

DESIGN AND ACCESS STATEMENT

FOR PROPOSED SOLAR PARK DEVELOPMENT AT;

**BROOKBARN FARM, WICK, LITTLEHAMPTON, WEST
SUSSEX, BN17 7PE**

Pegasus Group

Abbey House | Grenville Place | Bracknell | RG12 1BP

 www.pegasuspg.co.uk

Birmingham | Bracknell | Bristol | Cambridge | Cirencester | East Midlands | Leeds | Manchester

Planning | Environmental | Retail | Urban Design | Renewables | Landscape Design | Graphic Design | Consultation | Sustainability

© Copyright Pegasus Planning Group Limited 2011. The contents of this document must not be copied or reproduced in whole or in part without the written consent of Pegasus Planning Group Limited.

CONTENTS:

	Page No:
1. INTRODUCTION	1
2. SITE DESCRIPTION AND BACKGROUND	2
3. DESIGN	3
4. ACCESS	7
5. CONCLUSIONS	9

1. INTRODUCTION

- 1.1 This Design and Access Statement has been prepared by Pegasus Group Ltd on behalf of Anesco Ltd (hereafter referred to as the Applicant) in support of the accompanying planning application for a solar photovoltaic park on land at Brookbarn Farm, Wick.
- 1.2 The proposals involve the construction of a PV solar park split into two sites, capable of generating a total of up to 3MW of electricity, supported by associated landscaping, transformer housing, security measures and associated works. The energy generation of the development is as follows:
- 13,200 no Panels, 3.498MWp Total Installed Capacity, 3MWp Declared Net Capacity.
- 1.3 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. SITE DESCRIPTION AND BACKGROUND

- 2.1 The application site covers an area of approximately 5.2 hectares. The site is located to the northwest of Wick, approximately 3km north of Littlehampton and 2.5km south of the A27 junction. The site is presently bordered by the railway line to the south and the Black Ditch watercourse (tributary of the River Arun) to the north, with agricultural land forming the wider surroundings.
- 2.2 Vehicular access to the site for the delivery of the solar panels is proposed via Old Mead Road, accessed from the A284 to the east via the A27 transport network.
- 2.3 The site is located within the designated Countryside and within the 'Setting of Arundel' area and the settlement gap between Arundel and Littlehampton. It is outside of special landscape areas. The site is not in close proximity to any Conservation Areas.

3. DESIGN

- 3.1 A considerable number of factors have contributed towards the design and layout of the site that is now put forward. 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 The site currently is in pastoral agricultural use within the wider countryside setting. The land is classed as Grade 4 agricultural land.
- 3.3 It is proposed that the use of the site will be for the development of a Solar Park to generate up to 3MW of renewable energy.
- 3.4 The proposed Solar Park will involve the temporary change of use of the land, but due to the minimal physical intrusion of the development, it will mean that if the panels are to be removed after their 25 year lifetime the land can revert back to agricultural use. 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 If Arun District Council is to play a leading role in renewable energy generation in England then such electricity generation will continue to need to be introduced, which will generally need to be located outside of urban areas and within the countryside where the capacity to support such developments exists.
- 3.6 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

- 3.7 Each string of panels would be mounted on a rack supported by pile driven foundations. Between each string of panels there would be a distance of approx. 4.5m to avoid any shadowing effect from one panel to

another. The panels would be mounted at around 0.7m from the ground at the lowest edge, rising to a maximum of 2.4m at the highest point (the rearmost edge). The panels would be tilted at around 20 degrees from the horizontal, orientated to face due south towards the sun, and are fixed in that orientation.

- 3.8 The solar farm would use small string inverters, mounted on the back/underside of the solar panels, thereby removing the need for visible inverter buildings. There would also be two low voltage switch/transformers. The transformers (2.4m high, located within 3.5m by 3.5m by 2.0m high fences with switchgear alongside (1.1m by 2.6m by 1.9m). One metering circuit breaker unit within GRP enclosure is also proposed, with dimensions of approximately 2.5m by 2.8m by 2.4m tall.
- 3.9 Connection to the National Grid would be via underground cables to an existing overhead 11kV line adjacent to the eastern Application Site boundary. No new above ground cabling is required for the Proposed Development.

Layout

- 3.10 In proposing the general layout of the development, great consideration was given to the planting of native hedgerows and trees. This will help ensure that the development sits comfortably within its landscape setting, and 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. Each array will be mounted on a simple steel framework so that panels are facing true south, in order to maximise the energy output.
- 3.12 The inverters will be connected to the rear of the panel framework and will convert the electricity from DC to AC. The transformers and Metering Circuit Breaker Housing allow the electricity to be exported safely to the national grid network via a substation. The submitted Site

Layout drawing reference 001065_01A outlines the position of these structures.

- 3.13 The perimeter fencing 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, and has been set away from the boundaries of the fields, ensuring that there is separation from the existing vegetation and any sensitive ecological features. The fencing is proposed to be of a deer fence wire mesh design, and would be 2m high as detailed in plan reference 001065_400A. A security beam (infra-red) system would be mounted on 1.2m high poles inside the deer fence close to the array.
- 3.14 The specification for the location, positioning and height of the solar panels is also based on the following considerations; achieving maximum economic output of the panels, minimising any detriment to the landscape and wider visual amenity, and adhering to the safe working practices as recommended by the manufacturer.
- 3.15 The site is not located within any environmentally sensitive areas so as to reduce any potential impacts the proposed development may have on landscape and visual amenity and ecological assets. No public access across the site is required as part of this development.

Scale

- 3.16 The scale of development on site has been determined by the equipment necessary to efficiently generate renewable energy. The majority of the site will be covered by arrays of solar panels at a maximum height of 2.4m.
- 3.17 Each array of panels within the field will be mounted on a simple metal framework. 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 park will consist of a fixed structure as opposed to a 'tracking structure' which would follow the movements of the sun. The framework will be supported on piles that will be driven into the soil to no more than 1.5m depth. Such supporting systems avoid the use of concrete foundations and are easily removed at the end of the life of the project.

- 3.18 Drawing 001065_401A sets out the switch housing and metering cabinet dimensions. Their limited scale and positioning away from the site boundaries will ensure they are not overly apparent within the wider environment. Such structures will also 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. Due to the nature of the proposal, it is necessary to operate from an area that is not subject to overshadowing.
- 3.20 It is considered that the landform and vegetation of the site and surrounding area, in combination with surrounding existing urbanising influences from the adjacent railway and mobile home development, make this location ideal for utilisation as a solar park, and the effects resulting from the installation of the development can be mitigated by the proposed planting measures. Consequently, the development would not result in any unacceptable landscape or visual impacts, and this is evidenced in more detail within the accompanying Landscape Visual Impact Assessment (LVIA).

Appearance

- 3.21 Due to a combination of planting within and adjoining the application site, local topography and the low level nature of the proposed development, the effect on the local landscape character would be minor. Indeed the submitted LVIA concludes that *"the proposed development is considered to be appropriate to the setting and landscape character of*

the site and offers suitable landscape mitigation measures in terms of visual amenity". It is also noted the proposal would represent a smaller height of development than some agricultural practices covering large areas of rural land, such as glasshouses or poly-tunnels.

4. ACCESS

- 4.1 The access to the site for the delivery of the solar panels is proposed via Old Mead Road, accessed from the A284 to the east, via the A27 transport network. This routing will minimise disruption to local traffic and ensure the peaceful protection of residents within Wick, Lyminster and the wider area.
- 4.2 Once the development has been fully installed the traffic movements to the site will be minimal, with only two vehicles per month required for inspections. Therefore the main traffic impact will be during the construction phase. The construction period will take approximately 10 weeks, based on a six day working week (0730 to 1800 hours from Monday to Friday, and 0830 to 1300 hours on Saturdays). No construction work will occur on Sundays and Bank Holidays.
- 4.3 HGV deliveries will be advised to arrive after 09:30, and therefore will not affect the local highway network during the weekday morning peak periods. The construction will entail a total of 90 deliveries to the site. This equates to approximately 1.5 deliveries per day on average over the 10 weeks (Monday to Saturday) construction phase. On average, 15 staff will be at the site each day, which equates to approximately 30 two-way traffic movements.
- 4.4 Where possible, all deliveries of components will be organised to occur during the working week, and outside of the highway network peak periods.

-
- 4.5 Once operational, the number of vehicles accessing the site for maintenance purposes, would be a single vehicle approximately twice per month.
- 4.6 Pedestrian access to the solar park will be restricted for security purposes to prevent theft and vandalism.

5. CONCLUSION

- 5.1 The Design and Access issues of the proposed Solar Park have been assessed. 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 have an acceptable impact on the visual and amenity value of the wider countryside.
- 5.2 The solar park proposals are compliant with planning policy and will not have an adverse effect on the landscape character or residential amenity. The site has been carefully selected and will be naturally screened, which coupled with its low profile physical height of the solar panels, results in very limited views of the site. For this reason it is recommended within the accompanying LVIA that hedgerow surrounding the site be enhanced by infill and new planting. The LVIA concludes that, as a consequence, the overall landscape effects of the proposed development would be beneficial in the long term.
- 5.3 There are positive benefits arising from this renewable energy project, as it will raise the profile of renewable energy in the local community, and may encourage greater take up of solar power on domestic properties as the benefits are seen and understood. There are also significant benefits arising from the introduction of new planting in respect of both visual and biodiversity effects.
- 5.4 Overall, the proposals are considered to comply with planning policy and are appropriate in terms of design and access. The proposals represent 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.