

BRYN HENLLYS EXTENSION

PROPOSED SOLAR FARM

DESIGN AND ACCESS STATEMENT

PREPARED BY PEGASUS GROUP | AUGUST 2019
P18-2622 | LIGHTSOURCE BP



lightsource bp



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1. INTRODUCTION

1.1 This Design and Access Statement has been prepared by Pegasus Group on behalf of Lightsource BP (“The Applicant”) in support of the accompanying full application for the 9.9MW Photovoltaic (PV) installation (“Solar Farm”) extension to Bryn Henllys Extension Solar Farm at land at Waunlwyd Farm, Upper Cwmtwrch, Swansea, Powys, SA9 2XE (“The Application Site”).

1.2 Lightsource BP is a global market leader in the development, acquisition and long-term management of large-scale solar projects and smart energy solutions. Lightsource were established in 2010 and have developed significant expertise in the UK renewable energy sector. In 2017 Lightsource joined forces with BP and rebranded to become Lightsource BP. The company has invested £2.5 Billion into solar assets in just 7 years and currently manage 2GW of solar projects.

1.3 This application seeks full Planning Permission for:

“Extension to existing Solar Farm (inclusive of 9.9MW PV installation and associated infrastructure)”

1.4 Planning Permission is sought for a temporary period of 40 years from the date of the first export of electricity to the electricity grid.

1.5 The purpose of this document is to demonstrate that the Applicant has fully considered the design and access issues as part of the comprehensive preparation of the scheme prior to submission of the planning application. This report therefore covers the following matters:

- Use
- Amount
- Layout
- Scale
- Landscaping
- Appearance
- Access

2. APPLICATION SITE AND CONTEXT

- 2.1 The application site forms two parcels of land connected by an unnamed road at Waunlwyd Farm, Ystradown, Swansea. The site location is shown on the accompanying plans centred on coordinates [X: 275991, Y: 212620].
- 2.2 The site is wholly within the administrative area of Powys County Council and is in the Ystradgynlais Community Parish.
- 2.3 The 'northern parcel' is c. 13.1 ha (32.4 acres) and comprises four irregular shaped fields. The Afton Twrch lies to the west of the parcel within dense woodland near to the Application Site's western boundary. A farmstead and aggregate compound lie to the south west. Further fields are present to the northern and eastern site boundaries.
- 2.4 The 'southern parcel' is c. 11.3 ha (27.9 acres) and comprises six fields of varying shapes and sizes. The Afton Twrch lies to the west of the parcel within dense woodland to the western, northern and eastern boundaries. Further fields with hedgerow boundaries are present to the south, beyond which lies a number of isolated properties to the south and southeast.
- 2.5 To the immediate east of the Application Site ('southern parcel') planning permission has been granted for a 20MW solar farm (Bryn Henllys Solar Farm), granted under planning permission reference P/2015/0176 in June 2018.
- 2.6 The site comprises a number of fields which are of varying shapes and sizes, bound by hedgerows and adjacent woodland in places. The application site is crossed by a number of drainage channels, which follow the landform while small to medium ponds are located within or close to the application site boundaries. There is a small reservoir located c. 260m east of the eastern boundary of the northern parcel.
- 2.7 Historic Ordnance Survey (OS) maps identify that the proposed application site is located within a former coal mining area, and within/adjacent to locations of unknown filled ground (associated with former mining operations). In addition to former coal mining sites, the surrounding land is predominantly in agricultural use.
- 2.8 The Welsh Agricultural Land Classification Map demonstrates that the Application Site forms predominantly Grade 4 land (Poor) with some Grade 5 (Very Poor), both of which are subgrade and do not constitute the best or most versatile agricultural land.

- 2.9 The proposed development is not located within any statutory landscape designations. The Brecon Beacons National Park lies in close proximity to the north of the application site, with the National Park boundary broadly concurrent with the linear woodland belt located approximately 150m north of the application site, beyond the intervening fields adjacent to the application site.
- 2.10 The site is not located within or in close proximity to any World Heritage Sites, Historic Landscape Areas, Landscapes of Outstanding Historic Interest, Registered Park and Gardens, Conservation Areas or Heritage Coasts. The site forms 'open countryside' but is not within the Green Belt. There are no designated assets located within the Application Site.
- 2.11 There are several Grade II Listed buildings in close proximity to the application site. The Henllys Vale Colliery Limekilns (large bank of lime kilns associated with the quarries on the Black Mountain) is located c. 1.3km north of the proposed development Henllys Vale Colliery Chimney (Colliery chimney built for Henllys Vale Colliery, an anthracite drift mine that operated from 1898 to 1918) is located c. 1.3km north of the proposed development. Lastly, Henglyn Isaf (Early C18 thatched farmhouse, one of the older surviving houses around Ystradgynlais) is located c. 1.3km east of the proposed development.
- 2.12 The National Landscape Character Areas for Wales represent a strategic approach to landscape character assessment. The Application Site and much of the study area, falls within the NLCA 37 South Wales Valleys. The northern part of the study area coincides with the Brecon Beacon National Park and the associated NLCA 30 Brecon Beacons and Black Mountains.
- 2.13 LANDMAP is a Wales specific resource (managed by National Resources Wales) where the landscape, visual and heritage baseline is recorded at varying spatial levels (based on collated datasets). The site sits within LANDMAP Visual and Sensory Aspect Area BRCKNVS365. The assessment gives the area a 'Low' overall evaluation. It is noted that the justification for this assessment states: 'Open cast mining has created a disturbed landscape of tips which are detractors. The current waste tipping is also a detractor. Colonising vegetation on the fringes do not screen the slopes of the tip.' (Dated 28th January 2003).
- 2.14 There are a number of Public Rights of Way near to the Application Site, these include footpaths, Byways Open to all Traffic (BOAT's) and open access land. Public Rights of Ways run along parts of the eastern boundaries of the Application Site

and cross land (outside of the sites themselves) between the northern and southern parcels of land, with a further network of Public Rights of Way in the surrounding area.

- 2.15 The nearest residential properties are found on the eastern periphery of the villages of Cwm-Twrch Ucha and Ysdradowen, which are c. 300m west and south west of the application site. The villages follow a broadly linear pattern along the A4068, to the north of the town of Ystradgynlais.
- 2.16 Based on Natural Resources Wales (NRW) mapping, the Application Site is not considered to be at risk from River or Sea flooding. The Afon Twrch lies approximately 150m west of the Application Site at the bottom of the valley and Nant Gwyns lies approximately 700m further south of the southern parcel. Parts of the site are noted as being susceptible to Surface Water flooding based on detailed NRW mapping. These areas are associated with low lying areas in the northern development parcel. The Application Site is crossed by a number of drainage channels, which follow the landform, in conjunction with hedgerows used as agricultural boundaries for adjoining fields. Small to mediums ponds are located within or close to the Application Site boundaries, and there is a small reservoir c. 250m east of the northern parcel. The Application Site does not lie within a Groundwater Source Protection Zone.

3. DESIGN

3.1 A considerable number of factors have contributed towards the design and layout of the solar farm that is proposed in this application. These are now discussed against the various aspects of Design highlighted within CABE's guidance document regarding the production of Design and Access Statements.

Use

3.2 It is proposed that the use of the site will be for the extension to the existing Solar Farm (inclusive of 9.9MW PV installation and associated infrastructure), to act as an extension to the 20MW approved solar farm to the immediate east of the Application Site.

3.3 The proposed solar farm will involve the temporary change of use of the land but, due to the time restricted nature of the development, the agricultural use will be retained in the long term. The site will also be capable of dual use farming during its operational period, with small livestock able to graze the land between and amongst the panels.

3.4 In addition, the minimal physical intrusion of the development itself will mean that the panels can be removed after their 40-year life time from the first export of electricity and the land will revert swiftly to full agricultural use. There will be no long-term effects on ground condition. In this respect, the proposed scheme will result in a less permanent impact than most other forms of development, including some alternative methods of renewable energy production.

3.5 This Design and Access Statement, and the accompanying documents, set out why it is considered that this particular site is well suited to accommodate the proposed use.

Amount and Fabrication

3.6 The extent of the Proposed Development has been refined and finalised having consideration of potential environmental effects.

3.7 To minimise environmental effects of the development and part of the mitigation measures, the solar panels have been offset from the boundary vegetation. This will ensure long term retention and good condition of this vegetation.

- 3.8 As a result of this iterative process, the Proposed Development, is confined to locations where effects have been limited as far as possible and are considered justifiable when considered in the context of the scheme benefits, including to support the UK's renewable energy increase and CO₂ reduction legally binding targets. Consideration of the planning balance which weighs up all material factors associated with the planning application is contained within the accompanying Planning Statement.
- 3.9 The Proposed Development on the site where effects can be justified will consist primarily of a steel framework to support the panels and the panels themselves. In addition, small amenity buildings will be introduced, plus security fencing (i.e. deer fencing) and a CCTV system to restrict access and protect the scheme from theft and vandalism.

Layout

- 3.10 In proposing the general layout of the development, great consideration was given to the retention of the established field boundaries on site along with planting of native hedgerows and trees and the creation of enhanced wildlife corridors throughout the site. The grassland beneath the solar panels would be supplemented by an appropriate grass mix to enhance biodiversity, and this could be regarded as a beneficial change in landscape character terms. This will help ensure that the development is well contained both physically and visually.
- 3.11 Within the fields the panels will be arranged in long rows running from east to west, orientated to the south so to maximise efficiency.
- 3.12 Relatively small ancillary control buildings are required around the site. The submitted Site Layout drawing outlines the position of these structures within the site.
- 3.13 A network of internal tracks around the solar panels will be laid to allow vehicle access to the supporting equipment to allow for maintenance. The layout and extent of the roads is limited to that necessary to provide access and maximise efficiency.
- 3.14 The perimeter fencing and pole-mounted CCTV system serves an important purpose in protecting the valuable equipment within the application site. Its siting has however also considered the impact on the appearance of the area. The existing and proposed vegetation will largely screen the fencing from most viewpoints.

Scale

- 3.15 The scale of development on site has been determined by the equipment necessary to efficiently generate renewable energy. All of the plant buildings on site will be at or below single storey level (i.e. approximately at or below c. 3m in height) ensuring that they will not be readily visible from most viewpoints outside of the site and be limited in wider views. Even when viewed from nearby public vantage points, the scale of development will not be overbearing due to its limited height and relatively benign appearance (i.e. lack of movement and external illumination etc.).
- 3.16 Careful consideration has been given to the nearest residential properties. The proposals, on account of the low overall height and benign nature, would not give rise to loss of amenity as a result of overshadowing or overbearing structures, noise pollution or effluence, and that outlook from the nearest residential properties would not be compromised. Additionally, the densely wooded valley coalescing around Afon Twrch effectively screens the application site from the villages of Cwn-Twrch Ucha and Ysdradowen. The retention and improvement of existing hedgerows and planting would effectively screen the proposals from outside the site, with mid to long range views being very limited.
- 3.17 Each array of panels within the fields will be mounted on a simple metal framework, the lower edge of a solar panel will be 1m from the ground and the highest point will be 2.9m from the ground. The main purpose of the mounting structure is to hold the modules in the required position without undue stress. It must be capable of withstanding appropriate environmental stresses for the location, such as wind or snow loading. The solar farm will consist of fixed supporting frameworks, the framework will be driven into the soil no more 1.5m deep, removing the need for deep foundations. Such supporting systems are designed to avoid the use of concrete foundations and are reversible.
- 3.18 With regard to the proposed ancillary buildings, they are designed to be as small as possible while still being capable of undertaking their required function within the site. Such structures will not be prominent within the surroundings and be smaller than many isolated stores and barns typically found in the countryside environment.

Landscape

- 3.19 The impact upon the local landscape has been given careful consideration in putting forward the proposed scheme. While a scheme of this size will inevitably have an effect on landscape character as set out above, it has been located so to minimise effects as far as possible.
- 3.20 The southern parcel comprises six fields and its field boundaries are defined by mature and established hedgerows with frequent hedgerow trees that appear to be in good condition. The height of the vegetation is considerable, creating a strong sense of enclosure. Due to the sloping topography views across the landscape to the south are easily obtainable but are limited to the higher ground and not the valley landscape. Views to the east, north and west are generally screened by field boundary vegetation.
- 3.21 The northern parcel consists of four fields, hedgerows are lower, neatly trimmed and are gappy in some areas. This is particularly evident along the eastern edge of this parcel where the Application Site abuts a track and public footpath, which leads north-east towards the Brecon Beacon National Park. This part of the Application Site has a higher level of inter-visibility with the National Park, mostly to the north and north-west.
- 3.22 The pattern of existing vegetation is such that significant effects to landscape character will be localised and limited to the Application Site and its immediate setting. These effects would diminish with distance and over time as the mitigation planting becomes established.
- 3.23 Consideration of landscape and visual effects is contained in the Landscape and Visual Impact Assessment contained within the accompanying Environmental Statement. The Assessment has taken into account the existing context, potential change to the receiving landscape and influence on the visual amenity of the identified receptors.

Appearance

- 3.24 Due to a combination of vegetation within and adjoining the application site, local topography and the low-level nature of the proposed development, the majority of views from outside of the site will not be significantly affected by the proposed scheme.

3.25 There would be some localised significant effects but in majority of cases these can be mitigated, including the cumulative effects. Overall, the Proposed Development responds well to the characteristics of the receiving environment, mitigating visual effects, whilst not compromising the requirements of this solar energy scheme.

4. ACCESS

- 4.1 The approved Bryn Henllys solar farm is located immediately east of the southern parcel of the Application Site, with access to Bryn Henllys Extension proposed through Bryn Henllys solar farm.
- 4.2 The approved Bryn Henllys solar farm takes access from the existing access from Palleg Road. This existing access was used for the previous open cast minerals extraction which ceased in 2003, as such is of a standard and scale to accommodate regular HGV traffic. The existing access with Palleg Road is a wide formally surfaces access, which previously provided access to the open cast mine. Gates are set back approximately 18m from the edge of Palleg Road, which lead to an existing area of hardstanding of approximately 35mx45m.
- 4.3 At its southern extent, Palleg Road forms a priority junction with Cwmpnil Road, which in turn connects the A4068 via a mini-roundabout junction to the south west of the junction with Palleg Road.
- 4.4 The A4068 links to the A4067, which is a high standard route from the M4 Junction 45, approximately 18 kilometres to the south.
- 4.5 The same construction access will be used for the Bryn Henllys Extension, with materials transferred through Bryn Henllys solar farm and Bryn Henllys Extension using telehandlers.
- 4.6 Over the 3-month construction period of the solar farm it is estimated that Bryn Henllys Extension will typically generate up to 4 HGV deliveries (8 HGV movements) per day. This is a comparable impact to Bryn Henllys solar farm which has been considered acceptable.
- 4.7 All workforce vehicles are assumed to be light vehicles (cars, vans or minibuses) and are likely to give rise to approximately 10 vehicle movements at the beginning of each working day (with a similar number at the end of the day), with occasional movements throughout the remainder of the day.
- 4.8 Trips associated with decommissioning would be less than those associated with construction, since landscaping will remain in place, and the number of HGV trips will therefore be correspondingly reduced.

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- 4.9 The Environmental Statement is supported by a Transport Statement which includes a Construction Traffic Management Plan (CTMP). The CTMP includes details regarding the movement of construction vehicles, including relevant mitigation such as delivery time restrictions and construction signage.
- 4.10 When in full operation, the solar farm will not generate any significant traffic movements, with security and maintenance staff the only likely infrequent visitors who will use the network of internal tracks. The operational phase of development is not expected to result in any significant environmental effects in terms of traffic generated.
- 4.11 Pedestrian access to the solar farm will be restricted for security purposes to prevent theft and vandalism. The measures outlined within the CTMP have been designed to minimise any potential effects on users of the Public Rights of Way (PRoW) in close proximity to the Site. There are a number of Public Rights of Way which run near and through the application site all of which are footpaths.
- 4.12 Reinstated BOAT No. 7 currently routes along the existing farm access track, north of Bryn Henllys Solar Farm and between the northern and southern parcels of Bryn Henllys extension. Whilst Footpath 122A also routes along the existing farm access track between the northern and southern parcels of Bryn Henllys Extension. Footpath 122A also follows the eastern boundary of the northern parcel.
- 4.13 PRoW in the vicinity of the Application Site will be kept open during construction and decommissioning, although will be temporarily affected by the presence of construction vehicles along the farm access track.

5. SUMMARY AND CONCLUSIONS

- 5.1 It is considered that due to the benign appearance of the scheme and the natural screening afforded to the site, that the development proposals will not have an unacceptable adverse effect on the visual or amenity value of the wider countryside.
- 5.2 The site and extent of development have been carefully selected. The site is naturally screened and supplemented by additional planting which, coupled with its low-profile physical height of the solar panels and associated equipment, results in only limited distant views of the site being possible. Significant effects to landscape character will be localised and limited to the Application Site and its immediate setting. Effects would diminish with distance and over time as the mitigation planting becomes established.
- 5.3 The equipment forming the development proposals has been selected on the basis of maximising efficiency and productivity, but also to minimise visual effects where possible.
- 5.4 Safe access can be taken into the site from the public highway and within the site. Mitigation measures will be employed to ensure construction traffic is managed appropriately.
- 5.5 Overall, the proposals are considered appropriate in terms of design and access and the development represents a necessary step towards meeting the UK's legally binding climate change and renewable energy obligations. It is therefore considered that the application before the Council be supported and planning permission granted.

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DESIGN



ENVIRONMENT



PLANNING



ECONOMICS



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