

Proposed Photovoltaic Park, Land at Barnham Court Farm, Barnham Planning Design and Access Statement

for

BL Solar 7 Ltd

July 2015

THE Landmark
PRACTICE

Hope Chapel House
Hope Chapel Hill
Holwells
Bristol BS8 4ND
United Kingdom

www.thelandmarkpractice.com

© *The Landmark Practice 2015*

All rights reserved. No part of this document may be produced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopy, recording or otherwise without the prior permission of The Landmark Practice.

Landmark Ref: 2768

Client: BL Solar 7 Ltd

This document was produced under Landmark contract for BL Solar 7

Version		Prepared by	Checked by	Approved by	Issued
Draft 01	Name	R Bird	T Pearce	B Roberts	B Roberts
	Date	07/05/15	21/07/15	21/07/15	21/07/15

The information which we have prepared and provided is true, and has been prepared and provided in accordance with the RTPI's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Tel: [REDACTED]

CONTENTS

	Page
1.0 INTRODUCTION	2
2.0 SITE AND APPLICATION CONTEXT	4
3.0 PROPOSED DEVELOPMENT	6
4.0 NATIONAL PLANNING POLICY CONTEXT	7
5.0 LOCAL PLANNING POLICY	10
6.0 PLANNING ASSESSMENT	16
7.0 DESIGN AND ACCESS	22
8.0 CONCLUSION	25

1.0 INTRODUCTION

1.1 This Planning Statement has been prepared on behalf of BL Solar 7 Ltd (hereafter 'the applicant') to support submission of a planning application for the development of a solar park at Land at Barnham Court Farm, Barnham (hereafter 'the site').

1.2 This application seeks full planning consent for the following development as described on the relevant planning forms:

'Proposed solar park comprising the erection of solar arrays, inverters, transformers, equipment housing, security fencing, internal tracks, ancillary equipment and ecological mitigation'

1.3 The purpose of this Statement is to set out the context for the application, describe the site location, application site and the proposed development; set out the planning policy context and assess the extent to which it complies with the Development Plan and other material considerations. The Planning Statement should be read in conjunction with other plans and technical documents submitted as part of the application package to support the proposal. This includes:

Document	Date	Prepared By
Preliminary Ecological Appraisal	July 2015	The Landmark Practice
Landscape and Visual Impact Assessment	July 2015	The Landmark Practice
Construction Traffic Management Plan	July 2015	Curtins
Flood Risk Assessment	July 2015	Curtins

1.4 The following illustrative material has also been submitted in support of the proposed development:

Plan	Reference	Date	Prepared By
Site Location Plan	2768_01	21.07.2015	The Landmark Practice
Site Master Plan	2768_LF_100	20.07.2015	The Landmark Practice
Site Block Plan	2768_LF_500	20.07.2015	The Landmark Practice
Landscape Master Plan	2768_03_Landscape Masterplan	21.07.2015	The Landmark Practice
Typical Panel Elevations	2768_04	21.07.2015	The Landmark Practice
Typical Fence Details	2768_05	21.07.2015	The Landmark Practice

Gate Elevation	2768_06	21.07.2015	The Landmark Practice
Customer Switch Gear Container Elevation	2768_07	21.07.2015	The Landmark Practice
Inverter Transformer Housing Elevation	2768_08	21.07.2015	The Landmark Practice
DNO Substation Details	2768_09	21.07.2015	The Landmark Practice
CCTV Pole Elevation	2768_10	21.07.2015	The Landmark Practice

1.5 The structure of this Planning Statement is as follows:-

- Section 2 describes the site and its surroundings and reviews the planning history for the site;
- Section 3 provides a description of the proposed development;
- Section 4 sets out the national planning policy context;
- Section 5 sets out the relevant local planning policy context
- Section 6 considers the proposal in light of these policies and material considerations;
- Section 7 describes the approach to the principles of design and access which have informed the development; and
- Section 8 forms the summary and conclusion to the statement.

2.0 SITE AND APPLICATION CONTEXT

Site Location

- 2.1 The site is approximately 5.5 acres in area and is located approximately 1km south west of Barnham. The proposed development site is located to the south of the existing settlement boundary, over 200m in distance. OS map ref: ST 495086 103423.
- 2.2 The application site consists of a single agricultural field which is bounded by mature hedgerows and vegetation. A small pond lies on the southern boundary surrounded by scattered mature trees. A PRow runs along the northern boundary which follows part of the course of the former Chichester and Arundel Canal. This is separated from the site by a small embankment, mature trees and hedges and a section of dense woodland to the west. A small stream runs through the wooded area along the northern boundary. A double tracked railway line lies immediately adjacent to the site to the west.
- 2.3 All adjacent land is within agricultural use and paddocks lie to the south of the site. The immediate landscape is relatively flat and the site itself is located within a small depression. There is also an existing solar development 1km to the south east. Fattening Ground Barn lies some 300m to the south, Highground Barn 300m to the north and Barnham Court Farm 400m to the east.
- 2.4 The site can currently be accessed from the north using existing farm tracks associated with Barnham Court Farm linking to Church Lane. An access track leads to the eastern corner of the site

Planning History

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

Environmental Impact Assessment

- 2.6 A formal request for and EIA screening opinion was submitted to Arun District Council on 30 April 2015 relating to a proposed ground mounted solar farm of circa 1MW on the site. The council concluded under reference PE/00227/15 on 23 June 2015 that the development would not require the submission of an Environmental Impact Assessment.

Public Consultation

- 2.7 The applicant has undertaken active engagement with members of the local community prior to the submission of a planning application. A number of stakeholders were contacted directly in May 2015, to introduce the applicant'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:

- Barnham Ward Councillors (Arun District Council);
- Barnham Parish Council;
- Residents living along Church Lane, Barnham.

- 2.8 A project website was also set up to provide a convenient way for stakeholders to keep updated on the project's progress: www.barnhamcourt.bnrgsolar.co.uk
- 2.9 A presentation was given to Barnham Parish Council in July 2015, with councillors and local residents providing helpful suggestions and feedback, including adding the residents of Highground Lane and Hill Lane to any future communications.
- 2.10 The applicant will continue to engage with local residents and councillors throughout the planning, development and construction processes. This includes a planned consultation event in September to discuss the proposed traffic management measures along Church Lane.

3.0 PROPOSED DEVELOPMENT

- 3.1 The proposed development comprises the installation of a number of rows of solar panels (called 'arrays') together with associated infrastructure. The solar arrays will be laid out to maximise the production of electricity, with the panels angled at circa 25 degrees and orientated to optimise their exposure to direct sunlight. The rows of panels will be separated by a maximum 8.8 m, with a leading edge of 80 cm and trailing edge of 2.5 m. All development will be kept well away from the boundaries where occasional groups of trees are located that could potentially cast shadows. The site itself will be developed by maintaining the topsoil in situ.
- 3.2 Each solar array comprises a number of panels supported on steel supports driven directly into the ground, to a depth of 1-2 m depending on the ground conditions. The panels are then bolt anchored to a metal frame (table) which will be mounted onto the posts. The panels will be arranged at a final height of 2.5 m above ground. The panels are then connected by cabling that runs along the back of the tables. The panels themselves are very strong and durable and are not easily damaged or removed. With no moving parts to the solar arrays there is little risk of mechanical failure. The panels in the arrays are located close to each other, giving the appearance of a continuous structure.
- 3.3 Conduits will be installed along the arrays of panels to house the connecting cables. Each section of the array will be connected to an inverter which, in turn, is connected to the transformer housing, which is placed on site, with all cabling located underground. This structure will house the main site transformer and its connectivity hub. The arrays will be set apart by approximately three times their overall height, 8.8m in order to avoid shadowing.
- 3.4 The solar panels are fixed and will not track the sun by motors; therefore, no noise will be emitted from the panels. The only significant source of operational noise is from the operation of inverter cooling fans. The inverters are proposed to be located at the centre of the site, as far as possible from nearby noise receptors and electrical equipment will be enclosed within weatherproof containers. Operation noise levels will not exceed noise nuisance levels.
- 3.5 Site security is an essential part of the successful operation of a ground-mounted PV array and a large number of PV panels require a security perimeter fence to be erected. This fence will act as a deterrent from both human and animal interference. Careful selection of materials for the construction of the fence will ensure that the fence will not be detrimental to the visual environment but may, in fact, aid the visual screening of the PV arrays combined with the mitigation proposed in the accompanying Landscape Masterplan.
- 3.6 It is proposed that the site will be developed and used for solar energy production for a period of 30 years. The site will then be decommissioned in its 31st year, infrastructure removed and the land returned to full agricultural use.

4.0 NATIONAL PLANNING POLICY CONTEXT

National Planning Policy Framework (NPPF)

- 4.1 The National Planning Policy Framework (NPPF) was published in March 2012 and sets out the Government's planning policies for England and is a material consideration in planning decisions. It replaces the various Planning Policy Statements and Planning Policy Guidance, alongside other circulars and government guidance. The NPPF at paragraph 2, explains:

'Planning law requires that applications for planning permission must be determined in accordance with the development plan unless material considerations indicate otherwise. The National Planning Policy Framework must be taken into account in the preparation of local and neighbourhood plans, and is a material consideration in planning decisions.'

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

- 4.3 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).*

- 4.4 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.*

4.5 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."*

4.6 Paragraphs 100-108 specifically relate to development within areas at risk of flooding. Development should be directed away from areas at highest risk, but where development is necessary. The following three paragraphs are of relevance:

'The aim of the Sequential Test is to steer new development to areas with the lowest probability of flooding. Development should not be allocated or permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower probability of flooding. The Strategic Flood Risk Assessment will provide the basis for applying this test. A sequential approach should be used in areas known to be at risk from any form of flooding.' (para 101)

'If, following application of the Sequential Test, it is not possible, consistent with wider sustainability objectives, for the development to be located in zones with a lower probability of flooding, the Exception Test can be applied if appropriate. For the Exception Test to be passed:

- *it must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by a Strategic Flood Risk Assessment where one has been prepared; and*
- *a site-specific flood risk assessment must demonstrate that the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.*

Both elements of the test will have to be passed for development to be allocated or permitted.' (para 102)

'When determining planning applications, local planning authorities should ensure flood risk is not increased elsewhere and only consider development appropriate in areas at risk of flooding where, informed by a site-specific flood risk assessment following the Sequential Test, and if required the Exception Test, it can be demonstrated that:

- *within the site, the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location; and*
- *development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed,*

including by emergency planning; and it gives priority to the use of sustainable drainage systems.’ (para 103)

4.7 Para 109 of the NPPF supports the enhancement of the natural and local environment. In particular it requires proposals to:

- *‘ minimise impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government’s commitment to halt the overall decline in biodiversity including by establishing coherent ecological networks that are more resilient to current and future pressures.’*

National Planning Practice Guidance - Renewable and Low Carbon Energy

4.8 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.

4.9 NPPG gives specific guidance on planning for renewable and low carbon energy developments and notes that renewable energy developments should be acceptable for their proposed location. In addition to this principle, the PPG provides guidance on considerations associated with particular technologies, including solar farms.

4.10 Key matters are identified, and are addressed in this Statement. They are summarised below as:

- Use of previously developed land;
- Use of agricultural land;
- The temporary nature of solar PV development;
- Visual impact and use of mitigation planting;
- Need for security features;
- Impact on heritage assets;
- Energy generation;
- Cumulative effects.

4.11 The NPPG also provides additional guidance on the sequential and exception tests to be applied in areas of medium and high flood risk areas. The exception test requires proposed development to show that it will provide wider sustainability benefits to the community that outweigh flood risk, and that it will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall.

5.0 LOCAL PLANNING POLICY

- 5.1 This section sets out the relevant adopted and emerging local planning policy context and sets out the specifics of policy within each document.

Adopted Development Plan

- 5.2 Section 38 (6) of the Planning and Compulsory Purchase Act 2004 (The Act) requires that planning applications are determined in accordance with the statutory development plan unless material considerations indicate otherwise.

- 5.3 For the purposes of this application the development plan consists of:

- The saved policies of the adopted Arun District Local Plan 2003

- 5.4 The site is located outside the settlement boundary and is not subject to any allocations in the Local Plan. Therefore the following general policy **GEN2 Built-up Area Boundary** is of relevance as is policy **GEN3 Protection of the Countryside**

(GEN2)

'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.'

(GEN3)

'Outside the Built-Up Area, as defined on the Proposals Map, the countryside will be safeguarded for its own sake. Development will not be permitted unless:

- (i) it meets the operational needs of agriculture, forestry, the extraction of minerals or the deposit of waste; or*
- (ii) for quiet, informal recreation; or*
- (iii) for the diversification of the rural economy; or*
- (iv) for essential road schemes; or*
- (v) it is in accordance with a policy in Sections 2 and 3 of the plan referring to a specific use or type of development.*

Permission will not be given for the extension of isolated groups of buildings or the consolidation of linear or sporadic development unless the proposal accords with criteria (i) to (iii) or (v).'

- 5.5 The following two policies relate to the drainage of the site. **Policy GEN9 Foul and Surface Water Drainage** states that:

'Planning permission for development which will materially increase foul and/or surface water discharges will be refused unless the Local Planning Authority is satisfied 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.'

5.6 **Policy GEN 11 Inland Flooding** also states that:

'Permission for development which would be at risk from flooding and/or materially decrease the capacity of a floodplain to store or pass flows of floodwater, will be refused unless the Local Planning Authority is satisfied that compensatory flood storage/waterway areas can be provided as part of the development and the function and effectiveness of existing watercourses, or their replacements, are not adversely affected.'

5.7 The following policy (**GEN21 Renewable Energy**) relates specifically to renewable energy Development.

'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.'*

5.8 **Policy GEN29 Nature Conservation across the District**, seeks to protect undesignated sites from the harmful effects of development, and retain their value as a biodiversity resource.

'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. Legal agreements may be used to offset the loss of, or impact on, any nature conservation resource present on the site prior to development.'

5.9 **Policy GEN30** supports the protection of species protected by law.

'Development will not be permitted which would adversely affect, directly or indirectly, animal and plant species protected by law. Where development is permitted, the developer will be required to take steps to secure the protection of such animals and plants.'

Material Considerations

Arun District Local Plan 2001-2031

5.10 Arun District Council is currently preparing a new local plan the 'Arun District Local Plan 2011-2031' which will replace the saved policies of the 2003 Local Plan. This plan has been submitted for independent examination on 30 January 2015. A planning inspector has been appointed to the examination and preliminary questions have been released on 05

March 2015. As this plan is not adopted, the emerging plan does not form part of the Development Plan for the district. Due to the advanced stage of its preparation, however, relevant policies can be afforded some weight and are a material consideration.

- 5.11 The following general policies are of note and have been taken from the October 2014 publication version of the plan. **Policy SD SP1 Sustainable Development**, supports the sustainable development principles contained within the NPPF and planning applications which help to achieve the central aim of the plan, to increase employment density and accord with the policies of the Local Plan, unless material considerations indicate otherwise. **Policy SD SP2 Built-up Area Boundary** resists development outside boundaries unless it is consistent with other Local Plan policies. **Policy C SP1 Countryside** also protects development in countryside locations unless it is:

'd) for the diversification of the rural economy;

f) in accordance with other policies of the Plan which refer to a specific use or type of development.'

- 5.12 **Policy ECC DM1 Renewable Energy** specifically relates to renewable energy proposals and states the following.

'The Council will support renewable energy development subject to the criteria in this Policy. Schemes will be expected to contribute to the social, economic and environmental development and overall regeneration of the District.

Within areas of protected or sensitive landscapes, areas or buildings, development should generally be small scale or community based.

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.'

- 5.13 The following policies specifically relate to the protection of the landscape and habitats. **Policy LAN DM1 Protection of landscape character** permits development where:

'a. Landscape character, including its natural features, are conserved or enhanced.'

- 5.14 The council encourages the conservation and enhancement of biodiversity and the natural environment through strategic **Policy ENV SP1 Natural environment**. The policy protects both designated and non-designated sites, and promotes the creation of new areas for habitats and species. **Policy ENV DM1** relates specifically to designated sites and requires:

'1. Proposed development likely to have an adverse effect on land within or adjoining a Site of Biodiversity or Geological Importance as listed in Tables 17.1 - 17.6 (either individually or in combination with other developments), will not normally be permitted. Exceptions will only be made where the following can be demonstrated:

- a. There is no alternative solution (which shall be adequately demonstrated by the developer) and*
- b. There are reasons of public health or public safety or*
- c. There are benefits of primary importance to the environment or*
- d. There are imperative reasons of overriding public interest.*

Notwithstanding the above however, the presumption in favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined.

2. In determining any planning application affecting Sites of Biodiversity or Geological Importance the Council will ensure that the intrinsic natural features of particular interest are safeguarded or enhanced having regard to;

- a. The European, National or Local status and designation of the site;*
- b. The nature and quality of the site's features, including its rarity value;*
- c. The extent of any adverse impacts on the notified features of interest;*
- d. The need for compensatory measures in order to re-create remaining features of habitats on or off the site.*

3. Where appropriate the Council will ensure the effective management of designated sites through the imposition of planning conditions or Section 106 agreements as appropriate.

4. Developments shall also be consistent with all other Local Plan policies.'

5.15 **Policy ENV DM5 Development and biodiversity** also requires the following:

'Development schemes shall, in the first instance, seek to achieve a net gain in biodiversity and protect existing habitats on site. They shall also however incorporate elements of biodiversity including green walls, roofs, bat and bird boxes as well as landscape features minimising adverse impacts on existing habitats (whether designated or not). Development schemes shall also be appropriately designed to facilitate the emergence of new habitats through the creation of links between habitat areas and open spaces. Together, these provide a network of green spaces which serve to reconnect isolated sites and facilitate species movement.

Where there is evidence of a protected species on a proposed development site, planning applications shall include a detailed survey of the subject species, with details of measures to be incorporated into the development scheme to avoid loss of the species. This involves consideration of any impacts that will affect the species directly or indirectly, whether within the application site or in an area outside of the site, which may be indirectly affected by the proposals. All surveys shall be carried out at an appropriate time of year and shall be undertaken by a qualified and, where appropriate, suitably licensed person.

All developments shall have regard to Natural England's standing advice for protected species.

Developments shall also be consistent with all other Local Plan policies'

5.16 **Policy SO DM1 Soils**, relates to the protection of Best Most Versatile (BMV) agricultural land, and unless designated by the emerging plan does not permit development unless the need for the proposal outweighs the need to protect such land in the long term. This requirement can be outweighed if the following can be demonstrated.

'a. Preservation of land of lower agricultural quality has greater benefits in terms of ecosystem services (for example carbon storage, flood water retention, support of biodiversity);

b. 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

c. The proposed development meets the requirements of the countryside policy and/or equine development policy.'

5.17 **Policy W DM2** also relates to flood risk and should be noted due to the site's location in Flood Zone 3.

'Development in areas at risk from flooding, identified on the latest Environment Agency flood risk maps and the Council's Strategic Flood Risk Assessment (SFRA), 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.

The reports prepared as part of the criteria above must take into account contingency allowances, taking climate change into account as set out in the NPPF Technical Guidance.

In locations where strategic flood defence or resilient and resistant construction measures are necessary within the site itself, proposals will be required to demonstrate how measures have been incorporated as an intrinsic part of the scheme in a manner which is compatible with the Strategic Flood Risk Assessment.

All development proposals must take account of relevant Surface Water Management Plans, Catchment Flood Management Plans and related Flood Defence Plans and strategies such as the Lower Tidal River Arun Strategy. The council may require financial contributions from development on sites where measures to address flood risk or to improve the environmental quality of watercourses have been identified by these Plans and Strategies.

Developments shall also be consistent with all other Local Plan policies.'

6.0 PLANNING ASSESSMENT

6.1 Following the review of development planning policy, this section assesses the scheme against these policies.

6.2 Based on our analysis of the scheme and the identified development plan policies, we consider that the key issues against which the scheme should be assessed are:

- Principle of development;
- Landscape considerations;
- Biodiversity considerations;
- Flooding;
- Traffic and access;
- Agricultural land quality;
- Design considerations;
- Other environmental issues, including, noise and impact on residential amenity.

Principle of development

6.3 The proposed development is considered to be justified. Due to the scale of the solar park, the location outside of the settlement boundary is a functional requirement for this type of development. The location of a grid connection is also a technical and commercial consideration of site feasibility. In order for a site to be a realistic and viable proposition, a grid connection is required within a 2 km radius. Policy GEN3 of the adopted Local Plan does not specifically preclude development in the countryside. The policy explains that development will be appropriate outside of the built up areas if it represents one of five listed criteria. The proposed development complies with this policy by making a direct contribution to diversification of the rural economy and relates specifically to a Specific Type or Form of Development as specified by Policy GEN21.

6.4 Policy GEN21 of the adopted Local Plan states that permission will be granted for renewable energy developments subject to a number of criteria, including avoidance of significant harmful effect on the natural and built environment, residential amenity, and public safety and ensuring that they make a contribution to meeting need. The site lies within the open countryside and accordingly there will be no impacts on the built environment. The accompanying technical reports show that the scheme has no harmful effects on biodiversity, and a perimeter fence of 2 m high is proposed to prevent accidental or unauthorised access (for example, users of the adjacent Public Right of Way PROW).

6.5 The policies of the emerging Local Plan can be afforded some weight as this was submitted for examination in January 2015. Policy SDSP2 and Policy CSP1 also resist development outside the built up area boundaries and within countryside locations unless they provide diversification of the rural economy or accord with other policies of the Local Plan. It has already been demonstrated that the scheme supports rural diversification and emerging policy ECC DM1 supports the provision of renewable energy proposals subject to meeting a number of criteria, as discussed in the sub-sections below.

- 6.6 The proposed development will have an installed capacity of approximately 1MW of wholly renewable energy source. Producing electricity through solar panels emits no pollution, produces no greenhouse gasses and uses no finite fossil-fuel resources. The increased production of energy from renewable sources, such as solar PV, has very real benefits in savings in carbon dioxide emissions and reducing the potential impact of greenhouse gases on climate change. The proposed development will also ensure a constant and affordable source of energy, contribute to economic stability and provide a further form of diversification to support the rural economy.
- 6.7 With regard to the above, it is concluded that the principle of this development within this location is in conformity with Development Plan Policy, emerging policy context and national planning policy. This is subject to other planning policy considerations which are discussed in detail below.

Landscape considerations

- 6.8 The accompanying Landscape and Visual Impact Assessment (LVIA), fully addresses the impact on the surrounding landscape and sensitive receptors and considers the proposed development to be acceptable in landscape and visual terms. The assessment concludes that, with the proposed mitigation and due to the low lying nature of the landscape, the application scheme will not have a long term effect, alone or cumulatively with other developments, on the local landscape of the coastal plain or on users of the Public Rights of Way network. Given the considerable distance of the site from the higher ground on the South Downs National Park, and set against the wide panorama of the coastal plain, both the individual and cumulative effect if the development on the National Park will be negligible.
- 6.9 All the boundary hedgerows and trees at the site will be retained. The deer fence installed for security around the development will be offset from existing woodland, shrubs and watercourses by a minimum of 5 metres, with the panels off-set internally from the fence to allow for operational maintenance access. Any ground disturbed by construction works will be sown with a suitable native species seed mix which will be managed by the tenant farmer for the operational solar park by sheep grazing or mowing.
- 6.10 New hedge planting will be introduced to the southern boundaries as additional screening. New tree and shrub planting will also be introduced along the northern boundary to screen views from viewpoints along PRoW 200/1 to the north of the site.
- 6.11 The design and assessment of the proposed solar park has been informed by adopted Local Plan Policy GEN 21 and emerging policy ECC DM1 (both relating to Renewable Energy). The LVIA demonstrates that there is no unacceptable impact to the amenity of neighbouring residents and that proposed mitigation measures will ensure that there are no significant visual impacts on views afforded from residential properties. The proposed development is therefore considered to accord with the identified policies.
- 6.12 Although there is the potential for cumulative landscape and visual effects with existing solar parks, due to the low lying nature of the landscape, the majority of sites in the vicinity will be visible only from higher ground within the South Downs National Park, which is some 4 kilometres away. At this distance, and set against the wide panorama of the coastal plain and

the nearby expanses of glass houses and polytunnels, the cumulative effect will be minimal. The site is also located in a dip and screened extensively by mature vegetation to the north, further removing any potential cumulative views. As such, the cumulative effect will be negligible and will not cause a detrimental effect on the landscape character. As such the scheme is considered to accord with the requirements of policy ECC DM1.

- 6.13 The LVIA has also considered the visual effect on heritage assets within the locality. The assessment considers the impact of the proposal from a number of viewpoints discussed with the Council's Landscape Officer. Arun District Council Conservation Officer was also contacted on the 25 June to confirm the appropriateness of these viewpoints with respect to assessment of any impact on the identified heritage assets. No response had been received at the time of preparation of this Statement. Nonetheless, the LVIA demonstrates that no conservation or heritage assets will be affected by the proposed development.

Biodiversity considerations

- 6.14 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.
- 6.15 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 measures are also embedded within this application scheme.
- 6.16 Accordingly, all sensitive habitats within the application site will be retained and protected. A wildlife protection zone of at least 6 m width is proposed along all boundary features, and safe working distances of at least 10 m (i.e. the 6 m wide wildlife buffer habitat and the typical 4 m wide distance between the security fence and panels) will be maintained between the PV panels and adjacent habitats. Landscape mitigation and enhancement strategies are designed to incorporate ecological benefits, to create a range of positive impacts to sensitive habitats, bats, badger, hazel dormouse, small mammals, birds, reptiles, amphibians and invertebrates. Tree root protection zones will be identified and safeguarded where required.
- 6.17 The Preliminary Ecological Appraisal (PEA) that accompanies this application concludes that subject to the mitigation measures identified, there will be no significant residual negative impacts on ecologically sensitive receptors within the application site. Subject to implementation of the proposed enhancement measures, there will be net benefits to the ecology of the local area. The proposed development is therefore considered to be in accordance with policies GEN29 and GEN30 of the Development Plan, emerging policies ENV SP1, ENV DM1 and ENV DM5 and para 109 of the NPPF, which protects designated and undesignated sites from the harmful effects of development.

Flooding

- 6.18 The FRA confirms that the site lies in Flood Zone 3, from tidal and fluvial sources. However, the development is to be un-manned and the features noted within section 4.11 mitigate

against the risk to the development and the environment. As such the mitigated risk to the development is considered to be low. The classification of the development is Less Vulnerable and therefore is appropriate for this location.

6.19 As noted in section 4.11 the following measures will be included in the development:

- Maintenance operations are only to be scheduled when the risk of flooding to the site is low;
- All cabling installed is to be watertight so as not to be affected by flood waters.
- Solar panel foundations will be designed so as to prevent the panels from being washed away during a flood event.
- Kiosks are to be water tight, and to include suitable foundations to prevent them from being washed away.
- Power generation to be stopped when there is a risk of flooding to the development, and this should include a safety cut-off to the kiosks, substations, and inverted such that once the water has reached a level where the components may get affected the system is shut down.
- Any particularly vulnerable equipment can be located on the higher ground to the east of the site which is located within Flood Zone 1.
- Compound fencing will be permeable so as not to impede the flooding characteristics of the site.

6.20 The development does not require traditional drainage; the site is still largely Greenfield as the panels are simply supported on posts. The roads are either permeable or are to drain to permeable areas intended to enhance the natural storage capacity of the ground. Therefore there is not a proposed discharge point and the site will essentially behave hydraulically in a very similar manner to the existing conditions.

Traffic and access

6.21 The majority of the traffic associated with the proposed development will occur during the construction phase of approximately 14 weeks in duration. The accompanying Construction Traffic Management Plan (CTMP) details the specific arrangements for the management of construction traffic.

6.22 The CTMP evaluates the likely traffic effects associated with the construction of the development of a solar farm at Barnham Court Farm, Barnham, West Sussex. It calculates the typical trip generations and uses these to inform the likely significance of any potential issues that were identified in the appraisal of the adjoining highway networks. The resultant evaluation identifies a number of areas where mitigation of the impacts would be advisable but no area where the impacts would be unacceptable, even without mitigation.

6.23 In view of this, the CTMP and its incorporated measures work towards providing for a continued safe and efficient highway network during the particularly limited construction phase.

- 6.24 It is therefore considered that the existing access provision is satisfactory. The low trip generation of the proposed construction phase and relatively short construction programme, which includes a number of best practice techniques to minimise impact, will ensure that the proposed development will not cause any severe impacts on the local road traffic network. During operation, the proposed development will therefore not create any discernible increase in traffic on the surrounding road network.

Agricultural land quality

- 6.25 The site lies on land which is classified as Grade 1. National planning policy (NPPF para 112) advises that local planning authorities should encourage 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, the proposed use should allow for continued agricultural use where applicable and/or encourage biodiversity improvements around arrays.
- 6.26 The Council published a Soil and Agricultural Land Assessment Study in March 2013 (The Council's Soil Study) which acknowledges that when compared with the average proportions of land of differing quality across England, Arun District has a relatively high proportion of BMV land. Figure 4 within the document shows the provisional agricultural land classification of the District and wider area. Assuming that all of the Grade 3 land is classified as Grade 3a, the map indicates that approximately 75% of the area is BMV, which is a large proportion of the district. The development of suitable sites on BMV land is therefore unavoidable. The Study summarises at para 12.7 that a balance needs to be met between the need for development, the relative environmental, social and economic benefits of agricultural land; and anticipation of the potential positive and negative effects of climate change. The report concludes that the District would be capable of accommodating a growing population without jeopardising food security for the future.
- 6.27 Development of the site as a solar park is part of an historical and continuing process of agricultural diversification, used by the landowner to ensure that a maximum use is made of the entire land holding. The additional income from the solar park will enable the landowner to plan, with certainty, the future direction of the existing agricultural business and make investments on other parts of the wider agricultural landholding. Without the certainty of income that the solar park will provide, essential forward agricultural investment planning would not otherwise be possible. Given changing climatic conditions, this certainty will ensure that the landowner is well positioned to continue to operate within the agricultural market.
- 6.28 Notwithstanding the proposed solar park, the site will retain capacity to be used for the grazing of small livestock to maintain the grassland around and under the arrays, providing a dual use of the land for agriculture and solar energy production. As such the land will remain in agricultural production. The proposed development is therefore considered to accord with the requirements of emerging local plan policy, allowing the diversification and preservation of the site for a temporary period, with associated ecological benefits.

- 6.29 Planning permission for the solar park is sought on a temporary basis for a period of 30 years, after which time the solar arrays and associated equipment will be removed and the land returned to agricultural use. As the development retains all of the existing top soil in situ, and offers the opportunity for soil improvement associated with the cessation of intensive agriculture during the operational period of the solar park, an appropriate planning condition could be imposed to enable site restoration to full agricultural use after this period.

Design considerations

- 6.30 The layout of the solar array has been designed to maximize the production of electricity, with the panels being angled and orientated in landscape format to optimise their exposure to direct sunlight. The south facing nature of the site makes it appropriate to accommodate the arrays with minimal wastage of space. Existing boundary planting has been retained, with the development kept away from those features where existing vegetation could potentially cast a shadow onto the panels, which would reduce their efficiency.
- 6.31 There will be a 2m high fence sited around the perimeter to protect development from theft, vandalism or damage. The fence will be erected on the inside of the boundary hedgerows and vegetation and the fence line will be set a minimum of 8m from the hedge.
- 6.32 As part of the scheme, a number of environmental enhancement and visual mitigation measures have been proposed (described above). Overall it is considered that, with the implementation of the proposed measures, the design of the scheme is acceptable. The application scheme satisfactorily mitigates impacts arising from the proposed development and additionally offers opportunities for valuable environmental enhancement.

Other environmental issues, including, noise and impact on residential amenity

- 6.33 The proposed solar park will cause minimal environmental impact during the installation and operation at the site and will not emit any harmful pollutants.
- 6.34 The solar panels are fixed and will have no moving parts, so no noise will be emitted from the arrays. Similarly the supporting electrical equipment will not emit noise above the ambient level and locating the inverters within metal enclosures will ensure that nothing will be audible from beyond the site boundary.
- 6.35 The proposed development will therefore not cause any unacceptable environmental impact.

7.0 DESIGN AND ACCESS

- 7.1 This section of the statement describes the design principles and concepts that have informed the development, and how access issues have been addressed.

Solar Panel Specification

- 7.2 The proposed development is a solar park of approximately 2.5ha in area, comprising solar photovoltaic cells located in groups and rows called arrays, with associated infrastructure.
- 7.3 The solar panels are fixed and will have no moving parts and no noise will be emitted by the arrays. Similarly the supporting electrical equipment will not emit noise above the ambient level and certainly will not be audible from outside the confines of the site boundaries.
- 7.4 The panels are designed with a lifetime of 30 years with only a marginal loss of efficiency. The panels will be bolt anchored to a metal frame, which will be mounted on steel posts driven or secured into the ground (the pile driven sub-construction method). No substantial areas of concrete construction will be required with the possible exception of foundations for the inverter and transformer stations.
- 7.5 The solar panels will be connected to inverters by cabling which are necessary to convert the DC current generated by the PV modules into AC current. The AC current is then fed into transformers where the voltage is changed for transmission of the energy with minimum losses to the point of connection to the grid. The inverters and transformers will be housed in buildings (referred to as 'stations') with a small footprint (1 inverter of 29m² and DNO of 20.7m²).

Layout

- 7.6 The solar array has been laid out to maximise the production of electricity, with the panels being angled and orientated in a landscape view at circa. 25 degrees to optimise their exposure to direct sunlight. Existing boundary planting has been retained and the development footprint kept away from these features to ensure their continued vigour and health. This separation also ensures avoidance of areas where the existing vegetation could potentially cast a shadow onto the panels which would reduce their efficiency or create pressure for removal of vegetation in the future.
- 7.7 The supports for the arrays will be driven into the ground to depths of between 1-2m. The arrays will be set apart by approximately three times their overall height to avoid shadowing, with open aisles of 6-10m between them (the exact distance will depend on the topography of the site) designed to ensure optimum energy generation.
- 7.8 A 2m high fence accompanied by thermal analytic CCTV cameras will be installed around the perimeter of the arrays to protect the site from theft, vandalism or damage. The fence will be erected on the inside of the boundary hedgerows and vegetation, set at least 10m from any boundary hedges.

- 7.9 To facilitate the movement of small mammals through the site, small gaps will be left at regular intervals at the bottom of the perimeter fencing.

Scale

- 7.10 The scale of the development is appropriate to the existing field size and the technical requirements for a solar park
- 7.11 The layout and orientation of the arrays will leave ample space between panels and boundaries. This will avoid overshadowing and any risk or compromising the continued growth and future maintenance of the boundary hedgerows.
- 7.12 The proposed PV panels and mounting frames will be up to 2.5m in height and sited in rows. The panels will normally be set at a minimum of 1m above ground allowing light to penetrate and air to circulate, allowing grass to grow beneath them. The angled nature of the racks ensures the best solar absorption and the variation in the height will enable the scheme to allow for any ground undulations. The panels will be clustered together to minimise the ground footprint, but will be adequately spaced to avoid shadowing from panel to panel.

Landscaping

- 7.13 All the boundary hedgerows and trees at the site will be retained. The deer fence installed for security around the development will be offset from existing woodland, shrubs and watercourses by a minimum of 5 metres, with the panels off-set internally from the fence to allow for operational maintenance access. Any ground disturbed by construction works will be sown with a suitable native species seed mix which will be managed by the tenant farmer for the operational solar park by sheep grazing or mowing.
- 7.14 All field boundaries, internal and surrounding trees and woodland will be retained within the development. New hedge planting will be introduced to the southern boundaries as additional screening. New tree and shrub planting will be introduced along the northern boundary to screen views from viewpoints along PRow 200/1 to the north of the site.
- 7.15 With the proposed mitigation and due to the low lying nature of the landscape, the application scheme will not have a long term effect, alone or cumulatively with other developments, on the local landscape of the coastal plain or on users of the public rights of way network. Given the considerable distance of the site from the higher ground on the South Downs National Park, and set against the wide panorama of the coastal plain, both the individual and cumulative effect if the development on the National Park will be negligible.

Appearance

- 7.16 The arrays are of a simple form and construction, with the panels of a glass construction with outer metal framework. The panels consist of semiconductors and photovoltaic cells protected by a thin layer of cover glass. To keep the solar panel cool they are elevated above the ground to allow airflow underneath as well as above.
- 7.17 The panels have a black/blue appearance and, because they are designed to absorb the sunlight, they produce no discernible reflection or glare.

7.18 While operational the solar park will initially have a minor adverse visual effect on a PRoW running to the north of the site. These effects are localised and only parts of the site are visible. Once the proposed tree, shrub and hedgerow planting have matured adverse effects will be reduced to negligible adverse to no change/ no significance.

7.19 Overall, the proposed development is considered to be acceptable in landscape and visual terms.

Access

7.20 The primary route provides the most direct journey to the site and comprise the A29 – Fontwell Avenue, and the B2233 – Barnham Road. Vehicles with heights in excess of the 3.6 metre limit will be required to take the slightly longer route incorporating the B2132 and B2233 – Yapton Road.

7.21 As such, the primary route will approach Church Lane from the west, where construction vehicles will turn right onto Church Lane and proceed south toward the site access. The secondary Route will approach from the east, subsequently, construction vehicles will turn left onto Church Lane.

7.22 Vehicles will exit the site onto Church Lane and travel north towards the Church Lane / B2233 junction. At this point vehicles will turn to match their corresponding entry route. In conclusion, the CTMP confirms that there will be a continued safe and efficient highway network during the short period of the construction phase.

7.23 Once operational there will be minimal onsite activity. There will be regular (envisaged monthly) access to the array for maintenance works, usually carried out by a standard road going van, such as a Ford Transit. Within the site, access for maintenance activities will be available between the solar arrays.

8.0 CONCLUSION

- 8.1 This planning application seeks permission for development of a field mounted solar park at Barnham Court Farm, Barnham. The development of this site is assessed against the Development Plan and all other material considerations including the NPPF and NPPG.
- 8.2 This planning statement describes the approach to development that has been taken by the applicant, BL Solar 7 Ltd. The information provided in this statement, and in the technical reports that inform the application, demonstrates that the proposed solar park is in accordance with planning policy at both national and local levels.
- 8.3 Impact avoidance and mitigation measures are embedded within the scheme design and the approach to development. These will satisfactorily address landscape, ecological, flood and drainage and cumulative effects of the development. Any minor or negligible landscape impacts will be temporary in nature and the proposed enhancement measures will create long term landscape and biodiversity benefits to the local area. In addition the agricultural diversification of the land will provide an economic benefit during the period of operation of the solar park as well as the potential to improve the quality of the soils in readiness for the site being returned to full agricultural use at the end of the 30 year consent.
- 8.4 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 to the site. Government policies are supportive of renewable energy developments; the proposed development 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.