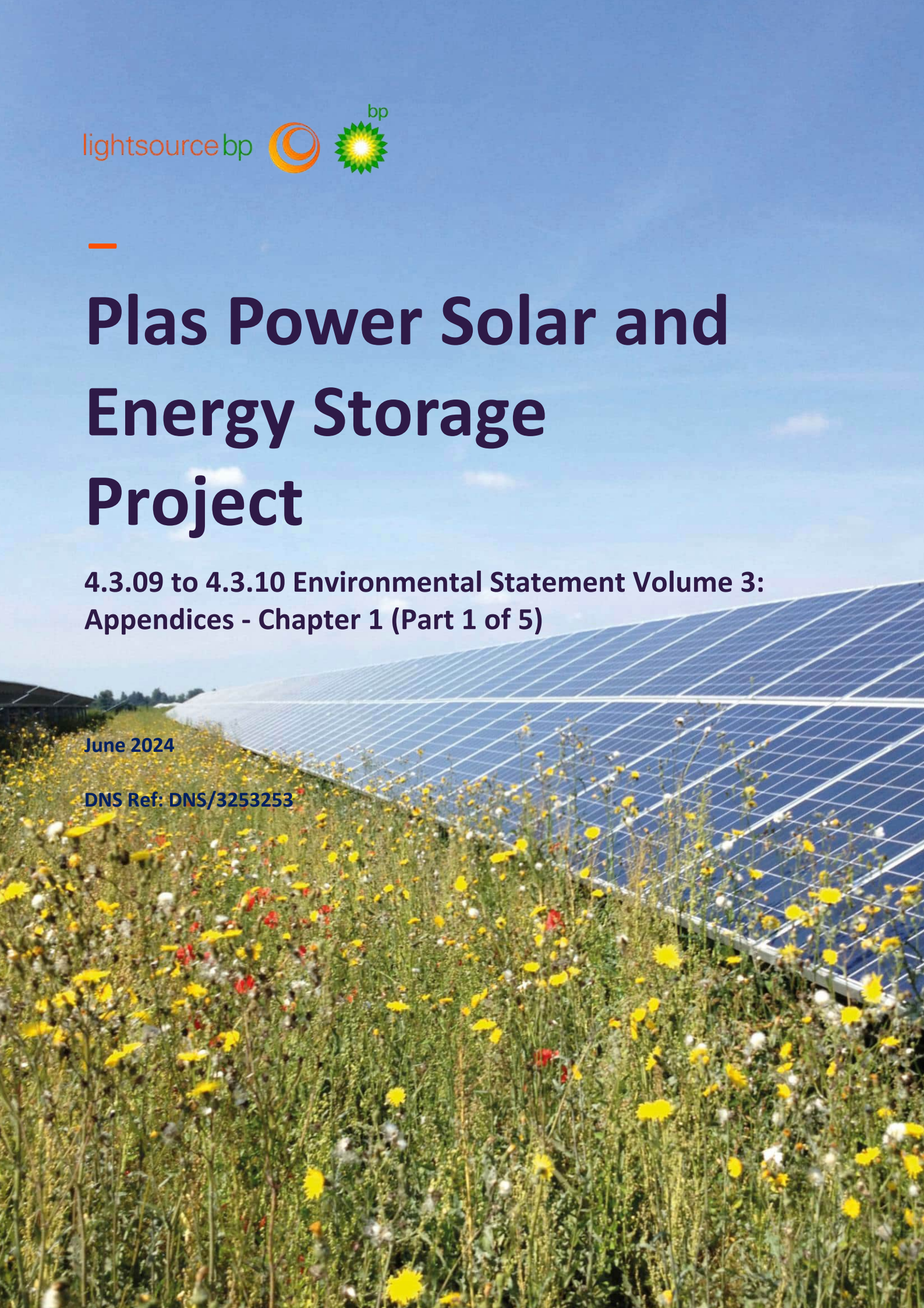


Plas Power Solar and Energy Storage Project

4.3.09 to 4.3.10 Environmental Statement Volume 3: Appendices - Chapter 1 (Part 1 of 5)

June 2024

DNS Ref: DNS/3253253

Appendix 4.1
EIA Scoping Report 2020

PLAS POWER SOLAR FARM

EIA SCOPING REPORT

Request for Scoping Direction under Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017

On behalf of Lightsource bp



JPW1473
0
October 2020

rpsgroup.com

Quality Management

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- EIA -

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1 INTRODUCTION

Introduction

1.1 This Scoping Report has been prepared by RPS on behalf of Lightsource bp. It proposes the scope of environmental assessment for the proposed solar farm and ancillary development at Plas Power Estate, Ruthin Road, Wrexham LL11 3BS.

1.2 Environmental Impact Assessment (EIA) is not required for all developments. A screening request was sent to Welsh Ministers on 27 May 2020. A Screening Direction (**Appendix 1**) was issued on 1 July 2020 and concluded:

"Based on the information provided and given the scale and nature of the proposed development, there is potential for significant effects on features of the Johnstown Newt Sites SAC and Stryt Las SSSI, particularly during construction and decommissioning, and for cumulative impacts with other planned activities and projects which could have a combined effect on features of the River Dee and Bala Lake SAC and River Dee SSSI. It is also likely that the scheme would result in significant visual effects. For these reasons, I conclude that EIA is required in this instance."

1.3 This report sets out the proposed scope of the Environmental Statement (the report of the EIA process), which will be prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) Wales Regulations 2017 (2017 No.567(W.136)) (referred to hereafter as the EIA Regulations)]. The Environmental Statement (ES) will accompany a full Development of National Significance (DNS) planning application to be submitted to the Welsh Ministers.

1.4 Lightsource bp is aware of the proposed A483 junction 3 to 6 improvements as part of the screening request and subsequent direction. Welsh Government ('WG') recently (25th August 2020) published an updated consultation document 'A483 Wrexham Bypass Junction 3 to 6 Improvement Scheme' that details a new preferred option for Junction 4 (A525 Ruthin Road) (see **Appendix 2**). If the junction improvement took place, this would remove part of the northeast section of the proposed development. As the road scheme is still at a relatively early stage and may or may not proceed, for the purposes of this Scoping Report, Lightsource bp has included the area within its development boundary for assessment. However, should the junction 4 improvement obtain the necessary consents the development can be modified accordingly. Lightsource bp will seek to engage positively with WG and Trunk Road Agency throughout the DNS pre submission stage process.

1.5 The aim of this report is to provide information to the Welsh Ministers to enable an EIA Scoping Direction to be made under Regulation 33 of the EIA Regulations. A letter to Welsh Ministers requesting such a direction accompanies this report.

Statutory Framework and Purpose of the Environmental Statement

Purpose of EIA

1.6 EIA is the process of identifying and assessing the significance of effects likely to arise from a proposed development. This requires consideration of the likely changes to the environment, where these arise as a consequence of the proposed development, through comparison with the existing and likely future baseline conditions in the absence of the proposed development.

Purpose of Scoping

1.7 The process of identifying the matters to consider within an ES (establishing the scope of the assessment) is known as scoping. Scoping is not a mandatory requirement under the EIA

Regulations. However, it is recognised that through the scoping exercise, the key environmental matters are identified at an early stage, which permits subsequent work to concentrate on those environmental topics for which significant effects may arise as a result of a proposed development.

Purpose of this Scoping Report

1.8 This document sets out details of the proposed development at Plas Power Estate, Ruthin Road, Wrexham LL11 3BS, the proposed EIA methodology and the proposed scope of technical assessments and invites comments from Welsh Ministers and its consultees regarding the scope of works. The intention of this scoping exercise is to gain agreement from all key parties regarding the proposed methodology and scope of assessment.

1.9 This Scoping Report has been informed by the following:

- Correspondence from Welsh Ministers and its consultees;
- Consultee meetings;
- Desk-top studies, site visits and surveys;
- Review of relevant websites, such as those provided by statutory consultees;
- Local planning policy, Planning Policy Wales and Technical Advice Notes;
- The EIA Regulations and EIA good practice guidance; and
- Experience of other similar developments.

The applicant

1.10 The applicant is Lightsource bp. Lightsource bp is a global leader in the funding, development and management of solar energy projects. Its projects generate competitively-priced, dependable, clean energy for businesses and communities.

1.11 The Applicant is a global market leader in the development, acquisition and long term management of large-scale solar projects and smart energy solutions. Lightsource was established in 2010 and has developed significant expertise in the UK renewable energy sector. In 2017 Lightsource joined forces with bp and rebranded to become Lightsource bp.

Public consultation

1.12 An important part of the applicant's planning process is engaging with local communities to provide information on the project and gather local feedback. Due to the current Covid-19 restrictions in the UK, the applicant is seeking to ensure that all community engagement is undertaken safely. Safety is one of Lightsource bp core values, and in order to keep to the high standards of community engagement, consultation is anticipated to be undertaken in early 2021.

1.13 As part of the consultation process, the applicant will engage with the local community in order to inform local people about the proposals, to explain the development and its likely effects and to take on board any concerns or issues. The ES will include a summary of the pre-application public consultation carried out.

2 THE SITE AND THE PROPOSED DEVELOPMENT

The site and its surroundings

2.1 The site lies within the administrative boundary of Wrexham County Borough Council (the LPA) and is located approximately 3.4 km to the west of Wrexham town centre, immediately west of the A483. The majority of the site comprises two interconnected areas north and south of the River Clywedog and Plas Buckley Road. The northern part of the site is bound at its northernmost point by the A525 Ruthin Road, at its easternmost point by the A483, to the south by Plas Power Woods and its westernmost point by agricultural fields beyond which lies Rhos Berse Road and Nant Road.

2.2 Please see drawings JPW1473-DNS-003 and JPW1473-DNS-004 which show the site's location and red line boundary, which extends to approximately 144.6 in total. The centre of the site lies at approx. grid reference SJ303498.

2.3 Irregular in shape the site comprises several agricultural fields, primarily used for intensive pasture grazing, bound by a mixture of mature woodland, trees, hedgerows, fencing tracks and roads. The southern part of the site lies south of Plas Power Woods and Plas Buckley Road. It is bound to the east by a stream, woodland and Ffordd Cadwgan. At the southernmost point lies Ffordd Cadwgan. To the west lie agricultural fields.

Project description

2.4 For the avoidance of any doubt the development as submitted in the Screening Direction Request did not extend to the north of the A525. It appears that in the responses to the detailed screening questions reference was made to the development being located to the north and south of the A525. Lightsource bp did originally submit a larger project to Wrexham County Borough Council during pre-application discussions (see **Appendix 3**). However, following this stage of consultation and feedback from the Council it was decided remove the extent of the site to the north of the A525 to reduce the project and its resultant impact. Therefore, the reduced area was submitted with the Screening Direction Request (see **Appendix 4**). In this Scoping Direction Request the application site boundary and development is largely the same with one exception. An additional 5.4ha approximately to the south east of the original red line adjoining Ffordd Cadwgan has been added to allow for the loss of developable land as a result of WG's latest A483 junction 4 improvement preferred option.

2.5 Lightsource bp proposes to develop a solar photovoltaic electricity generating station ('solar park' or 'solar farm') and associated ancillary development, with an installed generation capacity of up to 75 MW. The power generated would be enough to power approximately 21,500 typical family homes and result in an approximate saving of 27,000 tonnes of CO_2 per annum – the equivalent of removing approximately 5,750 cars from the road.

2.6 The main components of a solar farm are:

- Solar panels and frames;
- Inverters;
- Transformers;
- Cabling; and
- Substations.

2.7 During construction and decommissioning temporary site compounds will be required to host staff facilities, take deliveries of components and store plant and equipment securely while not in use.

2.8 Lightsource bp is currently considering two panel type options for the site:

1. Traditional static south facing panels up to 3 m tall;
2. Rotating 'tracker' panels up to 3 m tall.

2.9 An indicative proposed site layout and typical solar panel elevation for each option is enclosed (see drawing references: UK_Plas Power Estate_LP1-IDL_04 and UK_Plas Power Estate_LP1-IDL_03).

2.10 In terms of the traditional static option, the solar panels 'over sail' between 25% and 40% of the land which they occupy, typically, and are arranged in series of rows up to a height of 3 m at the highest point and tilted southwards at an angle of 10-25 degrees. The support frame uprights are pile driven into the ground, 'string' inverters are usually mounted onto the support frames while some excavation is required for the transformers' foundations.

2.11 The 'tracker' panels would be ground mounted to a piled anti-reflective frame made of galvanized steel or aluminium and would have a maximum height of 3 m depending on the position of the tracker and lower edge height of 0.8 m. The main difference between the two types of panels is that the trackers rotate very slowly and are orientated east-west. The solar panels would utilise a single axis tracking system and bifacial panels that increases continuous electrical productivity. The panels have an anti-reflective coating to ensure maximum absorption of solar radiation and reduction of reflections. The trackers are turned by small electric motors located on the panel arrays.

2.12 The majority of the cabling associated with the development will be laid underground via surface dug trenches of approximately 1 m deep and 50 cm wide and backfilled. These will utilise existing access tracks and road options wherever possible, particularly where sensitive habitats or archaeology is potentially present, such as through Plas Power Wood and Big Wood, both of which lie within Bersham Conservation Area and where a cable route will cross to connect the northern and south parts of the site. Indicative cable route locations are included within the Scoping Direction request, including for surface dug and horizontal directional digging (HDD) options. Options are being explored currently for connection routes of the northern and southern sites and to the Legacy substation to the south west of the site. Where surface dug trenches are not possible or practical within existing tracks and roads or would have an unacceptable environmental effect, in terms of ecology or on historical assets for example, HDD will be utilised, e.g. beneath hedgerows, watercourses, woodland and highways if required.

2.13 Several existing access points will be used for access for the construction, maintenance and decommissioning of the solar park. If necessary, some minor modifications to enable access to the site by all vehicles anticipated to visit it will be undertaken. Existing farm tracks will be used for internal access within the site wherever possible. New access tracks, where required, will be formed, normally, using a layer permeable crushed stone. Construction is anticipated to take approximately 6-8 months while decommissioning will take up to 6 months.

2.14 A solar farm is a temporary and fully reversible use, unlike housing for example, with all equipment removed from site at the end of the installation's operational life (approximately 40 years). The methods used in construction (limited concrete) mean that remediation works following the removal of the panels and associated infrastructure are relatively minor and will return the site to its previous greenfield character.

2.15 The solar farm will be designed to accommodate sheep grazing beneath and between the rows of panels, providing an efficient dual use of land for renewable energy generation and agriculture. The solar farm will be enclosed by 2 m tall post and wire 'deer' fencing with 3 m tall security cameras in selected locations.

3 GENERAL APPROACH TO EIA

Information required

3.1 Although there is no statutory provision as to the form of an ES, it must contain the information specified in Regulation 17(3), including any relevant information specified in Schedule 4 of the EIA Regulations, as set out below:

1. A description of the development including in particular:
    a. A description of the location of the development;
    b. A description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;
    c. A description of the main characteristics and the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the minerals and natural resources (including water, land, soil and biodiversity) used;
    d. An estimate, by type and quantity, of expected residues and emissions (such as water, air, soils and sub soil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases.
2. A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen opinion, including a comparison of the environmental effects;
3. A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.
4. A description of the factors specified in regulation 4(2) likely to be significantly affected by the development; population, human health, biodiversity (for example fauna and flora), land, (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaption), material assets, cultural heritage, including archaeological aspects, and landscape.
5. A description of the likely significant effects of the development on the environment resulting from, inter alia:
    a. The construction and existence of the development, including, where relevant, demolition works;
    b. The use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;
    c. The emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;
    d. The risks to human health, cultural heritage or the environment (for example due to accidents or disasters);
    e. The cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;

f. The impact of the project on climate (for example the nature and magnitude if greenhouse gas emissions) and the vulnerability of the project to climate change;

g. The technologies and the substances used.

3.2 The description of the likely significant effects on the factors specified in regulation 4(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project, including in particular those established under Council Directive 92/43/EEC(a) and Directive 2009/147/EC(b).

1. A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.
2. A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.
3. A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to EU legislation such as Directive 2012/18/EU(c) of the European Parliament and of the Council or Council Directive 2009/71/Euratom(d) or UK environmental assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.
4. A non-technical summary of the information provided under paragraphs 1 to 8.
5. A reference list detailing the sources used for the descriptions and assessments included in the environmental statement.

3.3 The information supplied in the ES will provide a clear understanding of the likely significant effects of the project upon the environment. The following sections outline the overall approach to EIA in order to meet these legal requirements.

Structure of the Environmental Statement (ES)

3.4 The ES will be structured logically, enabling all relevant environmental information to be found quickly and easily. The ES will describe the EIA process and its findings, and will include the following sections:

- Non-Technical Summary (as a stand alone document);
- Written Statement;
- Figures; and
- Appendices.

EIA methodology

Relevant EIA guidance

3.5 The EIA process will take into account relevant government or institute guidance, including:

- Welsh Office Circular 11/99: Environmental Impact Assessment;
- Department for Communities and Local Government (2014) Planning Practice Guidance at http://planningguidance.planningportal.gov.uk;
- Department of the Environment, Transport and the Regions (DETR) (1997) Mitigation Measures in Environmental Statements. HMSO;
- Highways Agency et al. (2008) Design Manual for Roads and Bridges, Volume 11, Section 2, Part 5. HA 205/08;
- Institute of Environmental Management and Assessment (2004) Guidelines for Environmental Impact Assessment;
- Institute of Environmental Management and Assessment (2011) The State of Environmental Impact Assessment Practice in the UK. Special Report;
- Institute of Environmental Management and Assessment (2015a) Environmental Impact Assessment: Guide to Shaping Quality Development;
- Institute of Environmental Management and Assessment (2015b) Climate Change Resilience and Adaptation;
- Institute of Environmental Management and Assessment (2016) Environmental Impact Assessment: Guide to Delivering Quality Development;
- Institute of Environmental Management and Assessment (2017) Environmental Impact Assessment: Assessing Greenhouse Gas Emissions and Evaluating their Significance; and
- Institute of Environmental Management and Assessment (2017) Health in Environmental Impact Assessment: A Primer for a Proportional Approach.

3.6 Other topic-specific specialist methodologies and good practice guidelines will be drawn upon as necessary.

Key elements of the general approach

3.7 The assessment of each environmental topic will form a separate chapter of the ES. For each environmental topic, the following will be addressed:

- Methodology and assessment criteria;
- Description of the environmental baseline (existing conditions);
- Identification of likely effects;
- Evaluation and assessment of the significance of identified effects, taking into account any measures designed to reduce or avoid environmental effects which form part of the project and to which the developer is committed; and
- Identification of any further mitigation measures envisaged to avoid, reduce and, if possible, remedy adverse effects (in addition to those measures that form part of the project).

Methodology and assessment criteria

3.8 Each topic chapter will provide details of the methodology for baseline data collection and the approach to the assessment of effects. Details of the proposed approach for each topic are provided

in Section 5 of this Scoping Report. Each identified environmental topic will be considered by a specialist in that area. The identification and evaluation of effects will take into account relevant topic-specific guidance where available.

Description of the environmental baseline

3.9 The existing and likely future environmental conditions in the absence of the project are known as 'baseline conditions'. Each topic-based chapter will include a description of the current (baseline) environmental conditions. The baseline conditions at the site and within the study area form the basis of the assessment, enabling the likely significant effects to be identified through a comparison with the baseline conditions.

3.10 The baseline for the assessment of environmental effects will primarily be drawn from existing conditions during the main period of the EIA work. Consideration will also be given to any likely changes between the time of survey and the future baseline for the construction and operation of the project. In some cases, these changes may include the construction or operation of other planned developments in the area. Where such developments are built and operational at the time of writing and data collection, these will be considered to form part of the baseline environment. Where sufficient and robust information is available, such as expected traffic growth figures, other future developments will be considered as part of the future baseline conditions. In all other cases, planned future developments will be considered within the assessment of cumulative effects.

3.11 The consideration of future baseline conditions will also take into account the likely effects of climate change, as far as these are known at the time of writing. This will be based on information available from the UK Climate Projections project (UKCP18), which provides information on plausible changes in climate for the UK (Environment Agency and Met Office, 2018) and on published documents such as the UK Climate Change Risk Assessment 2017 (Committee on Climate Change, 2016).

Assessment of effects

3.12 The EIA Regulations require the identification of the likely significant environmental effects of the project. Each topic chapter will take into account both the sensitivity of receptors affected and the magnitude of the likely impact in determining the significance of the effect.

Sensitivity or importance of receptors

3.13 Receptors are defined as the physical resource or user group that would be affected by a proposed development. The baseline studies will identify potential environmental receptors for each topic and will evaluate their sensitivity to the proposed development. The sensitivity or importance of a receptor may depend, for example, on its frequency or extent of occurrence at an international, national, regional or local level.

Magnitude of impact

3.14 Impacts are defined as the physical changes to the environment attributable to the project. For each topic, the likely environmental impacts will be identified. The magnitude of the impact will be described using defined criteria within each topic chapter.

3.15 The categorisation of the impact magnitude may take into account the following four factors:

- Extent;
- Duration;
- Frequency; and
- Reversibility.

3.16 Impacts will be defined as either adverse or beneficial. Depending on discipline, they may also be described as:

- Direct: Arise from activities associated with the project. These tend to be either spatially or temporally concurrent;
- Indirect: Impacts on the environment which are not a direct result of the project, often produced away from the project site or as a result of a complex pathway.

3.17 Impacts will be divided into those occurring during the construction phase and those occurring during operation. Where appropriate, some chapters may refer to these as temporary and permanent impacts.

Significance of effects

3.18 Effect is the term used to express the consequence of an impact (expressed as the 'significance of effect'), which is determined by correlating the magnitude of the impact to the sensitivity of the receptor or resource.

3.19 The magnitude of an impact does not directly translate into significance of effect. For example, a significant effect may arise as a result of a relatively modest impact on a resource of national value, or a large impact on a resource of local value. In broad terms, therefore, the significance of the effect can depend on both the impact magnitude and the sensitivity or importance of the receptor.

3.20 Levels of significance that will be used in the assessment include, in descending order:

- Substantial;
- Major;
- Moderate;
- Minor;
- Neutral.

3.21 Where an effect is described as 'neutral' this means that there is either no effect or that the significance of any effect is considered to be negligible. All other levels of significance will apply to both adverse and beneficial effects. These significance levels will be defined separately for each topic within the methodology sections. In all cases, the judgement made as to significance will be that of the author of the relevant chapter with reference to appropriate standards/guidelines where relevant.

Cumulative effects

3.22 The cumulative effects of the proposed development in conjunction with other proposed schemes will be considered. The cumulative effects assessment will consider any developments that are formally in the planning system at the time of submission. Developments that are built and operational at the time of assessment will be considered as part of the baseline.

3.23 No cumulative developments were identified as part of the pre-application advice service provided by Wrexham County Borough Council dated 9th January 2020.

3.24 The Screening Direction (**Appendix 1**) notes that:

"Given the scale and location of the proposal, there is some potential for cumulative visual effects in combination with other solar farm developments such as Bronwylfa Reservoir solar park to the south west of the Site"

"Additionally, Natural Resource Wales (NRW) indicate in their response the potential for cumulative impacts with the improvements to the adjacent A483 including Junction 4 (directly adjacent the site)

which could have a combined effects on Otter which are a feature of the River Dee and Bala Lake SAC and River Dee SSSI".

3.25 Further discussions will be undertaken with the Council prior to commencing the EIA to ascertain if any new developments are forthcoming that were not highlighted at the time of the pre-application advice. With reference to the Bronwylfa Reservoir solar park, further discussions with the Inspectorate will be undertaken as this development is an existing and operational solar park and therefore considered to form part of the baseline.

Mitigation measures

3.26 The EIA Regulations require that where significant effects are identified 'a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce or, if possible, offset likely significant adverse effects on the environment' should be included in the ES.

3.27 The development of mitigation measures is part of an iterative EIA process. Therefore, measures will be developed throughout the EIA process in response to the findings of initial assessments. The project that forms the subject of the DNS planning application will include a range of measures designed to reduce or prevent significant adverse environmental effects arising, where practicable. In some cases, these measures may result in enhancement of environmental conditions. The assessment of effects will therefore take into account all measures that form part of the project and to which Lightsource bp are committed.

3.28 The topic chapters will therefore take into account all measures that form part of the proposed development, including:

- Measures included as part of the project design (sometimes referred to as primary mitigation);
- Measures to be adopted during construction to avoid and minimise environmental effects, such as pollution control measures. These measures would be implemented through the Code of Construction Practice; and
- Measures required as a result of legislative requirements.

3.29 Where required, further mitigation measures will be identified within topic chapters. These are measures that could further prevent, reduce and, where possible, offset any residual adverse effects on the environment.

3.30 In some cases, monitoring measures may be appropriate, for example, to ensure that proposed planting becomes established. Where appropriate, monitoring measures will be set out.

Summary tables

3.31 Tables will be used to summarise the effects of the project for each environmental topic.

4 SCOPE OF ASSESSMENT

Work undertaken to date

4.1 The following studies have been undertaken or are currently ongoing in relation to the proposed development.

4.2 A Preliminary Ecological Appraisal of the area within the development red line boundary was undertaken on 3rd to 5th September 2019, which included a desk study identifying designated sites within 2 km (10 km for international designations) of the red line application boundary.

4.3 The Screening Direction (**Appendix 1**) concluded that there is a potential for significant effects on features of the Johnstown Newt Sites SAC and Stryt Las SSSI and as a result will examine these issues in an individual chapter.

4.4 An Archaeological Desk-Based Assessment and Built Heritage Appraisal of the site and wider area were prepared by RPS in October 2019. The documents identify the heritage value and sensitivity of any potentially affected heritage receptors and assesses them in accordance with the requirements of Chapter 6 of Planning Policy Wales, Technical Advisor Note (TAN) 24, the Historic Environment (Wales) Act, heritage-related policies in the Development Plan and relevant guidance, including Heritage Impact Assessment in Wales and Setting of Historic Assets in Wales.

4.5 The Archaeological Desk-Based Assessment assessed the site and wider area for its below ground archaeological potential, and potential impacts on the settings of designated archaeological heritage assets. There report confirmed there would be no direct impacts on any designated archaeological heritage assets and the potential impacts on non-designated buried archaeological remains are considered low given much of the site was formerly used for opencast coal extraction.

4.6 A preliminary desk based, Landscape and Visual appraisal of the proposed development area was completed by RPS Group in April 2020. The appraisal established the existing baseline conditions and likely sensitive landscape and visual receptors that would be affected by the proposed development.

4.7 The baseline conditions in relation to ground conditions and hydrogeology have been determined from a preliminary review of online information available from the British Geological Survey (BGS) and National Resource Wales (NRW). The available records indicate that the geology of the site comprises a cover of Glacial Superficial deposits comprising either Glacial till or Glaciofluvial sands and gravels overlying bedrock strata of the Pennine Lower and Middle Coal Measures. The presence of shallow coal seams has resulted in the use of much of the site, particularly in the east (Plas Power Park opencast site) and south (Cadwgan), for historical opencast extraction, resulting in the backfill and restoration of areas excavated to approximately 10 to 13 m depth. Whilst the nature of the backfill cannot be established from the information currently available, it is considered likely that it is coal mining arisings or reinstated overburden. On this basis these activities are considered unlikely to present a significant risk to human health or environmental receptors when the low impact nature of the development is considered.

Topics scoped out of assessment

4.8 Taking into account the findings of the above studies, together with the feedback from the Screening Direction and our knowledge of the site and surrounding area, it is proposed that the following topics are not included in the scope of the ES:

- Population,
- Transport,
- Human Health,

- Land (for example land take),
- Soil (for example organic matter, erosion, compaction, sealing),
- Water (for example hydromorphological changes, quantity and quality),
- Air,
- Material Assets,
- Risk of Major Accidents.

Planning policy context

4.9 The ES will provide an overview of relevant legislative and planning policy context within each topic chapter. The assessment will have regard to national and local policy documents, where relevant. However, it is not proposed to include a separate chapter on Planning Policy Context in the ES. The draft guidance on EIA from the Department for Communities and Local Government 'EIA: A Guide to Good Practice and Procedures' (DCLG 2006) (paragraph 155) states that there is no requirement to provide chapters on planning and sustainability in Environmental Statements. A separate Planning Statement will be submitted with the planning application and the environmental topic chapters within the ES will each set out the policy context relevant to that topic.

Population and transport

4.10 The construction will have a temporary effect on employment provision through the creation of construction jobs however, it is unlikely that the proposals will result in a significant change in population as workers are unlikely to relocate to an area on a permanent basis. Therefore, a minor beneficial effect is therefore anticipated for a temporary period.

4.11 Once operational, the solar farm will be operated remotely and only require between 10-20 visits per year for maintenance, monitoring and cleaning of the panels and site. The vehicle movements associated with the occasional visits to the site would have a negligible influence on the surrounding population and highway network.

4.12 The Screening Direction (**Appendix 1**) concludes that:

"…However, due to the temporary nature of construction traffic and the potential for securing a Construction Traffic Management Plan where necessary, I do not consider significant effects to be likely in this respect"

4.13 An outline Construction and Decommissioning Method Statement has been produced and a copy is attached at **Appendix 5**. The construction period is expected to take approximately 6-8 months. It is expected that construction hours will be between 07:00 and 18:30 hours Monday to Friday and 07:00 to 13:00 hours on Saturday. It is unlikely that, even at the most intense period of construction there will be more than 15 HGV deliveries per day. It is envisaged that the main construction route will be from the north and east thus avoiding passing the Johnstown Newt Sites SAC and Stryt Las SSSI. It is therefore considered that transport, both construction and operational can be scoped out of the ES and adequately addressed through the submission of separate standalone technical reports which will accompany the planning application. A detailed Construction Traffic Management Plan detailing the delivery routes, construction routes, construction compounds and any associated parking or management of construction traffic will be prepared. It is also proposed that details of the operational traffic movements and any onsite parking and turning spaces will be provided as part of the planning application.

Human health

4.14 The direct human health effects of the proposed development are limited, the proposed development will displace primary fossil fuel derived electricity and the consequent Greenhouse Gases and other

pollutants released during fossil fuel combustion and would result in a beneficial effect on human health.

Land (for example land take)

4.15 The site comprises agricultural land which will be developed for the production of renewable energy. is the site will be designed to be capable of enabling sheep grazing during its operational life, and therefore it is anticipated that energy and agriculture will remain in a co-use across the site. The proposed development is fully reversable and the agricultural potential of the site can be fully restored following decommissioning.

4.16 The site is also within an identified Mineral Resource Area, with the geology underlying the majority of the site containing secondary shallow coal resources, isolated areas of primary shallow coal resources and superficial glaciofluvial sand and gravel deposits. Whilst these deposits are present, they are recorded to extend significantly beyond the site boundary and the proposed use is temporary, and therefore sterilisation of minerals is not considered a significant impact.

4.17 Overall, the land will not be irreversibly developed and will remain in agricultural use as grazing of sheep will be possible whilst the solar arrays are in place and as such no likely significant lasting adverse effects on the quality of the land is expected.

Soil (for example organic matter, erosion, compaction, sealing)

4.18 The site comprises mainly grassland agricultural fields, interspersed with blocks of woodland. The north eastern part of the site is shown on the Soil Survey of England and Wales National Soils Map (1:250,000) for Wales to have been previously worked and restored for opencast coal and the field pattern and regularity of the boundaries in this area also indicates this. This area of worked and restored land is unlikely to comprise high quality agricultural land.

4.19 The land to the west of the restored area comprises soils of the Brickfield 2 soil association, which consists of fine loamy soils developed in till. These soils are subject to a soil wetness limitation due to the presence of slowly permeable subsurface horizons and the area is likely to comprise mainly lower quality agricultural land.

4.20 Given the existing / historical use of the site, it is not envisaged to be any significant sources of potential contaminative concern. Most of the soil will not be physically impacted from the development.

4.21 Appropriate construction techniques will be implemented to reduce above and below ground works and to minimise any compaction of soil mitigating any potential impact on the soils structure and ability to infiltrate water.

4.22 A detailed ALC survey of the site would be undertaken to identify the distribution of ALC grades across the entire site. However, the proposed development is temporary in nature and fully reversable and following decommissioning would ensure that the future quality of the agricultural land is maintained with no likely significant lasting adverse effects on the quality of the soil.

Water (for example hydromorphological changes, quantity and quality)

4.23 The vast majority of the site is located within Flood Zone 1 (low risk of flooding from fluvial or tidal sources) and Development Advice Map (DAM) Zone A (considered to be at little or no risk of fluvial or coastal/tidal flooding). A localised area of the site is shown has been assessed as Flood Zone 2 and 3 associated with the flood envelope of the River Clywedog.

4.24 NRW surface water mapping identifies a number of isolated locations within the site boundary at low to high risk of surface water flooding. Low risk is defined as areas with a chance of flooding between

1 in 1000 (0.1%) and 1 in 100 (1%), with high risk areas with a chance of flooding of greater than 1 in 30 (3.3%).

4.25 A Flood Consequence Assessment supported by a drainage strategy will be prepared in accordance with Planning Policy Wales, Technical Advice Note 15 and latest climate change data to ensure flood risk and hydrological impacts are managed appropriately.

4.26 Having considered the potential impacts, hydrology and drainage can be adequately addressed as part of the planning application via a standalone Flood Consequence Assessment and Drainage Strategy and can be scoped out of the ES.

Air

4.27 As identified in the Screening Direction (**Appendix 1**) the Planning Inspectorate considers that there is potential for significant effects on features of the Johnstown Newt Sites SAC and Stryt Las SSSI, particularly during the construction and decommissioning of the solar farm, the emissions generated by construction traffic will not have a significant effect as the main construction route for the development is not envisaged to pass those areas of concern identified above as traffic is unlikely to approach the site from the south as will be outlined within the Construction Traffic Management Plan and Outline Construction and Decommissioning Method Statement in **Appendix 5**.

4.28 In relation to traffic movement the location of the proposed development is not within or in close proximity to any declared Air Quality Management Areas. Typically, there will be around 15 Heavy Duty Vehicle (HDV) movements per day during the more intense construction periods.

4.29 In terms of air quality. The number of HDV movements during the construction and installation of the solar panels together with the supporting framework will not fulfil the traffic criteria detailed in the IAQM/EP (UK) Planning Guidance. A change in the volume of traffic on the surrounding road network will not have any significant effect on air quality as experienced by the nearest receptors located in the vicinity of the site.

4.30 Due to the nature of the development, once operational there would be no emissions generated by the development. As mentioned above in Human Health, the proposal will have no direct adverse environmental effect on air quality and therefore will have no significant environmental effect in EIA terms. More widely, the electricity the proposed development will produce will potentially displace primary fossil fuel derived electricity that relies on thermal combustion and the consequent release of Green House Gases (GHGs) and other pollutants into the atmosphere consequently, the proposal is considered to have a beneficial effect on air quality.

Material assets

4.31 The EIA Regulations refer to 'material assets', including architectural and archaeological heritage. The phrase 'material assets' has a broad scope, which may include assets of human or natural origin, valued for socio-economic or heritage reasons. Material assets are in practice considered across a range of topic areas within an ES, in particular the historic environment chapter. This topic is proposed to be included within the ES (see Table 4.1). Therefore, no separate consideration of material assets is considered necessary.

Risk of major accidents

4.32 Solar photovoltaic technology is a relatively benign form of electricity generation with very low risk of accident or disaster and will not have a significant environmental effect in this regard. The solar park will be enclosed by appropriately designed security fencing and monitored by CCTV, which will lower the risk of unauthorised access and accidents.

Content of the Environmental Statement

4.33 The scope of the EIA takes into account the pre-liminary environmental information pertinent to the site, formal pre-application consultation with Wrexham County Council and the Screening Direction issued by the Planning Inspectorate on 1st July 2020 (**See Appendix 1**).

4.34 As a result, the issues set out below are considered appropriate for assessment in an ES. It is considered that the Proposed Development may have the potential to give rise to significant environmental effects in these areas:

- Landscape and Visual;
- Biodiversity;
- Cultural Heritage;
- Climate Change;
- Cumulative Effects.

4.35 Table 4.1 identifies the chapters that are proposed for inclusion in the ES. Further details of the approach to the assessment and its scope are provided in Section 5 of this Scoping Report.

Table 4.1: Structure of the ES

Structure of ES	
Non-Technical Summary	Summary of the ES using non-technical terminology
Volume 1: Text	
	Glossary
Chapter 1	Introduction
Chapter 2	Project Description
Chapter 3	Need and Alternatives Considered
Chapter 4	Environmental Assessment Methodology
Chapter 5	Landscape and Visual
Chapter 6	Biodiversity
Chapter 7	Cultural Heritage
Chapter 8	Climate Change
Chapter 9	Cumulative Effects
Volume 2: Figures	
Including all figures and drawings to accompany the text.	
Volume 3: Appendices	
Including specialist reports forming technical appendices to the main text.	

5 TECHNICAL ASSESSMENTS

Chapter 1: Introduction

5.1 This chapter will provide the introduction to the ES, including details of the application, need for EIA and the structure of the ES.

Chapter 2: Project description

5.2 The ES will include a description of the project, which will form the basis of the assessment of effects. The EIA Regulations require an ES to include:

'A description of the development comprising information on the site, design and size and other relevant features of the development.'

5.3 This project description chapter will include details of the site, together with a description of the key components of the proposed development. The description will include the following information, as far as practicable at the time of writing:

- Construction phase - a description of the key works, activities and processes that would be required during the construction phase;
- Operational phase - a description of the completed development and its use;
- Decommissioning phase - a description of the key works, activities and processes that would be required during the decommissioning phase.

5.4 Where options remain at the time of the assessment (with regard to construction techniques, for example), the ES will provide a clear explanation of the assumptions made. Where appropriate, the realistic worst-case scenario will be assessed.

5.5 Where mitigation measures have been identified and developed through the EIA process and have been incorporated as part of the project, details of these measures will be set out within the project description chapter.

Chapter 3: Need and alternatives considered

5.6 This chapter will briefly set out the need for the proposed development. In addition, the EIA Regulations require the alternatives considered by the applicant to be set out in the ES:

5.7 'A description of the reasonable alternatives studied by the developer, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment.'

5.8 This chapter will summarise the reasons for the selection of the site and provide an outline of the alternatives considered during the EIA process, including a description of the alternative design and layout options that have been considered.

Chapter 4: Environmental assessment methodology

5.9 Details of the overall approach to EIA will be set out in this chapter, together with details of the scoping process, consultation undertaken and the overall approach to the assessment of significance. Topic specific methodologies, such as survey methods, will be provided in each topic chapter.

Chapter 5: Landscape and visual

5.10 Potentially significant Landscape and / or Visual effects, associated with a solar park development, are considered to be a substantial environmental issue. As such, a Landscape and Visual Impact Assessment (LVIA) would form an important part of the wider Environmental Impact Assessment (EIA) process.

5.11 Chapter 5: Landscape and Visual, of the EIA, would consider the potential effects of the proposed Plas Power development upon the physical landscape elements and features, landscape character and visual amenity within the Application Site itself and the surrounding landscape within the 5km radius study area.

5.12 The LVIA would be undertaken with reference to best practice guidance (see Assessment of Effects below), see Scope of Assessment below, and would be completed by a suitably qualified and experienced Chartered Landscape Architect (CMLI).

5.13 A Glint and Glare Assessment will also be completed as part of the LVIA Chapter. It will be a standalone assessment but included within the Appendices of the LVIA Chapter and referred to within the assessment of effects section of the chapter.

Consultation

5.14 To reiterate the Pre-Application Advice (Ref: ENQ/2019/0289) received from Wrexham County Borough Council (WCBC) it is copied here below. The advice has been considered during the selection of Candidate Viewpoints (see Table 5.1 below) and has also informed the early consideration of mitigation proposals and design input into the masterplan. The following advice is of relevance for this chapter of the EIA Scoping Report and the forthcoming LVIA Chapter:

"Green Barrier

The land subject to the enquiry currently sites within a designated Green Barrier, which performs the same functions as a green wedge as defined in Planning Policy Wales (PPW) paragraph 3.64. PPW paragraph 3.73 advises that proposals for renewable energy generation may be appropriate within green wedges, provided they do not conflict with the purposes of including land within it. Any formal proposals would therefore need to demonstrate that they maintain the openness of the Green Barrier. The LDP Green Wedge would not include the land.

Special Landscape Area (SLA)

Some of the land falls within SLA as designated on the UDP proposals maps. The key priority is the conservation and enhancement of the landscape. UDP policy EC5 does not explicitly refer to renewable energy, however the key consideration for this type of development will be demonstrating that the proposals have been designed to minimise visual impact from both near and distinct viewpoints. The land is not included within an LDP SLA.

...Landscape Impact

The development will inevitably result in a significant change to the existing landscape. Whilst I am confident that there are areas of the land where the development would not be unduly prominent, parts of the land are particularly visible, included those areas immediately to the north and south of the A525, the B5430 and Tanllan Lane. I am concerned that due to the longer distance views possible of the land from these roads, parts the development would be highly visible and therefore harmful to the landscape. This is matter that would need to be given further detailed consideration. Whilst the site is some distance from the Clwydian Range and Dee Valley Area of Outstanding Natural Beauty, it will also be necessary to consider the impact upon via long distance viewpoints.

Taking all of the above into account, the final design of the development will need to be informed by a Landscape and Visual Impact Assessment. Opportunities for landscape enhancements to help integrate the development into the wider rural landscape will also need to considered."

Baseline information

5.15 The following forms a summary of the baseline data collated, and work undertaken to inform the landscape and visual element of the EIA Scoping Report and the forthcoming LVIA Chapter. Information is illustrated on Figures 5.1 and 5.2 (**Appendix 6**):

- Preliminary review of legislative and planning policy context insofar as it relates to landscape and visual matters and / or solar park developments;
- Review of Landscape Planning Designations;
- Preliminary review of National, Regional and Local Landscape character assessments; and,
- Preparation of preliminary proposed ZTV.

5.16 A preliminary, desk based, landscape and visual appraisal of the proposed development area was completed by RPS Group in April 2020 and included as part of the request for an EIA screening direction. The following section summarises the existing baseline conditions and likely sensitive landscape and visual receptors that would be affected by the proposed Plas Power solar park development.

Landscape planning designations

5.17 The proposal site is outwith any Areas of Outstanding Natural Beauty (AONB), a designation of national importance for scenic quality; the nearest being the Clwydian Range and Dee Valley AONB, located circa. 2km to the south west (at its nearest point) (refer to Figure 5.1, **Appendix 6**). As such, there would be no direct physical impacts upon the AONB as a result of the proposed solar park.

5.18 Other designations of local importance, which fall partly within the proposal site, include Ancient Woodland, Special Landscape Area (SLA) and Green Barrier, as derived from the Wrexham Unitary Development Plan (UDP), adopted February 2005. It is noted that the deposit draft Wrexham Local Development Plan 2013-2028, currently in consultation, has removed the SLA and reduced the extents of the Green Barrier designations (refer to **Appendix 7**).

5.19 Within the wider 5km study area, there are a number of other landscape planning designation that would be indirectly affected by the proposed development. These include:

- Listed Buildings;
- Conservation Areas (CA). The nearest being the Bersham CA, located immediately adjacent to Application Site;
- Sites of Special Scientific Interest (SSSI);
- Scheduled Monuments. The nearest being Offa's Dyke to the west of the Application Site;
- Registered Common Land. The nearest being Tir Mynediad to th west, located entirely within the Clwydian Range and Dee Valley AONB; and,
- Historic Parks and Gardens. The nearest being Erddig, to the east of the Application Site at the south western edge of Wrexham.

5.20 Other designations within the local landscape, but outwith the 5km study area, include:

- Historic Landscapes;
- RAMSAR site; and,
- Pontcysyllte Aqueduct and Canal World Heritage Site.

5.21 There are a substantial number of individual trees, hedgerows and blocks of woodland across the Application Site, or immediately adjacent to it. A small part of the woodland, within the Application Site, is designated as Ancient Woodland to the north of the Application Site, to the south south-east of Home Farm.

National and local landscape character

5.22 The relevant published landscape character assessments have been initially reviewed below. Within the LVIA Chapter, particular attention will be paid to the key landscape characteristics of the relevant aspect areas of the Application Site and the surrounding areas.

5.23 National Landscape Character Areas (NLCAs) are countrywide and form the broad scale landscape character assessment of Wales. The Application Site and majority of the 5km study area falls within NLCA 13: Deeside and Wrexham; with the easternmost parts of the 5km study area falling within NLCA 12: Clwydian Range.

5.24 LANDMAP is an "all-Wales Geographical Information System (GIS) based landscape resource where landscape characteristics, qualities and influences on the landscape are recorded and evaluated into a nationally consistent dataset" (CCW (now NRW), 2011). It is administered by Natural Resources Wales (NRW) and comprises five spatially related datasets or aspect layers as follows:

- Geological Landscape: "considers the physical, primarily geological, influences that have shaped the contemporary landscape and identifies those landscape qualities which are linked to the control or influence exerted by bedrock, surface processes, landforms and hydrology";
- Landscape Habitats: "Focuses on recording habitat features, characteristics and their spatial relationships within the context of the wider landscape";
- Visual and Sensory: "Maps landscape characteristics and qualities as perceived through our senses, primarily visually. The physical attributes of landform and land cover, their visible patterns and their interrelationship";
- Historic Landscape: "Landscape characteristics that depend on key historic land uses, patterns and features. Identifies only those classes of historic land uses, patterns and features that are prominent and contribute to the overall historic character of the present landscape."; and
- Cultural Landscape: "Describes the links between landscape and people, from the way in which cultural, or human activity shapes the landscape, to the way in which culture shapes the way we respond to landscape. Focus is on mapping the landscape where it has been, or is being, shaped by a particular cultural activity or process, or where it has been directly represented, depicted or described in art, literature or folklore."

5.25 The Visual and Sensory Dataset (2019) locates the Application Site predominantly within Aspect Area 'WRXHMVS082: Plas Power Park'. The area is described as:

"A relatively small aspect area that comprises in the main part the remnants of Plas Power Estate. The area is distinct from the surrounding areas to the north in its physical separation of the estate through the presence of high stone estate walls, however the estate itself has been long neglected and the area to the east has been reclaimed following mining activities and has lost much of the original landscape structure of the formal park. The remaining area still has elements of formal landscape features specimen trees, mixed deciduous woodland and some limited evidence of driveway/avenues and the former kitchen garden. The key feature of the area in terms of landscape elements is the clearly defined earthwork of Offas Dyke which forms the western boundary of the aspect. The area provides an important green link between the adjacent Clywedog Valley and settlements at Coedpoeth and Tanyfron / Brynteg. Due to the close proximity of settlements and industry the area is under pressure from recreation and development expansion… …Scenic quality it considered to be Moderate/Low there is are a number of relatively attractive aesthetically pleasing views largely based upon the remnants of the historic landscape park. However the area has been

badly neglected and much of the former character has been degraded… …The area has no large scale or visually intrusive development within the area however the adjacent large settlement areas of Coedpoeth and Tanyfron/Brynteg are evident through nighttime light pollution and distant noise - traffic etc… …Elements of the former historic landscape park are still evident and the perimeter stone walls are attractive and emphasise the overall character of the area. Generally, although degraded through long term neglect and post mining restoration, the area has a tranquility and relative calm compared to the northern settlement areas and farmland. The visual unity of the area is further emphasised by the perimeter stone boundary walls… … The qualities and landscape features still present within the aspect are not uncommon in terms of the overall study area and areas of higher quality and in better condition are found elsewhere, hence the Low evaluation."

5.26 Overall, Aspect Area 'WRXHMVS082: Plas Power Park', is evaluated as Moderate.

5.27 There are two other Aspect Areas within which parts of the Application Site sit. They include;

- WRXHMVS065: A483 Mold Road Corridor which occupies the easternmost parts of the Application Site. Evaluated as Moderate overall; and,
- WRXHMVS038: A483 and Environs – Rhostyllen to Ruabon which occupies the southernmost parts of the Application Site. Evaluated as Moderate overall.

Visual resource

Zone of theoretical visibility

5.28 In order to further determine the geographical extent of potential visibility, a preliminary computer-generated Zone of Theoretical Visibility (ZTV) model was generated (refer to Figure 5.2 within **Appendix 6**). The ZTV broadly defines the study area for both the landscape character and visual assessment. A 5 km radius study area is proposed for this assessment due to the overall size and height (a maximum of 3m Above Ordnance Datum (AOD)) of the project. It is judged that any potential significant effects would lie within this radius. Following field survey and analysis of existing barriers, this may be reduced to 3km.

5.29 The preliminary ZTV was prepared based on an assumed maximum solar panel height of 3m AOD. Presently the proposed development has two options for panels – static south facing PVs (finished height circa 3m above existing ground level (AGL) and tracking PVs (finished height circa 3m AGL) . The preliminary ZTV was completed to show the worst-case for these two options with the origin points being completed at 3m AGL. The ZTV was compiled assuming observer height as 1.5m at eye level and takes into account screening effects of local settlements at 9m and existing vegetation / woodland at a height of 10m. 23 origin points, from within the Application Site, have been used to illustrate the full parameters of the proposed development. Including:

- 22 origin points (in total), set at 3m (AGL), within the centre of each of the fields of the Application Site containing solar panels
- 1 origin with one at the highest point within the Application Site.

5.30 OS Terrain 5 data has been used for generating the ground model for the ZTV.

View ranges

5.31 For the purposes of the LVIA Chapter, views will be classified as classified according to three distance 'ranges' as set out in Table 5.1.

Table 5.1: View Ranges

Range	Distance Threshold	Reasoning Description
Close	Less than 1 km	At close range the project could appear as a 'prominent' feature and visual receptors could experience high to medium/low magnitude of change when compared to existing views.
Medium	Between 1 km and 3 km	In medium range views the project could appear as 'present' features and visual receptors could experience medium/low to negligible magnitude of change compared to the existing situation.
Long	More than 3 km	In long range views the project would read as part of the landscape and visual receptors would tend to experience a low to negligible or lower magnitude of change compared to the existing situation.

Candidate viewpoints

5.32 A number of Candidate Viewpoints have been proposed, which are considered representative of key sensitive receptors within the 5km study area. An assessment of potential effects upon views from each individual viewpoint as a result of the proposed development would be completed (refer to Figure 5.2 in **Appendix 6**). These Candidate Viewpoints will be further refined following field work and will form the Representative Viewpoints to be assessed as part of the LVIA Chapter.

5.33 All Candidate Viewpoints are situated in publicly accessible locations within the extent of the ZTV, with a range of distances and orientation to the project. They include a range of receptors of varying sensitivity. Photographs would be taken from each of the chosen Representative Viewpoints and would be illustrated in accordance with the Landscape Institute Technical Guidance Note 06/19, Visual Representation of Development Proposals (Landscape Institute, September 2019). Any additional photographs, taken during field survey, would be included for contextual purposes and / or viewpoints.

5.34 Photographs would be taken during winter, when vegetation is devoid of leaf to show the worst-case scenario. Any assessment of effects upon summer views would be necessarily made using professional judgement. Table 5.2 below describes the location of the representative viewpoints for this assessment.

Table 5.2: Candidate Viewpoints

No. / Name	Sensitivity	View Location Description
CV1: PRoW North	High	Close distance view from public footpath on northern boundary to the Application Site.
CV2: A525 Bridge	Low	Close distance view from A road (A525) at bridge from pavement A483 to the immediate north-east of the Application Site.
CV3: PRoW South / Bersham Ironworks	High	Close distance view from public footpath at Berksham Ironworks within Conservation Area and scheduled monument, to the immediate south of the northern part of the Application Site.
CV4: PRoW West / Offa's Dyke	High	Close distance view from public footpath near Offa's Dyke scheduled monument, to the immediate west of the Application Site.
CV5: Unnamed Lane	Medium	Close distance view from local road to the west of the southern part of the Application Site.
CV6: Public Bridleway East	High	Close distance view from public bridleway due east of the Application Site.
CV7: Tan Lian	Medium	Close distance view from local road to the north-west of the Application Site, near scheduled monument (Offa's Dyke) and listed building.
CV8: Penygelli Rd	Medium	Medium distance view from local road to the west of the Application Site, on the residential edge of Coedpoeth.
CV9: PRoW / Wreham Erddig HPaG	High	Medium distance view from public footpath off Wat's Dyke Way, within the Wrexham Historic Park and Garden (HPaG).

No. / Name	Sensitivity	View Location Description
CV10: Long Lane	Medium	Medium distance view from local road to the north of the Application Site.
CV11: Brymbo Rd	Medium	Long distance view from local road to the north-west of the Application Site.
CV12: PRoW / Common Land within AONB	High	Long distance view from public footpath within registered Common Land and the Bryniau Clwyd a Dyffryn Dyfrdwy/Clwydian Range and Dee Valley AONB to the west of the Application Site.
CV13: PRoW / Common Land within AONB	High	Long distance view from public footpath within registered Common Land and the Bryniau Clwyd a Dyffryn Dyfrdwy/Clwydian Range and Dee Valley AONB to the west of the Application Site.
CV 14: PRoW along Offa's Dyke at Cadwgan Hall Mound	High	Close distance view from public footpath along Offa's Dyke and within proximity of Cadwgan Hall Mound scheduled monument, to the immediate south-west of the Application Site.
CV 15: PRoW South-East	High	Close distance view from public footpath to the south east of the Application Site.

Further visual assessment

5.35 Within 1km to the proposal development, a broad assessment of residential receptor groups, businesses/ places of work, roads and PRoW, not covered by Representative Viewpoints, would be completed. In some cases, given access restrictions, the baseline view and / or summary of effects from them would be anticipated and an overview assessment of effects upon the visual resource for Operational Phase only for these receptors would be given. This would include an overall assessment of the sequential effects upon views from the PRoWs which travel through the proposal development and roads within the immediate vicinity.

Photomontages

5.36 To illustrate the proposed development, once field work is completed, some Representative Viewpoint locations would be selected and a photomontage prepared, should this be required. The viewpoints would likely be selected through further consultation with WCBC.

Proposed approach

Baseline studies

5.37 Baseline information on the landscape will be gathered through a combination of desk studies, consultation and field surveys. Documents used in the assessment may include aerial photographs, Ordnance Survey (OS) maps and published landscape character assessments.

5.38 Further to the Baseline Information described above, the baseline assessment within the final LVIA Chapter will also include an assessment of the existing landscape character of the Site and its immediate surrounds itself. It will also include an assessment of the existing landscape character within the wider study area in terms of its value and its sensitivity to the proposed development. The studies will identify the landscape resources and character of the surrounding area and examine how the proposed development will affect individual landscape features, elements, characteristics and the wider landscape character.

5.39 Field work will be undertaken to gain a better understanding of the landscape and townscape of the Application Site and surrounding area, to determine its character and condition of the landscape resource and identify visual receptors and extent of views. Field work will help to establish those landscape resources which combine to give the distinct sense of place. Further consultation would be sought from key statutory organisations/consultees where applicable.

Assessment of effects

5.40 The Landscape and Visual Impact Assessment (LVIA) undertaken as part of the Landscape and Visual Resources chapter, will identify and assess the likely significant effects that would arise as a result of the proposed development on the landscape resources (fabric, character and resource) and the visual impact experienced by receptors (people) in the context of the current baseline. The full methodology for the LVIA can be viewed within **Appendix 8** of this ES Scoping Report. Please note this is written in the present tense as it will be included within the LVIA Chapter.

5.41 The LVIA will be based on the current published guidelines for landscape and visual assessment provided in:

- Guidelines for Landscape and Visual Impact Assessment: Third Edition (GLVIA) (Landscape Institute and Institute of Environmental Management & Assessment, 2013);
- An Approach to Landscape Character Assessment, Natural England (2014);
- Planning Policy Wales LANDMAP Guidance Note 1: LANDMAP and Special Landscape Areas (2016);
- Planning Policy Wales LANDMAP Guidance Note 3: (2013): and
- Technical Guidance Note 06/19, Visual Representation of Development Proposals (Landscape Institute, September 2019).

5.42 The sensitivity of landscape and visual receptors within the 5 km study area would be assessed (through the identification of the landscape resource's susceptibility to the proposed development/susceptibility of the visual receptor to change and value of the landscape resource/view), together with the predicted magnitude of impact on that receptor (through identification of the proposed development's size/scale, geographical extent and the duration and reversibility of effect). Combining sensitivity with magnitude of impact, a judgement will be made as to the significance of effect experienced by landscape resources and visual receptors during the construction phase, the operational and maintenance phase, as well as the decommissioning phase of the proposed development.

5.43 Where appropriate, mitigation measures will be identified to avoid, where possible, or reduce any potential landscape and / or visual effects as a result of the proposed development.

5.44 The LVIA Chapter would include an assessment of cumulative projects within the 5km radius within the same LANDMAP areas and from the Representative Viewpoints where there would be potential inter-visibility for the cumulative site and the proposed development. As previously mentioned, cumulative projects would include those with planning permission but yet to be constructed or within the planning system. It would not include development already constructed, such as the existing Bronwylfa Reservoir Solar Park, as these would be considered as part of the baseline.

5.45 The LVIA Chapter would, however, provide commentary on the hypothetical scenario of the potential combined effects should both sites have been implemented at the same time upon the receiving landscape resource, and upon visual receptors where the proposed development would be visible in combination with the existing Bronwylfa Reservoir Solar Park.

5.46 The LVIA chapter will include an assessment of effects of the proposed development (as detailed above) during construction, operation and decommission phases. For the assessment of the operational phase, the LVIA Chapter will include an assessment of the proposals during daytime only, at winter year 1, when all construction and mitigation planting is assumed complete, and during summer year 15 once all mitigation planting is assume to have reached its design and screening intention. Field work would be completed during the winter season of 2020 and therefore the assessment of effects at summer would be completed using professional judgement.

Issues proposed to be scoped out

5.47 No issues are proposed to be scoped out.

Chapter 6: Biodiversity

Baseline information

5.48 A Preliminary Ecological Appraisal of the area within the development red line boundary which included a Phase 1 habitat survey of the site and a desk study identifying designated sites within 2km (10km for international designations) of the red line application boundary.

Designations

5.49 There are three SACs and one Ramsar site within 10km and three SSSIs within 2km of the red line application. The site itself does not form any part of a statutory or non-statutory designated site but the red line boundary does adjoin Big Wood a designated Wildlife Site of county value. A further 14 Wildlife Sites located within 2km; seven of which fall within 1km of the site.

Habitats

5.50 The fields within the red line application boundary almost entirely comprise rye-grass leys, managed for silage production, and improved grassland fields which are heavily grazed by cattle and sheep. Both habitat types are of very low ecological value being floristically very species-poor and intensively managed. Small areas of poor semi-improved grassland and mown amenity grassland are also present within the site, but these habitats are also have low ecological value.

5.51 The fields are bounded by hedgerows, just over half of which are considered species-rich with at least five native woody species present in the canopy. Most of the hedgerows contained some semi-mature and mature trees.

5.52 Each of the individual hedgerows is a Habitat of Principal Importance under Section 7 of the Environment (Wales) Act 2016. Species-rich hedgerows within the site may also be classified as ‘Important’ under the Hedgerows Regulations 1997.

5.53 Individual semi-mature and mature trees and small groups of trees are present in several of the pasture fields.

5.54 Drainage ditches run alongside several field boundary hedgerows. Most of the ditches were dry with two holding very shallow standing water but lacking any aquatic vegetation.

5.55 The red line application boundary adjoins several blocks of broadleaved semi-natural woodland and mixed plantation including the Big Wood Wildlife Site. The River Clywedog flows through the Big Wood Wildlife Site and a tributary of this river flows through a narrow wooded corridor adjoining the southern site boundary.

5.56 All of the blocks of semi-natural woodland and watercourses are Habitats of Principal Importance under Section 7 of the Environment (Wales) Act 2016.

Species

5.57 The survey of wintering birds carried out in 2019 / 2020 recorded an assemblage of 58 species within the survey area of which 26 are classified as species of conservation concern in Wales (Red listed, Amber Listed and/or Species of Principal Importance). The survey area included the edges of the off-site woodland blocks and additional agricultural land to the north and west of the red line application boundary.

5.58 Small numbers of farmland passerine species were recorded including meadow pipit, yellowhammer, skylark, and bullfinch. Flocks of wintering redwing, fieldfare, starling and gull species were attracted to the site to feed on the invertebrates in the soils of the arable fields and improved pasture. No wader species such as lapwing or golden plover were recorded on any of the survey visits.

5.59 Evidence of otter has been recorded along the River Clywedog which lies adjacent to the site. The unnamed tributary, adjoining the southern boundary also provide suitable habitat for otter. The other field boundary ditches have very limited value for otter.

5.60 The closest water vole record to the site is 3.67km east of the site along the River Gwenfro, on the eastern side of Wrexham. The on-site ditches lack open water and marginal vegetation and have very low potential value for this species.

5.61 All habitats of potential value for bats and dormice within the development will be retained with stand offs/ buffer zones.

5.62 Adder, grass snake, common lizard and slow worm have all been recorded within 2km of the site. The grass leys and closely grazed pasture have negligible value for these species with potential reptile habitat largely restricted to the bases of the field boundary hedgerows.

5.63 The waterbodies located close to the site boundary have the potential to support breeding populations of great crested newts (GCN) with the on-site hedgerows and woodland would providing higher value terrestrial habitat for this species.

Proposed approach

Baseline studies

5.64 Additional baseline data will be collected in 2021 to supplement the existing baseline information to inform the assessment, specifically;

- Habitat survey of the cable route to record the features that will be subject to disturbance during construction
- Otter surveys of the Clywedog River and tributary to assess the potential presence of holts and laying up places in woodland adjoining the development with a focus on the cable route crossing point
- GCN surveys for ponds within 500m of the development to assess the presence/absence of breeding populations
- If present, GCN population assessments will be undertaken for each pond used by GCN to estimate population size.
- Breeding bird survey to assess the assemblage using the development area and adjoining habitats
- Update wintering bird survey to supplement the three mid and late winter visits completed in early 2020

Assessment of effects

5.65 The approach will follow the EcIA methodology detailed in the Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018). The ES chapter will determine the 'importance' of ecological features including key sites, habitats and species. The evaluation will specifically refer to:

5.66 Statutory and non-statutory designated sites for nature conservation;

- Habitats of Principal Importance in Wales;
- Species of Principal Importance in Wales; and
- Red listed, rare or legally protected species.

5.67 Importance will be qualified in a geographic context.

5.68 The approach will identify, qualify and, where possible, quantify the sensitivity, value and magnitude of all ecological receptors which cannot be scoped out of this assessment.

5.69 The magnitude of an impact will be assessed in the context of the extent, duration, timing and frequency of the impact as well as recovery time and replaceability through restoration or compensation. This information will determine the significance of the impacts on each receptor.

5.70 The significance of the impact on each ecology feature will be derived from its value and the magnitude of effect. The assessment of potential impacts has been undertaken assuming implementation of embedded mitigation and commitments for the project.

5.71 The assessment of residual impacts will be made, based on the implementation of additional mitigation measures where required for construction operation and decommissioning.

5.72 Cumulative biodiversity effects resulting from the combination of effects from the Proposed Development and other developments will be assessed including improvements to the A483. The cumulative biodiversity effects will be considered together to ensure an overarching assessment of impacts on otter and GCN but will be partly dependent on the availability and accessibility of information for other developments

Scope of the assessment

5.73 The solar park is intrinsically a relatively low impact development with continued grazing of pasture fields below the installed panels alongside stand offs and buffer zones from field boundaries and trees. In the absence of mitigation, the following effects would be reviewed and scoped out where not relevant.

Construction including the cable

- Impacts on Big Wood CWS
- Loss of arable and improved grassland
- Indirect effects on woodland edge habitat
- Gaps created in hedgerow network
- Impacts on ditches and the associated vegetation
- Changes in water quality in wet ditches, ponds and watercourses
- Disturbance of species (including otter and GCN)
- Damage to the health of mature trees

Operation

- Change in context of retained grassland - shading
- Effects on the water quality of waterbodies or watercourses

Decommissioning

- Habitat disturbance
- Re-instatement original land use
- Disturbance to species within or adjoining the site.

5.74 Standard construction control measures would be implemented to reduce the risk of contamination of land or water. Therefore, it is not anticipated that a significant impact on the River Clywedog habitat, unnamed watercourses or ponds.

Habitats Regulations Assessment (HRA)

5.75 A shadow HRA will be prepared for the development to inform the competent authority to assess whether there is potential for a Likely Significant Effect (LSE) on any of the qualifying interests of European designated sites.

5.76 Where a LSE is identified a shadow Appropriate Assessment would consider the embedded and additional mitigation measures forming part of the development proposal. It would specifically consider the local otter population, a qualifying feature of the River Dee and Bala Lake SAC and GCN breeding populations which are a feature of the Johnstown Newt Sites SAC and the Stryt Las SSSI.

5.77 The HRA will run parallel to the EIA and will consider impacts in-combination with other developments as well as from the Proposed Development.

Issues to be scoped out

5.78 The retention and protection of hedgerows, trees, woodland and watercourses both within and adjoining the site will maintain the context of these habitats within the site and wider landscape.

5.79 Grassland habitats with the site will be retained beneath the solar arrays and will continue to be manged through grazing. The grass leys will be reseeded as pasture and also subject to a grazing regime.

5.80 There will be no use of artificial lighting during construction or operation that could otherwise adversely affect the use the field boundary habitats and adjoining woodland.

5.81 Consequently, no adverse effects are anticipated on bats (foraging and roosting), dormouse, and hedgehog which have been scoped out of the impact assessment.

Chapter 7: Cultural heritage

Baseline information

5.82 A Preliminary Archaeological Desk Based Assessment (DBA) was prepared by RPS Group in October 2019 in order to assess the below ground archaeological potential of the site, and potential impacts on the settings of designated archaeological heritage assets.

5.83 A preliminary Built Heritage Assessment was also prepared by RPS Group in October 2019, to identify and assess the significance of those built heritage assets with the potential to be affected by the proposals, either directly or through change in their respective settings.

5.84 These documents have been used as the basis for subsequent consultation with Cadw, the Clwyd-Powys Archaeological Trust, and the local planning authority Conservation Officer. They have also been used to inform mitigation measures built into the design of the Proposed Development, with these built-in mitigation measures supported by the heritage consultees.

Designated archaeological assets

5.85 The Archaeological DBA identified one scheduled monument situated within the site boundary: DE180 (section of Offa's Dyke). As this will be outside of the development area, the fabric of the monument will not be directly affected. However, the development has the potential to impact on its significance as a result of change to its setting. The Archaeological DBA also identified that the development has the potential for impacts on the settings of a further 12 designated archaeological assets, which are situated within a 1km study area of the site.

Archaeological potential

5.86 The proposed development could potentially have a below-ground impact on any buried archaeological remains if any are present. However, the Archaeological Desk Based Assessment indicates that much of the proposed development site has previously been disturbed by open-cast coal mining, thereby reducing its archaeological potential. The potential for significant archaeological remains from any period to be present within the site is considered to be low.

Designated built heritage assets

5.87 The Built Heritage Statement determined that the site does not contain any built heritage assets. Over 100 listed buildings and 5 conservation areas were identified to lie wholly or partly within a 3 kilometre search radius of the site; however, the Site is not considered to form a part of the setting of the majority of these assets by virtue of a lack of visual, functional, or direct historic connection between the site and the assets.

5.88 Due to the local topography, there are views from some western parts of the site eastwards over Wrexham. However, due to the intervening distance, the site forms only a small part of the extended setting of any of these assets, and their significance is unlikely to be materially impacted by the proposals.

Proposed approach

Baseline studies

5.89 Further baseline studies will be carried out to supplement the existing baseline information. These will reflect feedback received from LPA consultees and changes to the proposed area of development since the preliminary studies were produced. They will comprise:

- An updated Built Heritage Assessment, to be informed by a ZTV, identifying and assessing the significance of designated and non-designated built heritage assets with the potential to be impacted by the proposals, the latter of which were beyond the scope of the preliminary assessment;
- A Heritage Impact Assessment, identifying levels of harm, if any, arising from the proposed scheme; and
- An updated Archaeological Desk Based Assessment, to include the proposed routes for the cable connection.

5.90 A geophysical survey will also be undertaken, across those areas of the site which are proposed for development, but excluding those areas previously disturbed by coal mining. Where practicable, proposed cable routes will also be surveyed as part of this intervention.

Assessment of effects

5.91 No standard EIA methodologies exist for Archaeological and Built Heritage Assessment. However, assessment methodology will be guided by various published documents including: Cadw's Conservation Principles for the Sustainable Management of the Historic Environment in Wales (2011); Heritage Impact Assessment in Wales (2017); Setting of Historic Assets in Wales (May 2017); and the Design Manual for Roads and Bridges (DMRB) LA 104, LA 106 (Revision 1) (January 2020). Although the latter was designed for road schemes in relation to EIAs, it is accepted as good practice for the assessment of cultural heritage in relation to archaeology, listed buildings and historic landscapes within EIAs.

5.92 A three-stage approach will be taken in order to reach an understanding of the level of any effect that the proposed development may have on cultural heritage assets.

5.93 Firstly, it will be necessary to understand the importance/sensitivity of the asset. The sensitivity of the archaeological/built heritage receptors (cultural heritage receptors) will be defined by their importance in terms of national, regional or local statutory or non-statutory protection and grading of the asset. Determination of the significance of built heritage receptors will take account of existing statutory designations and, for non-designated heritage receptors, professional judgement and Cadw criteria relating to local listing. For archaeology, Welsh Ministers' non-statutory criteria for assessing the national importance of archaeological monuments and professional judgement will be taken into account.

5.94 It is then necessary to determine the predicted magnitude of change/impact arising to the asset as a result of the proposals. Determining the magnitude of impact will be based on an understanding of the degree of change that would be experienced by an asset and its setting if the development scheme were to be completed as compared to a 'do nothing' situation. This change may occur, for example, through temporary or permanent land take or excavation, ground disturbance and compaction, or change to the setting of built heritage assets. Impacts will be characterised as 'adverse' or 'beneficial', with this distinction based on the principle (established in Planning Policy Wales) that the preservation of the asset is preferred, and that total physical loss of the asset is the least preferred.

5.95 Finally, using a matrix that measures both receptor sensitivity and impact magnitude, an assessment of the magnitude of effect of the Proposed Development on the asset will be produced. The assessment of potential impacts will be undertaken assuming implementation of embedded mitigation and commitments for the project.

5.96 The assessment of residual impacts will be made, based on the implementation of additional mitigation measures where required for the construction and operational phases.

5.97 Cumulative effects resulting from the combination of effects from the Proposed Development and other identified developments will be assessed. This will include consideration of improvements to the A483.

Scope of the assessment

5.98 The assessment will consider potential impacts on any buried archaeological remains which may be present in the site, and including along the routes of the proposed cable route(s).The assessment will also consider effects on the settings of designated archaeological assets up to a radius of 3km from the site boundary.

5.99 No built heritage assets are situated within the site. The assessment will therefore focus on impacts on designated and non-designated built heritage assets beyond the site as a result of change to their respective settings. The assessment will consider effects on the settings and significance of built heritage assets up to a radius of 3km from the site boundary, which is considered proportional given the nature of the Proposed Development. A ZTV will be used to help to identify which of those built heritage assets within this radius have the potential to be impacted by the proposals; although it is recognised that setting is not purely a visual factor, but also relates to other environmental factors and our understanding of the historic relationship between places.

Issues proposed to be scoped out

5.100 The site does not form part of the setting of any World Heritage Sites, Protected Wrecks, or Historic Battlefields. There is therefore no potential to affect the significance of any of these types of assets, so it is proposed to scope these issues out. As noted above, during the production of the ES Chapter, a ZTV will be used to help eliminate any heritage assets within 3km of the site that will not be affected by the development.

Chapter 8: Climate change

5.101 This section of the scoping report considers the assessment of potential impacts on and due to climate change. Climate change here is considered in terms of the impact of greenhouse gas emissions (GHGs) caused directly or indirectly by the proposed development, which contribute to climate change. The potential impact of changes in climate to the development, which could affect it directly or could modify its other environmental impacts, are proposed to be scoped out of the assessment, with the exception of the likely changes to cloud cover over its expected lifetime (explained in greater detail in paragraph 5.113).

Baseline information

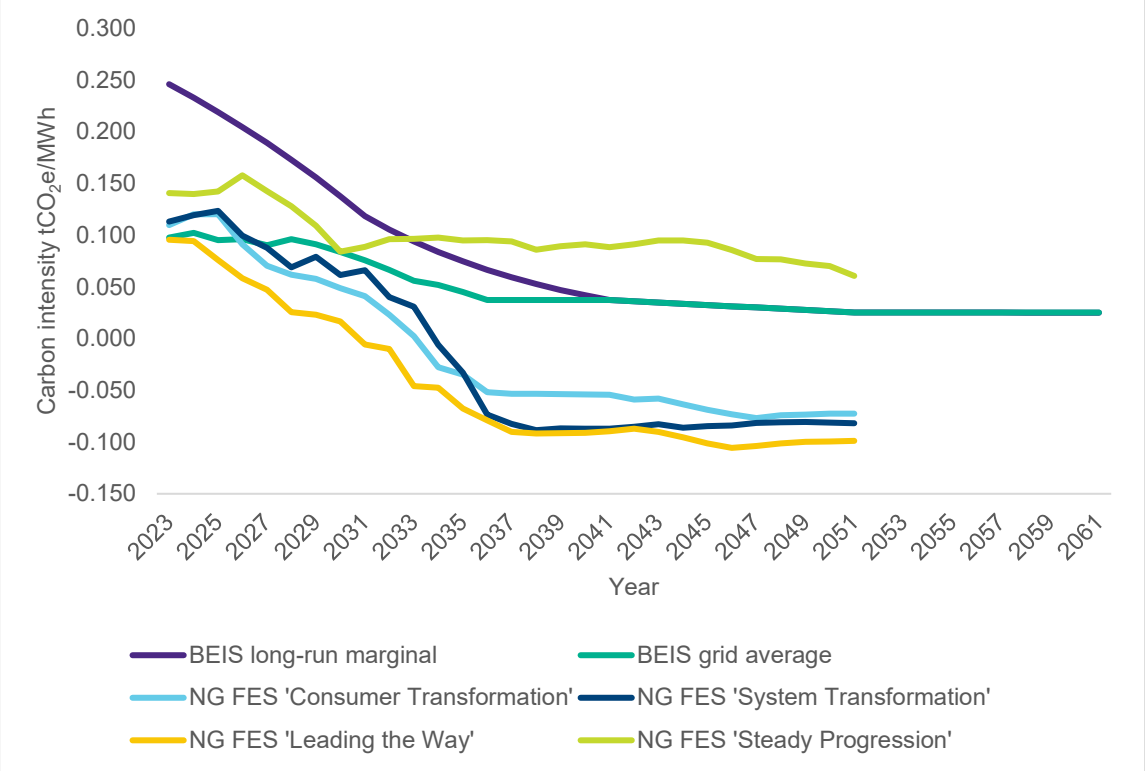
5.102 The current baseline for land that would be taken by construction of the proposed development is the existing agricultural land-use. However, installing solar panels above ground on agricultural land will not cause any disturbance to significant soil or vegetation carbon stocks GHG emissions from the existing land-use are not therefore considered further.

5.103 The current baseline for electricity generation in the operational phase of the proposed development, with regard to GHG emissions, is the equivalent level of electricity generation from alternative sources connected to the electricity grid. The current average carbon intensity of electricity generation on the UK National Grid is 0.23314 kgCO2e/kWh in the present-day baseline.

5.104 Potential scenarios for the future baseline of electricity generation are shown in Figure 5.1, which displays the carbon intensity of future marginal electricity generation projected by BEIS (as generated from alternative sources, in the absence of generation capacity provided by the proposed development). For means of comparison, the figure also displays the projected grid-average carbon intensity and the National Grid's 'Future Energy Scenarios' projected grid carbon intensities.

5.105 In most of these scenarios a rapid and sustained decarbonisation of baseline electricity generation is projected; in certain scenarios, the negative values are projected in this sector (i.e. from carbon capture and storage) in order to deliver 'net zero' for the UK economy as a whole.

Figure 5.1: Projected carbon intensity of electricity generation



5.106 The current climatic conditions baseline is established by meteorological records for the area of the propose development. The potential future climatic baseline can be considered using the 'UKCP18' projections published by the Met Office Hadley Centre, which encompass the potential climatic outcomes in the UK from a range of potential global emissions and climate change scenarios.

Proposed approach

5.107 GHG emissions would contribute to the effect of global climate change. Assessment guidance (IEMA, 2017) indicates that in principle, any GHG emissions may be considered to be significant,

and advocates as good practice that GHG emissions should always be reported at an appropriate, proportionate level of detail in an ES.

5.108 The proposed approach for assessing the impacts on climate change from the proposed development will be based on carbon life-cycle analysis for the solar farm

5.109 The embodied carbon of the proposed development will be assessed using published literature values from lifecycle studies. This is likely to include manufacturing, transport, installation, maintenance and end of life for the PV modules, and balance of system components (primarily inverters, transformers and cabling).

5.110 GHG emission reductions from operation of the PV system will be assessed base on the carbon intensity of the alternative marginal generator that is displaced, i.e. the generator that would have been supplying the grid with electricity in the absence of the proposed development.

5.111 Similarly, potential GHG emissions reductions from alternative electricity generation displaced by the use of battery storage (which is likely to be generators that would have operated to meet demand peaks) will be assessed.

5.112 As set out below, no significant adverse effects due to climate risks to the proposed development are considered likely, with the potential exception of flooding. Assessment of climate risks is therefore proposed to be scoped out of the assessment. However, the potential effect on power generation from changes in sunlight hours or cloud cover will be considered based on the UKCP18 projections.

Baseline studies

5.113 The sources of data concerning the present and future baseline have been described above, and no baseline surveys will be required.

Assessment of effects

5.114 The magnitude of impact will be expressed as tonnes of carbon dioxide equivalent (tCO2e), using 100 year global warming potential values for non-CO2 GHGs from the Intergovernmental Panel on Climate Change's Fifth Assessment Report or as otherwise defined in literature sources used.

5.115 The sensitive receptor will be defined as the global atmospheric concentration of GHGs and it will be characterised as having a 'high' sensitivity, given the severe consequences of climate change.

5.116 There are no clear, generally agreed thresholds or methods for evaluating the significance of GHG impacts in EIA. The IEMA guidance referenced above recommends contextualising a development's GHG impacts, for example on a sectoral basis or compared to the UK's national carbon budget.

5.117 It is considered that broadly speaking, the significance of the proposed development's GHG emissions can be contextualised in the following ways:

- with reference to the absolute magnitude of net GHG emissions as a percentage of the UK's national carbon budget;
- through considering any increase/reduction in absolute GHG emissions and GHG intensity compared with baseline scenarios, including projections for future changes in those baselines; and/or
- with reference to whether the proposed development contributes to and is in line with the UK's national carbon budget sectoral goals for GHG emissions reduction, which are consistent with science-based commitments to limit global climate change to an internationally-agreed level.

5.118 Taking these factors into account, where applicable, the evaluation of significance will ultimately be a matter of professional judgement, as it is not considered that a fixed numerical threshold can be defined.

Scope of the assessment

5.119 The scope of the assessment is the impact of life-cycle GHG emissions from solar farm, relative to the future baseline of displaced electricity generation.

5.120 Potential changes in generating capacity of the PV system due to climatic changes during the proposed development's operational lifetime (i.e. cloud cover or sunlight hours) will also be considered using UKCP18 projections.

Issues proposed to be scoped out

5.121 Risks to the proposed development from climate change proposed to be scoped out of Chapter 9, as these are not considered likely to be significant during the development's operating lifetime.

5.122 Potential risks that have been evaluated are increased rainfall (and corresponding flood risk), increased likelihood of extreme weather events, and increased ambient temperature (with resulting PV module efficiency losses

5.123 Flood risk will be assessed, with appropriate climate change allowance, in the Flood Risk Assessment for the proposed development.

5.124 Extreme weather events such as storms with high winds are also possible in the existing baseline and the proposed development's design will need to account for this. It is not considered that the potential for any increase in frequency or severity over the development's lifetime, due to climate change, could cause significant environmental effects.

5.125 The potential for small system efficiency losses due to hotter temperatures during the development's lifetime are not considered to have any potential to significantly affect the lifecycle GHG emissions and thus significantly reduce the environmental effect of the renewable electricity generation.

Chapter 9: Cumulative effects

5.126 As set out in Section 3 of this report, each topic chapter will consider the potential for significant cumulative effects with other major proposed developments. Other developments considered within the cumulative assessment include those that are:

- Under construction;
- Permitted, but not yet implemented;
- Submitted, but not yet determined; and
- Identified in the Development Plan (and emerging Development Plans - with appropriate weight being given as they move closer to adoption) recognising that much information on any relevant proposals will be limited.

5.127 An indicative list of other proposed developments and allocations to be considered within the EIA process are:

- Improvement to the adjacent A483 including Junction 4 of the A483, and
- Bronwylfa Reservoir Solar Park, only if confirmed to be included as its an operational development

5.128 Comments are invited on the content of this list and the extent to which allocations from neighbouring authorities may need to be considered.

5.129 Each topic author will review the overall list of developments and allocations and identify those relevant to their topic. The chapter will include an assessment of the potential for significant cumulative effects with the relevant developments.

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FIGURES

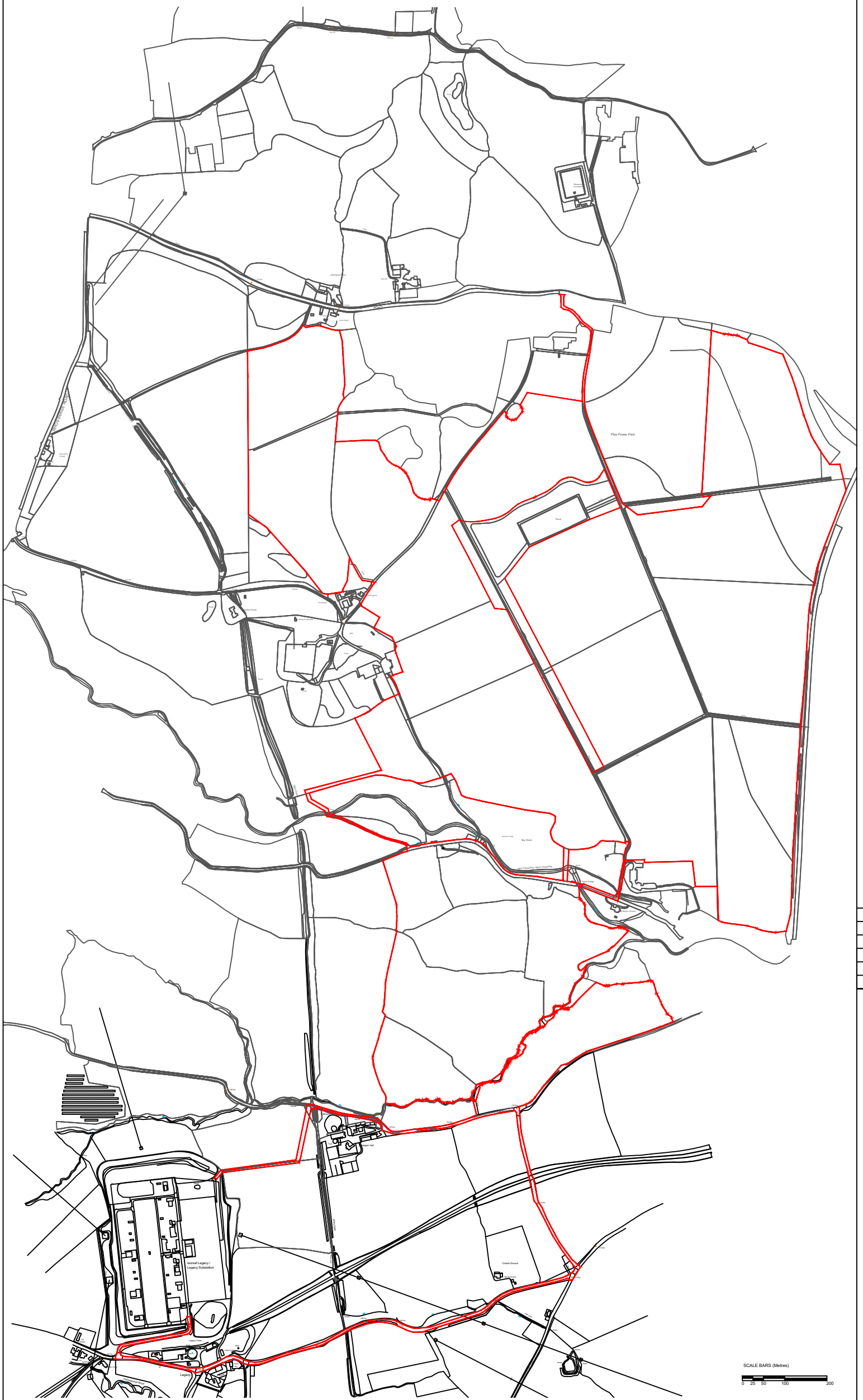
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LEGEND

SITE BOUNDARY



N

Rev	Description	By	CB	Date

MAKING COMPLEX EASY

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T: 02920 668 662 **E:** rpsca@rpsgroup.com

Client: LIGHTSOURCE BP

Project: PLAS POWER ESTATE

Title: EIA SCOPING
SITE LOCATION PLAN
AT 1:10,000

Status	Drawn By	PM/Checked by
DRAFT	GG	DW

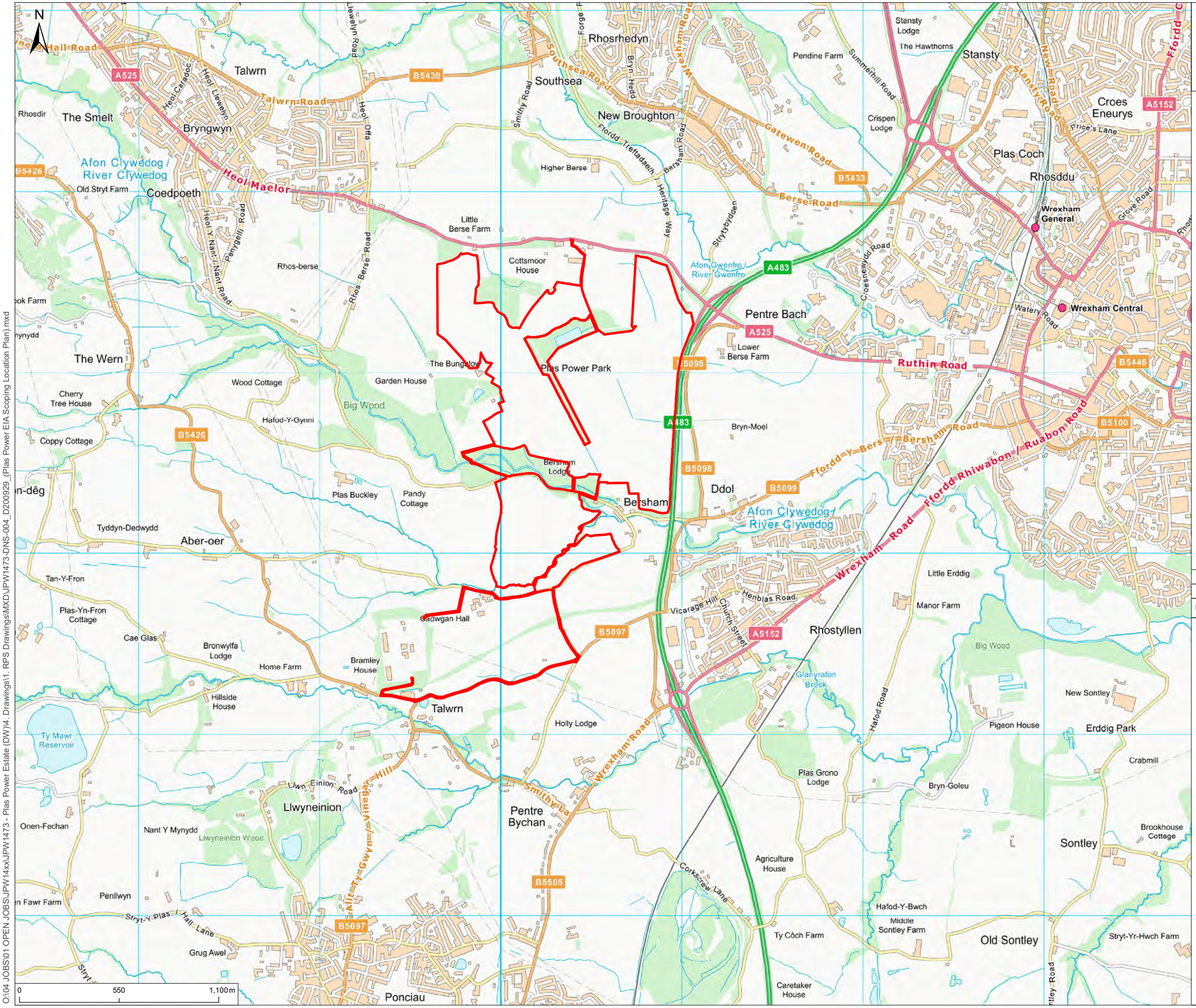
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JPW1473	1:10,000	SEPT 2020

RPS Drawing / Figure Number: JPW1743-DNS-003

Rev: -

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Legend

Site Boundary

Rev	Description	By	CB	Date

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Client LIGHTSOURCE BP

Project PLAS POWER ESTATE, WREXHAM

Title EIA SCOPING
SITE LOCATION PLAN
AT 1:20,000

Status	Drawn By	PM/Checked By
DRAFT	GG	DW

Project Number	Scale @ A3	Date Created
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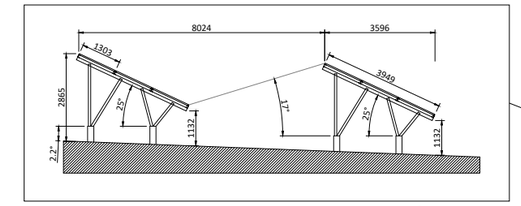
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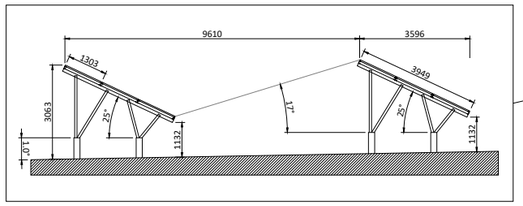
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UK_Plas Power Estate_LP1-Initial Design Layout_04

Area 1,351,508 m2 (333.96 acres)

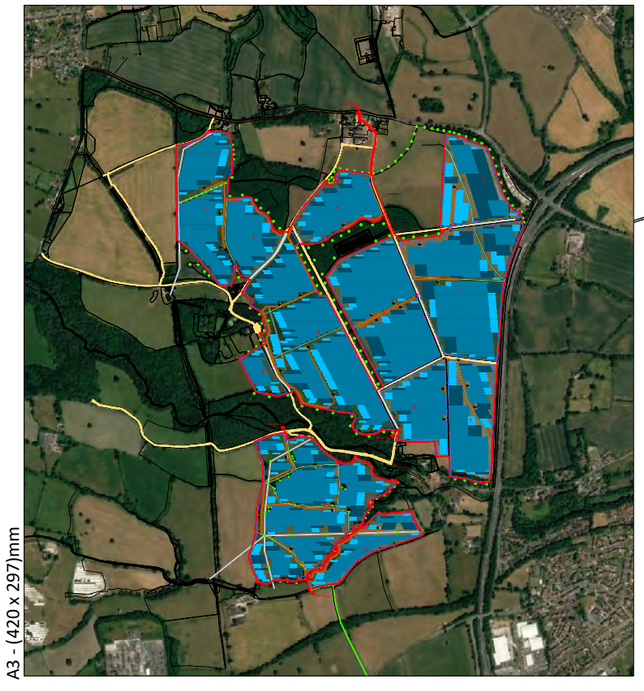


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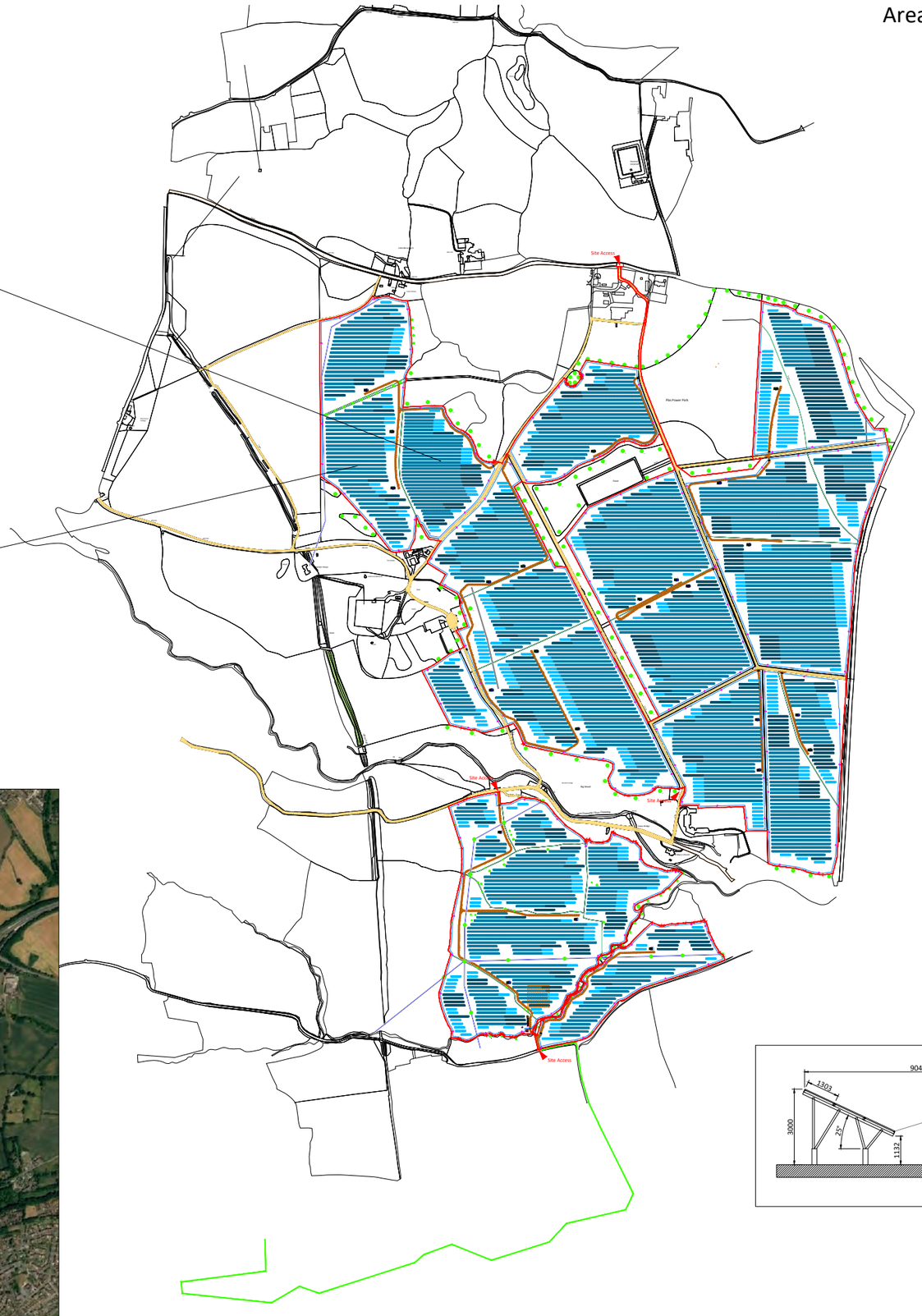


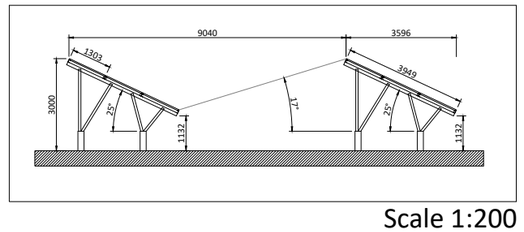
Scale 1:200

Scale 1:25000



A3 - (420 x 297)mm





Scale 1:200

- Site Boundary
- Site Access
- Security Fence
- Module Table 11 x 3
- Module Table 22 x 3
- Module Table 33 x 3
- Transformer
- Switchgear Substation
- AC Box
- DNO Substation
- Customer Substation
- Monitoring House
- Auxiliary Transformer
- Storage
- Proposed Access Road
- Existing Access Road
- Access Gates
- CCTV
- Toilet
- Compound Area (Indicative)
- Scheduled Monument Area
- Manhole

Revisions:

Rev	Date	Comments	Dwn	Chkd
04	24/09/20	Land added (road project)	AKZ	
03	22/09/20	Trackers layout	AKZ	
02	08/09/20	Fields removed and added on Rev5	DA	
01	02/09/20	Compound area added (North)	MV	

DRAWN	CHECKED	APPROVED	DATE
MA			28.08.2020

PROJECT NAME & ADDRESS:
Location: Plas Power Estate, Ruthin Road, Rhosrobin
Caego, Wrexham, Wales, LL11 3BS

NOTES:
- Bifacial 600 Wp modules
-
-
-

Paper Size:	Scale:	Sheet:
A3	1:12500	1

CAPACITY: 75 MWp

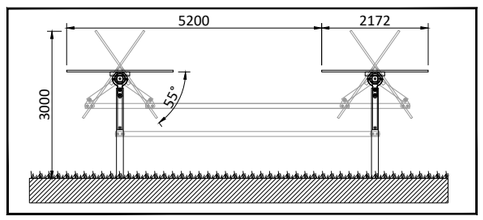
DRAWING TITLE: UK_Plas Power Estate_LP1-IDL_04

DRAWING NUMBER:	STATUS:
PLAS_01	Preliminary

Lightsource Renewable Development Limited,
7th Floor, 33 Holborn, London, EC1N 2HU
General: +44 (0) 333 200 0755
Web: www.lightsourcebp.com
info@lightsourcebp.com

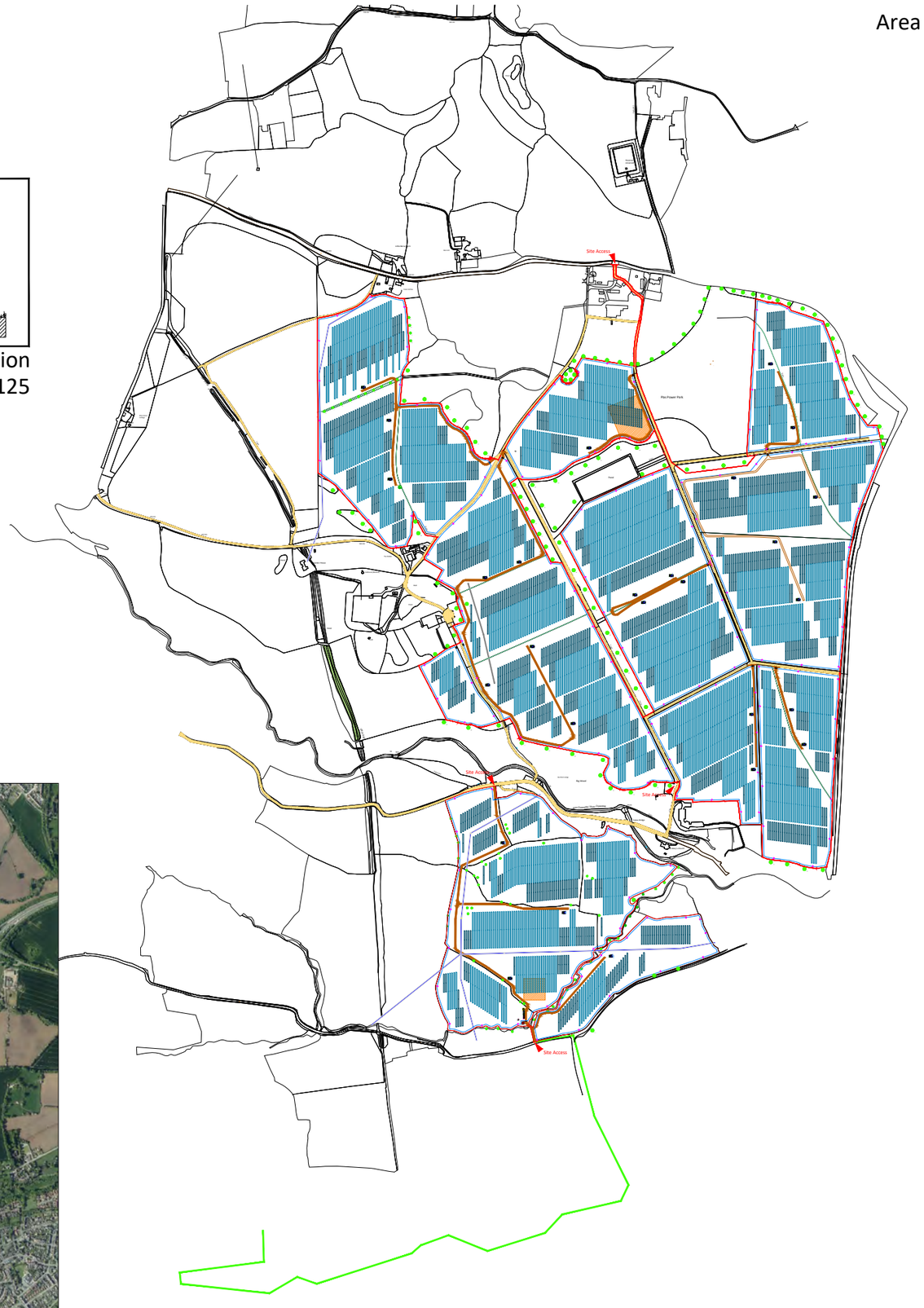
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UK_Plas Power Estate_LP1-IDL_03



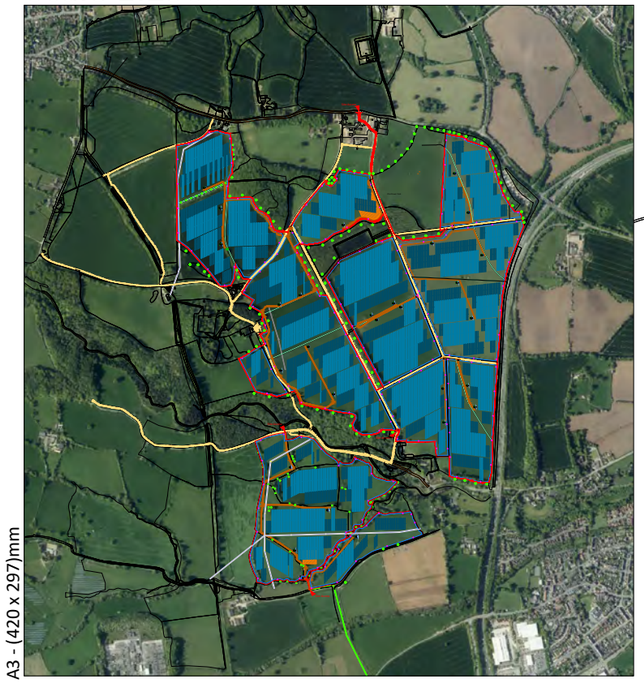
Typical elevation
Scale 1:125

Area 1,351,508 m2 (333.96 acres)



- Site Boundary
- Site Access
- Security Fence
- Tracker (1P) 34 modules
- Tracker (1P) 68 modules
- Transformer
- Switchgear Substation
- AC Box
- DNO Substation
- Customer Substation
- Monitoring House
- Auxiliary Transformer
- Storage
- Proposed Access Road
- Existing Access Road
- Existing Tree
- Access Gates
- CCTV
- Toilet
- Compound Areas (Indicative)
- Scheduled Monument Area
- Manhole

Scale 1:25000



A3 - (420 x 297)mm

Revisions:

Rev	Date	Comments	Dwn	Chkd
3	22/09/20	South field added & tracker updated	AKZ	
2	08/09/20	Fields removed & added on Rev5(Fixed-tilt)JDA		
1	02/09/20	Compound area added (North)	MA	

DRAWN	CHECKED	APPROVED	DATE
GM			05.07.19

PROJECT NAME & ADDRESS:
Location: Plas Power Estate, Ruthin Road, Rhosrobin
Caego, Wrexham, Wales, LL11 3BS

NOTES:
- Bifacial 600 Wp modules
-
-
-

Paper Size:	Scale:	Sheet:
A3	1:12500	1

CAPACITY: 75 MWp

DRAWING TITLE: UK_Plas Power Estate_LP1-IDL_03

DRAWING NUMBER:	STATUS:
PLAS_01	Preliminary

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APPENDICES

Appendix 1

Screening Direction

The Planning Inspectorate
Yr Arolygiaeth Gynllunio

Adeilad y Goron
Parc Cathays
Caerdydd
CF10 3NQ

Crown Buildings
Cathays Park
Cardiff
CF10 3NQ

Ffôn/tel: 0303 444 5960

e-bost/
e-mail: dns.wales@planninginspectorate.gov.uk

Dafydd Williams
RPS Group Ltd

and

Environment & Planning
Wrexham County Borough Council

(via e-mail)

Eich Cyf / Your Ref: JPW1473

Ein Cyf / Our Ref: 3253253

Dyddiad / Date: 1 July 2020

Dear Mr Williams

Town and Country Planning Act 1990
The Developments of National Significance (Procedure) (Wales) Order 2016
Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017

Potential DNS Application
Site Address: Plas Power Estate, Ruthin Road, Wrexham, LL11 3BS
Proposed Development: 77 MW Solar Farm and ancillary development

On the 27 May 2020 the Planning Inspectorate received a request made under regulation 31(1) of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 ("the Regulations"), for the Welsh Ministers to make a screening direction as to whether or not the development proposed is "EIA Development" within the meaning of the Regulations.

The Planning Inspectorate is authorised by the Welsh Ministers to provide that screening direction to provide that screening direction.

The project, as described above, falls within the description at paragraph 3(b) in column 1 of the table in Schedule 2 to the Regulations.

As the proposal is a potential Development of National Significance (DNS) application, the attached screening assessment identifies the key areas which have been considered. Having taken into account the selection criteria in Schedule 3 to the Regulations and the advice in Welsh Office Circular 11/99: Environmental Impact Assessment on establishing whether EIA is required, the assessment concludes that:

Based on the information provided and given the scale and nature of the proposed development, there is potential for significant effects on features of the Johnstown Newt Sites SAC and Stryt Las SSSI, particularly during construction and de-commissioning, and for cumulative impacts with other planned activities and projects which could have a combined effect on features of the River Dee and Bala Lake SAC and River Dee SSSI. It is also likely that the scheme would result in significant visual effects. For these reasons, I conclude that EIA is required in this instance.

Therefore, in exercise of the powers conferred by the Regulations and the authority referred to above, the Welsh Ministers hereby direct that the development subject of this application is EIA development within the meaning of the Regulations.

Consequently, this application must be accompanied by an Environmental Statement. Under regulation 17(1) of the Regulations an Environmental Statement must contain, for the purpose of assessing the likely impact on the environment, the information specified in that regulation. It is recommended that you refer to the Regulations and the accompanying Circular, Welsh Office Circular 11/99, before and during the preparation of the Environmental Statement. In the meantime, you may wish to have regard to the particular environmental topics identified in the attached screening assessment.

This letter will be copied to Wrexham County Borough Council, so that this screening direction is placed on Part 1 of the Planning Register in relation to the application in question, in accordance with the Regulations.

Yn gywir / Yours sincerely

[redacted]

Christopher Sweet MPlan

Swyddog Cynllunio / Planning Officer
Tîm Cynllunio a'r Amgylchedd / The Planning & Environment Team
Yr Arolygiaeth Gynllunio / The Planning Inspectorate

STAGE 1 – INITIAL EIA SCREENING ASSESSMENT

1	Case Details	
A	DNS case reference	
	3253253	
B	Brief description of development	
	Solar farm with an installed generating capacity of up to 77MW and ancillary development.	
2	EIA Screening Details	
2A	Schedule 1	
	Is the project Schedule 1 development as described in Schedule 1 of the EIA Regulations?	No
	If Yes, under which description of development? If No, consider whether project is 'Schedule 2' development below in part 2(B).	
2B	Schedule 2	
(i)	Is the project listed as a description of development under Column 1 of Schedule 2 of the EIA Regulations?	Yes
	If Yes, under which description of development? If No, EIA is not required.	
	3(a)	
(ii)	Does the project change or extend development described in paragraphs 1 to 12 of Column 1 of schedule 2, where the change or extension may have SIGNIFICANT* adverse effects on the environment?	No
	*If Yes, provide reasons for your answer below. *If unsure, discuss with PET. Proceed to point (iii).*	
	Choose an item.	
(iii)	Is the project located wholly or partly within a 'Sensitive Area' as defined by Regulation 2 of the EIA Regulations?	No
	If Yes, state which area and more to Question 3. If No, proceed to point (iv) below.	
(iv)	Are the applicable thresholds/criteria in Column 2 exceeded / met?	Yes
	If Yes, note which applicable threshold/criteria. If No, EIA is not required.	
	The area of development exceeds 0.5 ha.	

3	LPA / Welsh Ministers' Screening	
(i)	Has the LPA issued a Screening Opinion (SO)?	No
(ii)	Have the Welsh Ministers issued a Screening Direction (SD)?	No
4	Environmental Statement (ES)	
	Has the applicant/appellant supplied an ES for the current or previous (if reserved matters or conditions) application?	No

STAGE 2 – DETAILED EIA SCREENING ASSESSMENT

As per Schedule 3, Para 3: When considering the potential impact, take into account; (a) magnitude / spatial extent / population likely to be affected; (b) nature of impact; (c) transboundary nature; (d) intensity & complexity; (e) probability; (f) expected onset / duration / frequency & reversibility; (g) cumulation with existing and / or approved development; (h) the possibility of effectively reducing the impact.

5	Detailed Screening Questions	
Questions to be considered	Yes/No/Unknown – provide description	**For 'Yes/Unknown', are effects** likely to be significant? *Include consideration of features or measures to avoid or prevent what might otherwise be significant effects*
CRITERION 1. CHARACTERISTICS OF DEVELOPMENT		
Question 1(a) Size and design of the Development		
Will construction, operation or decommissioning of the Project involve actions which will cause physical changes in the locality (topography, land use, changes in waterbodies, etc.)?	Yes. The proposed development would result in the site (some 139 ha) being altered from agricultural use to that of a 77 MW solar farm made up of PV Panels with an upper height of 3m at the highest point and associated infrastructure. As such, there would be considerable physical change to the site itself. Whilst there would be little change in terms of topography, based on the information provided and given the scale and nature of the proposal, significant effects in this respect must be considered likely at this stage.	Significant effect likely.

5	Detailed Screening Questions	
Questions to be considered	Yes/No/Unknown – provide description	**For 'Yes/Unknown', are effects** likely to be significant?
Question 1(b) Cumulation with Existing and/or Approved Development		
Are there any other factors which should be considered such as: • consequential development which could lead to environmental effects? • the potential for cumulative impacts with other existing or planned activities in the locality? • any plans for future land uses on or around the location which could be affected by the project? • transfrontier impacts?	Given the scale and location of the proposal, there is some potential for cumulative visual effects in combination with other solar farm developments such as Bronwylfa Reservoir solar park to the south west of the Site. Additionally, Natural Resource Wales (NRW) indicate in their response the potential for cumulative impacts with the improvements to the adjacent A483 including Junction 4 (directly adjacent the site) which could have a combined effects on Otter which are a feature of the River Dee and Bala Lake SAC and River Dee SSSI. The Site would be reinstated to fully agricultural land at the end of the project's lifespan, therefore it would not affect future land uses. There is no transfrontier impact. Nonetheless, the request for an EIA Screening Direction does not contain enough information to exclude the potential for cumulative impacts with other existing or planned activities outlined above and I therefore consider that significant cumulative effects are likely.	Significant effect likely.

5	Detailed Screening Questions	
Questions to be considered	Yes/No/Unknown – provide description	**For 'Yes/Unknown', are effects** likely to be significant?
Question 1(c) Use of Natural Resources, in particular land, soil, water and biodiversity		
Will construction or operation of the Project use natural resources such as land, water, materials or energy, especially any resources which are non-renewable or in short supply?	Yes, the proposal would require a degree of land take and use of natural resources during both the construction and operational stages. However, the land would be able to be used for continued grazing during the operational phase and there is potential for a degree of material recycling at the end of the project's lifespan. Given that low degree of impact and the scale of the project, I am content that significant effects on natural resources are unlikely.	Significant effect unlikely.
Question 1(d) Production of Waste		
Will the Project produce solid wastes during construction or operation or decommissioning?	Yes, some waste will be produced during construction and, notwithstanding the potential for some recycling of materials, the decommissioning of the equipment at the end of its lifespan would result in some solid waste. However, given the scale and nature of the proposed development I do not consider that significant effects are likely in terms of waste generation.	Significant effect unlikely.
Question 1(e) Pollution and Nuisances		
Will the Project involve use, storage, transport, handling or production of substances or materials which could be harmful to human health or the environment	Yes, construction will involve use and storage of substances which could be harmful to human health or the environment. However, standard	Significant effect unlikely.

5	Detailed Screening Questions	
Questions to be considered	Yes/No/Unknown – provide description	**For 'Yes/Unknown', are effects** likely to be significant?
or raise concerns about actual or perceived risks to human health?	construction control measures would reduce the risk of harm to humans and the surrounding environment.	
Will the Project cause noise and vibration or release of light, heat energy or electromagnetic radiation?	Yes, some noise and vibration likely during the construction phase, though this would be localised and time limited. There would also be a minimal amount of noise during the operational phase and potential for redirection of light in terms of glint and glare via the reflective surface of the panels. Whilst these will be considerations for the decision maker, given the location of the site and the nature of the impacts, I am content that any effects in terms of glint and glare and noise would be localised and unlikely to be of a magnitude that would be significant, such that they would warrant EIA. As noted by the LPA, further noise assessment is nonetheless likely to be required.	Significant effect unlikely.
Will the Project release pollutants or any hazardous, toxic or noxious substances to air, or lead to risks of contamination of land or water (including surface waters, groundwater, coastal wasters or the sea)?	Yes, the request for EIA Screening Direction indicates that the site includes part of the River Clywedog, unnamed watercourses and ponds. However, standard construction control measures would reduce the risk of contamination of land or water. Therefore, it is not anticipated that a significant impact will arise.	Significant effect unlikely

5	Detailed Screening Questions	
Questions to be considered	Yes/No/Unknown – provide description	**For 'Yes/Unknown', are effects** likely to be significant?
Question 1(f) Risk of major accidents and/or disasters relevant to the development concerned, including those caused by climate change, in accordance with scientific knowledge		
Will there be any risk of accidents during construction or operation of the Project which could affect human health or the environment?	Yes, some small risk of accident during construction, operation and decommissioning. However, given the scale and type of works involved, such risks are unlikely to be significant.	Significant effect unlikely.
Question 1(g) Risks to Human Health (for example due to water contamination or air pollution)		
Will there be any risk to human health during the construction and/or operation of the development	Some small risk as outlined above, but the scale is such that it would not be significant.	Significant effect unlikely.
CRITERION 2. LOCATION OF DEVELOPMENT		
Question 2(a) Existing and Approved Land Use		
Will the Project result in social changes, for example, in demography, traditional lifestyles, employment?	No.	N/A
Are there any routes or facilities on or around the location, which are used by the public for access to recreation or other facilities, which could be affected by the project?	Yes, Bersham public footpath 1 runs through the site and would be obstructed by the Proposed Development. At this stage it is unclear how the application seeks to address this issue. However, given the scale of the potential loss, I am satisfied that even if no other provision can be made, the effects are not likely to be significant in EIA terms.	Significant effect unlikely.
Are there any transport routes which are susceptible to congestion or which cause environmental problems, which could be affected by the project?	Yes, there would be impacts on the local road network in terms of the construction phase. The LPA indicates that there may be impacts on the A483 trunk road and that consultation is required with the North and Mid Wales Trunk Road Agency. However, due to the temporary nature of construction	Significant effect unlikely.

5	Detailed Screening Questions	
Questions to be considered	Yes/No/Unknown – provide description	**For 'Yes/Unknown', are effects** likely to be significant?
	traffic and the potential for securing a Construction Traffic Management Plan where necessary, I do not consider significant effects to be likely in this respect.	
Is the project located in a previously undeveloped area where there will be loss of greenfield land?	Yes, the site is currently greenfield land in agricultural use. However, the nature of the proposal is such that grazing could continue during the operational phase and the land could be largely restored at the end of the scheme's lifespan. As such, significant effects are unlikely.	Significant effect unlikely.
Are there any areas on or around the location occupied by land uses which could be affected by the project, particularly sensitive land uses e.g. hospitals, schools, places of worship, community facilities?	No.	N/A
Question 2(b) Relative Abundance, Availability Quality and Regenerative Capacity of Natural Resources in the Area and its Underground		
Are there any areas on or around the location which contain important, high quality or scarce resources e.g. groundwater, surface waters, forestry, agriculture, fisheries, tourism, minerals, which could be affected by the project?	Yes. The site is in agricultural use. However, the majority of the site is used for grazing, which could continue during the operational phase, and the effects of the proposal could be largely reversed at the end of the project's lifespan. I am therefore content that significant effects in these respects are therefore unlikely.	Significant effect unlikely.

5	Detailed Screening Questions	
Questions to be considered	Yes/No/Unknown – provide description	**For 'Yes/Unknown', are effects** likely to be significant?
Question 2(c) Absorption Capacity of the Natural Environment		
Are there any other areas on or around the location which are important or sensitive for reasons of their ecology, or are used by protected, important or sensitive species of fauna or flora, which could be affected by the project?	Yes, in places the site in within 2km of the Johnstown Newt Sites SAC and within 7km of the River Dee and Bala Lake SAC and the River Dee SSSI. NRW suggest that impacts on Great Crested Newts (GCN) could be potentially significant, particularly during construction and de-commissioning (GCN are a feature of the Johnstown Newt Sites SAC and Stryt Las SSSI located approximately 1.69 km and 1.7km away respectively). Additionally, NRW indicate that there is potential for otter to use tributaries of the Dee (including the River Clywedog) for foraging and dispersal along the river's entire catchment area. When considering otter as a feature of the River Dee and Bala Lake SAC and River Dee SSSI, significant cumulative impacts in this respect cannot be ruled out. As such, based on the information provided and given the scale and location of the proposal, I consider that significant effects on protected species are likely in the above respects at this stage.	Significant effect likely.
Are there any inland, coastal, marine or underground waters on or around the location which could be affected by the project?	Yes, as noted above the site includes part of the River Clywedog, unnamed watercourses and ponds. However, whilst this provides a pathway for effects on protected species as outlined	Significant effect unlikely

5	Detailed Screening Questions	
Questions to be considered	Yes/No/Unknown – provide description	**For 'Yes/Unknown', are effects** likely to be significant?
	above, given the type of development proposed, I do not consider that effects in terms of water quality are likely to be significant.	
Are there any areas or features of high landscape or scenic value on or around the location which could be affected by the project?	Yes, the proposal would potentially be visible from the Clwydian Range and Dee Valley AONB, but the degree of separation is such that any effect would not be significant.	Significant effect unlikely
Is the project in a location where it is likely to be highly visible to many people?	Yes. Parts of the land are particularly visible, included those immediately to the north and south of the A525, the B5430 and Tanllan Lane. Whilst there may be some scope for effects to be limited by established and additional screening, based on the level of information provided and given the scale of the proposal and its potential visibility, I consider that significant effects in this respect must be considered likely at this stage.	Significant effect likely.
Are there any areas on or around the location which are densely populated or built-up, which could be affected by the project?	No.	N/A
Are there any areas or features of historic or cultural importance on or around the location which could be affected by the project?	Yes. There are a number of historic assets located within 3 km of the site as identified in the request for a Screening Direction. Cadw note that the project layout has been modified to reduce the likely impact of the proposed development on the historic environment to a level which is not of	Significant effect unlikely.

5	Detailed Screening Questions	
Questions to be considered	Yes/No/Unknown – provide description	**For 'Yes/Unknown', are effects** likely to be significant?
	sufficient impact to require an EIA to be produced. I see no reason to disagree with that view. Cadw's response also indicates that there is not sufficient information on non-designated heritage assets and the potential for further buried archaeological information to be present in the proposed development area to allow its full impact to be determined at this stage. Further assessment in this respect will therefore likely be required. However, given the type of development proposed and the degree of physical works involved, I am satisfied that significant effects on the historic environment as a whole are nonetheless unlikely.	
Are there any areas on or around the location which are already subject to pollution or environmental damage e.g. where existing legal environmental standards are exceeded, which could be affected by the project?	No.	N/A
Is the project location susceptible to subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions, which could cause the project to present environmental problems?	Yes, the majority of the site lies in Zone A, with a small proportion within Zone C2. The request for Screening Direction identifies flood risk as a consideration at the site, and states that a Flood Consequences Assessment (FCA) would be prepared in support of the planning application. However, on the basis of the information	Significant effect unlikely.

5	Detailed Screening Questions	
Questions to be considered	Yes/No/Unknown – provide description	**For 'Yes/Unknown', are effects** likely to be significant?
	submitted and taking account of the type of development, I consider significant effects unlikely in this respect.	
Has there already been a failure to meet environmental quality standards that is relevant to the project?	No.	N/A

Statement of reasons
Based on the information provided and given the scale and nature of the proposed development, there is potential for significant effects on features of the Johnstown Newt Sites SAC and Stryt Las SSSI, particularly during construction and de-commissioning, and for cumulative impacts with other planned activities and projects which could have a combined effect on features of the River Dee and Bala Lake SAC and River Dee SSSI. It is also likely that the scheme would result in significant visual effects. For these reasons, I conclude that EIA is required in this instance.

6	Outcome of assessment	
(ii)	If a SO/SD has been provided do you agree with it?	N/A
(iii)	Is EIA required?	Yes

Outcome	Action	✓
Schedule 2 development – threshold exceeded/ criterion met or Sensitive Area and likely to have significant effects	Issue direction stating EIA Required (Letter 2)	✓

Name and Job Title of Assessor	Chris Sweet – Planning Officer
Date of Assessment	29/06/2020

Cyfoeth Naturiol Cymru
Natural Resources Wales

Ein cyf/Our ref: CAS-115403-R9J7
Eich cyf/Your ref: 3253253

Maes y Ffynnon,
Penrhosgarnedd,
Bangor,
Gwynedd,
LL57 2DW

[redacted]

Er sylw / For the attention of Giulia Bazzoni
Crown Buildings,
Cathays Park,
Cardiff,
CF10 3NQ

17/06/2020

Dear Ms Bazzoni,

BWRIAD / PROPOSAL: Solar photovoltaic electricity generating station and associated ancillary development, with an installed generation capacity of up to 77 MW.

LLEOLIAD / LOCATION: Land at Plas Power Estate, Ruthin Road, Wrexham

Thank you for your letter dated 28/05/2020 requesting Natural Resources Wales's (NRW) views on whether the above proposed development is likely to have a significant environmental effect.

We note the information provided (applicants covering letter, RPS, ref JPW1473, dated 27th May 2020, site location plan, layout plan, and panel elevations).

We consider that the proposed development is likely to have adverse effects on the environment. However, in light of the information available to us we cannot confirm the significance of all these effects. We therefore cannot rule out that some of these effects may be significant. In the absence of further information, we consider that the proposed development has the potential to have significant environmental effects.

Our view on the likelihood of significant effect on each of the environmental interests identified by you in your consultation letter is set out below:

Protected Species and Protected Sites

We consider that the proposed development has the potential to have environmental effects on the following protected species:

- Otter (feature of the Bala Lake and River Dee Special Area of Conservation (SAC), River Dee Site of Special Scientific Interest (SSSI) and a European Protected Species (EPS)

- Great Crested Newt (GCN) (feature of the Johnstown Newt Sites SAC and Stryt Las Site SSSI and an EPS

There are records of both species in close proximity to the development site (record of otter within approximately 400m and record of GCN directly adjacent the site).
In our opinion the applicants covering letter (RPS, ref JPW1473, dated 27th May 2020) fails to provide detailed consideration of potential impacts during construction, operation (in respect of maintenance of the solar panels), and de-commissioning and the measures envisaged to avoid or prevent significant effects.

We have identified that the development could result in environmental effects due to habitat loss and disturbance from the proposed development.

The supporting information indicates that the site includes part of the River Clywedog, unnamed watercourses and ponds. There is potential for otter to use tributaries of the Dee (including the River Clywedog) for foraging and dispersal along the river's entire catchment area. When considering otter as a feature of the River Dee and Bala Lake SAC and River Dee SSSI, we advise cumulative impacts could be significant. Currently there is insufficient information to rule out the impact of this proposal cumulatively with other development. We are aware of ongoing proposals for improvements to the adjacent A483 including Junction 4 (directly adjacent the site). It is also noted that the area to the east of the site is an allocation in the deposit Wrexham LPD.

We also consider that impacts on GCN could be potentially significant, particularly during construction and de-commissioning (GCN are a feature of the Johnstown Newt Sites SAC and Stryt Las SSSI located approximately 1.69 km and 1.7km away respectively). An effect during maintenance is also possible (for example as a result of the use of chemicals for the cleaning of solar panels).

Appropriate consideration will be required to INNS/biosecurity issues. In respect of dormouse and water vole, we agree with the outline impact assessments.

Therefore, in light of the information available to us we cannot confirm the significance of the effects referred to above. We therefore cannot rule out that these effects may be significant. In the absence of further information, we consider that the proposed development has the potential to have significant environmental effects.

We have considered the likelihood of significant effects from the scheme on environmental interests listed on our consultation topics list: Development planning advisory service, consultation topics

We provide further advice in Annex 1 on interest features in the NRW Consultation topic list which we consider are unlikely to be significantly affected by the proposed development, however these should be addressed as part of any planning submission.

Our advice does not rule out the potential for the proposed development to affect other interests, including other environmental interests, or human health. You may wish to consult other bodies for their expert advice on those effects.

Our advice is made without prejudice to comments we may subsequently wish to make when consulted on any planning application, any environmental permit, the submission of more detailed information, or an Environmental Statement.

Yn gywir / Yours faithfully,

[redacted]

Daniel Davies
Uwch Cynghorydd, Cynllunio Datblygu / Senior Advisor, Development Planning
Cyfoeth Naturiol Cymru / Natural Resources Wales

Annex 1

Landscape (Clwydian Range and Dee Valley Area of Outstanding Natural Beauty)

The Plas Power Estate site lies within open countryside to the west of the A484 and the large town of Wrexham, and to the east of village of Coedpoeth. Hillslopes rise gently across the site and westwards towards the upland plateau of Ruabon/ Esclusham Mountain. This plateau of open moorland and enclosed farmed hillslopes lie within the Clwydian Range and Dee Valley AONB. The boundary of this designated landscape lies 1.5km to the west of the Plas Power Estate site.

The screening effect of the plateau edge gives Ruabon/ Esclusham Mountain a remote and wild character. The area feels removed from the settled lowlands around Wrexham and its rural villages.

Footpaths and open access land within the vicinity of New Broughton (within the AONB) have the potential for views of the proposed solar farm. The greater than 1.5km viewing distance and panoramic nature of the view has the potential to make the solar farm a relatively small component of the view. The visual characteristics of the development are likely to have some contrast with farmland but would be seen quite closely associated with the settled and developed lowlands around the town of Wrexham.

From desktop context analysis, we consider the proposed development has the potential to have some adverse effect upon views from the AONB, but that the effects are unlikely to be significant.

We would expect a Landscape and Visual Assessment (LVA) to be undertaken and submitted with the planning application; the analysis of available views used to inform the layout of the scheme; and to identify any areas where strategic planting, thickening of hedgerows etc would benefit the development's visual integration. The AONB, local landscapes and local visual amenity interests need to be considered. A glint and glare assessment would also be required for viewpoints identified by the LVA.

Pollution Prevention

We note that a number of watercourses cross the site. There is potential for pollution to enter watercourses during the construction, operation and decommissioning of the solar farm. These provide a potential pollution pathway to the Clywedog River which ultimately flows to the River Dee (Bala Lake and River Dee SAC and River Dee SSSI) approximately 6.7 km away. However, subject to the implementation of appropriate pollution prevention measures and the site layout designed to maintain a stand-off from all watercourses during construction and operation (as set out in the applicants covering letter - RPS, ref JPW1473, dated 27th May 2020) we consider that a significant environmental effect is unlikely with regards to the impact of pollution on water quality and designated sites.

Flood Risk

The majority of the site lies in Zone A, with a small proportion within Zone C2 as defined by the Development Advice Map (DAM) referred to under Technical Advice Note (TAN) 15 Development and Flood Risk (July 2004). Our Flood Map confirms the site to be located partially within the 1% (1 in 100) and 0.1% (1 in 1,000) annual exceedance probability (AEP) event flood outlines.

The development proposal is for the construction of a circa 77MW solar farm and associated infrastructure. The following comments are based on the proposal being classified as 'less vulnerable' development in accordance with Figure 2 of TAN15.

We note that this consultation relates to an EIA Screening request. In respect to advising whether the proposal is likely to have a significant environmental effect, no detailed flood risk data/information has been submitted to inform our opinion. The 'EIA Screening Direction Request' does identify flood risk as a consideration at the site, and states that a Flood Consequences Assessment (FCA) would be prepared in support of the planning application. The proposed layout also suggests that the solar panels are to be set back somewhat from the flood outline. Acknowledging that the vast majority of the site lies outside the flood outline, and on this basis of the information submitted, there is unlikely to be a significant environmental effect as a result of the proposals in relation to flood risk, subject to production of a Flood Consequences Assessment (FCA) which fully mitigates flood risk in accordance with the requirements of TAN15.

The FCA will need to assess flood risk from all sources, including the Afon Clywedog and its tributaries. It should be noted that the flood outline on the DAM does not include the impacts of climate change, or culvert/bridge blockages. The FCA will need to quantify the flood risk posed to the site, considering the impacts of climate change. It will also need to be considered whether the blockage of any nearby bridges/culverts could influence flood risk at the site. Any flood risk data we hold for the site can be requested by contacting datadistribution@cyfoethnaturiolcymru.gov.uk.

For a solar farm development, we would typically expect a FCA to demonstrate the following, in order to comply with TAN15:

- All solar panel edges should be raised a minimum of 300 mm above the 1% AEP event with an allowance for climate change, including a blockage of any relevant culvert/bridge structures (if appropriate)
- All water sensitive infrastructure should be raised at least 300 mm above the 1% AEP event with an allowance for climate change, including a blockage of any relevant culvert/bridge structures (if appropriate)
- The FCA will need to assess the flood risk posed to the site and access in the extreme event (0.1% AEP event including a blockage of any relevant culvert/bridge structures), in relation to the tolerable thresholds outlined in A1.15 of TAN15
- It would need to be demonstrated that the proposal does not have an adverse impact on flood risk elsewhere, in up to the 0.1% AEP event including a blockage of any relevant culvert/bridge structures. If no ground raising/reprofiling within the flood outline is proposed then this will need to be outlined clearly in the FCA

Based on the proposed plan, it appears that the primary access road which has several crossings over the Afon Clywedog is an existing road, and it does not appear that any new development will be located within 8 metres of the Main River. A bespoke Flood Risk Activity Permit (Environmental Permitting Regulations England & Wales, 2016) would be required for any works in, over, under or near a main river or within 8 metres of Main River. Further advice and guidance is available on our website at:

http://www.naturalresources.wales/permits-and-permissions/flood-risk-activities/

Contaminated Land

The site historically has been part of an open cast coal mine and has had an industrial use, therefore there is potential for contamination, as commented in the RPS Letter JPW1473, a Desk Top Study and Preliminary Risk Assessment (DTS and PRA) will be required. These should be submitted along with any intrusive investigation and further risk assessment with any subsequent planning application, any resulting issue could be dealt with by planning conditions as appropriate.

Llywodraeth Cymru
Welsh Government

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Robert Sparey
Planning Inspectorate

dns.wales@planninginspectorate.gov.uk

Eich cyfeirnod
Your reference: DNS 3253253

Ein cyfeirnod
Our reference:

Dyddiad
Date: 15 June 2020

Llinell uniongyrchol
Direct line: [redacted]

Ebost
Email: [redacted]

Dear Robert

EIA Screening - Plas Power Estate, Ruthin Road, Wrexham LL11 3BS

Thank you for your letter of 29 May asking for Cadw's view on the likely impact of the proposed development described above on the environment and whether or not Environmental Impact Assessment (EIA) is required.

Cadw, as the Welsh Government's historic environment service, has assessed the characteristics of this proposed development and its location within the historic environment. In particular, the likely impact on designated or registered historic assets of national importance. In assessing if the likely impact of the development is significant Cadw has considered the extent to which the proposals affect those nationally important historic assets that form the historic environment, including scheduled ancient monuments, listed buildings, registered historic parks, gardens and landscapes.

These views are provided without prejudice to the Welsh Government's consideration of the matter, should it come before it formally for determination.

Our records show that the historic assets listed in Annex A are potentially affected by the proposal.

The proposed development is some 139ha but only between 25% and 40% of this are will be "over sailed" by photovoltaic panels.

The designated historic assets in Annex A are located inside 3kms of the application area. When Cadw was consulted on this proposed development in 2019 there were significant concerns about the likely impact of the proposed development on scheduled monuments DE131 Cadwgan Hall Mound, and DE132 Offa's Dyke: Cadwgan Hall Section, extending from River Clywedog to the Railway and particularly in regard to scheduled monument DE180 Offa's Dyke: Section in Plas Power Park. A site meeting was held where we expressed our concerns and it is noted that the proposed development area has now been

Mae'r Gwasanaeth Amgylchedd Hanesyddol Llywodraeth Cymru (Cadw) yn hyrwyddo gwaith cadwraeth ar gyfer amgylchedd hanesyddol Cymru a gwerthfawrogiad ohono.

The Welsh Government Historic Environment Service (Cadw) promotes the conservation and appreciation of Wales's historic environment.

Rydym yn croesawu gohebiaeth yn Gymraeg ac yn Saesneg.
We welcome correspondence in both English and Welsh.

BUDDSODDWR MEWN POBL
INVESTOR IN PEOPLE

Cadw

altered in particular in the area surrounding scheduled monument DE180, but also in the areas close to scheduled monuments DE131 and DE132.

These changes have reduced the likely impact of the proposed development on the historic environment to a level which is not of sufficient impact to require an EIA to be produced. However, the proposed development is still likely to have an adverse impact on the settings of a number of the designated historic assets identified above and also on non-designated historic assets. Consequently any application for this development will need to be accompanied by a desk-based historic environment assessment including information on the scale of these impacts.

It should also be noted that there may not currently be sufficient information on the non-designated heritage assets and the potential for further buried archaeological information to be present in the proposed development area to allow its full impact to be determined. Consequently there may be a need for a geophysical survey and possibly an archaeological field evaluation, to be carried out prior to the submission of the planning application so that the results of this work can be included with that submission.

Yours sincerely

Jenna Arnold
Diogelu a Pholisi/ Protection and Policy

Annex A

Scheduled Ancient Monuments:
DE017 Erddig Mound & Bailey Castle
DE047 Hadfod-y-Bwlch Round Barrow
DE048 Croes-Foel Round Barrow
DE110 Offa's Dyke: Section S from Cae Llewellyn
DE113 Offa's Dyke: Vron Farm Section
DE131 Cadwgan Hall Mound
DE132 Offa's Dyke: Cadwgan Hall Section, extending from River Clywedog to the Railway
DE137 Offa's Dyke: Pentre-Bychan Hall Section, extending 540m S from Bron-Wylfa
DE139 Offa's Dyke: Plas Power Section
DE152 Wat's Dyke: Section extending from Erddig Park to Middle Sontley
DE153 Wat's Dyke: Section extending from Middle Sontley to Black Brook Bridge
DE158 Wrexham Churchyard Ornamental Wrought Iron Gates and Screen
DE163 Fairy Oak Round Barrow
DE164 Hillbury Round Barrow
DE165 Wat's Dyke: Section South of Ruthin Road
DE173 Wat's Dyke: Sections N & S of the Court
DE174 Offa's Dyke: Section S of Bryn yr Owen Farm
DE178 Offa's Dyke: Section S of Aberderfyn Road
DE179 Offa's Dyke: Sections N & S of Bryn yr Owen Colliery
DE180 Offa's Dyke: Section in Plas Power Park
DE181 Offa's Dyke: South Section at Coedpoeth
DE182 Offa's Dyke: North Section at Coedpoeth
DE183 Offa's Dyke Section South of River Gwenfro
DE184 Offa's Dyke: Vron Section
DE185 Offa's Dyke: Section South of Brymbo Colliery
DE189 Bersham Ironworks
DE191 Wat's Dyke: Section SSW of Wrexham Station, 130m Long
DE193 Moated Site near Groesfoel Farm, Rhostyllen
DE194 Offa's Dyke: Section extending 120m from Railway to Bronwylfa Road, Legacy
DE199 Bersham Colliery: No 2 Winding Gear
DE202 Brymbo Ironworks: Early Blast Furnace, Cast House & Foundry
DE203 Penrhos Engine House
DE221 Wat's Dyke: Garden Village Section
DE237 Nant Mill Wood Shaft Mounds
DE241 New Minera Lead Mine
DE242 Minera Halvans Plant
DE243 Taylor's Shaft, Minera
DE244 Meadow Shaft, Minera
DE286 Wat's Dyke at Crispin Lane, Wrexham
DE290 Gatewen Hall round barrow

Registered Historic Parks and Gardens:
PGW (C) 62 Wrexham: Erddig (grade I)
PGW (C) 67 Wrexham: Wrexham Cemetery (grade II)

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wrexham
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CYNGOR BWRDEISTREF SIROL
wrecsam

GIULIA BAZZONI
PLANNING AND ENVIRONMENT TEAM
THE PLANNING INSPECTORATE
CROWN BUILDINGS
CATHAYS PARK
CARDIFF
CF10 3NQ

Your Ref/Eich Cyf 3253253
Our Ref/Ein Cyf ENQ/2020/0077
Date/Dyddiad
Ask for/Gofynner am
Direct Dial/Rhif Union
E-mail/E-bost [redacted]

Dear Madam,

Town and Country Planning Act 1990
The Developments of National Significance (Procedure) (Wales) Order 2016 (As Amended)
Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017

SCREENING DIRECTION CONSULTATION FROM PLANNING INSPECTORATE
PLAS POWER ESTATE, RUTHIN ROAD, WREXHAM. LL11 3BS

I refer to your letter dated 28 May 2020.

With reference to your consultation regarding the above, please see below my comments regarding the proposals. I have only provided comments on matters that are considered likely to give rise to significant impacts. As a development within Schedule 2 of the 2017 EIA regulations the proposal has been assessed under the screening criteria set out in Schedule 3.

1. characteristics of the development;
(a) the size and design of the development;
(b) the cumulation with other existing development and/or approved development;
(c) the use of natural resources, in particular land, soil, water and biodiversity;
(d) the production of waste;
(e) pollution and nuisances;
(f) the risk of major accidents and/or disasters relevant to the development concerned, including those caused by climate change, in accordance with scientific knowledge;
(g) the risks to human health (for example due to water contamination or air pollution).

Under item b, the development lies close to an existing solar park north-west of Legacy Substation, and there are two nearby energy schemes in the DNS process which are likely to involve connections to the Legacy sub-station (DNS/3237973 Bersham Glenside and DNS/3251435 Legacy gas).

Rydym yn croesawu gohebiaeth yn Gymraeg.
Byddwn yn ymateb i unrhyw ohebiaeth yn Gymraeg ac ni fydd hyn yn arwain at unrhyw oedi.

We welcome correspondence in Welsh.
We will respond to any correspondence in Welsh and this will not lead to any delay.

With regard to item g, comments are attached from the Contamination officer (appendix A), which conclude that the impacts of the development can be adequately assessed through reports to accompany the application.

2. location of the development; and
(a) the existing and approved land use;
(b) the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground;
(c) the absorption capacity of the natural environment, paying particular attention to the following areas—
(i) wetlands, riparian areas, river mouths;
(ii) coastal zones and the marine environment;
(iii) mountain and forest areas;
(iv) nature reserves and parks;
(v) European sites and other areas classified or protected under national legislation;
(vi) areas in which there has already been a failure to meet the environmental quality standards laid down in Union legislation and relevant to the project, or in which it is considered there is such a failure;
(vii) densely populated areas;
(viii) landscapes and sites of historical, cultural or archaeological significance.

The site has no formal national or international designations.

Special Landscape Area (SLA)

Parts of the site fall within a Special Landscape Area designated under policy EC5 of the Wrexham Unitary Development Plan and a Green Barrier under policy EC1
https://www.wrexham.gov.uk/service/development-plans-and-other-planning-policy/wrexham-unitary-development-plan
The Wrexham Local Development Plan is likely to be adopted in the near future
https://www.wrexham.gov.uk/service/development-plans-and-other-planning-policy/wrexham-local-development-plan-2-ldp2-2013-2028

The site is within Wrexham LANDMAP areas 7c, 7d and 9a (appendix B).

The key priority is the conservation and enhancement of the landscape. UDP policy EC5 does not explicitly refer to renewable energy, however the key consideration for this type of development will be demonstrating that the proposals have been designed to minimise visual impact from both near and distinct viewpoints. The land is not included within an LDP SLA.

Landscape Impact

The development will inevitably result in a significant change to the existing landscape. Whilst I am confident that there are areas of the land where the development would not be unduly prominent, parts of the land are particularly visible, included those areas

immediately to the north and south of the A525, the B5430 and Tanllan Lane. I am concerned that due to the longer distance views possible of the land from these roads, parts the development would be highly visible and therefore harmful to the landscape. This is matter that would need to be given further detailed consideration. Whilst the site is some distance from the Clwydian Range and Dee Valley Area of Outstanding Natural Beauty, it will also be necessary to consider the impact upon via long distance viewpoints.

Taking all of the above into account, the final design of the development will need to be informed by a Landscape and Visual Impact Assessment. Opportunities for landscape enhancements to help integrate the development into the wider rural landscape will also need to considered.

Details of the electricity connections to Legacy Sub-station should be supplied.

Consultation is required with Natural Resources Wales.

Agricultural Land

According to the Welsh Government's Predictive Agricultural Land Classification map, the majority of the land would appear to be Grade 3b land, and it also contains Grade 2. The development of land containing Grade 2 land would therefore need to have regard to UDP policy EC2 as well as paragraphs 3.54 and 3.55 of Planning Policy Wales.

Flood Risk

The southern part of the site falls within C2. Technical Advice Note 15 advises that development should be directed away from zone C2; however given that only a small portion of the land is falls within C2 zone it would appear possible to design the development to take full account of this matter.

Consultation is required with Natural Resources Wales.

Ecology

The proposal for a solar farm in this location has the potential to adversely impact on 2 Local Wildlife Sites W218 (Legacy substation) and W217 (Big Wood). There are also potential impacts on the River Clywedog, a tributary of the River Dee Special Area of Conservation. Other species of concern include ground nesting birds which are nationally declining and the European protected great crested newt which has a strong population in the area. The submitted site plan shows limited scope for ecological mitigation or bettering.

Consultation is required with Natural Resources Wales.

Rydym yn croesawu gohebiaeth yn Gymraeg.
Byddwn yn ymateb i unrhyw ohebiaeth yn Gymraeg ac ni fydd hyn yn arwain at unrhyw oedi.

We welcome correspondence in Welsh.
We will respond to any correspondence in Welsh and this will not lead to any delay.

Trees and Hedgerows

The development would be designed to minimise the loss of trees and hedgerows. I would expect an Arboricultural Impact Assessment to be undertaken prior to the layout of the development being finalised.

Historic Environment
The site is close to Offas Dyke, a scheduled ancient monument, and Bersham Conservation Area.
http://old.wrexham.gov.uk/english/planning_portal/historic_environment/bersham.htm
Comments from the Clwyd-Powys Archaeological Trust (appendix C) and conservation/heritage officers are attached (appendix D).

Consultation is required with Cadw.

Public rights of way
Bersham public footpath 1 runs through, and will be obstructed by, the proposed development. The application should explain the intention with regard to the footpath.

Highways
There would be impacts on the local road network in terms of the construction phase and details of traffic routing and any accommodation works should be supplied. A Construction Traffic Management Plan (with provision for contractor parking) will definitely be required. Once operational, the vehicle movements are likely to be minimal.

The scheme should review their proposed temporary & permanent access points in terms of design, vehicle sizes, visibility, hard paving, anticipated traffic movements etc., and the suitability of the proposed routes to the site.

TAN 18 provides guidance on thresholds for requesting Transport Assessments for different class uses, and given its size, it may well require a Transport Assessment.

There may be impacts on the A483 trunk road and consultation is required with the North and Mid Wales Trunk Road Agency.

3. characteristics of the potential impacts;
(a) the magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected);
(b) the nature of the impact;
(c) the transboundary nature of the impact;
(d) the intensity and complexity of the impact;
(e) the probability of the impact;
(f) the expected onset, duration, frequency and reversibility of the impact;
(g) the cumulation of the impact with the impact of other existing and/or approved development;
(h) the possibility of effectively reducing the impact.

Rydym yn croesawu gohebiaeth yn Gymraeg.
Byddwn yn ymateb i unrhyw ohebiaeth yn Gymraeg ac ni fydd hyn yn arwain at unrhyw oedi.

We welcome correspondence in Welsh.
We will respond to any correspondence in Welsh and this will not lead to any delay.

There will be impacts in terms of the change to the locality and release of potential pollutants as set out above, but these will be assessed through the submission of detailed reports and the application process.

Overall conclusion
In light of the comments made above, the proposed development is considered to be one that should not be subject to an Environmental Impact Assessment.

Yours faithfully,

[redacted]

Pennaeth yr Amgylchedd a Chynllunio/Head of Environment and Planning

Appendices:

A. Comments from Contaminated land officer
B. LANDMAP area 7c 7d and 9a
C. CPAT comments
D. Heritage comments

Rydym yn croesawu gohebiaeth yn Gymraeg.
Byddwn yn ymateb i unrhyw ohebiaeth yn Gymraeg ac ni fydd hyn yn arwain at unrhyw oedi.

We welcome correspondence in Welsh.
We will respond to any correspondence in Welsh and this will not lead to any delay.

3253253 ENQ/2020/0077 Appendix A
Simon,

Re: ENQ/2020/0077 – DNS Application – Proposed 77 Mw Solar Park, Land at Plas Power Estate, Ruthin Road, Wrexham LL11 3BS

I have considered all of the information submitted in support of the above enquiry and I can provide the following comments.

It is noted that the proposed development is located on an area of land that has been historically identified as forming part of an open cast mine (1964) and subsequently a non water fill (1976) as these former uses have the potential to cause residual contamination it will be necessary to condition any future consent to ensure that any potential contaminations issues are dealt with. Should a planning application be submitted we would recommend to the Planning Department that our standard contamination conditions are imposed on any permission granted. This would require the developer to undertake a phased contamination assessment and if deemed necessary remedial works and verification.

Kind regards
Stacey

Stacey Inglis
Contaminated Land Officer
[redacted]



West Wrexham Ridges and Valleys 7d

This is one of a series of Local Planning Guidance Notes based on Wrexham LANDMAP (adopted November 2004), setting out recommendations for each Landscape Character area.



West Wrexham Ridges and Valleys summary:

- Mixed rural and urban village character
- Strong NW-SE orientation, with alternating ridges and valleys
- Hilltop villages separated by woodland, former industrial land and farmland
- Widespread use of local Cefn sandstone in older buildings, and distinctive stone walls
- Changing landscape as post mining restoration and regeneration continue
- Variety of wildlife habitats including small but important wetlands
- Border area - Offa's Dyke and site of prehistoric hillfort

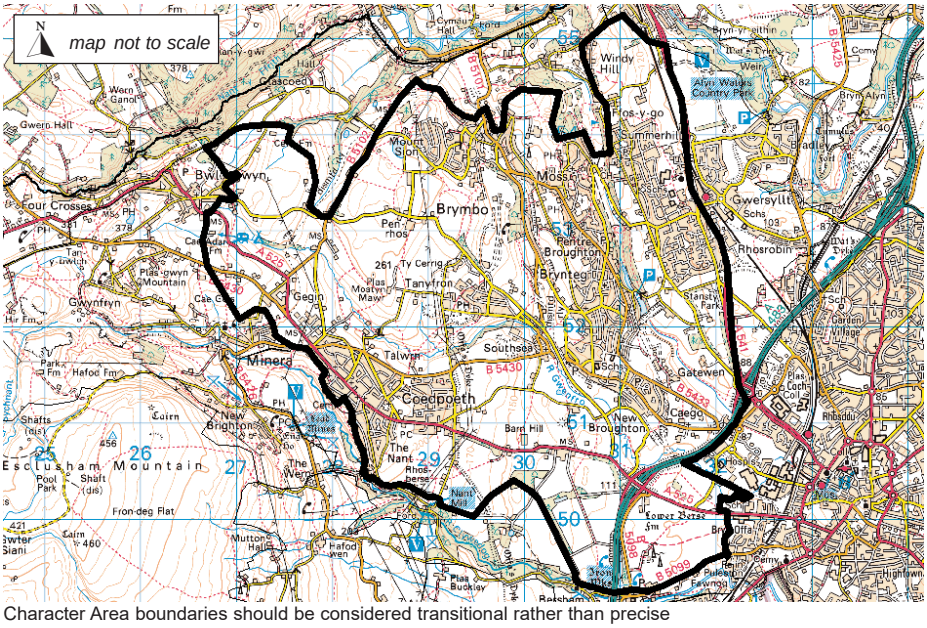


A complex area of former mining villages, industry, farmland and woodland in a landscape of distinct ridges and valleys which are aligned towards Wrexham town

Landscape context

West Wrexham Ridges and Valleys is the largest and most varied of four character areas in Wrexham which have a mixed rural and urban landscape. The other areas are Chirk, Rhosllannerchrugog - Rhostyllen, and Cefn Mawr

Map of West Wrexham Ridges and Valleys Landscape Character Area



Character Area boundaries should be considered transitional rather than precise

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Key characteristics

Visual character:

- Visually varied and complex, including lowland, valleys and hill and scarp areas
- Characteristic undulating hill slopes with wooded valleys
- Views towards Wrexham and the lowlands
- Urban villages and Wrexham linked by roads crossing open lowland farmland area
- Scattered groups of buildings in local Cefn sandstone and stone-built village cores, individuality in later additions but much standardised modern housing development

Geological character:

- The complex landform is related to geological faults, with alternating series of resistant sandstone ridges, and Coal Measure valleys of Carboniferous age
- Villages are built on outcrops of Cefn Rock (sandstone) which has been quarried for local building stone
- Glacial till covers much of the lower areas, with glacial sands and gravels towards Wrexham
- Many artificial landforms including the former Brymbo steelworks site

Ecological character:

- Much of the non-built area is improved grassland or arable of relatively low value

- Important wetlands include reed mace swamp at Gatewen Moss and rich swamp and marshy grassland at Higher Berse Marsh. Gwenfro valley has wet woodland and areas of valuable lowland pasture
- Plas Power tip and the former Brymbo Steelworks site are being restored mainly to broadleaved woodland

Historical character:

- Countryside has remnants of ridge and furrow, regular and irregular fields, but much land has been disturbed
- Most settlement is related to 19th and 20th century mining and industry
- Remnants of Bryn y Gaer prehistoric military hillfort at Pentre Broughton and the route of Offa's dyke can be identified
- Brymbo steelworks heritage area and Plas Power colliery buildings have been preserved
- Network of disused industrial railway lines crosses area

Cultural character:

- Urban villages retain their own cultural identity, but this is becoming weakened
- Area is affected by A483 corridor, which separates it from Wrexham, but increases accessibility to commuters
- Agriculture is still of some importance but horsiculture is an increasing land use

Landscape sensitivity

This area continues to accommodate profound changes, but is vulnerable to further loss of local distinctiveness, and coalescence of villages because of continuing development pressure. The small scale of the ridges and valleys means they are sensitive to large scale development, masts and power lines, and inappropriate engineered landfoms

Overall management strategy:

Conservation

Management Guidance

Aims	Guidelines
Enhance character of hill villages and wooded valleys	• Promote urban forestry, strengthen, restore and enhance wooded valleys • Keep settlements separate and maintain green barrier between villages and Wrexham town • Encourage the restoration and repair of rural and urban stone walls using local stone • Avoid standardised new developments using non-local materials and inappropriate highway design
Develop an accessible green network	• Maintain and develop green corridors for wildlife and people, linking rural and urban green spaces
Promote positive management of urban fringe countryside	• Encourage hedgerow retention and management and new hedgerow and tree planting along the urban fringe • Promote agri-environment agreements to encourage management for public access and wildlife as well as sustainable agricultural production • Areas for Horsiculture are to conserve traditional field boundaries Avoid the proliferation of fences, structures and buildings within the countryside, where this would erode character
Conserve geological features	• Maintain continuity and integrity of rock and glacial exposures and landforms
Enhance and extend existing habitats for wildlife	• Maintain high water table in wetland habitats and extend wetland habitats • Maintain secondary habitats in industrial redevelopments • Protect potential bat and owl roosting sites in old buildings and walls • Manage and extend woodlands to improve structure and wildlife value
Preserve archaeological features	• Maintain green areas to preserve surviving archaeology, carry out field and desk studies of fieldscape • Preserve by record Bryn y Gaer hillfort, evaluate in advance of any development or groundworks • Evaluate industrial sites in urban villages in advance of development • Preserve disused railway lines, and assess in wider industrial context • No development on or near Offa's Dyke - contact Cadw
Preserve local distinctiveness	• Support community cultural initiatives in urban villages, preserve historic appearance of buildings and settlements



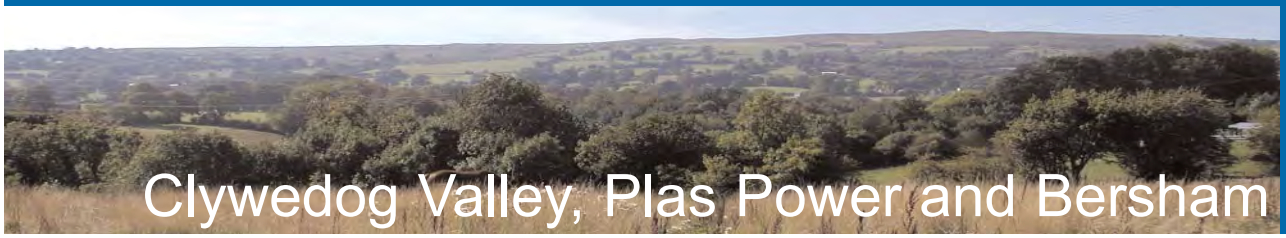
For further information contact:

Planning Environment
Planning Department
Wrexham County Borough Council
Lambpit Street, Wrexham. LL11 1AR

All our information is available in accessible formats

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Back



Clywedog Valley, Plas Power and Bersham 9a

This is one of a series of Local Planning Guidance Notes based on Wrexham LANDMAP (adopted November 2004), setting out recommendations for each Landscape Character area



Clywedog Valley, Plas Power and Bersham summary

- Cut-off areas of countryside, and wooded valley to the east of Wrexham town
- Woodlands of high nature conservation value
- Country parks at Nant Mill and Minera
- High potential for recreation, linking town and country
- Heritage centre and ironworks at Bersham
- Plas Power estate adjoining Clywedog Valley, surrounded by a magnificent stone wall

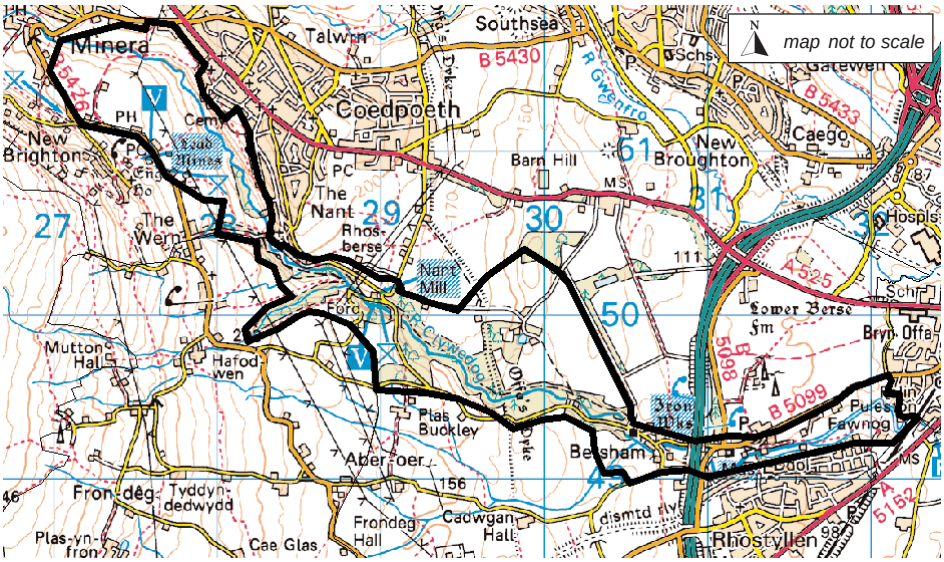


Small wooded valley from Wrexham to Minera, providing woodland walks with industrial archaeology and nature conservation interest, historically linked to Plas Power estate and Bersham iron works

Landscape context

This is one of several minor river valleys which are well wooded, with features showing former industrial uses. Adjacent farmed and wooded estate countryside is also included in this character area. The other valleys of this type are the River Alyn valley (9b), Ffrith Valley (9c) and Dee Valley - Froncysyllte to Newbridge (9d)

Map of Clywedog Valley, Plas Power and Bersham Landscape Character Area



Character Area boundaries should be considered transitional rather than precise

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Key characteristics

Visual character:

- Varied visual character but area, though close to settlements, is separated from them by walls, roads or topography and has a more tranquil character
- Upper Clywedog valley is overlooked by Coedpoeth and Minera, middle section is a wooded rocky gorge, and lower section is more shallow with a mosaic of lowland farmland and woodland
- Substantial Cefn sandstone stone walls of the Plas Power estate surround approximately a square mile of parkland

Geological character:

- In this area the upper Clywedog Valley follows a course between Esclusham Mountain to the south and Coal Measure areas to the north, separated by fault lines. The lower valley cuts through part of the terrace of sands and gravels known as the Wrexham delta terrace, on which Wrexham sits
- The river is incised into the landform, and where it cuts through resistant Cefn sandstone in the area of Nant Mill Country Park there are steep slopes and rock exposures
- There is much disturbed land or woodland, but soils are generally derived from alluvium or glacial drift.

Ecological character:

- Several valuable habitats associated with the river, valley bottom and floodplain
- River Clywedog is an aquatic habitat of high value



- Upland mixed ash woodland of high value and oak/ash/sycamore woodland are found in the valley and Plas Power estate

Historical character:

- The area is crossed by Offa's Dyke, a prehistoric military feature of outstanding archaeological value
- The eastern half of the Plas Power estate is restored land, following post war opencast coal mining, and the remaining designed landscape is in poor condition
- North of Bersham, the farmland retains a pattern of small fields

Cultural character:

- Recreational and educational area with Clywedog Trail from Wrexham to Minera, Bersham Heritage Centre and Minera lead mining centre, and the Nant Mill Country Park
- Bersham, now a Conservation Area, was a centre for iron working, and originally the trees from the valley provided charcoal for smelting. John Wilkinson (1728-1808) known as 'the father of the iron trade' is of international renown - the ironworks supplied clients throughout Europe
- The valley is linked to the Plas Power estate, of which the central core (the Hall has been lost) and the higher parts survive

Overall management strategy:

Conservation and Restoration

Management guidance

Aims	Guidelines
Enhance existing visual character	● Retain wooded valley character ● Protect and restore remaining historic landscape features of interest in Plas Power estate, ensure appropriate land uses
Conserve geological features	● Maintain continuity and integrity of rock exposures and Landforms and assess new exposure ● Maintain integrity of fluvial and glacial landforms
Enhance and extend wildlife habitats	● Enhance river bank habitats and minimise hard bank engineering such as canalisation or retaining walls ● Replace coniferous trees with native broadleaved trees in woodlands, increase diversity in woodland structure, retain old/dead trees standing or fallen, restrict grazing ● Enhance lowland pastures ● Encourage agri-environment agreements for sustainable land management ● Refer to Green network strategy due March 2007 to identify potential sites
Conserve historical features	● Preserve evidence of former industrial uses along river ● Assess archaeology prior to any new developments ● No development on or near Offa's Dyke - contact Cadw ● Preserve important elements of designed landscapes, and seek to reinstate original design intent, where in decline or degraded
Enhance and interpret cultural heritage	● Support Clywedog Trail and Bersham Heritage Centre ● Manage valley woodlands and historic landscape features for recreation and education ● Strengthen links into Wrexham Town, and up to Minera Quarry and Esclusham Mountain (refer to Green Network Strategy)

Landscape sensitivity:

The scale of the valley is very small, and any incongruous development within it or nearby, or loss of tree cover could affect its character. The Plas Power estate and Bersham areas are vulnerable to recreational and residential development because of their proximity to Wrexham town.



For further information contact:

Planning Environment
Planning Department
Wrexham County Borough Council
Lambpit Street, Wrexham, LL11 1AR

All our information is available in accessible formats

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Rhosllannerchrugog - Rhostyllen Ruabon - Penycae

7c

This is one of a series of Local Planning Guidance Notes based on Wrexham LANDMAP (adopted November 2004), setting out recommendations for each Landscape Character area.



Rhosllannerchrugog Rhostyllen - Ruabon Penycae summary

- Rural and urban areas affected by history of mining and quarrying
- Villages (Rhos, Penycae, Rhostyllen, Ruabon) characterised by high density and use of Ruabon red brick
- Prehistoric military border area - Gardden hill fort and Offa's Dyke
- Much accessible natural greenspace forming ecological network, including woodland and grassland habitats of high value
- The A483 and railway follow the lower edge of area

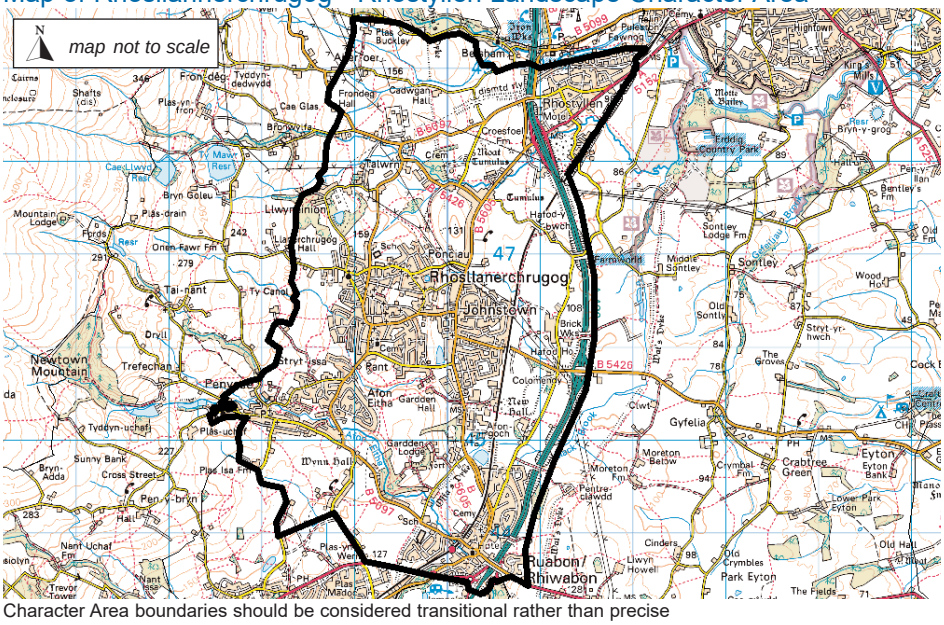


Closely-built former mining communities with a rich cultural heritage, located on the lower slopes of Ruabon Mountain, and distinguished by the widespread use of local Ruabon red brick

Landscape context

Rhosllannerchrugog - Rhostyllen is one of four character areas in Wrexham which have a mixed rural and urban landscape. The other areas are Chirk, Cefn Mawr and West Wrexham Ridges and Valleys

Map of Rhosllannerchrugog - Rhostyllen Landscape Character Area



Character Area boundaries should be considered transitional rather than precise

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Key characteristics

Visual character:

- Lower slopes of Ruabon Mountain consisting of undulating farmland, with residential and industrial development.
- Bersham colliery and tip, and the former Hafod tip, now restored, are landmarks

Geological character:

- Gentle Carboniferous Coal Measure slopes (sandstone) mostly overlain by glacial till, although Rhosllannerchrugog centre is built on an outcrop
- A sandstone ridge, highest at Gardden Hill and followed to the north by Offa's Dyke (part now under Johnstown) runs through the centre of the character area
- To the east of Johnstown, Etruria Marl has been quarried to make the characteristic red bricks and tiles

Ecological character:

- Most farmland is improved grassland of low biodiversity value
- Some former industrial sites are now of high wildlife value, including Stryt Las (great crested newts), the former Hafod tip (a young broadleaved woodland), and birch woodland north of Rhos
- Fragmented areas of semi-natural vegetation include broadleaved scrub, neutral grassland, upland oak woodland along the Afon Eitha valley, beech woodland on Gardden Hill, neutral grassland at Legacy substation, lowland pasture, and oak/ash/sycamore woodlands around the Crematorium and Llwyneinion

Historical character:

- Settlements are mainly of 19th -20th century origin but Penycae and Ruabon have older centres
- Coal mining remains are frequent but Bersham Colliery, with its coal spoil tip and remaining headgear is of particularly high value. Industrial sites are linked by a network of disused industrial railways
- Border area - prehistoric military hillfort at Gardden and Offa's Dyke, marking a former political and military boundary

Cultural character:

- Rhostyllen, with modern industrial and commercial areas next to the A483, is now closely linked to Wrexham town
- Johnstown, once linked with the brickworks and Hafod colliery, is a mainly English-speaking community.
- Rhosllannercrugog is a culturally rich community with strong Welsh culture and language
- Surrounding farming is under pressure, with part time holdings and increase in 'horsiculture'
- Hafod y Bonc Country Park is a former tip now important for environmental education and recreation

Landscape sensitivity:

The distinctive Welsh identity of the area is vulnerable to development pressure, particularly infill housing of standardised design and materials.The A483 corridor is visually threatened by nearby landfill, masts, building development and power lines. Surrounding farmland is also very vulnerable to urban pressures

Overall management strategy:

Enhancement, conservation and sustainable development

Management guidance

Aims	Guidelines
Enhance visual character	● Promote urban forestry and enhance remaining areas of neglected or derelict land ● Rationalise/reduce overhead power line clutter ● Survey and assess use of sandstone and local brick in walls and buildings
Develop an accessible green network	● Retain and improve environment for pedestrians and cyclists within settlements through the development of accessible natural green space and green network (refer to Green Strategy due March 2007)
Conserve geological features	● Maintain morphological integrity of landform and assess new exposures
Enhance and extend existing habitats for wildlife	● Develop wildlife corridors as part of a green network, linking areas of fragmented habitats (refer to Green Network Strategy due March 2007) ● Maintain ponds and protected great crested newts ● Maintain, enhance and expand: scrub, broadleaved woodland, lowland pasture and hedges ● Diversify improved grassland and farmland and reduce chemical use in agriculture
Preserve archaeological features	● Preserve mining remains, especially winding house, headgear and tip at Bersham, maintain and repair ● Development which adversely affect the site or setting of Offa's Dyke or Gardden Hill Fort would not be permitted ● Preserve historic core of Ruabon, including mills and chapels
Survey area of potential archaeological interest	● Evaluate historic core of settlements prior to development and assess in relation to wider historic landscape ● Carry out surveys of former colliery sites, railway lines and quarries, and assess in context of wider industrial landscape.Conserve historic transport routes
Strengthen cultural identities of settlements	● Preserve coal mining heritage at Bersham Colliery as visible reminder of Wrexham's former industrial base ● Preserve character of lower Ruabon slopes e.g. field systems, industrial sites ● Support Welsh-language cultural initiatives, and culturally distinct communities



For further information contact:
Planning Environment
Planning Department
Wrexham County Borough Council
L[redacted]

All our information is available in accessible formats

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Back

3253253 ENQ/2020/0077 Appendix C CPAT Comments

Dear Simon

Thank you for the consultation on this screening opinion. Our comments are as follows:

1) Background

We previously received the cultural heritage DBA from the RPS in November 2019 for comment and Cadw were consulted also. RPS provided a zoned plan (copy attached). At that time our comments were:

1. Remove Zone C from the development proposal to protect the setting of the scheduled dyke.

2. In zone D pull the red boundary back to the east from the edge of Big Wood by at least 100 metres
and preferably as far as the track to preserve the setting of the scheduled dyke here.

3. Geophysics of all fields not impacted by the prior extraction activity to determine the sub-surface
potential. The geophysics should preferably use the caesium-vapor magnetometry technique on a 0.25m
x 1m sensing grid using a towed array. We typically use the TigerGeo contractors for this. The results
should be appropriately filtered and fully interpreted.

4. The proposal will need to assess the impacts of any electrical connection route to the grid.

Some of this advice has been taken forward in the last six months including a partial removal of panels in Zone C around Offas Dyke to the north and in the area south of the former Plas Power Hall. The geophysics will need to be completed at the pre-determination stage to inform the application. Other potential visual impacts on scheduled monuments in the vicinity and the Bersham Ironworks have been assessed and we are in agreement that there is no signifcant visual impact. There was no setting impact assessment for the Grade II listed Plas Power Estate buildings and this will need to be completed via a Heritage Impact Assessment for any forthcoming application.

2) Screening

In terms of the screening opinion Cadw will therefore need to inform the LPA as to whether they still consider there to be a potential significant visual impact on Offa's Dyke in light of the fact that the layout alterations suggested in November have been partly completed.

With regard to non-designated archaeology a large part of the eastern half of the application area has been destroyed by later mineral extration. We would still require pre-determination geophysics in areas outside the former extraction zone and information from

this may result in some additional pre-determination evaluation and layout alterations. A significant impact is not likely as we can normally adjust the array layout to avoid any significant sub-surface archaeology revealed.

There may be a setting impact for the Grade II listed Plas Power Estate buildings (notably the stables) within the park even though many are screened by woodland and this needs to be assessed. The visual impact is not likely to be signifcant with appropriate screening and layout adjustments.

I hope these comments are useful, but please get back to me if you would like to discuss them further.

Kind regards

Mark Walters

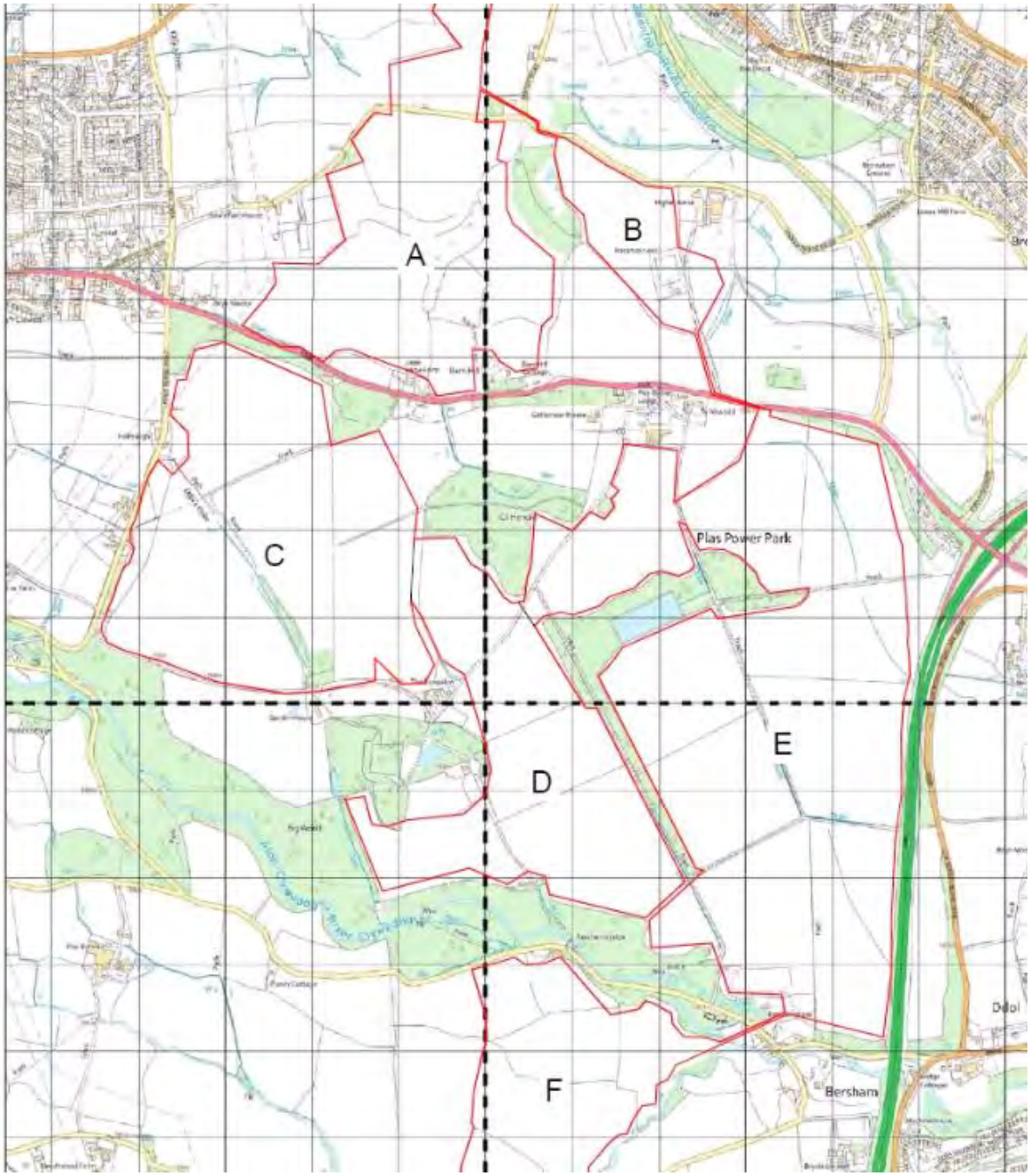
Mark Walters
Development Control Archaeologist / Swyddog Rheoli Datblygiad

Please note that our office is closed due to the coronavirus situation and I am working from home



Ymddiriedolaeth Archaeolegol Clwyd-Powys, Y Swyddfeydd, Coed y Dinas, Welshpool, SY21 8RP, Swyddfa Gofrestredig fel yr uchod. Rhif Cwmni 1212455, Rhif Elusen 508301, Sefydliad Cofrestredig CIfA.

Clwyd-Powys Archaeological Trust, The Offices, Coed y Dinas, Welshpool, SY21 8RP.
Registered Office as above. Company No 1212455, Charity No 508301. Chartered Institute for Archaeologists Registered Organisation No 6.
Please note that I do not work Fridays


A
B
C
D
E
F
Plas Power Park
Bersham
Depot

3253253 ENQ/2020/0077 Appendix C Heritage Comments

I am concerned regarding the field immediately to the north of the ironworks, as it's used as an overflow car park when we have the History Alive events at the site, without it we will be limited to the normal site car park only which will be major issue for the viability of the event.

The proposed development isn't going to be visible from any of the ironworks buildings although visitors will catch site of it from the car park and down towards the mill, there is unlikely to be anything there archaeologically because as Mark says it was trashed by a big NCB opencast in the 70s.

The area to the south of the river will have been crossed by waggon ways bringing raw materials to the works but likely they would have been destroyed by agriculture since the 18th Century. I agree with Mark's recommendations for geophysical surveys particularly over the proposed cable trench lines and for taking the development away from the dyke to protect its setting as much as possible.

Steve

Steve Grenter
Heritage & Archives Lead
Rheolwr Gwasanaeth Treftadaeth

[redacted]

✉ Wrexham County Borough Museum & Archives, Regent Street, Wrexham LL11 1RB.
✉ Amgueddfa ac Archifdy Bwrdeistref Siriol Wrecsam, Stryt yr Rhaglaw, Wrecsam, LL11 1RB.

As Mark Walters, CPAT has already stated, a Heritage Impact Assessment should be undertaken with a particular focus on the impact of proposals upon the setting of the designated heritage assets. In relation to the grade II Listed Plas Power Estate buildings, the document notes that these buildings are in a very poor state of repair. They are considered to be some of worst buildings, in terms of condition, on the Councils Buildings at Risk register and I would therefore suggest that as part of any mitigation we should be seeking repairs, or at the very least consolidation to prevent further deterioration, most notably of the ice house, bath house, game larder and dairy.

I would also suggest that an LVIA be carried out to assess, in particular, the impacts of development upon views to and from the Clwydian Range and Dee Valley AONB.

Kind Regards

Anna Irwin
Arweiniwr Cadwraeth a Amgylchedd/ Conservation and Environment Lead
Cynllunio a Rheoleiddio / Planning and Regulatory

[redacted]
Neuadd y Dref, Wrecsam, LL11 1AY
Guildhall, Wrexham, LL11 1AY

Sparey, Robert

From: [redacted]
Sent: 08 June 2020 11:12
To: Simon Greenland
Subject: FW: ENQ/2020/0077 DNS Application - Proposed 77Mw Solar Park, Land at Plas Power Estate, Ruthin Road, Wrexham LL11 3BS - EIA Screening Consultation

Hi Simon

I would make the following comments in response to this:

Construction phase:

Noise –a noise impact assessment should be considered for the construction phase to minimise and control any construction noise nuisance at noise sensitive properties (isolated residencies and built up areas (Coedpoeth and Rhostyllen)).

Dust – a dust management plan should be drawn up to manage dust from site surfaces and traffic, along with any demolition activities, that might affect any residential or commercial properties.

Advice – the Council has the option to control construction noise via the Control of Pollution Act (CoPA). The developer should consider an application under this if any extraordinary noise is to be expected (pile driving??). Otherwise, if complaints are received they will be investigated and a CoPa notice may be used to control activities.

An abatement notice can be issued should there be any nuisance caused from dust from construction/demolition activities.

Operational phase:

Noise impact assessment – Whilst the site will not be near any major residential development (Coedpoeth and Rhostyllen being the nearest), there are a number of isolated residential properties where noise from the operation of the site might be an issue. These should be considered during the planning phase by carrying out a noise impact assessment. The location of noise sensitive premises will be determined by the location of any noise generating plant, such as gas engines, transformers and inverters and their proximity to any premises.

A BS4142: 2014 `Methods for rating and assessing industrial and commercial sound' should;

- provide information on typical operating noise levels from site plant (transformers, inverters and gas engines);
- provide information on background and residual noise levels at the nearest sensitive receptors during the most sensitive periods of proposed operation; and
- advise on any operations that are shown to exceed appropriate and relevant noise criteria and where appropriate provide recommendations for further mitigation.

Do you require me to put this response in any other format or is this email sufficient?

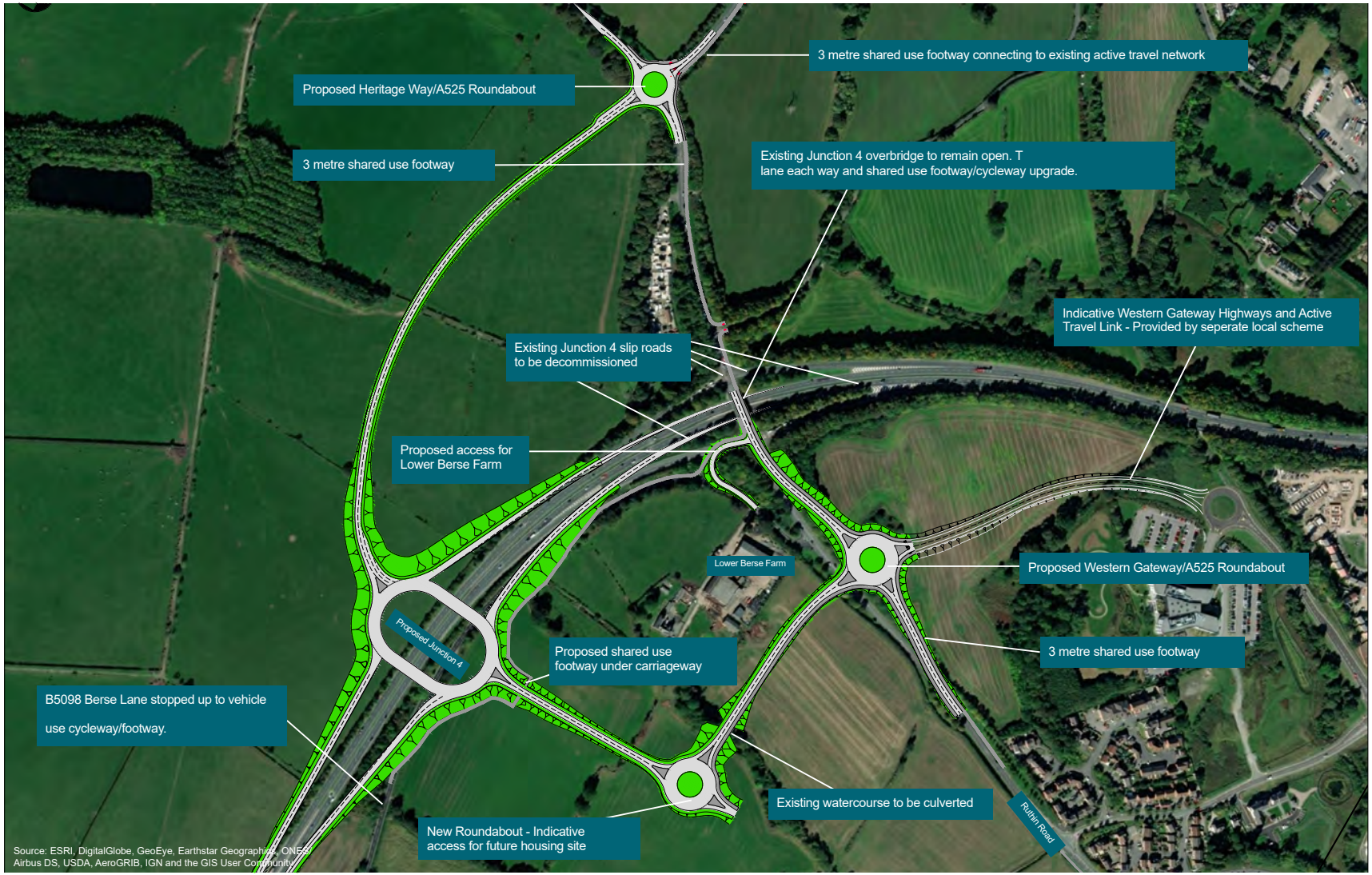
Best regards

Andy

Appendix 2

Proposed Junction 4 Road Scheme

Proposed Scheme for Junction 4 (Ruthin Road)



Key to symbols

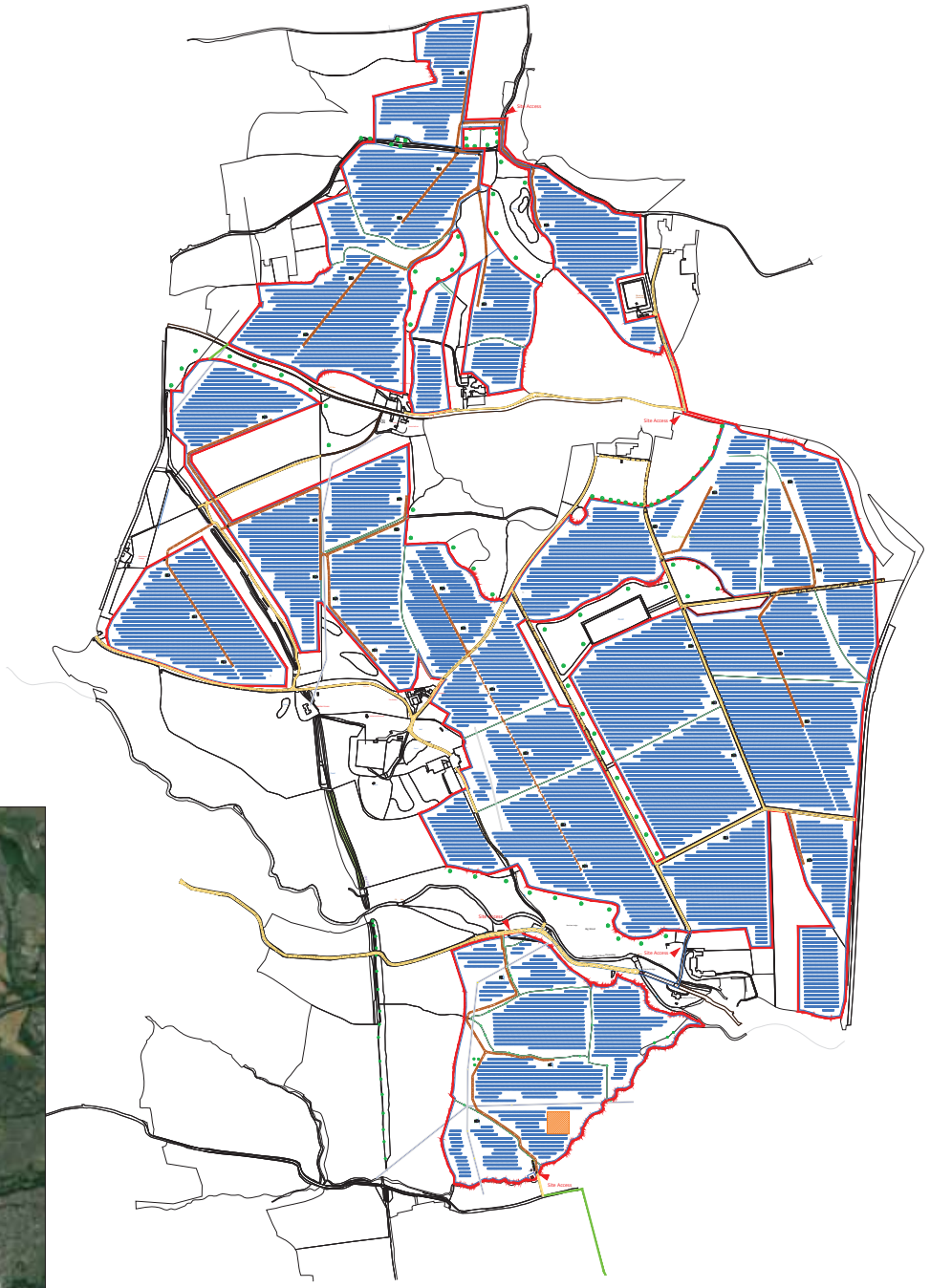
- New carriageway layout
- New shared use cycleway/ footway
- New verge/embankment/earthworks

Appendix 3

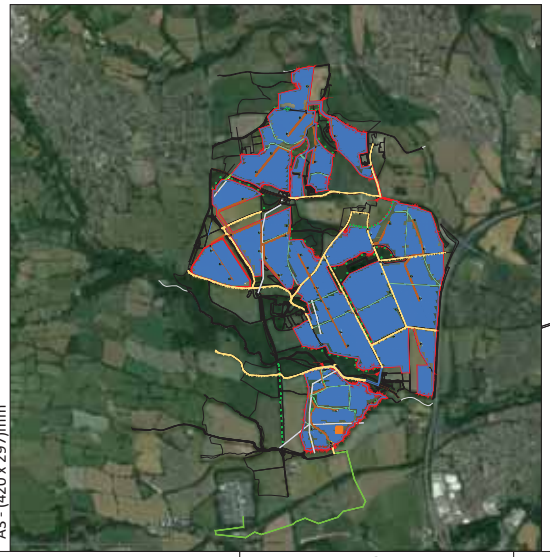
Larger Scheme Layout sent to Wrexham Originally

Plas Power Estate_Proposed Layout_Rev3

Area 1,980,731 m2 (489.44 acres)



Scale 1:40000



A3 - (420 x 297)mm

- Site Boundary
- Site Access
- Security Fence
- Module Table 14 x 4
- Module Table 28 x 4
- Transformer
- Switchgear Substation
- AC Box
- DNO Substation
- Customer Substation
- Monitoring House
- Auxiliary Transformer
- Storage
- Proposed Access Road
- Existing Access Road
- Existing Tree
- Access Gates
- CCTV
- Toilet
- Compound Area (Indicative)
- Scheduled Monument Area
- HV Cable
- Manhole

DRAWN	CHECKED	APPROVED	DATE
AG			17.10.19

PROJECT NAME & ADDRESS:
Location: Plas Power Estate, Ruthin Road, Rhosrobin
Caego, Wrexham, Wales, LL11 3BS

NOTES:
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Paper Size:	Scale:	Sheet:
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CAPACITY: 110.27 MWp

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DRAWING NUMBER:	STATUS:
PLAS_01	Preliminary

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info@lightsourcebp.com

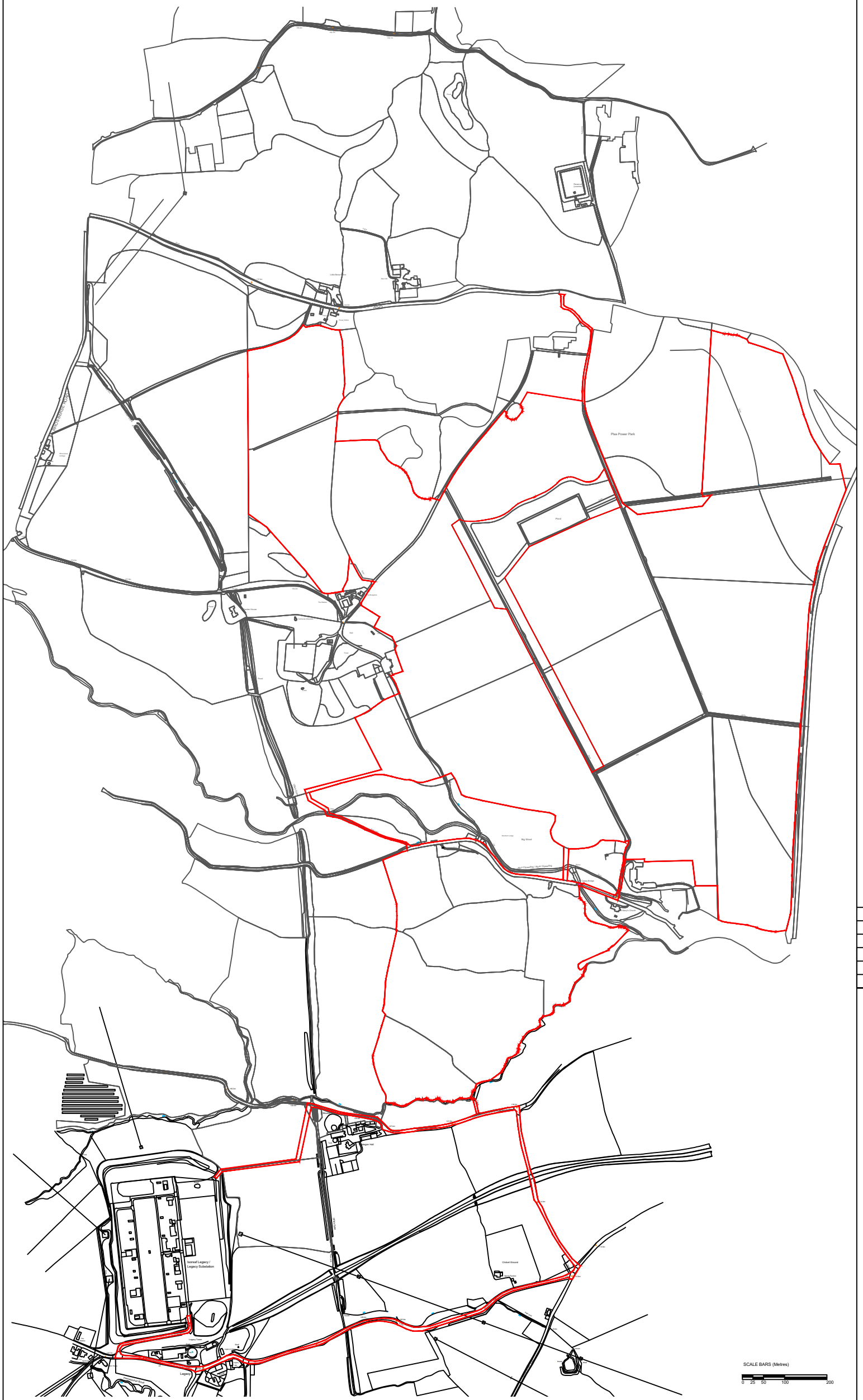
Appendix 4

Reduced Screening Scheme

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Notes

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LEGEND

SITE BOUNDARY

N

Rev	Description	By	CB	Date
E	Title Change	GG	DW	26/05/2020
D	Red line amendment	GG	DW	25/05/2020
C	Red line amendment	GG	DW	12/05/2020
B	Red line amendment	GG	DW	11/05/2020
A	Red line amendment to include cable route options	GG	DW	29/04/2020

Park House, Greyfriars Road, Cardiff, CF10 3AF
T: 02920 668 662 **E:** rpsca@rpsgroup.com

Client: LIGHTSOURCE BP

Project: PLAS POWER ESTATE

Title: EIA SCREENING
SITE LOCATION PLAN
AT 1:10,000

Status	Drawn By	PM/Checked by
DRAFT	GG	DW

Job Ref	Scale @ A3	Date Created
JPW1473	1:10,000	SEPT 2019

RPS Drawing / Figure Number: JPW1743-DNS-001

Rev: E

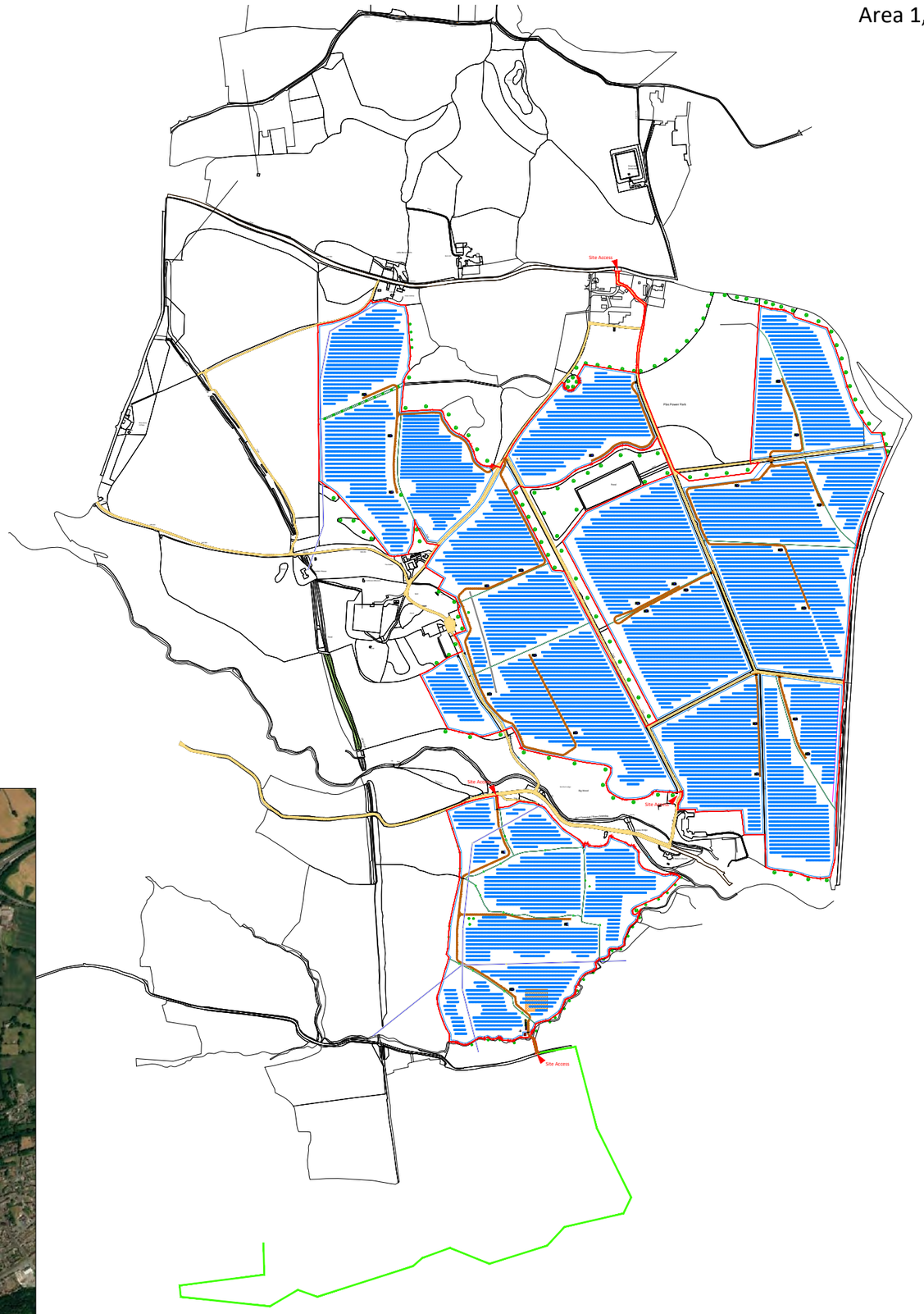
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O:\04 JOBS\01 OPEN JOBS\JPW14xx\JPW1473 - Plas Power Estate (DW)\4. Drawings\1. RPS Drawings\DWG\JPW1473-DNS-001RevE_D200526_(EIA Screening Site Location Plan).dwg

Plas Power Estate_Proposed Layout_Rev5

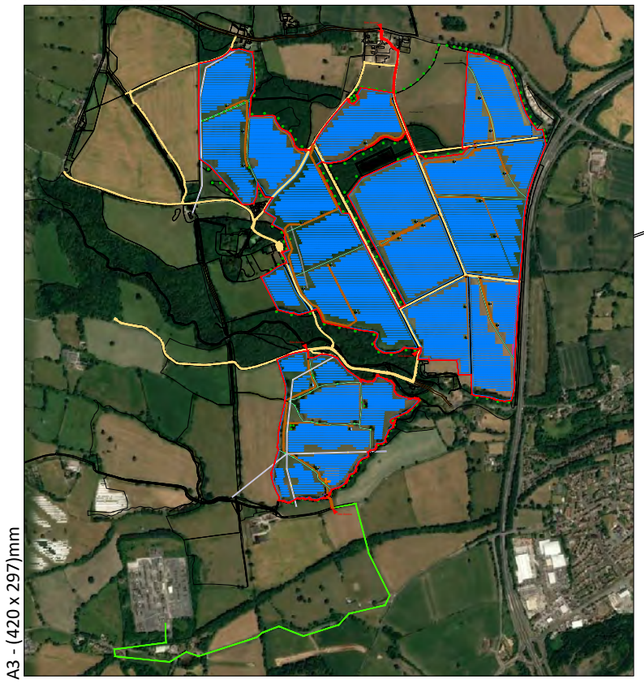
Area 1,297,290 m2 (320.57 acres)





- Site Boundary
- Site Access
- Security Fence
- Module Table 14 x 4
- Module Table 28 x 4
- Transformer
- Switchgear Substation
- AC Box
- DNO Substation
- Customer Substation
- Monitoring House
- Auxiliary Transformer
- Storage
- Proposed Access Road
- Existing Access Road
- Existing Tree
- Access Gates
- CCTV
- Toilet
- Compound Area (Indicative)
- Scheduled Monument Area
- HV Cable
- Manhole

Scale 1:25000



A3 - (420 x 297)mm

DA			06.05.20
DRAWN	CHECKED	APPROVED	DATE

PROJECT NAME & ADDRESS:
Location: Plas Power Estate, Ruthin Road, Rhosrobin Caego, Wrexham, Wales, LL11 3BS

NOTES:
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Paper Size:	Scale:	Sheet:
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CAPACITY: 75.02 MWp

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Appendix 5

Outline construction and Decommissioning Method Statement



lightsource bp

Outline Construction and Decommissioning Method Statement

Plas Power Estate Solar Farm, Ruthin Road, Wrexham LL11 3BS

DOC REFERENCE: Plas Power – EIA Scoping
DATE: September 2020

Lightsource BP, advancing solar

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1 Introduction

This Outline Construction and Decommissioning Method Statement (OCDMS) has been prepared in support of a request for an EIA Scoping Direction for a solar farm development Plas Power Estate, Ruthin Road, Wrexham, LL11 3BS.

Lightsource bp proposes to develop a solar photovoltaic electricity generating station ('solar park' or 'solar farm') and associated ancillary development, with an installed generation capacity of up to 77 MW. A full description of the proposed solar farm is provided in the accompanying Scoping Report prepared by RPS.

The purpose of the OCDMS is to provide the Planning Inspectorate with the outline of measures that will be implemented during construction of the project, so as to ensure that sufficient information is provided at this stage.

During the construction period, the site will be accessed via a number of established farm access points, with the main access being taken from A525. This access has already been upgraded to accommodate the residential development approved in planning applications (including P/2013/0093). Construction access to the southern land parcel is anticipated to be routed through the unnamed road to the south which already serves to accommodate large farm vehicles.

2 Parties Involved

- The DNS application will be submitted on behalf of Lightsource bp.
- The EPC (Engineering, Procurement and Construction) firm that will undertake the final detailed design and build the solar installation has yet to be selected.
- Contractors for the decommissioning work will be selected closer to the end of the Solar Installation's operational life.

3 Communication

Prior to the start of construction, pre-construction commencement letters will be sent to the nearest neighbours. It is anticipated that this will include the houses around Bersham, Rhos Berse Road, Coedpoeth Road as well as Coedpoeth Community Council and Wrexham Council.

These letters will give an overview of the construction process, a timetable for the various stages of the works and provide contact details for the Project Manager, who will be the point of contact during the construction process.

4 Public Highway Condition

4.1 Highway Condition

Lightsource bp, or its selected contractor, can if required undertake a video or photographic survey of the condition of the public highway for the route to the site prior to construction starting.

On completion of the construction works, a post-construction road survey can be undertaken, and appropriate remediation works required identified. The access route would then be made good from any damage caused by construction movement.

The same survey requirements can apply to the decommissioning of the sites – any damage to the public highway caused by decommissioning traffic can be made good following completion of the decommissioning work.

4.2 Compound Management

During construction delivery vehicles will be constrained to the site access tracks and construction compound areas. Certain light vehicles will be working within the sites, including the mini piling rig and small vehicles for on-site transport of materials.

In order to avoid muddying the highway, the construction compounds will be managed to keep vehicles that will be exiting the sites separate from muddier areas used by on-site vehicles.

No vehicle parking, loading or unloading will take place within the public highway. The construction compound areas, which will be reinstated for decommissioning as well, will be used for all parking, turning, unloading / loading.

4.3 Wheel Washing Facilities

During construction most delivery vehicles will be constrained to the gravel site access tracks. As and when necessary, vehicle wheels will be manually cleaned prior to release onto the public highway.

The site construction manager will monitor the public highway conditions and will assess if further measures are required to maintain road cleanliness, such as road sweeping.

4.4 Damage Repairs

The Principal Contractor engaged by Lightsource bp to construct the solar farm is contractually obliged to make good any damage to public roads caused by construction traffic.

5 Storage

No long-term on-site storage of materials is required during either the construction or decommissioning phases.

During construction the HGVs will provide the materials at regular intervals throughout the construction period as construction progresses, rather than being delivered all in one go. Thus, infrastructure can be unloaded in the construction compounds from the HGVs, and transported directly to where it is needed using smaller internal vehicles, or by hand where appropriate. This method enables some of the smaller field parcels to be accessed by appropriate construction vehicles.

Short term storage of materials can be accommodated within the construction compounds until it is required.

During decommissioning HGVs will arrive at the sites to remove infrastructure from the compound areas at regular intervals.

6 Safety and Security

Site safety will be detailed within the site construction Health and Safety Plan. This will include details of site management, site speed limits and control of vehicle access to site. The Principal Contractor is responsible for site health and safety.

During construction, the site will be secured using temporary security fencing. This will be positioned in locations where opening in the existing site boundary would allow intentional or accidental vehicle or pedestrian access to the construction area. This will prevent any unauthorised access during construction.

The Principal Contractor's Site Manager will be responsible for monitoring and preventing unauthorised access to the site during working hours and an after-hours security guard will manage this outside of working hours.

7 Construction Specific Information

7.1 Construction Activities

During the construction period the following activities will be undertaken:

- Site preparation will involve mowing the site area if required and marking out the site;
- Erecting the security fence, creating internal access roads, compound and crane area;
- Piling the frames into the ground and installing mounting frames;
- Affixing the panels to the mounting frames;
- Trenching for the cable runs to a depth of approximately 1m, and cables will be laid on the site;
- Pouring the concrete base for the electrical housing / cabinets (Switchgear, Transformer, etc.);
- Installation of the housing / cabinets;

- Erecting pole mounted CCTV cameras;
- Connecting all the cables up and backfilling the cable trenches;
- Construction of swales as indicated in an approved Drainage Plans.
- Landscaping works in accordance with Planting Plan.

7.2 Noise Management

Noise associated with construction is an unavoidable reality for most development projects. There will always be some noise associated with a building project, however this will be temporary and can be controlled by limiting the hours of noise generating activities to limit disruption for neighbouring properties.

When constructing a solar installation, the noisiest activity is the piling of the mounting frames into the ground. The piling will be undertaken at the start of the construction process, lasting a few weeks. In order to limit potential noise impacts, noise generating construction and decommissioning works shall only be undertaken between:

- 0800 and 1800 Monday to Friday; and
- 0800 to 1300 on Saturdays.

Only manual works will be undertaken outside of those hours.

Contractors will be required to conform to the construction noise code of practice BS 5228.

7.3 Air Quality and Dust Management

Given the ground condition of the sites, we do not anticipate any significant dust issues to arise during construction or decommissioning. If conditions on site are very dry then water misting/spraying will be employed to dampen ground to avoid any dust nuisance.

In relation to traffic movement the location of the proposed development is not within or in close proximity to any declared Air Quality Management Areas. Typically there will be around 12 Heavy Duty Vehicle (HDV) movements per day during the more intense construction periods.

In terms of air quality. The number of HDV movements during the construction and installation of the solar panels together with the supporting framework will not fulfil the traffic criteria detailed in the IAQM/EP (UK) Planning Guidance. A change in the volume of traffic on the surrounding road network will not have any significant effect on air quality as experienced by the nearest receptors located in the vicinity of the site.

The operation of the solar farm will not give rise to emissions of one or more of the eight air quality pollutants for which there are long and short term air quality objectives. Therefore it is concluded

the operation of the solar farm will not have a significant effect on local air quality and further assessment is not required.

7.4 Waste

The specialist EPC hired to construct the solar installation will ensure that all waste is disposed of responsibly from the sites during and immediately following construction.

The potential waste generated during the construction process will primarily be related to packaging, and will include:

- **The pallets that the solar panels are packaged in.** These will be either wood crates, or cardboard boxes. These will be removed from the sites on a regular basis. If they arrive on wooden pallets, which have a financial value, these will either be returned to the manufacturer/distributer, or collection by a local contractor will be arranged. If they arrive packaged in cardboard boxes, then these will be removed on a regular basis, either through a hired skip, or through trips to the closet appropriate recycling station.

- **Packing materials for various components, such as screws, cabling, and mounting frames**. Any non-recyclable waste will be stored in a skip for regular removal to an appropriate landfill.

- **Food waste from workers**. Personal rubbish will be collected along with nonrecyclable packaging materials, for disposal at an appropriate landfill.

- **Portable toilets** will be hired for the duration of the construction period; therefore there will be no human waste issues.

- **Excavated soil.** The sites require some ground works for access tracks, cable trenching, cabinet platforms. Excavated soil will be used for backfilling activities. Topsoil will be managed as detailed in 7.6 below. Excess subsoil will be removed from the sites and disposed of at an appropriate landfill or sold to a landowner needing additional soil.

7.5 Management and Protection of Ecological Resources

The site is currently a mix of intensively farmed pasture and arable land which is typically considered to have low wildlife values. Wildlife is likely to be concentrated around boundary hedges and trees. There is however the possibility of ground nesting birds being located within the construction areas on the sites. The following measures will be employed to manage and protect onsite ecological resources during construction:

- The boundary hedges are to be retained with all works set back from the hedges. The hedgerows and mature trees surrounding the site will be retained and protected in line with BS 7837.

- The security fence will be installed inside the boundary vegetation, and all subsequent construction and deconstruction work will take place inside the security fence, thus the construction area will be isolated from any animals traversing the site.

- All construction mitigation measures identified in the Ecological Assessment will be adhered to.

7.6 Management of Topsoil

Earthworks will be required to create stable, level platforms for the cabinets, and to create the trenches for the HV cable, and LV cables.

Topsoil will be removed from the relevant areas and set aside separately from any subsoil. When backfilling the cable trenches, the subsoil will be replaced first, followed by the topsoil.

Any topsoil not required for backfilling will be used to build up areas where new planting is to be undertaken in accordance with the solar installation Planting Plan, and the remainder will either be thinly spread on the sites or removed from site and disposed of at an appropriate facility.

Once construction is complete, both sites will be seeded in accordance with a detailed Planting Plan and Biodiversity Management Plan.

8 Decommissioning Specific Information

8.1 Decommissioning Activities

During decommissioning all infrastructure introduced to the sites for the development of the solar installation will be removed, requiring the following work:

- The **solar panels** will be unscrewed from the mounting frames and packaged either to send to a solar recycling depot, or if they are still operational they may be sold as second hand. Since January 2014, PV panels in the UK have been covered by the WEEE (Waste Electrical and Electronic) Regulations, which require recycling of the panels at the end of their operational life.

- The **mounting frame** horizontal poles will be removed and the piles will be pulled from the ground, the dismantled framework will be bundled and taken for recycling. Because of the slim line 'H' shape of the piles, they will not leave holes like fence posts and therefore only minimal soil back filling is likely to be required, if any.

- The **cable trenches** will be reopened, with the top soil set aside, and the cables and ducts will be removed. As the cables are removed, the trenches will be backfilled with the soil that has been set aside. The cables will be bundled and taken for recycling or sale to a scrap metal yard, and the ducts will be disposed of at an approved landfill.

- The **inverters, transformers,** and **switchgear cabinets / housing** will all be removed from the sites using a crane and HGVs for transportation. They can then be broken down off-site, and any reusable parts salvaged for second hand or scrap metal sale, with the remainder disposed of at an approved landfill. The concrete bases for the cabinets / housing will be broken up and removed, this will either be on-sold to aggregate suppliers, or disposed of at an approved landfill. The area where concrete has been removed will then be backfilled with good quality soil.

- The **fencing** and **CCTV equipment** will be removed from the sites, and sold on as second hand for reuse. Any holes left by the fence posts and poles will be backfilled with soil.

Following removal of all solar installation infrastructures from the sites, and backfilling with soil of any areas requiring it. Areas of disturbed ground, such as areas backfilled with soil, will be prepared, harrowed and seeded in grass. Any drainage features will either be in-filled by new topsoil that will be brought to the sites or retained in place if the landowner considers it will provide an on-going benefit to the land.

There will be no elements of the solar installation left on the sites either above or below ground – all infrastructures will be removed for recycling, reuse, or disposal at an approved landfill.

8.2 Decommissioning Financial Strategy

Under the terms of the lease Lightsource bp holds with the landowner, the Operator is responsible for full reinstatement and repair of the site at the end of the lease, requiring both areas to be returned to their original condition.

The scrap/recycle value of the raw materials used in the construction of a solar installation exceeds the cost of removing the materials from the sites and undertaking minor site restoration. The frames are aluminium or steel, the cabling and transformers have copper components, and these can all be on sold for scrap, therefore there will be a high incentive to remove the infrastructure at the end of the solar installations operational life in order to release this capital. In Germany and Italy, where solar markets are more established, solar installation owner/operators typically base their business models on this (i.e. decommissioning is financed by the resale value of scrap materials from the installation).

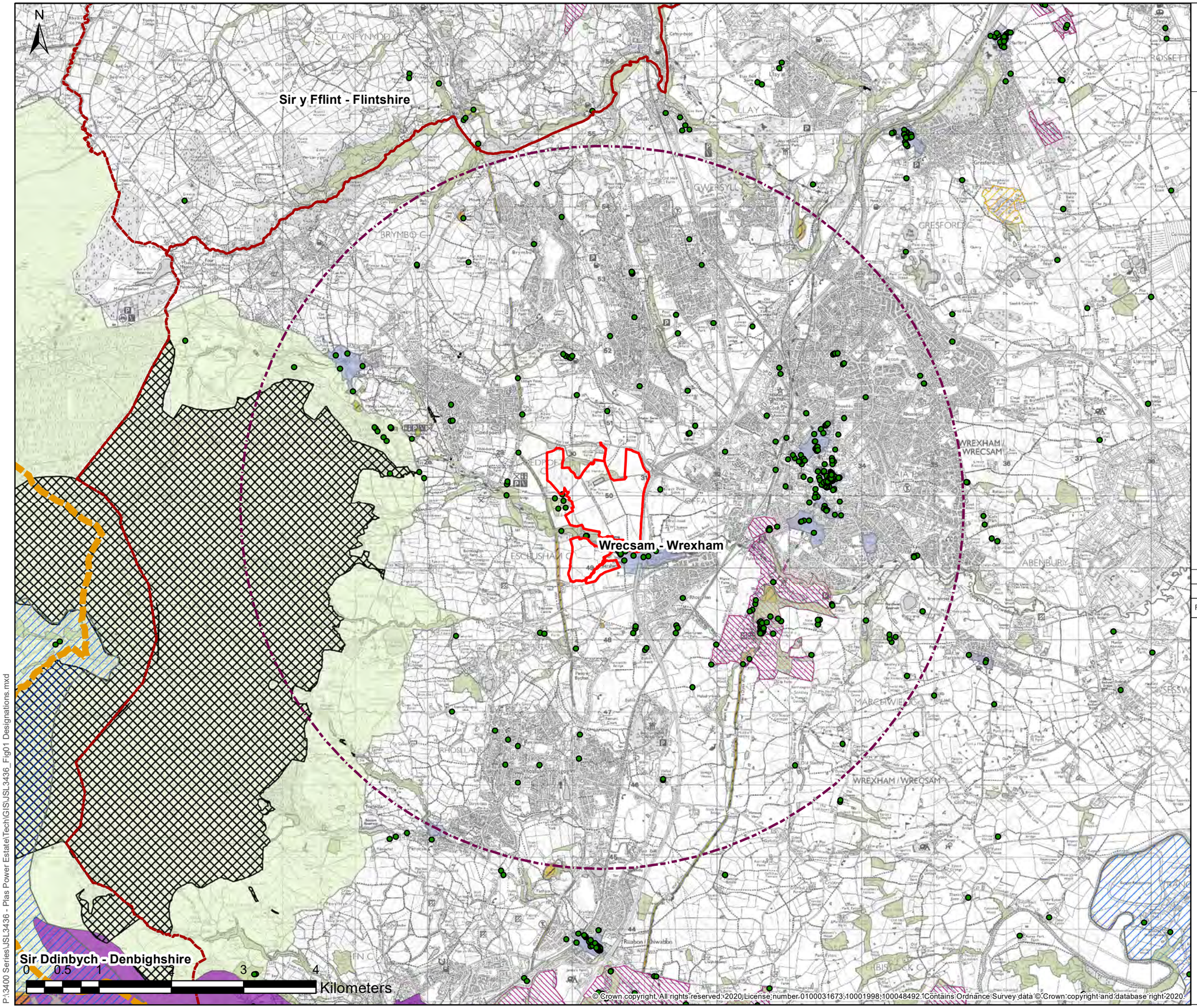
To protect against the risk that raw material prices slump vs. labour costs and therefore the above does not remain the case, at the 30 year point the Operator will obtain 3 quotes for the removal of

the solar installation. If the average cost exceeds the estimated scrap value of the material the company will accrue sufficient funds over the following 5-10 years to fund the removal of the equipment.

Given the nature of solar developments, with high upfront development and build costs but low operating costs, there will be sufficient operating margin over these years to fund all removal and site restoration costs.

Appendix 6

Landscape – Figures 1 and 2



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Legend

- Study Area (5km Radius)
- Application Site Boundary
- District Boundary
- National Trails
- Listed Buildings
- Conservation Areas
- Historic Landscapes
- Historic Parks and Gardens
- Scheduled Monument
- Registered Common Land
- World Heritage Site
- Area of Outstanding Natural Beauty (AONB)
- RAMSAR

Note: The Application Site falls partly within the EC1: Green Barrier and EC5: Special Landscape Area of the adopted Wrexham UDP 1996-2011. Please refer to Appendix 5.3 for these UDP Plans.

Rev	Description	By	CB	Date

MAKING COMPLEX EASY

Lakesbury House, Hiltingbury Road, Chandlers Ford,Hampshire SO53 5SS
T:02380 810 440 E: rpsso@rpsgroup.com

Client: Lightsource BP

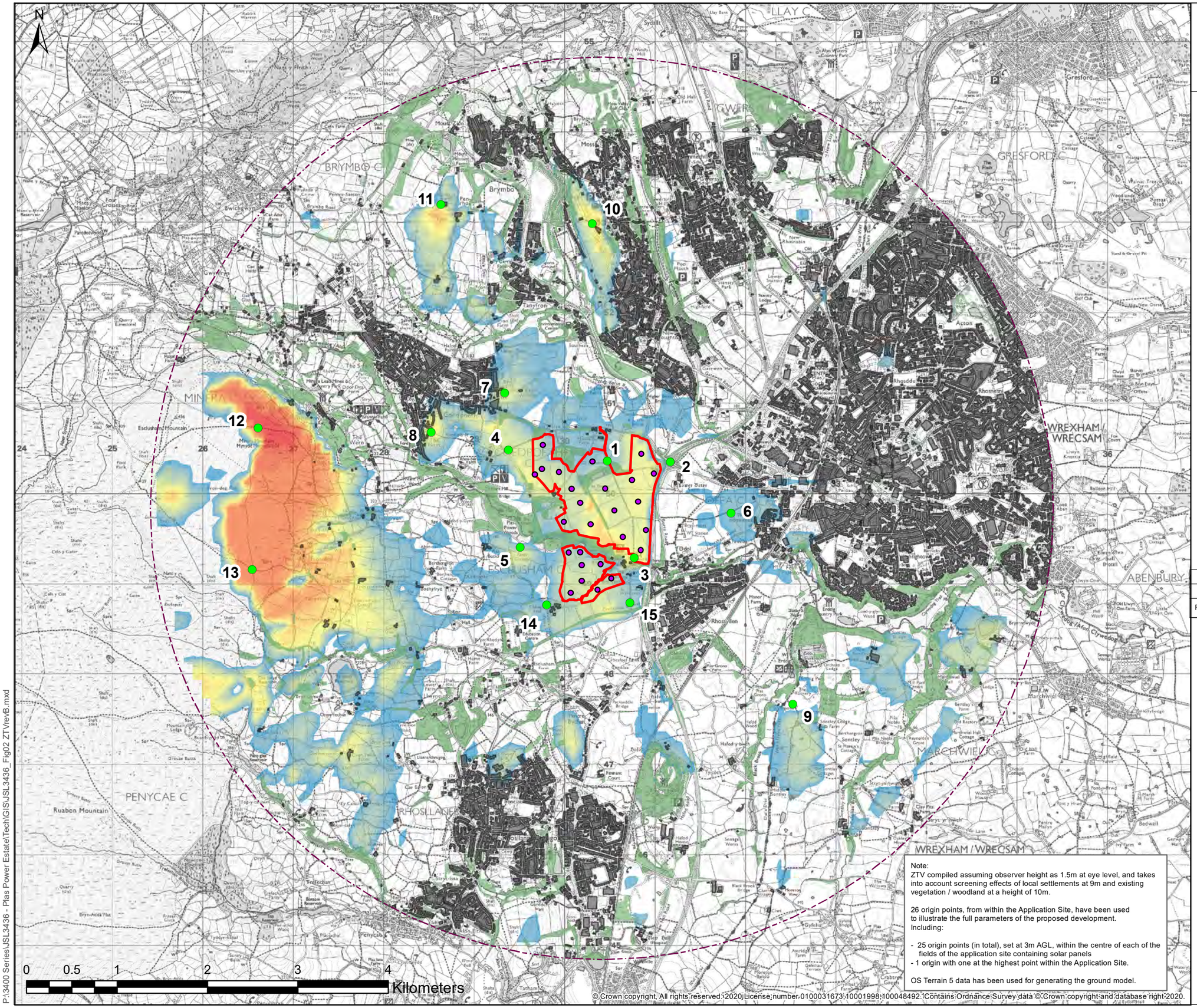
Project: Plas Power Estate, Ruthin Road

Title: Landscape Designations

Status	Drawn By	PM/Checked By
Information	KH	GL
Project Number	**Scale @ A3**	**Date Created**
JSL3436	1:50,000	OCT 2020
Figure Number		**Rev**
5.1		-

rpsgroup.com

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2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.

Legend

- Study Area (5km Radius)
- Application Site Boundary
- Settlement Barriers (9m)
- Vegetation Barriers (10m)
- ZTV Origin Points
- 1 Candidate Viewpoints

Indicative extent of surrounding landscape from which views to the proposed solar panels may be available

- Low Visibility (1 origin point)
- High Visibility (Up to 24 origin points)

Rev	Description	By	CB	Date

Note:
ZTV compiled assuming observer height as 1.5m at eye level, and takes into account screening effects of local settlements at 9m and existing vegetation / woodland at a height of 10m.

26 origin points, from within the Application Site, have been used to illustrate the full parameters of the proposed development. Including:

- 25 origin points (in total), set at 3m AGL, within the centre of each of the fields of the application site containing solar panels
- 1 origin with one at the highest point within the Application Site.

OS Terrain 5 data has been used for generating the ground model.

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MAKING COMPLEX EASY

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Client	Lightsource BP
Project	Plas Power Estate, Ruthin Road
Title	Preliminary Zone of Theoretical Visibility (ZTV) - Fixed Solar PVs @ 3m

Status	Drawn By	PM/Checked By
Preliminary	KH	PH
Project Number	**Scale @ A3**	**Date Created**
JSL3436	1:40,000	OCT 2020
Figure Number		**Rev**
5.2		**B**

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Appendix 7

Landscape – Extracts from Adopted Wrexham UDP

Inset / *Mewnosodiad 4*
Burton, Gresford / *Gresffordd* and Marford, Rossett / *Yr Orsedd* and Lavister, Llay / *Llai*

Inset / *Mewnosodiad 5*
Bradley / *Bradle*, Broughton, Brymbo, Bwlchgwyn, Coedpoeth, Gwersyllt, Gwynfryn, Minera / *Mwynglawdd*, New Brighton, Southsea, Tanyfron

Inset / *Mewnosodiad 2*
Wrexham Town Centre
Canol Dref Wrecsam

Inset / *Mewnosodiad 20*
Bersham / *Y Bers* and Rhostyllen

Inset / *Mewnosodiad 25*
Marchwiel

1. Wrexham Town / *Tref Wrecsam*

Inset Plan Notation / *Nodiadau Map Mewnosodiad*

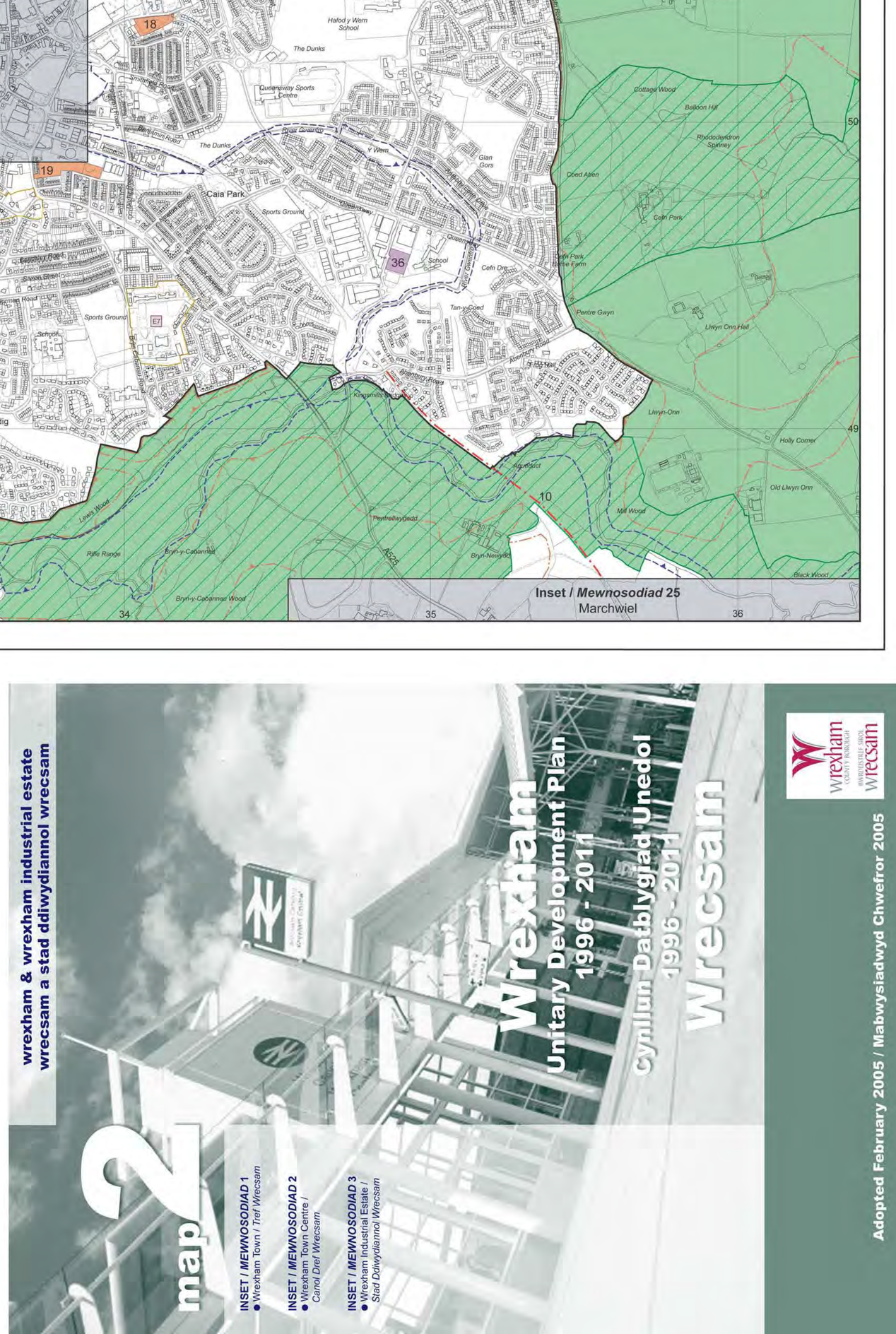
- Settlement Limit / *Ffin Anheddiad* - PS1
- District Shopping Centre / *Canolfan Siopa Cylch* - S5
- Employment / *Gwaith* - E1, E2, E7
- Commercial Offices / *Swyddfeydd Masnachol* - E7
- Green Barrier / *Ffin Gwyrdd* - EC1
- Special Landscape Area / *Ardal Tirlun Arbennig* - EC5
- Biodiversity Conservation / *Cadwraeth Bioamrywiaeth* - EC6
- Conservation Area / *Ardal Cadwraeth* - EC7, EC8
- Development and Flood Risk / *Datblygiad a Perygl Llif* - EC12
- Community and Leisure Facilites / *Cyfleusterau Cymunedol ac Adoliant* - CLF2
- Housing / *Tai* - H1
- Mixed Use and Regeneration Areas / *Ardaloedd Defnydd Cymysg ac Adfywio* - H14
- Walking/Cycling Route / *Llwybr Cerdded/Beicio* - T10
- Protection of Mineral Resources / *Diogelu Adnoddau Mwynau* - MW9
- Minerals Buffer Zone / *Cylchfeydd Rhagod Mwynau* - MW11

Other Settlement Policies / *Polisiau Anheddiad Eraill.*
PS3, PS4, PS5, PS6, PS7, PS8, H2, H7, H11, H12, E4, S4, S6, CLF1, CLF3, CLF5.

Other Countryside Policies / *Polisiau Cefn Gwlad Eraill.*
EC2, EC3, EC4, H3, H5, H6, H9, H10, E5, E6, PS9, S7, MW1, MW2, MW4, MW5, MW6, MW8, MW9, CLF7, T5.

Other County Borough-Wide Policies / *Polisiau Bwrdeistref Sirol Eraill.*
GDP1, GDP2, EC9, EC11, EC13, EC14, EC15, H4, PS2, PS10, PS11, PS12, CLF4, CLF6, CLF8, CLF9, CLF10, T1, T6, T8, T9, MW7, MW10, MW12, MW13, MW14, S8, S9.

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Inset / *Mewnosodiad* 22 - Sydallt

Inset / Mewnosodiad 1
Wrexham Town / Tref Wrecsam

Inset Plan Notation / *Nodiadau Map Mewnosodiad*

- County Boundary / *Ffin y Sir*
- Settlement Limit / *Ffin Anheddiad* - PS1
- District Shopping Centre / *Canolfan Siopa Cylch* - S5
- Commercial Offices / *Swyddfeydd Masnachol* - E7
- Green Barrier / *Ffin Gwyrdd* - EC1
- Special Landscape Area / *Ardal Tirlun Arbennig* - EC5
- Biodiversity Conservation / *Cadwraeth Bioamrywiaeth* - EC6
- Conservation Area / *Ardal Cadwraeth* - EC7, EC8
- Development and Flood Risk / *Datblygiad a Perygl Llif* - EC12
- Land Reclamation / *Adfer Tir* - EC16
- Housing / *Tai* - H1
- Traffic Management / *Rheoli Ffyrdd* - T7
- Walking/Cycling Route / *Llwybr Cerdded/Beicio* - T10
- Protection of Mineral Resources / *Diogelu Adnoddau Mwynau* - MW9
- Minerals Buffer Zone / *Cylchfeydd Rhagod Mwynau* - MW11

Other Settlement Policies / *Polisiau Anheddiad Eraill.*
PS3, PS4, PS5, PS6, PS7, PS8, H2, H7, H11, H12, E4, S4, S6, CLF1, CLF3, CLF5.

Other Countryside Policies / *Polisiau Cefn Gwlad Eraill.*
PS2, EC2, EC3, EC4, H3, H5, H6, H8, H10, E5, E6, PS9, S7, MW1, MW2, MW3, MW4, MW5, MW6, MW8, MW9, MW10, CLF7.

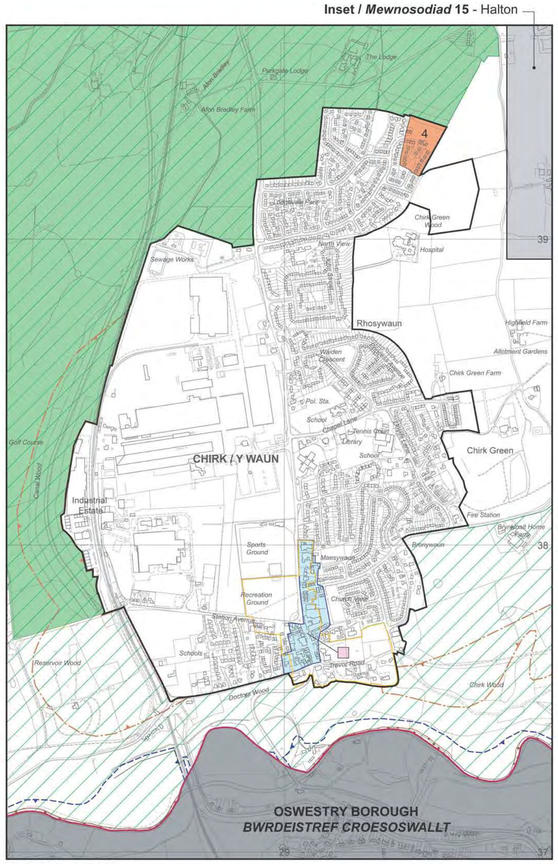
Other County Borough-Wide Policies / *Polisiau Bwrdeistref Sirol Eraill.*
GDP1, GDP2, EC9, EC11, EC13, EC14, EC15, H4, H9, PS10, PS11, PS12, CLF4, CLF6, CLF8, CLF9, CLF10, T1, T6, T8, T9, MW7, MW12, MW13, MW14, S8, S9.

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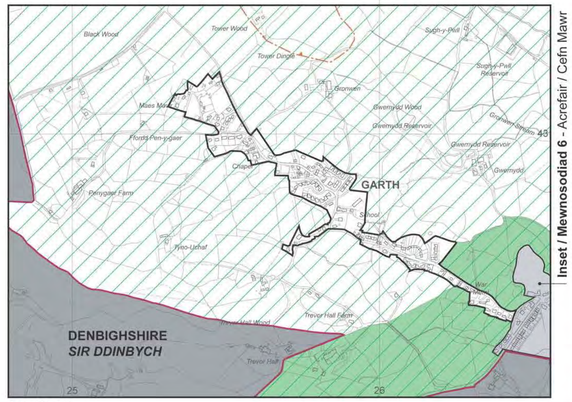
5. Bradley / *Bradle*, Broughton, Brymbo, Bwlchgwyn, Coedpoeth, Gwersyllt, Gwynfryn, Minera / *Mwynglawdd*, New Brighton, Southsea, Tanyfron

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Inset / *Mewnosodiad* 15 - Halton

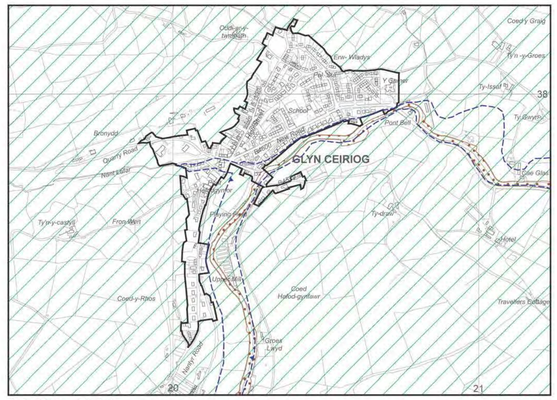


7. Chirk / *Y Waun*



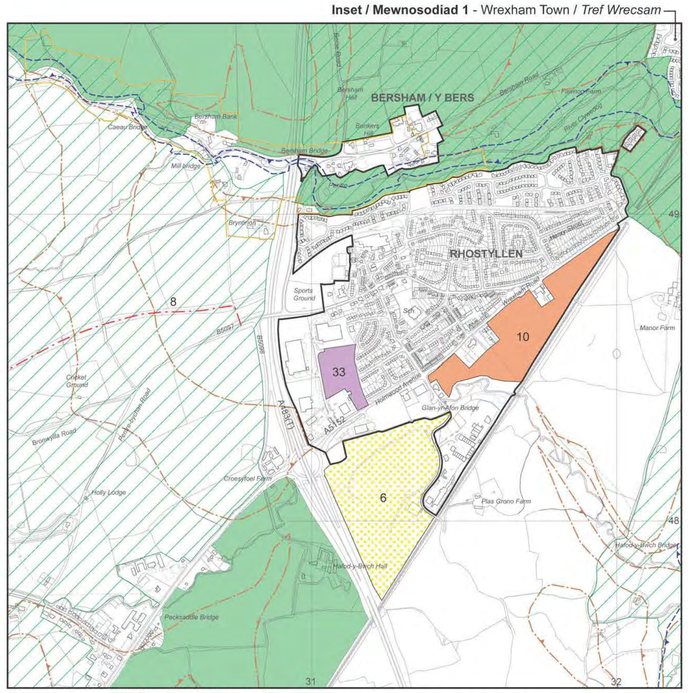
13. Garth

Inset / Mewnosodiad 6 - Acrefair / Cefn Mawr



14. Glyn Ceiriog

Inset / Mewnosodiad 1 - Wrexham Town / *Tref Wrecsam*


BERSHAM / Y BERS
RHOSTYLLEN
Bersham Bank
Bersham Hall
Bersham Bridge
Mill Bridge
Brynyffridd
Sports Ground
Manor Farm
Glan-yr-Afon Bridge
Bersham Road
Plas Grono Farm
Holly Lodge
Crossyfford Farm
Packsaddle Bridge
Hafod-y-Wern Hall
Hafod-y-Wern Bridge
Cricket Ground
Brownhill Road
Ffordd Isaf
Ffordd Isaf Bridge
Ffordd Isaf Farm
Ffordd Isaf Cottages

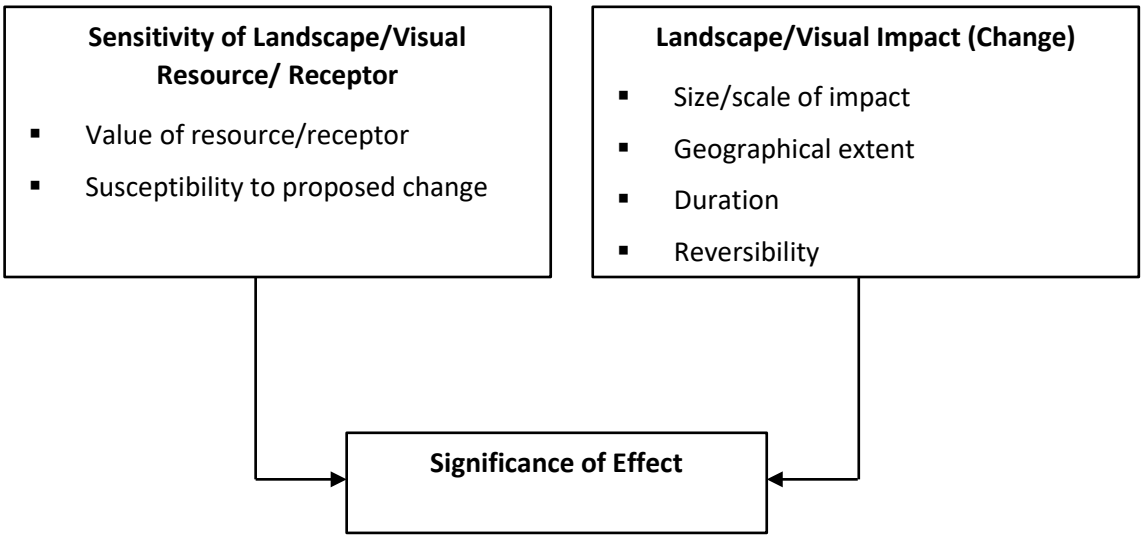
Appendix 8

Landscape – LVIA Methodology

Appendix 8: Assessment Criteria and Assignment of Significance

1.1 This assessment is based on the methodology in the GLVIA3, which recommends that an LVIA *"concentrates on principles and process"* and *"does not provide a detailed or formulaic recipe"* to assess effects, it being the *"responsibility of the professional to ensure that the approach and methodology are appropriate to the task in hand"* (preface to the Third Edition). The effects on the landscape resources or visual receptors (people) are assessed by considering the proposed change in the baseline conditions (the impact of the proposal) against the type of landscape resource or visual receptor (including the importance and sensitivity of that resource or receptor). The methodology is set out in detail below and summarised in Diagram 8.1. These factors are determined through a combination of quantitative (objective) and qualitative (subjective) assessment using professional judgement.

Diagram 8.1: Assessment Methodology Summary



Receptor Sensitivity

1.2 Landscape sensitivity is referred to in GLVIA3 at paragraph 5.39: *"Landscape receptors need to be assessed firstly in terms of their sensitivity, combining judgements of their susceptibility to the type of change or development proposed and the value attached to the landscape."*

1.3 The sensitivity of landscape resources and visual receptors is dependent on a range of factors and is classified on a five-point scale (negligible, low, medium, high and very high) as set out in Tables 8.2 and 8.3 below. Sensitivity relates to general categories rather than being project specific. Professional judgement has then been used together with the criteria defined in Tables 8.2 and 8.3 in order to more accurately assess the sensitivity / susceptibility of the resource / receptor to the project.

1.4 Table 8.3 draws on the GLVIA3 paragraphs .33 to 6.44 in relation to visual receptors. However, it should be noted that paragraph 6.32 of GLVIA3 refers to the susceptibility of different visual receptors to changes in views and states that *"the occupation or activity of different people experiencing the view at particular locations"* should be recorded as well as *"the extent to which their attention or interest may therefore be focused on the views and the visual amenity they experience at particular locations."* The subsequent sections of this

chapter describe the existing available views (see Baseline Conditions section) and the change in these views as a result of the project (Assessment of Effects section).

Resource Value

1.5 Landscape Value is referred to in the GLVIA3 at paragraph 5.44 as *"the value of any Landscape Character Type or Areas that may be affected, based on review of any designations at both national and local levels, and, where there are no designations, judgements based on criteria that can be used to establish landscape value"* and *"the value of individual contributors to landscape character, especially the key characteristics, which may include elements of the landscape, particularly landscape features, notable aesthetic, perceptual or experiential qualities, and combinations of these contributors."*

1.6 The value of certain landscapes are nationally recognised and designated, e.g. AONBs. Some landscapes are locally designated e.g. Areas of Great Landscape Value (AGLVs).

1.7 Other landscapes are undesignated but valued locally for specific reasons or specific elements/features or perceptual qualities. The value of an area of landscape is expressed both through designation and also other criteria, such as tranquillity, remoteness, wildness, scenic beauty, cultural associations, conservation interests, public attitudes and amenity/tourism uses.

1.8 How the landscape value may be affected by a development is classified on a five-point scale (negligible, low, medium, high and very high) as set out in Table 8.2 below. Table 8.3 also sets out the definition of these terms relating to the sensitivity and value of the visual resource.

Table 8.1: Definitions of Landscape Sensitivity and Value

Sensitivity	Typical Descriptors Landscape Resource Sensitivity	Landscape Resource Value
Very High	Exceptional landscape quality, no or limited potential for substitution. Key elements or features well known to the wider public. Little or no tolerance to change.	Nationally/internationally designated/valued landscape, or key elements or features of nationally/internationally designated landscapes. Little or no tolerance to change.
High	Strong/distinctive landscape character; absence of landscape detractors. Low tolerance to change.	Regionally/nationally designated/valued countryside and landscape features. Low tolerance to change.
Medium	Some distinctive landscape characteristics; few landscape detractors. Medium tolerance to change.	Locally/regionally designated/valued countryside and landscape features. Medium tolerance to change.
Low	Absence of distinctive landscape characteristics; presence of landscape detractors. High tolerance to change.	Undesignated countryside and landscape features. High tolerance to change.
Negligible	Absence of positive landscape characteristics. Significant presence of landscape detractors. High tolerance to change.	Undesignated countryside and landscape features. High tolerance to change.

Table 8.2: Definitions of Visual Sensitivity

Sensitivity	Descriptors Resource Sensitivity	Resource Rationale
Very High	Views of remarkable scenic quality, of and within internationally designated landscapes or key features or elements of nationally designated landscapes that are well known to the wider public. Little or no tolerance to change.	Observers, drawn to a particular view, including those who have travelled from around Britain and overseas to experience the views. Little or no tolerance to change.
High	Views from residential property, more scenic public rights of way and nationally designated countryside/landscape features with public access and National Trails. Low tolerance to change.	Observers enjoying the countryside from their homes or pursuing quiet outdoor recreation are more sensitive to visual change. Low tolerance to change.
Medium	Views from local roads and routes crossing designated countryside/landscape features and 'access land'. Pedestrians using other public rights of way, as well as promoted paths. Medium tolerance to change.	Observers enjoying the countryside from vehicles on quiet/promoted routes or pedestrians on less scenic rights of way are moderately sensitive to visual change. Medium tolerance to change.
Low	Views from work places, main roads and undesignated countryside/landscape features. High tolerance to change.	Observers in vehicles or people involved in outdoor activities where attention is not focused on landscape are less sensitive to visual change. High tolerance to change.
Negligible	Views from within and of undesignated landscapes, with significant presence of landscape detractors. High tolerance to change.	Observers in vehicles or people involved in frequent or frequently repeated activities are less sensitive to visual change. High tolerance to change.

Magnitude of Impact

1.9 The magnitude of impact of a particular proposal depends upon the:

Nature of proposed development and perceived change;

Scale of proposed change;

Duration of change; and

Reversibility.

1.10 The magnitude of the predicted impact has been described using criteria outlined above and Diagram 8.1 and detailed in methodology below.

1.11 Magnitude of impact has been classified on a five-point scale (no change, negligible, low, medium, and high). The definitions of terms relating to the magnitude of impact are set out in Table 8.4.

Table 8.3: Example Definitions of Magnitude

Magnitude	Typical Descriptors	
	Landscape Resource	Visual Resource
High	Total loss or addition or/very substantial loss or addition of key elements/features/patterns of the baseline i.e., pre-development landscape and/or introduction of dominant, uncharacteristic elements with the attributes of the receiving landscape.	Complete or very substantial change in view, dominant involving complete or very substantial obstruction of existing view or complete change in character and composition of baseline, e.g., through removal of key elements.
Medium	Partial loss or addition of or moderate alteration to one or more key elements/features/patterns of the baseline i.e., pre-development landscape and/or introduction of elements that may be prominent but may not necessarily be substantially uncharacteristic with the attributes of the receiving landscape.	Moderate change in view: which may involve partial obstruction of existing view or partial change in character and composition of baseline i.e., pre-development view through the introduction of new elements or removal of existing elements. Change may be prominent but would not substantially alter scale and character of the surroundings and the wider setting. Composition of the views would alter. View character may be partially changed through the introduction of features which, though uncharacteristic, may not necessarily be visually discordant.
Low	Minor loss or addition of or alteration to one or more key elements/features/patterns of the baseline i.e., pre-development landscape and/or introduction of elements that may not be uncharacteristic with the surrounding landscape.	Minor change in baseline i.e., pre-development view – change would be distinguishable from the surroundings whilst composition and character would be similar to the pre-change circumstances.
Negligible	Very minor loss or addition of or alteration to one or more key elements/features/patterns of the baseline i.e., pre-development landscape and/or introduction of elements that are not uncharacteristic with the surrounding landscape approximating to a 'no-change' situation.	Very slight change in baseline i.e., pre-development view – change barely distinguishable from the surroundings. Composition and character of view substantially unaltered.
No change	No loss, alteration or addition to the receiving landscape resource.	No alteration to the existing view.

Significance of Effects

1.12 The purpose of an EIA is to determine the likely significant environmental effects of a project. It is recognised that new development will lead to some landscape and visual effects. However, it should be stressed that not all landscape and visual effects arising will be significant in EIA terms.

1.13 GLVIA3 explains, at paragraph 5.55, that a staged approach can be adopted when assessing landscape significance *"susceptibility to change and value can be combined into an assessment of sensitivity for each receptor, and size/scale, geographical extent and duration and reversibility can be combined into an assessment of magnitude for each effect. Magnitude and sensitivity can then be combined to assess overall significance."*

1.14 Within this assessment, the assessment of significance has taken the following into account (as appropriate):

Reference to regulations or standards;

Reference to best practice guidance;

Reference to policy objectives;

Reference to criteria, for example designations or protection status;

Outcomes of consultation to date; and

Professional judgement based on local / regional / specialist experience.

1.15 Significance varies depending on the receptor's sensitivity and the magnitude of impact of the project. The distance to the development can be a major factor in determining the magnitude of the impact. Those resources or receptors closer to the project are likely to experience a greater significance of effects than those further away.

1.16 A significant effect would not necessarily mean that the effect is unacceptable in planning terms. What is important is that the likely effects of any proposal are transparently assessed and understood in order that the determining authority can bring a balanced and well-informed judgement to bear when making any decision. This judgement should be based upon weighing up the benefits of the proposal against the anticipated effects, both positive and negative.

1.17 The following matrix has been used to guide the assessment of effects. Where the matrix provides a choice of level of effects, e.g., minor or moderate, the assessor has exercised professional judgement in determining which of the levels is more appropriate.

Table 8.4: Assessment Matrix

Sensitivity	Magnitude of Impact				
	No Change	Negligible	Low	Medium	High
Negligible	No change	Negligible	Negligible or Minor	Negligible or Minor	Minor
Low	No change	Negligible or Minor	Negligible or Minor	Minor	Minor or Moderate
Medium	No change	Negligible or Minor	Minor	Moderate	Moderate or Major
High	No change	Minor	Minor or Moderate	Moderate or Major	Major or Substantial
Very high	No change	Minor	Moderate or Major	Major or Substantial	Substantial

1.18 The significance of effect on landscape, views and visual amenity has been described according to the six-point scale shown in the above matrix (substantial, major, moderate, minor, negligible or no change). A description of these terms is provided in Table 8.6.

Table 8.5: Definitions of Significance Criteria

Magnitude	Typical Descriptors	
	Landscape Resource	Visual Resource
No Change	Where proposals would not alter the landscape character of the area.	Where proposals would retain existing views.
Negligible	Where proposed changes would have an indiscernible effect on the character of an area.	Where proposed changes would have a barely noticeable effect on views/visual amenity.
Minor	Where proposed changes would be at slight variance with the character of an area.	Where proposed changes to views, although discernible, would only be at slight variance with the existing view.
Moderate	Where proposed changes would be noticeably out of scale or at odds with the character of an area.	Where proposed changes to views would be noticeably out of scale or at odds with the existing view.

Magnitude	Typical Descriptors	
	Landscape Resource	Visual Resource
Major	Where proposed changes would be uncharacteristic and/or would significantly alter a valued aspect of (or a high quality) landscape.	Where proposed changes would be uncharacteristic and/or would significantly alter a valued view or a view of high scenic quality.
Substantial	Where proposed changes would be uncharacteristic and/or would significantly alter a landscape of exceptional landscape quality (e.g., internationally designated landscapes), or key elements known to the wider public of nationally designated landscapes (where there is no or limited potential for substitution nationally).	Where proposed changes would be uncharacteristic and/or would significantly alter a view of remarkable scenic quality, within internationally designated landscapes or key features or elements of nationally designated landscapes that are well known to the wider public.

1.19 For the purposes of this assessment, those effects indicated as being of major or substantial significance, as defined in Table 8.6, are regarded as significant. Effects of moderate and lesser significance have been identified in the assessment but are not considered to be significant. The significance of effects for temporary changes, i.e. those during construction and decommissioning, are likely to be diminished due to their transitory nature. The significance of effect can vary depending on individual circumstances and the baseline situation, for example the presence of landscape designations and/or visual detractors. This is particularly true of the effects on landscape resources for instance in assessing whether (or not) a project would:

Give rise to a new landscape character type in its own right where the project would be the defining landscape characteristic; and/or

Give rise to a new landscape sub-type in which the project would be a major contributory element in defining character.

1.20 In the first case the resulting effect would normally be significant. In the second case the assessor must use professional judgement to determine if the effect is significant or not.

Limitations of the Assessment

1.21 The visual assessment is based on analysis of views towards the project site and includes viewpoints in sensitive locations from which the development would be most visible, not all public viewpoints from which the development would potentially be seen have been included in the assessment. Where impacts to residential and other private views (e.g. commercial occupiers) are noted these have necessarily been estimated.

1.22 The information provided in this chapter is considered to allow a robust assessment of the likely landscape and visual effects of the project to be made.

1.23 The visual assessment and associated field work have been carried out during summer 2020 when deciduous trees were in full leaf. As such, professional judgement has been used regarding the winter situation.

Appendix 4.2
EIA Scoping Direction 2020

The Planning Inspectorate
Yr Arolygiaeth Gynllunio

DNS: EIA Scoping Direction

3253253: Plas Power Estate Solar Farm

02/12/2020

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This Scoping Direction is provided on the basis of the information submitted to the Planning Inspectorate on 07 October 2020, in addition to consultation responses received. The advice does not prejudice any recommendation made by an Inspector or any decision made by the Welsh Ministers in relation to the development, and does not preclude the Inspector from subsequently requiring further information to be submitted with the submitted DNS application under Regulation 24 of The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (as amended) ("The 2017 Regulations").

1. Introduction

The Planning Inspectorate ("the Inspectorate") received a request under Regulation 33 of the 2017 Regulations for a Scoping Direction in relation to a proposed development for a solar photovoltaic electricity generating station ('solar park' or 'solar farm') and associated ancillary development by Lightsource bp.

The request was accompanied by a Scoping Report (SR) [EIA Scoping Report Part 1, Part 2, and Part 3] that outlines the proposed scope of the Environmental Statement (ES) for the proposed development.

This Direction has taken into account the requirements of the 2017 Regulations as well as current best practice towards preparation of an ES. In accordance with the 2017 Regulations the Inspectorate has consulted on the SR and the responses received from the consultation bodies have been taken into account in adopting this Direction.

The Inspectorate is authorised to issue this Scoping Direction on behalf of the Welsh Ministers.

2. Site Description

The site is comprised of two interconnected areas of agricultural fields located approximately 3.4 km to the west of Wrexham town centre, immediately west of the A483. A more detailed description of the site is given in Section 2 of the SR. As confirmed in paragraph 2.4, the site boundary has been altered since the Screening submission in May 2020.

3. Proposed Development

The proposal is for a solar photovoltaic electricity generating station ('solar park' or 'solar farm') and associated ancillary development, with an installed generation capacity of up to 75 MW.

The scope of the EIA should include all elements of the development as identified in the SR, both permanent and temporary, and this Scoping Direction is written on that basis.

In line with the requirements of Regulation 17 and Schedule 4 to the 2017 Regulations, any reasonable alternatives considered should be presented in the ES. The reasons behind the selection of the chosen option should also be provided in the ES, including where environmental effects have informed the choices made.

4. History

Natural Resources Wales (NRW) and the Local Planning Authority (LPA) highlight the site's historic use as part of an open cast coalmine, as indicated in paragraph 4.5 and subsequent sections of the SR. The site is currently in agricultural use.

5. Consultation

In line with Regulation 33(7) of the 2017 Regulations, formal consultation was undertaken with the following bodies:

- Relevant Local Planning Authority (Wrexham County Council)
- Natural Resources Wales
- Cadw

Responses received are included in **Appendix 1**.

6. Environmental Impact Assessment Approach

The Applicants should satisfy themselves that the ES includes all the information outlined in Schedule 4 of the 2017 Regulations. In addition, the Applicant should ensure that the Non-Technical Summary includes a summary of all the information included in Schedule 4. Consider a structure that allows the author of the ES and the appointed Inspector and Decision Maker to readily satisfy themselves that the ES contains all the information specified Regulation 17 and Schedule 4 of the 2017 Regulations. Cross refer to the requirements in the relevant sections of the ES and include a summary after the Contents page that lays out all the requirements from the Regulations and what sections of the ES they are fulfilled by.

As the assessments are made, consideration should be given to whether standalone topic chapters would be necessary for topics that are currently proposed to be considered as part of other chapters, particularly if it is apparent that there are significant effects and a large amount of information for a particular topic.

There may also be topic areas scoped out of the ES where the developer may wish to include application documents that sit outside of the ES and provide information that will support their consultation(s) and the decision-making process. The developer is encouraged to liaise with key consultees regarding non-ES application documents which are not a legislative requirement of the DNS regime. If agreement cannot be reached over non-ES application documentation, then the developer may wish to explore whether the Inspectorate can help provide clarity via its statutory preapplication advice service.

The ES should focus on describing and quantifying significant environmental effects. The Inspectorate welcomes the stated intention to provide a separate Planning Statement to address policy arguments.

6.1 Baseline

Schedule 4 of the 2017 Regulations states that the 'baseline scenario' is "A description of the relevant aspects of the **current** state of the environment" (emphasis added). The baseline of the ES should reflect actual current conditions at that time.

6.2 Reasonable Alternatives

In line with the requirements of Regulation 17 and Schedule 4 to the 2017 Regulations, any reasonable alternatives studied by the Applicant should be presented in the ES. The reasons behind the selection of the chosen option should also be provided in the ES, including where environmental effects have informed the choices made.

It is worth bearing in mind that under the Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations") unless it can be clearly shown to the Welsh Ministers that the project would have no adverse effect on the integrity of any designated sites, it would have to be shown that there is no feasible alternative solution (see advice note from IEMA). Further advice regarding the Habitats Regulations is provided in the final chapter of this Scoping Direction.

6.3 Currency of Environmental Information

For all environmental aspects, the applicant should ensure that any survey data is as up to date as possible and clearly set out in the ES the timing and nature of the data on which the assessment has been based. Any study area applied to the assessments should be clearly defined. The impacts of construction, operation and decommissioning activities should be considered as part of the assessment where these could give rise to significant environmental effects. Consideration should be given to relevant legislation, planning policies, and applicable best practice guidance documents throughout the ES.

The ES should include a chapter setting out the overarching methodology for the assessment, which clearly distinguishes effects that are 'significant' from 'non-significant' effects. Any departure from that methodology should be described in individual aspect assessment chapters. Where professional judgement has been applied this should be clearly stated.

The ES topic chapters should report on any data limitations, key assumptions and difficulties encountered in establishing the baseline environment and undertaking the assessment of environmental effects.

6.4 Cumulative Effects

The SR recognises the importance of including cumulative effects in the scope of the ES, and of liaising with the relevant LPA in identifying schemes to be considered.

Based on the information set out in the SR, the approach to the assessment of cumulative impact is considered largely appropriate. Effects deemed individually not significant from the assessment, could cumulatively be significant, so inclusion criteria based on the most likely significant effects from this type of development may prove helpful when identifying what other developments should be accounted for. The criteria may vary from topic to topic.

Best practice is to include proportionate information relating to projects that are not yet consented, dependent on the level of certainty of them coming forward.

All of the other developments considered should be documented and the reasons for inclusion or exclusion should be clearly stated. Professional judgement should be used to avoid excluding other development that is close to threshold limits but has characteristics likely to give rise to a significant effect; or could give rise to a cumulative effect by virtue of its proximity to the proposed development. Similarly, professional judgement should be applied to other development that exceeds thresholds but may not give rise to discernible effects. The process of refinement should be undertaken in consultation with the LPA, NRW and other consultees, where appropriate.

The scope of the cumulative assessment should be fully explained and justified in the ES.

The Planning Inspectorate's guidance for Nationally Significant Infrastructure Projects – Advice Note 17: Cumulative Effects Assessment sets out a staged process for assessing cumulative impacts that may be of relevance to the Applicant.

6.5 Mitigation

Any mitigation relied upon for the purposes of the assessment should be explained in detail within the ES. The likely efficacy of the mitigation proposed should be explained with reference to residual effects. The ES should provide reference to how the delivery of measures proposed to prevent/ minimise adverse effects is secured (through legal requirements or other suitably robust methods) and whether relevant consultees agree on the adequacy of the measures proposed.

6.6 Population and Human Health

The Applicant should ensure that the ES addresses any significant effects on population and human health, in light of the EIA Regulations 2017. This could be addressed under the separate topic chapters or within its own specific chapter.

6.7 Transboundary Effects

Schedule 4 Part 5 of the EIA Regulations requires a description of the likely significant transboundary effects to be provided in an ES. The ES should address this matter as appropriate.

7. Environmental Impact Assessment: Aspects of the Environment

This section contains the Inspectorate's specific comments on the scope and level of detail of information to be provided in the Applicant's ES. Environmental topics or features are not scoped out unless specifically addressed and justified by the Applicant and confirmed as being scoped out by the Inspectorate. In accordance with Regulation 17(4)(c) the ES should be based on this Scoping Direction in so far as the Proposed Development remains materially the same as the Proposed Development described in the Applicant's Scoping Report.

The Inspectorate has set out in this Direction where it has / has not agreed to scope out matters on the basis of the information available at this time. The Inspectorate is content that the receipt of a Scoping Direction should not prevent the Applicant from subsequently agreeing with the relevant consultees to scope such matters out of the ES, where further evidence has been provided to justify this approach. However, in order to demonstrate that the matters have been appropriately addressed, the ES should explain the reasoning for scoping them out and justify the approach taken.

Should the applicant wish to, due to a material change in circumstances after this Scoping Direction has been finalised, it is open to them to submit a request for an updated Scoping Direction. If the development itself materially changes, a fresh Scoping Direction should be sought.

7.1 Aspects Scoped In

Subject to the comments provided in Table 1, the following aspects are scoped into the ES:

Landscape and visual
Biodiversity
Hydrogeology and hydrology (including flood risk)
Historic Environment
Climate Change

8. Table 1: The Planning Inspectorate's Comments

ID	Reference in Scoping Report	Issue	Comment
	Description of the Development		
ID.1		Grid connection	The description of the development does not give any clarity on the grid connection. The ES should address the grid connection in a proportionate manner, even if it is to be subject to a separate consent and not part of the DNS application. If practicable the connection should be addressed in any relevant aspect chapters.
ID.2	2.4	Extent of development	The Inspectorate welcomes clarification of the evolution of the proposal from early pre-application discussions with the LPA to submission of the Screening request, and a further alteration in this Scoping submission. The ES should also clearly address the evolution of the scheme when describing the reasonable alternatives considered.
ID.3	2.8 – 2.13	Panel type Cable routes Access track creation	These three matters are not yet finalised in terms of design choices. At the point of submission of the application, the ES should describe the alternative options in the section on reasonable alternatives. The ES aspect chapters should fully consider any implications of the final choices.
ID.4	3.22 – 3.25	Cumulative effects	While developments that have already been constructed will form part of the baseline, this does not mean that they should be excluded when considering cumulative effects. Paragraph 5 of Schedule 4 of the 2017 Regulations makes it clear that consideration of cumulative effects should include existing development. It will be necessary to address the cumulative impacts of the development with the extant Bronwylfa Reservoir solar scheme.

ID	Reference in Scoping Report	Issue	Comment
	Applicant's proposed Aspects to be scoped out		
ID.5	4.8	Population Human Health Air Quality Risk of Major Accidents	Based on the information provided, the Inspectorate is satisfied that these matters can be scoped out of the ES. However, as indicated by the LPA and NRW, it may be necessary to address Contaminated Land and potential Pollution in other chapters of the ES (see comment ID.8).
ID.6	4.11 – 4.13	Transport	Should the construction period for this project coincide with the improvements to Junction 4 of the A483 it could mean that this aspect should be reviewed. If there is any chance of that scenario coming to pass the applicant should ensure that the North and Mid Wales Trunk Road Agent (NMWTRA) are consulted, and it may be necessary to address Transport (construction) in the ES. **Transport is therefore provisionally scoped out.**
ID.7	4.15 – 4.22	Land / Soil	The Inspectorate provisionally agrees that these matters can be scoped out. However, as the detailed Agricultural Land Classification is undertaken, the status of this aspect should be kept under review. If it becomes apparent that the development would affect 20 ha or more of Best and Most Versatile agricultural land, then the developer should consult the Land Quality Advice Service of the Welsh Government, and this matter should be included in the scope of the ES. **The loss of Agricultural Land is therefore provisionally scoped out.**
ID.8	4.7	Water – Historic site use	The SR states at paragraph 4.7 that the Site comprises Glacial Superficial deposits and gravel overlying bedrock strata of the Pennine Lower and Middle Coal Measures. The SR also states that the shallow coal seams has resulted in the use of much of the Site, particularly to the east and south.

ID	Reference in Scoping Report	Issue	Comment
			The SR does not contain a figure showing the extent of the historical opencast workings compared to the proposed development. However, it is stated that the restoration works comprised backfill of excavated areas to approximately 10 to 13 m depth. The SR contains limited information on the geology of the Site and the hydrological connectivity of the opencast restored areas and existing watercourses. Looking at the topography, it is clear the majority of the Site drains into the River Clywedog and subsequently into the River Dee, which is designated as a Special Area of Conservation and a Site of Special Scientific Interest. Due to the limited information available at this stage, it is not possible to discount any significant hydrological impact arising from the development, even if the proposed works will involve limited excavations. The LPA response confirms that the restored open cast mine has the potential to cause residual contamination. Additionally, NRW advise that there is potential to cause pollution during construction. Therefore, a hydrological assessment should be included in the ES, hydrogeological conceptual site model and pollution prevention plan as part of the mitigation, considering both construction and decommissioning. The findings of the assessment should also inform the ecological chapter. The assessment should also investigate whether the presence of a vast area of solar panels may have an impact on the water balance on Site. It has been noted that in some cases, solar panels can generate a localised increase in the water run-off. **A hydrological and hydrogeological assessment is therefore scoped in.**
ID.9	1.23 – 4.26	Water: Flood Risk	The stand-alone Flood Consequences Assessment (FCA) should be prepared in line with the comments from NRW. As a hydrological assessment is required as part of the ES the FCA should be part of the assessment. **Flood Risk is therefore scoped in.**

ID	Reference in Scoping Report	Issue	Comment
ID.10	4.31	Material Assets	The Inspectorate agrees with the suggested approach of addressing this aspect with other relevant chapters, rather than including a dedicated chapter of the ES. **Material Assets are therefore scoped into the ES, but not as a dedicated chapter.**
	Landscape and Visual		
ID.11	5.13	Glint and Glare Assessment	The applicant should ensure that any impacts on the Clwydian Range and Dee Valley Area of Outstanding Natural Beauty (AONB) are considered in the assessment. Please note the comments from NRW in their consultation response. Glint and Glare should also be considered as part of the assessment of impacts on the Historic Environment.
	Biodiversity		
ID.12	5.49	Wildlife Sites	The SR contains limited information on the adjoining Big Wood Wildlife Site and the other 14 Wildlife Sites located within 2 km of the Proposed Development; seven of which fall within 1 km of the site. The reasons for designation are not reported in the SR nor are the results of the biodiversity records search. As such, it is not possible at this stage to get an overall view of the sensitive receptors which could be affected by the proposed development and additional information will be required in the ES.
ID.13	5.58	Invertebrates	It is noted that the SR does not mention invertebrates. As mentioned above, no biodiversity records are provided. The limited information reported in the habitat description is not sufficient to exclude the presence of notable invertebrate species which may also support the bird species present on Site.

ID	Reference in Scoping Report	Issue	Comment
			If the development is likely to have any impact on invertebrates, this should be considered in the ES, including whether such impacts would have consequences for the identified bird species which they support.
ID.14	5.62 & 5.81	Bats Dormouse Hedgehog Reptiles	While the Inspectorate welcomes the stated approach of minimising works that would potentially impact on these species, it considers that it is premature to scope these species out of the ES at this stage. Survey work should be undertaken to confirm the presence or absence of sensitive receptors, before it can be determined whether the development is likely to have impacts. Additionally, the ES should consider not just the construction works, but the potential for pre-commencement intrusive investigations to affect sensitive receptors. As the submitted Outline Construction and Decommissioning Statement acknowledges that noise during construction is inevitable, it may be necessary to consider this and other construction and decommissioning impacts on these receptors, including during pre-commencement works.
ID.15	5.72	Cumulative impacts	The SR states that the cumulative impact of the proposal and the A438 improvement work will be considered with regards to otters and GCN. Other sensitive receptors should be considered, including birds, invertebrates, bats, dormouse, hedgehog and reptiles. The worst-case scenario used in the assessment should be clearly explained, including construction works of the two projects running simultaneously.
ID.16	5.74	Mitigation and enhancement	It is noted that no enhancement measures are proposed in the SR. The ES should include a biodiversity management plan including mitigation measures and enhancement opportunities during construction and once the

ID	Reference in Scoping Report	Issue	Comment
			proposal is operational. The Biodiversity Management plan should include objectives, monitoring arrangements and thresholds which would lead to changes in the management regime to achieve the identified objectives.
	Cultural Heritage		
ID.17	5.89	Updated Built Heritage Assessment	As Cadw indicate, this assessment should include all designated heritage assets listed in Annex B to their consultation report.
ID.18	5.89 & 5.90	Updated Archaeological Desk Based Assessment	This should include the results of the geophysical survey and consider the nature and importance of features identified in that process.
ID.19	5.89	Heritage Impact Assessment	The Inspectorate agrees with Cadw that this should be undertaken after the other Cultural Heritage Assessments listed above to ensure that all identified historic assets are considered.
ID.20	5.91	Assessment Guidance: Design Manual for Roads and Bridges	The Inspectorate welcomes the assurance that the ES will be prepared in accordance with the relevant Cadw guidance, and the updated Design Manual for Roads and Bridges. We note that LA 104 was subject to a revision in August 2020. The most current guidance should be used in the assessment.

9. Other Matters

This section does not constitute part of the Scoping Direction, but addresses other issues related to the proposal.

9.1 Habitats Regulation Assessment

The Conservation of Habitats and Species Regulations 2017 require competent authorities, before granting consent for a plan or project, to carry out an appropriate assessment (AA) in circumstances where the plan or project is likely to have a significant effect on a European site (either alone or in combination with other plans or projects). The competent authority in respect of a DNS application is the relevant Welsh Minister who makes the final decision. It is the Applicant's responsibility to provide sufficient information to the competent authority to enable them to carry out an AA or determine whether an AA is required.

When considering whether or not significant effects are likely, applicants should ensure that their rationale is consistent with the CJEU finding that mitigation measures (referred to in the judgment as measures which are intended to avoid or reduce effects) should be assessed within the framework of an AA and that it is not permissible to take account of measures intended to avoid or reduce the harmful effects of the plan or project on a European site when determining whether an AA is required ('screening'). The screening stage must be undertaken on a precautionary basis without regard to any proposed integrated or additional avoidance or reduction measures. Where the likelihood of significant effects cannot be excluded, on the basis of objective information the competent authority must proceed to carry out an AA to establish whether the plan or project will affect the integrity of the European site, which can include at that stage consideration of the effectiveness of the proposed avoidance or reduction measures.

Where it is effective to cross refer to sections of the ES in the HRA, a clear and consistent approach should be adopted.

The Planning Inspectorate's guidance for Nationally Significant Infrastructure Projects – Advice Note 10: Habitat Regulations Assessment relevant to Nationally Significant Infrastructure Projects may prove useful when considering what information to provide to allow the Welsh Ministers to undertake AA.

The Planning Inspectorate notes the intention to submit a shadow HRA considering the local otter population, a qualifying feature of the River Dee and Bala Lake SAC and GCN breeding populations which are a feature of the Johnstown Newt Sites SAC and the Stryt Las SSSI. The Applicant is reminded that a Stage 1 screening exercise should also be conducted taking into consideration potential impacts from the development on all conservation objectives of the identified designated sites, both alone and in combination.

9.2 SuDS Consent

Whilst a separate legislative requirement from planning permission, the Applicant's attention is drawn to the statutory SuDS regime that came into force in Wales in January 2019. The requirement to obtain SuDS consent prior to construction may require iterative design changes that influence the scheme that is to be assessed within the ES and taken through to application. As such, it is recommended that the applicant contact the local SuDS Approval Body early on.

9.3 The National Development Framework (Future Wales: the national plan 2040)

The Welsh Government published an updated draft of the NDF in September 2020. This latest iteration is a working draft that represents the Minister's response to the public consultation on the draft version. It is currently subject to a period of scrutiny by the Senedd which will continue until February 2021. It may be further amended by this process. The applicant may wish to address the contents of the working draft in their planning statement. Once the NDF is finalised, it will form the highest tier of the development plan hierarchy in Wales. Should the application be submitted after the NDF is finalised, the application will need to address the contents of the NDF.

Appendix: Consultation Responses

- Wrexham County Council
- Natural Resources Wales
- Cadw