status of 'Poor' (in 2018) which is due to the quantitative status being 'Good'. However, its chemical status is 'Poor'.

Water Supply

5.11 Anglesey is located in an area which is reported to suffer from 'low to moderate water stress' in accordance with the 'Water Stressed Areas - Final Classification Report' (EA and NRW; 2013).

Water Resources

5.12 Given the nature of the site and considering the site is underlain by relatively impermeable strata, it is considered unlikely that there are any active groundwater or surface water abstractions within the site or surrounding area.

Approach

5.13 The ES chapter will identify and assess the effects of the proposed development on surface

water quantity and quality and groundwater quantity and quality, as a result of the change in land use and regime during the construction and operational phases.

5.14 A Flood Consequence Assessment (FCA) will be prepared and submitted alongside the DNS application. The FCA will be undertaken to ensure that the proposed development is safe and that it will not increase flood risk elsewhere.

5.15 The FCA will include mitigation measures (where necessary) to ensure that there are no significant adverse effects on flood risk as a result of the proposed development. This will include any appropriate buffers to the top of the bank of the watercourses to ensure access for maintenance. Similarly, the solar panels would be elevated on a framework and panels would be excluded from areas where it is not practicable to elevate them above the flood depth. Therefore, the proposed development would not impede any surface water flow paths or displace any ponding of surface water. On this basis, it is proposed to scope out the assessment of the effects of the proposed development on flood risk from the ES chapter.

5.16 It is not considered necessary to provide Sustainable Drainage Systems (SuDS) to mitigate runoff from the proposed solar panel arrays, as solar panels do not have a significant effect on runoff volumes, peaks or time to peak, if grass cover is well-maintained underneath panels and between rows. Therefore, it is proposed to locate grass cover beneath the panels to prevent areas of bare ground and erosion occurring. Post-consent of the application, the proposed development will require approval from the SuDS Approving Body.

5.17 All proposed roads and tracks will be constructed of a permeable material (e.g. gravel); therefore, there would be no increase in runoff from these areas. Energy storage units and sub-stations will be located in storage containers or cabins above a 300 mm sub-base formed of permeable material (i.e. gravel).

5.18 The potential impacts associated with contamination during construction and operational phase of the proposed development having an effect on controlled water will be assessed in the ES chapter and this will provide mitigation measures (where necessary) to ensure that there is no adverse effect on groundwater and surface water as a result of the proposed development.

5.19 Given the greenfield nature of the site, it is considered unlikely that contamination is present onsite and therefore the potential for remobilisation of contamination to controlled waters (groundwater and surface water) is considered to be unlikely.

5.20 It is considered that the impact of the proposed development on clean water demand and

foul drainage supply is not significant. This is due to the nature of the proposed development being ultimately 'unmanned' and limited requirement for water supply and foul drainage. Therefore, it is proposed to scope out the assessment of the effects of the proposed development on water supply and foul drainage from the ES chapter.

5.21 Likely significant effects from the proposed development on groundwater or surface water interruption affecting local abstractions are not anticipated. This is because piling at the site will be shallow and small in footprint and therefore, if a local abstraction is within close proximity to the site, the impact of piling interruption to the supply of water to these abstractions would not be significant.

5.22 The ES chapter will draw on the findings of the FCA and other associated studies to confirm the effects on surface water quantity and quality and groundwater quantity and quality.

5.23 The assessment of likely significant effects will be based on a review of published data including evidence base documents, site surveys and site visits, online mapping ((BGS, NRW, Ordnance Survey, etc), and liaison with IACC.

Summary

5.24 Table 4 summarises the likely effects on the water environment identified for inclusion in the assessment.

Table 4: Water Environment Effects

Receptor	Effects	Scoped In
Groundwater	Construction and operational phase effects on groundwater.	✓
Surface water	Construction and operational phase effects on surface water quantity and quality.	✓
Flood Risk	Impacts on flood risk during the operational phase	X
Water Supply	Effect on water demand and foul drainage demand	X
Water Resources	Groundwater and surface water interruption affecting local abstractions	X

6 NOISE

6.1 An assessment of potential effects of the proposed development with respect to noise will be undertaken. This will include construction phase (temporary) and operational phase (permanent) effects.

Baseline

6.2 A baseline sound measurement exercise has been undertaken at key receptor locations around the site, between 18th and 24th March 2021. The exercise was agreed and partially overseen by a representative of the IACC's Environmental Health Department.

6.3 Measurements have been undertaken at four discrete locations (shown on Appendix 5), representative of the closest potentially affected receptors. These comprised:

- Adjacent to the hamlet of Carmel, to the south-east of the site;
- Within the vicinity of Chwaen-Goch, to the north-west of the site;
- Within the vicinity of Chwaen-Newydd and Glan-y-gors, to the south-west of the site; and
- Adjacent to Traian, to the north-east of the site.

6.4 The background sound environment across the site and surrounding area was highly consistent, given the lack of localised noise sources within the area, so this "four-cornered" approach to determining the background sound levels within the area surrounding the site is viewed as highly robust.

Approach

6.5 The key considerations in relation to the assessment of the likely significant noise effects from the proposed development are as follows:

- The transient noise effects arising from on-site construction and decommissioning activities;
- The transient noise effects of off-site construction and decommissioning traffic;
- The potential operational noise effects arising from static plant installations within the proposed development, primarily associated with cooling fans serving the inverter stations and energy storage containers.

6.6 Given the nature of the proposed development, traffic noise effects during its operational

phase are not considered to be significant.

6.7 The effects of noise during the construction and decommissioning phases will be assessed in accordance with the British Standard 5228-1:2009+A1:2014 'Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1: Noise'. The mitigation measures to be included in a CEMP will be discussed.

6.8 The change in noise levels resulting from additional traffic flows associated with the construction of the proposed development will be assessed in accordance with guidance contained in Design Manual for Roads and Bridges Volume 11 Section 3 Part 7 – HD213/11 Noise and Vibration for the key stages of construction.

6.9 The effects of noise during the operation of the proposed development will be assessed in accordance with British Standard 4142: 2014 +A1: 2019 Method for rating industrial and commercial noise. This standard requires an assessment of operational noise against prevailing the background sound environment and will inform the acoustic specifications and locations of the noise-generating plant items to be included, such that the amenity of existing receptors in the area will not be adversely affected.

Summary

6.10 Table 5 summarises the noise effects to be included for detailed assessment in the ES.

Table 5: Noise Effects

Receptor	Effects	Scoped In
Existing residential receptors and community uses	• Temporary noise effects during construction, and need for control/mitigation measures • Noise change due to operational noise generated by the proposed development • Noise change due to operational traffic generated by the proposed development	✓ ✓ X

7 CULTURAL HERITAGE

7.1 An assessment will be undertaken of the likely significant effects of the proposed development on the environment with respect to archaeology and built heritage.

Baseline

7.2 No designated historic assets are located within the site, but the Scheduled Monument of the Cors y Bol Bronze Age burial mound lies immediately adjacent to the north-western part of the site boundary (refer to Appendix 6). A further 11 Scheduled Monuments are situated within a 5km radius of the site; the second nearest is the Y Werthyr Iron Age hillfort, located approximately 1.1km west of the site. There are 83 Listed Buildings within a 5km radius of the site; the nearest is the Grade II Listed disused Church of St Mary, located approximately 550m to the north-east.

7.3 Non-designated historic assets recorded within the site by the Gwynedd Archaeological Trust Historic Environment Record (HER) and National Monuments Record of Wales (NMRW) (see below) include a scatter of worked prehistoric flints in the vicinity of the burial mound, cropmarks of two possible enclosures and a trackway to the north and south-east of Nantanog Farm, and the ruins of a 19th-century or earlier farmstead called Tyddyn Bach in the eastern part of the site. Two other ruined farmsteads, Glan-hafren and Pen-yr-allt, lie adjacent to the boundaries of the south-western part of the site (refer to Appendix 6).

Assessment

7.4 Initial baseline information would be obtained using best practice guidelines, including Cadw and the Chartered Institute for Archaeologists (CIfA) guidance, local planning authority guidance and other guidance from statutory and non-statutory bodies, where applicable. The baseline information would include:

- Relevant national and local planning policy;
- Geological and topographical information, including the results of any previous site-specific geotechnical investigations;
- The Cadw database for information on designated historic assets within a 5km-radius area measured from the boundary of the site;
- Data held by the Gwynedd Archaeological Trust HER and the Royal Commission on the Ancient and Historical Monuments of Wales' NMRW for a 2km-radius area measured from the boundary of the site;

- Historic aerial photographs of the site and wider landscape, held by the Welsh Government's Aerial Photography Unit and available online;
- Historic mapping and documentary sources (such as sales particulars) for the site and selected historic assets, available online and held in the collections of Anglesey Archives, Bangor University Library, and the National Library of Wales;
- LiDAR imagery for the site and surroundings, available online from the Lle Geoportal for Wales;
- The results of on-site and adjacent archaeological investigations, available as published and unpublished literature;
- A site walkover survey, including basic descriptive photographic records of any visible historic assets within the site and setting assessments for selected designated historic assets beyond the site; and
- An archaeological geophysical survey of the site.

7.5 Both designated and undesignated historic assets will be considered:

- Scheduled Monuments;
- Non-Scheduled archaeological remains;
- Registered Historic Parks and Gardens;
- Historic landscape features;
- Listed Buildings; and
- Conservation Areas.

Summary

7.6 Table 6 summarises the likely effects on built heritage and archaeology identified for inclusion in the assessment.

Table 6: Built Heritage and Archaeology Effects

Receptor	Effects	Scoped In
Scheduled Monuments	• Direct impacts on above- and below-ground archaeology – i.e. truncation and/or destruction of earthwork and buried archaeological remains • Indirect impacts on historic assets through change to setting (visual, noise)	✓
Non-Scheduled archaeological remains		✓
Registered Historic Parks and Gardens		✓
Historic Landscape features		✓
Listed Buildings		✓
Conservation Areas		✓

8 CUMULATIVE EFFECTS

8.1 The ES will consider the potential for likely significant effects on the environment resulting from committed developments in the area.

8.2 Schedule 3 (1. (b)) of the EIA Regulations states that the characteristics of the development must be considered with particular regard to:

"…cumulation with other existing development and/or approved development…"

8.3 The best practice approach to cumulative schemes requires inclusion of proportionate information relating to projects that are not yet consented, dependent on the level of certainty of them coming forward. In this regards, the Planning Inspectorate's Advice Note Seventeen: Cumulative Effects Assessment, although specific to Nationally Significant Infrastructure Projects[6] is also of relevance to the Scoping Report.

8.4 Table 7 below details a sole project that has been identified for the assessment of likely significant cumulative effects on the environment for the purposes of this ES. Further engagement will be undertaken with IACC to agree a list of cumulative schemes which will need to be assessed in the EIA. The information contained within Table 7 is based upon a First Stage Community Information Pack on the PINS Website and it is acknowledged that this may change as the scheme progresses. The Applicant is aware of other schemes which might be submitted under the DNS regime, however due to the intervening distance, significant environmental effects are considered unlikely.

Table 7: Cumulative Scheme

Project Reference	Description	Status	Distance
DNS/3270579 Mon Solar Farm	Large scale solar farm comprising three parcels (up to 349 MW with ancillary infrastructure).	The applicant has approached the Planning Inspectorate with a scheme that is potentially a Development of National Significance.	The Potential Area for development at Parcel 2 is circa 2km to the north west of the site. The Potential Area for development at Parcel 3 is circa 1km to the east of the site.

[6] Planning Inspectorate (2019) Cumulative Effects Assessment. Available from: https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2015/12/Advice-note-17V4.pdf

Consultation

8.5 The following statutory and other consultees will be consulted through the EIA process:

- Cyngor Sir Ynys Mon (IACC);
- Local Authority departments, such as Environmental Health, Archaeology, and Ecology; and
- NRW;
- Cadw;
- This will also include any other stakeholder that the PINS Wales and the Local Planning Authority nominate.

8.6 The first stage of (non-statutory) public consultation is due to be carried out during Summer 2021. The feedback received through the consultation will be summarised in the ES.

9 ENVIRONMENTAL STATEMENT STRUCTURE

9.1 The ES will contain two main volumes as set out in Table 8 below.

Table 8: Environmental Statement Structure

Volume 1: ES Main Text and Figures		
Chapter No.	**Chapter Title**	**Description**
1	Introduction	Introduction to the ES, EIA requirements, details of project team, ES organisation and availability.
2	EIA Methodology	Methods used to prepare each chapter, description of ES structure and content, generic significance criteria, scoping and consultation.
3	Site and Development Description	Site description and details of the proposed development.
4	Alternatives and Design Evolution	Outline of the main alternatives considered by the Applicant.
5	Construction Methodology and Phasing	Details of anticipated programme for development and construction methodology.
6	Landscape and Views	Effects of the proposed development on landscape and visual amenity.
7	Cultural Heritage	Effects of the proposed development with regards to built heritage and below-ground archaeology.
8	Biodiversity	Assessment of effect the proposed development on biodiversity and ecology at the site.
9	Water Environment	Assessment of the effects of the proposed development on groundwater and surface water quality and quantity.
10	Noise	Effects of the proposed development on noise.
11	Summary and Residual Effects	Summary of the residual and interactive effects of the proposed development.
Volume 2		
Technical Appendices		Technical data and reports to support the chapters in Volume 1.
Standalone Document		
Non-Technical Summary		Summary of the ES in non-technical language.

9.2 The first five chapters of the ES would be introductory and provide essential information for the subsequent technical chapters. Further information on these chapters is set out below.

Introduction

9.3 This chapter will provide background to the EIA, describe the structure of the ES and identify the project team.

EIA Methodology

9.4 This chapter will set out the methodology used in the EIA, state the assumptions applicable to all disciplines, summarise the EIA Scoping process undertaken and summarise the public consultation process. Bespoke methodologies, limitations and assumptions will be contained in the technical chapters of the ES where required.

9.5 The significance of an environmental effect is determined by the interaction of magnitude and sensitivity, whereby the effects can be positive or negative. Generic criteria to be used in carrying out this process are detailed below. Some technical chapters will use discipline-specific criteria with their own terms for magnitude, sensitivity and significance. This will be explained in the relevant chapter.

Prediction of Impact Magnitude

9.6 The methodology for determining the scale or magnitude of impact is set out below.

Table 9: Methodology for Assessing Magnitude

Magnitude of Impact	Criteria for assessing impact
Major	Total loss or major/substantial alteration to key elements/features of the baseline (pre-development) conditions such that the post development character/composition/attributes will be fundamentally changed.
Moderate	Loss or alteration to one or more key elements/features of the baseline conditions such that post development character/composition/attributes of the baseline will be materially changed.
Minor	A minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible/detectable but not material. The underlying character/composition/attributes of the baseline condition will be similar to the pre-development circumstances/situation.
Negligible	Very little change from baseline conditions. Change barely distinguishable, approximating to a 'no change' situation.

9.7 The sensitivity of a receptor is based on the relative importance of the receptor using the scale set out below.

Table 10: Methodology for Determining Sensitivity

Sensitivity	Examples of Receptor
High	The receptor/resource has little ability to absorb change without fundamentally altering its present character, or is of international or national importance.
Moderate	The receptor/resource has moderate capacity to absorb change without significantly altering its present character, or is of high importance.
Low	The receptor/resource is tolerant of change without detriment to its character, is of low or local importance.

Assessment of Effect Significance

9.8 Effect significance will be calculated using the matrix in Table 11. This illustrates the interaction between impact magnitude and receptor sensitivity.

Table 11: Effect Significance Matrix

Magnitude	Sensitivity		
	High	Moderate	Low
Major	Major Adverse/Beneficial	Major - Moderate Adverse/Beneficial	Moderate - Minor Adverse/Beneficial
Moderate	Major - Moderate Adverse/Beneficial	Moderate – Minor Adverse/Beneficial	Minor Adverse/Beneficial
Minor	Moderate - Minor Adverse/Beneficial	Minor Adverse/Beneficial	Minor Adverse/Beneficial - Negligible
Negligible	Negligible	Negligible	Negligible

Site and Development Description

9.9 This chapter will describe the setting of the site and the existing conditions on the site, as well as explaining the proposed development and setting out the development parameters. The detailed plans will be included as figures to the chapter. The section will also provide detail on the anticipated route of the grid connection at the time the application is made.

Alternatives

9.10 This chapter would describe the evolution of the proposed development based on environmental constraints.

Construction Methodology and Phasing

9.11 This chapter will outline the anticipated construction programme, phasing and methodology and explain the assumptions made. This chapter will form the basis of the construction phase assumptions documented in each of the technical chapters of the ES.

Technical Assessments

9.12 Each ES chapter will follow the headings set out below to ensure the final document is transparent, consistent and accessible.

- Introduction;
- Planning Policy Context;
- Assessment Methodology;
- Baseline Conditions;
- Likely Significant Effects;

- Mitigation Measures;
- Residual Effects;
- Cumulative Effects; and
- Summary.

9.13 Each chapter sub-heading is explained in further detail below.

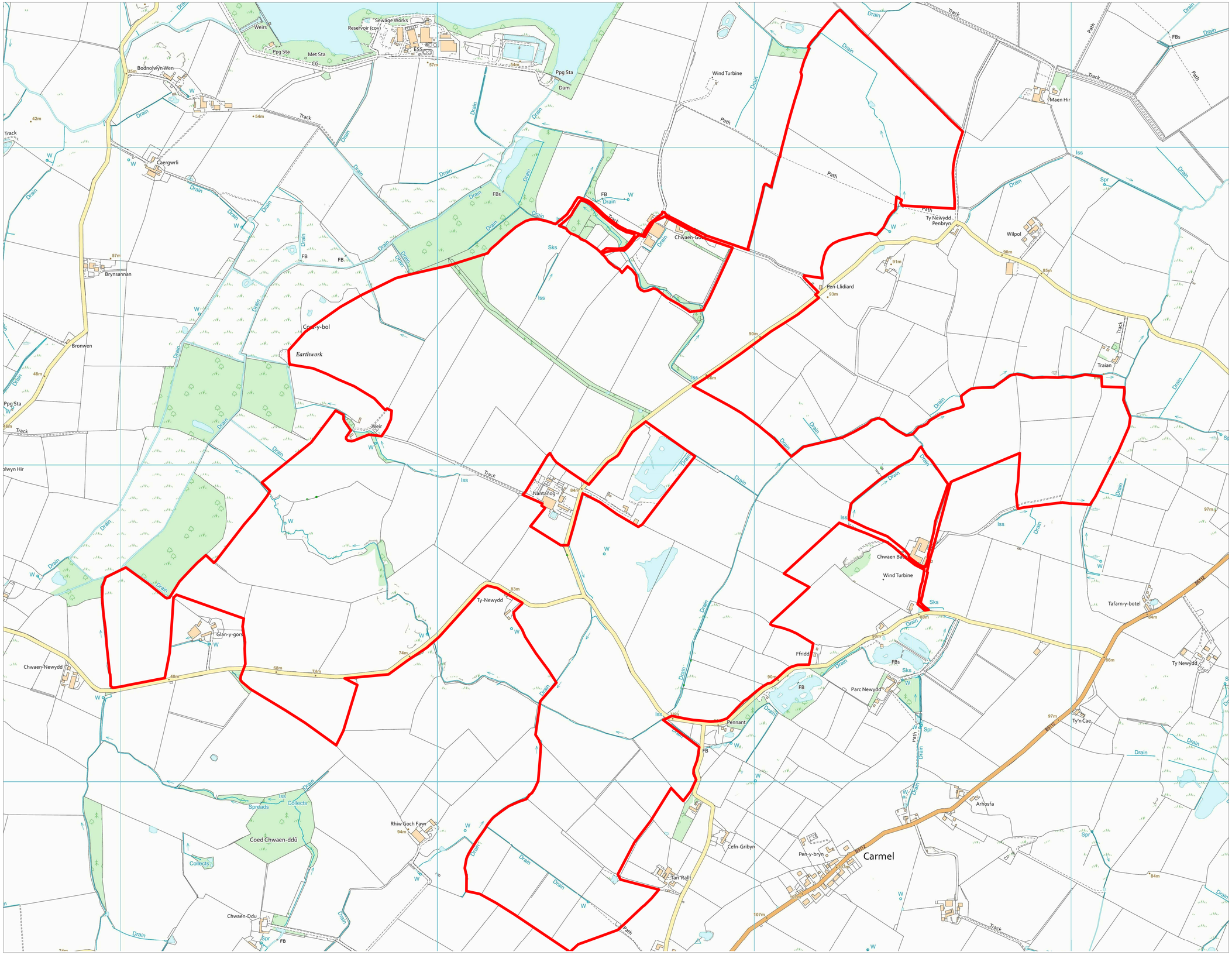
Table 12: Technical Chapter Format and Content

Sub-Heading	Content
Introduction	• This section will introduce the assessment discipline and the purpose for which it is being undertaken.
Planning Policy Context	• This section will include a summary of national, regional and local policies of relevance to the environmental discipline and assessment. Where applicable, relevant legislation will also be summarised.
Assessment Methodology	• This section will provide an explanation of methods used in undertaking the technical study with reference to published standards, guidelines and best practice. The application of significance criteria will also be discussed. • It will also outline any difficulties encountered in compiling the required information.
Baseline Conditions	• This will include a description of the environment as it is currently (2021) and as it is expected to change given the project were not to proceed (i.e. 'do-nothing' scenario). The method used to obtain baseline information will be clearly identified. Baseline data will be collected in such a way that the importance of the particular subject area to be affected can be placed in its context and surroundings so that the effects of the proposed changes can be predicted.
Likely Significant Effects	• This section will identify the likely significant effects on the environment resulting from the construction and operational phases of development.
Mitigation Measures	• Adverse effects will be considered for mitigation and specific mitigation measures put forward, where practicable. Mitigation measures considered may include modification of the project, compensation and the provision of alternative solutions (including alternative technology) as well as pollution control, where appropriate. • The extent of the mitigation measures and how these will be effective will be discussed. Where the effectiveness is uncertain or depends upon assumptions about operating procedures, data will be introduced to justify the acceptance of these assumptions. • Clear details of when and how the mitigation measures will be carried out will be given. When certainty of impact magnitude and/or effectiveness of mitigation over time exists, monitoring programmes will be proposed to enable subsequent adjustment of mitigation measures, as necessary. • The opportunity for enhancement measures will also be considered, where appropriate. • Information will be included on the mechanism by which the mitigation will be secured (e.g. by planning condition) with outline arrangements for monitoring and responsibilities for doing so, where necessary.
Residual Effects	• The residual effects, i.e. the effects of the proposed development assuming implementation of proposed mitigation, will be determined. The residual effects represent the overall likely significant effect of the development on the environment having taken account of practicable/available mitigation measures.
Cumulative Effects	• The cumulative effects of the proposed development and the identified committed developments will be assessed.
Summary	• A summary of the assessment and conclusions will be provided at the end of each technical chapter.

Summary and Residual Effects

9.14 The residual effects of the proposed development will be summarised in one table at the end of the ES setting out the overall beneficial and adverse effects of the proposed development.

APPENDIX 1
SITE LOCATION PLAN



N

W E

S

GENERAL NOTES

LEGEND

Site Boundary

REFERENCE DRAWINGS

No.	DRAWING TITLE	DRAWING No.

R	DATE	DESCRIPTION OF REVISION	REMARKS

PROJECT NAME :

ALAW MON
SOLAR PV AND BATTERY

enso energy

		SIGN
DRAWN BY	: GZ	
DATE	: 28-04-2021	
CHECKED BY	: SC	
DATE	: 28-04-2021	
APPROVED BY	: SC	
DATE	: 28-04-2021	

TITLE :

PROPOSED SITE PLAN

DRAWING No. :

WY2.0

SHEET SIZE	SHEET	SCALE	REV
A0	1 OF 1	1:4000	04

APPENDIX 2
INDICATIVE GRID CONNECTION ROUTE PLAN

CONCEPTUAL DESIGN

N
W E
S

GENERAL NOTES

LEGEND

Indicative Cable Route

REFERENCE DRAWINGS

No.	DRAWING TITLE	DRAWING No.

R	DATE	DESCRIPTION OF REVISION	REMARKS
03	29-04-2021	Locations added	GZ
02	05-10-2020	Cable route added	MP
01	08-04-2020	Site Boundary	

PROJECT NAME :

ALAW MON
SOLAR PV AND BATTERY

enso energy

		SIGN
DRAWN BY	: GZ	
DATE	: 28/04/2021	
CHECKED BY	: SC	
DATE	: 28/04/2021	
APPROVED BY	: SC	
DATE	: 28/04/2021	

TITLE :
Indicative Underground Grid Connection Route

DRAWING No. :
CO3.0

SHEET SIZE	SHEET	SCALE	REV
A0	1 OF 1	1:15000	01

APPENDIX 3
PREDICTIVE AGRICULTURAL LAND CLASSIFICATION MAP

The scaling of this drawing cannot be assured

Revision	Date	Drn	Ckd
-	-	-	-

N

LEGEND

- Site Boundary
- Existing Woodlands, Copses and Tree Belts ^
- Existing Scrub ^
- Existing Water Courses and Features ^
- Contours/Spot Heights (Metres AOD) ^
- Grade 2 - Good Quality Agricultural Land
- Grade 3a - Good to Moderate Quality Agricultural Land
- Grade 3b - Moderate Quality Agricultural Land
- Grade 4 - Poor Quality Agricultural Land
- Grade 5 - Very Poor Quality Agricultural Land
- Not Surveyed

Notes:
Source: Natural Resources Wales, Predictive Agricultural Land Classification

Project
Alaw Môn Solar Farm, Anglesey

Drawing Title
Predictive Agricultural Land Classification Map

Date	Scale	Drawn by	Check by
04.05.2021	1:12,500 @A3	ML	RD

Project No	Drawing No	Revision
32518	LN-E-01	-

0 100 200 300 400 500m

BARTON WILLMORE

Town Planning • Master Planning & Urban Design • Architecture • Landscape Planning & Design • Infrastructure & Environmental Planning • Heritage • Graphic Communication • Communications & Engagement • Development Economics

bartonwillmore.co.uk

Offices at Birmingham Bristol Cambridge Cardiff Ebbsfleet Edinburgh Glasgow Leeds London Manchester Newcastle Reading Southampton

APPENDIX 4
INITIAL ZONE OF THEORETICAL VISIBILITY

The scaling of this drawing cannot be assured

Revision	Date	Dm	Ckd
-	-	-	-

N

LEGEND

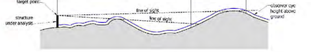
- Site Boundary
- Existing Water Courses and Water Features ^
- Contours/Spot Heights (Metres AOD) ^
- Ridgelines
- Distance Bands (at 2.5km intervals)
- Public Rights of Way *
- National Trails # / Long Distance Walks ^
- Conservation Area #/##
- Historic Landscapes ~
- Area of Outstanding Natural Beauty #
- Location of Photographic Viewpoints (Site Context Photographs: 1-22)

Zone of Theoretical Visibility (ZTV)

- Most Visible
- Least Visible

Notes:
The Zone of Theoretical Visibility (ZTV) provides an approximate portrayal of the greatest possible extent of visibility of the Proposed Development, on the basis of a digital ground model (DTM). The extent and nature of specific views towards the Proposed Development is to be verified through fieldwork to take account of other visual barriers, such as existing buildings, woodland, trees and infrastructure.

- The ZTV is produced using the specialised software package Key-Terra Firma which is an AutoCAD based application.
- The ZTV is produced by calculating the 'line of sight' from target points to analysis end.



Parameters:

- The study area for the ZTV is 17.6 x 13.9 km;
- The ZTV accounts for ground topography on the basis of a model made from Ordnance Survey Terrain 50 data in the form of 3D points data on a 50m grid;
- The ZTV does not account for any other features, including infrastructure, woodland, trees and hedgerows, and existing built forms;
- The ZTV is based on 387 targets across the areas of proposed solar panels, at a height of 3m above existing ground level;
- The ZTV portrays the extent of visibility of the Proposed Development on the basis of if a target point is visible within a given 50m grid square.

Project:
Alaw Môn Solar Farm, Anglesey

Drawing Title
Initial Zone of Theoretical Visiblity (ZTV) - Bare Earth

Date	Scale	Drawn by	Check by
29.04.2021	1:25,000 @A1 1:50,000 @A3	ML/GS	JM
Project No	Drawing No		Revision
32518	LN-LP-03		A

0 400 800 1600m

BARTON WILLMORE

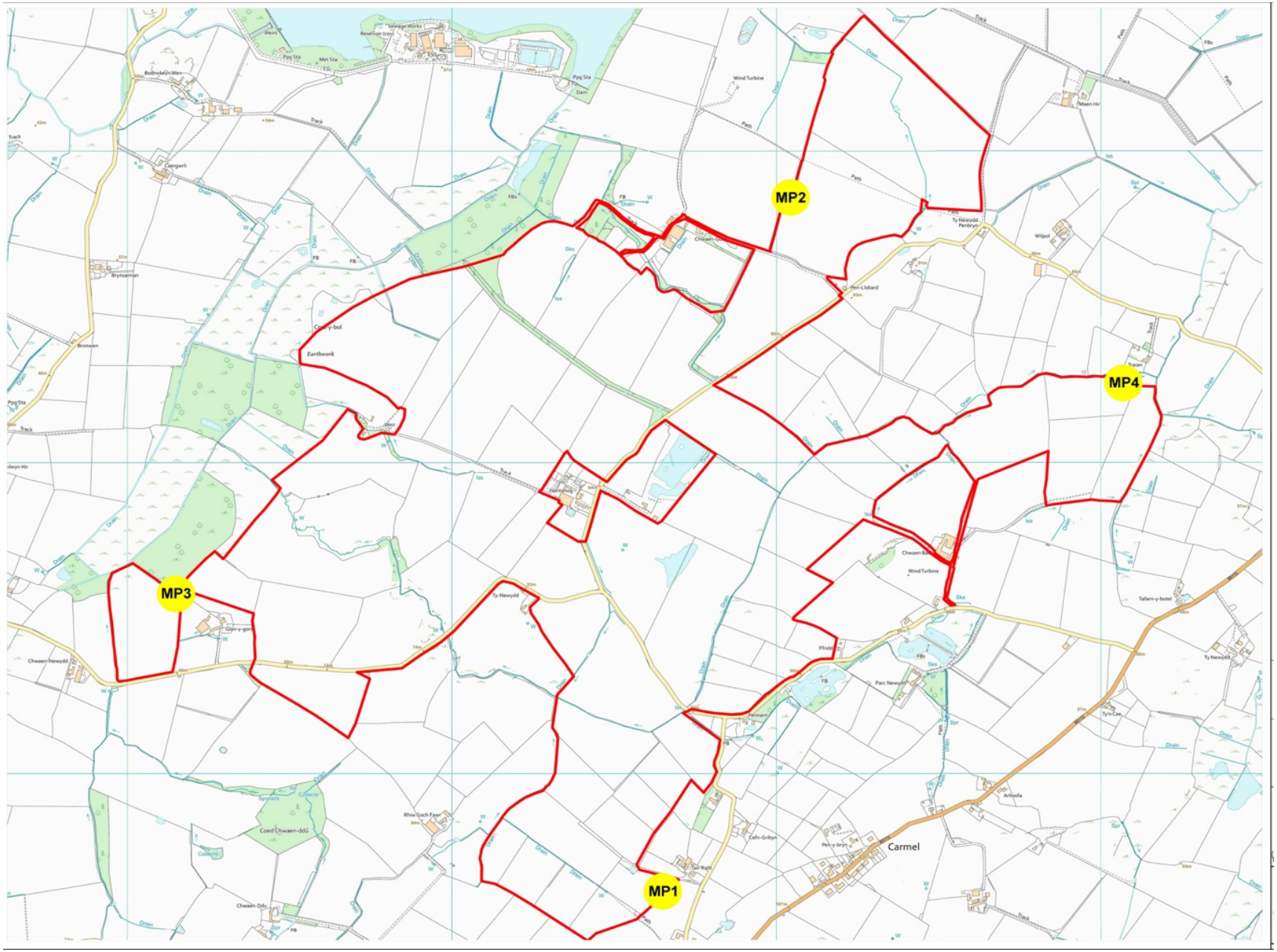
Town Planning • Master Planning & Urban Design • Architecture • Landscape Planning & Design • Infrastructure & Environmental Planning • Heritage • Graphic Communication • Communications & Engagement • Development Economics

bartonwillmore.co.uk

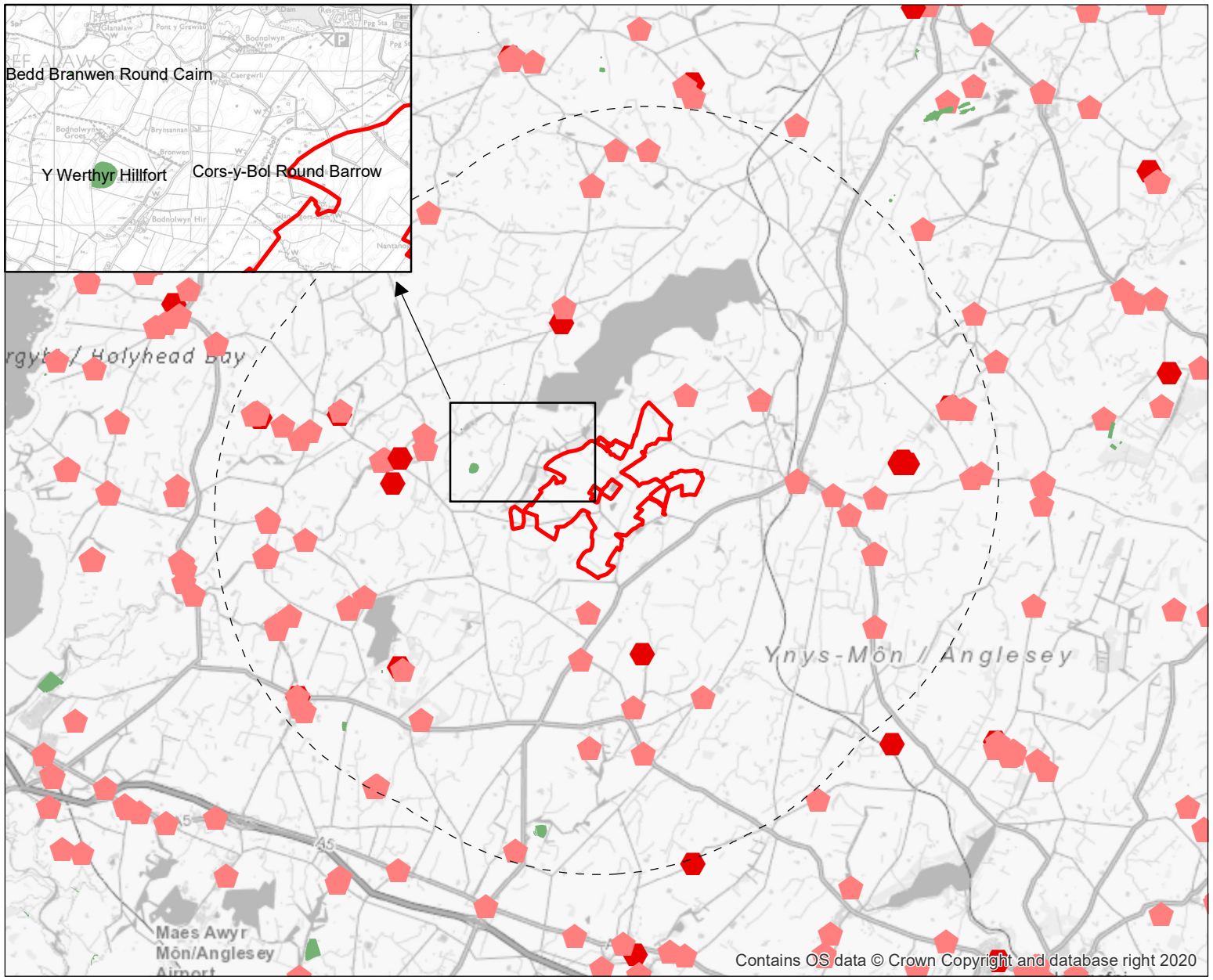
Offices at Birmingham Bristol Cambridge Cardiff Edbsflest Edinburgh Glasgow Leeds London Manchester Newcastle Reading Southampton

J:\32000\32518 - ENSO - Anglesey Solar & Storage Project\A4 - Drawings & Registers\Landscape\32518 LN-LP-03 ZTV Plan.dwg - A1

APPENDIX 5
NOISE MONITORING LOCATIONS


MP1
MP2
MP3
MP4
Carmel

APPENDIX 6
HERITAGE ASSETS PLANS



KEY

- Site
- 5km
- Scheduled Monuments

Listed Buildings

Grade

- I
- II
- II*

Contains Cadw data.
Inset shows Scheduled Monuments to the north-west of the site.

The scale of this figure is such that other Scheduled Monuments are too small to be identified.

Designated Historic Assets

Alaw Môn Solar Farm, Anglesey

Client: Enso Energy Ltd

DRWG No: P20-1336 Sheet No: - REV: -

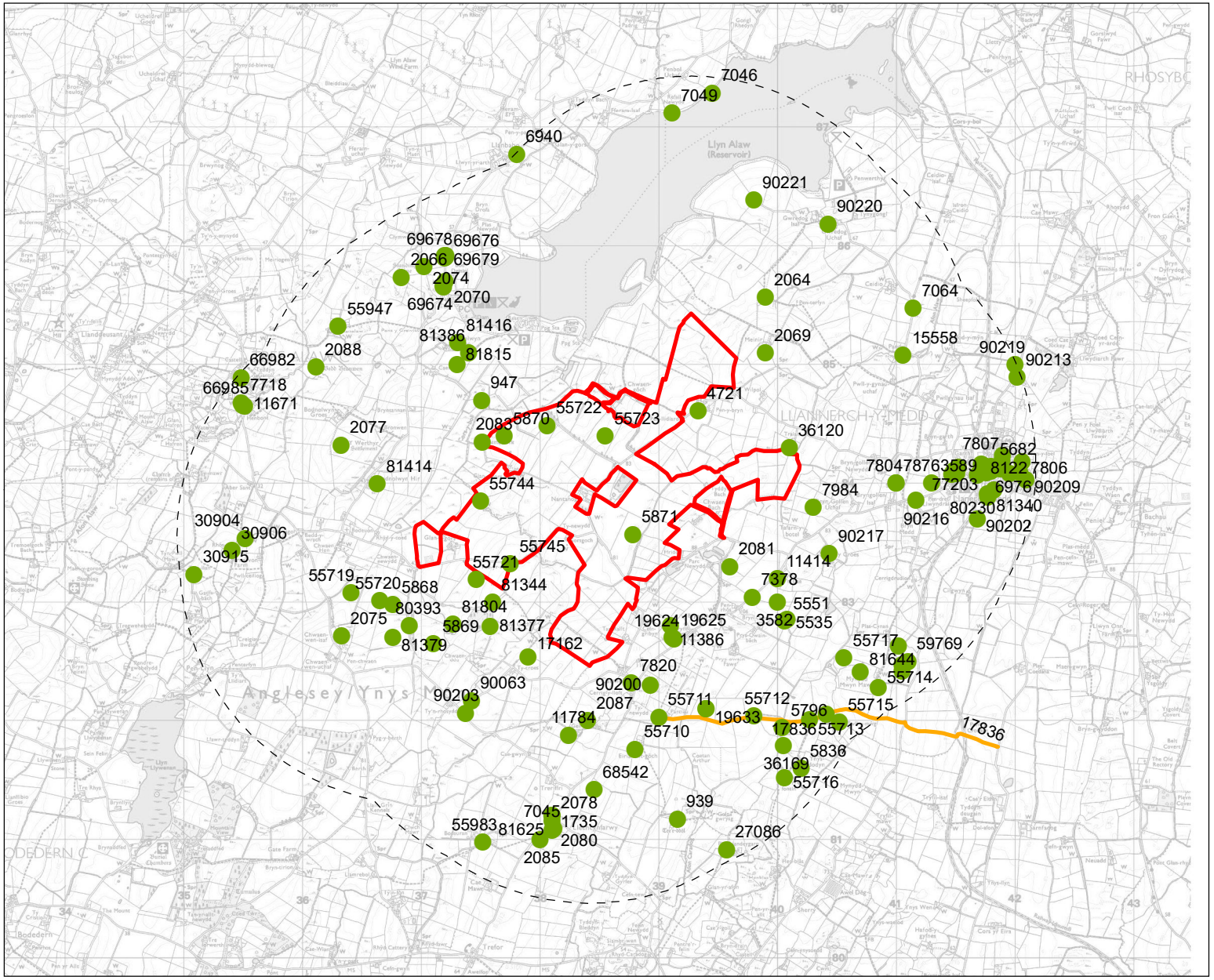
Drawn by: EP Approved by: GS

Date: 29/04/2021

Scale: 1:100,000 @ A4

Pegasus Group

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS | HERITAGE



0 5 km

N

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS | HERITAGE

KEY

- Site
- 2km
- HER data
- HER data

Contains Gwynedd Archaeological Trust Historic Environment Record data. Each 'monument' is labelled by its PRN number.

Non-Designated Historic Assets

Alaw Môn Solar Farm, Anglesey

Client: Enso Energy Ltd

DRWG No: P20-1336 Sheet No: - REV: -

Drawn by: EP Approved by: GS

Date: 29/04/2021

Scale: 1:50,000 @ A4

Pegasus Group