

# MAES MAWR SOLAR FARM PLANNING STATEMENT



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## REPORT

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# 1 INTRODUCTION

- 1.1 RPS is instructed by Elgin Energy EsCo Limited to submit a planning application for solar photovoltaic electricity generating station ('solar farm') and associated ancillary development at Maesmawr on land between Church Village and Treforest Industrial Estate in the administrative area of Rhondda Cynon Taff County Borough Council (RCTCBC)
- 1.2 The Maesmawr Solar Farm will have an installed generation capacity of approximately 30MW with the power generated being fed into the electricity distribution network. The proposal is fully reversible at the end of its 40-year life.

## Background to the Application

- 1.3 National Grid anticipates annual electricity demand in the UK could increase from 330 TWh in 2020 to up to 627 TWh in 2050, an increase of 90%. Similarly, peak demand in 2019 of 59 GW could increase to up to 96 GW, an increase of 63% over the same period. There is therefore an urgent need to increase electricity capacity in the UK to ensure a secure and stable supply in the future and achieve renewable energy and net zero targets.
- 1.4 Wales has set a target that by 2030 renewables are to generate electricity equal to 70% of its consumption. Currently, it is estimated up to 51% of electricity consumption in Wales is from renewables. It has set a further target for Wales to achieve a 95% reduction in greenhouse gas emissions by 2050 with an ambition to go beyond the target and achieve 'net zero'.
- 1.5 2019 also saw the Welsh and UK Governments declare 'climate emergencies', recognising the potentially catastrophic consequences of global warming on ecosystems and human populations. Consequently, there is an urgent need to install new zero-carbon electricity generating stations in Wales and beyond.
- 1.6 Solar energy is the most abundant energy source on earth. It is estimated that the sun transmits enough energy to the surface of the planet in 1.5 hours to power its entire human population's energy needs for a year. Solar therefore represents a key achievable way of meeting the global human population's electricity needs while combating climate change and its consequences.
- 1.7 The key benefit solar has over other energy sources is that a solar installation can be constructed and operational within a matter of months. Whereas other technologies require several years to reach full operational capacity. In addition, solar is relatively low environmental impact (both visually and in terms of biodiversity in comparison to most other energy sources) and a proven safe and stable technology.

## Community Involvement

[TEXT TO BE INSERTED FOLLOWING CONSULTATION]

## Planning History

- 1.8 As mentioned above, the application site lies within the administrative area of RCTCBC, the Local Planning Authority (LPA). RCTCBC's online records reveal no planning history associated with the site.
- 1.9 However, of relevance to this application is the planning permission (14/1014) granted in 2014 for a photovoltaic solar park (4.86MW) and ancillary development adjacent to the application site at Maes Bach, Willowford Road, Tonteg, Pontypridd, CF38 1SL. The development was permitted cognisant of its position:

- Outside the settlement boundary;
- Within the Efail Isaf, Garth and Nantgarw Western Slopes Special Landscape Area;
- Within a Coal High Risk Development Area;
- Within a Mineral Safeguarding Area for sandstone; and
- Within a Mineral Safeguarding Area for coal resource.

1.10 Similar, albeit fewer, designations relate to the application site as summarised later in this document.

### Site Description

1.11 The site is located on land between Church Village and Treforest Industrial Estate, to the east is the main railway line linking Cardiff and the Valleys. To the west lies the A473. For a more detail location please see drawings JPW1546-DNS-003 and 004.

1.12 The site itself extends to approximately 40 hectares (98.8 acres) (including the cable route) and consists of several parcels of land. The parcels are irregular in shape and comprise a series of agricultural fields of varying sizes. They are currently primarily used for pasture grazing, bound by a mixture of mature woodland, trees and hedgerows.

### The Proposed Development

1.13 The application proposes the installation of a solar photovoltaic electricity generating station (or 'solar farm') with an installed generation capacity of approximately 30MW and associated ancillary development, including a substation. The power generated would be enough to power approximately 7,000 typical family homes and result in an approximate saving of 360,000 tonnes of CO2 per annum.

1.14 Should the application be approved, the solar farm will generate electricity every day of the year for its anticipated lifespan of 40 years, following which the site will be decommissioned and can be returned to agricultural use.

1.15 The main components of a solar farm are:

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

1.16 In addition, the solar farm will also comprise a new access, internal access tracks, fencing, security measures, underground (on site) cabling and a grid connection cable which will connect the site to the point of connection at the existing Western Power Distribution (WPD) substation to the northeast within the Treforest Industrial Estate.

### Key Benefits

1.17 The proposal will result in several key benefits, including:

- Safe, stable and affordable electricity for approximately 7,000 homes;
- The abatement of over 36020,000 tonnes of carbon dioxide over the lifetime of the project;
- Contributing to sustainable development and government carbon reduction targets;
- Increased revenue from the energy sector to be spent in the local economy;
- The construction phase will result in jobs and increased expenditure in local shops, eating and drinking establishments and overnight accommodation; and
- The maintenance of the site will generate further opportunities for employment.

1.18 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 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.

1.19 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.

## 2 PLANNING POLICY CONTEXT

- 2.1 Legislation, national and local planning policies relevant to the proposed development are summarised below.
- 2.2 Future Wales - the National Plan 2040, published February 2021 ('Future Wales'), Planning Policy Wales, Edition 11 published February 2021 ('PPW'), and the accompanying Technical Advice Notes (TANs) set out the national planning policies of the Welsh Government. Following the publication of Future Wales, TAN8: Renewable Energy has been revoked and there is no longer an energy-specific TAN.
- 2.3 The relevant Development Plan for the proposed development is Future Wales and the Rhondda Cynon Taf (RCT) Local Development Plan, adopted March 2011 (the 'LDP').
- 2.4 A summary of relevant planning policies and guidance is provided below.

### Future Wales – the National Plan 2040 (February 2021)

- 2.5 Future Wales is the national development framework, setting the direction for development in Wales to 2040. It addresses key national priorities, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of communities.
- 2.6 Regarding climate change, Future Wales recognises that changes to our climate and weather patterns will have a significant impact on well-being on both current and future generations. Increasing temperatures and extreme weather events are putting pressure on ecosystems, infrastructure, built environment and our unique landscape and cultural heritage, which all contribute to social, economic and ecological resilience.
- 2.7 Climate change is identified as an equality issue as it will disproportionately affect the most vulnerable communities in Wales and the wider world. This is despite the most vulnerable communities historically contributing least to the problem of climate changing emissions. Vulnerable communities are more likely to be exposed to the risks and impacts of climate change without the ability to cope with or recover from those impacts.
- 2.8 It is noted that it is vital that we reduce our emissions to protect our own well-being and to demonstrate our global responsibility. Future Wales together with PPW will ensure the planning system focuses on delivering a decarbonised and resilient Wales through the places we create, the energy we generate, the natural resources and materials we use and how we live and travel.
- 2.9 Regarding energy generation, Future Wales identifies that Wales can become a world leader in renewable energy technologies. Wales' wind and tidal resources, potential for solar generation, its support for both large and community scaled projects and commitment to ensuring the planning system provides a strong lead for renewable energy development means it is well placed to support the renewable sector, attract new investment and reduce carbon emissions.
- 2.10 Future Wales contains two policies (17 and 18) of specific relevance to the proposed development.
- 2.11 **Policy 17 – Renewable and Low Carbon Energy and Associated Infrastructure** – expresses strong support for the principle of developing renewable and low carbon energy from all technologies and at all scales to meet our future energy needs. The policy states that in determining planning applications for renewable and low carbon energy development, decision-makers must give significant weight to the need to meet Wales' international commitments and our target to generate 70% of consumed electricity by renewable means by 2030 in order to combat the climate emergency.



- 2.12 In respect of large-scale solar, Policy 17 states that all proposals should demonstrate that they will not have an unacceptable adverse impact on the environment. It also expects proposals should describe the net benefits the scheme will bring in terms of social, economic, environmental and cultural improvements to local communities. New strategic grid infrastructure for the transmission and distribution of energy should be designed to minimise visual impact on nearby communities.
- 2.13 **Policy 18 – Renewable and Low Carbon Energy Developments of National Significance** – deals with Developments of National Significance ('DNS'). It is a criteria-based policy which states that such developments will be permitted (subject to policy 17) and the following:
1. Outside of the Pre-Assessed Areas for wind developments and everywhere for all other technologies, the proposal does not have an unacceptable adverse impact on the surrounding landscape (particularly on the setting of National Parks and Areas of Outstanding Natural Beauty);
  2. there are no unacceptable adverse visual impacts on nearby communities and individual dwellings;
  3. there are no adverse effects on the integrity of Internationally designated sites (including National Site Network sites and Ramsar sites) and the features for which they have been designated (unless there are no alternative solutions, Imperative Reasons of Overriding Public Interest (IROPI) and appropriate compensatory measures have been secured);
  4. there are no unacceptable adverse impacts on national statutory designated sites for nature conservation (and the features for which they have been designated), protected habitats and species;
  5. the proposal includes biodiversity enhancement measures to provide a net benefit for biodiversity;
  6. there are no unacceptable adverse impacts on statutorily protected built heritage assets;
  7. there are no unacceptable adverse impacts by way of shadow flicker, noise, reflected light, air quality or electromagnetic disturbance;
  8. there are no unacceptable impacts on the operations of defence facilities and operations (including aviation and radar) or the Mid Wales Low Flying Tactical Training Area (TTA-7T);
  9. there are no unacceptable adverse impacts on the transport network through the transportation of components or source fuels during its construction and/or ongoing operation;
  10. the proposal includes consideration of the materials needed or generated by the development to ensure the sustainable use and management of resources;
  11. there are acceptable provisions relating to the decommissioning of the development at the end of its lifetime, including the removal of infrastructure and effective restoration.



- 2.14 Policy 18 also requires that the cumulative impacts of existing and consented renewable energy schemes should also be considered.
- 2.15 In addition to topic-based policies, Future Wales establishes four regions and policies appropriate to them. RCT is within the 'South-East' region in which it is noted that decarbonisation and responding to the threats of the climate emergency should be central to all regional planning.
- 2.16 There is strong potential for wind, marine and solar energy generation and Strategic and Local Development Plans should provide a framework for generation and associated infrastructure. The Welsh Government wishes to see energy generation, storage and management play a role in supporting the South-East economy. Local ownership and distribution is important for ensuring communities in proximity to renewable energy development benefit from it and that the future energy system better serves Wales.

### Planning Policy Wales, Edition 11 February 2021

- 2.17 PPW has been recently updated in light of the publication of Future Wales. It remains centred around the well-being goals set out in the Well-being of Future Generations Act 2015 ('WBFGA'). These are:
1. A prosperous Wales;
  2. A resilient Wales;
  3. A healthier Wales;
  4. A more equal Wales;
  5. A Wales of cohesive communities;
  6. A Wales of vibrant culture and thriving Welsh Language;
  7. A globally responsible Wales.
- 2.18 PPW sets out five 'Key Planning Principles' (page 17), the fifth of which concerns 'Maximising environmental protection and limiting environmental impact' and states:
- "Natural, historic and cultural assets must be protected, promoted, conserved and enhanced. Negative environmental impacts should be avoided in the wider public interest. This means acting in the long term to respect environmental limits and operating in an integrated way so that resources and/or assets are not irreversibly damaged or depleted. The polluter pays principle applies where pollution cannot be prevented and applying the precautionary principle ensures cost effective measures to prevent environmental damage." (our emphasis)*
- 2.19 Section 5.7 of PPW – 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.
- 2.20 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.

- 2.21 Paragraph 5.7.5 highlights that planning applications for onshore generating projects in Wales which have an installed generation capacity of between 10MW and [3]50MW [sic] (there is no upper limit for onshore wind generating stations) are made directly to the Welsh Ministers under the DNS process and considered under policies in Future Wales.
- 2.22 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.
- 2.23 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.” (our emphasis)*
- 2.24 In terms of delivery, Paragraph 5.7.7 goes on to state that the planning system should (inter alia):
- 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;
  - maximise renewable and low carbon energy generation.
- 2.25 Paragraph 5.7.8 states an effective electricity grid network is required to fulfil the Welsh Government's renewable and low carbon ambitions. It advocates an integrated approach towards planning for energy developments and additional electricity grid network infrastructure. In certain circumstances, additional electricity grid network infrastructure will be needed to support the Pre-Assessed Areas in Future Wales, but also new energy generating developments more generally.
- 2.26 PPW paragraph 5.7.14 confirms that the Welsh Government targets for the generation of renewable energy are:
- Wales to generate 70% of its electricity consumption from renewable energy by 2030;
  - One Gigawatt of renewable electricity capacity in Wales to be locally owned by 2030; and
  - New renewable energy projects to have at least an element of local ownership by 2020.
- 2.27 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.

2.28 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.

2.29 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.

2.30 Paragraph 5.9.22 states developers should take an active role in engaging with the local community on renewable energy proposals. This should include pre-application discussion and provision of background information on the renewable energy technology that is proposed.

2.31 Paragraph 5.9.24 states the Welsh Government supports renewable and low carbon energy projects that provide proportionate benefit to the host community or Wales as a whole.

2.32 Paragraph 5.9.25 states the social, environmental and economic (including job creation) benefits associated with any development should be fully factored into and given weight in the decision-making process.

2.33 Paragraph 5.9.26 states that there are significant opportunities to achieve local benefits through renewable energy developments. Some benefits can be justified as mitigation of development impacts through the planning process. In addition, developers may offer benefits not directly related to the planning process. Local authorities, where practical, should facilitate and encourage such proposals.

## Development Plan

2.34 The Development Plan for the site is Rhondda Cynon Taf (RCT) Local Development Plan (LDP), adopted March 2011.

2.35 The LDP Proposals Map indicates that the site is subject to/affected by a few specific designations. These are set out in the policies listed below.

- 2.36 From a sustainability perspective, it is important to ensure that all new development is energy efficient, and the energy used is sourced in the most sustainable way and as near to where it will be used as possible. RCT is sufficiently far south to be able to benefit from electricity generation from photovoltaics, and the LDP promotes making use of this opportunity.
- 2.37 The LDP has a number of policies relevant to the proposal and summarised below.
- 2.38 **Policy AW8 Protection and Enhancement of the Natural Environment** states that RCT's distinctive natural heritage will be preserved and enhanced by protecting it from inappropriate development. It goes on to say that development proposals should not harm the features of Sites of Importance for Nature Conservation (SINCs) or Regionally Important Geological Sites (RIGS) or other locally designated sites. The policy also mentions that development should not have an unacceptable impact upon features of importance to landscape or nature conservation.
- 2.39 **Policy AW10 – Environmental Protection and Public Health** states that developments will not be permitted where they would cause or result in a risk of unacceptable harm to health and or local amenity.
- 2.40 **Policy AW 12 – Renewable and Non- Renewable Energy** requires that development proposals which promote the provision of renewable and non-renewable energy will be permitted where it can be demonstrated that there is no unacceptable effect upon the interests of soil conservation, agriculture, nature conservation, wildlife, natural and cultural heritage, landscape importance, public health and residential amenity.
- 2.41 **Policy AW 14 – Safeguarding of Minerals** states that mineral resources shall be safeguarded from any development which would unnecessarily sterilise them or hinder their extraction.
- 2.42 **Policy SSA 23 – Special Landscape Areas** states that development within the defined Special Landscape Areas will be expected to conform to the highest standards of design, siting, layout and materials appropriate to the character of the area.

### 3 KEY PLANNING CONSIDERATIONS

3.1 Having regard to the positive planning policy context in respect of renewable energy development set out above, it is clear that a presumption in favour of sustainable development exists in respect of the proposal, particularly under the considerations set out under PPW. However, the planning policy context indicates that any planning application must address the following key issues:

- Agricultural land classification;
- Landscape and visual impact;
- Highways and traffic (in respect of temporary construction works);
- Historic environment impacts;
- Glint and glare;
- Ecology;
- Ground conditions including mineral sterilisation;
- Hydrology and flood risk; and
- Cumulative impact.

3.2 The key issues with reference to specific reports, as necessary, are considered below.

#### **Agricultural Land Classification (ALC)**

3.3 Paragraph 3.58 of PPW states that land of grades 1, 2 and 3a of the DEFRA ALC system is the best and most versatile and should be conserved as a finite resource for the future. Development plan policies and development management decisions should give considerable weight to protecting such land from development, because of its special importance. Land in grades 1, 2 and 3a should only be developed if there is an overriding need for the development and either previously developed land or land in lower agricultural grades is unavailable, or available lower grade land has an environmental value recognised by a landscape, wildlife, historic or archaeological designation which outweighs the agricultural considerations. If land in grades 1, 2 or 3a does need to be developed, and there is a choice between sites of different grades, development should be directed to land of the lowest grade.

3.4 The accompanying ALC Report (document reference: OXF 11632) concludes that the site comprises almost entirely lower quality agricultural land, with some areas of very poor grade 4 and 5 land.

3.5 In summary, one of the fundamental principles of planning for solar farms and site selection is that it is located on land that does not does not comprise any of the “best and most versatile” agricultural land. The site comprises, predominantly lower quality grade 3b, 4 and 5 land as defined in the MAFF 1988 ALC guidelines.

3.6 Consequently, there is no reason having regard to agricultural land why the proposed development should not proceed as it is in accordance with PPW paragraph 3.58 in this regard.

## Landscape and Visual

- 3.7 The accompanying Landscape and Visual Impact Assessment (LVIA) and the Landscape Chapter of the Environmental Statement (ES) concludes that the site sits within an enclosed landscape with substantial vegetative cover, which would be retained and enhanced as part of the proposed development. There would be no substantial earthworks required altering the varied topography. Also, given the existing character of the landscape, which includes the existing Maes Bach Solar Farm, there are not anticipated to be any significant effects upon the local landscape character due to the development of the Maesmawr Solar Farm. Albeit that there would be a noticeable increase in renewable energy infrastructure within the local landscape as a result.
- 3.8 The LVIA confirms that the nature of views, beyond the immediate vicinity, would be partially or entirely obstructed by intervening vegetation and/or topographical variation. Therefore, it is anticipated that there would be no other significant visual effects from within the 5km study area used for this assessment. With any views to the proposed development being seen as a continuation of the existing solar farm.
- 3.9 Overall, the landscape assessment confirms that the quality and character of the landscape and visual resources would be maintained and would have the capacity to accommodate the proposed development without significant effects beyond those identified at a very local level to the proposed development or within it, where mitigation would be very difficult and not entirely appropriate when considering the characteristics of the site.

## Highways and Traffic

- 3.10 The accompanying Construction Traffic Management Plan (CTMP) (document reference: JNY11208-01) provides information to ensure that the construction of the development is organised and delivered in a manner that mitigates and safeguards highway impact, highway safety and the amenity of the area surrounding the site.
- 3.11 The construction period is expected to take approximately 4 months. Construction hours will be between 08:00 and 18:30 hours Monday to Friday and 08:00 to 13:00 hours on Saturday. Over the duration of the 4-month construction period, deliveries will vary in amount per day with an average of 6-8 deliveries (6-8 inbound plus 6-8 outbound movements) per day over the period.
- 3.12 Construction HGVs will route to the site via Maesmawr Road. Maesmawr Road provides access to a small number of residential properties, farms and agricultural fields, thus there are already large vehicles routing along it. The residential properties are all set back from the highway with screening formed by the hedgerow which typically lines both sides of the carriageway, and it is considered there are no sensitive receptors along Maesmawr Road and the access route.
- 3.13 The construction process will be managed by the appointed Site Manager employed by the contractor. The Site Manager's responsibilities will include acting as a point of contact for the local authority, stakeholders and members of the public. Further to this, the Site Manager will also be responsible for delivery scheduling, construction route compliance and managing other contractors employed on-site.
- 3.14 To further control the environmental impacts of the development, measures to be employed include covering any skips and vehicles to prevent overspill, wheel washing facilities, mitigation measures for noise, employing local contractors and the implementation of a waste management strategy.
- 3.15 There is no daily requirement for access when the Solar Farm is operational. Access is only required for maintenance and inspection purposes which is undertaken by a 4x4 type vehicle approximately once per month – likely between 10-20 visits a year.

- 3.16 Overall, the CTMP confirms that the measures and control processes outlined in it are appropriate to ensure highway safety and free flow of traffic during the construction period.

### **Historic Environment**

- 3.17 The accompanying Archaeological Desk-Based Assessment and Heritage Impact Assessment which are appended to the Heritage Chapter of the ES consider the potential for development at Maesmawr to affect known and potential heritage assets, as required by section 6.1 of PPW.
- 3.17.1 A low archaeological potential was identified for all past periods of human activity as part of the Archaeological DBA. It was assessed that any archaeological remains within the site would generally be considered of Local/Low sensitivity.
- 3.17.2 With respect to archaeological heritage assets outside of the site but located within the 1km study area, any effects will be confined to the settings of the assets affected. The one scheduled monument within this study area has very limited intervisibility with the site, and the site is not considered to be part of its setting.
- 3.17.3 With respect to designated heritage assets within the 5km study area, it is considered that at distances further than 1km from the site the solar farm would not produce noise or light pollution, or generate increased traffic, which could adversely affect the identified archaeological heritage assets in a way unrelated to visibility. For the six additional scheduled monuments within 5km of the site, no more than a negligible potential effect on the setting of one asset, the Rhiw Saeson Caerau hillfort, is identified. For all the others, a combination of intervisibility, distance, and the scale of contribution to often very extensive settings has led to the conclusion that no impact will arise for any designated archaeological heritage asset as a result of the Proposed Development.
- 3.17.4 In summary, there would be no significant effects arising to archaeological heritage assets as a result of the proposed development.
- 3.17.5 The proposed development would minimally affect the settings of 11 built heritage receptors through distant changes to their extended settings. In each case, the built heritage receptor is of medium sensitivity and the site currently makes no contribution to this sensitivity.
- 3.17.6 Due to the nature of the impacts and significance of effect above, further mitigation measures are not strictly required in terms of built heritage. However, it is proposed that an appropriate landscape strategy, secured by condition, would further soften any visual changes to the setting of the heritage receptors.

### **Glint and Glare**

- 3.18 A Glint and Glare Assessment is appended to the Landscape Chapter of the ES. This confirms that the existing screening by vegetation, topography and buildings will eliminate glint effects at the majority of the receptor points analysed.
- 3.19 Potential residual glint effects on residential properties, amenity receptors, roads and public rights of way are not considered to be significant and therefore no additional mitigation measures are recommended or required. Consequently, the proposal is not considered to give rise to significant glint and glare effects.

### **Ecology**

- 3.20 A detailed assessment of any potential impact on ecology is included at Chapter 6 of the Environmental Statement (ES). The ES confirms that there is no potential for impacts on any statutory designated sites.



- 3.21 The eastern boundary of the site and a short section of the northern boundary area adjoin a non-statutory designated site, The Willowford SINC and there is a hydrological connection with Tonteg Marsh SINC. The consistent implementation of environmentally sensitively construction methods, including pollution prevention, would avoid the potential for any adverse effects on these SINC.
- 3.22 Many of the key habitats are being retained and protected within the site including the hedgerow network, mature trees, ponds, ditches, and boundary watercourses.
- 3.23 Habitats of low value (important in a local context) include marsh/marshy grassland which comprises a large area of species-poor marsh growing on a deep layer of underlying peat, a small area of sharp-flowered rush grassland with multiple positive indicator species and more localised areas of marsh/marshy grassland with some associated with shallow peat. These features are classified as having low sensitivity/value under the EIA criteria for assessment, equating to importance in a local context only.
- 3.24 The species/species groups that utilise habitats within the site have been evaluated as mostly low value (importance at a site or local context) derived from survey findings and precautionary assumptions of presence. The assemblage of birds breeding within and adjacent to the site, is classified as of low - medium sensitivity equating to importance in a local or possibly district context, with a barn owl hunting territory overlapping the site. Adder has been recorded on site with the habitats also having the potential to support grass snake, slow worm and common lizard.
- 3.25 Surveys have confirmed the very likely absence of great crested newt, and water vole and there is no evidence of otter activity.
- 3.26 In conclusion, it is not considered that the proposed development will have a significant impact on ecology and nature conservation following the implementation of mitigation measures as detailed in the ES.

### **Ground Conditions (including Mineral Sterilisation)**

- 3.27 A Coal Mining Risk Assessment and Mineral Assessment (CMRAMA) is appended to the Ground Conditions Chapter of the ES. This has identified few potential pollutant linkages that may be active upon the development of the site. Those identified relate to the presence of historical mine workings and the potential for mining gases to be present beneath the site that could be released through groundworks and the potential for chemical attack on steel structures/foundations through Made Ground or natural soils.
- 3.28 A number of mine entries are recorded on the site with evidence of historical mine workings based on BGS borehole records. As such the CMRAMA identified recorded mine workings in relation to a number of coal seams beneath the site, and it also identified shallower coal sub-crops across the site. The review identified two adits and a shaft within/close to the proposed cable route, one shaft within the main area of the site and several shafts or adits within close proximity of the northern and south-west boundaries. The Coal Authority confirmed that they do not hold records to confirm if these shafts/adits have been infilled or treated, and no information is available regarding diameter or shaft depths.
- 3.29 The CMRAMA identified a high level of risk from recorded mine workings and a moderate to high level of risk from unrecorded mine workings. The risk associated with recorded and unrecorded mine entries was considered to be moderate to high.
- 3.30 Whilst the risk from recorded and unrecorded mine workings is high, the nature of the development does not increase this risk over the majority of the site once complete. The solar arrays are lightly loaded, have minimal foundation (land anchors in very shallow deposits) and require limited site attendance (period inspections).

- 3.31 Regarding mineral sterilisation, whilst the site does lie within an area designated for protection of sandstone reserves, it is considered that this is unlikely to restrict development for the proposed use as a solar farm due to its temporary nature.

### Hydrology and Flood Risk

- 3.32 The Development Advice Map (DAM) indicates that the majority of the site is 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*”. However, the access route from the north of the site passes through Zones B and C1 described as “*areas known to have flooded in the past*” and “*the 1000-year extreme flood outline*”, respectively.
- 3.33 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%). The access route runs through areas of “low” and “medium” fluvial flood risk whereby to risk of flooding is classified as between 1 in 1000 (0.1%) and 1 in 100 (1%), and between 1 in 100 (1%) and 1 in 30 (3.3%) respectively. This is associated with the River Taff.
- 3.34 NRW surface water mapping identifies two flow routes through the site with a mixed ‘low’ to ‘high’ risk of surface water flooding. Low risk is defined as areas with a chance of flooding between 1 in 1000 (0.1%) and 1 in 100 (1%), with high-risk areas with a chance of flooding of greater than 1 in 30 (3.3%). These flow route exist from the centre of the solar site to the central western boundary and at the northern solar farm boundary. Additionally, there are isolated areas of ponding in the south, that are at ‘low’ risk, and in the north, that are at ‘high’ risk.
- 3.35 There is also surface water flood risk identified along the access route that extends north of the site. Taffs Mead Road is shown to be at ‘low’ risk of surface water flooding and Tonteg Road is shown to be at ‘high’ risk. There is a portion of the route at conjunction of Taffs Mead Road and Gwaelod-YGarth Road that has ‘medium’ surface water flood risk, corresponding to an annual probability of flooding that is between 1 in 100 and 1 in 30.
- 3.36 There will be a negligible increase in impermeable area as a consequence of the development, and therefore it does not require any specific surface water management.
- 3.37 The solar panel design, as well as surface water and soil management measures, ensure that there is no alteration to local drainage patterns within the site and no increases in suspended sediments within the drainage channels or surface water runoff.
- 3.38 In conclusion, the installation of solar panels within the site has been determined to have negligible hydrological impacts on surrounding ecological sensitive habitats. The proposed development is at low risk of flooding and with appropriate surface water and soil management measures would cause negligible effects on the hydrological or ecological regimes.

### Cumulative Impact

- 3.39 The Scoping Direction issued by Ministers in relation to the proposed development identified three developments with the potential for cumulative effects. These were:
- DNS/3272053 Twyn Hywel Wind Farm
  - DNS/3280378 Mynydd y Glyn Wind farm
  - DNS/3266623 Cwm Ifor Solar
- 3.40 These schemes have been considered in the ES under relevant topics, landscape and heritage in particular.

- 3.41 Twyn Hywel Wind Farm is proposed to the north of the site. It is separated from the site by interceding planting, development, and topography. This includes the valley of the River Taff.
- 3.42 Mynydd Y Glyn Wind Farm is proposed to the northwest of the site, lying west of Pontypridd. It is separated from the site by interceding topography, planting, and development (including Church Village and Tonteg). While both schemes may be partially and distantly co-appreciable with the site it is considered that they would not result in an increased significance of effects (i.e. cumulative effects) when compared to the proposed development alone.
- 3.43 The Cwm Ifor Solar Farm lies to the north of the site. Located to the north and northwest of Abertridwr and the proposed development is separated from the site by planting, topography and other development. This includes the valley of the River Taff. It is therefore unlikely that the proposed development would be appreciable alongside this scheme and it would therefore not result in an increased significance of effects when compared to the proposed development alone.
- 3.44 It is therefore considered that no cumulative impacts will arise from the schemes identified for cumulative assessment.

### Summary of Key Planning Considerations

- 3.45 This section has considered the key planning issues the proposed development raises.
- 3.46 The proposed development will not result in the loss of the best or most versatile agricultural land, a key national planning policy requirement. However, such sites tend to have experienced less intensive agricultural practices and as a result possess higher landscape and ecological value, as is the case at the application site.
- 3.47 The proposed development will have a localised landscape impact. However, the LVIA and ES chapter confirm that the quality and character of the landscape and visual resources would be maintained and would have the capacity to accommodate the proposed development without significant effects beyond those identified at a very local level to the proposed development or within it where mitigation would be very difficult and not entirely appropriate when considering the characteristics of the site. The landscape impact of the development should also be considered in the context of an SLA designation that is vast, covering all of rural RCTCBC outside of settlement boundaries, and is therefore an abundant resource in that regard. The localised landscape impact will also be transient in nature, enduring for a temporary 40-year period, following which the site can be restored to its previous appearance relatively easily.
- 3.48 The site is not subject to any ecological designations. Nevertheless, the proposed development has been designed to minimise ecological impact, avoiding higher quality habitats and including mitigation that will ensure no net loss of biodiversity at the site.
- 3.49 The proposed development will have a low non-visual impact on the heritage assets in the vicinity of the site. There will be some impact on the setting of heritage assets with further mitigation measures being explored. However, these effects will be transient, given the temporary nature of the development, reducing their magnitude. On this basis the heritage impact is considered acceptable.
- 3.50 This section has summarised that the proposed development will have no adverse impact in respect of the following issues:
- Best and most versatile agricultural land;
  - Landscape and visual
  - Highways and traffic;

- Historic environment;
- Ecology
- Ground conditions;
- Hydrology and flood risk;
- Glint and glare;
- Cumulative impact.

3.51 Consequently, the proposed development is considered to be in accordance with both national and local planning policy.

## 4 SUMMARY AND CONCLUSION

- 4.1 In summary, full planning permission is sought for a solar farm and ancillary infrastructure at Maesmawr on land between Church Village and Treforest Industrial Estate.
- 4.2 The site occupies a valley position and is located within an existing field pattern with sparse hedgerows and trees. The site falls within a SLA designation that covers most of rural RCTCBC.
- 4.3 The national and local planning policy context is overwhelmingly supportive of renewable energy developments and there is therefore a presumption in favour of the proposals, in accordance with PPW paragraph 5.9.1.
- 4.4 This Planning Statement and the application supporting information assesses the proposal in terms the key planning issues of agricultural land quality, landscape and visual impact, highways and traffic, glint and glare, historic environment, ecology, ground conditions and hydrology.
- 4.5 Whilst there will be localised impact on landscape the quality and character of the landscape and visual resources would be maintained and would have the capacity to accommodate the proposed development without significant effects beyond those identified at a very local level to the proposed development or within it where mitigation would be very difficult and not entirely appropriate when considering the characteristics of the site.
- 4.6 Furthermore, due to the surrounding topography of the site, there is minor or negligible landscape impact from longer distance views. The landscape impact of the development should also be considered in the context of an SLA designation that is vast, covering all rural RCTCBC outside of settlement boundaries, and is therefore an abundant resource in that regard. The localised landscape impact will also be transient in nature, enduring for a temporary 40-year period, following which the site can be restored to its previous appearance relatively easily. There are considered to be no significant impacts in respect of agricultural land quality, highways and traffic, hydrology and flood risk, glint and glare, historic environment, ecology or ground conditions.
- 4.7 The proposed development and its substantial benefits in terms of the provision of renewable electricity and the well-being of future generations is considered to be in accordance with the development plan as a whole and, on balance, the proposed development would not have an unacceptable, adverse impact. Consequently, it is considered that planning permission should be granted accordingly.