

**PLANNING STATEMENT
MANOR FARM SHRIPNEY**

for

BNRG RENEWABLES



**PLANNING SUPPORTING STATEMENT
LAND AT MANOR FARM, SHRIPNEY
for
BNRG RENEWEABLES
May 2014**

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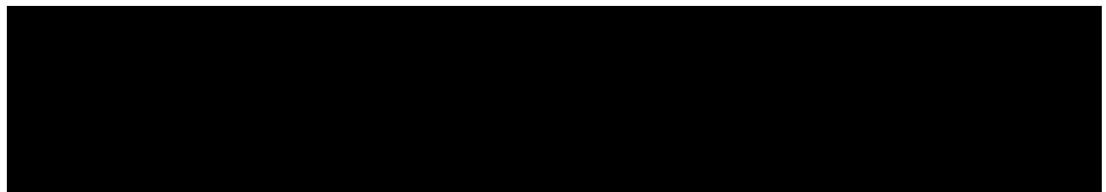
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CONTENTS

	Page
1.0 INTRODUCTION	1
The Applicant	1
Background to the Application	1
Planning application and supporting documents	2
2.0 CONTEXT OF THE APPLICATION	3
Site Location	3
Planning History	3
Pre-Application Consultation	3
Environmental Impact Assessment	4
Site Selection	4
Description of Development	5
Scheme benefits	6
Construction and Operational Phases	7
3.0 PLANNING POLICY ASSESSMENT	9
Development Plan Policy	9
Arun District Local Plan	9
Emerging policy	11
National Planning Policy Framework (NPPF)	12
National Planning Practice Guidance - Renewable and Low Carbon Energy	14
International Legal and Policy Context	15
European Legal and Policy Context	15
National Legal and Policy Context	16
4.0 KEY PLANNING CONSIDERATIONS	17
Introduction	17
Development in the countryside	17
Landscape Considerations	17
Agricultural Land Quality	18
Biodiversity Considerations	19
Heritage Considerations	19
Flooding Issues	20
Traffic and Access	20
Other environmental issues, including noise	21
5.0 THE PLANNING BALANCE	23

1.0 INTRODUCTION

1.1 This Planning Statement has been prepared on behalf of BNRG (hereafter known as 'the applicant') to support the submission of a planning application for the development of a solar park on land at Manor Farm, Shripney, Ordnance Survey grid reference E4929890 W102550.

1.2 The purpose of this Statement is to set out:

- the context for the application;
- a description of the application; and
- an assessment of compliance with the Development Plan and other material considerations.

The Applicant

1.3 BNRG Renewables, is a renewable energy company that specialises in the development of ground-based utility-scale solar parks, with extensive knowledge of the renewable energy sector and a sound track record of delivering high quality development. The company is committed to developing its projects as sensitively as possible, engaging with local residents and exploring opportunities to deliver wider habitat and biodiversity improvements within its parks.

1.4 BNRG is working with a joint venture partner, Landlink Estates, to develop the application site. Landlink Estates is a privately owned company that manages a significant agricultural and horticultural estate for a well-established group of companies. All of these companies are members of the Langmead Group which owns a significant agricultural and horticultural estate. Manor Farm forms part of that estate.

Background to the Application

1.5 The UK Government has committed to increasing domestic renewable energy generation to deliver 15% of energy demand by 2020. The commitment responds to the need to address the projected growth in global energy demand and concern over fossil fuel supplies. In addition to these trends, global warming and climate change necessitates best use of renewable resources to provide a secure basis for the UK's future energy needs.

1.6 The national policy context for delivery of these objectives is set out in Department for Energy and Climate Change Policies¹, summarised below as:

- Supporting international action on climate change;
- Increasing the use of low carbon technologies;
- Maintaining UK energy security;
- Reducing the UK's greenhouse gas emissions by 80% by 2050.

1.7 The Coalition Government reaffirmed in the UK Renewable Energy Roadmap (2011) and the Roadmap Update (2012) that UK targets for generation of renewable energy will continue to remain the same as those outlined within the 2009 Energy Strategy

¹ <https://www.gov.uk/government/policies/increasing-the-use-of-low-carbon-technologies>

White Paper. The updated Roadmap also included Solar PV as a key technology in the delivery of the 2020 target.

Planning application and supporting documents

- 1.8 This planning application comprises the following documentation:
- The Completed Application Form;
 - The Completed Ownership and Agricultural Land Declaration Certificate;
 - Design and Access Statement;
 - Location Plan;
 - Site Block Plan;
 - Landscape Masterplan;
 - Panel Elevation Plan;
 - Inverter and Transformer Station Roof Plan and Elevations;
 - Substation (Switchgear) Floor Plan and Elevations (this will be the same for the solar park operator and the DNO);
 - Security Fencing Plan; and,
 - Security Camera Details Plan.
- 1.9 The application is also accompanied by the following supporting reports and technical assessments:
- This Planning Statement;
 - Preliminary Ecological Assessment;
 - Landscape and Visual Impact Assessment;
 - Flood Risk Assessment, including a Surface Water Drainage Strategy;
 - Desk-based Archaeological Assessment; and
 - Traffic Management Plan.

2.0 CONTEXT OF THE APPLICATION

Site Location

- 2.1 The application site is approximately 50ha in area and is located on agricultural land at Manor Farm, Shripney, approximately 500 m from the northern edge of Bognor Regis. The application site currently comprises arable land and is surrounded by hedgerows, woodland and ditches.

Planning History

- 2.2 The applicant is not aware of any planning history affecting the site which will be relevant to the determination of this planning application.

Pre-Application Consultation

- 2.3 The applicant has undertaken active engagement with members of the local community prior to the submission of a planning application.
- 2.4 A number of stakeholders were contacted directly in July 2013, to introduce BNRG's work and to provide them with a meaningful opportunity to express views, both on the proposed development and the suitability of the site to support a solar power scheme. Consultees included:
- Bersted Ward Councillors (Arun District Council);
 - Barnham Ward Councilors (Arun District Council);
 - Bersted Parish Council;
 - Aldingbourne Parish Council; and
 - Residents living on Shripney Lane.
- 2.5 In August 2013, representatives from BNRG Renewables met with Bersted Parish Council. The purpose of the meeting was to present the emerging application scheme and to discuss the project.
- 2.6 A meeting was also held in September 2013 with representatives of the neighbouring Bersted Brooks Nature Reserve.
- 2.7 A drop-in session, primarily targeted at Shripney Lane residents, was held in September 2013 at the Robin Hood pub in Shripney. The purpose of the drop-in session was to provide information on BNRG's work, answer queries and to gauge the key issues of interest to Shripney Lane residents. Approximately 20 residents attended and the key issues to emerge from the consultation event were the use of Shripney Lane for construction traffic and local flooding.
- 2.8 An additional drop-in session for both Shripney Lane residents and local Councillors was held on the 19th May 2014. The purpose of the drop-in session was to provide additional information on the proposal and, in particular, to consult on proposed access and construction traffic arrangements. As a result of the consultation session, BNRG proposed to change the speed limit for construction vehicles using Shripney Lane from 30mph to 15mph.
- 2.9 The applicant will continue to engage with local residents and councillors throughout the planning, development and construction processes.

Environmental Impact Assessment

- 2.10 A formal request for an EIA screening opinion was submitted to Arun District Council in July 2013. The Council determined on 14th August 2013 that the scheme is not EIA development.

Site Selection

- 2.11 Natures Way Foods is one of the leading fresh produce companies in the UK. After expanding during the 1990s, the Company now employs around 500 people and supplies prepared produce, salad and fruit grown to the retail and food service markets. These goods come from several farms, including Manor Farm.
- 2.12 The Langmead Group was established in 1994 by Robert and David Langmead, whose family has farmed in West Sussex since 1881. Each generation has diversified and expanded the holding to adapt to changing markets, ensuring its longevity for the future. The Langmead Group's total landholding within West Sussex comprises approximately 2,428 hectares (6,000 acres) of farming enterprise, including cottages, farmhouses, office space, industrial, manufacturing properties and assets in the renewable sector.
- 2.13 In 2006, the company undertook an internal review to inform greening the business. The purpose of the review was to identify opportunities firstly, to cut overall CO₂ emissions in response to customer demand, and secondly, to cut electricity costs overall. The review demonstrated that development of large scale solar parks would allow it to achieve these objectives. Following several speculative approaches by various solar power companies, The Langmead Group decided to seek planning permission for a solar park on its own terms rather than work via a third party. This would enable it to control the environmental and community benefits accruing from the development. BNRG was subsequently chosen by the company to deliver the project as a partner, in recognition of its reputation as an environmentally sensitive developer and its experience in successfully promoting, designing, constructing and operating renewable solar parks across the UK.
- 2.14 A key technical and cost driver to site selection for energy development is access to a realistic grid connection. In broad terms, any site within 3.0 km of a primary substation is potentially a suitable location for electricity generation. Within this distance, however, technical constraints can necessitate use of expensive non-standard grid connection infrastructure or, in the worst case, a significant upgrade to the network.
- 2.15 Following identification of the broad site location as being technically suitable in terms of accessibility to the grid, an initial planning feasibility assessment of the whole site was undertaken. This, together with environmental surveys and statutory and public pre application consultation, informed site layout and masterplanning. The factors which have influenced the choice of location are:
- The land is within the ownership of the Langmead Group which, in association with the Nature Way Foods brand, considers the solar park as an essential part of the strategy to achieve carbon neutrality;
 - Proximity to the substation provides straightforward connection to the grid;
 - The field is free of horticultural tunnels, unlike other parts of the landholding; and

- The field is at an appropriate distance from residential properties and PRowWs.

Description of Development

2.16 The following terms are used in this Statement to describe the components of the proposed development:

- **Photovoltaic (PV):** Material that converts solar radiation into DC electricity.
- **Solar PV Cell:** A single, non-divisible group of Photovoltaic Material, which can generate electricity from Solar Energy.
- **Solar PV Panel/Module:** A manufacturer assembled group of Solar PV Cells within a supporting frame that provides simple interfaces to, and physical protection for the cells.
- **Table:** The supporting framework onto which a number of Solar PV Panels are mounted.
- **Solar PV Array:** A group of Solar PV Panels or Modules.
- **Solar PV Park:** The collective term for an installation of equipment and infrastructure that forms a photovoltaic power generating installation.
- **Inverter:** An electrical device that changes the direct current (DC) electricity produced by a photovoltaic material into alternating current (AC) that is suitable for feeding into the national grid.
- **Transformer:** An Electrical Device that transfers Electrical Energy from one Voltage level to another.
- **Substation:** A group of Electrical Switchgear that connects the Solar PV Park to the National Grid.

Summary details of proposed development

- 2.17 The proposed solar park will be approximately 50 hectares in area. It will comprise a number of rows of solar arrays, each bolt anchored to a metal frame (table), which will be mounted on steel posts driven or secured into the ground (no pile driven sub-construction areas of concrete construction will be required, with the possible exception of foundations for the transformer stations). If it is necessary to remove some top soil to enable installation, this will be stored on site under appropriate conditions until the underground infrastructure is installed, when it will be replaced in situ.
- 2.18 The solar panels will be angled and orientated in a portrait view to optimise their exposure to direct sunlight. They will be fixed i.e. they will not track the sun using motors and so will emit no noise. Similarly, the supporting electrical equipment will not emit noise above the ambient level and certainly would not be audible from outside the confines of the site boundaries. With no moving parts to the solar arrays there is little risk of mechanical failure. The solar panels are designed with an expected lifetime of 30 years with only a marginal loss of efficiency.
- 2.19 The panels will be connected by cabling carried in conduits to inverters to where the DC current generated by the PV modules is converted into AC current. The AC current is then fed into transformers where the voltage is changed (usually from 340 to 11,000 volts) for transmission of the energy with minimum losses to the grid connection point. The inverters and transformers will be housed in buildings (referred to as 'stations'), each with a footprint of approximately 30m².

- 2.20 There is also a requirement for two small substations to be placed on site. One will belong to the Distribution Network Operator (DNO) whilst the other will belong to the operator of the solar farm. These will have a combined footprint of approximately 10m x 10m.
- 2.21 The point of connection will be into the substation to the south of the site. This connection will be provided via an underground cable and delivered by the local electricity supplier using its statutory powers.
- 2.22 The arrays are designed to be set apart by approximately three times their overall height in order to avoid shadowing, giving open aisles of about 6–10m in width between them. The exact distance will depend on the topography of the site and will be designed to ensure optimum energy generation.
- 2.23 The application proposes that the site will be used for solar energy production for a period of 30 years, after which it will be decommissioned in its 31st year, all the infrastructure removed, and the land returned to solely agricultural use.
- 2.24 A perimeter deer fence of up to 2.4m in height will be erected around the perimeter of the array, on the inside of the boundary hedgerows. The purpose of the fence is to protect the array from theft, vandalism or damage. The security fence will be off-set from existing hedgerows by some 8 m with the panels offset internally from the fence by varying distances to allow for operational maintenance access.

Site Access

- 2.25 During the construction phase, vehicular access to the site will be taken from Shripney Lane via the existing access to the farm. This will be upgraded as required to a standard suitable for HGV movements.

Scheme benefits

- 2.26 The proposed scheme includes a number of significant benefits. These include:
- generation of circa 21MW of green renewable energy, which will make a valuable contribution towards the achievement of the UK's legally binding commitments of achieving 15% of its energy consumption from renewable energy sources by 2020;
 - provision of substantial landscape improvements, including the retention and management of existing trees, the provision of new hedgerow planting and areas of substantial new tree planting;
 - retention of an agricultural use on land;
 - for the duration of the solar farm, no agricultural chemicals will be used, thereby allowing time for the soil to regenerate naturally, creating an overall improvement in land quality;
 - substantial biodiversity enhancements, including provision of a wildlife buffer zone around the site, and creation of new wildlife habitats within the site, to create functional links with the wider countryside; and
 - implementation of a dedicated Landscape and Ecological Management Plan to ensure delivery of biodiversity benefits within the site and to associated off site wildlife networks.

Construction and Operational Phases

Construction Phase

2.27 The construction period for the proposed development will be approximately sixteen weeks. The following operations will be undertaken (listed here in the approximate order of implementation):

- Preparation of the temporary construction compound, if required;
- Laying of proposed access track, if required;
- Digging of cable trenches;
- Erection of fence and gates to define the site boundaries;
- Delivery of panels, frames and inverters, concrete for building foundations if required;
- Installation of solar panel mounting legs, framework and panels;
- Cable laying;
- Commissioning of the panels and installation of metal inverter cabins and connection to grid; and,
- Reinstatement works primarily to the construction compound, if required.

Waste strategy

2.28 By the very nature of the design and installation process, the quantum of construction waste that will generated from the scheme is significantly lower than compared to other energy generating development. There are five broad waste streams that will be generated directly from the installation, which are;

- Damaged panels - any damaged panels will be returned to manufactures for repair and subsequent re-use;
- Packaging - packaging surrounding the solar panels and framework will be collected in a designated on site skip for appropriate recycling;
- Framework - any excess cuttings from the galvanised frames will be temporarily stored in a designated skip, prior to being taken off site for recycling;
- Stock fence – any excess cuttings from the stock fencing will be collected and temporarily stored within a designated skip for recycling; and,
- Cable - any excess cable will be stored in a designated skip and will be collected by a reputable recycling company for either reuse or recycling.

2.29 As well as the above, other sources of waste include:

- Mess/dry room -these will be fitted out with appropriate recycling bins for the separate sorting and collection of paper, cardboard and aluminium waste.
- On site facilities - during the construction the workers facilities will be made available at appropriate locations within the site. It will be responsibility of the contractor to ensure that the waste is collected and disposed of by a licensed waste contractor.

Operational Phase

2.30 Once the site is built and operational it will be visited monthly, using a light commercial vehicle, for routine maintenance and cleaning.

Decommissioning Phase

- 2.31 It is expected that the solar PV farm will be in operation for a period of 30 years. At the end of this period, it is proposed that the installation will be decommissioned and removed, and the land returned to agricultural use. If required, decommissioning of the solar PV farm can be financed from a dedicated deconstruction bond accrued over the life of the project.
- 2.32 At this stage, the decommissioning proposal is based on current procedures and experience. These will, however, be reviewed to reflect new experiences and requirements and the overall approach to decommissioning will be reviewed to ensure it is still relevant. Any soil erosion and sedimentation control measures, as well as other mitigation measures used during construction, will be re-implemented during the decommissioning phase. It is anticipated that decommissioning activities will take between two to four months.
- 2.33 The purpose of decommissioning is to return the site to its current condition or to a condition required for the future use. All project components will be removed with the possible exception of some underground infrastructure. Topsoil will be replaced if necessary and parts may be seeded with a low-growing native vegetation to help stabilise soil conditions and enhance soil structure.
- 2.34 HGV traffic flows to and from the site are anticipated to be no different to those estimated in the Traffic Management. Abnormal loads are not usually required as part of the decommissioning process and the dismantling should require less labour, with parking for these vehicles likely to be accommodated on site using the existing access.

3.0 PLANNING POLICY ASSESSMENT

Development Plan Policy

- 3.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires applications for planning permission to be determined in accordance with the Development Plan, unless material considerations indicate otherwise.
- 3.2 This section identifies the Development Plan policies relevant to the site and assesses the proposed scheme against these.
- 3.3 The Development Plan relevant to the application site includes:
- Saved local plan policies – the Arun District Local Plan.

Arun District Local Plan

- 3.4 The Arun Local Plan with a plan period to 2011 was adopted in 2003. The majority of the policies were “saved” by order of the Secretary of State in 2007. It will be replaced by the emerging Arun Local Plan (2011-2029) in due course. The policies considered pertinent for this application are listed below.
- 3.5 The adopted Local Plan Proposals Map indicates that the site is unallocated rural land.
- 3.6 Policy GEN21 relates to Renewable Energy and states that

“Planning permission will be granted for development for renewable energy generation provided that:

- (i) there is no significant harmful environmental effect on the quality of the natural and built environments;*
- (ii) there is no unacceptable impact on the amenity of neighbouring residents;*
- (iii) there is no adverse effect on public safety;*
- (iv) development will make a contribution to meeting need on a local, regional or national basis and the reduction in emissions of damaging greenhouse gases.”*

- 3.7 The supporting Landscape and Visual Impact Assessment demonstrates that the solar park will not be a prominent feature within the landscape. The nearest settlement of Shripney is considered to be a sufficient distance from the site for there to be no impact on the amenity of neighbouring properties.
- 3.8 In terms of the built-up area boundary, Policy GEN2 states that:

“The boundaries of the built-up area for the purposes of the West Sussex County Structure Plan and this District Local Plan are defined on the Proposals Map. Development or redevelopment will be permitted within the built-up area boundaries, subject to the other policies in this plan. Outside the built-up area boundaries, development or redevelopment will not be permitted unless it is consistent with other Local Plan policies.”

- 3.9 Policy GEN3 relates to the Protection of the Countryside and seeks to focus development within the built-up areas, and safeguard land outside the built up areas (referred to as the countryside for policy purposes). However, the policy does not

specifically preclude development in the countryside, and allows it should it meet one of five criteria. These are:

- it is necessary for agriculture, forestry, minerals extraction or waste deposit;
- for quiet, informal recreational use;
- diversification of the rural economy;
- relates to an essential road scheme;
- it accords with the Area Policies and those that relate to Specific Types or Forms of Development in Sections 2 and 3 of the Local Plan.

3.10 It is considered that the proposed development complies with policy GEN3 by making a direct contribution to diversification of the rural economy. It is therefore considered that the principle of development in this rural location is acceptable, subject to other detailed planning considerations.

3.11 Policy GEN9 relates to foul and surface water drainage and identifies that planning permission for development which will materially increase foul and/or surface water discharges will be refused unless, it can be shown that either adequate drainage capacity exists or appropriate drainage capacity can be provided as part of the development. Consideration should also be given to the use of Sustainable Urban Drainage Systems (SUDS) as alternatives to conventional drainage where appropriate.

3.12 Policy GEN29 refers to Nature Conservation, and identifies that development will only be permitted on sites which contain semi-natural habitats, features of nature conservation interest, or within wildlife corridors, where these can be largely retained and sympathetically incorporated into the scheme.

3.13 With regard to archaeological issues, Policy 17 states that permission will not be granted for development that would be harmful to the significant archaeological interest of a site.

Summary

3.14 The application site is not subject to any specific land use designations and is not of significant landscape or archaeological value. Policy GEN21 is supportive of renewable energy, and the proposal satisfies all of the relevant criteria.

3.15 Solar power is particularly positive in terms of renewable energy technology due to the limited height of the panels and the ability to follow topography. This means that it can be designed to create minimal landscape and visual effects. In the context of the wider landscape, the development will have only a negligible impact on views. With mitigation measures established, the views would be almost fully screened.

3.16 Although the site is not of intrinsic ecological value, existing features of ecological interest will be retained in accordance with policy GEN29 and overall biodiversity interest within the site, and connectivity with the wider countryside, enhanced. Ecological interest associated with existing tree cover will, where necessary, be supplemented with substantial additional planting.

- 3.17 In view of the above it is considered that the proposed development is in conformity with the Development Plan. Prior to making a decision on the application however, the Council should review any other material considerations which may suggest otherwise.

Emerging policy

- 3.18 Arun District Council is currently developing its Draft Local Plan. The Council resolved on 11 February 2014 that emerging Local Plan policies were to be treated as a material consideration in the determination of planning applications. The policies have yet to be subject to Examination and, therefore, following the advice in the National Planning Policy Framework, should carry little weight in the determination of this planning application.
- 3.19 Policy ECC DM1, Renewable Energy, identifies that the Council expects schemes to contribute to the social, economic and environmental development and overall regeneration of the District. Overall the Council will support proposals for appropriately located renewable energy development, and their ancillary development where they meet the following criteria:
- a. The proposal is located and designed to minimise adverse impacts to landscape, habitats, the historic environment and residential amenity including visual, noise and odour impacts;*
 - b. The location and design of proposals will need to take account of the Council's landscape assessment and landscape sensitivity studies (or successor documents) and proposals for large scale renewable energy projects will need to be supported by a zone of theoretical visibility and viewpoint assessment;*
 - c. Proposals will need to demonstrate that there are no detrimental cumulative impacts on landscape character, biodiversity, key species or residential amenity;*
 - d. Proposals located within or close to the boundaries of areas designated for their landscape, ecological, or historic interest should demonstrate that development will not impact upon the purposes of designation;*
 - e. Proposals will need to demonstrate the potential benefits of the development to the host communities and identify opportunities for environmental enhancement;*
 - f. Priority should be given to proposals that integrate with existing or new development where appropriate to do so having regard to (a);*
 - g. For proposals that make use of biomass or energy crops, applicants will need to demonstrate the proposal is appropriately located so that it will not result in the loss of high grade agricultural land and to the local transport network and that the network has sufficient capacity to safely absorb additional traffic resulting from the development; and*
 - h. All proposals will need to demonstrate a suitable connection to the electricity distribution network, or appropriate energy storage facility, and provide evidence to demonstrate that the connection will not result in unacceptable impacts upon the landscape, natural and historic environment or visual and residential amenity.*

Schemes falling within landscape or nature designations will be considered where there are no alternatives and where a considerable community benefit is demonstrated and considered to outweigh the landscape impact.

Developments shall also be consistent with all other Local Plan Policies

- 3.20 Policy C SP1- relates to the Countryside and states that development outside of the built-up area boundary, development will need to meet certain criteria. Whilst the proposed development is not specifically listed, the scheme will contribute to diversification of the rural economy. Therefore it is considered to comply with this policy. Additionally, the proposed development will include landscape and biodiversity enhancements, as stated in the latter section of the policy.
- 3.21 Policy SO DM10 relates to agricultural land and states that unless designated for development, the use of Grades 1, 2 and 3a of the Agricultural Land Classification for any form of development not associated with agriculture, horticulture or forestry will not be permitted unless need for the development outweighs the need to protect such land in the long term. The requirement to protect the best and most versatile land can be outweighed if it is demonstrated, amongst other things that any site preferred for development is demonstrated to be the best and most sustainable option, including but not limited to the terms of land quality, ecosystem services, infrastructure and proven need and that the proposed development meets the requirements of the countryside policy and/or equine development policy.
- 3.22 Turning to design, Policy D SP1 states that development proposals should be of good quality and demonstrate a high standard of design. The Council expects all development proposals to consider the efficient use of land, layout, landscape and its setting, density, mix, scale, massing, materials, finish, architectural details and nearby habitats.
- 3.23 With regards to flooding, Policy W DM2, identifies that within areas identified at being at risk from flooding will only be permitted where all of the following criteria have been satisfied:
- a. The sequential test in accordance with the National Planning Policy Framework Technical Guidance has been met.*
 - b. A site specific Flood Risk Assessment demonstrates that the development will be safe, including access and egress, without increasing flood risk elsewhere and reduce flood risk overall.*
 - c. The scheme identifies adaptation and mitigation measures.*
 - d. Appropriate flood warning and evacuation plans are in place; and*
 - e. New site drainage systems are designed to take account of events which exceed the normal design standard i.e. consideration of flood flow routing and utilising temporary storage areas.*

National Planning Policy Framework (NPPF)

- 3.24 The NPPF sets out Government planning policy for England and how it is expected to be applied. National planning and local policy in respect of specific technical considerations (landscape, biodiversity, flood risk, traffic and cultural history) is

described in more detail in the technical reports that are submitted with the planning application.

3.25 Overarching policy in relation to the purpose of the planning system and its role in bringing forward a low carbon future are summarised below.

3.26 The purpose of the planning system is to contribute to the achievement of sustainable development, in the context of economic, social and environmental dimensions. Paragraph 17 establishes twelve core planning principles that should underpin both plan-making and decision-taking. Of direct relevance to this proposal is that planning should:

Support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change, and encourage the reuse of existing resources, including conversion of existing buildings, and encourage the use of renewable resources (for example, by the development of renewable energy).

3.27 Paragraph 93 identifies that planning plays a key role in helping to shape places to secure reductions in greenhouse gas emissions, minimising vulnerability and providing resilience to the impacts of climate change, and supporting the delivery of renewable and low carbon energy and associated infrastructure. This is central to the economic, social and environmental dimensions of sustainable development. To support the move to a low carbon future, the NPPF requires (paragraph 95) LPAs to:

plan for new development in locations and ways which reduce greenhouse gas emissions;

actively support energy efficiency improvements to existing buildings;
and

When setting any local requirement for a building's sustainability, do so in a way consistent with the Government's zero carbon buildings policy and adopt nationally described standards.

3.28 Paragraph 95 goes on to state that:

"To support the move to a low carbon future, local planning authorities should:

plan for new development in locations and ways which reduce greenhouse gas emissions..."

3.29 Paragraph 97 requires local authorities to help increase the use and supply of renewable and low carbon energy, they should recognise the responsibility on all communities to contribute to energy generation from renewable or low carbon sources and should:

"have a positive strategy to promote energy from renewable and low carbon sources;

design their policies to maximise renewable and low carbon energy development while ensuring that adverse impacts are addressed satisfactorily, including cumulative landscape and visual impacts;..."

- 3.30 Paragraph 98 provides specific guidance in relation to the determination of planning applications and identifies that local planning authorities should:

not require applicants for energy development to demonstrate the overall need for renewable or low carbon energy and also recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and

approve the application if its impacts are or can be made acceptable. Once suitable areas for renewable and low carbon energy have been identified in plans, local planning authorities should also expect subsequent applications for commercial scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas”

National Planning Practice Guidance - Renewable and Low Carbon Energy

- 3.31 National Planning Practice Guidance (NPPG) was adopted in March 2014. The PPG has been designed to support the National Planning Policy Framework and the two should be read in conjunction.

- 3.32 NPPG gives specific guidance on planning for renewable developments. It identifies that increasing the amount of energy from renewable and low carbon technologies will help to make sure the UK has a secure energy supply, reduce greenhouse gas emissions to slow down climate change and stimulate investment in new jobs and businesses. Planning has an important role in the delivery of new renewable and low carbon energy infrastructure in locations where the local environmental impact is acceptable.

- 3.33 With regards to solar energy the guidance identifies that where a planning application is required, factors to be considered include:

- the importance of siting systems in situations where they can collect the most energy from the sun;
- need for sufficient area of solar modules to produce the required energy output from the system;
- the effect on a protected area such as an Area of Outstanding Natural Beauty or other designated areas;
- the colour and appearance of the modules, particularly if not a standard design.

- 3.34 The guidance goes on to identify that the particular factors which a local planning authority will need to consider include:

- encouraging the effective use of land by focussing large scale solar farms on previously developed and non agricultural land, provided that it is not of high environmental value;
- where a proposal involves greenfield land, whether (i) the proposed use of any agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land; and (ii) the proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays. See also a speech by the Minister for Energy and Climate Change, the Rt Hon Gregory Barker MP, to the solar PV industry on 25 April 2013.

- that solar farms are normally temporary structures and planning conditions can be used to ensure that the installations are removed when no longer in use and the land is restored to its previous use;
- the proposal's visual impact, the effect on landscape of glint and glare (see guidance on landscape assessment) and on neighbouring uses and aircraft safety;
- the extent to which there may be additional impacts if solar arrays follow the daily movement of the sun;
- the need for, and impact of, security measures such as lights and fencing;
- great care should be taken to ensure heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting. As the significance of a heritage asset derives not only from its physical presence, but also from its setting, careful consideration should be given to the impact of large scale solar farms on such assets. Depending on their scale, design and prominence, a large scale solar farm within the setting of a heritage asset may cause substantial harm to the significance of the asset;
- the potential to mitigate landscape and visual impacts through, for example, screening with native hedges;
- the energy generating potential, which can vary for a number of reasons including, latitude and aspect.

International Legal and Policy Context

3.35 In 1992, at the Earth Summit in Rio, countries from across the world joined an international treaty, the United Nations Framework Convention on Climate Change. The purpose of the treaty was to consider in a cooperative approach what could be done to limit global temperature increases and the resulting climate change, and to cope with the already inevitable consequences on human populations and the wider natural environment. By 1995, it became clear that emission reductions provisions in the Convention were inadequate and further negotiations were launched to strengthen the global response to climate change. Two years later the Kyoto Protocol was adopted, which legally binds developed countries to emission reduction targets. The Protocol's first commitment period started in 2008 and ended in 2012. The second commitment period began on 1 January 2013 and will end in 2020.

- As a signatory and ratifier of the Protocol, the UK is obliged under international law to deliver on mitigation targets. This requires the UK (as an Annex I country) to submit:
 - National communications containing detailed information on GHG emissions, climate-related policies, mitigation efforts, adaptation policies, and the level of financial and technical support that it is providing to developing countries); and
 - GHG inventories: detailed information on emissions and methodologies used to calculate those emissions.

European Legal and Policy Context

3.36 Concurrently with the United Nations Framework Convention, the European Union (EU) has progressed through a series of initiatives to deliver a comprehensive strategy and action plan to reduce climate change emissions and manage the effects of global warming.

3.37 EU leaders have committed to transforming Europe into a highly energy-efficient, low carbon economy via:

- a 20% reduction in EU greenhouse gas emissions from 1990 levels;
- raising the share of EU energy consumption produced from renewable resources to 20%;
- a 20% improvement in the EU's energy efficiency; and,
- further targets are set for reducing greenhouse gas emissions progressively up to 2050, with actions implemented through a package of binding legislation on member nations.

3.38 All countries within the EU, including the UK, are listed under Annex I of the Kyoto Protocol. As such, the UK and EU are legally bound to meet the mitigation targets which they have set or face UN sanctions. In this context, European and UK policy is heavily focussed on the need to hit emissions targets.

National Legal and Policy Context

3.39 Therefore in a national context, there is a strong legal and policy imperative to deliver on international agreements to reduce greenhouse gas emissions, and increase energy consumption produced from renewable resources.

3.40 International obligations are transposed via domestic legislation into UK law and policy. The key legislation is the 2008 Climate Change Act, which places a duty on the Secretary of State for Energy and Climate Change to ensure that the net UK carbon account for all six Kyoto greenhouse gases for the year 2050 is at least 80% lower than the 1990 baseline and gives ministers powers to introduce the measures necessary to achieve a range of greenhouse gas reduction targets. An independent Committee on Climate Change was created under the Act to provide advice to UK Government on the targets and related policies.

4.0 KEY PLANNING CONSIDERATIONS

Introduction

4.1 Following the above review of development planning policy, this section assesses the scheme against these policies. Based on our review of the scheme and the identified Development Plan policies, it is considered that the key issues against which the scheme should be assessed are:

- Development in the Countryside;
- Landscape considerations;
- Agricultural land quality;
- Biodiversity considerations;
- Heritage considerations;
- Flooding issues;
- Traffic and access; and
- Other environmental issues including noise.

Development in the countryside

- 4.2 As the proposal involves the development outside of the defined built-up area boundary, it could be considered to conflict with the relevant Development Plan policies that aim to focus development to within urban areas. There are, however, a number of material considerations which outweigh any potential conflict.
- 4.3 A long term rental agreement would provide the farm business with an additional source of regular, predictable income for the duration of the tenancy. Income and expenditure associated with agriculture can be volatile, so the provision of a stable income stream would enhance the resilience and viability of the existing farm business, whilst also significantly enhancing their 'green' credentials. The proposed solar park will accordingly add to the continued "*development and diversification*" of the estate in line with paragraph 28 of the National Planning Policy Framework.
- 4.4 The proposed development is, moreover, temporary for 30 years and is wholly reversible. The agricultural use on the land will be retained through this period.
- 4.5 Overall, in view of the need to promote economic growth and to retain employment in the District, and the considerable quantum of renewable energy that will be generated, it is considered that the principle of development in a countryside location acceptable.

Landscape Considerations

- 4.6 The proposed solar park will not be a prominent feature within the landscape due to its low height set within a low coastal plain landscape. The few partial / glimpsed views from surrounding roads, PRoWs and properties can be screened by enhancing existing vegetation features and establishing new hedgerow and tree planting along the perimeter boundary. There will be no significant views of the solar park from the South Downs National Park or Halnaker Windmill. Although the high ground will afford views towards the solar park, the distance, angle of view and intervening horticultural tunnels and field boundaries will make it difficult to discern. The array will

also face away from the National Park, thus the effect on the visual amenity of the National Park is considered to be negligible.

- 4.7 The most significant view of the array will be from PRow No 149 which skirts around the west side of Shripney Hamlet, in front of Myddleton Terrace, although views from here are already adversely affected by overhead utility lines and Manor Farm's (the neighbouring farm) horticultural tunnels to the west. The proposed planting on this perimeter will be beneficial in that it will provide screening to both the proposed solar park and the existing horticultural tunnels. There are two clusters of listed buildings within 1km of the site, one to the south and one to the east in the nearby settlements of Shripney and North Bersted. None of these afford views of the site. The cumulative effect of one existing and another proposed solar park, between 2.5 and 2.8 km from the site, will be minor adverse due to the distance and aspect making the solar parks barely distinguishable within the surrounding landscape.
- 4.8 The main landscape effects include the temporary, reversible loss of the site's rural character during operation. Although evident, this will have a low impact on the surrounding views due to the already light industrial character created by horticultural estates and overhead utility lines. The proposed development is temporary and will be constructed in such a way that it will not have any adverse impact on the landscape once it is removed. Even while operational the development is considered acceptable in landscape and visual terms.

Agricultural Land Quality

- 4.9 The site lies on land which is classified as being of Grade 2 quality.
- 4.10 Planning permission is sought on a temporary basis for a period of 30 years, after which time the solar arrays, associated equipment and fencing will be removed and the land returned to solely agricultural use. A planning condition to require the site's restoration after this period can be added to any planning permission.
- 4.11 Policy 12 of the Arun Local Plan relates directly to the protection of agricultural land. It was not identified as a saved policy and therefore expired in September 2007. It is intended that this policy will eventually be replaced with Policy DM10 (Soils) in the Draft Local Plan 2013. Policy DM10 has yet to be subject to Examination and therefore carries little weight in the determination of this planning application. There is, therefore, no adopted policy in relation to use of agricultural land. Instead, the application should be considered against the requirements of paragraph 112 of the NPPF.
- 4.12 Paragraph 112 of the NPPF aims to safeguard the Best and Most Versatile (BMV) agricultural land (grades 1 to 3a) from inappropriate development, i.e. development unrelated to agricultural or forestry, unless there is a strong case in support of development that overrides protection.
- 4.13 The application site comprises a very small area of the overall best and most versatile farmland in the West Sussex Coastal Plain area. Arun has a relatively high proportion of best and most versatile land and therefore the use does not represent a significant loss in the context of the District.

- 4.14 During the lifetime of the development the site, including under the arrays, will be available for grazing of small livestock, thereby enabling dual use of the land for agricultural and solar energy production. As such the land will not be lost from productive agriculture.
- 4.15 It is concluded that while the proposal would involve the removal of agricultural land from arable use over its lifetime, it will be retained in pastoral use and can be returned to its original state after the lifetime of the development. The District has a large supply of productive land, and the proposal is for a farm diversification scheme which would support the viability of the farm. In these circumstances it is considered that the proposed solar farm would be acceptable.

Biodiversity Considerations

- 4.16 The application site is not covered by any statutory or non-statutory designations and there are no statutory designated sites within 1 km of the application site.
- 4.17 As a matter of principle, BNRG designs its Solar Parks firstly, to avoid adverse effects on biodiversity and, if that is not possible, to fully mitigate such effects with appropriate measures. Ecological enhancements are also embedded within application schemes.
- 4.18 The Ecological Appraisal suggests that ecological enhancements will consist of the following:
- The creation of a wildlife protection zone seeded with a fine grass mix including native herb species.
 - Hedgerow enhancements with the planting of additional native species.
 - A landscape management plan to be prepared and implemented to cover the management of the retained and enhanced habitats, such as the hedgerows and ditches.

Heritage Considerations

- 4.19 The supporting Archaeological Assessment concludes that given the distance from the nearest listed buildings and the Shripney Conservation Area, it is unlikely that there will be an impact upon the settings of these assets arising from the development at Manor Farm.
- 4.20 Initial archaeological fieldwork has identified the presence of an extensive prehistoric and Romano-British landscape with occupation areas and small enclosures set amongst field systems, together with a high-status Iron Age burial. Given the proximity of these archaeological remains and the discovery of Roman pottery within and close to the site it is possible that this archaeological landscape continued into the site and that elements of this landscape may still survive as a buried archaeological resource.
- 4.21 Consequently, the proposed trenching has the potential to expose and cut through archaeology of later prehistoric and Romano-British date. Although this should not be viewed as an over-riding constraint to development, archaeological monitoring of groundworks as they are carried out is recommended to be undertaken as a condition of planning consent.

Flooding Issues

- 4.22 The majority of the site is identified as being within Flood Zone 1, with a small area of the site lying within Flood Zone 2 and 3, which is considered to be at actual risk from fluvial flooding. In the event that flood water does impact upon the site, it is considered that the proposed mitigation measures will be sufficient.
- 4.23 Human presence on the site is limited and so the risk to human life is minimal. No significant changes will be made to the site's permeability characteristics and the existing surface water regime will be retained. The supporting FRA demonstrates that the development will meet the requirements with respect to flood risk as outlined in NPPF and associated guidance; that it will be safe over the lifetime of the development, that it will not put human lives at risk and that it will not increase flood risk elsewhere.

Traffic and Access

- 4.24 The Transport Statement submitted to inform the planning application assesses the transport and highways implications of the proposed solar photovoltaic park. The Transport Statement demonstrates that:
- The site is located in a suitable location in transport terms – in that it meets the tests of the NPPF in terms of providing genuine and realistic opportunities for sustainable travel;
 - The scheme will provide a safe and suitable vehicular access;
 - The adequate car parking provision will be provided adequate parking for the development proposal such that no overspill will occur on Shripney Lane; and
 - The development proposal for a solar photovoltaic park will not have a severe residual impact (noting that once construction is complete, the level of traffic associated with the operation of the development proposal will be circa one visit per month for maintenance purposes).
- 4.25 Construction vehicles associated with the development proposal will route from the A29 (which is denoted as a Local Lorry Route on the WSCC Advisory Lorry Route Map) into Shripney Lane then turn right into Manor Farm, when travelling from the north. If travelling from the south/west vehicles will route via the A259 and then the A29 which is denoted as a Strategic Lorry Route. The proposed routes are detailed in the Transport Statement.
- 4.26 Construction vehicles travelling from the north will park in the layby on the eastern side of the A29 to the north of Victoria Gardens, to contact the site to ensure they can gain access to the site and also to reduce the likelihood of conflict with an opposing HGV on Shripney Lane. Those travelling from the south/west will park in the layby on the eastern side of the A259 to the west of Colworth, to contact the site before proceeding.
- 4.27 Against this background, the proposed development will result in a negligible increase in vehicle movements over the course of a day, and these effects will be experienced during the construction and decommissioning phases only. The submitted Construction Management Plan provides a number of measures for the management of traffic, principally during the construction period.

Other environmental issues, including noise

- 4.28 The proposed solar park will cause minimal environmental impact during the installation and operation at the site and will not emit any harmful pollutants once installed.
- 4.29 The proposed development will therefore not cause any unacceptable environmental impact.

Acoustic Considerations

- 4.30 Noise impacts will be limited to the construction phase of the development, whereby there would be minor impacts generated by the vehicle movements across the site coupled with the installation of equipment.
- 4.31 Once operational, the sub-stations which accompany the scheme may generate some noise, although any noise will be mitigated by the surrounding cabinet housing. The arrays are fixed and as such will not generate any noise. It is considered that due to relatively remote location of the site, any noise generated above background levels will not be audible to the nearest sensitive receptors.

Glint and Glare

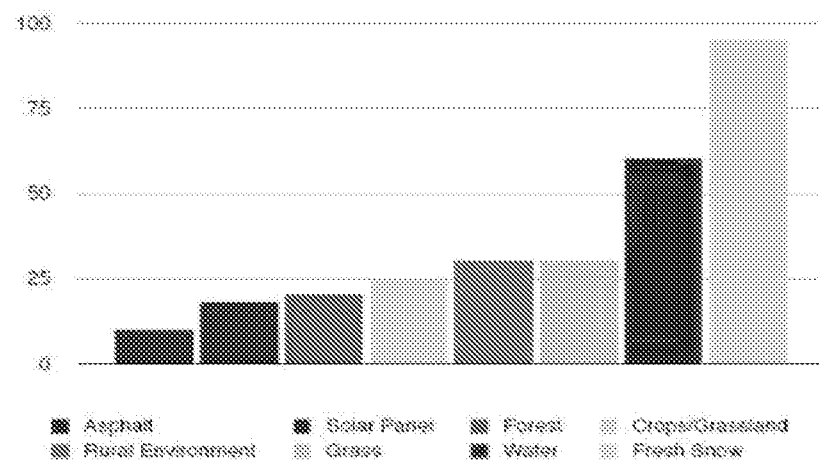
- 4.32 The photovoltaic (PV) panels are made up of silicon based photovoltaic (PV) cells that are encased in a glass covering. Glass does not have a true specular reflection, but does reflect a certain magnitude of light. Reflection of sunlight from photovoltaic (PV) panels is unwanted by the operator, because the greater the amount of light which can be captured at the photovoltaic (PV) cell, the greater the amount of electricity which is produced. Panel manufacturers therefore use anti-reflective coating in the glass that changes the reflectivity.
- 4.33 It should be noted that since solar panels will only be reflecting some 2% of the light, the intensity of the glare will be less than glare that would be experienced from other surfaces.
- 4.34 Therefore as light falls onto the photovoltaic (PV) panels, most of the sunlight is transmitted to the photovoltaic (PV) cell beneath the glass with only a small amount reflected back in multiple of angles and magnitudes. The result is a structure that has little glare. The Federal Aviation Administration (FAA) Technical Guidance for Evaluation Selected Solar Technologies at Airports, November 2012 indicate the reflective light can be a little as 2% of the incident sunlight:

“Once the amount of sunlight is known, reflectivity from solar projects will vary based on the type of solar power system and its materials and design. Solar PV employs glass panels that are designed to maximise absorption and minimise reflection to increase electricity production efficiency. To limit reflection, solar PV panels are constructed with dark, light-absorption materials and covered with anti-reflective coating. Today’s panels reflect as little as 2% of the incoming sunlight depending on the angle of the sun and assuming use of anti- reflective coating.”

- 4.35 The FAA study advises while solar collection technology has highly reflective surfaces, Photovoltaic (PV) technology is primarily absorptive since the purpose of Photovoltaic (PV) panel is to absorb as much of the sun’s energy as possible. The study notes the degree of reflectivity of a Photovoltaic (PV) panel will depend upon:-

- The intensity of the incoming light;
- The reflectivity of the panel surface; and

4.36 Whether the reflected light is 'specular' (as occurs from mirrors and still water) or diffuse (as occurs from rough surfaces such as terrain and vegetation).



4.37 Photovoltaic (PV) panels are constructed from specially-treated low-iron glass, designed to minimise reflection and maximise transmission of light through the glass. Standard low-iron glass reflects approximately 7% of light. As an example Sunarc AR-Glass panels reflect a total of approximately 2% of light.

5.0 THE PLANNING BALANCE

- 5.1 The principle of the development is broadly supported within the NPPF. Of particular relevance to this application is Part 10 of the NPPF and Paragraphs 98 and 109.
- 5.2 The development is also considered to comply with policies contained within the Development Plan.
- 5.3 In terms of visual impact on the surrounding landscape and sensitive receptors, careful consideration of the overall height of the arrays, coupled with setting back the solar panels from sensitive receptors and provision of additional screening vegetation, means that the solar park will have minimal visual impact. In addition, owing to the nature of the landscape and its relatively discrete location, the solar park will not be visible from any significant vantage points within the surrounding area, or impact on any nearby receptors. The supporting LVIA identifies that, with the proposed mitigation, there will be no significant visual impact as a result of the scheme.
- 5.4 With the mitigation measures proposed in the Ecological Assessment, the development is capable of being accommodated without adverse effect on ecology and the enhancement measures proposed offer biodiversity benefits to the local area.
- 5.5 The accompanying Surface Water Drainage Strategy and Flood Consequence Assessment demonstrate that the proposed solar park will not increase flood risk, either on site or in the surroundings. It is also anticipated that any effect on archaeological features are capable of being addressed by an appropriate planning condition.
- 5.6 There are no Development Plan policies which restrict the use of this site for a solar park development, and there are no sensitive or other designations of relevance on or in the immediate vicinity of the site. Government policies are supportive of renewable energy developments.
- 5.7 The increase in renewable energy generation is of paramount importance within the UK, to reduce overall CO2 emissions by 50% by 2050 to provide energy security and assist in mitigation of climate change. This material encouragement for the proposed solar park is further strengthened by renewable energy policies contained within the Development Plan, which policies promote generation of power from renewable energy sources and require renewable energy schemes to consider careful siting and minimization of environmental and visual impacts.
- 5.8 The information provided with this application demonstrates that the proposed solar park is in accordance with planning policy at the national and local levels. It will provide a reliable energy source which is not dependent on the use of fossil fuels and contributes to both local and national renewable energy targets.
- 5.9 It is therefore proposed that full planning permission should be granted for the application scheme.