Plas Power Solar and Energy Storage Project

4.3 Environmental Statement Volume 3: Appendices

Part 3 of 14

February 2024

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Schedule of appendices included in this document

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4.3.11	**Appendix 4.3 EIA Scoping Report 2023**
4.3.12	**Appendix 4.4 EIA Scoping Direction 2023**

Appendix 4.3
EIA Scoping Report 2023

PLAS POWER SOLAR FARM

EIA SCOPING REPORT UPDATE

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

On Behalf of Lightsource bp

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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 A scoping request was sent to Welsh Ministers in October 2020. A Scoping Direction (**Appendix 2**) was issued on 2 December 2020 and confirmed the topics to be Scoped into the EIA:

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

1.4 Since the original Scoping Direction was issued, the proposed development has been revised, in the main, to reduce the amount of Best and Most Versatile (BMV) agricultural land within the site. This has resulted in some previous areas of the site being omitted and some new areas being included.

1.5 Accordingly, a Scoping Direction is now sought in respect of the revised proposal. It is anticipated that the revised proposal would, in broad terms, give rise to similar environmental effects as the previous proposal and therefore this Scoping Report has been produced as an update to the original Scoping Report submitted to Welsh Ministers in October 2020.

1.6 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.

1.7 Lightsource bp is aware of the proposed A483 Junction 3 to 6 improvements. If the junction improvement took place, this would remove part of the northeast section of the proposed development. As the road scheme still may or may not proceed, for the purposes of this Scoping Report, Lightsource bp has included the area within its development boundary for the purpose of scoping the assessment. However, should the Junction 4 improvement obtain the necessary consents the proposed development will be modified accordingly so as to omit land impacted by the

improvement works. Lightsource bp will seek to engage positively with WG and the North and Mid Wales Trunk Road Agent throughout the DNS pre-submission stage process.

1.8 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

1.9 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

1.10 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

1.11 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.

1.12 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

1.13 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.

1.14 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

1.15 An important part of the applicant's planning process is engaging with local communities to provide information on the project and gather local feedback.

1.16 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 application site (the "site") covers approximately 140 hectares (ha) and is located wholly within the administrative boundary of Wrexham County Borough Council. The site is approximately 3.4 km to the west of Wrexham town centre (please see **Figure 2.1**).

2.2 The majority of the site comprises two interconnected areas north and south of the A525 Ruthin Road. The southern and larger part of the site is bound by the A525 Ruthin Road to the north, to the east 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. The northern part is bound by the A525 Ruthin Road to the south and extends northwards towards Higher Berse Road. Coedpoeth lies approximately 300m to the west and New Broughton lies approximately 600m north-west of the site. The site comprises several agricultural fields, primarily used for pasture grazing, bound by a mixture of mature woodland, trees, hedgerows, fencing, agricultural tracks and roads.

2.3 The site includes a small section of land to the east adjacent to the A483 which was included in plans for a road scheme at Junction 4 of the A483 (as part of the Junction 3-6 Improvements). However, in February 2023, the WG's Roads Review Panel recommended that the A483 Junctions 3 to 6 Improvement scheme should not proceed in its current form as the case for change is not well-aligned with the WG's aim to reduce car mileage. An alternative project is currently being developed, and therefore the planning protection issued in March 2021 to the proposed Junction 4 Improvement will remain in place whilst this further development work is progressed and concluded. For the purpose of EIA Scoping this area is included for completeness so as, in the scenario that the Junction 4 Improvement project does not require the land, it can be included in the proposed development. Indeed, even if the land is not used as part of the permanent proposed development, there may be the potential to use it temporarily during construction for access and/or for the construction compound.

2.4 The proposed development will include a cable that will connect the solar farm, battery storage facility and associated infrastructure to the Legacy Substation located approximately 600m to the south-west of the site, north of the B5246 Bronwylfa Road. There are currently four options for the cable route that are under consideration. Each of the four cable route options are scoped for in this EIA Scoping Report.

2.5 The site historically has been part of an open cast coal mine and has had an industrial use. The site formed part of an open cast mine in 1964 and subsequently a non-water fill in 1976. The site is currently used for agricultural purposes, comprising of agricultural fields, primarily used for pasture grazing, bound by a mixture of mature woodland, trees, hedgerows and fencing. The proposed development would support the continued use of the land for sheep grazing.

Project Description

2.6 The proposed development will consist of the construction of solar panels mounted on metal frames, new access tracks, underground cabling, perimeter fencing with CCTV cameras, switchgear substations, inverters, transformer stations, auxiliary transformers, permanent storage containers, monitoring houses, a battery energy storage system (BESS) (also referred to as the battery storage facility) and all ancillary grid infrastructure and associated works (refer to **Figure 2.2** – Proposed Site Layout Plan). At this stage, further detailed design review is required is confirm the final MW capacity of the proposed development, however, it is anticipated that it will be in the region of 57MWac. **Figure 2.3** – Proposed Site Layout Plan Revisions, provides an overview of how the proposed development has evolved since previously scoped in December 2020.

2.7

2.8 The main components of a solar farm are:

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

2.9 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.

Solar Arrays

2.10 Solar panels, also known as photovoltaics (PV), are made up of cells, which convert the light energy from daylight into electrical energy.

2.11 The solar panels will be attached to metal frames or mounting structures which together form PV tables (or modules). The PV tables will be fixed to pile driven galvanised steel posts. The frames are typically made of galvanised aluminium or steel and will have a rough matt finish, rather than a polished finish. The base of the frame piles are thin 'H' or 'Z' shapes, thus they have very little impact on the ground and do not require any prior excavation. The frames are driven to a depth of approximately 1.5-2m depending on ground conditions. No concrete foundations are likely to be required for the frames. When the site is decommissioned, the frame piles are simply pulled out from the ground causing minimal ground disturbance.

2.12 The frames will allow the panels to be positioned at an angle of between 15-25 degrees from the horizontal axis and orientated to the south, with a proposed height of up to 3.055m to the top of the panel frame on level ground, including 1m of ground clearance to enable maintenance access below the PV modules (refer to **Figure 2.4** – Panel Elevation (drawing number: PNL_2P_25/6854) for further details).

2.13 A solar panel array will comprise of multiple rows of solar panels running east to west. Between each row of solar panels there would be a gap of approximately 6m to avoid overshadowing from one solar row to another.

2.14 The solar panels will be set back from the site boundaries to allow for perimeter security fencing, CCTV coverage, access tracks and maintenance access.

Inverters, Transformers and Switchgear Substations

2.15 Lightsource bp are currently considering two inverter options:

1. String inverters; or
2. Central inverters.

2.16 The inverters are required to convert the Direct Current (DC) electricity generated by the panels, to Alternating Current (AC) which is compatible with the wider UK grid network. String inverters would be mounted onto support frames whilst central inverters would be situated in pairs throughout the site. From the inverters, the electricity flows to a transformer which 'steps-up' the voltage of the electricity from low voltage (LV) to medium voltage (MV) before the switchgear substations. The switchgear substations include a 'switch' mechanism to shut parts or all of the solar farm off from the wider network in the event of a fault (similar to a household fuse box).

2.17 The proposed inverters will comprise containerised units, as shown in grey on the site layout and will measure approximately 8.2m long (L), 2.3m wide (W) and 2.7m high (H) (including the base).

2.18 The proposed transformers will be 5.5m (L), 4.5m (W)and 3.2m (H), these are an 'open air' design, surrounded by a fence and accompanied by a switchgear substation. The switchgear substations will be 4.2m(L), 2.6m(W) and 3.15m(H) (including the base). At this stage, further detailed design review is required is confirm the final MW capacity of the proposed development, however, it is anticipated that it will be in the region of 57MWac.

2.19 The inverters, transformers and switchgear substations will be sited on a hardcore base. Refer to **Figure 2.5** – Proposed Inverters (drawing number: UK_EPD_INV), **Figure 2.6** – Proposed Transformers (drawing number: UK_EPD_TFM) and **Figure 2.7** – Proposed Switchgear Substations (drawing number: UK_EPD_SWG) for further details.

2.20 The electricity generated across the site, will be cabled to the main customer and DNO substations to the south of the site. All cabling will be routed underground.

Auxiliary Transformer

2.21 There will be one auxiliary transformer located within the site adjacent to the DNO and customer substations in the south-west of the site. This will be approximately 3.8m (L) x 3.8m (W) 3.2m (H). The auxiliary transformer will provide low voltage electricity supply to the site. Refer to **Figure 2.8** – Proposed Auxiliary Transformer (drawing number: UK_EPD_AUX) for further details.

Customer and DNO Substations

2.22 All electricity from across the site will collect at a main customer substation which will be installed to the south-west of the site and will connect to the DNO substation before the electricity is exported off-site and onto the UK Grid Network. From here, a high voltage (HV) cable buried underground, will connect the solar farm to the existing grid network. The DNO substation will be adopted by the DNO.

2.23 The customer substation will be approximately 7.7m (L) x 2.6m (W) 3.5m (H) (including the base) and the DNO substation will be approximately 5.5m (L) x 5.0m (W) x 4.4m (H).

2.24 Both the Customer and DNO Substations will be painted in RAL 6005 Moss Green. Refer to **Figure 2.9** – Proposed Customer Substation (drawing number: UK_EPD_CSS) and **Figure 2.10** – Proposed DNO Substation (drawing number: UK_EPD_DNO) for further details.

2.25 A DNO cabinet will be located close to the DNO substation and will house the DNO meter (refer to **Figure 2.11** – Proposed DNO Cabinet (drawing number: UK_EPD_MTR)). The DNO cabinet is generally made of Glass Reinforced Plastic (GRP).

2.26 The location of the Customer and DNO Substations and associated buildings and infrastructure could change and be located to the south-east subject to further technical and environmental studies as part of the layout and design iteration of the proposed development.

Monitoring House/Communications Building

2.27 A monitoring house is required to enable remote monitoring of the site. This building is typically 3.8m (L) x 3.2m (W) and 3.3m (H) (including the base). This building will provide daily information/data in relation to the operation of the solar farm. During a solar farm's operation, data communication is vital to facilitate information flow from equipment such as inverters to a central control centre and warn Lightsource bp of any operational potential issues with the solar farm and or battery storage compound. In addition to this a 5.05m weather station attached to the outside of the building is proposed to monitor wind speed, direction, and temperature. Refer to **Figure 2.12** – Proposed Monitoring House (drawing number: UK_EPD_MH/CB) for further details.

Storage Container

2.28 It is proposed that one permanent storage container will be located within the site to store miscellaneous spare parts. This unit will measure circa 12.4m (L) x 2.6m (W) x 2.79m (H). The storage container will be painted in RAL 6005 Moss Green. Refer to **Figure 2.13** – Proposed Storage Container (drawing number: UK_EPD_S40) for further details.

Facilities

2.29 A composting toilet will be based on-site for use of on-site staff during operational and maintenance works. It can also be made available for use by tour groups and visiting members of the local authority as necessary. This will be emptied as and when required by an approved contractor. Refer to **Figure 2.14** – Proposed Composting Toilet (drawing number: UK_EPD_TLT) for further details.

Security Fencing and Gates

2.30 The proposed solar farm will be secured by perimeter fencing. This will be deer fencing with wooden posts at circa 3.5m centres. The fence will be circa 2m high with small mammal gates fitted at appropriate points to enable free access into and out of the site (see **Figure 2.15** – Proposed Security Fencing (drawing number: UK_EPD_FNC)).

2.31 The security fencing will function to restrict unauthorised access into the site and to deter theft or vandalism. Deer fencing has been selected due to its relative visual permeability and minimal impact on the natural surface water flows. A distance of approximately 3m will be maintained between the security fencing and the solar arrays. A further distance of approximately 6m will be maintained between the solar arrays and the site boundary (i.e. the existing hedgerow/treeline, where applicable).

2.32 Gates will be located at each of the access points around the site. Each gate will be 2m high and 5m wide. Refer to **Figure 2.16** – Proposed Gates (drawing number: UK_EPD_GTD) for more details.

CCTV and Infra-red Lighting

2.33 CCTV cameras carefully positioned around the periphery of the site. These cameras will be circa 2.5-3m high on galvanised steel posts and will be directed into the solar farm. They will use passive infra-red technology, thereby avoiding the need for lighting. These will enable remote surveillance of the site. Refer to **Figure 2.17** – Proposed CCTV (drawing number: UK_EPD_CAM) for further details.

Cabling

2.34 The majority of the cabling within the northern and southern areas of the site will be laid underground via surface dug trenches of approximately 1m deep and 50cm wide and backfilled. These will utilise existing access tracks and road options wherever possible, particularly where sensitive habitats or archaeology are potentially present, such as through Plas Power Wood and Big Wood, both of which lie within Bersham Conservation Area.

Battery Energy Storage System (BESS)

2.35 The integration of renewable energy projects places an increasing demand for additional flexibility and reserve supply within the UK's energy generation mix. The battery storage or Battery Energy Storage Systems (BESS) can provide flexible back-up power to the National Grid almost instantaneously when needed to assist with this.

2.36 Lightsource bp are considering the option of including a BESS as part of the proposals. The location for a potential BESS has not yet been identified and will be informed by further technical and environmental studies. A typical BESS comprises the following:

- Power Conversion System
- Battery Block

- Storage Building
- Generator
- Welfare
- Customer Substation
- Monitoring House

2.37 With the exception of the Power Conversion System at approximately 4m, most other buildings and structures will typically be below 3.5m in height, subject to location and the flood risk assessment.

2.38 There will be security fencing around the BESS compound which will function to restrict unauthorised access into the compound and to deter theft or vandalism. Fencing is typically welded mesh with metal posts, combined with CCTV at approximately 2.5-3.0m high, as for the wider site.

2.39 It is anticipated it would be located to the south of the site, close to the infrastructure associated with the solar farm, and away from residential properties and sensitive viewpoints.

2.40 BESS technology is continually evolving and improving, and therefore the description of development and full details of the infrastructure cannot be fully defined at this stage.

Access

2.41 The main strategic routes to the area near the site are:

- A483 towards Chester in the north and Oswestry and the A5 to the south. These routes provide the links to larger cities such as Cardiff and Swansea to the south and Liverpool and Manchester to the North.
- A534 towards Nantwich, linking to the A500 towards Stoke-on-Trent and the M6. This route links to Birmingham, Bristol, Derby and Nottingham.

2.42 Several existing access points will be used for access for the construction, maintenance and decommissioning of the proposed development. If necessary, some minor modifications will be required or temporary accesses will be created off the highways to enable access to the site by all vehicles anticipated to visit.

2.43 It is currently assumed that the main access to the southern part of the site will be off the A525, there are two options for access that require further assessment and design work. The first is via the existing Home Farm access (Access 1), which would be suitable for HGVs. It will require advance signage to warn of construction vehicle movement and potential speed reduction via temporary traffic management. Through detailed design and the road safety audit process the access safety will be examined, but at this stage the access is considered a viable HGV access point with appropriate traffic management. This access would be used both during construction and once operational by operational and maintenance staff.

2.44 The alternative access from the A525 is further east and would be temporary for construction 'although it could be used on an occasional basis during operation. This point of access would require construction of an access route from the Plas Power Estate onto the A525 (Access 2). It would provide a route emerging in the vicinity of the Heritage Way and A525 Junction. This access would have the advantage that it would avoid properties situated around the Home Farm access and would minimise the distance between the A483 strategic route and the southern part of the site.

2.45 Abnormal indivisible loads (AILs) would be able to access the site by the identified strategic routes, and there are no barriers to AILs on the A525 between the trunk road and the potential site accesses.

2.46 The access to the northern part of the site will be via an existing farm access routing north off the A525 (Access 3). This access would be suitable for HGVs. It will require advance signage to warn of construction vehicle movement and potential speed reduction via traffic management. Through

detailed design and the road safety audit process the access safety will be examined, but at this stage the access is considered a viable HGV access point with appropriate traffic management. This access point could be reconfigured in a number of ways and designed to accommodate required movements, although as it is the sole point of access for adjacent dwellings, reconfiguration would require maintaining the access for residents.

2.47 Access to the southern part of the site from the south along Rhos Berse Road will be limited to construction staff vehicular access only with construction vehicle access in exceptional circumstances only (for example if there is an obstruction on the network restricting access from the A525).

2.48 There will be no access to the northern part of the site from Tanllan Lane to the north.

2.49 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 of permeable crushed stone. Geosynthetic reinforcement or soil stabilisation may be used to reduce the depth of track construction. The surface will be a compacted granular material (crushed rock) up to an approximate thickness of 0.3m, dependent on the ground conditions. Width will increase at bends and at the entrance point. The tracks will measure between 3.5m and 4.5m wide.

2.50 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.

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 on 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 detailed:

- 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;
- Negligible.

3.21 All 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 No specific cumulative developments were identified in the Scoping Direction issued in December 2020, other than the A438 improvement works with regards to the assessment of effects on otters and great crested newts. Following the recommendation that the A438 imporvement works scheme should not proceed, it is proposed that this no longer needs to be considered as part of the cumulative assessment.

3.26 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 previous pre-application advice. With reference to the Bronwylfa Reservoir Solar Park, this development is an existing and operational solar park and therefore considered to form part of the baseline.

Mitigation Measures

3.27 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.

3.28 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.

3.29 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 Construction Environmental Management Plan; and
- Measures required as a result of legislative requirements.

3.30 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.

3.31 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

3.32 Summary 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 (PEA) 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. A PEA update is currently underway to account for any changes to the site and to account for the new red line boundary. The Phase 1 habitat survey update was undertaken on 5th to 6th April 2023.

4.3 Ecological surveys were undertaken throughout 2019 to 2021 to assess the use of the site by the following species: otter, great crested newt, wintering birds and breeding birds. An updated wintering bird survey was undertaken in late 2022 to early 2023. Surveys for great crested newt are recommended to be undertaken in spring 2023.

4.4 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 we will examine these issues in an individual biodiversity chapter. The December 2020 Scoping Direction confirmed that additional information will be required in the ES in respect of wildlife sites and invertebrates.

4.5 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. An Archaeological Desk-Based Assessment and Built Heritage Appraisal update is currently underway to account for the additional land now included within the site boundary.

4.6 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. The 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. As above, this assessment is being updated to account for the additional land now included within the site boundary.

4.7 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. A Landscape and Visual Appraisal update is currently underway to account for the additional land now included within the site boundary.

4.8 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 Natural 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 including Cefn Rock sandstone in the northernmost part of the site. 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 13m 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 proposed development is considered.

Topics Scoped Out of Assessment

4.9 Taking into account the findings of the above studies, together with the feedback from the Screening Direction, the December 2020 Scoping 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),
- Air,
- Material Assets,
- Risk of Major Accidents,
- Noise and Vibration.

Planning Policy Context

4.10 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

Population

4.11 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.

Transport

4.12 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, as the trips would be less than the daily variation in traffic flows and therefore will be imperceptible.

4.13 This confirms the conclusion of the scoping advice received from Wrexham County Borough Council (WCBC) in December 2020 (contained in **Appendix 2**) that the highway effects during operation of the solar farm would be negligible:

"…Once in operation, it is considered that the solar park will generate only minimal traffic and as such does not present any highways concerns."

4.14 The 2020 scoping advice notes, regarding construction and decommissioning traffic:

"The construction and decommissioning phases are expected to generate HGV traffic. It is recommended that a Construction Traffic Management Plan is produced and agreed with WCBC Highways Department prior to commencing construction. The Plan should confirm the size of vehicles to be used, route taken to access the site from the A483 and how vehicle movements will be managed to minimise impact on the highway network."

4.15 It is agreed that a Construction Traffic Management Plan (CTMP) detailing the construction vehicle routes, vehicle types including AILs, traffic management and signing, construction compound locations and accesses, off-site electrical connection and any associated parking or management of construction traffic will be prepared for review by WCBC. The CTMP will take account of traffic impact on minor roads as requested in the 2020 scoping advice, and primary routes for traffic will be via the A483 and A525.

4.16 An Outline Construction Environmental Management (CEMP) will be submitted as an Appendix to the ES which will set out the construction methodology together with environmental and traffic management measures (i.e. the CTMP). The construction period is expected to take approximately 12-18 months. It is expected that construction hours will be between 07:00 and 19:00 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.

4.17 This accords with the 2020 scoping advice which concludes that construction transport effects can be adequately mitigated to avoid significant impact:

"…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"

4.18 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, including for construction, decommissioning and operation can be scoped out of the ES and adequately addressed through the submission of separate standalone technical reports which will accompany the planning application – including an Outline CTMP (as part of the outline CEMP) and a Transport Statement. It is also proposed that details of the operational traffic movements and any onsite parking and turning spaces will be provided within the Transport Statement. The December 2020 Scoping Direction confirmed that population and transport could be scoped out of the EIA, and it is not considered that the changes associated with the currently proposed development change this conclusion.

Human Health

4.19 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. The December 2020 Scoping Direction confirmed that human health could be scoped out of the EIA and it is not considered that the changes associated with the currently proposed development change this conclusion.

Land (for example land take)

4.20 The site comprises agricultural land which will be developed for the production of renewable energy. 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.

4.21 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.

4.22 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. The December 2020 Scoping Direction confirmed that land as a topic could be scoped out of the EIA, however, as indicated by WCBC and NRW, it may be necessary to address contaminated land and potential pollution in other chapters of the ES. It is not considered that the changes associated with the currently proposed development change this conclusion.

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

4.23 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.

4.24 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.

4.25 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.

4.26 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.

4.27 A detailed ALC survey of the has been undertaken to identify the distribution of ALC grades across the entire site and is included at Appendix 3. In accordance with WG guidance, the areas identified as Grade 3b agricultural land on the WG Predictive ALC map have not been surveyed. This includes almost the entire southern portion of the site. The ALC survey has therefore provided an assessment of the northern portion of the site as well as pockets of the southern portion of the site which were identified on the WG Predictive ALC map as Grade 3a.

4.28 The ALC survey confirms that the areas surveyed are variously limited by both wetness and droughtiness and that only 6.4% of the survey area (1.6 ha) contains Grade 3a agricultural land. The wider survey area contains 83.7% (21.5ha) Grade 3b and 7.9% (2 ha) Grade 4 agricultural land.

4.29 The ALC survey has been independently verified by the WG Land Quality Advice Service (LQAS). In respect of the 1.6 ha of Grade 3a agricultural land which is contained within the site, LQAS confirmed that is does consider the loss of 1.6Ha of BMV land to be '*a matter in the national agricultural interest'* and that it would be a matter for the Determining Authority to take a view regarding compliance with PPW 3.58 and 3.59 in the light of evidence before them.

4.30 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.

Air

4.31 As identified in the December 2020 Scoping Direction, the Inspectorate was satisfied that air quality could be scoped out of the ES. 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.

4.32 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.

4.33 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

4.34 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

4.35 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.

4.36 It is acknowledged that there is some element of risk associated with emerging battery storage technology. The development will minimise fire risk by:

- Procuring components and using construction techniques which comply with all relevant legislation;

- Including automatic fire detection systems in the development design;
- Including automatic fire suppression systems in the development design;
- Including redundancy in the design to provide multiple layers of protection;
- Designing the proposed development to contain and restrict the spread of fire through the use of fire-resistant materials, and adequate separation between elements of the battery storage facility;
- Continuous monitoring of the BESS parameters (current, voltage, temperature, etc.) that would be used as an early indicator of an issue and would result in shut down of the system before a failure event would typically occur; and
- Ensuring that North Wales Fire and Rescue Service recommendations and requirements are addressed to enable an adequate emergency response to a fire.

4.37 A Battery Storage Management Plan will be produced to secure the implementation of the above principles throughout the construction, operation and decomissioning of the proposed development. On this basis, it is considered that risk of major accidents (including fire risk) can be scoped out of the EIA.

Noise and Vibration

4.38 Based upon an initial review of the site location and surrounding area, the existing baseline sound environment is likely to be dominated by local traffic noise on the A483 and A525, as well as other local roads. The nearest noise sensitive receptors to the northern section of the proposed development are residential dwellings situated on:

- Heol Olfa and Tan Llan to the west,
- Higher Berse Road and Smithy Road to the north and east, and
- The A525 running east to west to the south.

4.39 The closest receptors to the southern section of the proposed development are residential dwellings situated on:

- Rhos Berse Road to the west,
- The A525 to the north,
- Bersham Road to the south, and
- Berse Lane to the west.

4.40 The primary operational noise sources associated with the proposed development are the solar panel inverters, transformers, and substations. There is also a BESS proposed within a compound. The above sources do not generate any substantial levels of vibration since this is controlled at source as part of the plant design.

4.41 As mentioned above, the local noise climate is likely dominated by local traffic noise which is broadband in nature. Solar inverter units are typically similar in nature and thus are unlikely to contain any distinct, perceptible acoustic characteristics. The level of noise emitted can be readily controlled via layout, orientation, and acoustic mitigation where required. Similarly, operational noise from the BESS compound and substation can also be mitigated via careful design. As such, it is proposed that an assessment of the noise and vibration impacts be scoped out of the ES.

4.42 Noise and vibration during the construction and decommissioning phases are assumed to be similar and may be controlled via the CEMP and application of Best Practicable Means (BPM). As such, it is unlikely that construction noise and vibration will give rise to significant effects at nearby receptors and assessment is therefore proposed to be scoped out of the ES.

Content of the Environmental Statement

4.43 The scope of the EIA takes into account the preliminary environmental information pertinent to the site, formal pre-application consultation with WCBC, the Screening Direction issued by the Planning Inspectorate on 1st July 2020 (**Appendix 1**) and the Scoping Direction issued by the Planning Inspectorate on 2 December 2020 (**Appendix 2**).

4.44 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;
- Hydrology and Hydrogeology;
- Climate Change;
- Cumulative Effects.

4.45 **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	Hydrology and Hydrogeology
Chapter 9	Climate Change
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 [setting out the need is optional, this chapter could just focus on the alternatives]. 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 alternatives and evolution of 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 farm 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 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 Proposed Approach below), and would be completed by a suitably qualified and experienced Chartered Landscape Architect (Chartered Member of the Landscape Institute (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 WCBC it is copied here below. The advice has been considered during the selection of Representative Viewpoints (see Table 5.2 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."

5.15 Subsequently, RPS attended a meeting with NRW on 13 May 2021 where landscape matters associated with the development were discussed. NRW's advice informed the parameters and scope of the LVIA.

Baseline Information

5.16 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.

5.17 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 farm development.

Landscape Planning Designations

5.18 The 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 of **Appendix 6**). As such, there would be no direct physical impacts upon the AONB as a result of the proposed solar farm. The LVIA would consider potential visual effects from the AONB and any potential effects the setting to the AONB as well as upon the AONB itself.

5.19 Other designations of local importance, which fall partly within the site, include Special Landscape Area (SLA), Green Barrier and Offa's Dyke (SAM) where one of the cable routes is located, 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**).

5.20 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.

5.21 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.

5.22 There are a substantial number of individual trees, hedgerows and blocks of woodland across the Application Site, or immediately adjacent to it.

National and Local Landscape Character

5.23 The relevant published landscape character assessments have been initially reviewed below. Within the LVIA Chapter, particular attention would be paid to the key landscape characteristics of the relevant LANDMAP aspect areas within which the is located and the surrounding areas indirectly affected.

5.24 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.

5.25 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.”

5.26 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 Offa's 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 night-time 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 tranquillity 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."

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

5.28 There are two other Aspect Areas within which parts of the site sit. They include;

- WRXHMVS065: A483 Mold Road Corridor which occupies the easternmost parts of the Application Site. Evaluated as Moderate overall; and,
- WRXHMVS073: West Wrexham Lower Slopes which occupies the northernmost part of the Application Site. Evaluated as Low overall.

Visual Resource

Zone of Theoretical Visibility

5.29 In order to further determine the geographical extent of potential visibility, a preliminary computer generated Zone of Theoretical Visibility (ZTV) was generated (refer to Figure 5.2 of **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 the LVIA 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.

5.30 The preliminary ZTV was prepared based on an assumed maximum solar panel height of 3m AOD. 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. 24 origin points, from within the Application Site, have been used to illustrate the full parameters of the proposed development. Including:

- 23 origin points (in total), set at 3m (AGL), within the centre of each of the fields of the Application Site which would contain solar panels; and,

- 1 origin at the approximate highest point within the Application Site.

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

5.32 A further ZTV exercise was completed to help determine the location of additional solar panels, within a field adjacent to the northern parcel of the Application Site, see Figure 5.3. The Application Site boundary (redline) was amended as a result. It is anticipated that this amendment would not significantly affect the residential receptors at Coedpoeth. Residential receptors would be considered in detail as part of a standalone Residential Visual Amenity Assessment (RVAA), which would be referred to as appropriate within the LVIA.

View Ranges

5.33 For the purposes of the LVIA Chapter, views will be 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.

Representative Viewpoints

5.34 Following site work, the Candidate Viewpoints were refined and Representative Viewpoints selected and will be assessed as of the LVIA Chapter. These Representative Viewpoints 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**). Some Candidate Viewpoints have also been discounted as no longer relevant to the revised layout.

5.35 All Representative 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 were taken from each of the chosen Representative Viewpoints and 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 or as alternative / additional Representative Viewpoints.

Photographs were taken during winter 2021, when vegetation was 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.

Table 5.2: Representative Viewpoints

Representative Viewpoint No. / Location	Sensitivity	Existing view description
VP1: Public Right of Way (BER/1) north, looking west	**High**	Close distance view from public footpath on northern boundary to the Application Site.
VP2: Public Right of Way (BER/1) near Bersham Conservation Area	**High**	Close distance view from public footpath at Bersham Ironworks within Conservation Area and scheduled monument, to the immediate south of the northern part of the Application Site.
VP3: Public Right of Way (BER/10) near scheduled monument	**High**	Close distance view from public footpath near Offa's Dyke scheduled monument, to the immediate west of the Application Site.
VP4: Plas Buckley Road looking east from local road	**Low**	Close distance view from local road to the west of the southern part of the Application Site.
VP5: Tan Lian, local road to the north-west	**Low**	Close distance view from local road though field gate to the west of the Application Site, near scheduled monument (Offa's Dyke) and listed building and settlement edge.
VP6: Public Right of Way (BER/11) off Penygelli Road, on residential edge of Coedpoeth	**High**	Medium distance view from local road to the west of the Application Site, on the residential edge of Coedpoeth.
VP7: Public Right of Way (ERD/1) off Wat's Dyke Way, within Wrexham Historic Park and Garden	**High**	Medium distance view from public footpath off Wat's Dyke Way, within the Wrexham Historic Park and Garden (HPaG).
VP8: Long Lane, local road to the north.	**Low**	Medium distance view from local road to the north of the Application Site.
VP9: Public Right of Way (ESC/16) at Hookfield Farm, within AONB	**High**	Medium distance view from footpath within Clwydian Range and Dee Valley AONB.
VP10: Public Right of Way (ESC/31) within registered common land and AONB	**High**	Medium 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.

Representative Viewpoint No. / Location	Sensitivity	Existing view description
VP11: Public Right of Way (ESC/17A) within registered common land and 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.
VP12: Public Right of Way (ESC/1) to the north of the disused railway line	**High**	Close distance view from the public footpath located to the south of the Application Site, adjacent to the elevated disused railway line.
VP13: Public Right of Way (BER/3) to the east of the A483 and Bryn-moel wireless transmitting station	**High**	Close distance view from public footpath located to the east of the Application Site.

Further Visual Assessment

5.36 Within 1km to the proposal development, a broad assessment of businesses/ places of work, roads and PRoW, not covered by Representative Viewpoints, would be completed. Residential receptors would be assessed within a standalone Residential Visual Amenity Assessment (RVAA). 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

5.37 To illustrate the proposed development, once field work is completed, Representative Viewpoint locations 10 and 11 within the AONB have been selected through consultation with NRW, and a photomontage will be prepared from both views.

Proposed Approach

Baseline Studies

5.38 Baseline information pertaining to landscape and visual matters would 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.

5.39 Further to the Baseline Information described above, the baseline assessment within the final LVIA Chapter would also include an assessment of the existing landscape character of the Site and its immediate surroundings. It would also include an assessment of the existing landscape character within the wider study area in terms of its value and sensitivity to the proposed development. The studies will identify the landscape resources and character of the surrounding area and examine

how the proposed development would affect individual landscape features, elements, characteristics, and the wider landscape character.

5.40 Field work has been 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 helped to establish those landscape resources which combine to give the landscape its distinct sense of place. Further consultation would be sought from key statutory organisations/consultees where applicable.

Assessment of effects

5.41 The Landscape and Visual Impact Assessment (LVIA) undertaken as part of the Landscape and Visual Resources chapter, would identify and assess the likely significant effects that would arise as a result of the proposed development on the landscape resources (fabric and character) 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.

5.42 The LVIA would 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);
- Technical Guidance Note 06/19, Visual Representation of Development Proposals (Landscape Institute, September 2019); and,
- Landscape Institute Technical Guidance Note 02/21: Assessing landscape value outside national designations (May 2021).

5.43 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, operational phase and maintenance phase, as well as the decommissioning phase of the proposed development.

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

5.45 The LVIA Chapter would include an assessment of cumulative effects with projects falling within the 5km radius study area same LANDMAP aspect areas and from the Representative Viewpoints where there would be potential inter-visibility for the cumulative project and proposed development. Cumulative projects would include those with planning permission but yet to be constructed or within the planning system and not yet determined. 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.

5.46 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.

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

Issues proposed to be scoped out

5.48 No issues are proposed to be scoped out.

Chapter 6: Biodiversity

Baseline Information

5.49 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

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 both Big Wood and Higher Berse Marsh designated Wildlife Sites of county value. A further 14 Wildlife Sites are 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, some of which are considered species-rich with at least five native woody species present in the canopy. Most of the hedgerows contained some semimature 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 are present in several of the rye-grass ley 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 and Higher Berse Marsh 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 Wintering bird surveys were carried out in 2019 / 2020 and again in 2022 / 2023. The 2022 / 2023 survey recorded an assemblage of 46 species within the survey area of which 23 are classified as species of conservation concern in Wales (Red listed, Amber Listed and/or Species of Principal Importance). The survey area included the grass-ley fields, pasture fields and the edges of the off-site woodland blocks.

5.58 Small numbers of farmland passerine species were recorded including meadow pipit, yellowhammer, skylark, and bullfinch. Flocks of wintering redwing, fieldfare, starling, rook and gull species were attracted to the site to feed on the invertebrates in the soils of the arable fields and improved pasture. Wading species recorded included flocks of lapwing and small numbers of snipe. Small numbers of farmland passerine species were recorded including linnet, skylark, and bullfinch.

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 identified as part of the 2019 PEA is located 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 and small areas of taller grassland.

5.63 The presence of great crested newt populations in waterbodies located close to the site boundary has been confirmed. Small populations have been recorded or are assumed in ponds close to the site and a medium sized meta-population has been recorded further to the west. The on-site hedgerows and woodland provide higher value terrestrial habitat for this species.

Proposed approach

Baseline studies

5.64 Additional baseline data will be collected in 2023 to supplement the existing baseline information to inform the assessment, specifically;

- GCN surveys for additional ponds within 500m of the development to assess the presence/absence of breeding populations

- If present, GCN population assessments will be undertaken where possible for each pond used by GCN to estimate population size.

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 and Higher Berse Marsh 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 managed 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.

Mitigation and Enhancement Measures

5.82 Lightsource bp aims to be an industry leader in the protection and promotion of biodiversity in the development of solar projects. Their goal is to deliver biodiversity net gain (BNG) on their operational ground mounted sites at 5+ years post construction, or within an ecologically acceptable timeframe for particularly challenging climates or habitats.

5.83 A Biodiversity Management Plan (BMP) will be produced which will secure biodiversity enhancements associated with the proposed development. The parameters of this are not yet confirmed but opportunities for both on-site and off-site enhancement measures are under consideration.

Chapter 7: Cultural Heritage

Baseline Information

5.84 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.

5.85 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.

5.86 These documents have been used as the basis for subsequent consultation with Cadw, the Clwyd-Powys Archaeological Trust (CPAT), 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.

5.87 In response to the feedback from consultees, the proposed development design was altered to reduce potential impacts on the settings of designated heritage assets (see below).

5.88 An archaeological geophysical survey was undertaken in October 2021, across those areas of the site included in the original proposed development footprint, but excluding areas disturbed by opencast mining in the 20th century.

Designated Archaeological Assets

5.89 The Archaeological DBA identified one scheduled monument situated within the original proposed site boundary: DE180 (section of Offa's Dyke). The revisions to the extent of the proposed development mean this heritage asset is no longer within the site boundary. Other scheduled monuments specifically discussed by Cadw and the other consultees were DE131 Cadwgan Hall Mound and a further section of Offa's Dyke (DE132). The removal of the southern part of the original site from the proposed development means that any potential impact on the settings of these assets has been reduced. While these monuments will not be directly impacted by the proposed development, there remains the potential for impacts as a result of changes to their settings.

5.90 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 around the site.

Archaeological Potential

5.91 The proposed development could potentially have a below-ground impact on any buried archaeological remains if any are present. However, the Archaeological DBA indicates that much of the proposed development site has previously been disturbed by open-cast coal mining, thereby

reducing its archaeological potential. The results of the geophysical survey to date show a very limited range of potential archaeological features within the site. The potential for significant archaeological remains from any period to be present within the site is considered to be low.

Built Heritage

5.92 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.

5.93 The group of Grade II listed buildings around the site of Plas Power House were considered to be at risk of potential setting impacts, however changes to the proposed development site boundary have reduced this potential impact.

5.94 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

5.95 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;
- An updated Archaeological Desk Based Assessment, to be informed by a ZTV, to include the proposed routes for the cable connection;
- Further geophysical survey will also be undertaken, across the areas of the site which are newly included in the proposed development area. Where necessary, and practicable , proposed cable routes will also be surveyed as part of this intervention.
- The consultees suggested that a Heritage Impact Assessment, identifying levels of harm, if any, arising from the proposed development should be prepared. The need for this will be considered further when the draft ES chapter has been written.

Assessment of Effects

5.96 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 (issued August 2020), LA 106 (Revision 1) (issued 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.

5.97 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.

5.98 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.

5.99 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.

5.100 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.

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

5.102 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

5.103 The assessment will consider potential impacts on any buried archaeological remains which may be present in the site, 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. 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.

5.104 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

5.105 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, ZTV will be used to help eliminate any heritage assets within 3km of the site that will not be affected by the development.

Mitigation

5.106 As a result of consultations to date, some mitigation of potential impacts on settings has already been incorporated into the proposed development design, through the removal of areas of proposed solar panels to create buffers between the assets and the development.

5.107 The assessments outlined above will enable a robust mitigation strategy to be developed for inclusion in the ES, which will minimise impact on buried archaeology and the settings of designated heritage assets around the proposed development.

Chapter 8: Hydrology and Hydrogeology

Introduction

5.108 This chapter reports on the assessment of the effects of the proposed development with regards to hydrology and flood risk. This assessment focuses on the likely effects of the proposed development on local flood risk and effects on water resources, including water quality and flow regimes.

5.109 This section describes the assessment methodology, the baseline conditions currently existing at the site and in the surrounding area. The report also looks at any potential impacts of the proposed development and discusses whether further reporting is required to mitigate and reduce any significant adverse effects.

Study Area

5.110 The site area has been taken as the construction area, with a 250m buffer considered.

5.111 The 250 m buffer is considered appropriate for data collection taking into account the nature of the development and likely zone of influence on hydrological receptors. Given the landscape surrounding local land use activities, it would be difficult to ascertain the exact source of any impacts on water quality beyond 250m.

Baseline Information

5.112 An initial desk-based review of literature and data sources to support this Scoping Report has highlighted the following sources of baseline data which provide coverage of the new solar farm site area:

- Ordnance Survey (OS) Mapping (Ordnance Survey 2022);
- BGS Geology of Britain Viewer: 1:50,000 Geological Mapping (British Geological Society 2022a);
- NRW Flood Risk Map Viewer (NRW 2022);

- Lle A Geo-portal for Wales (http://lle.gov.wales/home?lang=en);
- Wrexham County Borough Council website (https://www.wrexham.gov.uk/residents);
- Wrexham County Borough Council Local Development Plan 2 (2013 to 2028);
- Wrexham County Borough Council Preliminary Flood Risk Assessment (2011); and
- Wrexham County Borough Council Local Flood Risk Management Strategy (2013).

5.113 In addition to the above data sources, site-specific hydrological data will be obtained via consultation with the Natural Resources Wales, Lead Local Flood Authority, and site reconnaissance.

5.114 The December 2020 Scoping Direction (**Appendix 2**) confirmed that a hydrological and hydrogeological assessment should be scoped into the EIA based on the previous scheme due to the limited information available about the hydrological connectivity of the opencast restored areas and existing watercourses. A hydrological and hydrogeological assessment will therefore be presented in Chapter 8 of the ES.

Baseline Environment

5.115 An initial review of published OS maps and NRW data shows that the solar farm site does not have any watercourses present on site. However, the River Clywedog is located approximately 45m south and the River Gwenfro is located approximately 410m northeast.

Fluvial Risk

5.116 The Development Advice Map indicates that the site is wholly located within Zone A. Zone A is described in TAN15 as those areas "considered to be at little or no risk of fluvial or coastal/tidal flooding". A small parcel of land in the far south of the site is encroaching Flood Zone B and Flood Zone C2. This is linked to the undefended River Clywedog running through the woodland adjacent south of the site.

5.117 The proposed solar farm site area is located within an area of very low fluvial and tidal flood risk where the risk of flooding from both sources is classified as less than 1 in 1,000 (0.1%) each year.

5.118 In June 2023 the current TAN15 is due to be updated. As a consequence, the mapping supporting the assessment of flood risk will also be updated. Should this be adopted prior to submission of this DNS application, the new Flood Map for Planning will be assessed in relation to the site.

Surface Water Risk

5.119 NRW surface water mapping shows that the site has a predominantly 'very low' risk of flooding from surface water. This means that each year this area has a chance of flooding of less than 0.1%.

5.120 There is a defined flow path, which runs from the centre of the site flowing west to east and forms areas of 'low', 'medium', and 'high' risk of flooding. This corresponds to areas having a change of flooding between 1 in 1000 (0.1%) and 1 in 100 (1%), between 1 in 100 (1%) and 1 in 30 (3.3%) and greater than 1 in 30 (3.3%), respectively. Depths along this flow path are predicted to reach over than 0.9m in an around the centre of the site. Flow velocities are predicted to be between less than 1 and up to 3m/s.

5.121 Another flow path is indicated to be at a 'low', 'medium', and 'high' risk of surface water flooding in the far south-eastern corner of the site. Flood depths are predicted to range from less than 0.15m

to 0.9m, with the depths becoming greater the further south the risk is predicted. The direction of the flow is predicted to be south with flow velocities predicted to be 1 to 2m/s.

5.122 Smaller flow paths are noted across the site, including the south and west of the southern part of the site, and in the centre and north of the northern part of the site. Depths are predicted to range from 0.15m to 0.9m, with flow velocities ranging from less than 1m/s up to 2m/s. The direction of flow in the northern half of the site is towards to the northeast, towards the direction of the ordinary watercourse River Gwenfro. The flow paths noted in the southern half of the site are predicted to flow in all directions.

Designated Sites

5.123 Under the Water framework directive (WFD), hydrological features often contribute either directly or indirectly to the overall framework designation. Hydrological designations within the solar farm site area are provided at an international and national level.

5.124 Further details on the designated sites within the Plas Power Solar Farm area are provided in **Table 5.3** below.

Proposed Approach

5.125 Under the Water framework directive, hydrological features often contribute either directly or indirectly to the overall framework designation. Hydrological designations within the Plas Power Solar Farm area are provided at an international and national level.

5.126 The watercourses within the 250m buffer of the site are all part of the Dee catchment.

Table 5.3. Water Frame Directive Classification

Catchment	River Name/watercourse feature	Classification (2018)
Dee	River Cylwedog	Overall – Moderate
	River Gwenfro	Overall – Moderate

5.127 There are no designated sensitive areas (e.g. Special Area of Conservation (SAC), Special Protection Area (SPA) or Site of Special Scientific Interest (SSSI)) on site or within the 250m buffer of the site.

Scope of the assessment

Potential Project Impacts

5.128 A range of likely effects on hydrology and flood risk have been identified which may occur during the construction, operation and maintenance, and decommissioning phases of the development of Plas Power Solar Farm.

5.129 A stand-alone Flood Consequences Assessment (FCA) will be prepared which will form part of the hydrological assessment in the ES. Details of the impacts and where they are to be addressed is presented in **Table 5.4**.

Table 5.4. Identified Impacts and Method of Assessment

Impact No.	Impact	Justification	Data Collection and analysis required to characterise the baseline environment
Construction			
1	Potential increase to flood risk	The construction could directly impact flood risk on adjoining land.	A desk-based study of the flood risk will be undertaken within the supporting Flood Consequence Assessment.
2	Potential to increase temporary flood risk.	Impacts in flood risk could arise from any change in run-off areas affected during construction compound and temporary areas.	A desk-based study of the flood risk will be undertaken within the supporting Flood Consequence Assessment.
3	Deterioration of water quality in 'Main Rivers'.	Direct impacts to water quality may occur from construction works in close proximity to watercourses.	A review of the NRW catchment data explorer to identify the WFD classification of watercourses on or within 1km within the sites. To be captured within the supporting Flood Consequence Assessment.
4	Deterioration of water quality of ordinary surface watercourses.	Direct impacts to the water quality as a result, temporary access roads crossing a number of ordinary watercourses and drains	A review of the NRW catchment data explorer to identify the WFD classification of watercourses on or within 1km within the sites. To be captured within the supporting Flood Consequence Assessment.
Operation and Maintenance			
5	Deterioration of water quality of Main Rivers	Indirect impacts may occur as a result of leakage of stored materials or spilled materials used during operation and maintenance.	A desk-based study of Main Rivers in particular, the chemical and biological objectives set by the WFD. To be captured within the supporting Flood Consequence Assessment
6	Deterioration of water quality of ordinary watercourses	Indirect impacts may occur as a result of leakage of stored materials or spilled materials used during operation and maintenance.	A desk-based study of Main Rivers in particular, the chemical and biological objectives set by the WFD. To be captured within the supporting Flood Consequence Assessment
7	Potential increase in flood risk	A desk based study of the food risk area within the site, and potential impacts to off site assets and land.	A desk based study of the flood risk will be undertaken within the Flood Consequence Assessment.
Decommissioning			
8	Potential increase to flood risk	The decommissioning could directly impact flood risk on adjoining land.	A desk based study of the flood risk will be undertaken within the Flood Consequence Assessment.

9	Potential to increase temporary flood risk.	Impacts in flood risk could arise from any change in run-off areas affected during decommissioning of compounds and temporary areas.	A desk based study of the flood risk will be undertaken within the Flood Consequence Assessment.
10	Deterioration of water quality of Main Rivers	Direct impacts to water quality may occur from workings associated to the removal of the solar panels and associated infrastructure.	A desk-based study of Main Rivers in particular, the chemical and biological objectives set by the WFD. To be captured within the supporting Flood Consequence Assessment
11	Deterioration of water quality of ordinary watercourses and drains.	Direct impacts to water quality may occur from workings associated to the removal of the solar panels and associated infrastructure.	A desk-based study of Main Rivers in particular, the chemical and biological objectives set by the WFD. To be captured within the supporting Flood Consequence Assessment

Measures Adopted as Part of the Project

5.130 Measures adopted as part of the project will include:

- Preparation of a Flood Consequence Assessment due to the overall size of the site being in excess of 1 ha, to accompany the planning application.
- NRW and WCBC would be contacted through the construction works and planning process to ensure that any appropriate permits (if required) and consents are in place. Committed operational and construction mitigation measures are outlined below. Construction phase mitigation would be implemented through the CEMP.
- Development of, and adherence to, a Decommissioning Environmental Management Plan (DEMP) in due course.

5.131 The requirement and feasibility of additional measures will be dependent on the significant effects on hydrology and flood risk.

Mitigation Measures

5.132 All construction work would be undertaken in accordance with the Construction Environmental Management Plan and good practice documentation including, some of which have been withdrawn, but still provide a useful guidance and principles:

- CIRIA – SuDS Manual;
- Pollution Prevention Guidance Note 6 (PPG6): Pollution Prevention Guidelines – Working at Construction and Demolition Sites;
- Pollution Prevention Guidance Note 5 (PPG5): – Working in, near or liable to affect watercourses; and
- CIRIA (C741) Environmental good practice on site guide.

5.133 The following specific mitigation measures for the protection of surface water during construction activities would be secured through the implementation of a CEMP:

- Management of construction works to comply with the necessary standards and consent conditions as identified by NRW;
- Prevention of discharge to surface watercourses without permission from NRW during earthworks operations;
- Wheel washers and dust suppression measures to be used as appropriate to prevent the migration of pollutants;
- Regular cleaning of roads of any construction waste and dirt to be carried out;
- Refuelling of machinery to be undertaken within designated areas where spillages can be easily contained. Machinery to be routinely checked to ensure it is in good working condition;
- Any tanks and associated pipe work containing substances included in List 1 of the Groundwater Directive to be double skinned and provided with intermediate leak detection equipment;
- Areas at risk of spillage, such as vehicle maintenance areas and hazardous substance stores (including fuel, oils and chemicals) to be bunded and carefully sited to minimise the risk of hazardous substances entering the drainage system or the local watercourses. Additionally, the bunded areas will have impermeable bases to limit the potential for migration of contaminants into groundwater following any leakage/spillage. Bunds used to store fuel, oil etc. to have a 110% capacity;
- A briefing highlighting the importance of water quality, the location of watercourses and pollution prevention to be included within the site induction;
- Areas with prevalent run-off to be identified and drainage actively managed, e.g. through bunding and/or temporary drainage;
- Disturbance to areas close to watercourses reduced to the minimum necessary for the work;
- Excavated material to be placed in such a way as to avoid any disturbance of areas near to the banks of watercourses and any spillage into the watercourses;
- Construction materials to be managed in such a way as to effectively minimise the risk posed to the aquatic environment;
- All plant machinery and vehicles to be maintained in a good condition to reduce the risk of fuel leaks;
- Drainage works to be constructed to relevant statutory guidance and approved via the LLFA prior to the commencement of construction; and
- Consultation with the NRW to be ongoing throughout the construction period to promote best practice and to implement proposed mitigation measures.

5.134 A DEMP would be produced and agreed with the relevant authorities prior to decommissioning works. The DEMP would consider in detail all potential environmental risks on the site and contain guidance on how risks can be removed or mitigated. This would include details of how surface water drainage should be managed during the decommissioning.

5.135 Decommissioning practices to incorporate measures to prevent pollution and increased flood risk, to include emergency spill response procedures, and clean up and remediation of contaminated soils, where identified.

Potential Cumulative Impacts

5.136 The predicted effects of construction, operation and maintenance, and decommissioning from the Plas Power Solar Farm are considered to be localised to within the footprint of the application site. Therefore, it is reasonable to scope out a cumulative assessment specific to hydrology and flood risk.

Chapter 9: Climate Change

5.137 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 later in this section).

Baseline Information

5.138 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.

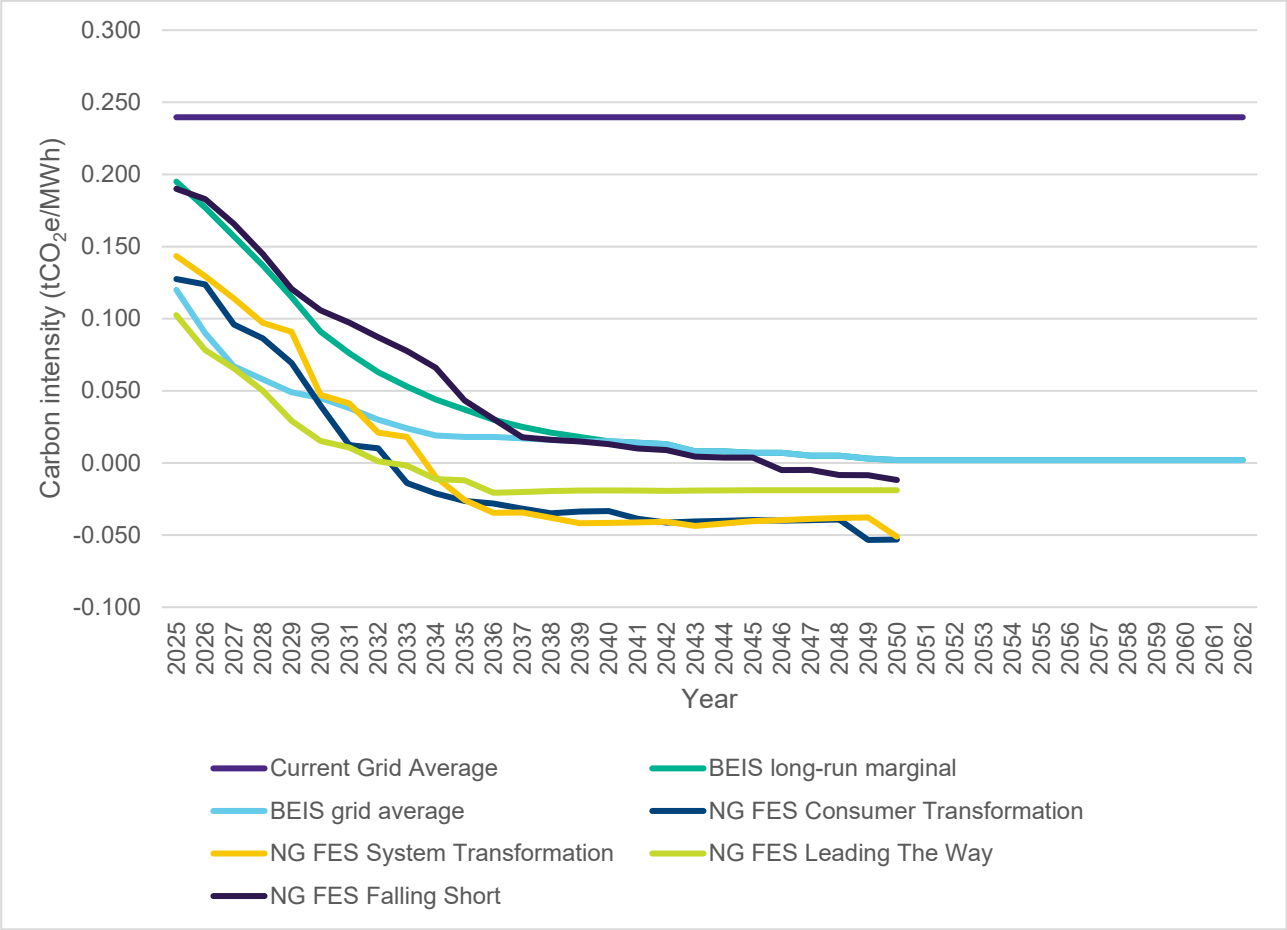
5.139 The current baseline for electricity generation in the operational phase of the proposed development, with regard to GHG emissions, is the equivalent level of electricity generation from alternative sources connected to the electricity grid. The current average carbon intensity of electricity generation on the UK National Grid is 0.23963[1] $kgCO_2e/kWh$ in the present-day baseline.

5.140 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.

5.141 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.

[1] Inclusive of the associated well-to-tank (WTT) emissions associated with extracting, refining and transportation of primary fuels before their use in the generation of electricity.

Figure 5.1: Projected carbon intensity of electricity generation



5.142 The current climatic conditions baseline is established by meteorological records for the area of the proposed 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

5.143 GHG emissions would contribute to the effect of global climate change. Assessment guidance from (IEMA, 2022) describes five levels of significance for emissions resulting from a development, each based on how the project contributes towards achieving a net zero and 1.5°C-aligned reduction trajectory. To aid in considering whether effects are significant, the guidance recommends that resultant GHG emissions should be contextualised against pre-determined carbon budgets, or policy and performance standards where a budget is not available. It is a matter of professional judgement to integrate these sources of evidence and evaluate them in the context of significance.

5.144 The proposed approach for assessing the impacts on climate change from the proposed development will take a life-cycle approach, considering the manufacturing-stage emissions and the benefits of renewable energy generation in operation compared to a future baseline.

5.145 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), and electricity storage units.

5.146 GHG emission reductions from operation of the PV system will be assessed based 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.

5.147 GHG emission reductions from operation of the electricity storage facility will also be assessed based on the carbon intensity of the alternative marginal generator that it will displace, i.e., a peaking plant that would need to supply the grid with electricity in the absence of the proposed developments electricity storage units.

5.148 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

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

Assessment of Effects

5.150 The magnitude of impact will be expressed as tonnes of carbon dioxide equivalent (tCO_2e), using 100-year global warming potential values for non-CO_2 GHGs from the Intergovernmental Panel on Climate Change's Fifth Assessment Report or as otherwise defined in literature sources used.

5.151 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 and cumulative contributions of other sources.

5.152 The IEMA guidance referenced above states that a development's GHG impacts should be contextualised, for example on a sectoral basis or compared to the UK's national carbon budget, to determine whether a project's carbon footprint will support or undermine a trajectory towards a science-based 1.5°C compatible trajectory towards net zero.

5.153 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 applicable carbon budgets at the UK, Wales and local authority scale;
- 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.

5.154 Taking these factors into account, effects may be described as: major adverse, moderate adverse, minor adverse, negligible, or beneficial. Minor adverse and negligible effects are considered to be non-significant, the remaining levels of effect (major adverse, moderate adverse, beneficial), are all considered to be significant. The evaluation of significance will be carried out in accordance with the guidance, which will include the application of professional judgement to contextualise and determine levels of significance in a way that makes clear the relationship between the project's carbon footprint and a reduction trajectory consistent with measures required in the UK to meet our

nationally determined contribution towards the Paris Agreement's 1.5°C target as reaffirmed in COP26.

Scope of the Assessment

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

5.156 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

5.157 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.

5.158 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.

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

5.160 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.

5.161 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.

Cumulative effects

5.162 As set out in Section 3 of this report, there will not be a separate cumulative effects chapter, instead each topic chapter will consider the potential for significant cumulative effects with other proposed developments. Other developments considered for inclusion 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.

5.163 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

- Novus Legacy Energy Storage System 'ESS' – land east of the Legacy National Grid substation and west of the A483.

5.164 Whilst Bronwylfa Reservoir Solar Park was previously identified as a potential cumulative development, as mentioned previously, this site is currently operational and so should be considered as part of the baseline.

5.165 Comments are invited on the content of this list and the extent to which allocations from neighbouring authorities may need to be considered. It is noted, however, that the Scoping Direction issued by the Inspectorate on 2 December 2020 (**Appendix 2**) did not refer to any additional potential cumulative developments.

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

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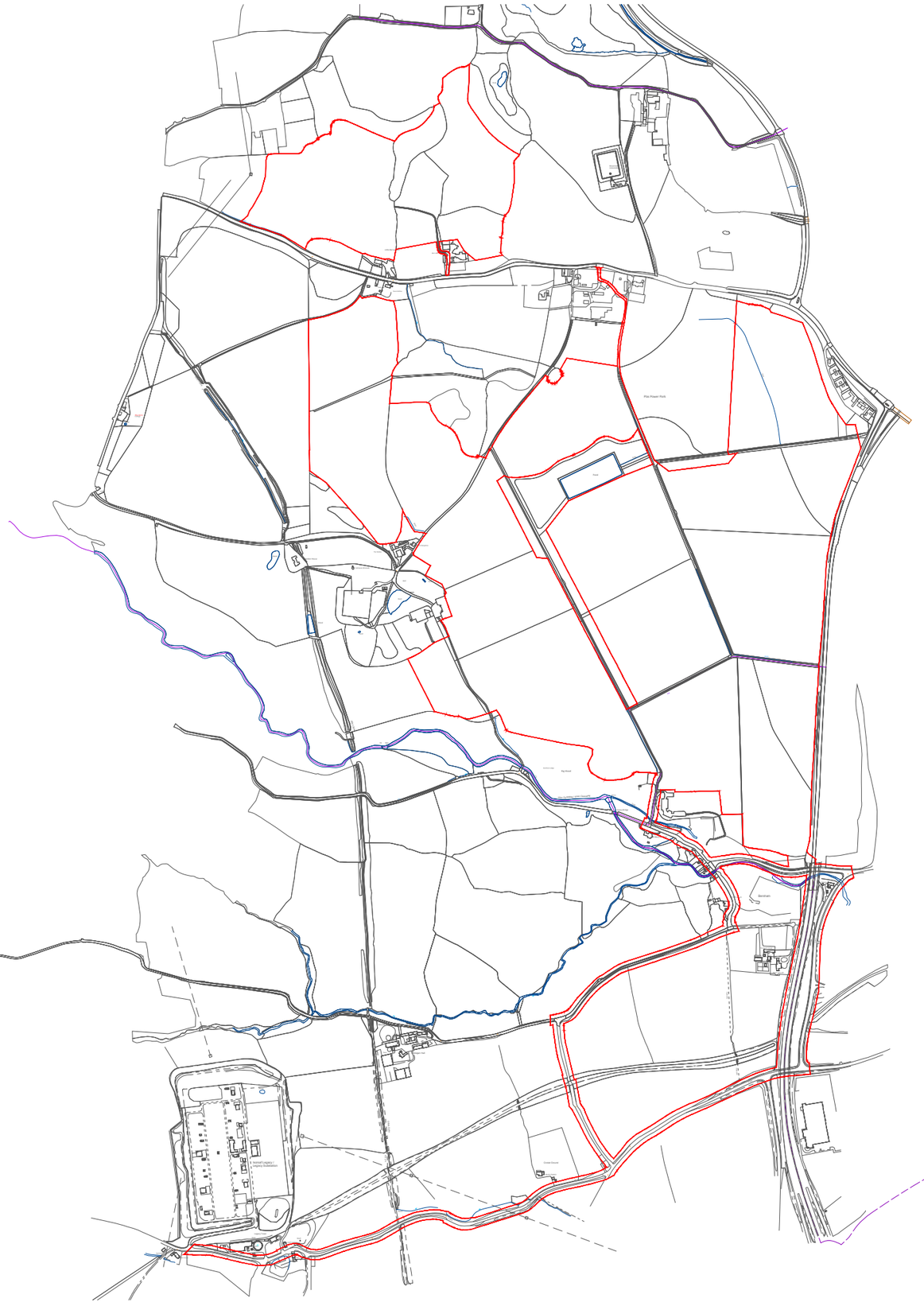
FIGURES

Figure 2.1

Site Location Plan

GBR_Plas Power_AD - Site Location Plan_10



Area 1,403,299 m2 (346.76 acres)

KEY:
Red Line - Planning Application Boundary

METERS
0 100 200 300 400 500

ISO full bleed A3 (420.00 x 297.00 MM)

GBR_Plas Power_AD - SLP_10			
DA			11.05.2023
DRAWN	CHECKED	APPROVED	DATE

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

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

DRAWING NUMBER:	STATUS:
AD-SLP	Preliminary

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Web: www.lightsourcebp.com
info@lightsourcebp.com

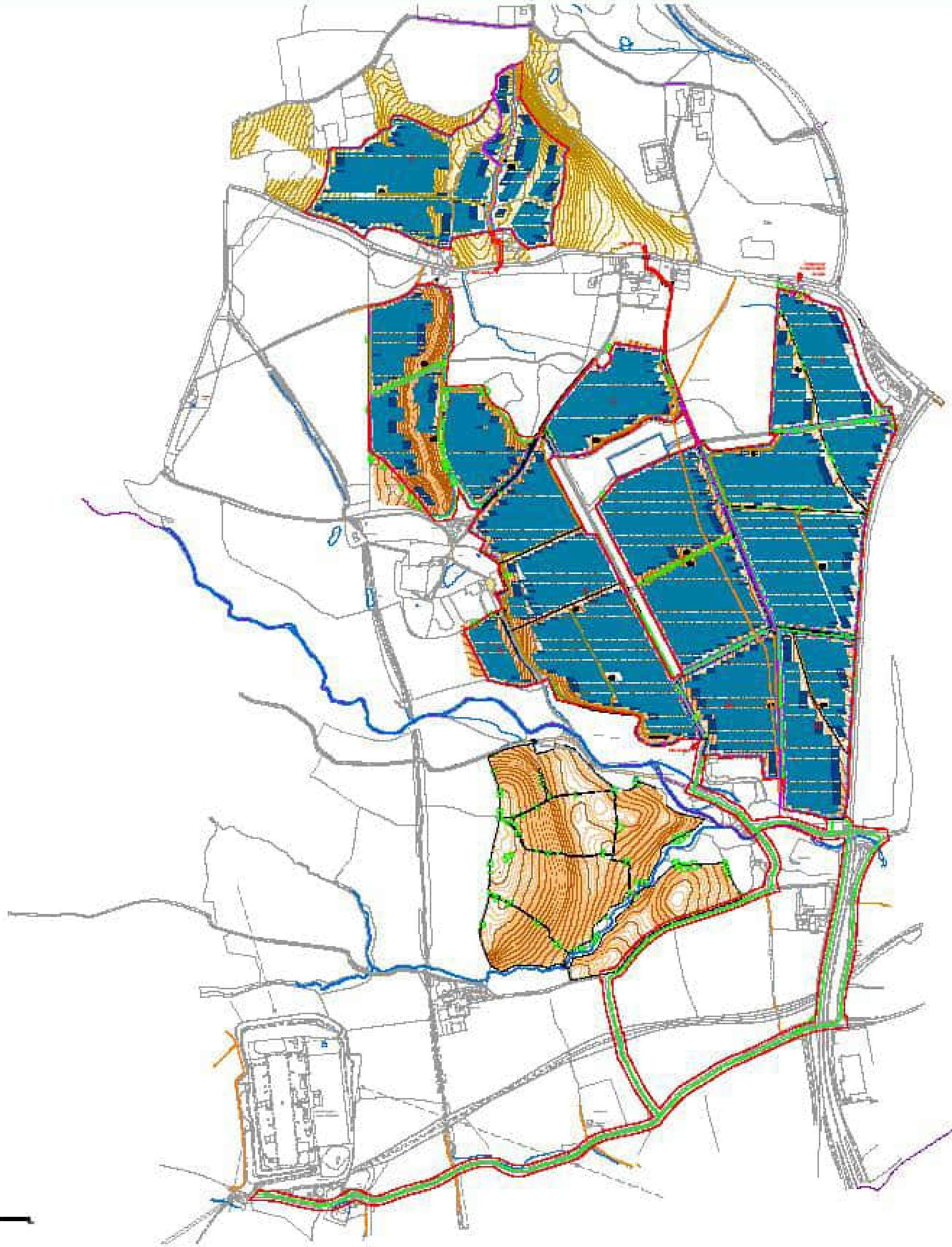
Figure 2.2

Proposed Site Layout Plan

GBR_Plas Power_LP2 - Preliminary Design Layout_09

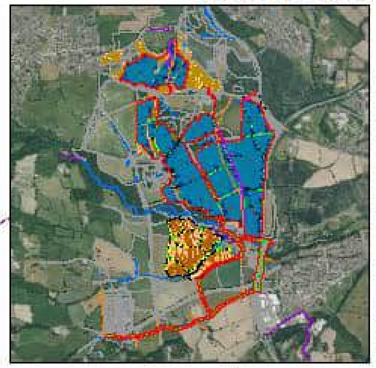
N

Area 1,403,299 m2 (346.76 acres)



- Site Boundary
- Site Access
- Security Fence
- Module Table 30 x 2
- Module Table 15 x 2
- Transformer
- Switchgear Substation
- DNO Substation
- Customer Substation
- Monitoring House
- Storage
- Access Road
- Tree
- Access Gates
- CCTV
- Cable Route
- Existing PRoW
- Proposed PRoW diversion

Scale 1:50000



DA			11.05.2023
DRAWN	CHECKED	APPROVED	DATE

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

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

CAPACITY:

DRAWING TITLE:
GBR_Plas Power_LP2 - PDL_09

DRAWING NUMBER:	STATUS:
LP2-PDL	Preliminary

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ISO full bleed A3 (420.00 x 297.00 MM)

Figure 2.3

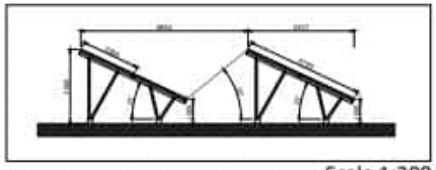
Proposed Site Layout Plan Revisions

Cynigion wedi'u Diweddaru/ Updated Proposals

lightsource bp

Area 1,110,147 m² (274.32 acres)

Addition of land north of A525, not BMV, well screened and low potential for significant effects



Potential for new temporary site access off the A525

Land safeguarded for A483 junction improvements (provisionally included - subject to inclusion in road scheme)

Land excluded to avoid use of BMV Grade 2 & 3a land and to avoid potential impacts on heritage features

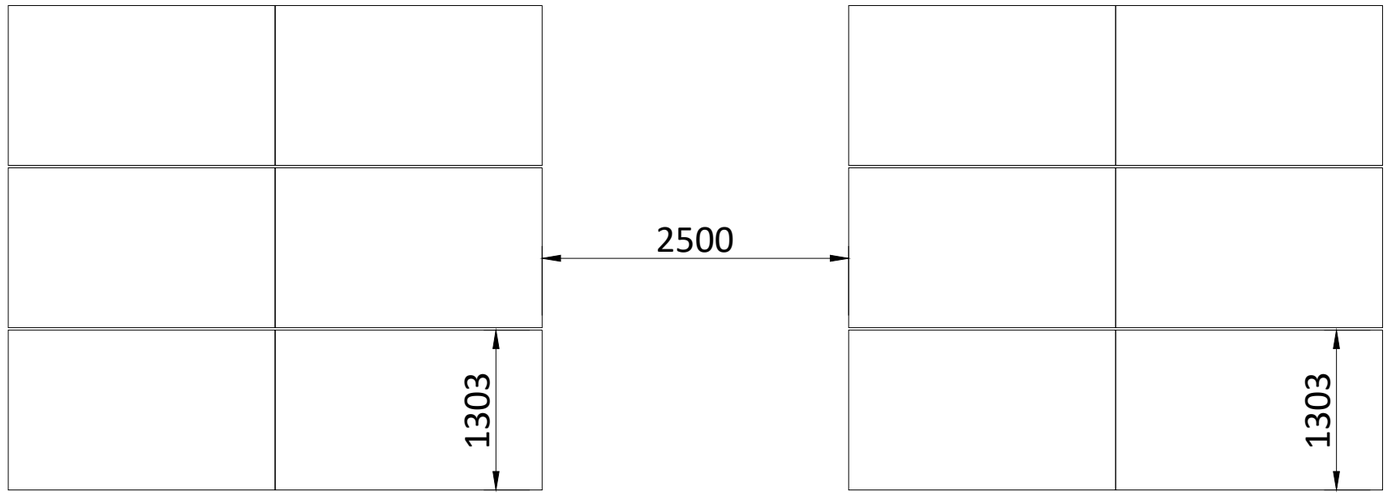
Revised cable route options under consideration

Previous Site Boundary:

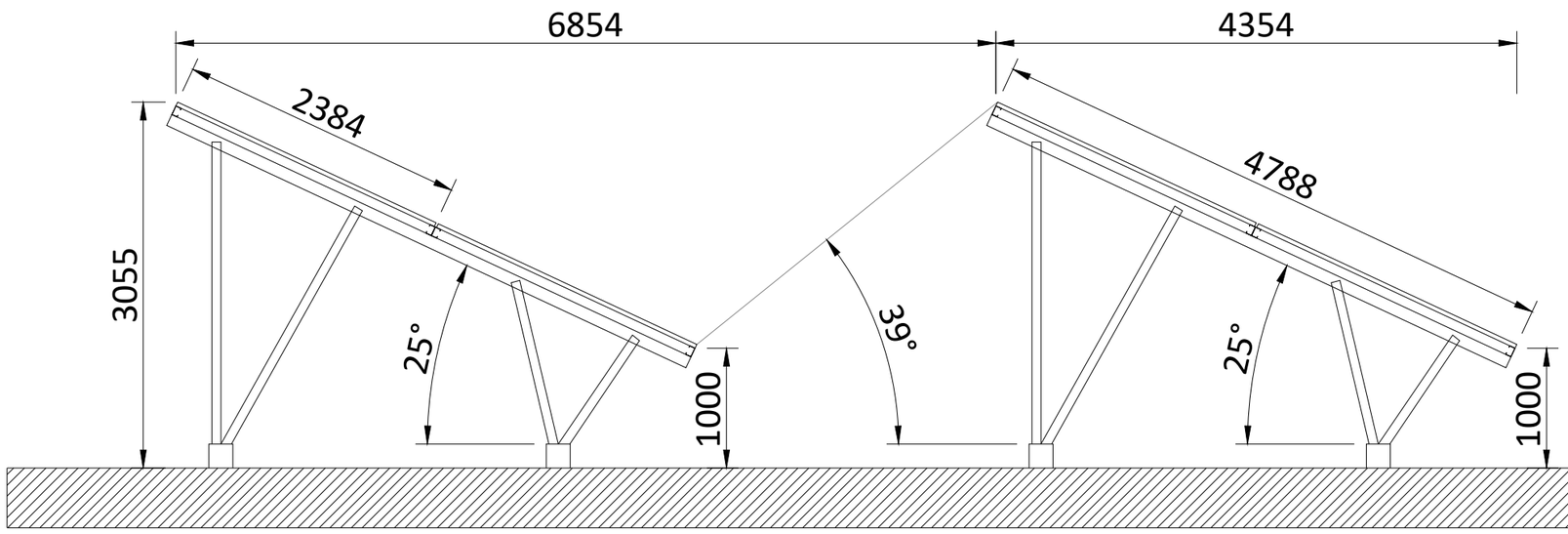
Safety
Integrity
Respect
Sustainability
Drive

Figure 2.4
Panel Elevation

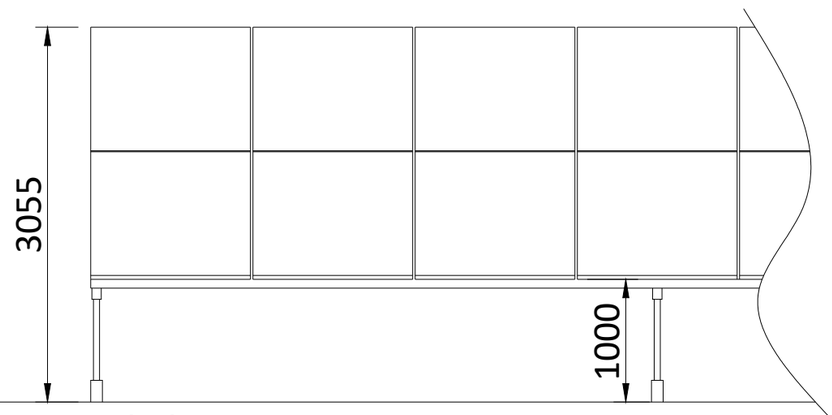
Panel Elevation 2 Portrait 25/6854



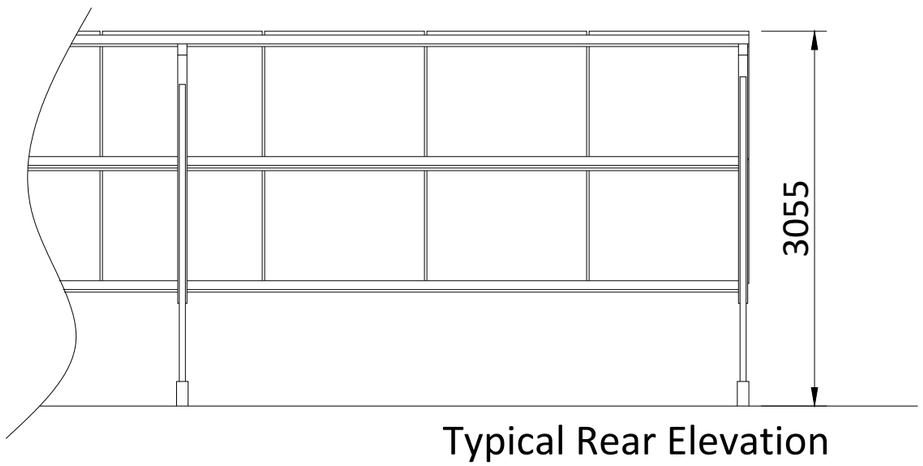
Plan



Typical Section



Typical Elevation



Typical Rear Elevation

METERS

0 1 2 3 4 5

A3 - (420 x 297)mm

Panel Elevation 2 Portrait 25/6854			
DA			12.01.2022
DRAWN	CHECKED	APPROVED	DATE
Paper Size: A3	Scale: 1:50	Sheet: 1	
DRAWING NUMBER: PNL_2P_25/6854		STATUS: Preliminary	

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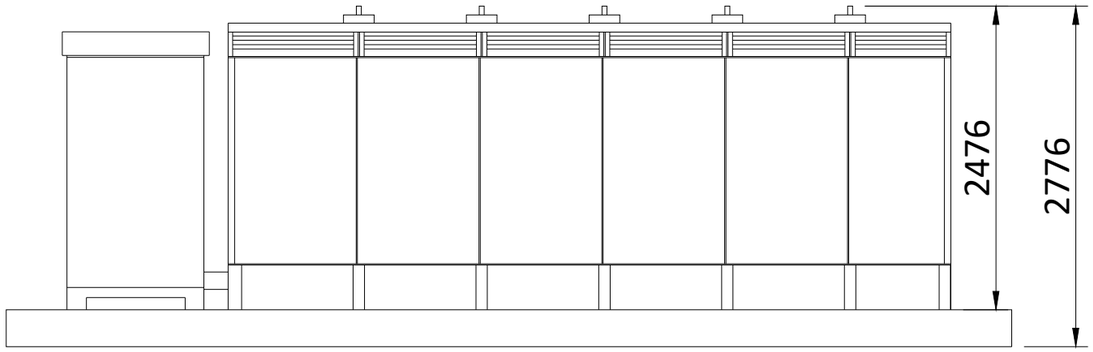
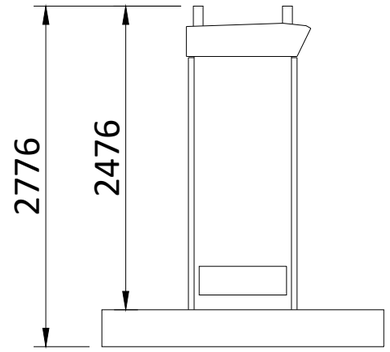
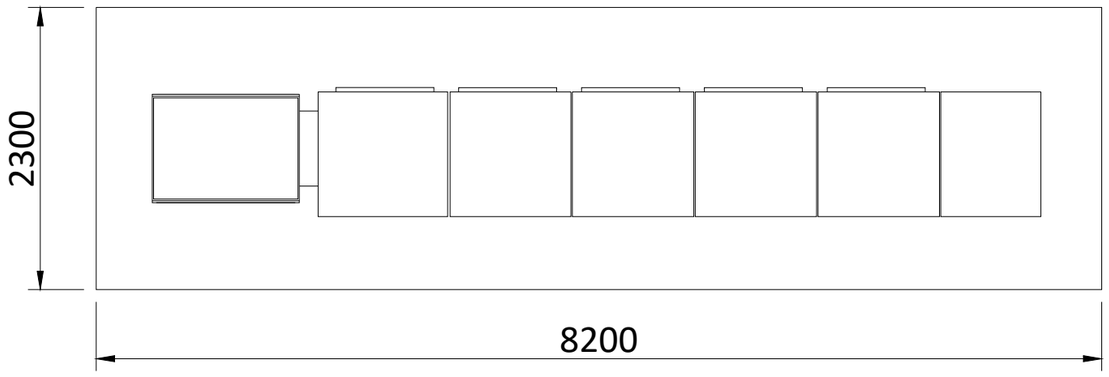
Figure 2.5
Proposed Inverters



Front View



Side View



Plan View

A3 - (420 x 297)mm

UK_EPD_Inverter_00			
DA			23.10.2020
DRAWN	CHECKED	APPROVED	DATE
Paper Size: A3	Scale: 1:50	Sheet: 1	
DRAWING NUMBER: UK_EPD_INV	STATUS: Preliminary		

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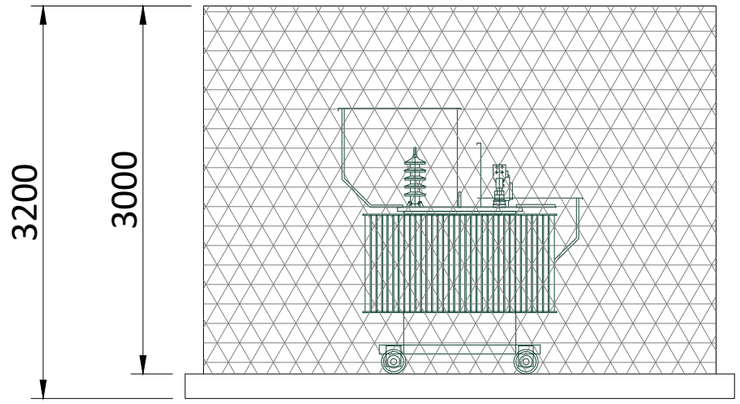
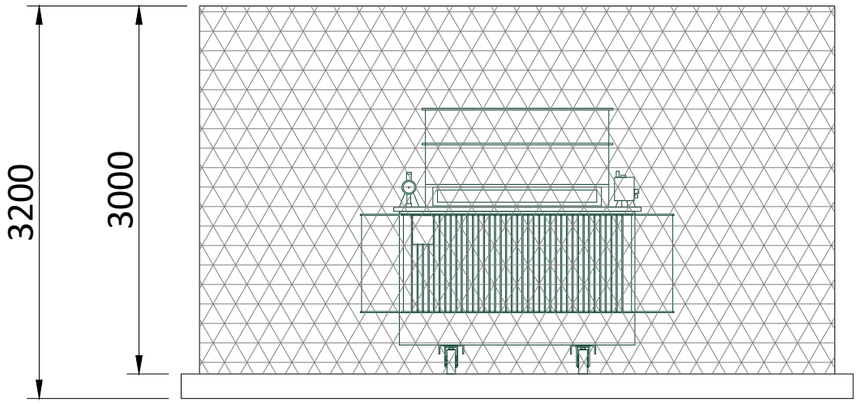
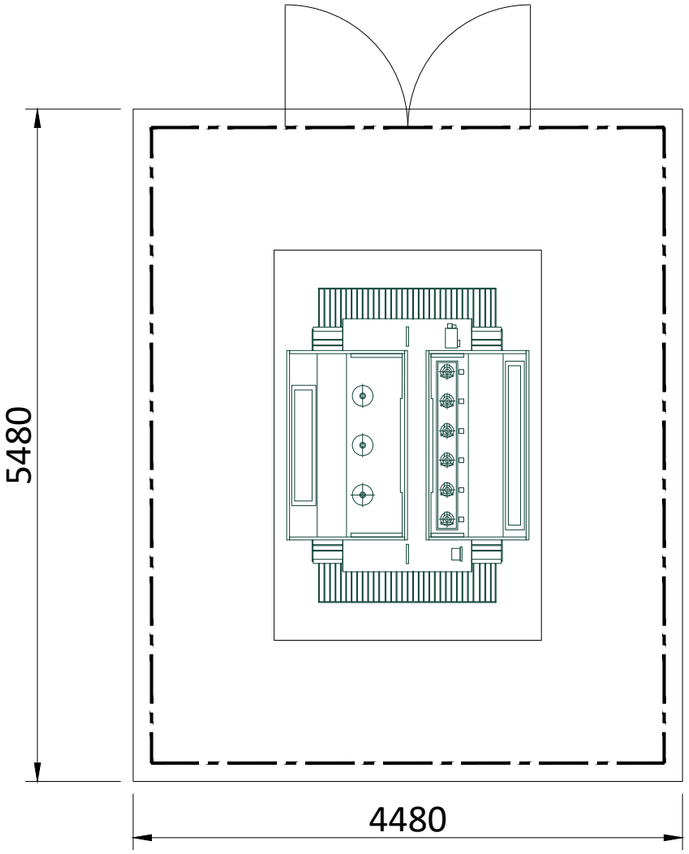
Figure 2.6
Proposed Transformers



Front View



Side View



Plan View

METERS
0 1 2 3 4 5

A3 - (420 x 297)mm

Building must be painted

RAL 6005 Moss Green

UK_EPD_Transformer_00

DRAWN	CHECKED	APPROVED	DATE
DA			23.10.2020

Paper Size:	Scale:	Sheet:
A3	1:50	1

DRAWING NUMBER:	STATUS:
UK_EPD_TFM	Preliminary

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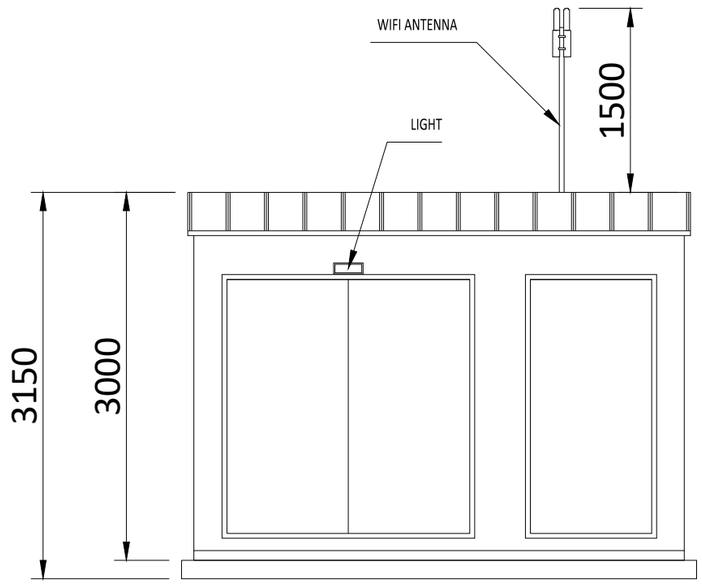
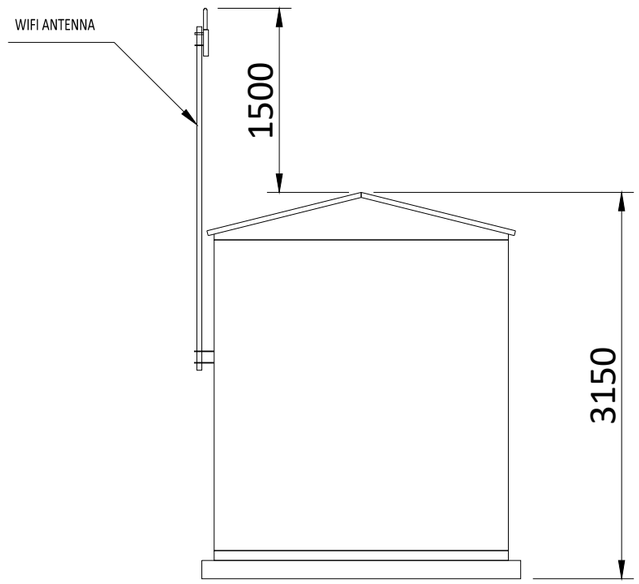
Figure 2.7

Proposed Switchgear Substations

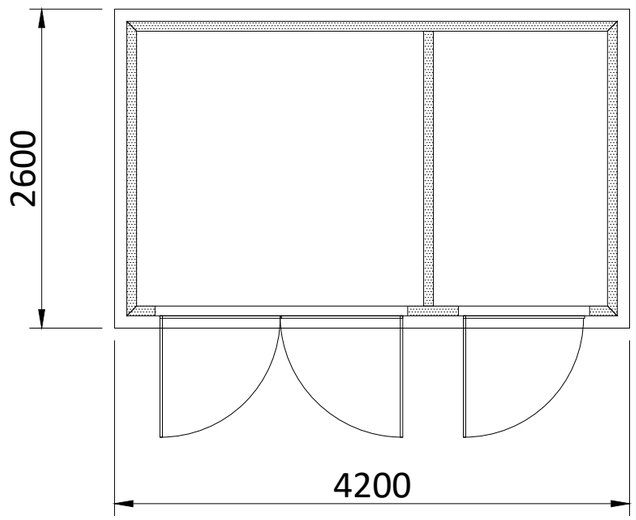
UK_EPD_Switchgear/Production Substation/LV&MV Kiosk_00



Front View

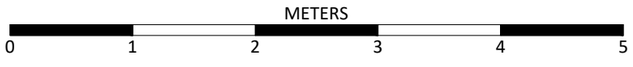


Side View



Plan View

A3 - (420 x 297)mm



Building must be painted

RAL 6005 Moss Green

UK_EPD_Switchgear/Production Substation/LV&MV Kiosk_00

DRAWN	CHECKED	APPROVED	DATE
DA			23.10.2020

Paper Size:	Scale:	Sheet:
A3	1:50	1

DRAWING NUMBER:	STATUS:
UK_EPD_SWG	Preliminary

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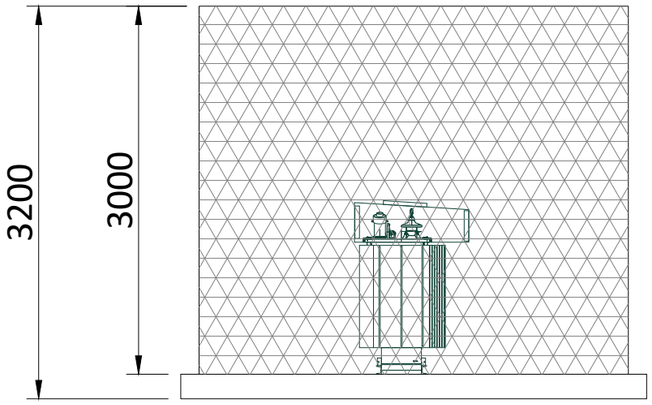
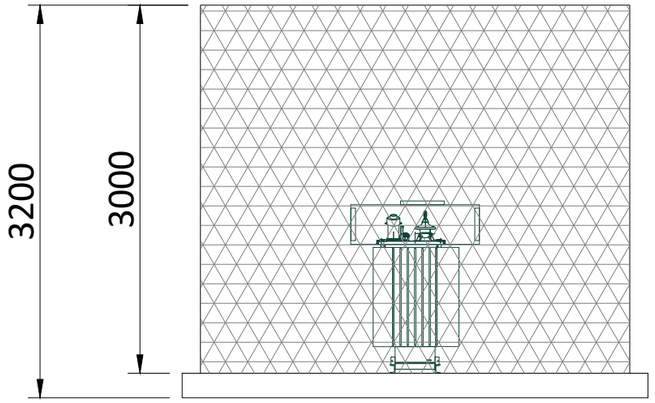
Figure 2.8

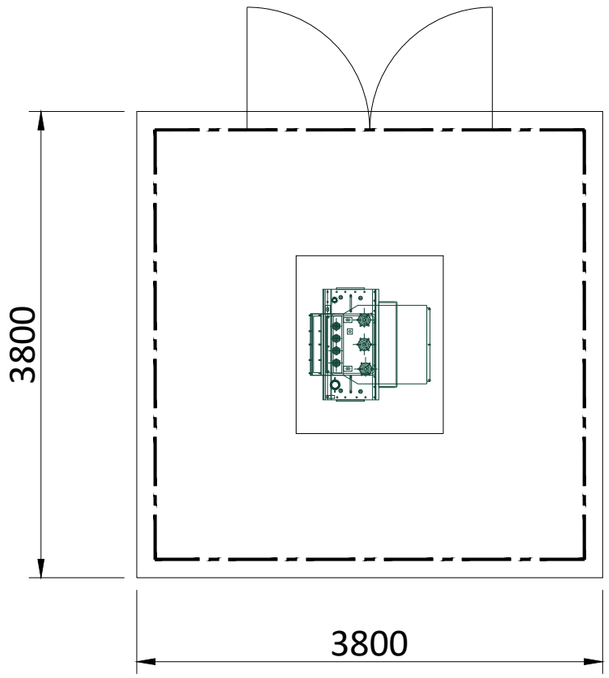
Proposed Auxiliary Transformer



Front View



Side View



Plan View

A3 - (420 x 297)mm

Fence must be painted

RAL 6005 Moss Green

UK_EPD_Auxiliary Transformer_00

DRAWN	CHECKED	APPROVED	DATE
DA			23.10.2020

Paper Size:	Scale:	Sheet:
A3	1:50	1

DRAWING NUMBER:	STATUS:
UK_EPD_AUX	Preliminary

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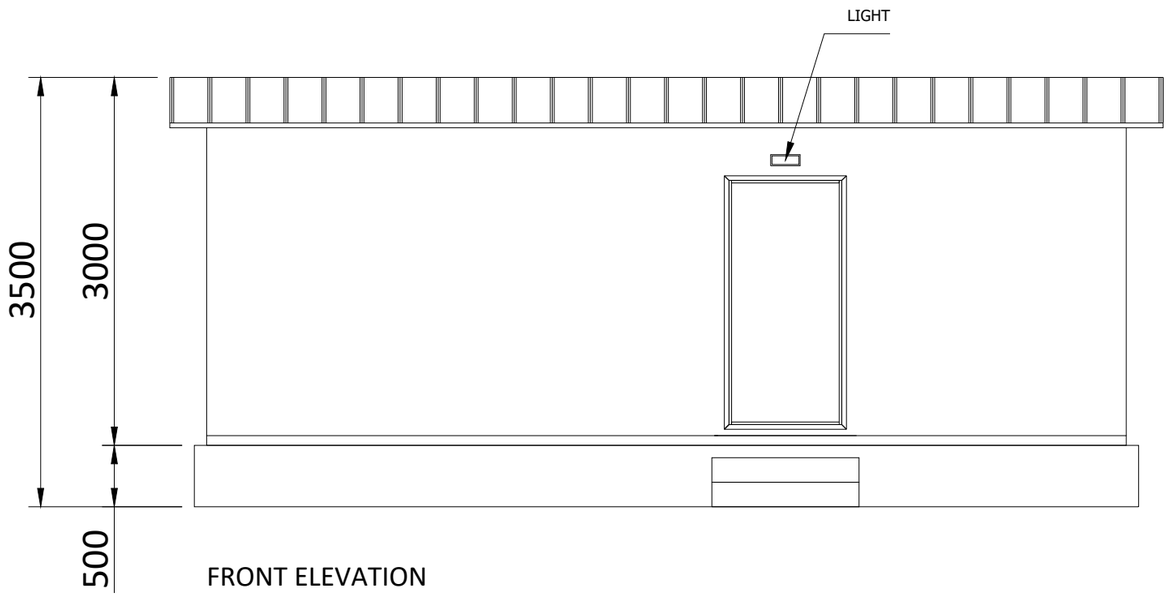
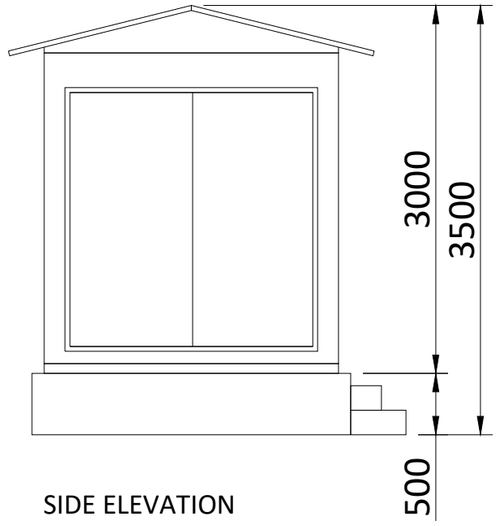
Figure 2.9

Proposed Customer Substation

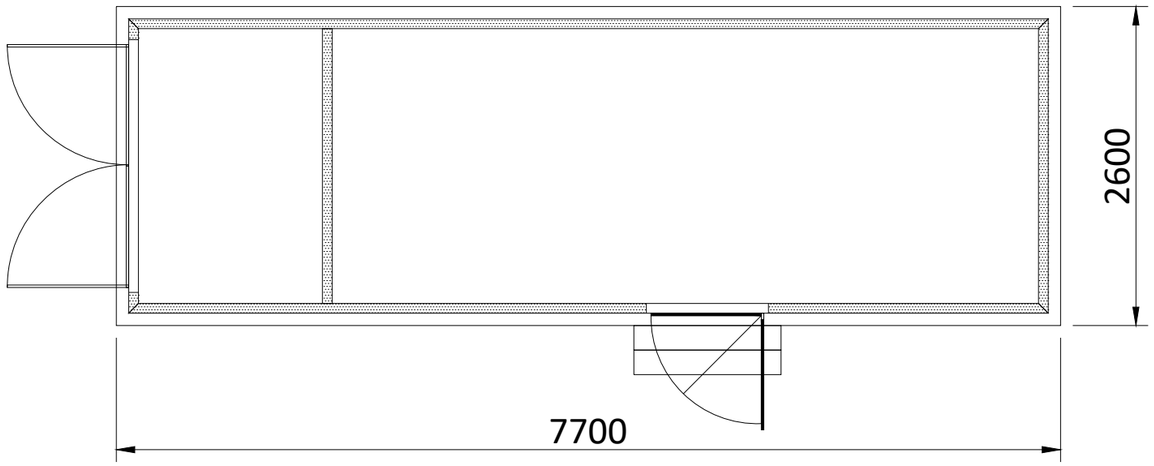
UK_EPD_Customer Substation_01



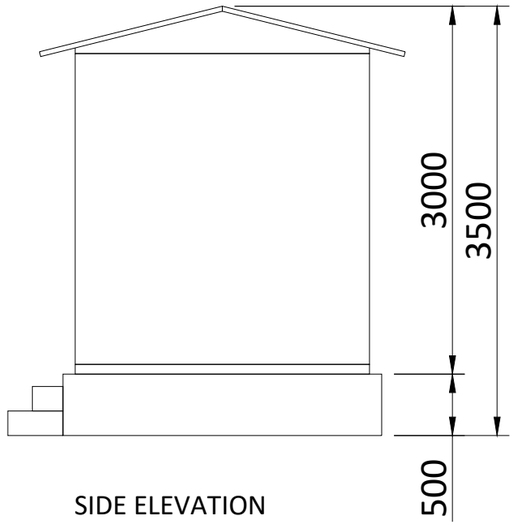
FRONT ELEVATION



SIDE ELEVATION



FLOOR PLAN



SIDE ELEVATION

Building must be painted

RAL 6005 Moss Green

UK_EPD_Customer Substation_01

DA			16.02.2021
DRAWN	CHECKED	APPROVED	DATE

Paper Size:	Scale:	Sheet:
A3	1:50	1

DRAWING NUMBER:	STATUS:
UK_EPD_CSS	Preliminary

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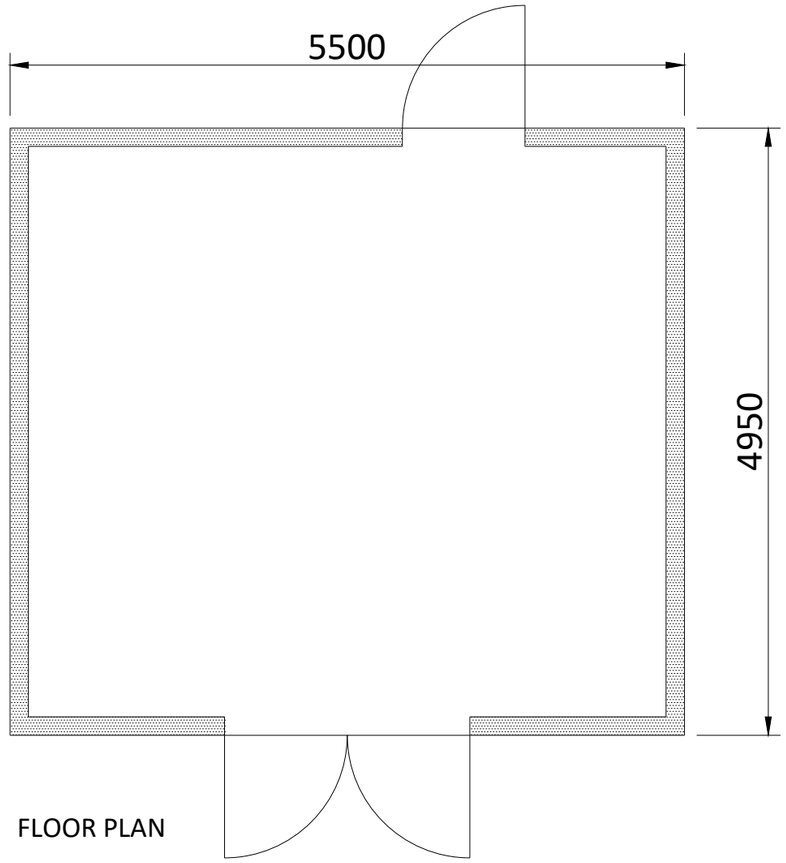
info@lightsourcebp.com

A3 - (420 x 297)mm

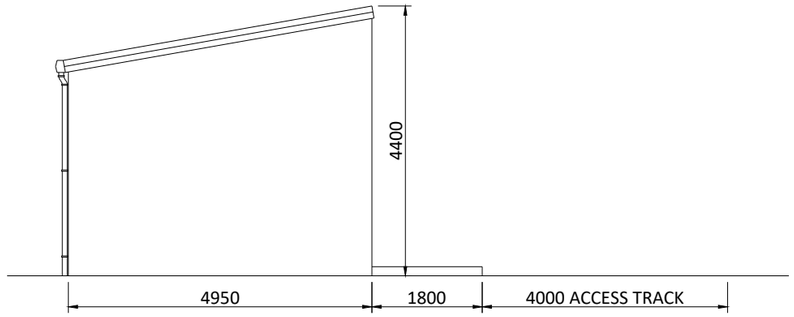
METERS

0 1 2 3 4 5

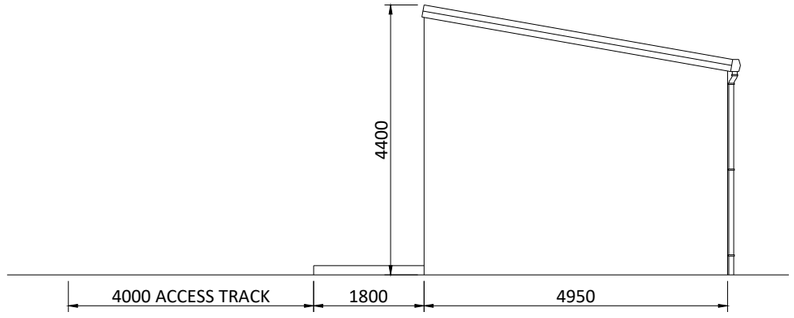
Figure 2.10
Proposed DNO Substation



FLOOR PLAN

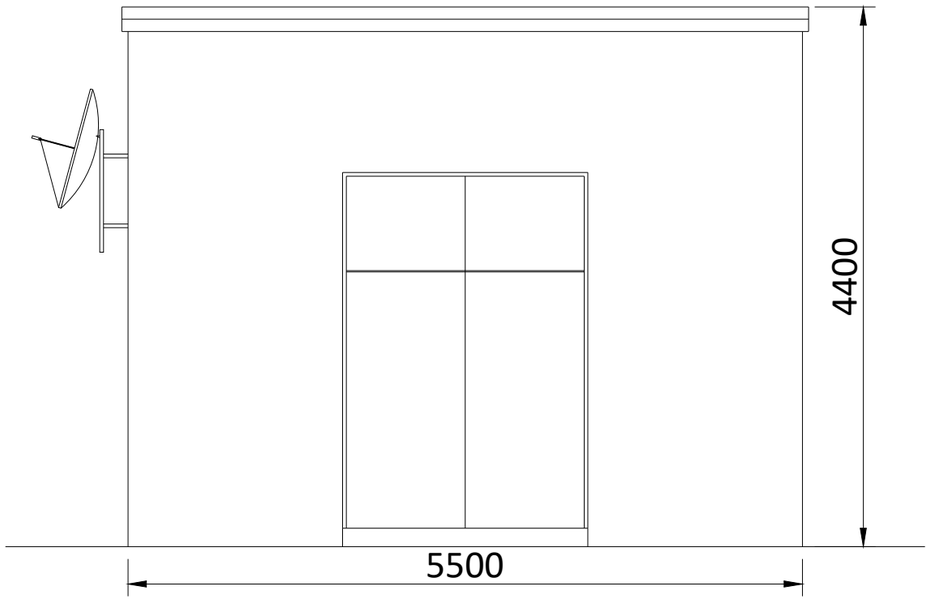


SIDE ELEVATION

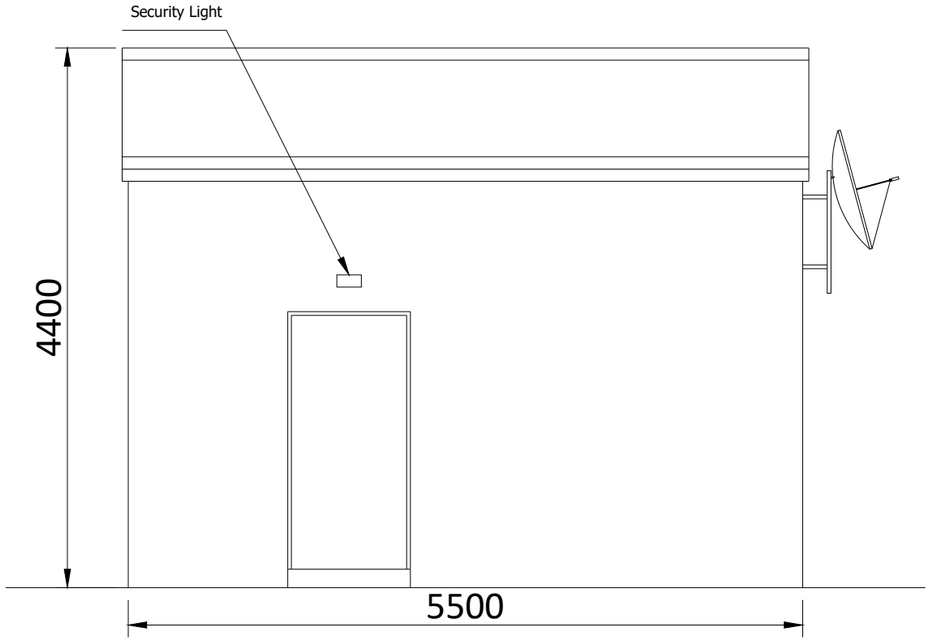


SIDE ELEVATION

SIDE ELEVATIONS @1:100



FRONT ELEVATION



BACK ELEVATION

A3 - (420 x 297)mm

METERS

0 1 2 3 4 5

UK_EPD_DNO Substation_00			
DA			23.10.2020
DRAWN	CHECKED	APPROVED	DATE
Paper Size: A3	Scale: 1:50	Sheet: 1	
DRAWING NUMBER: UK_EPD_DNO	STATUS: Preliminary		

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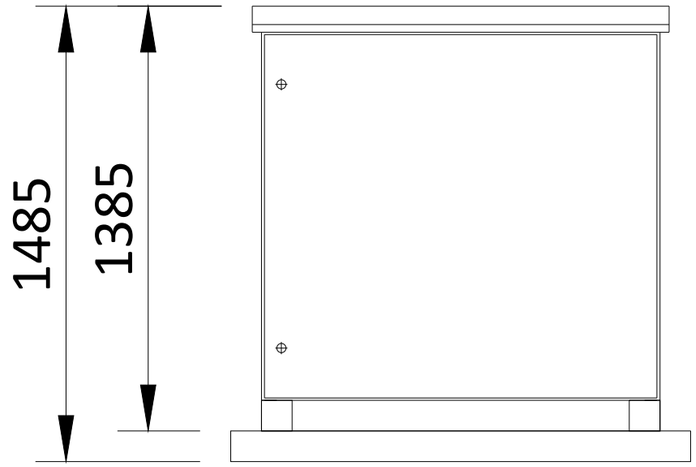
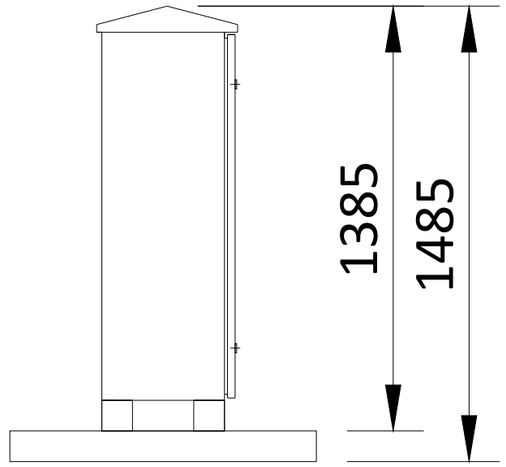
Figure 2.11

Proposed DNO Cabinet

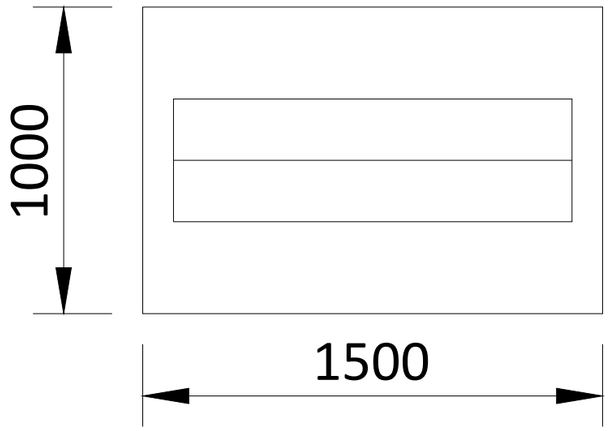
UK_EPD_GRP Cabinet-DNO Meter_00



FRONT ELEVATION



SIDE ELEVATION



FLOOR PLAN

A3 - (420 x 297)mm

METERS

0 1 2 3 4 5

UK_EPD_GRP Cabinet-DNO Meter_00			
DA			23.10.2020
DRAWN	CHECKED	APPROVED	DATE
Paper Size: A3	Scale: 1:20	Sheet: 1	
DRAWING NUMBER: UK_EPD_MTR	STATUS: Preliminary		

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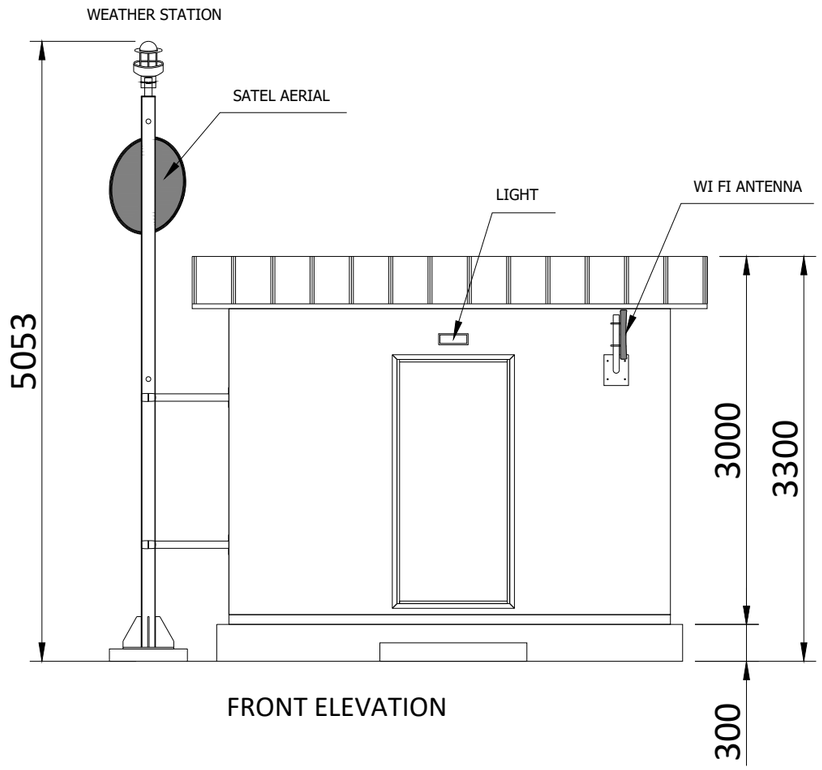
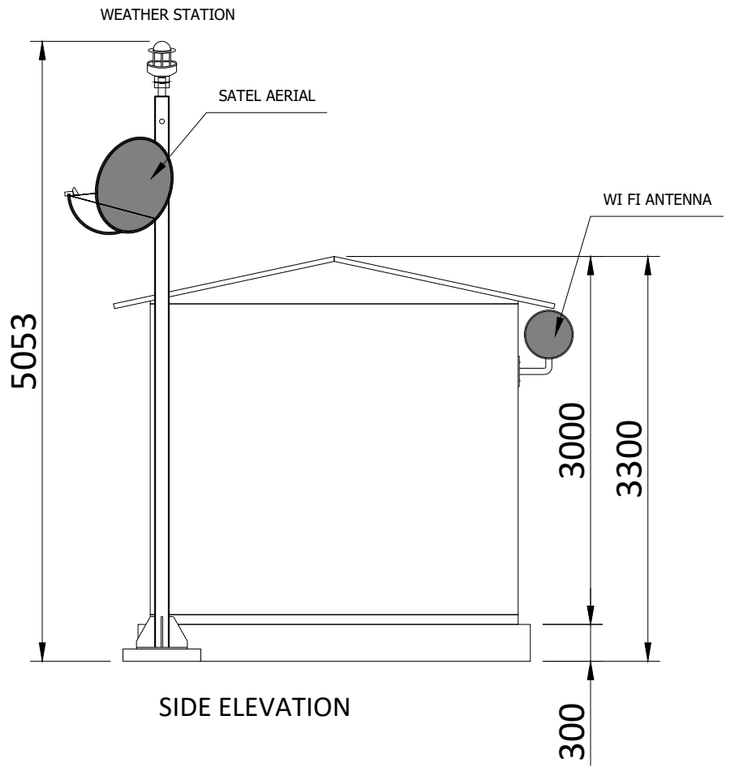
Figure 2.12
Proposed Monitoring House

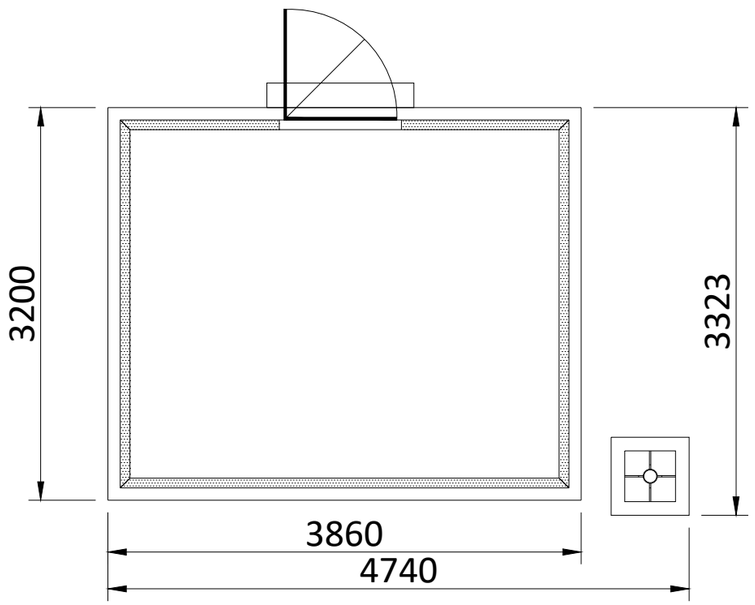
UK_EPD_Monitoring House/Communication Building_00



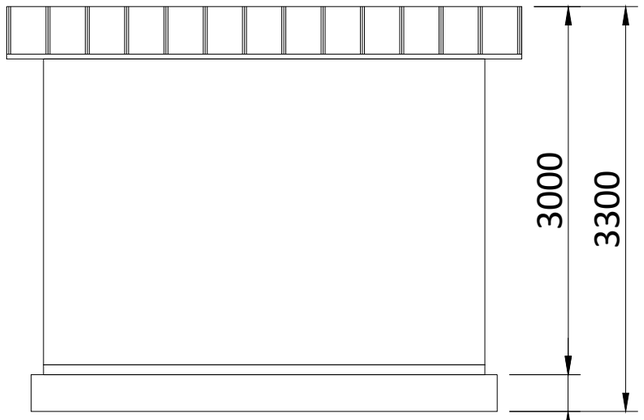
FRONT ELEVATION



SIDE ELEVATION



FLOOR PLAN



BACK ELEVATION

A3 - (420 x 297)mm

METERS
0 1 2 3 4 5

Building must be painted

RAL 6005 Moss Green

UK_EPD_Monitoring House/Communication Building_00

DA			20.10.2020
DRAWN	CHECKED	APPROVED	DATE

Paper Size:	Scale:	Sheet:
A3	1:50	1

DRAWING NUMBER:	STATUS:
UK_EPD_MH/CB	Preliminary

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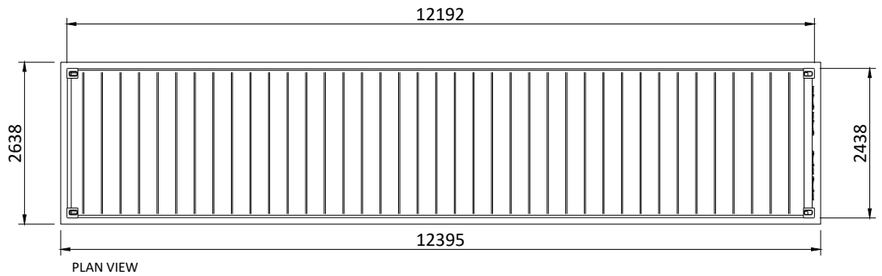
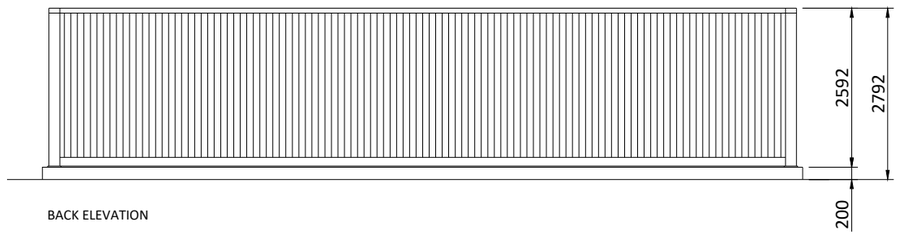
Figure 2.13

Proposed Storage Container

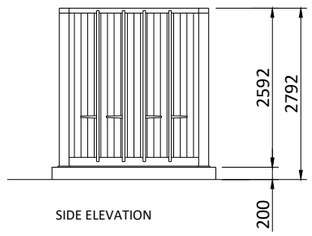
UK_EPD_Spare Parts Storage 40' Container_00



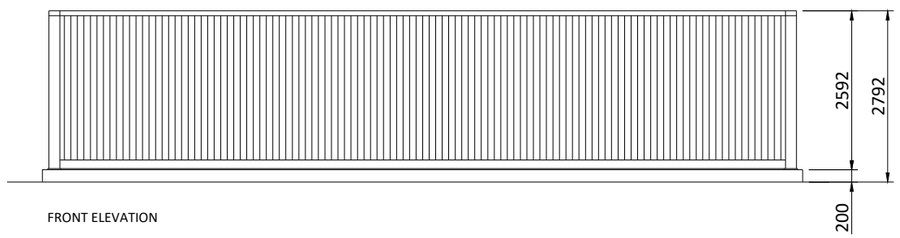
PLAN VIEW



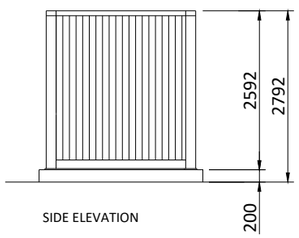
BACK ELEVATION



SIDE ELEVATION



FRONT ELEVATION



SIDE ELEVATION

A3 - (420 x 297)mm

METERS

0 5 10 15

Building must be painted

RAL 6005 Moss Green

UK_EPD_Spare Parts Storage 40' Container_00

DRAWN	CHECKED	APPROVED	DATE
DA			23.10.2020

Paper Size:	Scale:	Sheet:
A3	1:100	1

DRAWING NUMBER:	STATUS:
UK_EPD_S40	Preliminary

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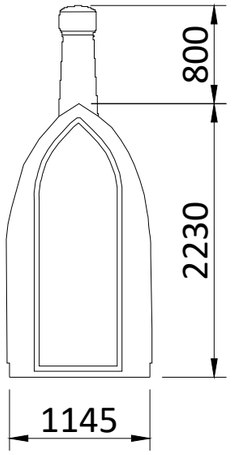
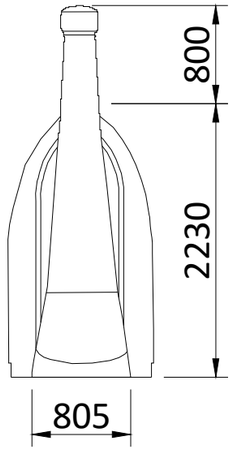
Figure 2.14
Proposed Composting Toilet

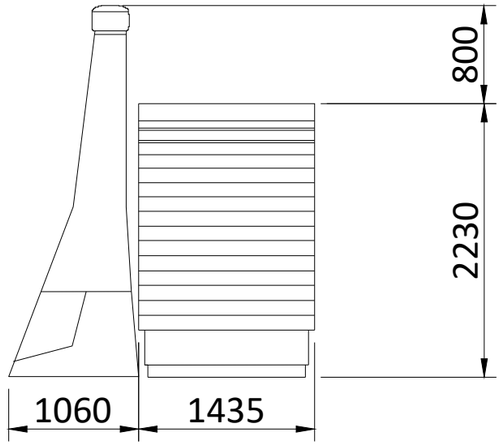
UK_EPD_Toilet_00



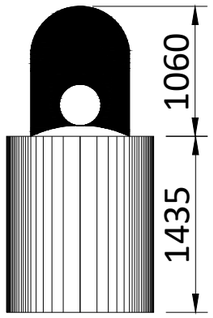
FRONT ELEVATION



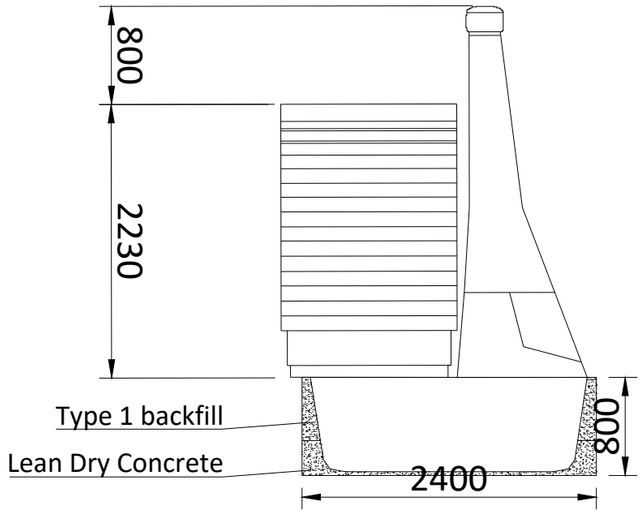
BACK ELEVATION



SIDE ELEVATION



FLOOR PLAN



SIDE ELEVATION

A3 - (420 x 297)mm

METERS
0 1 2 3 4 5

UK_EPD_Toilet_00			
DA			23.10.2020
DRAWN	CHECKED	APPROVED	DATE
Paper Size: A3	Scale: 1:50	Sheet: 1	
DRAWING NUMBER: UK_EPD_TLT	STATUS: Preliminary		

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General: +44 (0) 333 200 0755
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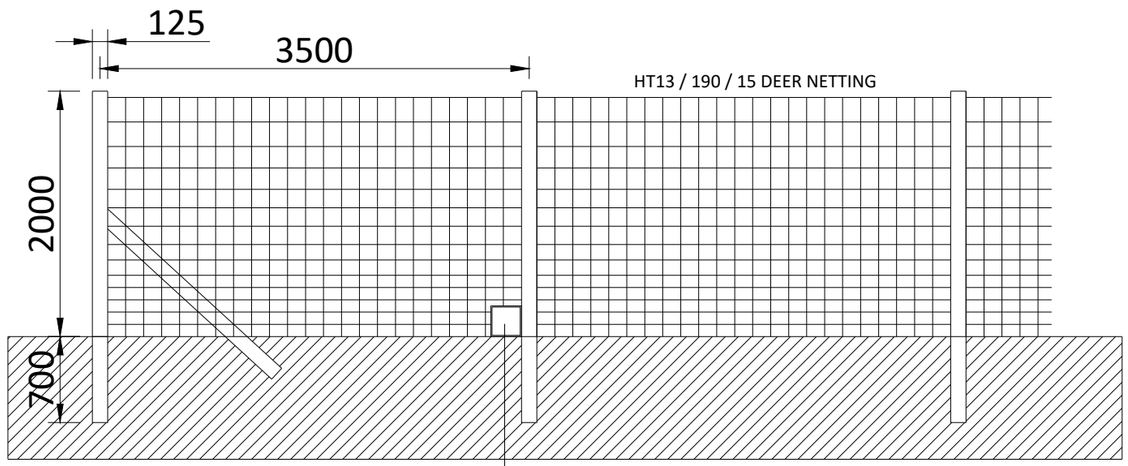
Figure 2.15
Proposed Security Fencing



Small Mammal gates fitted at appropriate points to enable free access 250mm x 250mm

NOTES:
Deer Fence Mesh dimensions are 150mm x 150mm

A3 - (420 x 297)mm

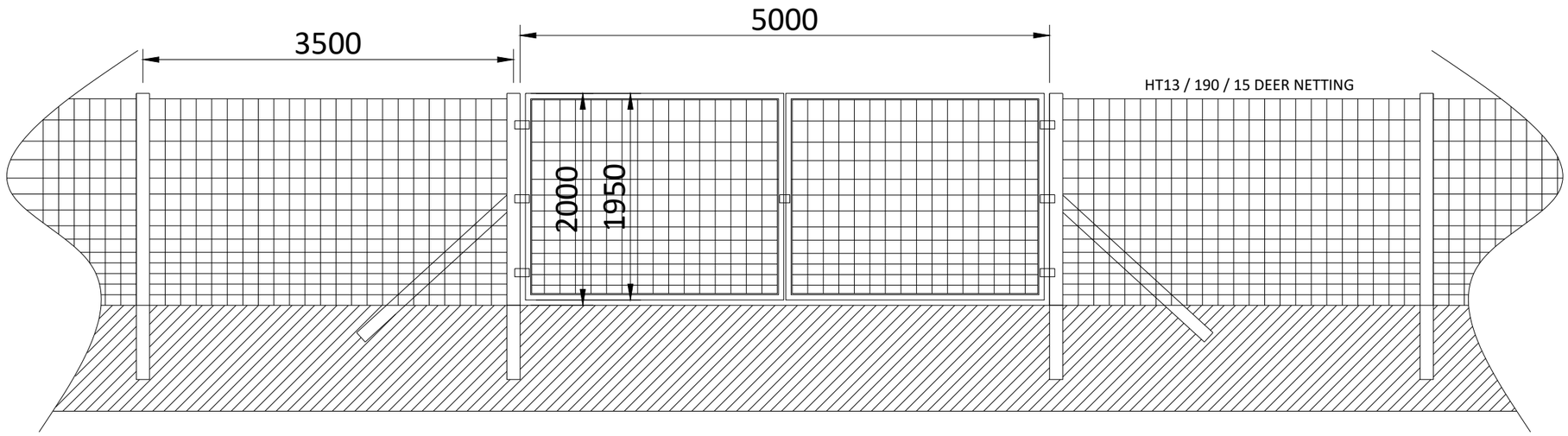
METERS
0 1 2 3 4 5

UK_EPD_Fence_00			
DA			23.10.2020
DRAWN	CHECKED	APPROVED	DATE
Paper Size: A3	Scale: 1:50	Sheet: 1	
DRAWING NUMBER: UK_EPD_FNC	STATUS: 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

Figure 2.16
Proposed Gates

UK_EPD_Gate_00



METERS
0 1 2 3 4 5

A3 - (420 x 297)mm

UK_EPD_Gate_00			
DA			23.10.2020
DRAWN	CHECKED	APPROVED	DATE
Paper Size: A3	Scale: 1:50	Sheet: 1	
DRAWING NUMBER: UK_EPD_GTD	STATUS: Preliminary		

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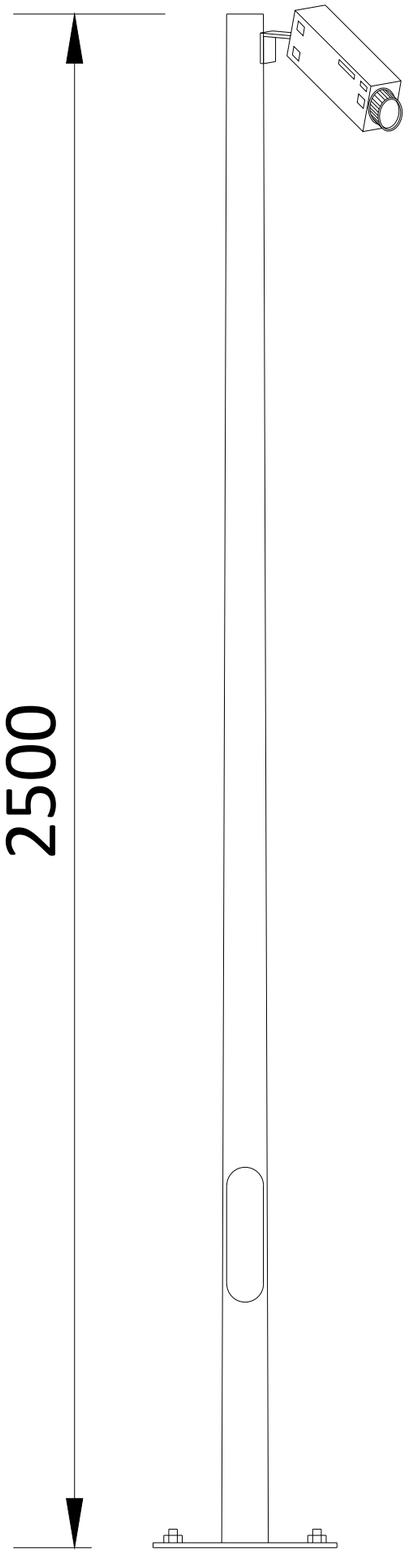
Figure 2.17
Proposed CCTV

UK_EPD_CCTV Camera_00



METERS

0 1 2 3

A3 - (420 x 297)mm

UK_EPD_CCTV Camera_00			
DA			23.10.2020
DRAWN	CHECKED	APPROVED	DATE
Paper Size: A3	Scale: 1:10	Sheet: 1	
DRAWING NUMBER: UK_EPD_CAM	STATUS: 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

C Sweet

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

Plas Carew, Uned 5/7 Cefn Coed
Parc Nantgarw, Caerdydd CF15 7QQ
Ffôn 0300 025 6000
Ebost cadw@gov.cymru
Gwefan www.cadw.cymru.gov.uk

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Parc Nantgarw,Cardiff CF15 7QQ
[redacted]

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

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)

Wrexham County Borough Council / Cyngor Bwrdeistref Sirol Wrecsam
Guildhall, Wrexham. LL11 1AY
Neuadd y Dref, Wrecsam. LL11 1AY
DX: 721924 - Wrexham 4
www.wrexham.gov.uk www.wrecsam.gov.uk

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).

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.

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.

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

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.

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

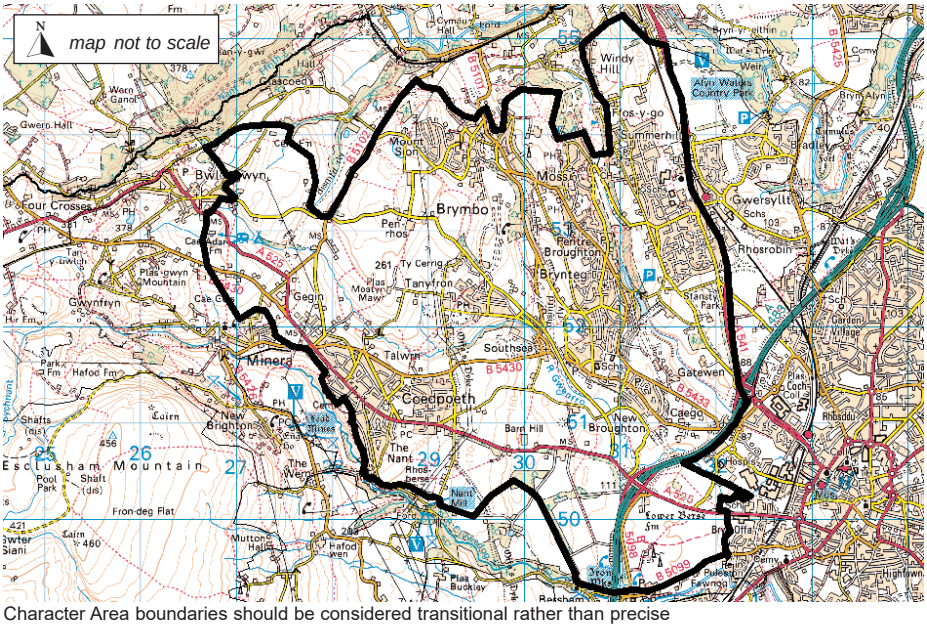
Landscape context

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

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

Map of West Wrexham Ridges and Valleys Landscape Character Area



Character Area boundaries should be considered transitional rather than precise

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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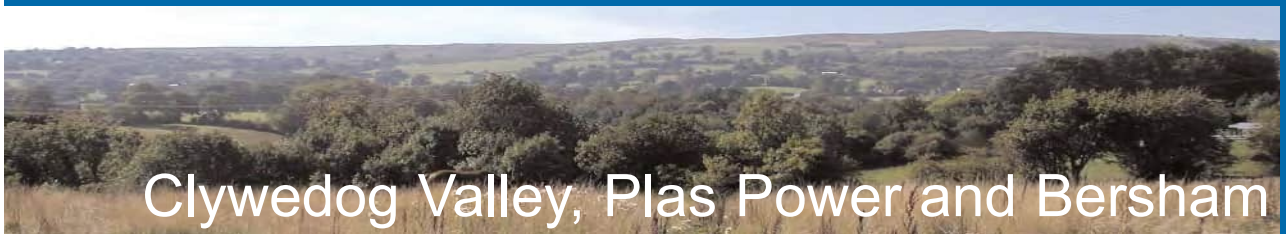


Clywedog Valley, Plas Power and Bersham 9a

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

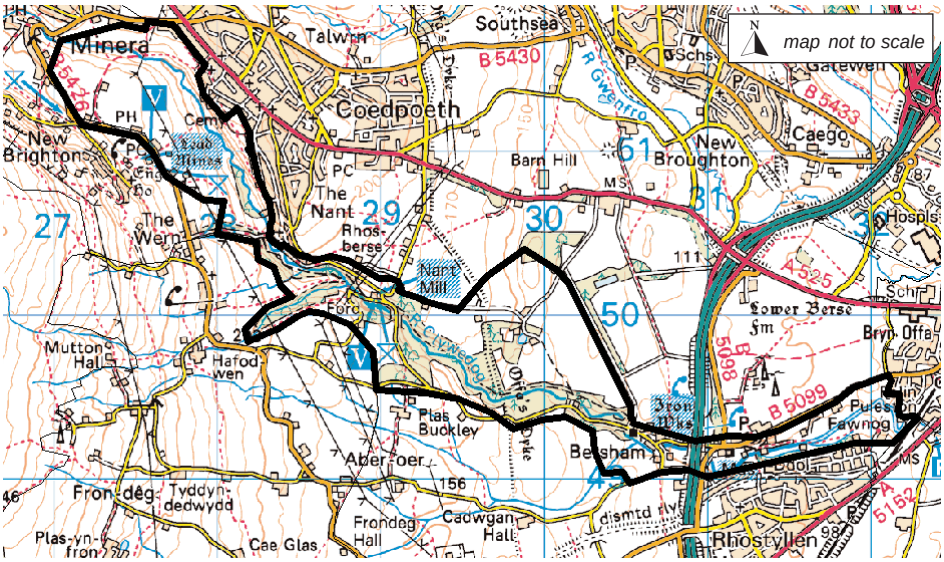
- Cut-off areas of countryside, and wooded valley to the east of Wrexham town
- Woodlands of high nature conservation value
- Country parks at Nant Mill and Minera
- High potential for recreation, linking town and country
- Heritage centre and ironworks at Bersham
- Plas Power estate adjoining Clywedog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

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

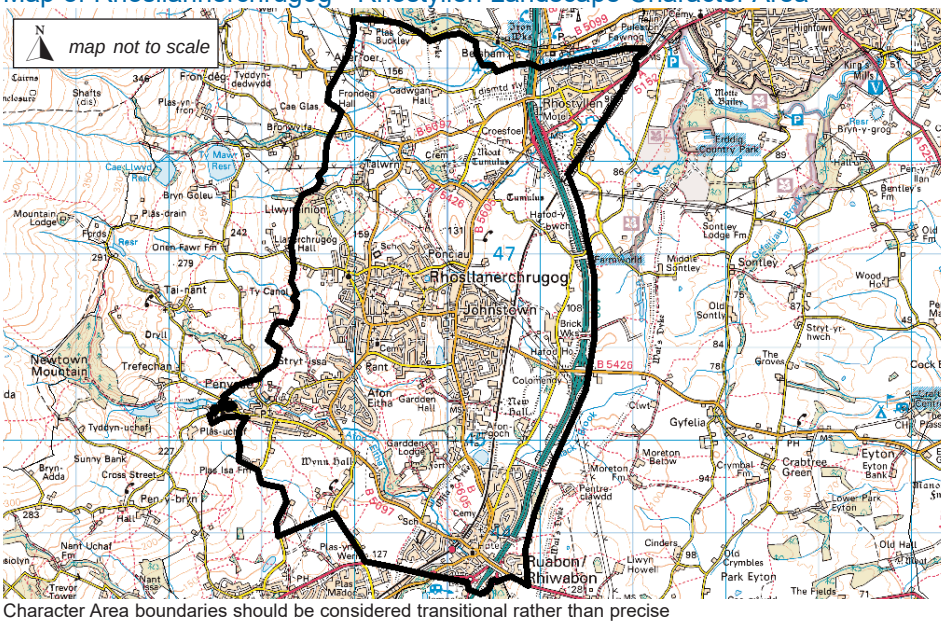
- Rural and urban areas affected by history of mining and quarrying
- Villages (Rhos, Penycae, Rhostyllen, Ruabon) characterised by high density and use of Ruabon red brick
- Prehistoric military border area - Gardden hill fort and Offa's Dyke
- Much accessible natural greenspace forming ecological network, 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

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

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.

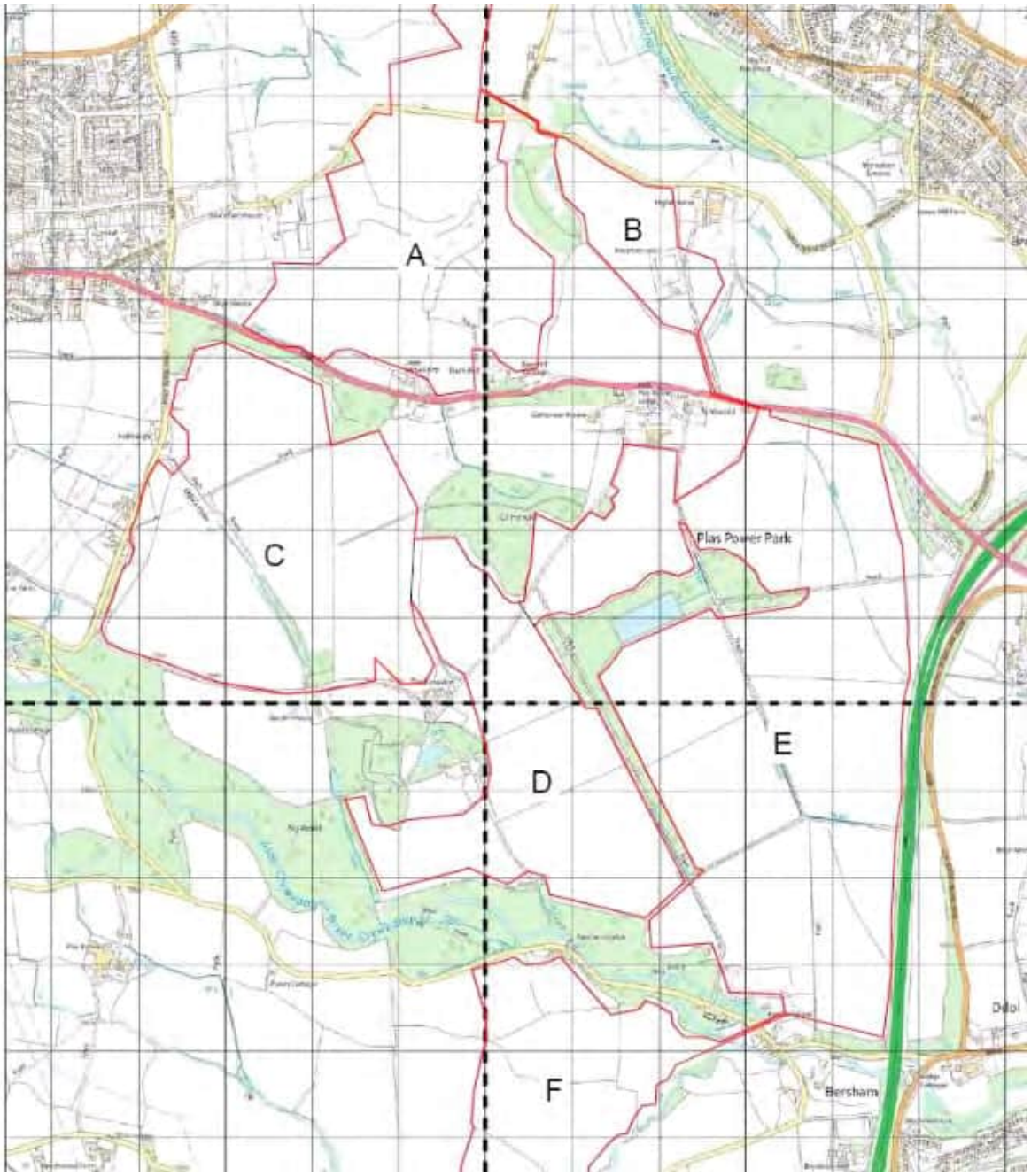
Kind regards

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

Please note that I do not work Fridays


A
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Plas Power Park
Bersham

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

Scoping Direction December 2020

The Planning Inspectorate
Yr Arolygiaeth Gynllunio

DNS: EIA Scoping Direction

3253253: Plas Power Estate Solar Farm

02/12/2020

Contents

Prepared by:

Giulia Bazzoni MA PIEMA
Robert Sparey MPlan

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

Appendix 3

Agricultural Land Classification Survey Report

AGRICULTURAL LAND CLASSIFICATION
PLAS POWER SOLAR FARM

CLIENT: LIGHTSOURCE RENEWABLE UK DEVELOPMENT LTD
PROJECT: PLAS POWER SOLAR FARM
DATE: 7TH NOVEMBER 2022 – ISSUE 2
ISSUED BY: JAMES FULTON MRICS FAAV

CONTENTS

1. Executive Summary

1.1 This report assesses the Agricultural Land Classification (ALC) grading of 25.1Ha, of agricultural land at Plas Power near Wrexham.

1.2 The limiting factor is found to be soil wetness on all of the land to the north and west, and droughtiness on the shallow soils over rock to the east, both of which are a combination of the soils found on site and the climatic regime.

1.3 The land is graded as follows:

Grade 3a:	1.6 Ha	6.4%
Grade 3b:	21.5 Ha	83.7%
Grade 4:	2.0 Ha	7.9%

2. INTRODUCTION

2.1 Amet Property Ltd have been instructed by Lightsource Renewable UK Development LTD to produce an Agricultural Land Classification (ALC) report on an a 25.1-hectare site at Plas Power to the west of Wrexham in support of a planning application for a solar farm with associated infrastructure.

2.2 The report's author is James Fulton BSc (Hons) MRICS FAAV who has worked as a chartered surveyor, agricultural valuer, and agricultural consultant since 2004, has a degree in agriculture which included modules on soils and over 10 years' experience in advising farmers on soil structure and cultivation methods and in producing agricultural land classification reports.

2.3 The report is based on site visits conducted on the 10th of September and 28th October 2022. During the site visits conditions were dry and sunny. During the inspection four trial pits were dug, these would ordinarily be to 120cm but in all cases the land became impenetrable before 120cm was reached. In addition to the trial pits an augur was used to take approximately one sample per hectare on the proposed development site with smaller trial pits and stone counts at some of these locations to confirm soil structure and colour where it was not clear from the augur samples. A plan of augur points can be found at *appendix 1.* The trial pit locations were selected as they were representative of the soils found on site. Where subsoils were inspected with a spade, descriptions of structure have been recorded based on the soil survey field handbook[1]; where an augur has been used the structure is described as good, moderate or poor based on figure 9,10 and 11 in the MAFF[2] (1988) guidance.

2.4 During the first sampling visit subsoil state was very dry making it extremely difficult to determine structure and in some cases, soils were so hard as to prevent auguring at all. The soil state was much better for the second visit and soil horizons could be inspected to allow for an assessment of the site.

2.5 The site extends 25.1Ha of arable and grassland spread across 9 fields or part fields. The elevation of the site ranged from 128m to 168m AOD and is gently sloping.

2.6 Further information has been obtained from the MAGIC website, the Soil Survey of England and Wales, the British Geological Survey, the Meteorological Office and 1:250,000 series Agricultural Land Classification maps.

2.7 The collected information has been judged against the Ministry of Agriculture Fisheries and Food Agricultural Land Classification of England and Wales revised guidelines and criteria for grading the quality of agricultural land. The

[1] Hodgson, JM (1997) Soil Survey Field Handbook

[2] MAFF (1988) - *Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land*. MAFF Publications

contents and format of the report is further informed by the BSSS guidance (2022)[3].

2.8 The principal factors influencing agricultural production are climate, site and soil and the interaction between them MAFF (1988)[4] & Natural England (2012)[5].

3. PUBLISHED INFORMATION

3.1 The British Geological Survey 1:50,000 scale map shows the bedrock geology to be Pennine Lower Coal Measures Formation and Pennine Middle Coal Measures Formation – mudstone, siltstone and sandstone. Superficial deposits are described as Till, Devensian – Diamicton.

3.2 The national soils map shows the site to be largely Brickfield 2 Association – Slowly permeable waterlogged fine loamy soils and Nercwys Association – Deep fine loamy soils with slowly permeable subsoils and slight seasonal waterlogging. The two most easterly sample points (23 and 24) are shown to be Neutral restored opencast – Restored opencast coal workings. Slowly permeable seasonally waterlogged compacted fine loamy and clayey disturbed soils. Often stony with thin topsoils.

3.3 The Welsh Assembly Government predictive ALC shows the areas to be grade 3a.

[3] British Society of Soil Science (2022) – Guidance Document 1 – Working with Soil Guidance Note on Assessing Agricultural Land Classification Surveys in England and Wales

[4] MAFF (1988) - *Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land*. MAFF Publications

[5] Natural England (2012) - *Technical Information Note 049 - Agricultural Land Classification: protecting the best and most versatile agricultural land*, Second Edition

4. CLIMATE

4.1 Climate has a major, and in places overriding, influence on land quality affecting both the range of potential agricultural uses and the cost and level of production.

4.2 There is published agro-climatic data for England and Wales provided by the Meteorological Office, such data for the subject site is listed in the table below.

Agro-Climatic Data – Full details can be found at *appendix 2*

Grid Reference	330019 350727
Altitude (ALT)	153.17
Average Annual Rainfall (AAR)	930.97
Accumulated Temperature - Jan to June (ATO)	1301.01
Duration of Field Capacity (FCD)	207.73
Moisture Deficit Wheat	76.75
Moisture Deficit Potatoes	59.74

4.3 The main parameters used in assessing the climatic limitation are average annual rainfall (AAR), as a measure of overall wetness; and accumulated temperature (ATO), as a measure of the relative warmth of a locality.

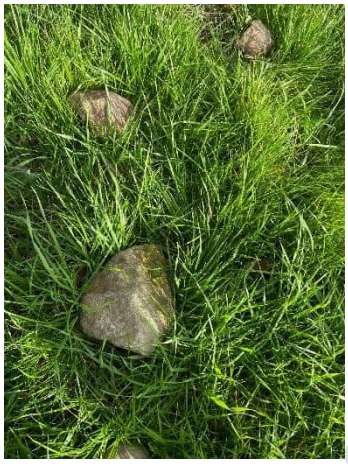
4.4 The AAR and ATO limit the site to Grade 2.

4.5 The site is shown to be in flood zone A – areas at little or no risk of fluvial or coastal/tidal flooding. There was no evidence of flooding seen during the site visit and it is considered that will not result in a limitation to land grade.

5. STONINESS

5.1 There were stones found in almost every sample point on the site. The stones were generally medium to large and occasionally very large. Stones were of various shapes from rounded to tabular and angular. A number of stone counts were carried out alongside estimates.

Very large stones at Sample point 8



Stone count at sample point 12

6. GRADIENT

6.1 The steepest areas of the site are only a gentle slope with gradient never representing the most limiting factor to land grade.

7. SOILS

7.1 The soils found on site largely follow the expectations set by the national soils map. Full information on the sample points along trial pit descriptions and photographs can be found at *appendix 3*.

7.2 There were two distinct soil types found on site.

Sample points 23 and 24 were a very shallow (15-20cm) very stony medium clay loam topsoil over rock.

The rest of the site was a medium clay loam (occasionally heavy clay loam) topsoil over a slowly permeable gleyed clay loam subsoil from between 25 and 50cm.

7.3 Soil Texture and depth do not provide a direct limitation to land grade across the majority of the site but the soil depth at sample points 23 and 24 does limit the area to grade 3b although this is not the most limiting factor at this sample point.

INTERACTIVE FACTORS

8. WETNESS

8.1 An assessment of the wetness class of each sample point was made based on the flow chart at Figure 6 in the MAFF guidance. The wetness class and topsoil texture were then assessed against Table 6 of the MAFF guidance to determine the ALC grade according to wetness. The wetness assessment can be found at *appendix 4*.

Medium clay loam over slowly permeable clay loam subsoil

8.2 Where the slowly permeable gleyed horizon started at between 25 and 30cm when combined with the FCD of 207.73 result in a wetness class of IV based on Figure 7 in the MAFF guidance. Where the gleyed horizon starts at between 40 and 70cm with a slowly permeable layer starting at 50cm the wetness class is found to be III.

8.3 Table 6 for between 176 and 225 FCD, wetness class IV and medium clay loam topsoil results in a grade 3b limitation. Where the wetness class is III the medium clay loam topsoil gives a limitation of grade 3a and th heavy clay loam topsoil gives a limitation of grade 3b.

8.4 Wetness was not a limiting factor on the shallow soils.

9. DROUGHTINESS

9.1 Droughtiness limits are defined in terms of moisture balance for wheat and potatoes using the formula:

MB (Wheat) = AP (Wheat) - MD (Wheat)

and

MB (Potatoes) = AP (Potatoes) - MD (Potatoes)

Where:
MB = Moisture Balance
AP = Crop Adjusted available water capacity
MD = Moisture deficit

9.2 Moisture deficit for wheat and potatoes can be found in the agro-climatic data and are as follows:

MD (Wheat) = 76.75
MD (Potatoes) = 59.74

9.3 Crop adjusted available water is calculated by reference to the total available water and easily available water which is calculated by reference to soil

texture and structural condition and the stone content. The moisture balance was calculated for the trial pit locations and the locations where droughtiness was considered likely to be a limiting factor and can be found at *appendix 4*

9.4 The very shallow soils and high stone count at sample points 23 and 24 result in droughtiness being the most limiting factor inthis area.

10. AGRICULTURAL LAND CLASSIFICATION

10.1 The Agricultural Land Classification provides a framework for classifying land according to which its physical or chemical characteristics impose long-term limitations on agricultural use. The limitations can operate in one or more of four principle ways: they may affect the range of crops that can be grown, the level of yield, the consistency of yield and the cost of obtaining it.

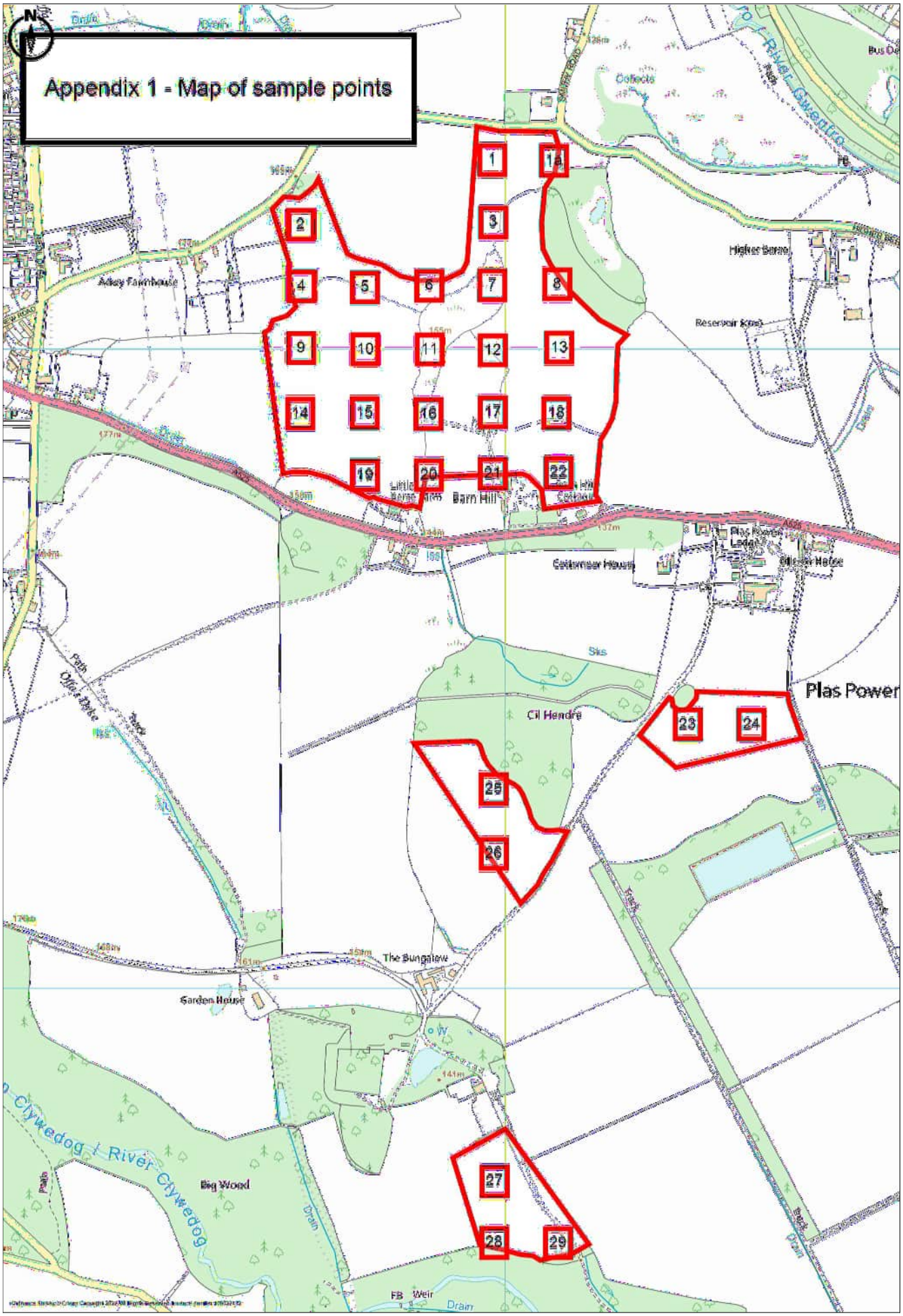
10.2 The principle physical factors influencing agricultural production are climate, site and soil and the interactions between them which together form the basis for classifying land into one of 5 grades; grade 1 being of excellent quality and grade 5 being land of very poor quality. Grade 3 land, which constitutes approximately half of all agricultural land in the United Kingdom is divided into 2 subgrades – 3a and 3b. A full definition of all of the grades can be found at *appendix 5.*

10.3 This assessment sets out that the site is variously limited by both wetness and droughtiness.

10.4 The breakdown of land by classification is:

Grade 3a:	1.6 Ha	6.4%
Grade 3b:	21.5 Ha	83.7%
Grade 4:	2.0 Ha	7.9%

10.5 A plan of the land grading can be found at *appendix 6*.



Appendix 2 – Climatic Data

Site Details: Plas Power

Grid reference (centre of site): 330019 350727

Altitude: Mean 153.17m AOD

Climatic data from surrounding locations:

Grid Reference	ALT	AAR	LR_AAR	ASR	ATO	ATS	MDW	MDP	FCD
33003500	112	903	0.8	400	1348	2246	83	68	204
33003550	95	790	0.7	375	1365	2265	89	76	183
33503500	65	754	1.1	340	1403	2309	100	89	175
33503550	61	751	1	340	1405	2311	100	89	173

Altitude Adjusted

Grid Reference	AAR	ATO	FCD	MDW	MDP	Proximity Adjustment
33003500	935.94	1301.07	208.76	76.47	59.40	94.90%
33003550	830.72	1298.69	188.89	80.18	64.38	2.87%
33503500	850.99	1302.49	189.02	84.16	68.21	1.62%
33503550	843.17	1299.93	186.33	84.09	68.10	0.62%

Appendix 3 - Plas Power (Wrexham) - Sep 22

		Topsoil					Subsoil 1						Subsoil 2						Subsoil 3	
Sample No	Altitude	Depth	Texture	Colour	Stoniness	Mottles	Depth	Texture	Colour	Stoniness	Mottles	Structure	Depth	Texture	Colour	Stoniness	Mottles	Structure	Depth	Texture
1	139	0-25	MCL	10YR 3/3	5%		25-50	CL	10YR 4/4	5%	FOB	WMSAB	50-80	CL	10YR 5/3	5%	CO	WMAB	80	IMP
1a	135	0-25	MCL	10YR 3/3	5%		25-60	CL	10YR 5/3	5%	CO	Poor	60	IMP						
2	165	0-30	MCL	10YR 3/3	5%		30-50	CL	10YR 5/3	5%	CO	Poor	50	IMP						
3	140	0-20	MCL	10YR 3/3	5%		20-50	CL	10YR 4/4	5%	FOB	Moderate	50-70	CL	10YR 5/3	5%	CO	Poor	70	IMP
4	164	0-30	MCL	10YR 3/3	5%		30-50	CL	10YR 5/3	5%	CO	Poor	50	IMP						
5	157	0-25	MCL	10YR 3/3	5%		25-50	CL	10YR 5/3	5%	CO	Poor	50	IMP						
6	153	0-30	MCL	10YR 3/3	5%		30-50	CL	10YR 4/4	5%	FOB	Moderate	50-80	CL	10YR 5/3	5%	CO	Poor	80	IMP
7	145	0-30	HCL	10YR 3/3	5%	CO	30-50	CL	10YR 4/4	5%	FOB	Moderate	50-80	CL	10YR 5/3	5%	CO	Poor	80	IMP
8	141	0-30	MCL	10YR 3/3	15%		30-50	CL	10YR 5/3	5%	CO	Poor	50	IMP						
9	164	0-25	MCL	10YR 3/3	10%		25-50	CL	10YR 5/3	5%	CO	Poor	50	IMP						
10	158	0-25	MCL	10YR 3/3	10%		25-50	CL	10YR 5/3	5%	CO	Poor	50	IMP						
11	151	0-30	HCL	10YR 3/3	5%	CO	30-50	CL	10YR 4/4	5%	FOB	Moderate	50-70	CL	10YR 5/3	5%	CO	Poor	70	IMP
12	144	0-30	MCL	10YR 3/3	5%		30-50	CL	10YR 5/3	5%	CO	Poor	50	IMP						
13	143	0-25	MCL	10YR 3/3	15%		25-50	CL	10YR 5/3	5%	CO	Poor	50	IMP						
14	164	0-25	MCL	10YR 3/3	5%		25-50	CL	10YR 5/3	5%	CO	Poor	50	IMP						
15	157	0-25	MCL	10YR 3/3	5%		25-50	CL	10YR 5/3	5%	CO	Poor	50	IMP						
16	151	0-25	MCL	10YR 3/3	10%		25-50	CL	10YR 5/3	5%	CO	Poor	50	IMP						
17	147	0-25	MCL	10YR 3/3	10%		25-80	CL	10YR 5/3	5%	CO	Poor	80	IMP						
18	148	0-30	MCL	10YR 3/3	10%		30-70	CL	10YR 5/3	5%	CO	Poor	70	IMP						
19	168	0-25	MCL	10YR 3/3	15%		25-80	CL	10YR 5/3	5%	CO	Poor	80	IMP						
20	158	0-30	MCL	10YR 3/3	5%	CO	30-80	CL	10YR 5/3	5%	CO	Poor	80	IMP						
21	151	0-30	MCL	10YR 3/3	5%	CO	30-60	CL	10YR 5/3	5%	CO	Poor	60	IMP						
22	148	0-25	MCL	10YR3/3	5%		25-80	CL	10YR 5/3	5%	CO	Poor	80	IMP						
23	132	0-20	MCL	10YR3/3	25%		20	IMP												
24	128	0-15	MCL	10YR 3/3	25%		15	IMP												
25	147	0-30	MCL	10YR 3/3	<5%		30-50	MCL	10YR 5/3	<5%	CO	Poor	50	IMP						
26	143	0-30	MCL	10YR 3/3	5%		30-50	MCL	10YR 5/3	<5%	CO	Poor	50	IMP						
27	134	0-25	MCL	2.5Y 3/3	15%		25-50	MCL	10YR 5/3	<5%	CO	Poor	50	IMP						
28	135	0-30	MCL	2.5Y 3/3	15%		30-50	MCL	10YR 5/3	<5%	CO	Poor	50	IMP						
29	132	0-30	MCL	2.5Y 3/3	15%		30-50	MCL	10YR 5/3	<5%	CO	Poor	50	IMP						
	153.17																			

Appendix 3b – Trial Pit Descriptions

Sample Point No. 1	
Horizon 1	0-25cm Dark brown (10YR 3/3) medium clay loam with 5% small hard subrounded stones
Horizon 2	25-50cm Dark yellowish brown (10YR 4/4) clay Loam with a weak medium subangular blocky structure, firm consistence, few ochreous and black mottles and 5% small hard subrounded stones.
Horizon 3	50-80cm Brown (10YR 5/3) clay loam with a weak medium angular blocky structure, firm consistence, common ochreous mottles and less than 0.5% biopores
Pictures	

Horizon 1

Horizon 2

Slowly permeable layer	From 50cm
Gleying	From 50cm
Wetness Class	III
Wetness limitation	3a
MB Wheat	49.94
MB potatoes	48.19
Droughtiness Limitation	1
Soil depth limitation	1
Stoniness limitation	1

Sample Point No. 17	
Horizon 1	0-25cm Dark brown (10YR 3/3) medium clay loam with 5% small hard subrounded stones
Horizon 2	25-50cm Brown (10YR 5/3) clay loam with a weak medium angular blocky structure, firm consistence and less than 0.5% biopores
Pictures	

Horizon 1	Horizon 2
	

Slowly permeable layer	From 25cm
Gleying	From 25cm
Wetness Class	IV
Wetness limitation	3b
MB Wheat	3.39
MB potatoes	24.19
Droughtiness Limitation	2
Soil depth limitation	1
Stoniness limitation	1

Sample Point No. 23	
Horizon 1	0-20cm Dark brown (10YR 3/3) medium clay loam with 25% medium and large hard subangular tabular stones
Horizon 2	20cm – Impenetrable due to rock layer
Pictures	

Horizon 1

Slowly permeable layer	None
Gleying	None
Wetness Class	I
Wetness limitation	1
MB Wheat	-49.56
MB potatoes	-59.81
Droughtiness Limitation	4
Soil depth limitation	3b
Stoniness limitation	4

Sample Point No. 25	
Horizon 1	0-25cm Dark brown (10YR 3/3) medium clay loam with 5% small hard subrounded stones
Horizon 2	25-50cm Brown (10YR 5/3) clay loam with a weak medium angular blocky structure, firm consistence and less than 0.5% biopores
Pictures	

Horizon 1	Horizon 2
	

Slowly permeable layer	From 25cm
Gleying	From 25cm
Wetness Class	IV
Wetness limitation	3b
MB Wheat	3.39
MB potatoes	24.19
Droughtiness Limitation	2
Soil depth limitation	1
Stoniness limitation	1

ANALYTICAL REPORT

Report Number	**34263-22**	**W250**	**AMET PROPERTY**
Date Received	**15-SEP-2022**		**HENWICK BARN**
Date Reported	**27-SEP-2022**		**BULWICK**
Project	**SOIL**		**CORBY**
Reference	**AMET PROPERTY**		**NORTHANTS**
Order Number			**NN17 3DU**

Laboratory Reference		**SOIL578904**	**SOIL578905**	**SOIL578906**	**SOIL578907**						
Sample Reference		**PLAS 25TS**	**PLAS 25SS**	**PLAS 1ATS**	**PLAS 20TS**						
Determinand	**Unit**	**SOIL**	**SOIL**	**SOIL**	**SOIL**						
Coarse Sand 2.00-0.63mm	% w/w	7	6	10	6						
Medium Sand 0.63-0.212mm	% w/w	12	16	14	16						
Fine Sand 0.212-0.063mm	% w/w	18	19	16	18						
Silt 0.063-0.002mm	% w/w	38	38	37	38						
Clay <0.002mm	% w/w	25	21	23	22						
Stones >50mm	% w/w	0.0	0.0	0.0	0.0						
Stones 20-50mm	% w/w	2.0	0.0	0.0	1.5						
Stones 2-20mm	% w/w	0.9	1.9	2.6	1.8						
Organic Matter LOI	% w/w	5.1	3.2	7.5	6.2						
Neutralising Value as CaCO3 eq.	% w/w	<1	<1	1.7	1.0						
Neutralising Value as CaO eq.	% w/w	<1	<1	<1	<1						
Textural Class **		MCL	MCL	MCL	MCL						

Notes

Analysis Notes: The sample submitted was of adequate size to complete all analysis requested.
The results as reported relate only to the item(s) submitted for testing.
The results are presented on a dry matter basis unless otherwise stipulated.

ANALYTICAL NOTES

Report Number	**34263-22**	**W250**	**AMET PROPERTY**
Date Received	**15-SEP-2022**		**HENWICK BARN**
Date Reported	**27-SEP-2022**		**BULWICK**
Project	**SOIL**		**CORBY**
Reference	**AMET PROPERTY**		**NORTHANTS**
Order Number			**NN17 3DU**

Notes

** Please see the attached document for the definition of textural classes.

Reported by

Myles Nicholson

Natural Resource Management, a trading division of Cawood Scientific Ltd.
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Fax: 01344 890972
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ADAS (UK) Textural Class Abbreviations

The texture classes are denoted by the following abbreviations:

Class	Code
Sand	S
Loamy sand	LS
Sandy loam	SL
Sandy Silt loam	SZL
Silt loam	ZL
Sandy clay loam	SCL
Clay loam	CL
Silt clay loam	ZCL
Clay	C
Silty clay	ZC
Sandy clay	SC

For the *sand, loamy sand, sandy loam* and *sandy silt loam* classes the predominant size of sand fraction may be indicated by the use of prefixes, thus:

- vf Very Fine (more than 2/3's of sand less than 0.106 mm)
- f Fine (more than 2/3's of sand less than 0.212 mm)
- c Coarse (more than 1/3 of sand greater than 0.6 mm)
- m Medium (less than 2/3's fine sand and less than 1/3 coarse sand).

The subdivisions of *clay loam* and *silty clay loam classes* according to clay content are indicated as follows:

- M medium (less than 27% clay)
- H heavy (27-35% clay)

Organic soils i.e. those with an organic matter greater than 10% will be preceded with a letter O.

Peaty soils i.e. those with an organic matter greater than 20% will be preceded with a letter P.

Appendix 4 - Wetness and droughtiness assesment

	Wetness Assesment			Grade	Grade by
	Depth to		Wetness	According to	most limiting
Sample No	SPL	Gley	Class	Wetness	factor
1	50	40-70	III	3a	3a
1a	25	<40	IV	3b	3b
2	30	<40	IV	3b	3b
3	50	40-70	III	3a	3a
4	30	<40	IV	3b	3b
5	25	<40	IV	3b	3b
6	50	40-70	III	3a	3a
7	50	40-70	III	3b	3b
8	30	<40	IV	3b	3b
9	25	<40	IV	3b	3b
10	25	<40	IV	3b	3b
11	50	40-70	III	3b	3b
12	30	<40	IV	3b	3b
13	25	<40	IV	3b	3b
14	25	<40	IV	3b	3b
15	25	<40	IV	3b	3b
16	25	<40	IV	3b	3b
17	25	<40	IV	3b	3b
18	30	<40	IV	3b	3b
19	25	<40	IV	3b	3b
20	30	<40	IV	3b	3b
21	30	<40	IV	3b	3b
22	25	<40	IV	3b	3b
23			I	2	4
24			I	2	4
25	30	<40	IV	3b	3b
26	30	<40	IV	3b	3b
27	25	<40	IV	3b	3b
28	30	<40	IV	3b	3b
29	30	<40	IV	3b	3b

APPENDIX 5 - DESCRIPTION OF ALC GRADES

Grade 1 - excellent quality agricultural land Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

Grade 2 - very good quality agricultural land Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

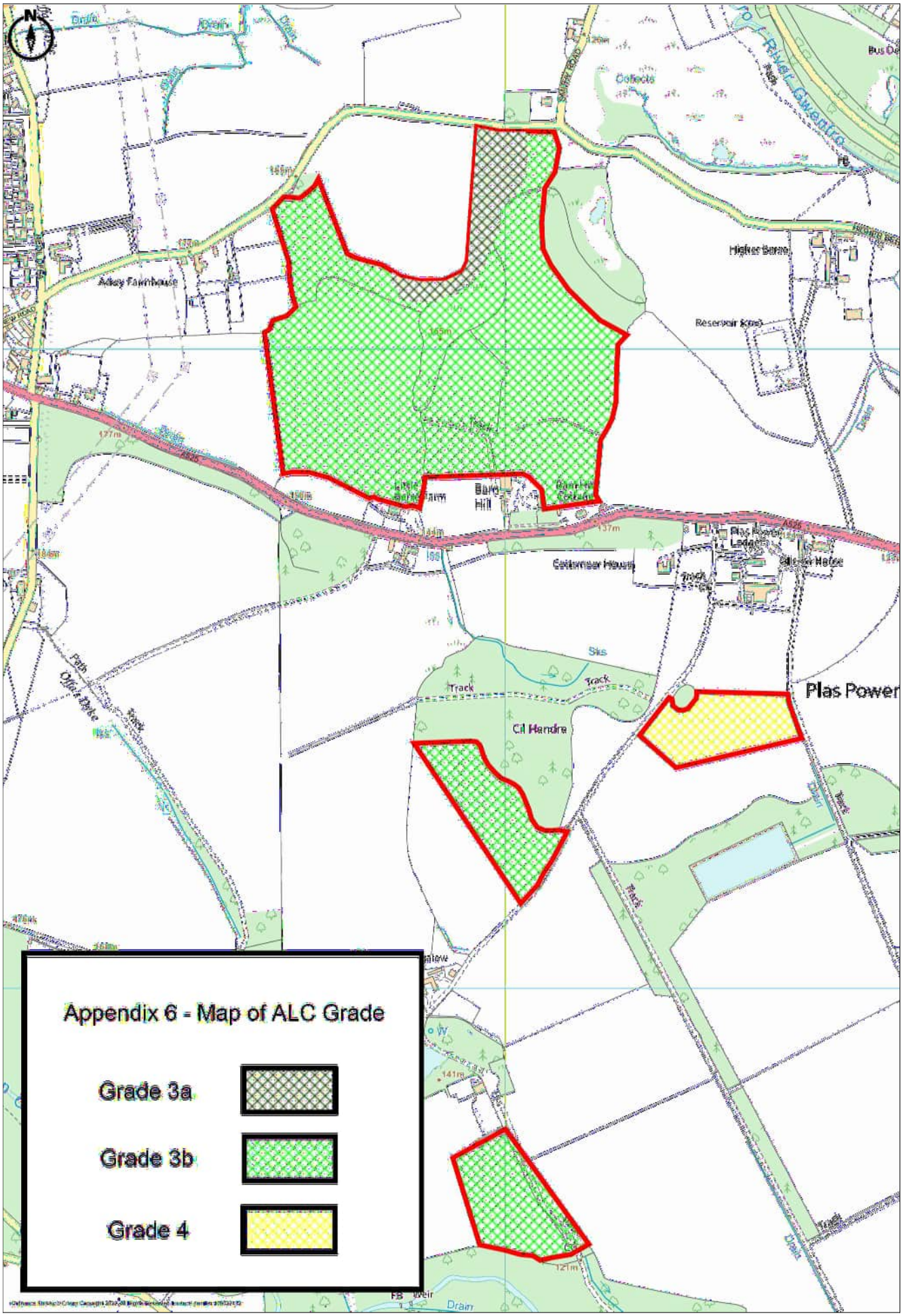
Grade 3 - good to moderate quality agricultural land Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

Subgrade 3a - good quality agricultural land Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

Subgrade 3b - moderate quality agricultural land Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

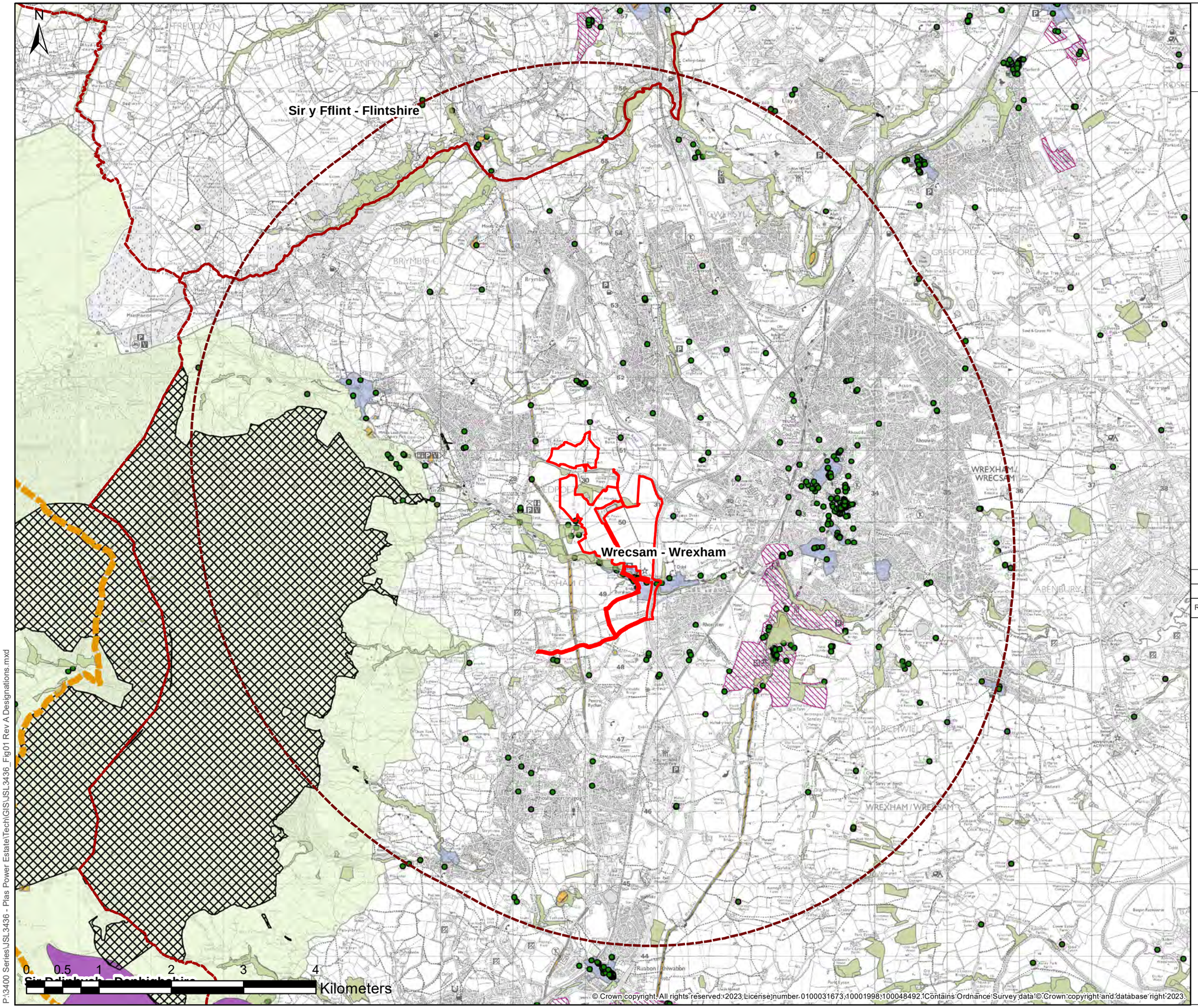
Grade 4 - poor quality agricultural land Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5 - very poor-quality agricultural land Land with very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.



Appendix 4

Landscape – Figures 1, and 2 and 3



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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
- 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
- Ancient Woodland

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

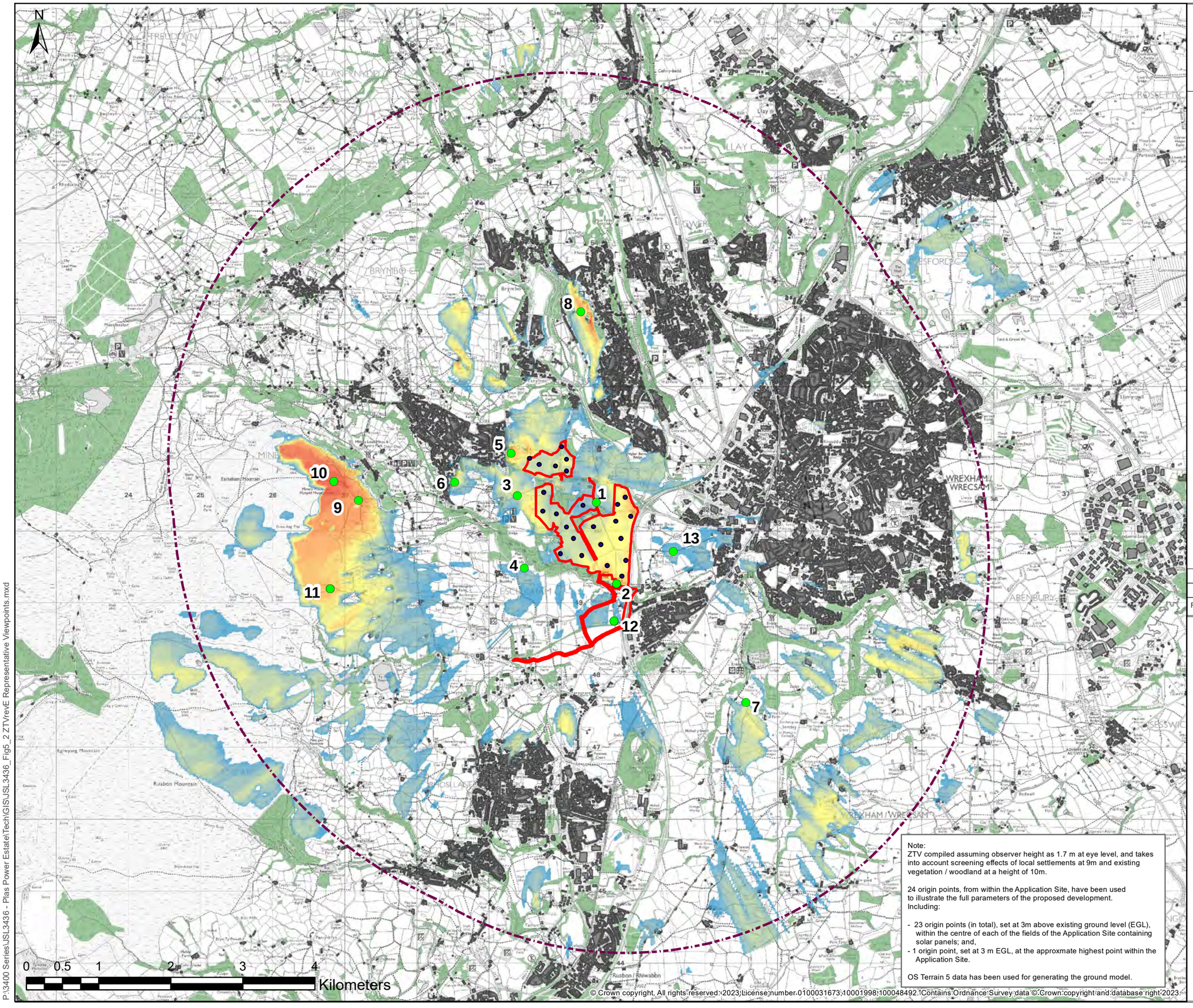
Project: Plas Power Estate, Ruthin Road

Title: Landscape Designations

Status	Drawn By	PM/Checked By
Information	KH	GL
Project Number	**Scale @ A3**	**Date Created**
JSL3436	1:50,000	MAY 2023
Figure Number		**Rev**
4.1		**A**

rpsgroup.com

P:\3400 Series\JSL3436 - Plas Power Estate\Tech\GIS\JSL3436_Fig01 Rev A Designations.mxd



Notes
1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
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)
- Respesentative Viewpoints
- ZTV Origin Points

ZTV (theoretical extent of the surrounding landscape from where the Proposed Development may be visible)

- Low Visibility (up to 1 origin point)
- High Visibility (up to 19 origin points)

Note:
ZTV compiled assuming observer height as 1.7 m at eye level, and takes into account screening effects of local settlements at 9m and existing vegetation / woodland at a height of 10m.

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

- 23 origin points (in total), set at 3m above existing ground level (EGL), within the centre of each of the fields of the Application Site containing solar panels; and,
- 1 origin point, set at 3 m EGL, at the approxmate highest point within the Application Site.

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

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	Zone of Theretical Visibility (ZTV) - Fixed Solar PVs @ 3m with Representative Viewpoints

Status	Drawn By	PM/Checked By
Info	KH	PH
Project Number	**Scale @ A3**	**Date Created**
JSL3436	1:50,000	Dec 2020
Figure Number		**Rev**
4.2		E

rpsgroup.com

P:\3400 Series\JSL3436 - Plas Power Estate\Tech\GIS\JSL3436_Fig5_2 ZTVrevE Representative Viewpoints.mxd

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.

3 origin points, from within the Application Site at 3m AGL, have been used to illustrate the visibility from this field of the proposed development.

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

Notes
1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.

Legend

- Application Site Boundary
- Settlement Barriers (9m)
- Vegetation Barriers (10m)
- A ZTV Origin Points x 3
- ZTV Point A
- ZTV Point B
- ZTV Point C

INSET (NTS)

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	Zone of Theretical Visibility (ZTV) - Fixed Solar PVs @ 3m Visibility of Northern Field Exercise

Status	Drawn By	PM/Checked By
Info	GL	KH
Project Number	**Scale @ A3**	**Date Created**
JSL3436	1:30,000	April 2023
Figure Number		**Rev**
4.3		-

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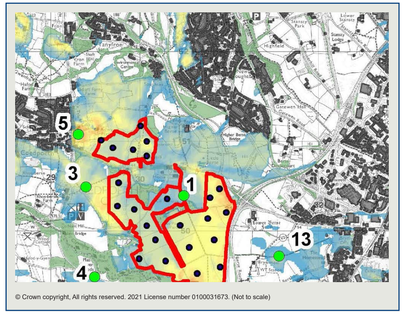
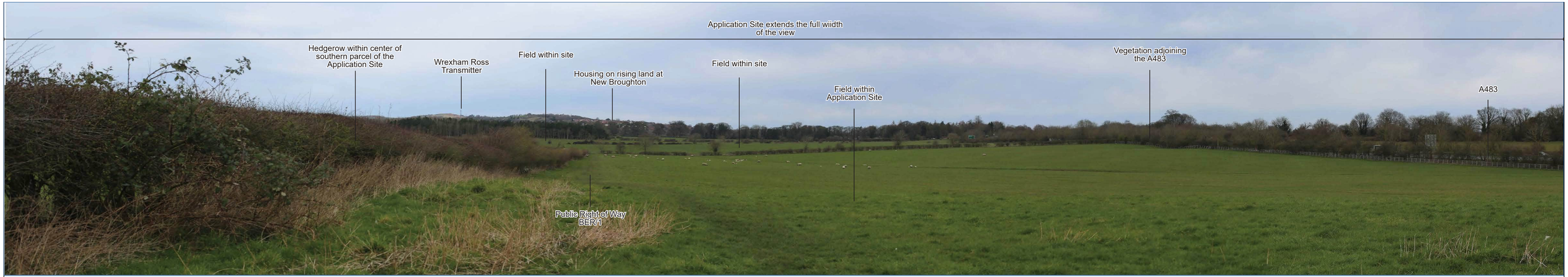
0 0.375 0.75 1.5 2.25 3 Kilometers

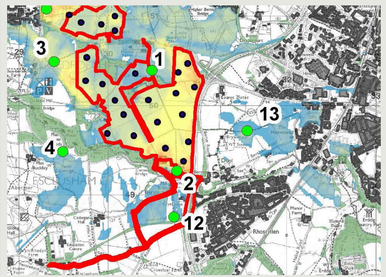
P:\3400 Series\JSL3436 - Plas Power Estate\Tech\GIS\JSL3436_Fig02 ZTVrevE_Additional Points Reference Figure.mxd



Representative Viewpoint 1: PRoW BER/1 North (looking West) - Close distance view from public footpath on northern boundary to the Application Site.

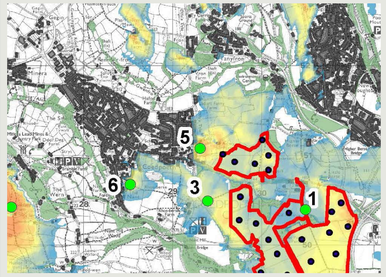
Plas Power Estate JSL3436	Date of photograph: 17/03/2021		**Figure: 4.4Ai**





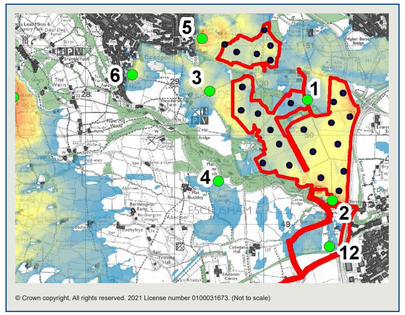
Representative Viewpoint 2: PRoW BER/1 South (looking North) - Close distance view from public footpath near the Conservation Area to the immediate south of the northern part of the Application Site.

Plas Power Estate JSL3436	Date of photograph: 17/03/2021		**Figure: 4.4Bi**



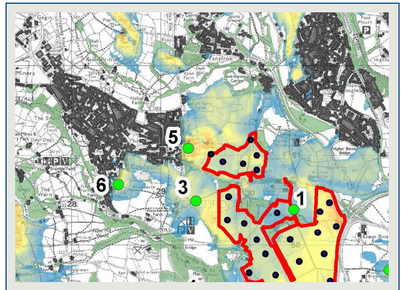
Representative Viewpoint 3: PRoW BER/10 West - Close distance view from public footpath near scheduled monument, to the immediate west of the Application Site.

Plas Power Estate JSL3436	Date of photograph: 17/03/2021		**Figure: 4.4Ci**



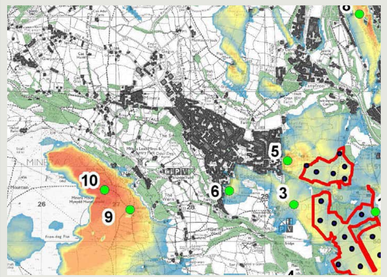
Representative Viewpoint 4: Plas Buckley Road looking east from local road - Close distance view looking East from local road to the west of the Application Site

Plas Power Estate JSL3436	Date of photograph:		**Figure: 4.4Di**



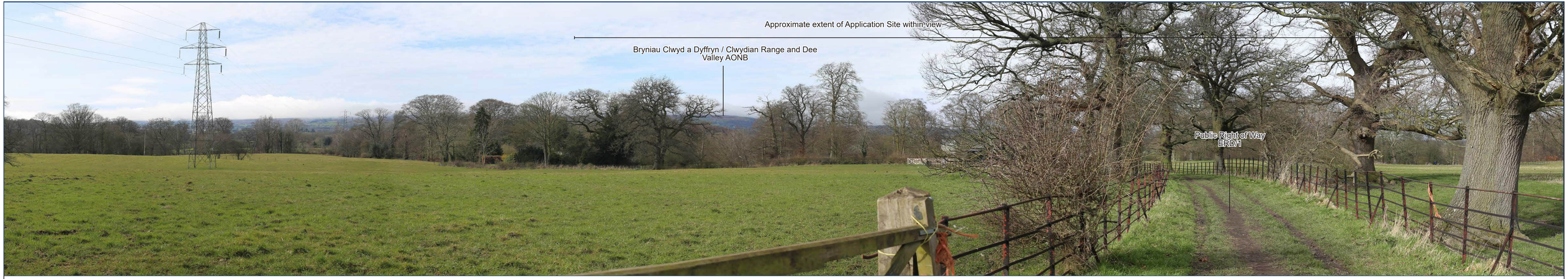
Representative Viewpoint 5: Tan Lian local road to the north-west - Close distance view from local road to the north-west of the Application Site, near scheduled monument (Offa's Dyke) and listed building.

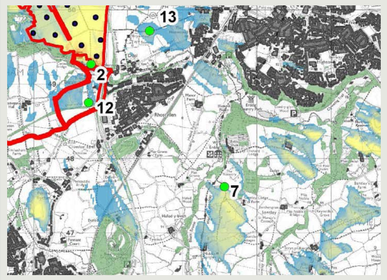
Plas Power Estate JSL3436	Date of photograph: 17/03/2021		**Figure: 4.4Ei**



Representative Viewpoint 6: Public Right of Way (BER/11) off Penygelli Road - Middle distance view to the west of the Application Site, on the residential edge of Coedpoeth

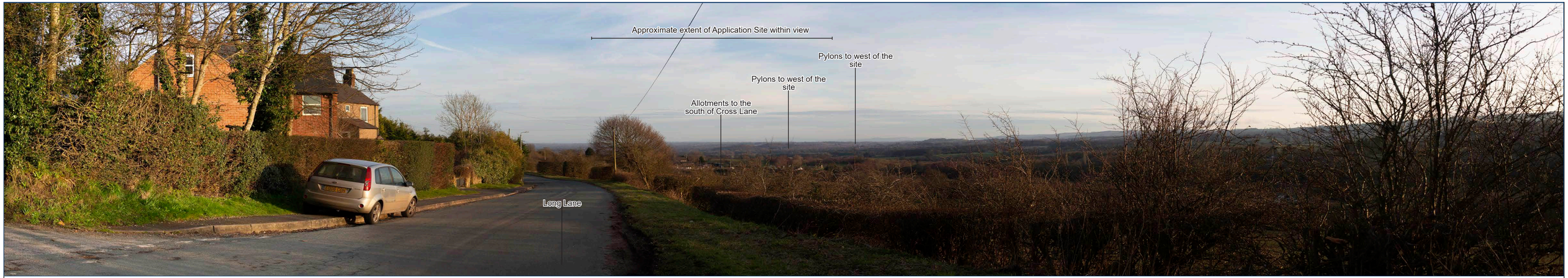
Plas Power Estate JSL3436	Date of photograph: 17/03/2021		**Figure: 4.4Fi**

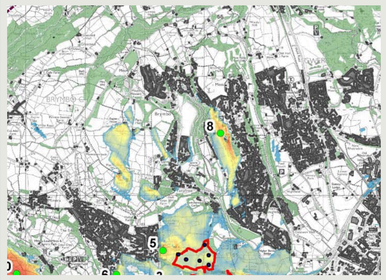




Representative Viewpoint 7: PRoW ERD/1 / Wreham Erddig HPaG - Middle distance view from public footpath off Wat's Dyke Way, within the Wrexham Historic Park and Garden (HPaG).

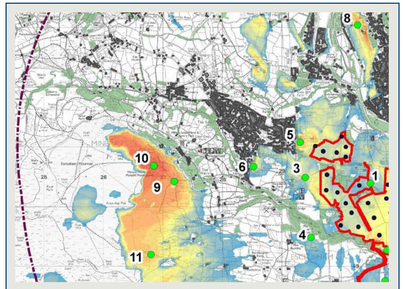
Plas Power Estate JSL3436	Date of photograph: 18/03/2021		**Figure: 4.4Gi**





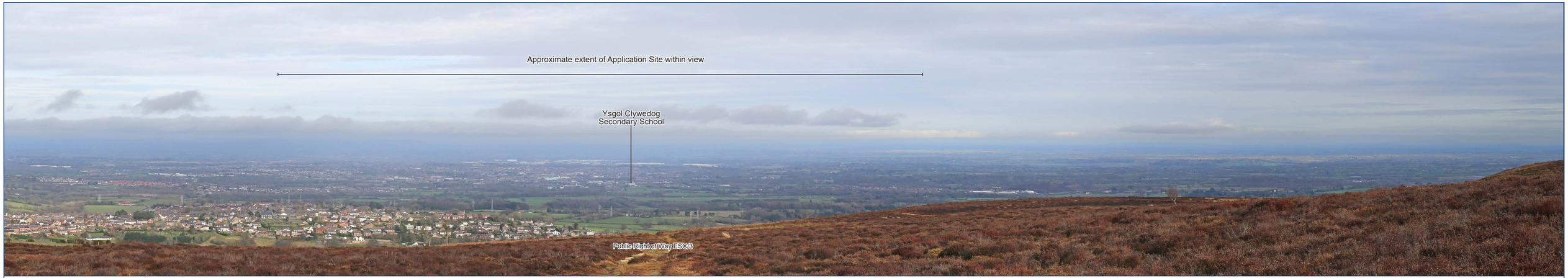
Representative Viewpoint 8: Long Lane - Middle distance view from local road to the north of the Application Site.

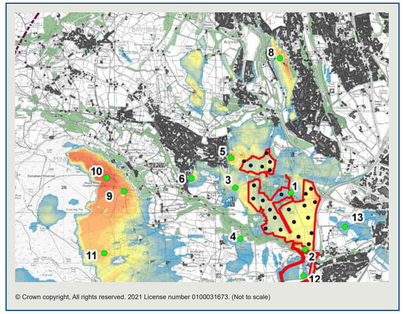
Plas Power Estate JSL3436	Date of photograph: 18/03/2021		**Figure: 4.4Hi**



Representative Viewpoint 9: PRoW ESC/16 at Hookfield Farm in AONB - Long distance view near residential property within Clwydian Range and Dee Valley AONB to the west of the Application Site.

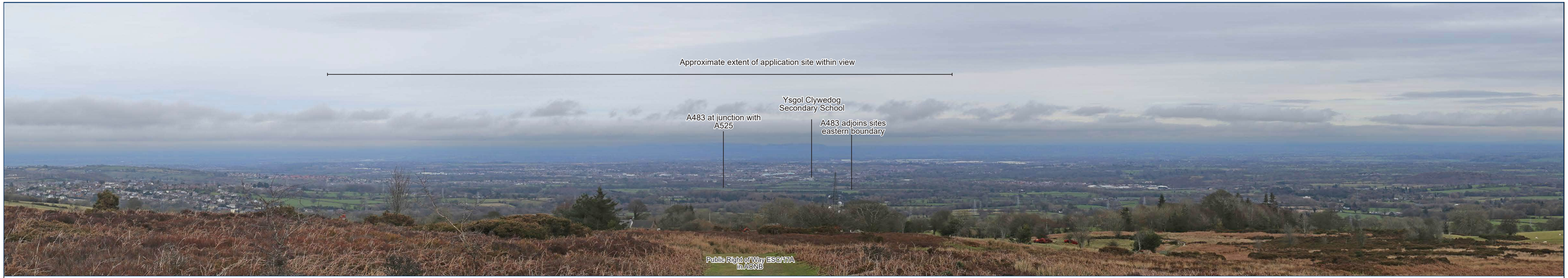
Plas Power Estate JSL3436	Date of photograph: 18/03/2021		**Figure: 4.4ii**

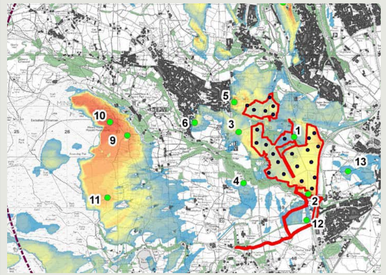




Representative Viewpoint 10: PRoW ESC/31 / Common Land within AONB - Long distance view from public footpath within registered Common Land and the Bryniau Clwyd a Dyffryn Dyfrdwy/ Clwydian Range and Dee Valley AONB to the west of the Application Site.

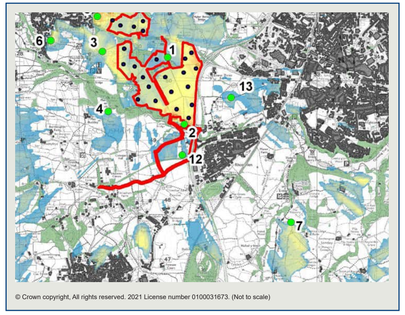
Plas Power Estate JSL3436	Date of photograph: 18/03/2021		**Figure: 4.4Ji**





Representative Viewpoint 11: PRoW ESC/17A / Common Land within AONB - 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.

Plas Power Estate JSL3436	Date of photograph: 18/03/2021			**Figure: 4.4Ki**

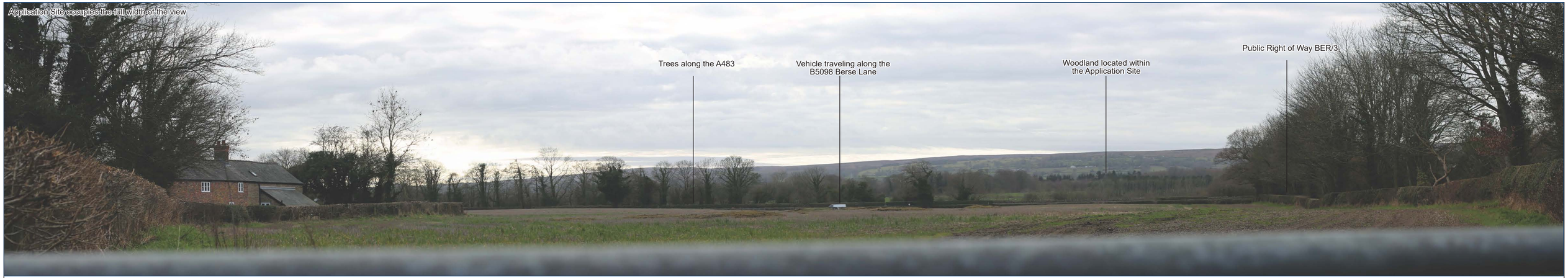


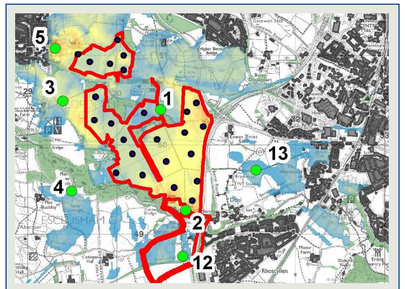
Representative Viewpoint 12: PRoW (ESC/1) South - Close distance view from PRoW at disused railway to the south of the Application Site

Plas Power Estate
JSL3436

Date of photograph: 17/03/2021

Figure: 4.4Li





Representative Viewpoint 13: PRoW BER/3 (looking west) - Close distance view from public footpath to east of the A483

Plas Power Estate JSL3436	Date of photograph: 17/03/2021		**Figure: 4.4Mi**

Appendix 5

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.

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

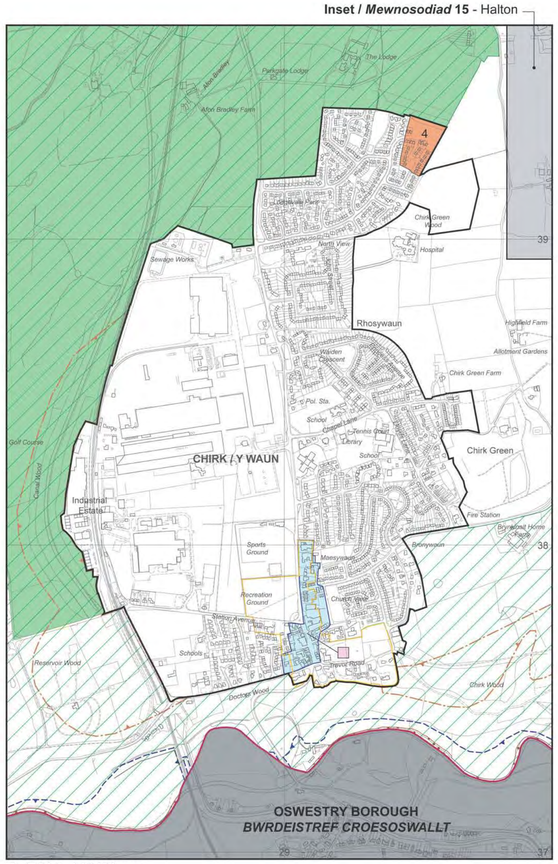
Other Settlement Policies / *Polisiau Anheddiad Eraill.*
PS3, PS4, PS5, PS6, PS7, PS8, H2, H7, H11, H12, E4, S4, S6, CLF1, CLF3, CLF5.

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.

N/G
Scale 1:10000

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



7. Chirk / *Y Waun*

13. Garth

20. Bersham / *Y Bers* and Rhostyllen

25. Marchwiel

14. Glyn Ceiriog

26. Penley / *Llanerch Panna*

27. Horseman's Green

8. Dolywern / Llwynmawr

9. Pontfadog

10. Llanarmon Dyffryn Ceiriog

15. Halton

16. Worthenbury

17. Erbistock

21. Bangor-is-y-Coed

22. Sydallt

28. Cross Lanes

29. Overton / Owrtyn

11. Tregeiriog

12. Hanmer

18. Bettisfield

19. Bronington

23. Tallarn Green / *Talwrn Green*

24. Holt

Inset Plan Notation / *Nodiadau Map Mewnosodiad*

☐	County Boundary / *Ffin y Sir*
☐	Settlement Limit / *Ffin Anheddiad* - PS1
🟦	District Shopping Centre / *Canolfan Siopa Cylch* - S5
🟪	Employment / *Gwaith* - E1
▨	Commericial Offices / *Swyddfeydd Masnachol* - E7
🟩	Green Barrier / *Ffin Gwyrdd* - EC1
▨	Special Landscape Area / *Ardal Tirlun Arbenning* - 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
🟦	Community and Leisure Facilities / *Cyfleusterau Cymunedol ac Adoliant* - CLF2
🟧	Housing / *Tai* - H1
— · —	Walking/Cycling Route / *Llwybr Cerdded/Beicio* - T10
☐	Protection of Mineral Resources / *Diogelu Adnoddau Mwynau* - MW9

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.

Other County Borough-Wide Policies / *Polisiau Bwrdeistref Sirol Eraill.*
GDP1, GDP2, EC9, EC11, EC13, EC14, EC15, H4, PS10, PS11, PS12, CLF4, CLF6, CLF8, CLF9, CLF10, T1, T6, T8, T9, S8, S9, MW7, MW10, MW11, MW12, MW13, MW14.

N/G
Scale / *Graddfa* 1:10000

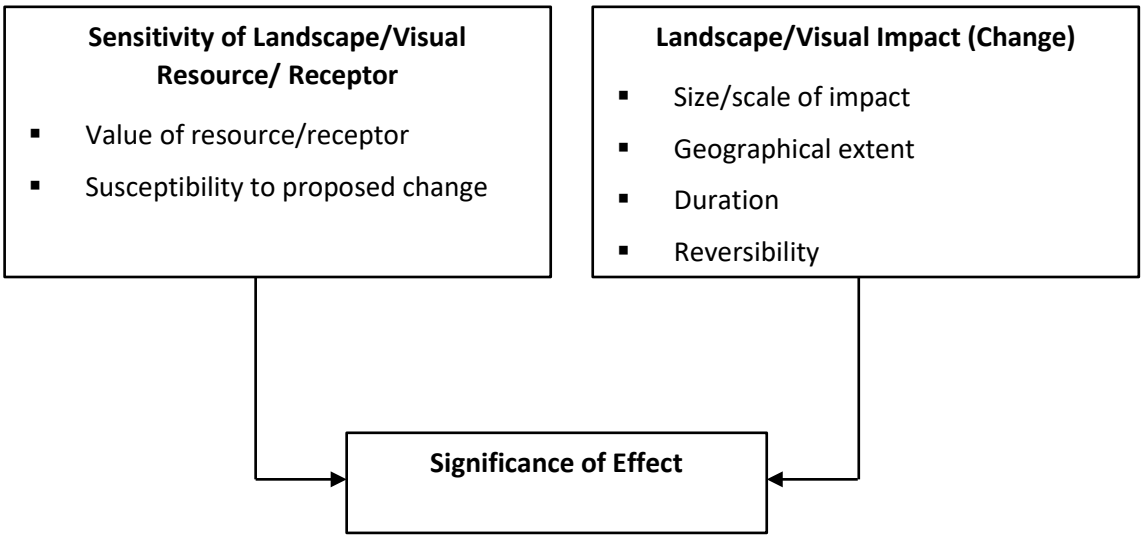
Appendix 6

Landscape – LVIA Methodology

Appendix 6: 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 5.1. These factors are determined through a combination of quantitative (objective) and qualitative (subjective) assessment using professional judgement.

Diagram 5.1: 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 5.2 and 5.3 below. Sensitivity relates to general categories rather than being project specific. Professional judgement has then been used together with the criteria defined in Tables 5.2 and 5.3 in order to more accurately assess the sensitivity / susceptibility of the resource / receptor to the project.

1.4 Table 5.3 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 5.2 below. Table 5.3 also sets out the definition of these terms relating to the sensitivity and value of the visual resource.

Table 5.1: 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 5.2: 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 5.1 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 5.4.

Table 5.3: 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 5.4: 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 5.6.

Table 5.5: 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 5.6, 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 4.4
EIA Scoping Direction 2023

EIA Scoping Direction Addendum

DNS 3253253: Plas Power Estate Solar Farm

This Scoping Direction Addendum is provided on the basis of the updated Scoping Report submitted to Planning and Environment Decisions Wales on 07 June 2023, 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"). This Scoping Direction Addendum should be read in conjunction with the original Scoping Direction for this potential DNS application issued on 02 December 2020. **Together the original Scoping Direction and this Addendum constitute the most recent Scoping Direction for the purposes of regulation 17(4)(c) of the 2017 Regulations.**

1. Consultation

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

- Wrexham County Borough Council (WCBC)
- Natural Resources Wales (NRW)
- Cadw
- Welsh Government Land Quality Advice Service (LQAS)
- Welsh Government Transport Division
- Health and Safety Executive
- Hafren Dyfrdwy
- Dŵr Cymru Welsh Water (DCWW)
- Coal Authority
- North Wales Fire and Rescue Service

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

Prepared by:
Marloes Holtkamp MSc
17/10/2023

2. Planning and Environment Decisions Wales (PEDW) comments

Overall, the aspects of the environment scoped in and out of the Environmental Statement as outlined in the original Scoping Direction remain largely unaffected.

However, based on comments from the Welsh Government's LQAS, **Soil is hereby scoped into the ES.**

PEDW draws the Applicant's attention to the following consultation responses contained at Appendix 1:

Landscape and Visual
NRW welcome the confirmation that the Landscape and Visual Impact Assessment (LVIA) will assess the potential effects on the Clwydian Range and Dee Valley Area of Outstanding Natural Beauty. The Applicant's attention is drawn to their comments regarding the evidence which should inform the assessment, viewpoints and photomontages. NRW advises that the listed guidelines upon which the LVIA would be based should refer to NRW GN46 (Using LANDMAP in Landscape and Visual Impact Assessments).

Flood Risk
The Applicant's attention is drawn to comments from NRW advising the Flood Map for Planning (FMfP) is considered in the Flood Consequence Assessment. Any cable routes or tracks within the Development Advice Map / FMfP will need further consideration to ensure that no ground raising or infrastructure impacts on flood flow routes. The Applicant's attention is also drawn to NRW's comments regarding requirements in relation to any crossings of the river Clywedog and access track crossings. Furthermore NRW add that the flood risk from surface water, small watercourses and blockage / flooding from other sources should be discussed with WCBC as the Lead Local Flood Authority.

Water quality
The Applicant's attention is drawn to comments from DCWW regarding asset protection and the proposed development site being crossed by a public sewer. DCWW also highlights that the proposed development falls within the DCWW River Dee Drinking Water Catchment. The River Clywedog flows through the proposed site and feeds the River Dee and any watercourses which act as field drainage on site and flow into The River Clywedog could affect the drinking water source. The Applicant's attention is drawn to the further information requested by DCWW at Appendix 1 to assess the impact of the proposed development on drinking water quality.

The Applicant's attention is also drawn to NRW's comments regarding water quality. NRW state that clarification is required of the design of the proposed on-site composting toilet and with respect to any foul drainage facilities required during construction. Attention is also drawn to NRW's comments regarding the potential of pollution to watercourses, advising that pollution plans should be provided in support of the application.

PEDW advises the Applicant consults directly with DCWW and NRW to ensure these issues are appropriately addressed.

Protected Species
NRW welcomes that the Scoping Report states impacts on Otter and Great Crested Newt will be assessed. The Applicant's attention is drawn to NRW's comments in respect of the assessment requirements for these European Protected Species and the protected sites they are features of. NRW also advises that impacts of invasive non-native species are assessed and measures to control, to remove or for the long-term management of invasive species are specified, both during construction and operation.

Land / Soil
LQAS welcomes that the red-line boundary has been amended to avoid Best and Most Versatile (BMV) agricultural land. The Applicant's attention is drawn to comments from LQAS highlighting the Environmental Statement should address the methodology for the installation and decommissioning of the infrastructure, including how likely impacts have been assessed or will be avoided. The Applicant's attention is also drawn to LQAS' comments in relation to the requirements for a soil management scheme, which should be prepared as part of the Construction Environmental Management Plan. The draft CEMP should be provided as a technical appendix to the ES.

Land Contamination / Coal Mining
The Applicant's attention is drawn to the comments from NRW regarding the potential for contamination due to the site historically having been part of an open cast coal mine. They advise a Preliminary Risk Assessment is required, to be submitted along with any intrusive investigation and further risk assessment with the application. The Applicant's attention is also drawn to comments from the Coal Authority regarding past coal mining activity, including recorded mine entries close to the proposed cable run. PEDW advises the Applicant consults directly with the Coal Authority on this matter.

Cultural Heritage
The Applicant's attention is drawn to Cadw's comments disagreeing with section 5.93 of the Cultural Heritage section of the Scoping Report, which states that the potential for sub-surface archaeology is limited. They note that the geophysical survey needs to be completed for all of the proposed development area and that archaeological evaluation will need to be carried out on any potentially significant features detected in the geophysical survey. The Applicant's attention is also drawn to comments from Cadw regarding the requirements for the Built Heritage Assessment, to include all designated heritage assets listed in Annex A to their consultation response.

Transport
Welsh Government Transport Department agrees that it will not be necessary to include a Transport Assessment for the operational phase of the development and advises the applicant to contact the Development Control Team to agree the scope of the Construction Traffic Management Plan. PEDW advises the Applicant consults directly with Welsh Government Transport Department to ensure their concerns highlighted in their consultation response regarding negative impact on junction 4 of the A483 during construction and decommissioning, glint and glare, and cabling crossing the A483 are appropriately addressed. Should it become apparent when further assessment is undertaken that there is a likely significant effect with regard to Transport then the Scope of the ES should be increased to include this topic.

Appendix 1: Consultation Responses

From: Matthew Phillips
Sent: Monday, July 17, 2023 2:43 PM
To: PEDW – Seilwaith / Infrastructure <PEDW.Infrastructure@gov.wales>;
Subject: EIA Scoping Direction (updated SR provided) - Plas Power Solar Farm DNS 3253253

Dear Adeline,

I refer to your consultation dated regarding the above dated 14 June 2023.

I confirm that we have no detailed comments to make on the revised Scoping Opinion Report. Having regard to the nature of the development, it's location and site constraints, the appropriate matters have screen scoped into the ES.

Yours sincerely

Matthew Phillips
Pennaeth Gwasanaeth, Cynllunio, Rheoli Datblygu/Head of Service, Planning Development Management
Economi a Chynllunio/Economy and Planning

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Cyfoeth Naturiol Cymru
Natural Resources Wales

Ein cyf/Our Ref: CAS-220315-Y8T1
Eich cyf/Your Ref: 3253253

PEDW
Crown Buildings
Cathays Park
Cardiff
CF10 3NQ

Dyddiad/Date: 19 July 2023

Annwyl Syr/Madam / Dear Sir/Madam,

BWRIAD/PROPOSAL: EIA SCOPING – SOLAR PHOTOVOLTAIC ELECTRICITY GENERATING STATION AND ASSOCIATED ANCILLARY DEVELOPMENT, WITH AN INSTALLED GENERATION CAPACITY OF UP TO 75 MW

LLEOLIAD/LOCATION: LAND AT PLAS POWER ESTATE, RUTHIN ROAD, WREXHAM

Thank you for consulting Cyfoeth Naturiol Cymru (CNC) / Natural Resources Wales (NRW) about the above, which we received on 14/06/2023. We have reviewed the EIA Scoping report (RPS, June 2023) and have the following comments.

Please note that our comments are without prejudice to any comments we may wish to make when consulted on any subsequent planning applications or on the submission of a more detailed scoping report or the full Environmental Statement. At the time of any planning application there may be new information available which we will need to take into account in making a formal response.

These comments include those matters NRW consider will need to be taken into consideration and applied to the Environment Impact Assessment (EIA) and the resulting Environmental Statement (ES).

Protected Landscape

The development site is located approximately 2km east of the Clwydian Range and Dee Valley Area of Outstanding Natural Beauty (AONB). Our comments relate to the potential impacts of the proposed development on the AONB.

In November 2020 we provided comments (our reference CAS-127925-J6X0) on the EIA Scoping Report (RPS, October 2020) and met with the developer's team in May 2021 to discuss these comments. Our comments below relate to the revised EIA Scoping Report (RPS, June 2023) prepared in response to changes to the site boundary. These changes relate to the removal of land previously in the south-western part of the site and the inclusion of land north of the A525.

We have reviewed Chapter 5: Landscape and Visual in the revised EIA Scoping Report and Appendix 4 (Landscape Figures).

We welcome confirmation at paragraph 5.18 that the LVIA will assesses the potential effects on the setting of the AONB as well as upon the AONB itself. We advise this assessment should be informed by existing evidence on the natural beauty and special qualities of the AONB contained in:

- LANDMAP.
- Tranquillity and Place Report No: 569, NRW, 2022.
- Supplementary Planning Guidance Note on the Clwydian Range and Dee Valley AONB, 2018.

A ZTV for the revised proposals has been prepared (Figure 4.2 to the revised EIA Scoping Report). This shows a broadly similar extent of land within the AONB would have theoretical visibility of the development compared with the previous proposals.

We note the previous Candidate Viewpoints (CVs) have been refined following site work by RPS and Representative Viewpoints (RVs) for assessment in the LVIA have been identified. RVs 9, 10, and 11 are located within the AONB and are considered to be appropriate for assessment purposes. The locations of RVs 10 and 11 are similar to CVs 12 and 13. We welcome the inclusion of RV 9 which is an additional viewpoint within the AONB.

We welcome confirmation at paragraph 5.38 that photomontages will be prepared from RVs 10 and 11 within the AONB. We note these will be prepared in accordance with the Landscape Institute's TGN 06/19, which is the applicable guidance for visualisations.

At paragraph 5.43 the revised EIA Scoping Report refers to guidance for LVIA. We advise this list should refer to NRW GN46 (Using LANDMAP in Landscape and Visual Impact Assessments).

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 for Planning (FMfP) also identifies a proportion of the site to be within Flood Zone 2/3 Rivers. We note the statement in the Scoping report in relation to the new TAN15 that "*should this be adopted prior to submission of the DNS application, the new Flood Map for Planning will be assessed in relation to the site*". However, as confirmed in the letter from Welsh Government dated 15 December 2021, the FMfP represents better and more up-to-date information on areas at flood risk than the DAM. We therefore advice the FMfP is considered in the FCA, irrespective of the status of the new TAN15.

The development proposal is for the construction of a 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.

Paragraph 5.131 of the EIA Scoping report states that a standalone FCA will be prepared in

support of the planning application. The FCA will need to demonstrate that the risks and consequences of flooding can be managed to an acceptable level, in line with TAN15.

We note that the amendments to the application since our previous Scoping advice includes the removal of land from the south of the site, and the addition of land to the north of the site. The additional land to the north is not within the DAM or FMfP flood zones. Our advice on the requirements of the FCA, as specified below, is therefore unchanged from our previous advice.

The FCA will need to assess flood risk from all sources, including the Afon Clywedog and its tributaries. 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 an 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;
- 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;
- 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.
- Any cable routes or tracks within the DAM/FMfP will need further consideration to ensure that there is no ground raising or infrastructure which could impact on flood flow routes. Any crossings of the Clywedog (main river) will require a Flood Risk Activity Permit (FRAP) and any access track crossings will require a FRAP and should be clear span crossings, not culverts.

The primary mapped flood risk is from surface water and small watercourses which should be addressed in the FCA in consultation with Wrexham County Borough Council (WCBC) as the Lead Local Flood Authority. We note that deer netting is required as part of the boundary fencing. Consideration of blockage/flooding from other sources should be discussed with the Lead Local Flood Authority.

Protected Sites - Mobile Species

We consider that the proposed development has the potential to have significant effects on the following protected species (and as features of protected sites):

- Otter (feature of the River Dee and Bala Lake 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.

We note and welcome the statement in the EIA Scoping report that the EIA will assess impacts on these species. The EIA should assess direct and indirect impacts during both the construction, operation (including maintenance works) and decommissioning phases. The EIA should also identify any necessary mitigation measures.

As EPS, GCNs and otters are protected under the Conservation of Habitats and Species Regulations 2017 (as amended). The EIA will need to demonstrate that the development would not be likely to be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in its natural range. We also advise in relation to EPS that, in addition to consideration of significance, the assessments also considers:

- current conservation status of all local populations; and
- favourable conservation status of all local populations

As features of protected sites (SSSI and SAC), the EIA will need to demonstrate that the proposal would not have adverse effects on the sites highlighted above. We note, and welcome, that a Shadow Habitats Regulations Assessment will be prepared that will consider impacts on relevant protected sites (including the sites listed above).

The EIA Scoping report does not identify whether impacts of invasive non-native species will be considered. We advise that the EIA assesses and specifies measures to control, remove or for the long-term management of invasive species both during construction and operation.

Our advice is based on the understanding that hedgerows and trees on site will be retained and protected (as stated in paragraph 5.80 of the Scoping report).

Protected Sites – Water Quality

- *Phosphorus Sensitive River SAC*

We note the application site is within the catchment of the River Dee and Bala Lake Special Area of Conservation (SAC). As you are aware, on the 21st January 2021, we published an evidence package outlining phosphorus levels for all river SACs across Wales. In line with our Planning Advice (July 2022), under the Habitats Regulations, Planning Authorities must consider the phosphorus impact of proposed developments on water quality within SAC river catchments.

Paragraph 2.33 of the Scoping report states that a "*composting toilet will be based on-site for use of on-site staff during operational and maintenance works*". As explained in our Planning Advice, the design of both permanently sited and portable compost toilets should separate the urine and sanitary waste from the solids. We advise that this is clarified in the EIA. We also advise that clarification is required with respect to any foul drainage facilities that may be required during the construction phase.

- *Pollution Prevention*

There are a number of watercourses on site and there is potential for pollution from the works. If pollution does occur then this could potentially impact on the Clywedog and ultimately the Dee, which is also designated as the River Dee and Bala Lake SAC/SSSI. Therefore due to the potential of pollution we advise that pollution plans should be provided in support of the application. We would direct the applicant to GPP5 as this will cover the majority of pollution prevention around working in/near watercourses.

Land Contamination

The site historically has been part of open cast coal mine and has had an industrial use, therefore there is potential for contamination, and a Preliminary Risk Assessment will be required. This should be submitted along with any intrusive investigation and further risk assessment with the planning application. It may be possible for any resulting issues to then be dealt with by planning conditions as appropriate.

In accordance with Planning Policy Wales 6.9.17 the onus will remain with the developer to ensure that the development of the site will remove any unacceptable risks and the determining authority (in making development management decisions) will need to ensure that the land is suitable for its proposed use and would not meet the legal definition of contaminated land under Part IIA.

Other Matters

Our comments above only relate specifically to matters included on our checklist, *Development Planning Advisory Service: Consultation Topics* (September 2018), which is published on our website. We have not considered potential effects on other matters and do not *rule out the potential for the proposed development to affect other interests.*

We advise the applicant that, in addition to planning permission, it is their responsibility to ensure they secure all other permits/consents/licences relevant to their development. Please refer to our website for further details.

If you have any queries on the above, please do not hesitate to contact us.

Yn gywir / Yours faithfully

Bryn Griffiths
Uwch-gynghorydd - Cynllunio Datblygu / Senior Advisor - Development Planning

E-bost/E-mail: northplanning@cyfoethnaturiolcymru.gov.uk

Croesewir gohebiaeth yn Gymraeg a byddwn yn ymateb yn Gymraeg, heb i hynny arwain at oedi. / Correspondence in Welsh is welcomed, and we will respond in Welsh without it leading to a delay.

[redacted]

Llywodraeth Cymru
Ty'r Afon
Heol Bedwas
Caerffili CF83 8WT
03000 256 000
cadw.llyw.cymru

Welsh Government
Ty'r Afon
Bedwas Road
Caerphilly CF83 8WT
03000 256 000
cadw.gov.wales

Adeline Wilcox
Planning Officer
PEDW

PEDW.Infrastructure@gov.wales

Eich cyfeirnod Your reference	DNS 3253253
Ein cyfeirnod Our reference	
Dyddiad Date	13 July 2023
Llinell uniongyrchol Direct line	
Ebost Email:	Cadwplanning@gov.wales

Dear Adeline

PROPOSED DEVELOPMENT: Plas Power Estate Solar Farm - EIA Scoping Direction

LOCATION: Plas Power Estate, Ruthin Road, Wrexham LL11 3BS

Thank you for your letter of 14 June asking for Cadw's view on the above.

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.

Advice

This advice is given in response to scoping opinion as to the contents of an Environmental Impact Assessment (EIA) that will be submitted in support of an application for the Plas Power Estate Solar Farm.

Assessment

An updated scoping report produced by RPS has been submitted with the scoping request. In general, we concur with the Cultural Heritage section of this document but disagree with section 5.93. This section states that the potential for sub-surface archaeology is limited as it is understood that the initial geophysical survey has detected features and that the geophysical survey has not yet covered all of the proposed development area. In order to determine the significance of features detected by the

[redacted]

geophysical survey, there may be a need for them to be archaeologically evaluated. As such, in addition to baseline studies identified in section 5.97 there is a need to add the requirement for the geophysical survey to be completed for all of the proposed development area and that archaeological evaluation will need to be carried out on any potentially significant features detected in the geophysical survey.

There will also need to be for the impact of the proposed development on the setting of the designated heritage assets listed in Annex A (which are located inside 3km of the application area). This should be carried out in accordance with the Welsh Government guidance given in the document “The Setting of Historic Assets in Wales”. We would expect a stage 1 assessment to be carried out for all of the above designated heritage assets, which will determine the need, if necessary, for stages 2 to 4 to be carried out for specific heritage assets.

Yours sincerely

Jenna Arnold
Casework Team Leader

Annex A

Scheduled Monuments

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
DE139 Offa's Dyke: Plas Power Section
DE152 Wat's Dyke: Section extending from Erddig Park to Middle Sontley
DE174 Offa's Dyke: Section S of Bryn yr Owen Farm
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
DE189 Bersham Ironworks
DE203 Penrhos Engine House

Registered Parks and Gardens

PGW(C)62(WRE) Erddig

Listed Buildings

1561	Llydiart Fanny Farmhouse	II
1562	Tyn-y-Coed	II
1569	Broughton Hall and Broughton Hall Farmhouse	II
1585	Tan-y-Llan	II
1586	Octagonal Building at Bersham Ironworks Site	II*
1737	Game Larder at Plas Power	II
1738	Dairy at Plas Power	II
1739	Ice-House at Plas Power	II
1740	Rhosberse Lodge at Entrance to West drive at Plas Power	II
1807	Cemetey Chapels	II
1808	Lodge to Cemetary	II
1809	Gate Piers to Cemetary	II
14889	Pen-Rhos Engine House	II*
16452	Stable Block at Plas Power	II
16453	Bath House in Plas Power Park	II
16454	Railings and Gates to West Entrance Drive at Plas Power	II
16455	Wall to Plas Power Park including Park Cottage	II
16456	Wall to Plas Power Park SW of Rhosberse Lodge	II
16485	Gates to Cemetary	II
16538	Bersham Mill including cast-iron feed pipe	II
16539	Single Storeyed Building to SE of Octagonal Building at Bersham Ironworks Site.	II*
16540	Mill House Farmhouse	II
16541	,2,Mill Terrace,Bersham,,,	II
16546	,3,Mill Terrace,Bersham,,,	II
16547	,4,Mill Terrace,Bersham,,,	II
16549	,6,Mill Terrace,Bersham,,,	II
16550	,5,Mill Terrace,Bersham,,,	II
16552	East Weir on River Clywedog	II
16553	Church of Saint Mary	II*
16554	Caeau Bridge	II
16555	Caeau Weir	II
16558	Western Weir on the River Clywedog	II
17877	Former Stables at New Sontley Farm	II
17878	Combined Pigsties and Hen House at New Sontley Farm	II

19726	Lime Kiln	II
87790	Mortuary at Wrexham Cemetery	II

Soil, Peatland & Agricultural Land Use Planning Unit
Uned Pridd, Mawndir a Chynllunio Defnydd Tir Amaethyddol
Yr Adran Newid Hinsawdd / Department for Climate Change.
Change

Llywodraeth Cymru
Welsh Government

Ref: DNS/3253253

Robert Sparey
Planning and Environment Manager
Planning and Environment Decisions Wales
Crown Buildings
Cathays Park
Cardiff
CF10 3NQ

Via Email: PEDW.Infrastructure@gov.wales

20th July 2023.

Dear Robert Sparey,

Re: Scoping Direction Consultation Response - DNS/3253253 – Plas Power Estate Solar Farm, Wrexham.

Thank you for consulting the Department on the above Scoping Direction request concerning the use of soil and Best and Most Versatile (BMV) agricultural land.

1. Policy Context:

The Department has examined the revised Scoping Report and consider the policy below is also applicable to this development: -

- Policy 18(11) of NDF Future Wales[1] – sets out the need for acceptable provisions relating to the decommissioning of the development at the end of its lifetime, including the removal of infrastructure and effective restoration.

2. Agricultural Land Classification (ALC): Technical Assessment and advice.

It is welcome that through the revised proposals, the red-line boundary has been amended to avoid Best and Most Versatile (BMV) agricultural land. This amendment removes the c.23ha block of BMV agricultural land south of the Afon Clywedog – see Figure 2.1 (Site Location Plan) and Figure 2.3 (Proposed Site Layout Plan Revisions) of the updated Scoping Report (Ref: 2023-06-07- 2nd EIA Scoping Report Update 2023 – Clean[2]).

[1] https://www.gov.wales/sites/default/files/publications/2021-02/future-wales-the-national-plan-2040.pdf
[2] https://planningcasework.service.gov.wales/api/documents/download/A45486247?hash=a4b454d91392d7d4df88da5eeec1fc2779aa9b025a7fa9dae4705c52e223aaaf

Most of the land within the amended red-line boundary is considered ALC Subgrade 3b on the Predictive ALC Map[3]. As per published guidance[4] a detailed field survey is not required, and the Predictive ALC Map grade can be taken as best available information for these areas.

For areas noted as Grade 2 and 3a (BMV) on the Predictive ALC Map a detailed ALC field survey has been undertaken and the report is provided in Appendix 3 of the updated Scoping Report (Ref: Agricultural Land Classification Plas Power Solar Farm – 7th November 2022 – Issue 2).

The ALC survey report has been previously validated by the Department and has been completed to an acceptable standard as per '*Guidelines and Criteria for Grading the Quality of Agricultural Land*' (MAFF 1988)[5]. The ALC Survey Report can be accepted as an accurate reflection of the agricultural land quality on the survey area.

The area of Subgrade 3a land (1.6ha) surveyed in the far north of the site is not included in the revised red-line boundary. **The revised red-line boundary therefore does not include BMV agricultural land and as such the Department does not consider PPW paragraph 3.58 and 3.59[6] applicable in this case.**

3. **Infrastructure and potential impacts on soil functions (installation and decommissioning).**

The statements made in the revised scoping report (e.g. paragraph 2.50, 4.22 and 4.30) regarding the development being *'fully reversible*,' '*no significant ground works required*,' '*remediation works are relatively minor'* and '*no likely significant lasting effects on the quality of the soil'* are unsubstantiated.

The type, location and level of infrastructure proposed as part of the development is quite extensive (see section 2 of the revised scoping report). No information on the methodology for the installation and decommissioning of the infrastructure is provided or how any likely impacts have been assessed or will be avoided.

This should be addressed as part of the Environmental Statement (ES) and a soil management scheme should be prepared by the developer as part of the CEMP. The Scheme should be presented in sufficient detail for the determining authority and consultees to form a judgement as to its feasibility, and should include: -

- Soil stripping programme - volumes and types of soils affected.
- Soil handling techniques and procedure.
- Size, location, construction, management, and period of soil storage dumps.
- Proposed after use and restoration programme, including techniques and aftercare scheme.

[3] https://www.gov.wales/agricultural-land-classification-predictive-map
[4] https://www.gov.wales/agricultural-land-classification-predictive-map-guidance
[5] https://publications.naturalengland.org.uk/publication/6257050620264448?category=5954148537204736
[6] https://www.gov.wales/sites/default/files/publications/2021-02/planning-policy-wales-edition-11_0.pdf

This response and advice expressed does not bind any other part of Welsh Government commenting on the proposal.

I trust the above advice and associated remarks are clear and unambiguous. Please do not hesitate to contact if necessary.

Regards

Arwel Williams

Soil, Peatland & Agricultural Land Use Planning
Welsh Government
Department for Climate Change
Landscapes, Nature & Forestry Division


From: Dunn, Casey (CCRA - Transport and Digital Connectivity) < >
Sent: Friday, July 28, 2023 5:05 PM
To: PEDW – Seilwaith / Infrastructure <PEDW.Infrastructure@gov.wales>
Cc: Sparey, Robert (COOG - Planning & Environment Decisions Wales) < >; Lewis, Helen (CCRA - Transport and Digital Connectivity) < >
Subject: RE: EIA Scoping Direction (updated SR provided) - Plas Power Solar Farm DNS 3253253 -

Good afternoon Addy

Thank you for your consultation on the above DNS application. I have reviewed the scope for the ES and agree that it will not be necessary to include a Transport Assessment for the operational phase of the development due to the low number of site visits required. I would advise the applicant to contact the Welsh Government (WG) Development Control Team (via northandmidwalesdevelopmentcontrolmailbox@gov.wales) to agree the scope of the Construction Traffic Management Plan (CTMP). The applicant will need to demonstrate that the construction traffic will not have a negative impact on the operation of Junction 4 of the A483 throughout the construction and decommissioning phases.

The WG (Transport) will also need to have sight of the Glint and Glare Assessment to ensure the proposals will not cause a distraction to road uses on the A483 due to the sites close proximity to the trunk road.

Finally, the proposed site plan appears to show cabling crossing the A483 in two locations. I would be grateful if the applicant could contact the WG (Transport) on the above email address to provide further details on these proposals. I would strongly recommend the applicant consider alternative routes as the WG would look to avoid any potential ducting on the bridge structures or directional drilling across the trunk road where alternative routes are available.

Regards

Casey Dunn

Is-adran Rheoli'r Rhwydwaith - Network Management Division
Trafnidiaeth - Transport
Y Grŵp Newid Hinsawdd a Materion Gwledig - Climate Change and Rural Affairs Group
Llywodraeth Cymru - Welsh Government
Sarn Mynach
Llandudno Junction
LL31 9RZ

Ffôn - Phone
Symudol - Mobile

Chemicals, Explosives and
Microbiological Hazards
Division – Unit 4

NSIP Consultations
Land Use Planning Team
Building 1.2,
Redgrave Court,
Bootle L20 7HS

NSIP.applications@hse.gov.uk

http://www.hse.gov.uk/

For the attention of: A Wilcox
Planning and Environment Decisions Wales
Crown Buildings
Cathays Park
Cardiff
CF10 3NQ

Date: 20th June 2023

References: **CM9 Ref:** 4.2.1.7093.
NSIP Ref: DNS 3253253

Dear Mr Chapman,

PROPOSED: Solar Farm and associated ancillary development, with installed generation capacity of up to 77 MW at Plas Power Estate, Ruthin Road, Wrexham LL11 3BS

INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017 (as amended) REGULATIONS 10 and 11

Thank you for your letter of 14th June 2023 regarding the information to be provided in an environmental statement relating to the above project. HSE does not comment on EIA Scoping Reports but the following information is likely to be useful to the applicant.

HSE's land use planning advice
Will the proposed development fall within any of HSE's consultation distances?

1. With reference to the drawing with the title EIA SCREENING SITE LOCATION PLAN AT 1:20,000 [Drawing Number: JPW1473-DNS-002, Rev E], on which is shown a redlined site boundary, in the southernmost section of the proposed development site there is an area which falls within HSE public safety consultation zones associated with Major Accident Hazard Pipeline(s) operated by Wales & West Utilities:

    a. Maelor / Y Waen (VN080) W130 NEWales [Transco ref: 1859, HSE ref: 7606] - Wales and West Utilities

2. The redlined area does not currently fall within the consultation distances of any Major Accident Hazard Installation(s).

3. HSE will not advise against the proposed development, providing the proposed development does not introduce populations, either permanent or temporary, into any of HSE's public safety consultation zones which are assigned to individual Major Accident Hazard Pipeline(s).

4. Please note if at any time a new Major Accident Hazard Pipeline is introduced or existing Pipeline modified prior to the determination of a future application, then the HSE reserves the right to revise its advice.

5. Likewise if prior to the determination of a future application, a Hazardous Substances Consent is granted for a new Major Hazard Installation or a Hazardous Substances Consent is varied for an existing Major Hazard Installation in the vicinity of the proposed project, then again the HSE reserves the right to revise its advice.

Would Hazardous Substances Consent be needed?

6. The presence of hazardous substances on, over or under land at or above set threshold quantities (Controlled Quantities) may require Hazardous Substances Consent (HSC) under the Planning (Hazardous Substances) Act 1990 as amended. The substances, alone or when aggregated with others, for which HSC is required, and the associated Controlled Quantities, are set out in The Planning (Hazardous Substances) (Wales) Regulations 2015.

7. Hazardous Substances Consent would be required if the proposed development site is intending to store or use any of the Named Hazardous Substances or Categories of Substances and Preparations at or above the controlled quantities set out in schedule 1 of these Regulations.

8. Further information on HSC should be sought from the relevant Hazardous Substances Authority.

Explosives sites
CEMHD 7's response is no comment to make as there are no HSE licenced explosive sites in the vicinity of the proposed development.

Electrical safety
No comment from a planning perspective

At this time, please send any further communication on this project directly to the HSE's designated e-mail account for NSIP applications at nsip.applications@hse.gov.uk. We are currently unable to accept hard copies, as our offices have limited access.

Yours faithfully,

CEMHD4
NSIP Consultation Team

From: AP Planning HD < >
Sent: Monday, July 31, 2023 10:01 AM
To: PEDW – Seilwaith / Infrastructure <PEDW.Infrastructure@gov.wales>
Subject: hd ref P-230725-40908 : EIA Scoping Direction (updated SR provided) - Plas Power Solar Farm DNS 3253253 -

ST Classification: OFFICIAL PERSONAL

Good day,

With reference to the above planning application the Company's observations regarding sewerage are as follows.

The above site is out of Hafren Dyfrdwy's waste water area, and therefore we have no comment to make.

If upon investigation you find the development affects any clean water assets, please email assetprotection@hdcymru.co.uk as soon as possible.

Should you require any further information please contact us on email below.

Kind regards,

Asset Protection Team

Asset Protection
Asset Strategy and Planning
Chief Engineer
Hafren Dyfrdwy

Email:

The Coal Authority

INVESTOR IN PEOPLE

RTPI Learning Partner

200 Lichfield Lane
Berry Hill
Mansfield
Nottinghamshire
NG18 4RG

Tel: 01623 637 119 (Planning Enquiries)

Email: planningconsultation@coal.gov.uk

Web: www.gov.uk/coalauthority

For the Attention of: A Wilcox – Planning Officer
Planning and Environment Decisions Wales

[By Email: PEDW.Infrastructure@gov.wales]

12th July 2023

Dear Planning Officer

RE: DNS 3253253

Scoping - Solar Farm and associated ancillary development, with an installed generation capacity of up to 77 MW - Plas Power Estate, Ruthin Road, Wrexham, LL11 3BS

Thank you for your notification of the 14th June 2023 seeking the views of The Coal Authority on the above.

The Coal Authority is a non-departmental public body sponsored by the Department for Energy Security and Net Zero. As a statutory consultee, The Coal Authority has a duty to respond to planning applications and development plans in order to protect the public and the environment in mining areas.

Our records indicate that parts of the site are within the boundary of a site where coal has been removed by surface mining methods. There are also three recorded mine entries within 20m of the road to the south of the site, along which the cable run is proposed. These features may pose a potential risk to surface stability and public safety.

I have reviewed the EIA Scoping Report Update, dated June 2023 and prepared by RPS Group. Although it does not appear, from our records, that we were consulted on the original scoping consultation.

Although consideration should be given to whether past coal mining activity poses any risk to the project, especially in the area where the mine entries are recorded close to the cable run. Due to the limited nature of the coal mining legacy within the site, and the works proposed as part of the solar farm project, we do not consider that there has been any omission in this regard in the scoping report.

Please do not hesitate to contact me if you would like to discuss this matter further.

Yours faithfully

[redacted]

Melanie Lindsley *BA (Hons), DipEH, DipURP, MA, PGCertUD, PGCertSP, MRTPI*
Principal Planning & Development Manager

From: Gavin Lowry
Sent: Thursday, June 15, 2023 1:55 PM
To: PEDW – Seilwaith / Infrastructure <PEDW.Infrastructure@gov.wales>
Subject: Site Address: Plas Power Estate, Ruthin Road, Wrexham LL11 3BS

Hi,

We have nothing new to add in reference to this application.

Kind regards,

[redacted]

Rheolwr Cydymffurfio Ardal y Dwyrain / Eastern Compliance Manager

Sir y Fflint a Wrecsam / Flintshire & Wrexham

Rheolwr Cefnogi Gorsaf Dân Bwcle / Station Support Officer for Buckley Fire Station

E-bost / E-mail: [redacted]
Ffôn / Telephone: [redacted]

Rydym yn croesawu gohebiaeth yn y Gymraeg a'r Saesneg *- byddwn yn ymateb yn* ***gyfartal i'r ddwy ac yn ateb yn eich dewis iaith heb oedi.***
We welcome correspondence in Welsh and English - we will respond equally to both and will reply in your language of choice without delay.

Gwnewch yn siŵr eich bod yn profi'ch larwm mwg yn rheolaidd. Os nad oes gennych larwm, neu os ydy'ch larwm wedi torri, ffoniwch 0800 169 1234, anfonwch *e-bost i dtc@gwastan-gogcymru.org.uk neu ewch i www.gwastan-gogcymru.org.uk am gyngor* ***ynglŷn â beth i'w wneud nesaf.***

Please make sure that you regularly check your smoke alarm. If you do not have one, or find that the one that you do have is not working, call 0800 169 1234, e-mail cfs@nwales-fireservice.org.uk or visit www.nwales-fireservice.org.uk for advice on what to do next.

Peidiwch ag argraffu'r e-bost hwn oni bai fod hynny'n wirioneddol anghenrheidiol –
Please don't print this e-mail unless you really need to

ATAL / AMDDIFFYN / YMATEB
PREVENTING / PROTECTING / RESPONDING

Dawn Docx
Prif Swyddog Tân / Chief Fire Officer

Gwasanaeth Tân ac Achub
Fire and Rescue Service

PEDW.Infrastructure@gov.wales

Eich Cyf/Your Ref:	DNS 3253253
Ein Cyf/Our Ref:	LW/KL/80/154685
Dyddiad/Date:	26th June 2023
Gofynner am/Ask for:	Lee Williams
Rhif Union/Direct Dial:	

To whom it may concern,

THE TOWN AND COUNTRY PLANNING ACT 1990 – CONSULTATION

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

With reference to your consultation dated 14th June 2023, in respect of application DNS 3253253.

The Fire Authority does not have any observations in regard to access for appliances and water supplies.

If you should require any further information, please do not hesitate to contact the Compliance Officer.

Yours faithfully

[redacted]
On behalf of North Wales Fire and Rescue Authority

Dŵr Cymru
Welsh Water

Developer Services
PO Box 3146
Cardiff
CF30 0EH

Tel: +44 (0)800 917 2652
Fax: +44 (0)2920 740472
E.mail: developer.services@dwrcymru.com

Gwasanaethau Datblygu
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Caerdydd
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Ffacs: +44 (0)2920 740472
E.bost: developer.services@dwrcymru.com

PEDW
Crown Buildings
Cathays Park
Cardiff
CF10 3NQ

Date: 11/08/2023
Our Ref: PPA0008128

Dear Sir/Madam

Grid Ref: 330570 350580
Site Address: Plas Power Estate Ruthin Road Wrexham
Development: DNS EIA Scoping Direction (updated SR provided) - Plas Power Solar Farm

I refer to your consultation on a scoping direction in accordance with regulation 33(6) and Schedule 4 of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 which relates to a Development of National Significance (Procedure) (Wales) Order 2016. We note that the consultation relates to Plas Power Estate which refers to a "Solar Farm and associated ancillary development, with an installed generation capacity of up to 77 MW" at Plas Power Estate, Ruthin Road, Wrexham LL11 3BS.

We welcome the opportunity to comment on the proposal and would offer the following standing advice which should be taken into account within any future application:

ASSET PROTECTION

The proposed development site is crossed by a public sewer with the approximate positions being marked on the attached Statutory Public Sewer Record. Under the Water Industry Act 1991 Dwr Cymru Welsh Water has rights of access to its apparatus at all times. No part of any building will be permitted within 3 metres either side of the centreline of the 100mm public sewer (coordinates X: 330769.04, Y: 349162.34). Our strong recommendation is that your site layout takes into account the location of the assets crossing the site and should be referred to in any master-planning exercises or site layout plans submitted as part of any subsequent planning application. Further information regarding Asset Protection is provided in the attached Advice & Guidance note.

The applicant is also advised that some public sewers, lateral drains and watermains may not be recorded on our maps of public sewers and watermains because they were originally privately owned and were transferred into public ownership by nature of the Water Industry (Schemes for Adoption of Private Sewers) Regulations 2011. The presence of such assets may affect the proposal. In order to assist us in dealing with the proposal the applicant may contact Dwr Cymru Welsh Water on 0800 085 3968 to establish the location and status of the apparatus. Under the Water Industry Act 1991 Dwr Cymru Welsh Water has rights of access to its apparatus at all times.

SEWERAGE

It appears the application does not propose to connect to the public sewerage system, and therefore Dwr Cymru Welsh Water has no objections in principle. However, should circumstances change and a connection to the public sewerage system/public sewage treatment works is preferred we must be re-consulted on this application.

As of 7th January 2019, this proposed development is subject to Schedule 3 of the Flood and Water Management Act 2010. The development therefore requires approval of Sustainable Drainage Systems (SuDS) features, in accordance with the 'Statutory standards for sustainable drainage systems – designing, constructing, operating and maintaining surface water drainage systems'. It is therefore recommended that the developer engage in consultation with the Isle of Anglesey Council, as the determining SuDS Approval Body (SAB), in relation to their proposals for SuDS features. Please note, Dwr Cymru Welsh Water is a statutory consultee to the SAB application process and will provide comments to any SuDS proposals by response to SAB consultation.

WATER SUPPLY AND RESOURCE

It appears the application does not propose to connect to the public watermains system. However, should circumstances change and a connection to the public water supply system is required we must be re-consulted on this application. Furthermore, we refer to comments from our drinking water catchment team which reinforces the associated risks to the Drinking Water Protected Area under article 7 of the Water Framework Directive. This article requires the UK to take action to protect drinking water sources. Section 7.3 states that the aim is ‘to avoid deterioration in water quality where this may lead to additional purification treatment being required’.

The proposed development falls within the DCWW Drinking Water Catchment known as The River Dee Catchment. The site is approximately ~34 km from the River Dee at Poulton abstraction point however the nearest water course is The River Clywedog which flows from northwest to southeast through the proposed site. As this feeds the River Dee, any watercourses which acts as field drainage on site and flows into The River Clywedog could have an effect on the drinking water source.

DCWW therefore request further information from the applicant to assess the impact of the proposed development on drinking water quality:

- Copies of the Environmental Management Plan, Pollution Prevention and any mitigations.
- Site vehicle access and parking and know if there will be any welfare facilities onsite during the construction phase.
- Proposed access tracks crossing a water courses will need to be assessed to see if pollution prevention measures and silt traps are required.
- Proposals to use any pesticides and vegetation removal during the work.

We trust that you'll find our comments, along with the attached information, of assistance for the purposes of this EIA scoping opinion and we respectfully reserve the right to comment further on any matters and issues arising from ongoing and future consultation. We look forward to continuing our engagement on the project prior to and during the submission of an application to the Planning Inspectorate.

Please note that our response is based on the information provided in your enquiry and should the information change we reserve the right to make a new representation. Should you have any queries or wish to discuss any aspect of our response please do not hesitate to contact our dedicated team of planning officers, either on 0800 917 2652 or via email at developer.services@dwrcymru.com.

Please note that our response is based on the information provided in your enquiry and should the information change we reserve the right to make a new representation. Should you have any queries or wish to discuss any aspect of our response please do not hesitate to contact our dedicated team of planning officers, either on 0800 917 2652 or via email at **developer.services@dwrcymru.com**

Please quote our reference number in all communications and correspondence.

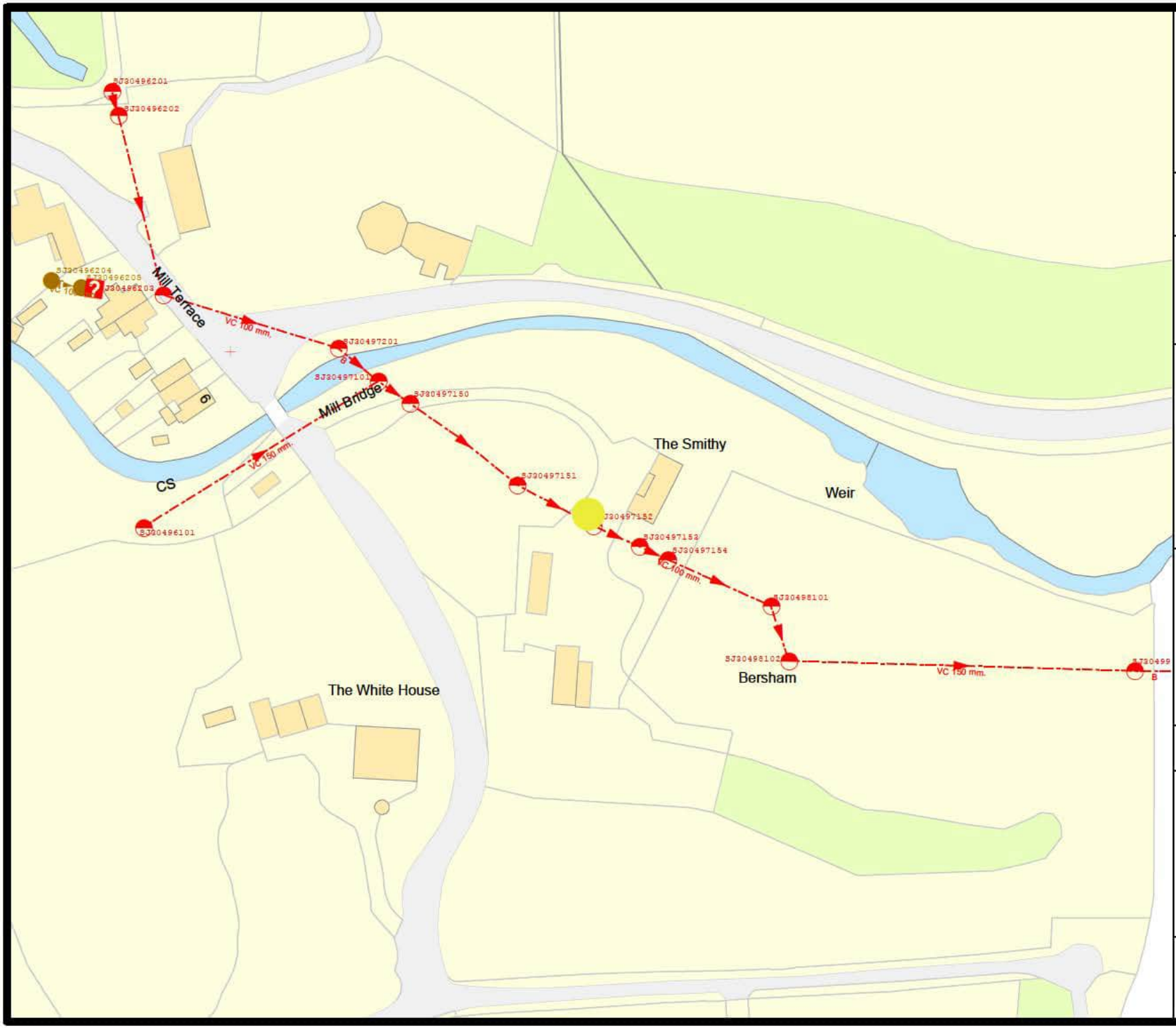
Yours faithfully,

[redacted]

Owain George
Planning Liaison Manager

Developer Services

<u>Please Note</u> that demands upon the water and sewerage systems change continually; consequently the information given above should be regarded as reliable for a maximum period of 12 months from the date of this letter.



Dŵr Cymru
Welsh Water

PPA0008128

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LEGEND(Representative of most common features)

Waste network:

- Foul chamber
- Surface water chamber
- Combined chamber
- Combined sewer overflow
- Special purpose chamber
- Treatment works
- Pumping station
- Outfall
- Lamphole
- Storm Overflow
- Rising main
- Gravity sewer
- Private sewer
- Private sewer subject to Sect. 106 adoption agreement
- Private Sewer Transfer
- Lateral Drain
- Inspection Chamber

NB Sewer symbol colour indicates the type

RED - Combined
GREEN - Surface Water
BROWN - Foul
Purple - Former S24 sewers (for indicative purposes only)

Notes:

Whilst every reasonable effort has been taken to correctly record the pipe material of DCWW assets, there is a possibility that in some cases pipe material (other than Asbestos Cement or Pitch Fibre) may be found to be asbestos cement (AC) or Pitch Fibre (PF). It is therefore advisable that the possible presence of AC or PF pipes be anticipated and considered as part of any risk assessment prior to excavation

EXACT LOCATIONS OF ALL APPARATUS TO BE DETERMINED ON SITE.

Map Ref:	330770,349162
Map scale:	1:1250
Printed by:	Chris Trower
Printed on:	15 Aug 2023