



# CIL-LONYDD SOLAR FARM

## Design and Access Statement



**CENIN**

April 2024



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# 1. Introduction

This Design and Access Statement (DAS) has been prepared on behalf of Cenin Renewables Ltd (the applicant), in respect of a Development of National Significance (DNS) planning application for a proposed solar farm with an installed generation capacity of approximately 35 MW and associated ancillary development, including battery storage, on land to the east of Panside and south of Hafodyrnys in the Caerphilly County Borough. The point of connection is proposed to be located at an existing 132 kV substation to the southeast on Mynydd Maen Common, which would be connected to the site by a cable route of 3km.

The project will be known as 'Cil-Lonydd Solar Farm' and here after referred to as the 'Proposed Development'. By virtue of the fact that the proposal exceeds 10 MW, it constitutes a DNS as set out in the Specified Criteria and Prescribed Secondary Consents (Wales) Regulations 2016.

The Site is located within the administrative area of the Caerphilly County Borough Council (CCBC). It is noted that the CCBC declared a climate emergency in June 2019 and made the commitment to be net zero by 2030 in addition to, and supporting, the binding targets of the commitments made by the Welsh Government in respect of achieving their interim carbon budget reductions and net zero by 2050. These commitments were made under the Environment (Wales) Act 2016. Achieving these targets will require significant investment in renewable energy infrastructure both locally and across Wales.

The Proposed Development would provide a clean, renewable and sustainable form of electricity generation which would feed directly into the local electricity network and would add to CCBC's progress in meeting their renewable energy targets and would also assist in meeting national targets for energy supply and low carbon energy development. The principle of renewable energy such as solar power, is supported by local and national policy.

The purpose of this DAS is to allow the Applicant to demonstrate that the development proposals are based on a thoughtful design process and a sustainable approach to access. The DAS will also demonstrate how the development proposals have evolved during the design process.

This DAS has been prepared in accordance with the requirements of:

- The Town and Country Planning (Development Management Procedure) (Wales) Order 2012 (as amended);
- The Developments of National Significance (Procedure) (Wales) Order 2016 (Section 14);
- Planning Policy Wales, Edition 12, published February 2024 (PPW);
- Technical Advice Note 12: Design, published March 2016 (TAN 12);
- Design and Access Statements in Wales: Why, What and How, published April 2017; and
- Designing for Renewable Energy in Wales, published November 2023

Consideration has also been given to the relevant policies within the Caerphilly County Borough Council Local Development Plan (LDP), adopted November 2010.



The application is also accompanied by a Planning Statement and Environmental Statement (including a Non-Technical Summary and associated technical appendices). The Planning Statement provides an appraisal of the Proposed Development against the Development Plan and relevant national planning policy. While the DAS is a standalone document, further detail can be found in these additional documents, and the DAS should be read in conjunction with them accordingly.

The DAS is structured as follows:

- **Section 1** provides an introduction and sets out the purpose of this document;
- **Section 2** provides a summary of the proposal;
- **Section 3** sets out the project brief and the vision of the proposal;
- **Section 4** identifies planning policy and guidance relevant to the site;
- **Section 5** outlines the site and context analysis demonstrating an understanding of the Site and its constraints and opportunities;
- **Section 6** establishes a suite of design principles in response to the site analysis and planning policy review to guide the design of the proposal;
- **Section 7** sets out the iterative design process explaining how the design has responded to the design principles to address the site constraints and maximise opportunities;
- **Section 8** details 'The Proposed Development' in respect of Design and Access considerations set out in *Design and Access Statements in Wales: Why, What and How*, published April 2017 and includes consideration of:
  - a. Character;
  - b. Access;
  - c. Movement;
  - d. Environmental Sustainability; and
  - e. Community Safety.
- **Section 9** provides a brief summary and conclusion of the proposal including a response to local planning policy

## 2. Summary of the Proposal

Cenin Renewables Ltd proposes to develop a solar farm with an installed generation capacity of approximately 35 MW with associated ancillary development, including battery storage. The power generated would be enough to power approximately 12,500 typical family homes.

The point of connection is proposed to be located at an existing 132kV substation to the southeast on Mynydd Maen Common, which would be connected to the Site by a cable route of 3km. Trenches of typically 1m deep and 50cm wide will be required for the underground cabling. To optimise utilisation of the grid network with the highest amount of clean electricity, the proposal will share a grid connection with the nearby Mynydd Maen Wind Farm.

The solar farm will be enclosed by tall post and wire 'deer' fencing with security cameras in selected locations for security and insurance purposes.

A solar farm is a temporary and fully reversible use, unlike housing for example, with all equipment removed from the site at the end of the installation's operational life, which is approximately 50 years. The methods used in construction 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. The solar farm will be designed to accommodate sheep grazing beneath and between the rows of panels, providing an efficient dual use of land for renewable energy generation and agriculture.

### Key Components

The key components of the Proposed Development are:

- Solar Photovoltaic (PV) panel arrays including mounting frames;
- String Inverters;
- Transformers;
- Battery Storage;
- Cabling and Grid Connection to an existing 132kV substation;
- Perimeter Deer Fencing and Infra Red Security CCTV;
- Improved site access, internal access tracks and a temporary construction compound; and
- Landscaping.

The details of the key components are provided on the accompanying planning drawings and should be viewed alongside this document and the details of each component are considered further in Section 8 of this document.



**Through our innovative approach to renewable energy provision, we unlock hidden green energy potential and utilise the earth's natural resources**



## Construction

Construction would be undertaken in accordance with good practice environmental management procedures that will be set out in more detailed plans and method statements contained within a Construction Environmental Management Plan (CEMP) to be developed by the contractor. The CEMP will set out the key management measures that contractors would be required to adopt and implement and can be secured by a planning condition.

The construction phase of the Proposed Development will take 6 to 9 months. All work will be conducted between 08:00 and 18:00, construction HGV deliveries and departures will not be permitted to enter or exit the Site between 08:00 and 09:00 or between 17:00 and 18:00. All construction HGV deliveries and departures will therefore only be permitted to enter or exit the Site between 09:00 and 17:00.

A temporary construction compound will be located on site, with an exact location yet to be agreed. However, the construction compound will provide a turning area to allow vehicles to enter and exit the Site in forward gear. All delivery drivers and construction workers will be advised of the construction routes and requirements prior to making their delivery or commencing work.

The construction compound will be large enough to provide for all storage, welfare and parking. No vehicles will be allowed to wait on the highway or park on highway verges. All materials and plant associated with the construction process will be stored within the footprint of the construction site. The compound is designed to enable all vehicles to park on site, to avoid obstruction to the public highway.

As far as possible, storage areas would be located away from existing properties and sensitive receptors. Such storage areas would be bunded to mitigate any spillages of potential contaminants and would avoid being located in areas of vegetation or habitat to be retained. All construction works will be carried out within the defined project area and no additional land would be required outside of the Site boundary.

Construction HGVs will route along the existing access track into the farm which links out onto the A472 at Hafodyrynys to the north or the A467 at Abercarn to the south. Construction HGVs will exit the Site in the reverse order of the above route. A variety of vehicles will need to access the Site during construction. These will include rigid and articulated HGVs and a large mobile crane associated with manoeuvring the requisite materials (including aggregate, mounting frames and the solar panels) and prefabricated buildings.



View along existing access track

## Operation

During the operational phase, the activities on-site would amount to servicing of plant and equipment, cleaning the panels and vegetation management. These trips will typically be made by small vans and 4x4s. The frequency of vehicle trips associated with the monitoring and upkeep of the Proposed Development is typically expected to be about 10 - 20 times a year.

Emissions from activities from the Proposed Development shall be free from odour, noise and vibration at levels likely to cause pollution outside the Site.

The Proposed Development will then export renewable energy to the grid for a temporary period of approximately 50 years.

## Decommissioning

At the end of the proposed 50-year operational period, the solar farm and its ancillary equipment will be decommissioned, dismantled and removed and the Site fully reinstated. A solar farm is a fully reversible development, with all equipment removed from the Site and the land restored to its original condition at the end of the installation's operational life, as per the contractual agreements with the Landowner.

The methods used in the construction 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 relatively quickly following decommissioning. It is estimated that decommissioning of the development will take approximately 6 months to complete.

## The Applicant

Through their innovative approach to renewable energy provision, Cenin Renewables Ltd unlock hidden green energy potential and utilise the earth's natural resources.

Cenin respect the people they work with and the places they live, helping develop quality energy systems for local communities that increase wellbeing and add value for future generations by creating a sustainable world. In 2021, Cenin were awarded the Queen's Award for Enterprise due to their work in sustainable development. As part of the commitment Cenin make to the communities in which they work, all of their projects aim to:

- Provide local energy generation creating economic benefit for the foreseeable future;
- Provide annual educational visits for local schools and community groups to visit project sites, to explain how Cenin help deliver the electric economy;
- Offer all Year 6s from schools in the local area to visit the Parc Stormy HQ each year, for the life of the project at no cost;
- Maintain access to the countryside for wellbeing, exercise and active travel;
- Support local clubs and associations in the area; and
- Help create the 'Wales we want' for our future generations.

The Cil-Lonydd Solar Farm proposal will result in locally produced energy that will feed directly into the local energy network, providing a stable, cost-effective source of power for Caerphilly and the surrounding area.

## Dual Use and Reversibility

The solar farm will be designed to accommodate sheep grazing beneath and between the rows of panels, providing an efficient dual use of land for renewable energy generation and agriculture.

A solar farm is a temporary and fully reversible use, unlike housing for example, with all equipment removed from the Site at the end of the installation's operational life (approximately 50 years). The methods used in construction mean that remediation works following the removal of the panels and associated infrastructure are relatively minor and will return the Site to its previous character relatively quickly.





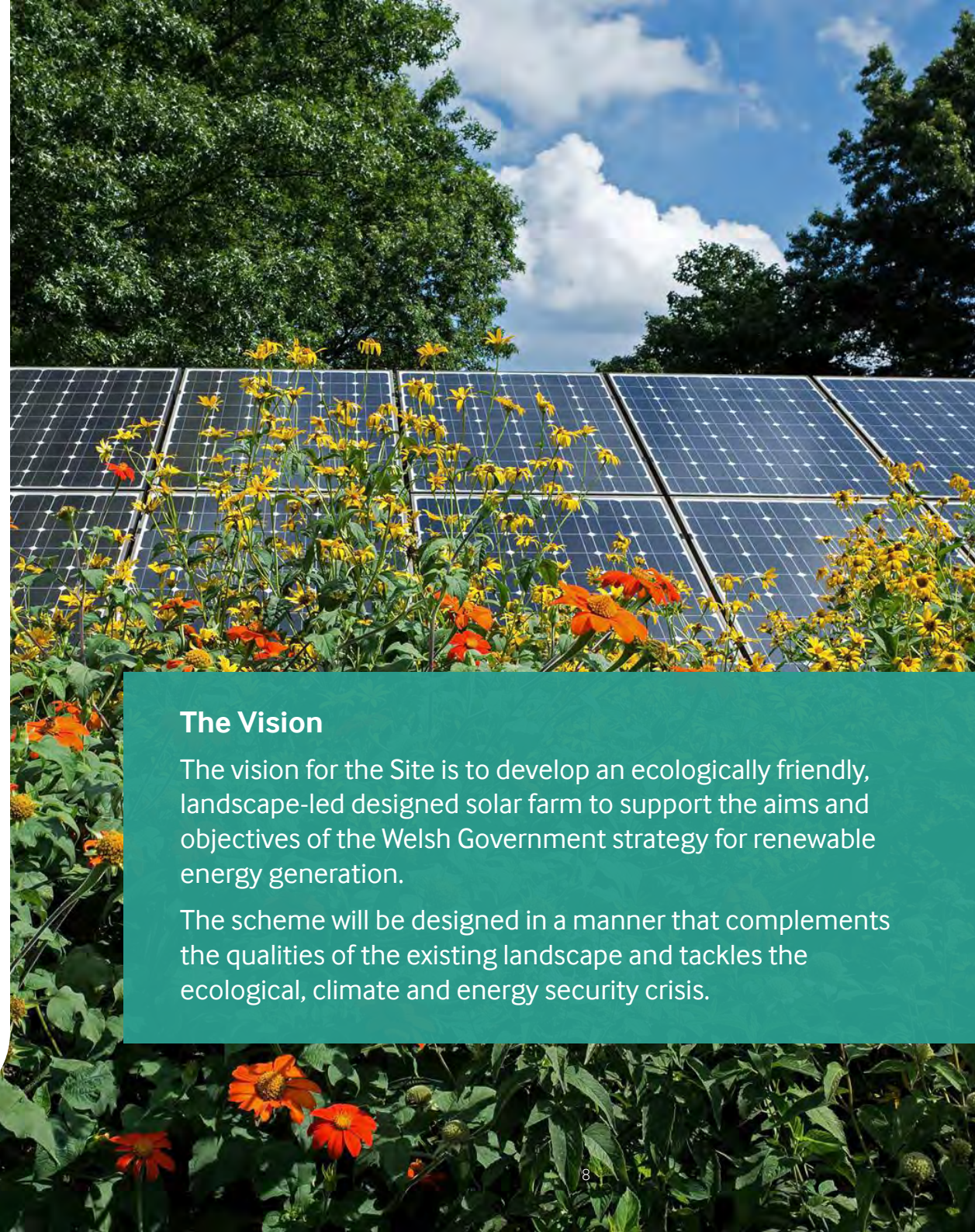
# 3. The Brief and Vision

The project brief, set by the Applicant, provides the starting point for the design, as noted within the Welsh Government guidance document: Design and Access Statements in Wales. Why, What & How.

The brief and vision for the Proposed Development is set out below.

## The Brief

- The main aim of the project is to develop a circa 35 MW solar farm to provide a renewable and sustainable source of electricity to be exported to the local electricity distribution network to support the Welsh Government’s strategy for renewable energy generation;
- The design will consider sustainability objectives (environmental, social and economic) and be sympathetic to the sites surrounding area by exploring economic and social objectives to benefit the local community;
- The scheme will be located on underutilised and lower quality agricultural land within an area offering suitable capacity and connection opportunities into the local network;
- The development will protect and enhance existing local wildlife and ecological habitats within the site and surrounding area and be sympathetic and complement the existing landscape setting;
- The proposals will also protect the amenity of local communities situated near to the Site; and
- The design of the scheme will explore opportunities to enhance the local environment, including landscape and biodiversity features.



## The Vision

The vision for the Site is to develop an ecologically friendly, landscape-led designed solar farm to support the aims and objectives of the Welsh Government strategy for renewable energy generation.

The scheme will be designed in a manner that complements the qualities of the existing landscape and tackles the ecological, climate and energy security crisis.



# 4. Planning Policy Review

## Relevant Planning Policy and Guidance

The following section provides an overview of the relevant planning policy and guidance that has influenced the design of the proposed solar farm, including National and Development Plan policies.

The Design and Access Statement Guidance document states the following:

*'Relevant planning policy and guidance that will influence the design should be identified at this stage but should not be copied into the document. The proposals section of the document provides the opportunity to show how the proposed development has responded to the identified policy and guidance. Key things to consider are designations or site-specific policies in the Development Plan, locally specific design guidance, development briefs, masterplans or design codes. Reference should also be made to the planning history of the site where relevant.'*

They are briefly outlined over the following pages, with more information and a detailed response provided within the accompanying Planning Statement.

### National Policy

Planning Policy Wales (PPW) 12th Edition published February 2024, and the accompanying Technical Advice Notes (TANs), set out the national planning policies of the Welsh Government, and are material considerations in the determination of individual planning applications.

PPW paragraph 1.18 states that the planning system provides for a presumption in favour of sustainable development to ensure that social, economic and environmental issues are balanced and integrated, at the same time, by the decision-taker in taking decisions on individual planning applications.

PPW recognises that good design means effectively managing the relationship between all elements of the natural and built environment. It should go beyond aesthetics and consider social, environmental and economic aspects of the development. PPW objectives of good design are as follows:



PPW paragraph 3.4 states: *"Meeting the objectives of good design should be the aim of all those involved in the development process and applied to all development proposals, at all scales"*. Paragraph 3.17 states DAS' should state the design principles and concepts adopted.

Section 5.7 'Energy' outlines the context to and the requirements of energy projects. Paragraph 5.7.1 states low carbon electricity must become the main source of energy in Wales. Renewable electricity will be used to provide both heating and transport in addition to power.

Paragraph 5.7.2 acknowledges that overall power demand is expected to increase as a result of growing electrification of transport and heat. PPW highlights that in order to ensure future demand can be met, significant investment will be needed in energy generation, transmission and distribution infrastructure. The system will need to integrate renewable generation with storage and other flexibility services,

in order to minimise the need for new generation and grid system reinforcement.

Paragraph 5.7.6 stresses that the planning system should secure an appropriate mix of energy provision, which maximises benefits to our economy and communities whilst minimising potential environmental and social impacts. This forms part of the Welsh Government's aim to secure



the strongest economic development policies, to underpin growth and prosperity in Wales, recognising the importance of decarbonisation and the sustainable use of natural resources, both as an economic driver and a commitment to sustainable development.

Paragraph 5.7.7 states: *“The benefits of renewable and low carbon energy, as part of the overall commitment to tackle the climate emergency and increase energy security, is of paramount importance.”*

It continues that the Welsh Government is committed to using the planning system to:

- integrate development with the provision of additional electricity grid network infrastructure;
- optimise energy storage;
- optimise the location of new developments to allow for efficient use of resources; and
- maximise renewable and low carbon energy generation.

Section 5.9.19 sets out the key issues in determining applications for renewable and low carbon energy technologies. It states planning authorities should consider:

- The contribution a proposal will make to meeting identified Welsh, UK and European targets;
- The contribution to cutting greenhouse gas emissions; and
- The wider environmental, social and economic benefits and opportunities from renewable and low carbon energy development.

PPW paragraph 5.9.20 states planning authorities should also identify and require suitable ways to avoid, mitigate or compensate adverse impacts of renewable and low carbon energy development.

The construction, operation, decommissioning, remediation and aftercare of proposals should take into account:

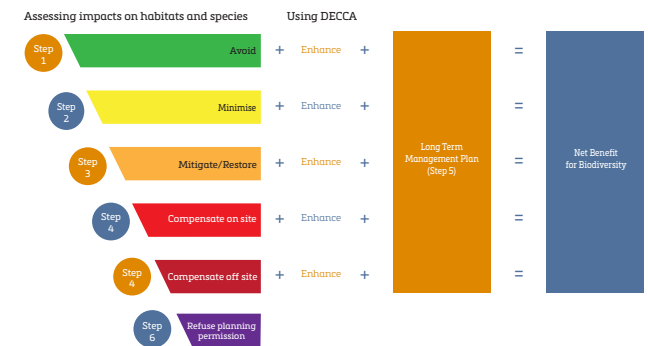
- the need to minimise impacts on local communities, such as from noise and air pollution, to safeguard quality of life for existing and future generations;
- the impact on the natural and historic environment;
- cumulative impact;
- the capacity of, and effects on, the transportation network;
- grid connection issues where renewable (electricity) energy developments are proposed; and
- the impacts of climate change on the location, design, build and operation of renewable and low carbon energy development. In doing so, consider whether measures to adapt to climate change impacts give rise to additional impacts.

Paragraph 6.0.3 outlines that *“distinctive and natural places must maintain or incorporate green infrastructure, recognising the wide ranging role it can play, as key components of their natural and built fabric. Doing so will maximise health and well-being of communities and the environment.”*

Paragraph 6.2.11 states that *“The quality of the built environment should be enhanced by integrating green*

*infrastructure into development through appropriate site selection and use of creative design.”*

Paragraph 6.2.12 stipulates that a Green Infrastructure Statement should be submitted with all planning applications which will describe how green infrastructure has been incorporated into the proposed scheme utilising the ‘Step-Wise Approach’, as outlined within paragraph 6.4.15 and demonstrated graphically below.



Prior to an application being submitted, developers for renewable and low carbon energy developments are encouraged, wherever possible, to consider how to avoid, or otherwise minimise, adverse impacts through careful consideration of location, scale, design and other measures.

TAN12: Design states that a DAS is a statutory requirement for certain applications for planning permission in order to outline how the design of the proposal has been considered in relation to its context.



## Local Development Plan Caerphilly County Borough Council Local Development Plan (LDP)

The Site falls within the Caerphilly County Borough Council Local Development Plan (LDP), adopted November 2010.

The LDP Constraints Map and publicly available geographical information systems (GIS) indicates that the site is affected by the following designations or features:

- Within a Visually Important Local Landscape (VILL) NH2.3 Abercarn,
- Within a Sandstone Safeguarding Area,
- Within a Mineral Site Buffer Zone (MN1.3),
- Bridleway Abercarn BR179 and Restricted Byways Abercarn RBW171,172, 316 and 320 run through the site.

The Site also immediately adjoins or lies in the vicinity of the following designations or features:

- Sites of Importance for Nature Conservation (SINC)
  - SINC NH 3.112 Coed Cil-Lonydd, East of Newbridge,
  - SINC NH 3.113 Mynydd Maen, East of Newbridge,
  - SINC NH 3.124 Gwydon Valley Woodlands, Abercarn,
  - SINC NH 3.128 Cwm Hafod-Fach Woodlands, North of Abercarn



- The eastern boundary of the Site adjoins registered Common Land.

Regarding historic designations, Schedule Ancient Monument (SAM) MM250 Charcoal Blast Furnace at Abercarn, is located within 3km of the Site.

Policy SP2 Development Strategy - Development within the Northern Connections Corridor (NCC), stipulates that development proposals in the Northern Corridor will promote sustainable development that protects the natural heritage from inappropriate forms of development.

Policy SP6 Place Making seeks to ensure that development proposals contribute to creating sustainable places by having full regard to the context of the local, natural, historic and built environment and its special features.

Policy CW3 Design considerations - Highways states that development proposals must satisfy the following highways requirements:

1. The proposal has regard for the safe, effective, and efficient use of the transportation network.
2. The proposal ensures that new access roads within development proposals are designed to a standard that:
  - Promotes the interests of pedestrians, cyclists and public transport before that of the private car, and
  - Safely and effectively accommodates the scale and nature of traffic, which those roads are intended to serve.
3. Parking, appropriate servicing and operational space have

been provided in accordance with the CSS Wales Parking Standards 2008.

4. Where access onto a highway is required, the proposal takes account of the restrictions relevant to the class of road as designated in the road hierarchy ensuring movements and speeds are controlled through appropriate design, in order to ensure highway safety and amenity.

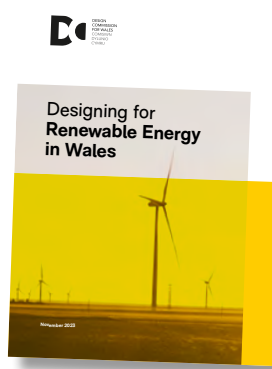
Policy CW4 Natural Heritage Protection seeks to ensure that development proposals that affect locally designated natural heritage features, will only be permitted:

1. Where they conserve and where appropriate enhance the distinctive or characteristic features of the Special Landscape Area (SLA) or Visually Important Local Landscape (VILL).
2. Within, or in close proximity to sites designated as Sites of Importance for Nature Conservation (SINC), Local Nature Reserves (LNR), Regionally Important Geological Sites (RIGS), Green Corridors, or Local Priority Habitats and Species, where proposals either:
  - Conserve and where appropriate enhance the ecological or geological importance of the designation, or
  - Are such that the need for the development outweighs the ecological importance of the site, and where harm is minimised by mitigation measures and offset as far as practicable by compensation measures designed to ensure that there is no reduction in the overall value of the area or feature.

## Design Guidance

### Designing for Renewable Energy in Wales (Nov 2023)

This document, prepared by the Design Commission for Wales, sets out the key design objectives and considerations for the sensitive development of large-scale on-shore wind and solar installations in Wales.



Chapter 6 sets out guidance and best practise regarding the design of Solar Farms. The following are some of the principal issues that the design approach will need to address and demonstrate an appropriate response to:

#### Landscape Change

It is fully acknowledged that solar farm developments will impact on the appearance of the Welsh landscape. The ambition of this design guidance is that solar farms will be designed in a manner that complements the qualities of existing landscapes.

#### Design Process

The construction of large-scale solar farm installations should follow from a thorough, multi-disciplinary design process, starting with the appropriate site selection and development of a comprehensive design brief. The brief should be prepared in participation with all stakeholders and establish clear design principles and objectives.

#### Site Location

Solar farm panel arrays are normally mounted on support frames above ground, angled to optimise the panel orientation to sunlight and maximise generating capacity. The support frames also allow for maintenance access and frees the ground level to be used for other complementary purposes. Considerations for site selection include:

- Low-grade agricultural land
- Non-designated sites
- Solar Orientation
- Appropriate connection to the National Grid
- Adequate site access
- Landscape screening potential
- Low impact on surrounding settlements

#### Solar Farm Layout and Response to Landscape Scale

Important factors to be considered in generating the site landscape approach include the scale of panel arrays; how they are subdivided into smaller 'fields' of panels; the spacing between 'fields' of arrays; and planting of landscape strips between them.

#### Perimeter Screening

In most cases, solar farms will be visible from some vantage points in the landscape. Where possible, hedgerow and screen planting around the perimeter and within solar farms should be considered to limit local impacts.

#### Colour

Colour selection of panels, and panel support structures, should be carefully considered to reduce the contrast between the panel array and the geometry, colours and textures of the landscape context.

#### Local Environmental Impacts

Solar farm design layouts should demonstrate that care has been taken to screen local communities from unacceptable environmental impacts, including noise, ancillary plant and traffic, and other impacts arising during installation, maintenance and decommissioning.

#### Cumulative Impacts

The cumulative effect of developing solar farms adjacent to existing facilities should be carefully considered for their combined impact on the landscape.

#### Ancillary Infrastructure

The siting and design of ancillary infrastructure needs to relate to the key characteristics of the landscape. Careful siting of the substations, transmission lines, access tracks and control buildings will help to enhance a solar farm design.

#### Long Term Design Considerations

Consideration should be given from the start as to how a site can potentially be restored visually to its pre-development appearance following decommission of the solar farm. Careful consideration should be given to the impact on habitats and important features, both during and post operation.



# 5. Site and Context Analysis

## Site Location

The Site of the proposed solar farm comprises land at Cil-Lonydd Farm between Newbridge to the west, Hafodyrynys to the north, Abercarn to the south and Cwmbran to the east, all within the Ebbw Valley.

The Site is located within the administrative boundary of Caerphilly County Borough. The aerial plan opposite shows the location of the Site within its surrounding context.

The total site area is approximately 28.6ha in size and extends to approximately 37.5ha when including the cable route area.

The Site consists of several parcels of agricultural land. These various parcels are irregular in shape and comprise a series of agricultural fields of varying sizes. They are currently primarily used for pasture grazing, divided by well-established hedgerows containing large mature and veteran trees.

An existing access track provides a link from the farm to the A472 at Hafodyrynys to the north and the A467 at Abercarn to the south.

The site is located within a Visually Important Local Landscape (VILL), and is adjacent to three Sites of Interest for Nature Conservation (SINC), as well as containing scattered parcels of ancient woodland.

The site also adjoins Mynydd Maen Common to the east and neighbours Hafod Fach Quarry, an asphalt quarry, which is located to the south.



## Site Context

### Land Use

The Site consists of several parcels of agricultural land, which are currently being used primarily for pasture grazing. The Proposed Development will be designed to be capable of enabling sheep grazing during its operational life and therefore energy and agriculture would co-use the site.

The Site is located within a Sandstone Safeguarding Area and partially within a Mineral Site Buffer Zone, as defined by the Caerphilly County Borough Local Development Plan Proposals Map, polices SP8 and MN1.3, where the LDP advocates that mineral resources should be safeguarded from permanent development that would prevent their future working.

### Landscape and Visual Amenity

The Site is located within the Wales National Landscape Character Area 37 - South Wales Valleys. The Site is also located within the Mynydd Llwyd and Mynydd Maen LANDMAP Visual and Sensory Aspect Area (CYNONVS214). The area has an overall LANDMAP evaluation of moderate for scenic quality.

LANDMAP summarises, *'Areas of upland comprising both heath and grassland on the western slopes of both Mynydd Maen and Mynydd Llwyd. These areas are largely flanked by coniferous plantation woodland with more open areas to the east. More westerly areas in valleys have smaller field patterns. Some views to adjacent upland areas and to urban area of Newbridge in the valley to the west.'*

The entire Site is within the Visually Important Local Landscape – 2.3 Abercarn. The Visually Important Local Landscape (VILL) areas were designated in the Caerphilly County Borough Local Development Plan adopted in 2010. These areas cover former Special Landscape Areas (SLA) which were excluded as SLAs.

The nearest National Park to the Site is the Brecon Beacons National Park, which lies approximately 7km to the northeast at its nearest point. There would be no intervisibility between the proposal and the national park. The closest Area of Outstanding Natural Beauty (AONB) is over 20km to the east. The Blaenavon Industrial Landscape World Heritage Site is approximately 9km to the north at its nearest point with also little to no intervisibility between this and the Site.

There are Special Landscape Areas (SLA) within 5km of the Site. The closest are 'St Illtyd Plateau & Ebbw Eastern Sides' which lie approximately 1.5km to the north, 'Mynyddislwyn' approximately 1.7km to the southwest and 'South West Uplands' 2.6km to the east of the Site. The 'Eastern Ridge & Mynydd James' SLA lies around 3.5km to the north.

The Site is located on a westward sloping plateau in an elevated, uplands area on Mynydd Maen. The Proposed

Development is well screened by trees from most viewpoints. The Site is located to the east of Newbridge, the nearest settlement to the proposed development in the valley below. This is typical of the landscape character in the area - the developed lower valleys contrasting with the rural, agricultural character of the uplands. These are often separated by steep valley sides which in the surrounding area are mostly wooded.



View looking southeast towards the Site from Trinant



The majority of the Site covers an upland area of improved pasture fields bounded by mature deciduous trees of varying density. The eastern most field is unimproved pasture in character and is bounded on its eastern edge by coniferous trees. This boundary marks the western edge of an area of unimproved open moorland which extends to the peak of Mynydd Maen in the east.

## Ecology

The Site does not form part of any international statutory ecological designations, however several international designated sites are located within the surrounding area. Two international designated sites of value to highly mobile species are located within 20km, namely the Severn Estuary Special Protection Area (SPA) and Ramsar site to the south and the River Usk Special Area of Conservation (SAC) to the east. Within 10km of the Site are two designations at international level for habitat features - the Aberbargoed Grasslands Special Area of Conservation (SAC), and the Cardiff Beech Woods SAC.

One statutory national designated site is located within 2km from the site boundary, namely the Ty'r Hen Forwyn Site of Special Scientific Interest (SSSI).

There are a number of locally designated sites within 2km including Local Wildlife Sites (LWS) and Sites Important for Nature Conservation (SINC). Several ancient woodland sites, including a woodland designated as a SINC are also located adjacent to the boundaries of the Proposed Development.

Considering the distance from the Proposed Development and the designations, and the size and nature of the solar farm, no

significant impact on these designated sites or their qualifying features would be expected to result from the Proposed Development.

A Phase 1 habitat survey of the Site has been undertaken. In summary, the main habitat types within the Site comprise a mix of species-poor improved grassland and semi-improved grassland.

## Topography

The Site is on locally high ground, with a small valley (the Nant Gawni) running beyond its northern boundary and to the west. A stream (Nant Hafod-fach) rises at Cil-Lonydd Farm in the southern part of the site, flowing southwest. The valley of the Nant Gwyddonfach lies to the east.

The highest point of the Site is its northeastern boundary, at 346m AOD. The whole Site slopes gently to the south and has a height of 343m AOD at its southeastern edge. There is also a slope southwestwards with a height of 320m AOD at the western boundary.

## Heritage and Archaeology

Within a 5km radius of the Site, there are 10 Scheduled Monuments, 163 listed buildings, and 5 Conservation Areas. No other asset types are present within this 5km search area. The nearest designated heritage assets are 1.8km from the site to the north. Any potential development impacts on the historic environment would consist of direct impacts on buried archaeological remains within the Site.

A Cultural Heritage Desk Based Assessment has been undertaken which determined that there is the potential for some negligible impacts on the settings of designated heritage assets, but in no case would the Proposed Development be likely to have an effect on the significance of any designated heritage asset.

## Access and Infrastructure

The Site is accessed via an existing track, that provides a link from the farm to the A472 at Hafodyrynys to the north and the A467 at Abercarn to the south.

There are a number of Public Rights of Way (PRoW) routes that both cross the Site and surround it providing links across the valley between Newbridge and Cwmbran. A cycleway is located to the east of the Site providing an active travel link from Crumlin round to Abercarn via the ancient woodland areas that abut the eastern and southern sides of the Site.

## Flood Risk

A review of the flood risk data for the Site confirms that the development is located wholly within Flood Zone 1, the lowest risk of flooding from fluvial sources.

The Natural Resource Wales (NRW) Flood Risk from Surface Water map indicates a small area of High, Medium and Low risk of surface water flooding from Surface Water and Small Watercourses. This correlates with the mapping location of the Nant Hafod-fach stream that rises at Cil-Lonydd Farm within the southern part of the Site and flows in a southwest direction towards Abercarn.

## Development Constraints and Opportunities

Following a review of the site context, an initial site analysis has been undertaken which has identified a number of development considerations and opportunities to be considered as part of the design process of the Proposed Development.

These are listed below:

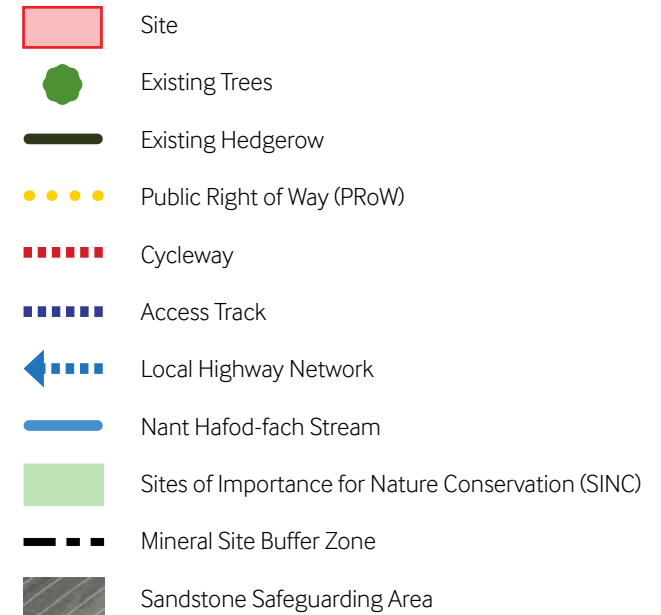
### Development Considerations

- The solar farm would be located on a ridge on an upland plateau. The landform of the Site and the landform of the surrounding area mean that it is not looked on from higher elevations, and being on the top of a ridge would mean that views to the Proposed Development are mostly limited. Views from the densely populated valley bottom would be largely screened by the landform.
- Mature hedgerows with trees define some of the established field patterns within the agricultural landscape. They form positive landscape features which enclose and partly screen the land within the Site. These features are diverse ecological assets within the landscape and are a focus for wildlife.
- The design approach needs to carefully consider any Proposed Development within the northeastern part of the site, where the boundary abuts the neighbouring SINC.
- A number of PRowWs either cross the Site or are in close proximity, which need to be considered as part of any design proposals.
- Mature green infrastructure are valuable landscape and biodiversity assets. The proposals for the solar farm need to take into consideration these features to avoid or minimise any loss or effects on assets and to minimise any impacts on the surrounding landscape or visual receptors.

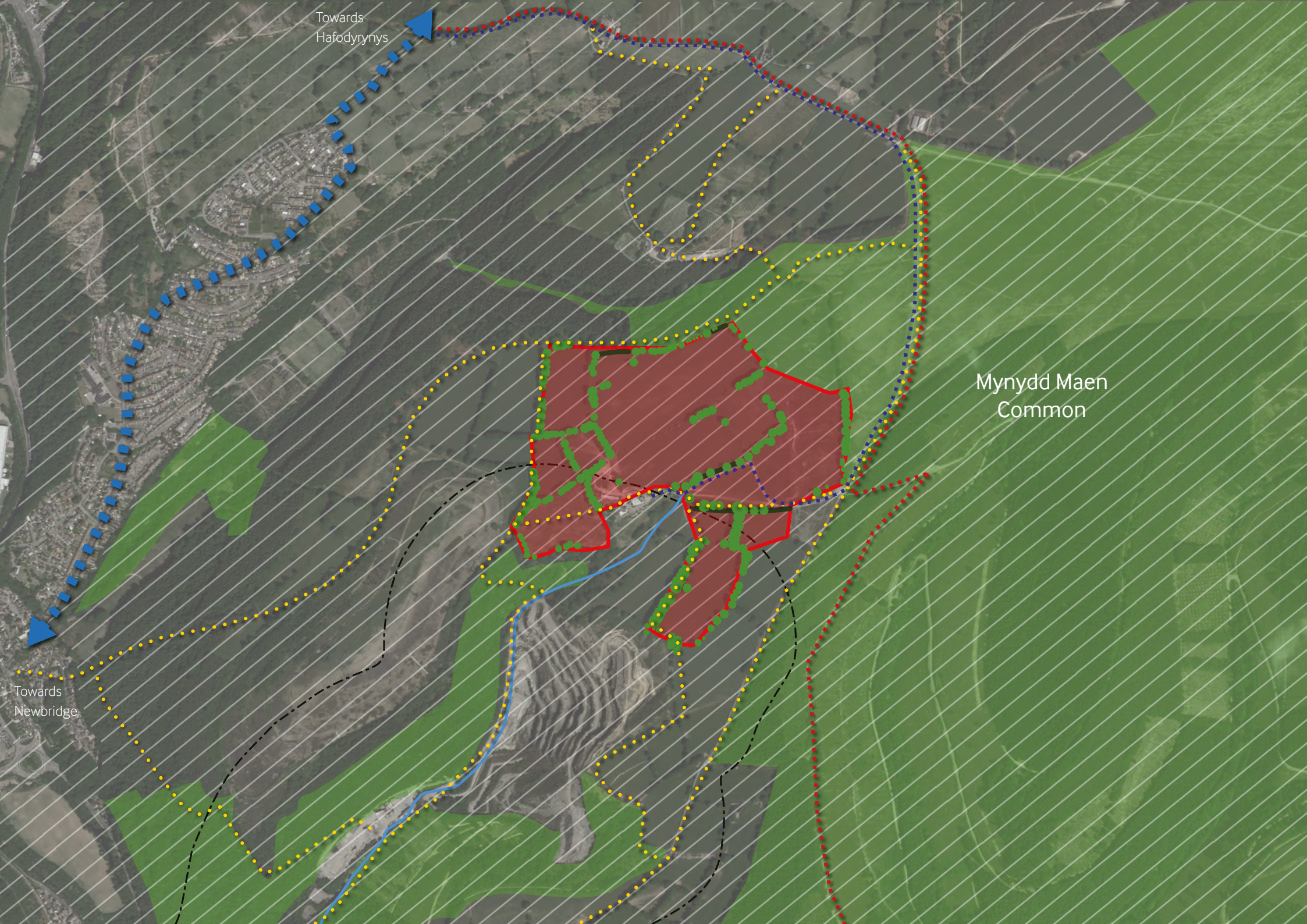
These potential constraints have informed the preparation of the following opportunities for the solar farm:

### Development Opportunities

- To develop a site layout that provides appropriate landscape elements in keeping with the surrounding rural landscape, which minimises any adverse effects on landscape character and the visual amenity of the local community.
- Mature hedgerows and trees will continue to be managed to retain their important characteristics, ensuring they contribute to the quality of the Site, the wider rural landscape character and the valuable screening function they provide. Any expansion of the green infrastructure will incorporate appropriate native species to reflect the well established collection of trees and hedgerows.
- Hedgerows form the primary boundary treatment providing a link with the surrounding rural landscape. There is the opportunity to increase the amount of hedgerow to mitigate the potential visual impacts from the adjacent PRowW and access track.
- Due to the sloping and gently undulating nature of some parts of the Site, near distance views of the Proposed Development that follow the topography are available. This can make the extent of the panels appear to occupy a greater proportion of the view compared to when they are located and viewed over a flat area. Many impacts can be mitigated through the use of tree and hedgerow planting to screen the solar farm, retaining the character of these attractive rural panoramas.







Towards  
Hafodyrynys

Mynydd Maen  
Common

Towards  
Newbridge



## Consultant Lead Design

The Applicant has carried out a comprehensive pre-application consultation (PAC) exercise in respect of the Proposed Development to ensure the design of the scheme was an inclusive and iterative process.

The DNS (Wales) Regulations 2016 (“the DNS regulations”) requires the Applicant to undertake statutory PAC on the full draft planning application for a period of no less than 42 days. This is to provide technical and community stakeholders, and local people, a further opportunity to provide feedback on the project and the technical assessments produced for the Proposed Development. In accordance with the DNS regulations, relevant specialist consultees and owner/occupiers adjacent to the Site boundary have been notified of the Proposed Development via a Schedule 1 or 2 notice and accompanying letter. The applicant underwent this process in April 2024. The feedback received during this process has been reported in the PAC Report.

The objective of the consultation was to introduce and gain feedback on the Development proposals so that this feedback could be incorporated into the final project design where possible. Full details of the consultation exercise are given in the PAC Report submitted alongside the application. The Applicant has given meaningful consideration to the feedback received from the statutory consultees and local stakeholders throughout the consultation process and has subsequently made a number of changes to the design of the Proposed Development. The comments raised and the associated responses are discussed in further detail in the PAC Report and in brief where applicable in relation to the design development in Section 7 of this report.

**Cil-lonydd Solar**

**CENIN** is delighted to share its plans to develop Cil-lonydd Solar, an innovative renewable energy scheme that in addition to producing 35MW of clean, green energy will also bring a wide-range of benefits to the local community.

As society comes to terms with the immense challenges that both energy security and climate change brings, the need for innovative, integrated projects that deliver vital local economic and environmental benefits has never been greater. Ensuring Coephrilly County Borough can meet its obligation to be a net carbon neutral authority by 2030.

Cil-lonydd Solar is an opportunity to generate power locally which can then be used in the local area. This not only increases our energy security but also addresses the cost of living crisis by keeping the cost of energy stable and affordable.

Renewable energy generation is now the most cost-effective way of producing energy and will become the main source of energy for households, industry, and transport.

We are already in the new, global industrial era of the electric economy and this project will help ensure Coephrilly will be at the forefront of this.

We are committed to engaging with the local community and would invite any questions to be submitted via e-mail or using the 'Contact Us' section on the website.

Become a part of building a sustainable future in Coephrilly, powered by renewable, locally produced solar energy which in turn can provide sustainable local power.

**Got a question for us?**  
Should you wish to ask a question about the project or provide feedback about our plans, please email [info@cil-lonydd.co.uk](mailto:info@cil-lonydd.co.uk). You can also download these slides, along with a number of other important documents on our project website.

**Martyn Popham**  
Director & Project Lead

**CENIN** Pre Application Consultation

**Engagement**  
Throughout the planning process, we have always welcomed open dialogue with the local community, to ensure our plans have been properly consulted on.

Project updates were sent to local residents in February and April 2024, and we contacted all Coephrilly Ward Councilors in March 2024 to make them aware of our most up-to-date plans.

**Community**  
Central to all of the projects we undertake is a commitment to ensuring we provide wide-ranging benefits to the communities in which we operate.

If you're an organisation, club or individual in the Cil-lonydd area and would welcome such support, please contact us via [info@cil-lonydd.co.uk](mailto:info@cil-lonydd.co.uk) to find out more.

**Education**  
We believe helping future generations understand the need for changes in the way we live is essential. As part of our commitment to help understand this need, we've offered all Year 6 pupils from schools within 5km of Cil-lonydd Solar a free educational visit to our Parc Stormy base, as well as covering the cost of their transport.

Please contact [visits@cenin.co.uk](mailto:visits@cenin.co.uk) if you would like to find out more, or to arrange a visit.

**Contact Us**  
Should you wish to ask a question about the project or provide feedback about our plans, please email [info@cil-lonydd.co.uk](mailto:info@cil-lonydd.co.uk). You can also download these slides, along with a number of other important documents on our project website, [www.cil-lonydd.co.uk](http://www.cil-lonydd.co.uk).

**CENIN** Pre Application Consultation

**Our partnership with RES**  
To optimise utilisation of the grid network with the highest amount of clean electricity, we are sharing a grid connection with the nearby Mynydd Maen Wind Farm being developed by RES. Wind and solar power complement each other by hitting energy production peaks at different times of day, ensuring a consistent supply of renewable power.

**Cil-lonydd Solar Cable Route Plan**  
16/11/2023  
Drwg: MM3-11a

Site boundary  
Cable route

**CENIN** Pre Application Consultation

**Cil-lonydd Solar Site Location Plan**  
06/09/2023  
Drwg: MM3-10a  
Scale: 1:10,000 @ A2

**CENIN** Pre Application Consultation

**Cil-lonydd Solar Plan of Cable Route across Common**  
06/09/2023  
Drwg: MM3-10a  
Scale: 1:10,000 @ A2

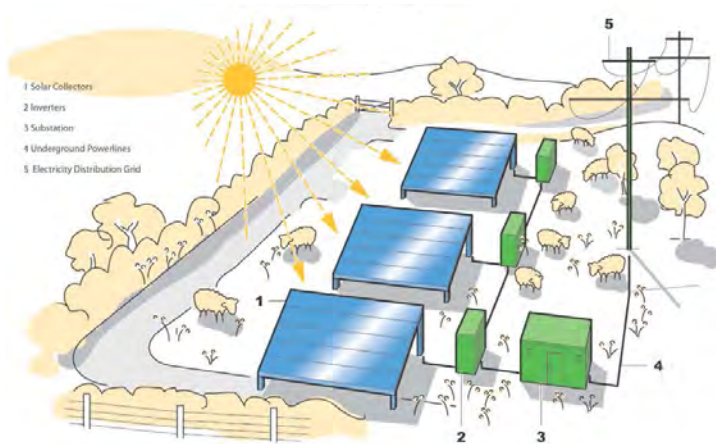
**CENIN** Pre Application Consultation



## 6. Design Principles

Having regard to the context of the Site and the surrounding area, the constraints and opportunities identified, as well as relevant national and local planning policies, the following set of ten design principles have been developed, which have informed the design process of the Proposed Development.

The ten design principles, along with the brief and vision for the project outlined previously in Section 3, have guided the development of the project design and have ensured that the proposals have met the project objectives in achieving the design approach required to deliver a high quality and well considered solar farm on land at Cil-Lonydd Farm.



Typical Solar Farm Arrangement

<b>Design Principle 1</b>	Position the main components of the development to minimise any environmental impact
<b>Design Principle 2</b>	Incorporate opportunities for biodiversity enhancement into the design including the protection of field boundaries and existing groups of trees
<b>Design Principle 3</b>	Minimise the impact on natural resources including Best and Most Versatile agricultural land and allocated mineral resources
<b>Design Principle 4</b>	Provide a design that is functional, makes the best use of the location and provides efficient energy generation
<b>Design Principle 5</b>	Seek to assimilate the proposed development into the receiving landscape as far as possible and limit impact on the surrounding Sites of Importance for Nature Conservation (SINC)
<b>Design Principle 6</b>	Ensure safe and efficient access to the public highway during construction and operation
<b>Design Principle 7</b>	Protect and maintain the PRow network that both crosses through the Site and surrounds it
<b>Design Principle 8</b>	Seek to minimise any impact on the Nant Hafod-fach Stream
<b>Design Principle 9</b>	Ensure the design seeks to protect the general amenity of surrounding sensitive receptors in respect of noise and visual impacts
<b>Design Principle 10</b>	Ensure that the approach to design is an inclusive and iterative process.

# 7. Design Development

Design development is an iterative process and throughout the evolution of the project a number of site layout changes have been made. This section explains the various design decisions that have informed the layout alternations and demonstrates how the design principles, the brief and the vision for the project have been accounted for in the design process. The design changes have been guided by additional environmental and technical survey information becoming available throughout the Environmental Impact Assessment (EIA) process and also in response to feedback from the local community, statutory and non-statutory consultees and stakeholders, including the LPA, that was provided through PAC.

## Site Selection

The Applicant undertook a site selection process which was informed by technical site criteria as well as national policy and guidance including best practise advice as set out in 'Designing for Renewable Energy in Wales'. This includes the following criteria which informed the site selection process:

- Low-grade agricultural land
- Non-designated sites
- Solar Orientation
- Appropriate connection to the National Grid
- Adequate site access
- Landscape screening potential
- Low impact on surrounding settlements

The existing agricultural land at Cil-Lonydd Farm is not considered to be the best available for grazing and has a predictive agricultural land classification of Grade 4 - '*Land with severe limitations due to adverse soil, relief or climate (or a combination of these)*'.

As shown on the site constraints and opportunities plan, the application area does not contain any environmental land designations but does however abut the boundary of a neighbouring SINC, which will need to be carefully considered as part of the design process.

The fields across the Site are all orientated in a southeastern or southwestern direction meaning they are suitably located to maximise solar gain. The Site is also extremely well screened from nearby farms and properties therefore the Proposed Development should have a minimal impact on the surrounding settlements as well as on the Mynydd Maen Common.

There is existing electrical infrastructure in the local vicinity, which can provide a connection to the National Grid. The location of the Site also has good links with local areas proposed for data centres, therefore providing an opportunity for locally generated energy being used locally.

The proposals are also likely to have a low impact on ecology, archaeology and geology given the baseline condition of the site. The Site also has a low vulnerability to major accidents and disasters arising from, for example, flooding or sea level rise, due to its location within flood zone 1.

## Design Approach

Following the site selection process, the design approach to the Proposed Development has been informed by the technical, and site specific requirements as well as consultation with the Local Planning Authority and the general public. The design approach taken was optimised in order to maximise solar energy generation whilst minimising the impact on the environment as far as possible.

The design approach has been has been informed by a number of criteria:

- Site location and ground conditions / topography - panel arrays need to be mounted on support frames above the ground and angled to optimise the panel orientation to sunlight to maximise generating capacity.
- Scale of panel arrays - how they will be subdivided into fields of panels, the spacing between them as well as the planting of landscape strips (if required) between them.
- Landscape and visual design considerations - perimeter screening including additional hedgerow and screen planting should be used to limit any local impacts.
- Local environmental impacts - consideration should be given to minimise any impact on features and areas of local environmental sensitivity such as noise, ancillary plant etc
- Infrastructure - consideration of the siting and design of ancillary infrastructure including battery storage, access tracks and cable routes to minimise any impacts on the existing landscape character and setting of the Site.



## Design Evolution

The design of a solar farm is an iterative process and the layout has evolved during the project lifecycle in response to technical and environmental considerations as well as discussions with landowners, the local community and statutory and non-statutory consultees.

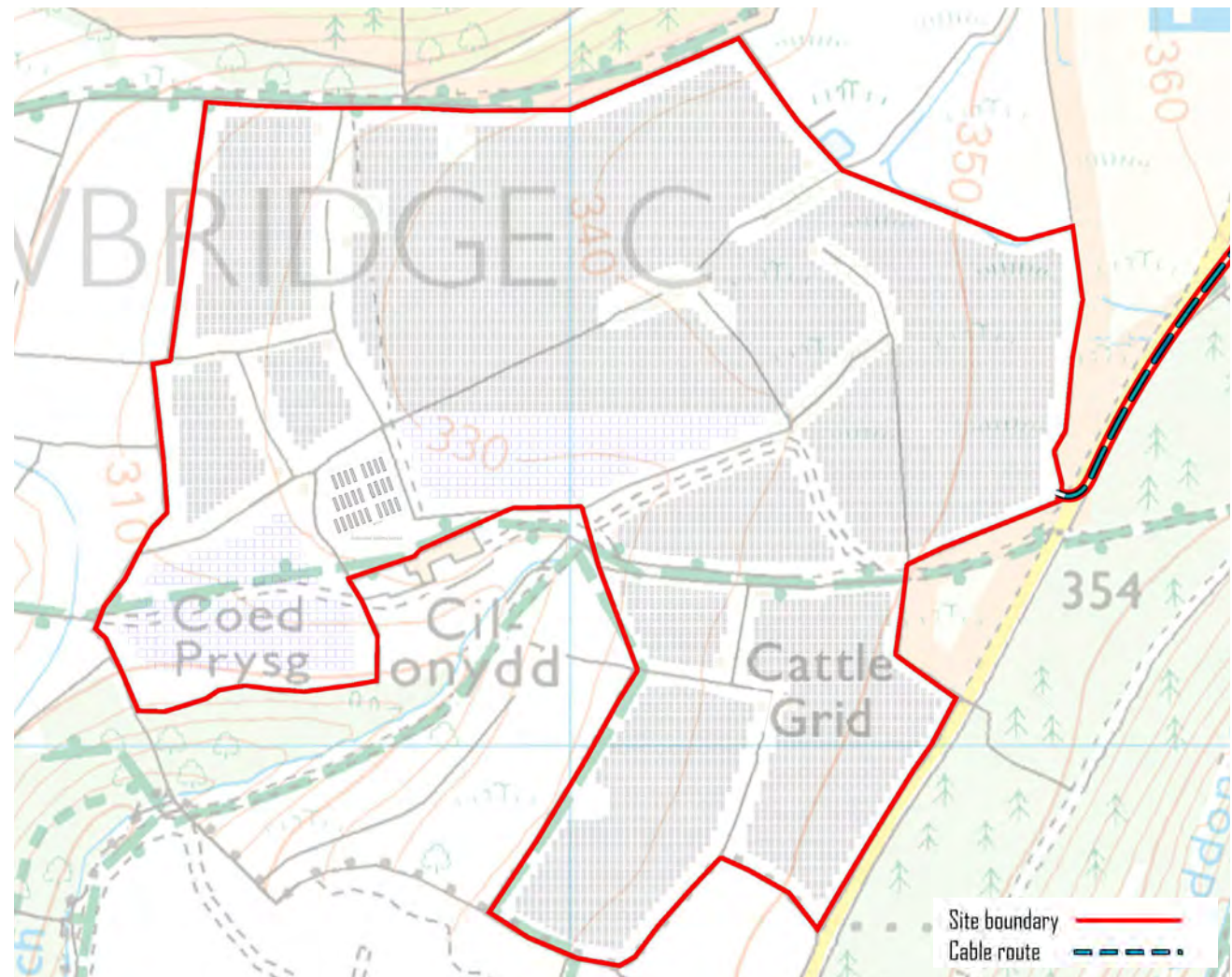
### Design Iteration 1 - Site Layout November 2023

The initial site layout opposite was produced based on known technical and environmental information as well as site analysis work that had been undertaken, as well as incorporating good design practice.

This layout was used as a starting point for discussions around the Proposed Development and was also used for initial engagement with the local community. A brochure was produced, which included this site layout and supporting information, and was circulated to the local community to invite comments and questions / clarifications.

The layout worked around the existing vegetation within the Site including field hedgerow boundaries and existing trees. The PRoW that runs across the site in an east / west alignment has also been retained with solar panel arrays set either side to maintain the route.

This initial layout was also used to inform environmental surveys and reports in respect of landscape, ecology and transport as part of the EIA process to support this DNS planning application.

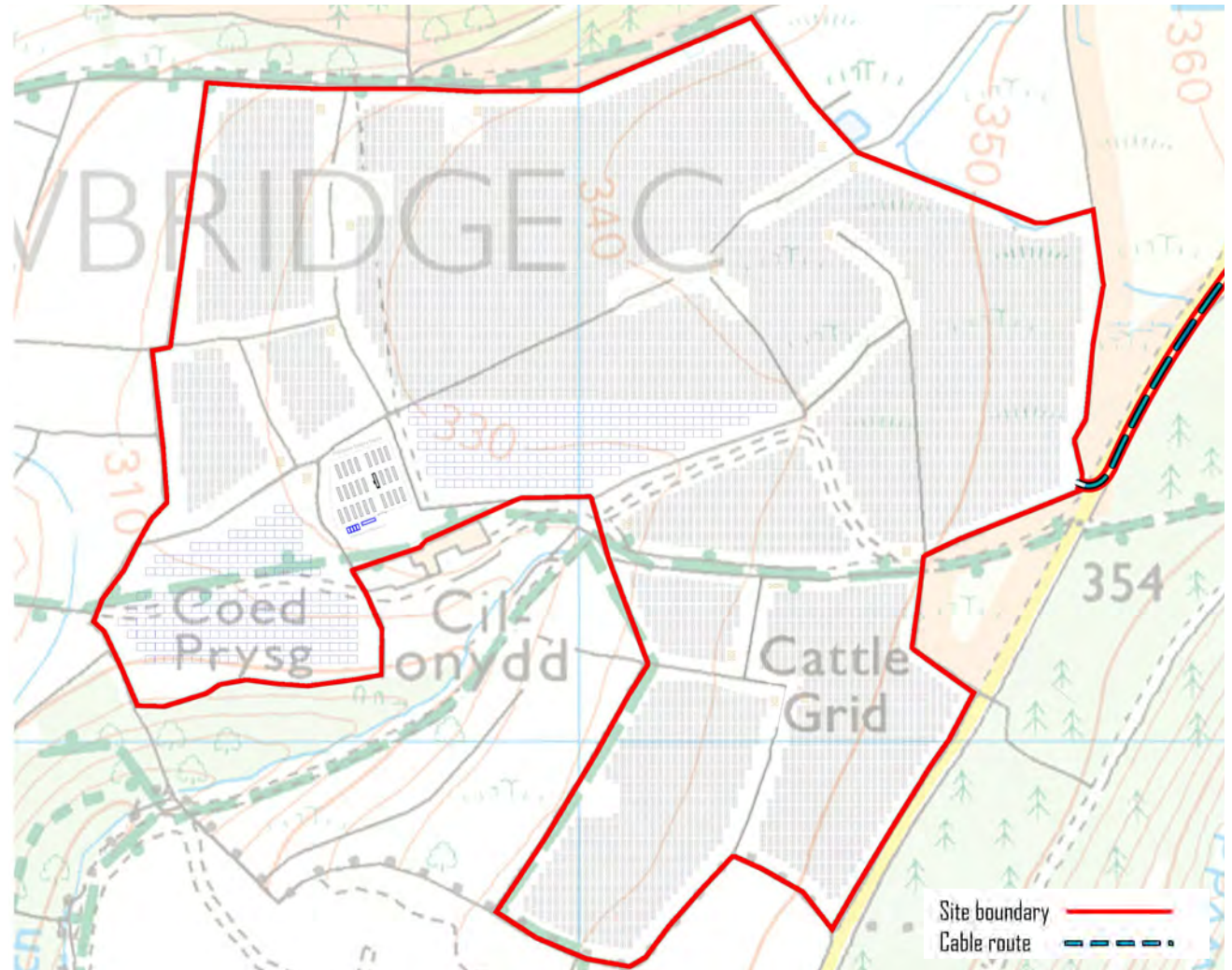
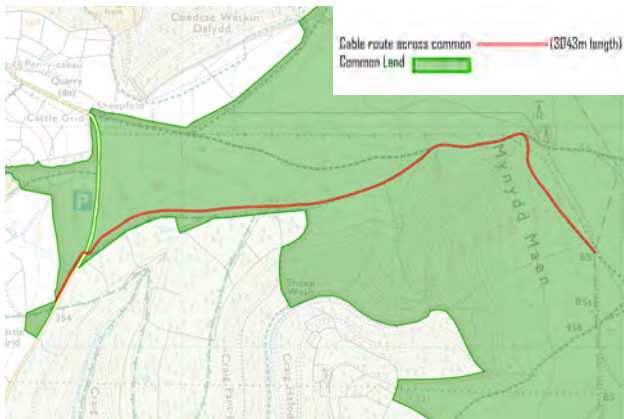


### Design Iteration 2 - Site Layout February 2024

The second site layout produced, as shown opposite, provided further detail around the battery storage area of the site by providing a parking area for maintenance access as well as a welfare unit.

There were no comments received from the initial consultation and engagement exercise in relation to the site layout so no further amendments were required at this time to the arrangement of the solar arrays.

The proposed cable trench route across the Mynydd Maen Common land to the east of the site was also confirmed as part of this design iteration and shown on the plan below. This makes use of existing tracks and informal routes in order to avoid impacting on existing vegetation within the area denoted as Common.





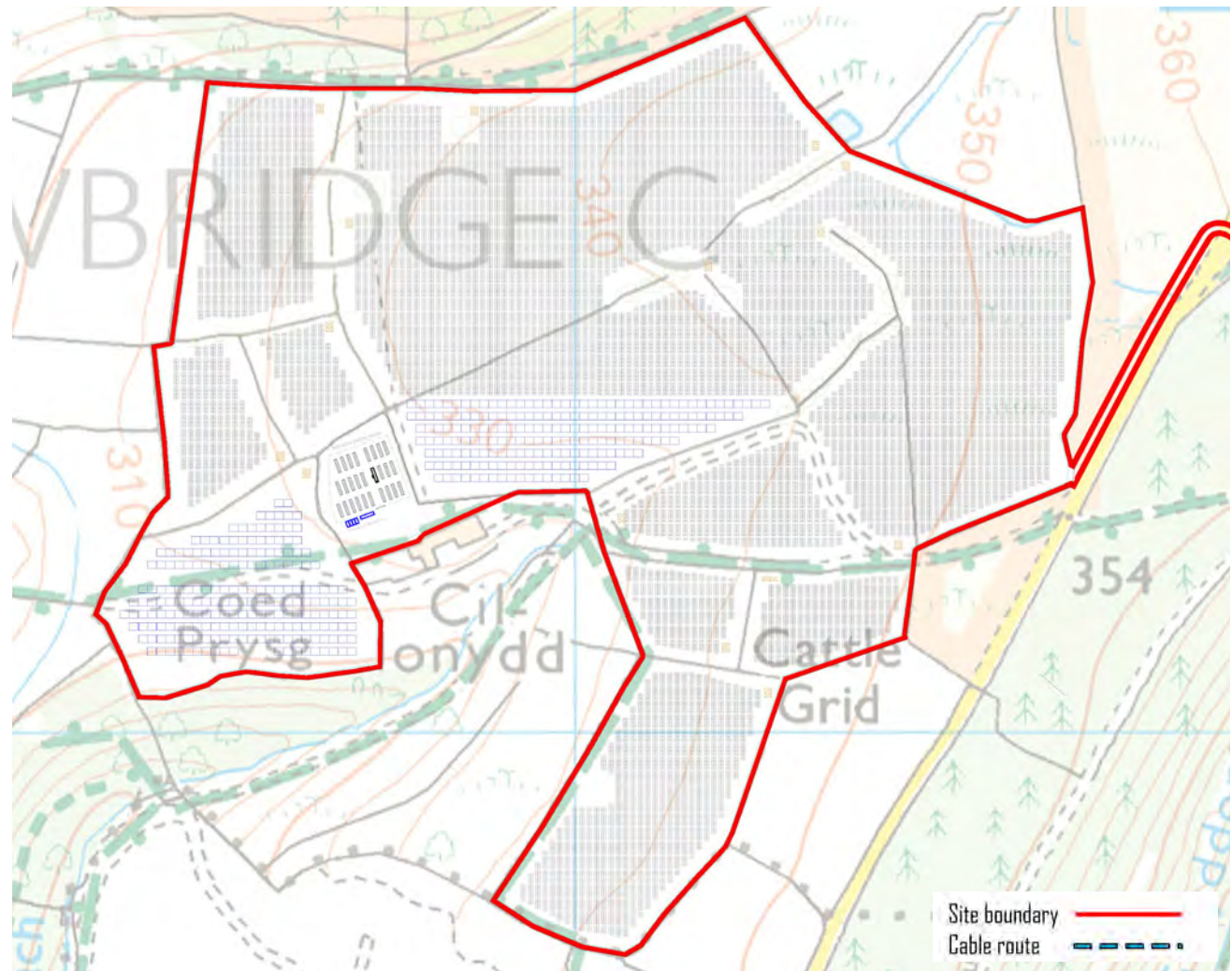
### Design Iteration 3 - Site Layout March 2024

Following further engagement with landowners involved in the site application area, there was a change to the redline boundary which involved the removal of a parcel of land at the southeast corner of the Site, as shown on the plan opposite.

The amendment has not materially affected the overall design approach to the Proposed Development other than slightly reducing the expected output down to an installed generation capacity of approximately 35 MW.

This change to the boundary does however have a positive benefit in terms of reducing possible landscape and visual impacts, particularly for road users on the local access track, which passes to the east of the site. This also allows for the opportunity for a landscape buffer zone to be introduced from the road to help further screen the Proposed Development.

This iteration was also used within a further consultation brochure circulated to the local public alongside the Pre-Application Consultation (PAC) process.



## Public Consultation and Engagement

The initial proposals for the site were included in a consultation brochure circulated to the local public in November 2023. This brochure was delivered to XXX households where views were sought on the emerging proposals.

ADD TEXT ON CONSULTATION RESPONSES

A second consultation brochure was produced and circulated again to local residents which included the updated development proposals and to inform local residents about the Pre-Application Consultation (PAC) process. This brochure was delivered to XXX households.

This brochure also pointed residents towards the virtual consultation room, which was created on the project website at [cil-lonyddsolar.co.uk](http://cil-lonyddsolar.co.uk).

ADD TEXT ON CONSULTATION RESPONSES



# 8. The Proposed Development

The following section of the document details the Proposed Development and how it meets the five objectives of good design as set out in PPW 12 in line with the Welsh Government’s DAS guidance.

The five objectives are:

**Character** - Sustaining or enhancing local character promoting legible design and a successful relationship between public and private spaces.

**Access** - Ensuring ease of access for all.

**Movement** - Promoting sustainable means of transport.

**Environmental Sustainability** - Ensuring the efficient use and protection of natural resources and enhancing biodiversity.

**Community Safety** - Ensuring attractive and safe public spaces.



## Character

The existing site (excluding the cable route) comprises 28.6ha of open agricultural land to the east of Newbridge and to the south of Hafodyrynys. The site is located on a westward sloping plateau in an elevated, uplands area on Mynydd Maen and is well screened by trees and existing vegetation from most viewpoints. The majority of the Site covers an upland area of improved pasture fields bounded by mature deciduous trees of varying density.

The Proposed Development would involve a temporary but reversible use of land throughout the operational phase with the proposed continual use of the site for agricultural purposes, including the grazing of sheep, which would provide a continuity of agricultural use alongside the generation of clean, renewable energy. The renewable energy will be exported to the Local Distribution Network providing energy to homes and business in the locality. Construction methods would have minimal physical impact, which allows for the relatively simple removal of the panels following the end of their operational phase. The land is then capable of being restored as close as reasonably practicable to its current condition, or better, following the period of general rest the land will have taken during the lifespan of the project.

The importance of renewable energy generation and its key role in the response to climate change is recognised at all levels of governance in Wales. Renewable energy generation supports the national economic objective to reduce dependency on fossil fuels and decentralise energy supply. The Welsh Government therefore considers that the wider benefits of renewable energy

schemes to society and the economy are significant and should be given significant weight by decision makers when reaching their decisions on individual planning applications. At a local level, CCBC declared a climate emergency in June 2019 with an aim to reduce the Council’s carbon emissions to net zero by 2030. This project contributes to these ambitions.

## Site Layout

The final site layout (Site Layout March 2024) has been designed to be sympathetic to the existing site environment and to be in keeping with the existing field patterns and structure. The existing field boundaries and bordering hedgerows and trees will be retained and strengthened to provide screening for the Proposed Development and to enhance habitat connectivity across the Site linking into the wider landscape. The final layout is a result of an in-depth design and consultation exercise, the evolution of which is documented in Section 7 of this document.

## Amount and Scale

The Proposed Development will have an installed generation capacity of approximately 35 MW with associated ancillary infrastructure, including battery storage. During its first year of operation, the electricity generated would be enough to power approximately 12,500 typical family homes for a year.

The point of grid connection is proposed to be located at an existing 132kV substation to the southeast on Mynydd Maen Common, which would be connected to the site by a cable route of 3km. The development is for a temporary period of 50 years and will be fully reversible at the end of its life span.



### Solar Photovoltaic (PV) Panels, Mounting Frames, String Inverters and Transformers

The Solar PV panels are fixed panels which will be positioned at a 'fixed' tilt in an east / west or south facing orientation. There are no moving elements associated with the panels. They will be arranged in a series of rows known as arrays.

The east / west facing panels will sit approximately 0.7m off the ground with an overall height of 1.4m at the highest point. The south facing panels will be up to a height of 2.729m at the highest point and tilted southwards at an angle of 15 degrees. The lower edges of the panels will sit at 1m above ground.

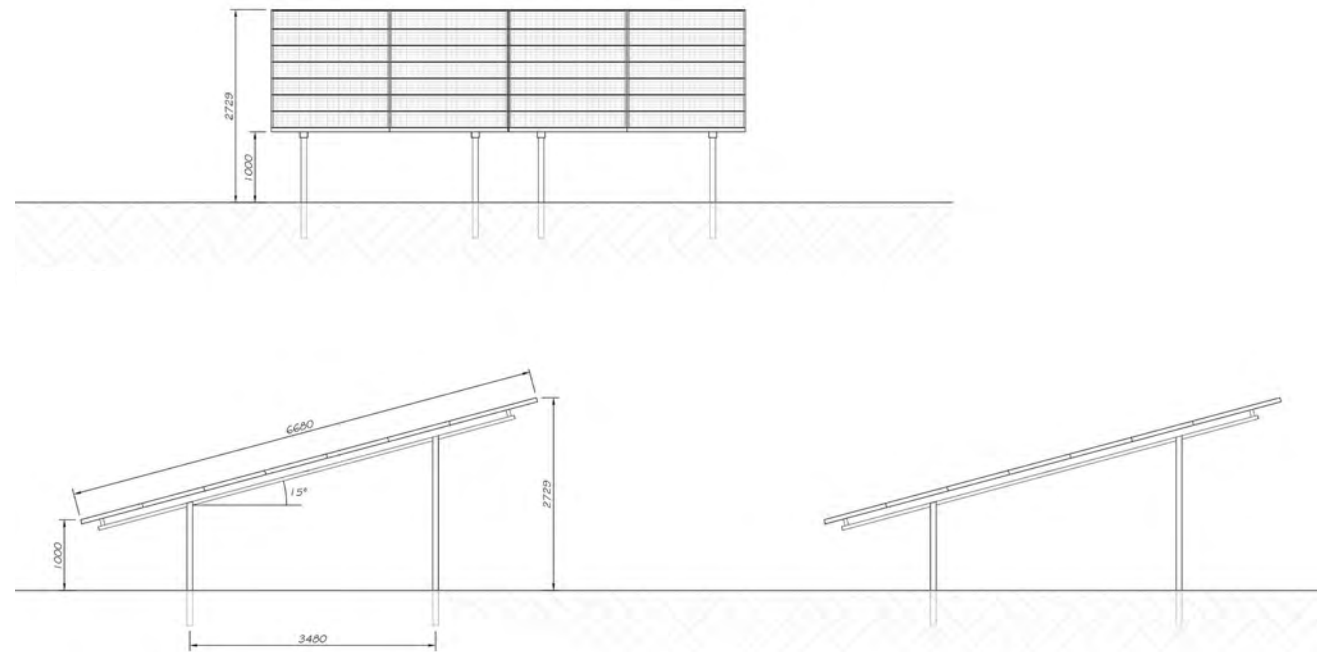
The positioning of the PV arrays is determined by existing physical features (e.g. topography, vegetation) and separation distances are provided between the rows to avoid inter-shading.

The positioning of the array is also designed to avoid physical features such as ditches, water pipes, electrical overhead lines, rights of way, biodiversity and archaeological considerations and tree root protection areas. The distance to features, and the layout of the array, has been guided by technical studies and consultation with the relevant bodies.

Across the Site, the metal frames or mounting structures for the panels will be installed by piled technique and there would be no significant ground works required with this installation method.

Where piled foundations are used, the metal framework that houses the solar modules would be fixed into the ground by posts. The posts will be driven into the ground (by either direct piling or screw piling) to a depth of around 1.5-2m, dependent on localised ground conditions. The solar panels require no sub surface foundations and are designed to be reversible leaving no trace when removed.

To enable the solar energy to be exported to the grid, a number of inverters and transformers are required and are appropriately spaced across the Site. 'String' inverters will be mounted onto the support frames and will not require any additional foundations. The transformers will be housed in Glass Reinforced Plastic (GRP) containers and will be in a suitable pantone colour that can be agreed with CCBC.

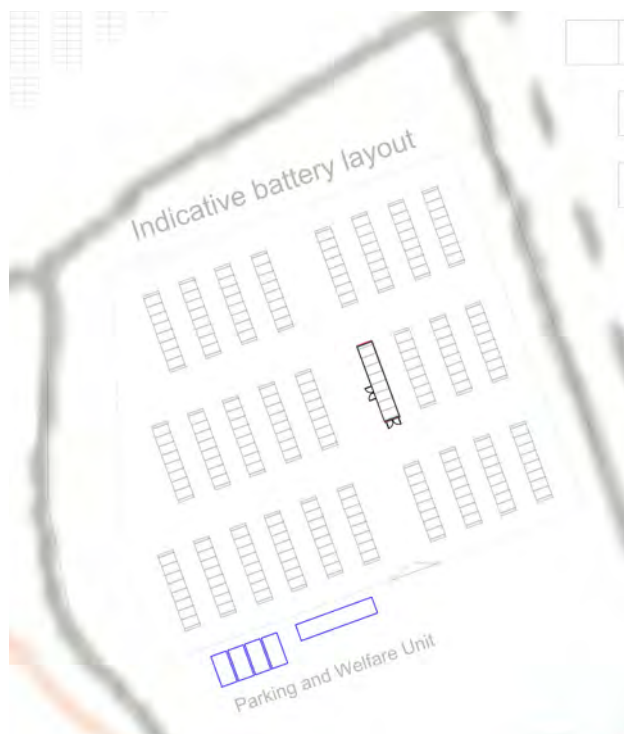


*South Facing Solar Panel Design*

## Battery Storage

As part of the Proposed Development, a 40 MWh battery storage facility will also be included, which will store any surplus electricity generated by the solar panels during daylight hours and then release it into the network when needed.

An indicative layout is included on the proposed site plan, an extract of which is below:



## Cabling

The cable route will be approximately 3km in length and will traverse the Mynydd Maen Common land. This will share the substation with Mynydd Maen Wind Farm.

A secondary application under Section 38 of the Commons Act will be submitted to enable temporary works to be carried out during construction of the Proposed Development.

Trenches of approximately 1m deep and 0.5m wide are required for the underground cabling.

## Perimeter Fencing

A 2m high security fence will be installed around the Site to protect the solar panels from theft or vandalism and damage. The fencing will be post and wire 'deer' fencing and will provide gaps at ground level (known as mammal gates) to allow for ecology to freely enter and exit. In addition, column mounted infra red CCTV security cameras will be provided inside the site, which will face the site and monitor the integrity of the fence. CCTV columns will be positioned at intervals around the perimeter fence.

## Lighting

There will be no use of artificial lighting during operation that could adversely affect field boundary habitats and / or adjoining woodland. Some temporary task lighting may be required during construction and decommissioning depending on the time of year and sunlight levels.

The solar farm will cause a minimal amount of potential for redirection of light in terms of glint and glare via the surface of the panels. Any effects would be localised and unlikely to be of a magnitude that would be significant in environmental terms. Accordingly, a Glint and Glare Assessment has been undertaken and forms part of the DNS planning application.

## Noise

An operational noise assessment for the Proposed Development has been undertaken. Noise predictions of the proposed operation of the solar farm have been assessed against the results of a baseline noise survey, which indicates that the operation of the solar farm would result in a low impact at nearby noise-sensitive receptors.

## Appearance and Design

The solar farm is low lying in nature, typically shorter in height than the many existing mature trees and hedgerows around the site.

The design and appearance will be a more modern and obvious human influence on the landscape compared to that currently formed by industrialised agriculture. Whilst construction would cover a wide area, the works would be temporary and the Proposed Development will be considerably less solid and durable in appearance than traditional buildings. This would mitigate against the likely change in the character of the landscape. The development will be removed within the 50 year lifetime enabling the Site to return to its former agricultural character and appearance.



## Access

Site access will be taken from the A472 at Hafodyrynys, entering the Site from the eastern boundary, utilising the existing access track.

This access point will be used for the construction, maintenance and decommissioning of the Proposed Development. 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.

The Proposed Development will cause limited impacts on the local road network in terms of the construction phase. The application is accompanied by a Construction Traffic Management Plan (CTMP). The CTMP includes, amongst other things, details of the proposed construction vehicle movements and types of vehicles, details of the proposed access junction arrangement, visibility splays (where relevant), details of the proposed haulage route and its suitability, details of traffic management measures to be adopted, construction working hours and duration of works.

It is not expected that visitors for maintenance purposes will access the Site via public transport due to the need to transport equipment and tools, for example.

Given the type of development proposed, it is not designed to enable access for members of the public regardless of levels of mobility. Therefore, specific provisions for disabled access have not been incorporated into the design, although any new

onsite tracks will be capable of being used by the public and will be designed to provide safe and appropriate access, they will not be designed for the purpose of enabling access for all.

There is an existing PRoW that crosses the Site and as such, there is potential for disruption to this route during the construction phase, with some limited interventions such as signage, diversion or a possible temporary closure required.



## Movement

The solar farm and associated ancillary infrastructure such as the battery storage, will only be accessed by construction personnel and maintenance teams, who will periodically attend the site to maintain the panels etc.

As previously stated, given the type of development proposed, the opportunity for site personnel to visit the Site by public transport is not viable. Additionally, the distance to the established public transport network and the lack of footway connections to local amenities and services means that travel by alternative sustainable modes is unlikely to be chosen. The opportunity for car-sharing is an option that can be promoted.

The public has access to the Site via the PRoW network. This will be managed through appropriate measures, as set out in the Construction Environmental Management Plan (CEMP) which includes a PRoW management plan / strategy for the duration of the construction works. Following construction, the impact on the PRoW should be minimal with the access being used occasionally by routine maintenance vehicles.



View looking west along the existing PRoW which runs through the Site





## Environmental Sustainability Renewable Energy and Climate Change

The Welsh Government has set a target of 70% of all energy consumption by 2030 is to be provided by renewable energy sources. In January 2023 the Government announced an updated target to meet 100% of Wales' energy needs from renewable energy sources by 2035.

The proposed solar farm will use a natural renewable resource in solar radiation, to generate electricity. This will offset requirements for the use of fossil fuel derived electricity, which in the case of this development will be the equivalent of approximately 12,500 households per year.

The proposed development will contribute towards UK and Welsh Government renewable energy and carbon reduction targets and provide cost effective and clean electricity. The Proposed Development is compliant with national and local environmental sustainability objectives and policies.

The design approach to the site layout has been influenced by the most optimal scheme for solar power generation, taking into account panel orientation to achieve the best solar gain.

The design of the site layout also responds to the existing site conditions, whilst balancing the effects arising from construction and operation. The final site layout was found to be the most sustainable and appropriate for the type of development proposed.

## Landscape and Visual Amenity

The site layout has been designed to integrate into the local topography in order to minimise the potential visual impact of the Proposed Development, as well as providing sufficient screening of the development through the use of native trees and hedgerow planting and enhancement. It is acknowledged however, that the Proposed Development on land at Cil-Lonydd Farm will have an impact on the South Wales Valleys Landscape Character Area (LCA) and the Abercarn Visually Important Local Landscape (VILL). The assessment of this impact is covered within the accompanying Landscape and Visual Impact Assessment (ES Chapter 5), which concludes that there will be no significant effects on the qualities of the LCA and VILL as a result of the proposed development during construction or during operation.

Regarding Visual Amenity, the assessment concludes that the overall visual effects of the Proposed Development would be very noticeable from some viewpoints and routes in close proximity to the Site. The visual effects of the Proposed Development would diminish with distance from the Site as well as with intervening screening effects of landform and vegetation which limit views.

## Biodiversity and Habitat Enhancement

Landscape and biodiversity mitigation has been embedded into the overall site design from the outset and has been formulated to minimise potential landscape and visual impacts and maximise enhancement of landscape features, landscape character and biodiversity of the Site. Habitat creation and ongoing management practices are proposed, that will enhance the operational Site for biodiversity.

The design and long-term management of the solar farm seeks to maintain and improve habitat functionality through protecting and enhancing potentially valuable wildlife corridors. This would be achieved through strengthening the hedgerow and woodland network within and around the Site. Habitat enhancement measures include new native hedgerow, tree and woodland planting and reinforcing existing hedgerows with native planting and the creation of species diverse grassland. Chapter 6 in the accompanying ES submitted with this DNS planning application provides more detail on biodiversity and habitat enhancement.



## Community Safety

The typical security issues for a development of this nature may include:

- Acts of criminal damage during the construction and operational phases;
- Theft of components during the construction and operational phases; and,
- Theft of components during site restoration.

To manage construction and restoration related security matters, a secure temporary compound will be used to store materials and ancillary welfare facilities during the construction period.

During operation, a 2m high security fence will be installed around the Site to protect the solar panels from theft or vandalism and damage. The fencing will be post and wire 'deer' fencing and will provide gaps at ground level (known as mammal gates) to allow for ecology to freely enter and exit.

# 9. Conclusion

The importance of renewable energy generation and its key role in the response to climate change is recognised at all levels of governance in Wales. Renewable energy generation supports the national economic objective to reduce dependency on fossil fuels and decentralise energy supply. The Welsh Government therefore considers that the wider benefits of renewable energy schemes to society and the economy are significant and should be given substantial weight by decision makers when reaching their decisions on individual planning applications. At a local level, CCBC declared a climate emergency in June 2019 with an aim to reduce the Council's carbon emissions to net zero by 2030. This project contributes to these ambitions.

The design and access considerations of the Proposed Development have been proportionately addressed and the layout has been designed sensitively in keeping with existing topography and the landscape. Landscape assessments have recognised the potential of the scale of the Proposed Development to cause localised change. However, through effective mitigation the Proposed Development will not have unacceptable adverse impacts on the visual or amenity value or character of the local or wider countryside by way of its siting, scale, form, massing or appearance.

The design of the Development has gradually evolved throughout the iterative design stage to respond to the suite of detailed technical surveys and studies undertaken to support this DNS planning application. In addition, the design has responded to the comments and responses received from the local community as part of an inclusive pre-application public consultation exercise and the comments received from statutory and non-statutory consultees through PAC.

The Proposed Development is compliant with the relevant provisions of the CCBC Local Development Plan Policy SP2 Development Strategy through the promotion of sustainable development and Policy SP6 Place Making by ensuring that the development proposals contribute to creating sustainable places by having full regard to the context of the local, natural environment. The Proposed Development also conforms to the requirements of Policy CW3 Design Considerations - Highways through satisfying highway design requirements and Policy CW4 Natural Heritage Protection through the conservation of distinctive landscape features and ecological designations.

The Proposed Development incorporates a detailed landscaping strategy which seeks to provide and enhance natural screening, particularly when coupled with the existing natural containment of the Site, limits any available views into the Site. This, together with the measures that have been incorporated into the design to enhance and encourage the ecological diversity of the Site, will ensure that at the end of the projects lifespan the Site can not only be restored to its current use, but will also be likely to have been improved.

Overall, as demonstrated within this DAS and the supporting Planning Statement, the Development meets the requirements of PPW 12 and the presumption in favour of sustainable development and is compliant with the relevant policies of the adopted CCBC Local Development Plan.







The importance of renewable energy generation and its key role in the response to climate change is recognised at all levels of governance in Wales.

Cil-lonydd Solar is an innovative renewable energy scheme that in addition to producing 35MW of clean, green energy will also bring a wide-range of benefits to the local community.



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