

From: [SaveGraveneyMarshes](#)
To: [Cleve Hill Solar Park](#)
Subject: Deadline 2
Date: 25 June 2019 17:04:00

Dear Hefin,

In response to the question about National Planning policies not covering this proposed development, we would like to make the following points:

1. There is no mention about the construction of solar plants in EN01, EN03 or EN05 and this should be a focus of any examination especially the configuration, height, size, impact on the landscape, people, heritage and flora and fauna. In the case of this proposal we put it that it is an untested construction and technology and therefore raises questions as to whether it should even be considered. We are aware of the small solar park in Holland which has an east-west configuration but there very clearly is no comparison to the size, height and location of this development.
2. In the absence of National Planning policies, the following are relevant to this particular situation and should therefore be considered in the decision making process:

Kent County Council 'Large Scale Solar Arrays':

<https://democracy.kent.gov.uk/documents/s48772/KCC%20Solar%20Policy%20Position%20Statement%20August%202014%20FINAL.pdf>

Swale Borough Council 'The Development of Large Scale (>50kW) Solar Arrays'

<https://archive.swale.gov.uk/assets/Planning-General/Planning-Policy/Evidence-Base/VERSION-3-SWALE-LARGE-SCALE-SOLAR-PV-PDF-July-2014.pdf>

Gov.uk 'Renewable and low carbon energy guidance':

<https://www.gov.uk/guidance/renewable-and-low-carbon-energy>

Hive Energy 'What we're looking for':

<http://www.hiveenergy.co.uk/our-uk-solar-parks/working-with-you/ground-mounted-solar-pv/>

GREAT will be participating in all issue specific hearings and open floor sessions.

Kind regards,

Lut Stewart
Vice-chair, GREAT

LARGE SCALE SOLAR ARRAYS



Position Statement on Development Large Scale Solar Arrays

August, 2014

SUMMARY OF KCC POSITION

- KCC is in principle supportive of the installation of renewable and low carbon energy generation technologies, particularly where it will increase security of supply, provide community and economic benefits and contribute to tackling climate change.
- Development should be appropriate to the locality and avoid adverse planning and environmental impacts. KCC does not consider that the need for renewables should automatically override environmental protections and an application will only be supported if the impact is or can be made acceptable.
- As a preference, KCC will support solar arrays mounted on existing roofs or integrated into new roofs/buildings. Developments on previously developed and/or contaminated and industrial land are also preferable. Community owned projects would be particularly welcomed. KCC will not support the development of large scale Solar PV arrays in areas identified for their special character or other importance. KCC will not support large scale solar PV arrays in the Green Belt and landscapes designated for their natural beauty (Kent Downs and High Weald AONBs) and areas which contribute to their setting.
- KCC will not support large scale solar PV arrays on sites with ecological importance, archaeological or historic interest, or classified as the best and most versatile grades of agricultural land (1, 2, and 3a).
- For greenfield proposals outside of protected areas, KCC expect proposals to demonstrate the landscape's suitability to receive such a development. Proposals must show how the design of the scheme has accounted for landscape character. Developments should avoid both landscape and visual impacts, or demonstrate appropriate mitigation. In addition, land management around panels should allow for continued agricultural use and/or encourage biodiversity improvements.
- In formulating its views on proposals, KCC will have regard to cumulative impacts of multiple solar arrays on landscape character and visual amenity. The impact from a single development may not be significant on its own, but when combined with other impacts from similar developments could become significant.
- The consultation and involvement of local communities should be an integral part of the development process.
- Where supportive of development proposals KCC will request planning conditions to be imposed to ensure solar PV arrays are removed at the end of their permitted period and the land restored to its previous use.

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INTRODUCTION

Kent is currently experiencing an unprecedented number of planning applications for large scale solar farms. This reflects the County's southerly position and good solar resource and the availability of attractive Government support through the Feed-in-Tariff and Renewables Obligation. Concerns have been raised at the scale and potential cumulative impact these solar farms are having on the Kent countryside particularly in terms of the visual, ecological, historical and agricultural impacts.

1 Renewable Energy Policy

- 1.1 The UK has set itself challenging and binding targets for the reduction of greenhouse gas emissions. These targets are set out in the Climate Change Act 2008 and require an 80% reduction on 1990 levels by 2050 and at least 34% by 2020. The UK is also bound by the EU Renewable Energy Directive whereby the UK must source 15% of its total energy requirement from renewable resources by 2020. Achieving the EU target is going to mean at least 30% of our electricity demand being generated renewably. Kent has endorsed the National target of 15% in the Kent Environment Strategy and is working towards achieving this.
- 1.2 The National Planning Policy Framework 2012 (NPPF) sets out policy to support the development of renewable and low carbon energy, stating that local planning authorities should recognise the responsibility on all communities to contribute to energy generation from these sources.
- 1.3 Planning has an important role to play in the delivery of new renewable and low carbon energy infrastructure in locations where the local environmental impact is acceptable. The DCLG has published detailed guidance 'Planning practice for renewable and low carbon energy' in July 2013 which should be read alongside the NPPF and sets out factors that will need to be considered when determining applications for large scale solar farms. The County Council has had regard to these factors in the development of this position statement.
- 1.4 Kent has a wealth of different renewable energy sources available on land and around its coastline including:
 - Onshore wind
 - Offshore wind
 - Large scale solar
 - Wood fuel
 - Other biofuels (including green waste)
 - Anaerobic digestion
 - Micro generation (solar thermal, air and ground source heat pumps)
 - Hydro
 - Tidal and wave energy

- 1.5 These sources can be utilised at different scales and can have different spatial impacts. Developing the available resource must take account of wider issues such as affordability, community acceptance, security of supply and planning and environmental issues including the impact on landscape character, biodiversity, heritage, land use, residential amenity, air quality, public health and safety.
- 1.6 The County Council will support the development of renewable energy production where it will increase security of supply, provide community and economic benefits and contribute to tackling climate change. However, development must be appropriate to the locality and avoid adverse planning and environmental impacts. The County Council does not consider that the need for renewables should automatically override environmental protections and an application will only be supported if the impact is (or can be made) acceptable.

PLANNING CONSIDERATIONS

Solar farms are relatively new in the County and due to their scale and land coverage, potential developments can have a variety of impacts. It is therefore important for us to set out our position on their development. For purpose of this position statement a large solar array is defined as an installation greater than 100kWp.

Significant impacts are generally considered to include the effects on the following receptors:

- Landscape and visual impacts
- Green Belt
- Biodiversity
- Agricultural Land
- The Historic Environment
- Flood Risk
- Communities

2 Landscape and Visual Impacts

- 2.1 The landscape and visual impacts of large scale solar PV arrays is likely to be one of the most significant impacts. The County Council will not support their development within areas designated for their natural landscape beauty including the Kent Downs AONB and High Weald AONB and the areas close to them which contribute to their setting.
- 2.2 The assessment of landscape character and visual amenity need to be considered separately and will be fundamental to determining the acceptability of proposals. Developers are encouraged to consult the County Landscape Officer at an early stage. The Landscape Institute and IEMA in April 2013 produced guidance on the preparation of Landscape and Visual Impact Assessments and Landscape Character Assessments which is helpful to this process. Further information is also provided in Appendix A.
- 2.3 The direct and indirect, temporary and permanent, and cumulative impacts on the fabric, character and quality of the landscape will need to be considered, as will the degree to which a proposed development will become a significant or defining characteristic of the landscape. The significance of the impacts should consider the sensitivity of the landscape and visual resource and the magnitude or size of the predicted change. Some landscapes may be more sensitive to certain types of change than others and it should not be assumed that a landscape character area deemed sensitive to one type of change cannot accommodate another type of change.

- 2.4 Established vegetation, including mature trees, should be retained wherever possible and protected during construction. Any buildings required in order to house electrical switchgear, inverters etc. must be designed and constructed in order to minimise their landscape and visual impact and construction materials should be selected to reflect the local landscape context. If a pre-fabricated building is used, consideration should be given to the need to screen the building with vegetation. However where a landscape is valued for its distinct feeling of openness such planting may cause additional harm.
- 2.5 Solar farms often involve the erection of features such as security fencing this can be particularly harmful to the character of the landscape and there is likely to be limited opportunity to provide screening through hedgerow planting or other landscaping as this would introduce similarly alien visual interruption. In these instances where impacts cannot be appropriately mitigated, KCC will not support these developments. In historic landscapes the wrong or insensitive landscape mitigation could have an equally harmful impact as the scheme itself.
- 2.6 The site design should also be informed by landscape character; Solar PV should fit into field patterns rather than be imposed upon the landscape. Limiting density allows for additional land use increasing the benefits derived from a single site and therefore making it more sustainable.

3 Green Belt

- 3.1 The NPPF states that when located in the Green Belt, elements of many renewable energy projects will comprise inappropriate development. The County Council will not support the development of large scale solar PV arrays in the Green Belt by virtue of their impact on openness and on the purposes of the Green Belt.
- 3.2 Very special circumstances will need to be demonstrated before such proposals can be supported and arguments in favour will need to be weighed against the harm to the Green Belt. Redevelopment or infilling on previously developed land may be considered acceptable where it has an equal or lesser impact than the existing development.

4 Biodiversity

- 4.1 The County Council will not support large scale solar PV arrays on sites with high ecological importance). Solar PV arrays could have implications for habitat loss, fragmentation and modification and for displacement of species. The NPPF sets out the approach to ecology in the planning process through a number of guiding principles. The potential impact from all stages of the development, including construction, operation and decommissioning stages, will need to be addressed.

- 4.2 Ecological impact assessments, including specific protected species surveys, may need to be submitted to inform planning decisions. These should follow best practice guidelines and refer to the Natural England Standing Advice. They should also inform and influence the design to ensure potential adverse impacts are mitigated and to maximise biodiversity enhancement opportunities.
- 4.3 Where there are ecological receptors present, the key activities with potential ecological impacts (positive or negative) are set out in Table 1 (below).
- 4.4 The implementation of an ecological mitigation/management/monitoring plan can result in Solar PV arrays delivering environmental gains such as the creation of enhanced wildlife habitats including wildflower meadows, hedgerows and woodland buffers. However these may not always be appropriate in terms of landscape character and advice should be sought from the County Landscape Officer when preparing these plans.

Activity	Potential impacts without mitigation
Vegetation clearance	Risk of killing/injuring protected species (e.g. nesting birds, dormice, reptiles, great crested newts, water voles); loss of foraging and sheltering habitat
Creation of access tracks	Fragmentation and loss of habitats
Creation of construction compound	Damage to or loss of habitats
Erection of fencing	Risk of killing or injuring and/or disturbance to protected species, where fencing prevents access
Construction traffic	Risk of killing, injuring and/or disturbance to protected species
Underground cabling	Damage to or (temporary) loss of habitat; risk of killing/injuring protected species
Foundations	Damage to or loss of habitats
Lighting (during construction and operation)	Disturbance effect on nocturnal wildlife (e.g. bats and badgers)
Site management during operation of solar panels	When in close proximity to boundary features, 'over-management' leads to reduction in ecological value of hedgerows, trees and buffer habitat;

Table 1: potential ecological impacts

5 Agricultural Land

- 5.1 The County Council will not support large scale solar PV arrays on sites which are classified as the best and most versatile grades of agricultural land (1, 2, and 3a). The NPPF requires the presence of such land to be taken into account alongside other ecological considerations in the location of proposed projects.
- 5.2 Development may be appropriate on land outside of this classification (3b, 4 and 5) and it may be possible to continue the use of the land for animal grazing in conjunction with the installation of solar arrays. Managing ecological interests including their improvement will be an important consideration.

6 Historic Environment

- 6.1 Solar PV developments may affect heritage assets (archaeological sites, monuments, buildings, conservation areas and historic landscapes) both above and below ground. The County Council will not support the development of large scale solar PV arrays where this would have a detrimental impact on Kent's heritage assets.
- 6.2 In particular, development may impact the setting of
- World Heritage Sites (specifically, the setting of Canterbury Cathedral, St Augustine's Abbey and St Martin's Church in Canterbury). Particular regard to UNESCO World Heritage sites is required, as the location and setting of such sites forms an integral part of the heritage status. Cumulative impacts of poorly located solar farms may erode the setting of such locations, with potentially significant consequences (including threatening the World Heritage Status in extreme circumstances).
 - Listed Buildings, Conservation Areas, Registered Parks and Gardens, Scheduled Monuments – There are a significant number of identified and listed heritage and conservation sites/locations throughout Kent, each with specific considerations that must be taken into account in preparing any application.
 - Other undesignated heritage assets or archaeological sites - such impacts would generally be visual, but in certain circumstances other factors such as the disturbance of archaeological interests may also need to be considered. Developers should also consider the impact on Historic Landscape Character and this will require careful liaison between heritage and LVIA specialists. In respect of archaeological deposits direct impacts could include ground disturbance associated with trenching, foundations, fencing, temporary haul routes etc. Equally, finds may be protected by solar farms if the site is removed from regular cultivation.

- 6.3 NPPF requires that all proposals should be informed by a consultation with the Historic Environment Record (HER). The County Council should be approached for this. Where there is potentially archaeological interest, developers should submit an appropriate desk-based assessment and, where necessary, a field evaluation. KCC will be able to provide a brief for the required expert assessment or evaluation work .
- 6.4 Development proposals should be sensitively planned and designed to take into account the results of the Historic Environment Assessment. Any opportunities to introduce better management of affected assets, or to improve the settings of designated sites, should be identified.

7 Flood Risk

- 7.1 A Flood Risk Assessment (including drainage) may be needed to inform the planning approval process. Freestanding solar panels will drain to the existing ground. Access tracks should therefore be permeable, and localised Sustainable Urban Drainage works, such as swales and infiltration trenches, should be used to control any run-off and to avoid unnecessary concentration of surface run-off.
- 7.2 Sites should avoid the need to impact on existing drainage systems and watercourses. Culverting existing watercourses or drainage ditches should be avoided. Where this is unavoidable, it should be demonstrated that no reasonable alternatives exist and where necessary only temporarily for the construction period.

8 Communities

- 8.1 Solar farms can impact on nearby residents and the wider local community hosting the development. Concerns about loss of amenity, visual impact including glint and glare from panels and linked to this road safety will need to be considered as part of determining the acceptability of developments.
- 8.2 The County Council considers that community involvement should be an integral part of the development process. The local community should be consulted by the developer at the conceptual stage, ideally utilising local exhibitions and presentations where community views can be sought and recorded.
- 8.3 The opportunities for community gain are encouraged and should be explored as part of developing projects wherever practical. Such opportunities can include:
- Establishing a Community Benefits Trust with funds being contributed annually by the developer for local projects.
 - Local or community ownership of panels.
 - Local share issue.
 - Investment in green infrastructure provision and management.

9 Planning Conditions

- 9.1 Where the County Council is supportive of development proposals it will ask for planning conditions to be imposed to ensure solar PV arrays are removed at the end of their permitted period and the land restored to its previous use.

Appendix A: Information to Accompany a Planning Application

Landscape and Visual Impact Assessments (LVIA)

Landscape advice should be sought at the pre-application stage. A LVIA should be carried out for all planning applications, whether part of an EIA or not and should inform the scheme, site choice and design.

A thorough LVIA should include:

- Baseline evidence, recognising existing land uses and character, topography and the constraints these deliver. Scheme design and mitigation should be informed by this evidence.
- The integrated nature of landscape should be included especially historic landscape.
- A management plan for the life of the site which will be informed by the evidence gathered in the LVIA including a restoration plan.
- Existing and potential solar farms should be identified and Cumulative Impact Assessments included as part of the LVIA with a plan showing cumulative 'zones of visual influence'.

Biodiversity

Ecological Impact Assessment should consider all development activities, e.g. construction, cabling, construction compound, traffic, site operation and decommissioning of scheme, and incorporating:

- preliminary ecological appraisal;
- specific species surveys (where necessary);
- Ecological impact assessment of development activities on ecological receptors and considering potential for cumulative impacts; Mitigation measures (where necessary) in accordance with the mitigation hierarchy (avoid – mitigate – compensate);
- Ecological enhancement measures, ensuring delivery time frame is compatible with development;
- Outline of long-term ecological management plan measures

The implementation of an ecological management plan, including monitoring of the site would ensure that mitigation and enhancement measures are retained and are effective. A detailed plan would be required by planning condition/obligation.

Historic Environment

- Heritage Statement describing the impact of the proposed development on the historic environment. As a minimum the Kent Historic Environment Record should have been consulted.

- Where the Heritage Statement has identified an impact on the historic environment a desk-based assessment should be carried out based on a specification supplied by the Heritage Conservation team at Kent County Council. If appropriate the assessment may be accompanied by field evaluation.
- Where the desk-based assessment and any fieldwork has identified impacts on significant heritage assets, a description of how these will be mitigated.

English Heritage has published guidance on the factors that should be considered when assessing impacts on the setting of heritage assets ('Setting of Heritage Assets', 2011). Where historic environment assessment is being undertaken as part of an EIA the guidance in the Interreg IIIB funded Planarch 2 document 'Guiding Principles for Cultural Heritage in Environmental Impact Assessment (EIA)' should be followed.

Renewable Energy Planning Guidance Note 2



The Development of Large Scale (>50kW) Solar Arrays



Version History			
Date	Version	Author/Editor	Comments
July 2014	1	Anna Stonor	

With thanks to Cornwall Council and Ashford Borough Council for permission to use their original documents and with thanks to Burden Bros Contractors for permission to use photographs of Old Rides Farm solar development on the Isle of Sheppey.

Front cover photograph: Old Rides Farm solar development, the Isle of Sheppey

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The Development of Large Scale (>50kW) Solar PV Arrays in Swale Borough

This guidance document has been prepared to assist all parties involved in the renewable energy development process. The status of this document is that it has been approved by the Council and will guide decision makers when determining applications.

Introduction

This guidance note aims to provide planning advice in respect of solar photo voltaic (PV) installations with a capacity in excess of 50kW. Planning advice in respect of solar PV installations with a capacity of less than 50kW is provided within a sister document 'The Development of Domestic and Medium Scale Solar PV arrays up to 50kW and Solar Thermal', published by Swale Borough Council.

This guidance note will be regularly reviewed and updated and can be viewed on our website at www.swale.gov.uk/local-planning-guidance/

We hope that you find this planning guidance useful but if you have any queries please do not hesitate to contact the Planning Policy team at planningpolicy@swale.gov.uk or ring 01795 417850.

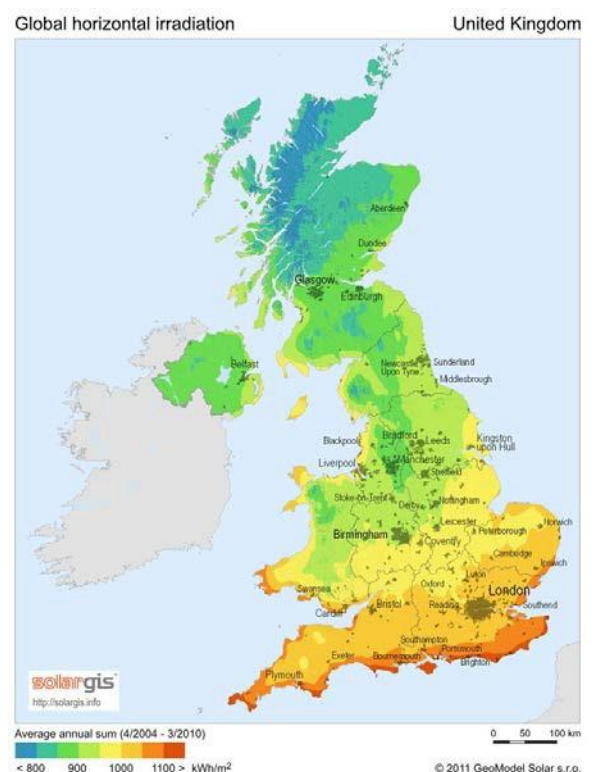
We continuously seek to improve the quality of the advice and guidance that we offer and we would be happy to receive comments, suggestions, or images which may improve this guidance document.

Solar PV in the UK

The **map**, right, shows the global irradiation and solar electricity potential for the UK. The greatest irradiation is within the south of England.

Large, grid-connected solar PV power plants

Large, centralised solar PV power systems, mostly at the multi- megawatt scale, have been built to supply power for local or regional electricity grids in a number of countries including Germany, Switzerland, Italy and now in the UK.



Feed in Tariff and Renewables Obligation

The Feed in Tariff (FiT) provides developers with a financial subsidy towards solar PV. The tariff for solar PV is index linked and is currently guaranteed for 20 years. The Renewables Obligation (RO) is designed to encourage generation of renewable sources of electricity and this scheme may be appropriate for large solar developments, although the government intends to reduce the size of eligible schemes. See Ofgem's website for details www.ofgem.gov.uk/environmental-programmes/renewables-obligation-ro

Government Guidance

The National Planning Policy Framework confirms the government's commitment to sustainable development with one of the core planning principles being to

“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);”

Further detailed guidance is available in **Planning Practice Guidance - Renewable and low carbon energy** published by the DCLG in March 2014. Paragraph 013 identifies particular factors that Swale Borough Council will need to consider when determining applications for large scale solar farms as:

- 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.
- 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 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;
- the care that 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.

Paragraph 022 relates to wind turbines, but is also relevant to the cumulative impact of solar arrays:

- Cumulative landscape impacts and cumulative visual impacts are best considered separately. The cumulative landscape impacts are the effects of a proposed development on the fabric, character and quality of the landscape; it is concerned with the degree to which a proposed renewable energy development will become a significant or defining characteristic of the landscape.
- Cumulative visual impacts concern the degree to which proposed renewable energy development will become a feature in particular views (or sequences of views), and the impact this has upon the people experiencing those views. Cumulative visual impacts may arise where two or more of the same type of renewable energy development will be visible from the same point, or will be visible shortly after each other along the same journey. Hence, it should not be assumed that, just because no other sites will be visible from the proposed development site, the proposal will not create any cumulative impacts.

This Guidance note provides more information for potential developers and explains the approach to handling applications that Swale Borough Council will take.

Planning Application considerations

a) *Pre-Application Discussions*

Potential applicants are strongly encouraged to enter into pre-application discussions with the Council. Developers should contact Swale Borough Council Development Management at an early stage to discuss proposals including whether an Environment Statement is likely to be required in support of a planning application as well as which statutory consultees, parish councils and other bodies should be involved in the development of the scheme.

b) *Environmental Impact Assessment (EIA)*

Environmental Impact Assessment (EIA) helps to ensure that an authority giving development consent for a project makes its decision in the full knowledge of any likely significant environmental effects on the environment. Large scale solar PV arrays are not expressly listed in Schedule 2 to the EIA Regulations 2011, however it is quite possible such developments could have a likely significant effect on the environment. The National Planning Policy Guidance provides guidance on Environmental Impact Assessment and should be referenced by applicants [planningguidance.planningportal.gov.uk/blog/guidance/environmental-impact-assessment/](https://www.planningguidance.planningportal.gov.uk/blog/guidance/environmental-impact-assessment/).

c) *Screening*

As a starting point the proposal should be assessed against the selection criteria in Schedule 3 of the EIA Regulations in order to establish whether or not an Environment Statement is

required. In general, EIA is likely to be needed for Schedule 2 developments if the solar PV development is in a particularly environmentally sensitive or vulnerable location.

In each case it will be necessary to judge whether the likely effects on the environment of the development will be significant in that particular location. In judging whether the effects of a development are likely to be significant it is necessary to have regard, amongst other things, to the potential impact of the development on visual amenity and landscape character and how this will be affected by the installation of a solar farm development, and also the possible cumulative effect with any existing or approved development. This should include situations where there is more than one application for solar PV development which should be considered together. Any views expressed by consultees should be taken into account. Advice should be sought from consultees where there is any doubt about the significance of a development's likely effects on a 'sensitive area' as defined in the EIA Regulations.

d) Full Planning Application

The Local Planning Authority will expect applications to be for full, rather than outline, planning permission.

e) Planning Application Fee

The planning application fee for a solar PV installation is considered to fall within Category 5 of the Town and Country Planning (Fees for Applications and Deemed Applications) (Amendment) (England) Regulations 2008. This category, for the erection, alteration or replacement of plant or machinery, currently imposes a fee of £335 for each 0.1ha up to 5ha. Where the site exceeds 5ha the fee would be £16,565; plus an additional £100 for each additional 0.1ha, subject to a maximum total of £250,000.

A 15ha solar PV facility (the average size of a 5 MW system) would therefore attract a planning application fee of; £16,565 (for 5ha) + £100 for each additional 0.1ha = (£10,000), giving a total of £26,565.

The planning application boundary, and planning application fee, relates to the site area. If the solar PV panels are close to a field boundary and there is an existing or proposed fence the planning application area should reflect these field boundaries. If the solar PV panels are some way away from the field boundaries (e.g. >50m) where a separate fence is proposed the planning application boundary should extend around the proposed solar PV panels with a separate planning application area extending around the fenced area. In such instances it would be unreasonable for the application area (and planning application fee) to include relatively large tracts of field where no development is proposed. Where no fence is proposed and solar PV panels are positioned in the middle of a field well away from the field boundaries the planning application boundary should be drawn around the proposed array and any immediate ancillary works e.g. access tracks. It is for the applicant to ensure that all proposed development is included within the boundary of the planning application.

As with all such applications, a planning application will not be registered until the correct planning application fee has been received by Swale Borough Council.

f) *Site Levelling Works*



Development of the 5MW Trenouth solar PV farm, Cornwall. Images courtesy of Low Carbon Solar Partners



Consideration should be given to the existing site contours. If any site levelling works are proposed to facilitate the development of a solar PV array the extent of these levelling works should be discussed at the pre-application stage and detailed within any planning application.

g) *Development in Relation to Current Land Use*

Ideally large scale solar PV arrays should be directed towards previously developed land / brownfield sites, contaminated land or industrial land. There are relatively few sites of appropriate status and size in Swale Borough. Large scale solar PV arrays should avoid landscapes designated for their natural beauty and sites of acknowledged/recognised ecological/archaeological importance. It is therefore often likely that such development will look to land currently in agricultural use.



The development of a 1.4MW solar PV farm on land adjacent to the Hendra Holiday Park, Newquay will greatly assist in meeting the electricity demand of this facility. Images courtesy of Hendra Holiday Park.

h) Assessment of the Impact upon Agricultural Land

The National Planning Policy Framework indicates that

“Local planning authorities should take into account the economic and other benefits of the best and most versatile agricultural land. Where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of a higher quality.”

As outlined earlier in the section on Government Guidance, Planning Practice Guidance encourages, amongst other things, solar farms on previously developed and non-agricultural land and where a proposal does involve agricultural land that it has been shown to be necessary and poorer quality land has been used in preference to higher quality land. The presence of the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) will therefore be a significant issue in the determination of applications to be taken into account alongside other material planning considerations.

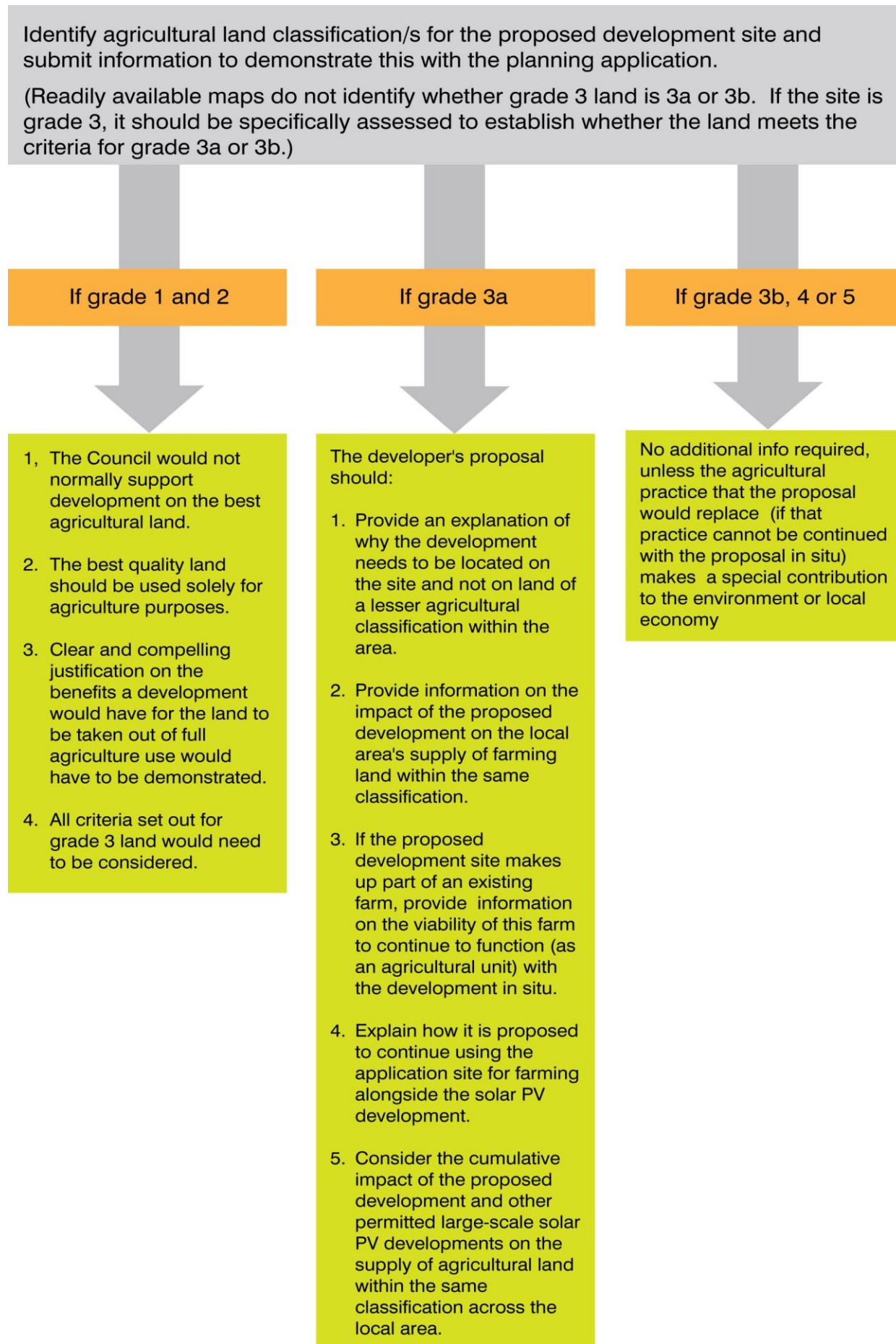
Developers should note that, with regard to development on agricultural land, the search area for appropriate sites should not necessarily be confined to land in the control of the applicant, or to land within the borough, and rather should be determined in consultation with the Local Planning Authority.



Construction of a 1.4MW solar PV farm at the former tin mine site at Wheal Jane, Cornwall. Such sites should generally be considered for such development in preference to agricultural land.

The following steps should be undertaken by the developer when considering locating a large scale solar photovoltaic development on agricultural land. If a planning application is subsequently submitted it should be accompanied by the relevant information detailed in the chart below.

Swale Borough Council's decision making steps for agricultural land classification



i) Ground Maintenance



Vegetation will grow under the solar panels and this will require management, particularly to avoid the site becoming overgrown with noxious weeds and to assist with the eventual restoration of the site, normally to agriculture. There are various techniques for managing the vegetation, these include mowing, strimming, grazing, spraying or mulching.

Sheep and cattle grazing under solar PV arrays. Support structures, and the height of panels, would need to be substantial in order to allow cattle grazing and would not ordinarily be recommended. Images courtesy of Steve Edmunds, Mole Valley Renewables.



Spraying should be avoided wherever possible and mulching large areas is likely to present technical challenges and may add to the landscape/visual impact of a development proposal. Few of these management techniques are regarded as sustainable, particularly on larger sites, and there is a desire, both in terms of food production and the rural scene, to continue an agricultural use on the site.

Grazing is therefore to be encouraged wherever practicable. Cattle, horses, pigs and goats are likely to be too 'physical' with the solar PV arrays but sheep, chickens or geese should be acceptable. In order to facilitate grazing within the solar farm it is advised that solar panels are positioned at least 900mm above ground level and all cabling etc. is suitably protected.



Adequate spacing between rows of panels is necessary to avoid overshadowing. Vegetation will grow between these rows and this vegetation will require management. The image to the right shows the 1.4MW Wheal Jane solar PV farm, Cornwall. Image courtesy of Lightsource Limited.



j) *Construction Compound*



The development of a large scale solar PV array will require the delivery and storage of construction materials, plant, machinery and office/welfare accommodation. It is therefore likely that a temporary construction compound will be required. Such compounds should be carefully located in order to minimise environmental or amenity impact and any planning application should contain details of their size and location. Topsoil and subsoil should be stripped from such areas and stored on site for replacement following the completion of construction works. Details of such soil stripping, storage and replacement should be contained within any planning application, together with the anticipated life of the construction compound.



Case Study 1

Old Rides Farm, Isle of Sheppey

Background

Old Rides Farm lies south-east of Eastchurch on the Isle of Sheppey in Kent. The site was formerly an agricultural field, adjacent to Standford Hill HM Prison which has two 2.3MW wind turbines. It lies within 500m of the Swale SSSI, Ramsar Site and Special Protection Areas along the Swale Estuary.

A planning application was submitted for the development of a 8MW solar farm at the site. This involved the installation of over 32,000 solar PV panels on a site of 14 ha with associated inverters, substation and security fencing.

Issues & Mitigation

The main issues with regard to this open site, adjacent to the Swale Marshes, were its potential landscape and visual impacts and its ecological impact. As such Landscape and Visual Impact Assessments and Ecological Assessments were necessary. They concluded that mitigation measures consisting of native tree and hedge planting, buffer strips, bird and bat boxes and log piles would minimise adverse impacts and help restore the landscape character in this part of the Isle of Sheppey and well as provide biodiversity enhancements. The land around the panels is seeded with mixed species grass and managed by sheep grazing, providing extra income for the landowner and continuing the agricultural use.

The field was assessed as Grade 3b and the loss of best and most versatile agricultural land was therefore not a significant planning issue in this case.

Planning permission was granted for a period of twenty five years. Construction is complete and the farm is now capable of producing enough electricity annually to supply 2,500 average size households.

k) *Soil stripping, Storage and Replacement*

The development of a large scale solar installation is likely to require the excavation of soils associated with construction compounds, access roads, cable trenching etc. Where such soil stripping occurs topsoil and subsoil should be stripped, stored and replaced separately in order to minimise soil damage and to provide optimal conditions for site restoration. Any planning application should contain a methodology for soil stripping, storage and replacement and this methodology should subsequently be adhered to during site development.

The construction compound associated with the development of the 5MW Trefullock solar PV farm in Cornwall



Soil excavation during cable trenching at the 5MW Trefullock solar PV farm in Cornwall. Topsoil and subsoil are stored on opposite sides of the cable trench in order to avoid the mixing of soil types and facilitate subsequent soil replacement and site restoration.

l) *Access Tracks*

Solar PV facilities which are developed on agricultural land should:

- aim to minimise disturbance to the agricultural land;
- be temporary, capable of removal and 'reversible'; and
- minimise their landscape/visual impact and their impact on the rural scene.

The installation and use of access tracks should be kept to an absolute minimum. Access tracks between rows of solar panels will generally not be acceptable. Agricultural vehicles, including tractors, quad bikes and 4WD, should be capable of servicing these facilities without the need to construct access tracks.

Buffer strips of 5m+ between hedges and solar panels could be used for access purposes while also providing access for hedge management and biodiversity.

m) Security Fencing/Lighting

Applicants will be expected to direct considerable effort towards minimising the landscape/visual impact of solar PV arrays. Whilst there is an acknowledged need to ensure solar PV facilities are adequately secured it would be unfortunate if such security measures resulted in an unacceptable landscape/visual impact. Applicants should:

- minimise the use and height of security fencing;
- utilise existing features, such as hedges or landscaping, to screen security fencing;
- use natural features, such as vegetation planting, to assist in site security;
- minimise the use of security lighting. Any lighting should utilise a passive infra-red (PIR) technology and should be designed and installed in a manner which minimises glare, light pollution and impacts on biodiversity, in particular bats (see ecology section).
- Ensure that appropriate measures are in place to facilitate continued access by larger mammals, such as badgers and foxes.

Close welded mesh panel fencing, as shown here at the Wheal Jane solar farm, generally has a low landscape/visual impact while also being versatile and providing a good level of site security



In some instances specialist fencing may be necessary in order to prevent access by deer. Such deer fencing can be much less intrusive than other forms of fencing and should be considered where possible.



Photo courtesy of The Green Company

Planning applications should contain full details and specifications of all security and lighting installations in order to allow an accurate landscape/visual/ecological assessment of the proposal to be made.



Where pole mounted CCTV facilities are proposed the location of these facilities should be carefully considered in order to minimise visual/landscape impact. In exposed landscapes such structures should be avoided where possible.

Further Security Advice from the Police is provided in Appendix D.

Any security equipment, such as this CCTV system, should be as discrete as possible in order to minimise its visual and landscape impact.



n) *Ground Anchors*

Solar PV facilities which are developed on agricultural ground should be 'reversible', allowing the site to be easily restored to a more intensive agricultural use.

Intrusive development, such as trenching and foundations, should therefore be minimised and the use of concrete should be avoided. Solar PV arrays should be installed using 'pile' driven or screw foundations, or pre-moulded concrete blocks (shoes), and capable of easy removal.



The ground anchors and framework associated with the development of the 1.4MW Benbole solar PV farm in Cornwall



Where there are areas of archaeological interest, and therefore a need to avoid ground disturbance, the use of pre-cast concrete anchors should be considered, as shown here at the 5MW Trefullock solar PV farm in Cornwall



Where pile driven foundations are proposed consideration should be given to the noise impact at nearby sensitive receptors. Difficult ground conditions, such as those encountered at the 1.4MW Wheal Jane solar PV farm shown here, may also require drilling.

Where 'pile' driven foundations are proposed applicants should ensure that such development would not exceed statutory noise levels at any nearby noise sensitive properties.

o) Tracking

Some solar PV arrays will follow the daily movement of the sun across the sky in order to take maximum advantage of the solar gain. These systems are known as 'trackers' and, although they maximise solar gain, they are expensive to install and maintain. Some solar PV arrays will be static. These are less expensive to install and maintain but, because they do not follow the sun's movement, they are not as efficient as 'trackers'. A compromise is reached with some solar arrays which are generally static but can be moved quarterly to reflect seasonal changes in the movement of the sun across the sky. The type of solar PV array installed, and the extent of any 'tracking', will have an impact on the landscape/visual assessment and the planning application should clearly indicate the type of array proposed.

The impact of 'trackers' on grazing animals such as sheep should be carefully considered to avoid such animals becoming trapped in any moving parts.

p) Grid Connection



Any buildings required in order to house electrical switchgear inverters etc should be designed and constructed in order to minimise their landscape and visual impact and maximise opportunities for habitat creation. They should typically be of an 'agricultural style, clad with timber or local stone.



The capacity of the electrical grid network in Swale Borough may be one of the greatest constraints to the development of solar PV farms. Such development is likely to be attracted to suitable sites within 2km of an existing electrical substation with sufficient capacity to accommodate the additional electrical supply. There is likely to be considerable interest in some areas and electricity substations may be unable to accommodate all development interest. It is likely that developers will have approached the relevant power distribution network provider to evaluate sites as part of the pre- application process.

Application proposals should provide a broad indication of the route of connectivity to the electrical grid. Such connectivity should avoid areas of high landscape, ecological or archaeological sensitivity.

q) Landscape and Visual impact



The landscape/visual impact of a solar PV park is likely to be one of the most significant impacts of such development.

The 5MW Howton solar PV farm in Cornwall. Image courtesy of Lightsource Limited

Developers may be attracted to southerly sloping sites, where solar gain is greatest. However such sites may be of high agricultural value and are likely to be more visible within the wider landscape.

Howton 5MW solar PV farm, Cornwall. Image courtesy of LowCarbon Solar Partners.



Solar farms are regarded as a temporary use of land (refer to Duration of Planning Permission at the end of the Guidance) and as such the removal

of existing vegetated field boundaries, including hedges will not be permitted as this will irrevocably alter the landscape character of the site.

The development will need to have regard in both its design layout, and future maintenance plans for the retention of growth of vegetation on these important boundaries, including the opportunity for individual trees to grow on to maturity. Careful consideration should be given to the impact of existing or proposed vegetation in order to ensure that any resultant shading of solar panels does not result in the future pruning or felling of such vegetation.

The 5MW Howton solar PV farm in Cornwall. Image courtesy of Lightsource Limited.



The landscape/visual impact of development across the borough must be considered with great care at the pre-application stage and mitigation measures proposed wherever necessary. Guidance on the information which should be provided within a Landscape and Visual Impact Assessment is covered in Appendix A. Swale's **Landscape Character and Biodiversity Appraisal** should be referenced in all applications and can be found at www.swale.gov.uk/landscape-character-appraisal-september-2011/

Existing hedges and established vegetation, including mature trees, should be retained wherever possible. Trees and hedges should be protected during construction. The impact of the proposed development on established trees and hedges should be informed by a tree survey (to BS 5837) and/or a hedge assessment as appropriate. In many cases significant tree/hedge planting will be required. Reference to Swale Borough Council document, **Planting on New Development: A guide for Developers** (www.swale.gov.uk/assets/Planning-Forms-and-Leaflets/Planting-On-New-Developments-feb-2011.pdf) should also be made.

Any buildings associated with the solar array, eg to house electrical switchgear and inverters, should be designed and constructed to minimise their landscape and visual impact and materials should be selected to reflect the local landscape context. If a pre-fabricated building is to be used, consideration should be given to the need to screen the building with vegetation and provide habitat opportunities.

A significant part of Swale lies within the Kent Downs Areas of Outstanding Natural Beauty (AONB). The extent of the AONB can be seen on the Kent Downs AONB website www.kentdowns.org.uk/interactive-map. The purpose of the AONB designation is to conserve and enhance the natural beauty of the area. The designation gives formal recognition to an area's landscape importance and allows for the development of communities and economic activity. The AONB designation is not necessarily a constraint on all renewable energy development. Developments are encouraged provided that they do not have a significant adverse impact on the AONB.

The Kent Downs AONB Unit have produced a Position Statement and Companion Report on Renewable Energy and this should be referred to for applications within the AONB and its setting www.kentdowns.org.uk/guidance-management-and-advice/renewable-energy1

Swale also has land designated as Special Landscape Areas and Areas of High Landscape Value. These are shown on the Swale Borough Local Plan 2008 Proposals Map maps.swale.gov.uk/LocalPlans/LP_document/indexmap.html Within these areas the priority is the protection and enhancement of these landscape assets and reference to these designations should be made in relevant applications.

Planning policies in the Swale Borough Local Plan 2008, particularly E9 (Protecting the Quality and Character of the Borough's Landscapes), as well as policies in the emerging Swale Local Plan, Bearing Fruits, should be referenced in applications.



The 5MW Trefullock solar PV farm, Cornwall





Construction of the 1.4MW solar PV farm on land adjacent to the Hendra Holiday Park, Newquay. Images courtesy of Hendra Holiday Park.

A soil mound, less than 2m high, can sometimes assist in reducing the visual/landscaping impact of a proposed solar installation. There is a need to ensure that the screening mound itself does not have a detrimental visual/landscape impact and consideration should be given to the vegetation management. This mound has been carefully designed to allow sheep grazing. Installation at the Olde House, Chapel Amble, Cornwall.

Cumulative Impact

Swale Borough Council maintains a record of all EIA Screening requests received in respect of proposals for large scale solar PV installations and a register of all planning decisions. Planning applications are also available to view on UK Planning. Prospective applicants are advised to contact the Council to review these records at an early stage in order that, where necessary, the issue of cumulative impact for such development can be considered and addressed when preparing any planning application.

r) Ecology

Solar arrays could have implications for habitat loss, fragmentation and modification and for displacement of species. The nature of impacts will depend on the ecological characteristics and features of the site and sensitivity to proposed changes. Schemes may reduce habitat and habitat suitability for some species, but may also be capable of integrating different uses of land and delivering environmental gains. The NPPF sets out the national approach to conserving and enhancing the natural environment and the adopted and emerging Swale Borough Local Plans sets out the local approach. It will be important to consider impacts through the construction, operation and decommissioning stages of a scheme.

The most important thing to get right with respect to ecology is choosing an appropriate location. Intensively managed agricultural land is likely to be of least ecological interest and therefore most suitable, in ecological terms, for solar PV farms. The proximity of and effect on environmentally sensitive sites (eg Ramsar sites, Special Protection Areas and SSSIs) and species must also be fully considered in any proposal.

Design should be informed and influenced by ecological assessments (phase 1 habitat surveys, protected species surveys etc). Issues that may need particular assessment include ground nesting birds, wintering birds, bats, dormice, reptiles and badgers. The use of an advising ecologist throughout the design process can ensure that adverse impacts are mitigated and biodiversity enhancements are maximised. (NB. Protected species surveys are season-dependent so contacting an ecologist at a very early stage is advisable).

The assessment will need to include a 'desk study' for existing ecological records, an evaluation of the likely impacts of the solar PV farm upon ecological features, specify mitigation to avoid/minimise these impacts and list any further surveys required. The main impacts and mitigation requirements are likely to be:

Lighting - security lighting may affect bats. It is advised that lighting is not used unless absolutely necessary. If lighting is necessary it must be minimised and directed away from hedges/woodland/scrub. A bat survey will be needed to inform any other mitigation required and indeed whether lighting would be allowable on site.

Cables - overhead and underground cables have the potential to adversely impact upon biodiversity. Cable routes need to be carefully designed in consultation with the consulting ecologist.

Construction - we advise that hedges are fully retained and no new hedge breaks are created. If any hedges/scrub are to be removed, further surveys including for dormice and reptiles may be necessary. Pile driving may affect any badgers nearby; this will need to be informed by a badger survey and a licence may be necessary.

Fencing - we advise that large buffer strips (at least 5m) are left between perimeter fencing and existing hedges. The fencing must allow badgers, reptiles and other fauna access into the site (whilst retaining grazing sheep). We advise a gap to allow small mammals and reptiles access is left around the entire base of the fence, with larger gaps or gates for badgers at suitable intervals.



Koborn-Gondorf facility solar PV facility, in Germany, is used as a nature reserve for endangered species of flora and fauna



Enhancement, Management and Monitoring

Solar PV farms have the potential to increase the biodiversity value of a site if the land was previously intensively managed. Sheep grazing or an autumn cut with removal of grass cuttings could increase the botanical diversity of the site. The ecological consultant should specify a suitable management regime for each case, bearing in mind shading by the solar panels. Hedges should be managed appropriately and could be laid to reduce gaps.

Proposed enhancements should build upon and extend existing habitats or create new important habitats e.g.: cultivated strips/plots for rare arable plants, rough grassland margins, bumble bee plant mixes, wild bird mixes, etc.

It is advised an ecological monitoring programme is developed to monitor impacts upon the flora of the site and upon any particular features (e.g. bats, wintering birds). Results of the monitoring will then inform any changes needed to the management/grazing regime.



A 5m buffer strip between the field boundary and any fencing will allow access for maintenance purposes, minimise damage to the field boundary and provide an access corridor for wildlife.

Checklist for advising on potential nature conservation impacts:

- Could the development site, alone or cumulatively, have impacts on a designated site and its objectives or designation?
- Is the site (habitat/species) sensitive to changes likely to result from a solar PV scheme?
- Can the site successfully integrate land uses and deliver environmental benefits?
- Are proposed mitigation measures adequate and likely to be effective?
- Is post-construction monitoring necessary?
- Have impacts been properly assessed in the Environmental Statement/ Habitats Regulations Assessment or other ecological assessment? What are the conclusions and have they been addressed?
- Are there opportunities for environmental enhancement, such as creation of new natural screening features or management of the land/margins for conservation purposes?
- Are enhancement measures appropriate and do they contribute to wider aims in the area, such as Biodiversity Action Plans (BAP)?

Solar farms can offer the opportunity to increase biodiversity and hence it is desirable to maximise the environmental benefit to the land where they are located. Guidance produced by Natural England should be considered, namely Information Note TIN101 "Solar parks: maximising environmental benefits" (publications.naturalengland.org.uk/publication/32027) and the BRE National Solar Centre Biodiversity Guidance for Solar Development at, www.bre.co.uk/filelibrary/pdf/Brochures/NSC-Biodiversity-Guidance.pdf which offer more detailed advice on these aspects of solar farm development.

s) Proximity to Public Footpaths, Bridleways and Highways

The existence of Public Rights of Way (PROW), including public footpaths, bridleways and highways, should be carefully considered at the site selection and design stage. Solar PV facilities should not, by virtue of its size, scale or setting, have an unacceptable impact, either during its construction or operation, on users of such a PROW. Where a PROW may be affected by such development careful mitigation, including appropriate landscape planting, should be considered and detailed within any planning application. Additional measures, such as the erection of an interpretation board explaining the role of the facility, may allow the development to become an accepted feature along the PROW.

t) Historic Environment

The impacts of solar PV developments on the historic environment will require expert assessment in most cases. Solar developments may affect heritage assets (sites, monuments, buildings and landscape) both above and below ground. Above ground impacts may include the effects of applications on the setting of Listed Buildings and Scheduled Monuments as well as on the Historic Landscape Character of the area. Below ground impacts may include direct impacts on archaeological deposits through ground disturbance associated with trenching, foundations, fencing, temporary haul routes etc.

Swale Borough Council will expect all proposals to have been informed by a consultation with the Historic Environment Record (HER) maintained by Kent County Council. Any application should identify the presence of both designated and undesignated heritage assets which may be affected by any development and identify if there will be a requirement for further information to support an application. If such a requirement is identified we will expect applicants who wish to proceed with such sites to undertake a further consultation with Kent County Council who will advise on a brief for the required expert assessment or evaluation work.

The results of such assessments will be expected as supporting information in advance of the validation of applications. Swale Borough Council expects such assessments to follow the briefs set by the Historic Environment Service and to demonstrate the use of appropriately qualified professional expertise. Where assessments are absent or inadequate the Council may request further work to be undertaken in advance of determination. We will expect applications to take account of the results of historic environment assessments in their design, for instance through the sensitive planning of installations. Any opportunities to introduce better management of affected assets, or to improve the settings of designated sites, should be identified and this will be actively encouraged.

The Historic Environment Record (HER) is maintained by Kent County Council and can be located online using the Heritage Gateway at

www.heritagegateway.org.uk/gateway/chr/herdetail.aspx?crit=&ctid=97&id=4777.

Information on Listed Buildings in Swale may be found at www.english-heritage.org.uk/professional/protection/process/national-heritage-list-for-england/.

u) Drainage, Surface Water Run-off and Flooding

Due to the size of solar PV parks, planning applications will be expected to be accompanied by a Flood Risk Assessment. The guidance of the Environment Agency should be sought with regard to these. This will need to consider the impact of drainage. As solar panels will typically drain to the existing ground, the impact will not in general be significant and therefore this should not be an onerous requirement.

However, on sloping sites the concentration of run-off from panels could lead to the formation of gullies. This is more likely where the underlying soils are not naturally free draining, the site is steep and the arrays are installed up-and-down the slope, rather than along contours. Simple Sustainable Drainage Urban Drainage Systems (SUDS) drainage techniques, such as shallow swales or infiltration trenches, should be adopted to overcome this. These should aim to disperse the run-off at regular intervals to allow it to soak into the natural ground and prevent drainage paths forming straight down the slope. To avoid the concentration of flows, these should not necessarily be linked through the site but can be a series of short, contoured

features.

Where access tracks need to be provided, permeable tracks should be used, and localised SUDS, such as swales and infiltration trenches, should be used to control any run-off.

Given the temporary nature of solar PV park sites, they should be configured or sites selected to avoid the need to impact on existing drainage systems and watercourses. Culverting existing watercourses/drainage ditches should be avoided. Where culverting for access is unavoidable, it should be demonstrated that no reasonable alternatives exist and where necessary only be used temporarily for the construction period.

v) *Glint and Glare*

Glint may be produced as a direct reflection of the sun in the surface of the PV solar panel. It may be the source of the visual issues regarding viewer distraction. Glare is a continuous source of brightness, relative to diffused lighting. This is not a direct reflection of the sun, but rather a reflection of the bright sky around the sun. Glare is significantly less intense than glint.

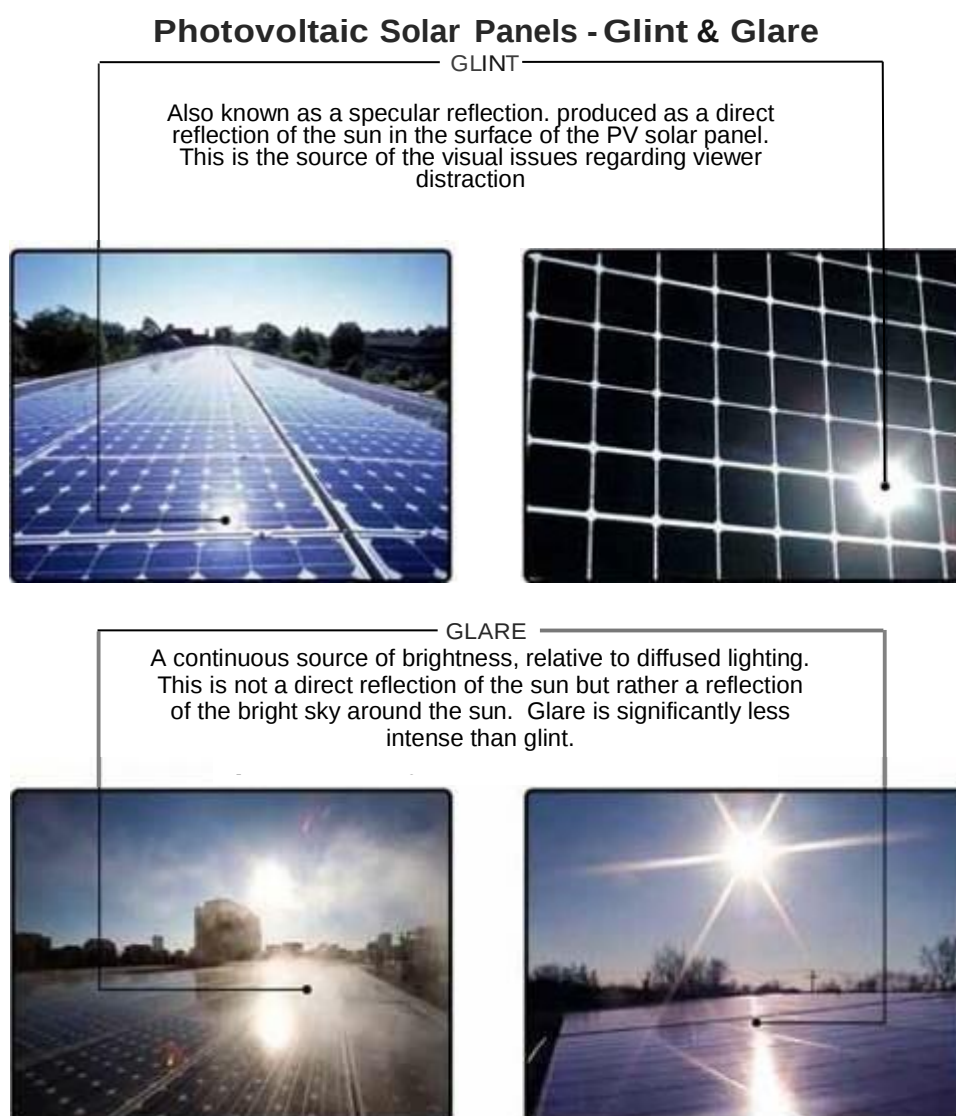


Figure 1

Solar panels are designed to absorb, not reflect, solar irradiation. However the sensitivities associated with glint and glare, and the landscape/visual impact and the potential impact on aircraft safety and on wildlife, should not be underestimated.

All applications should include a glint and glare assessment. This will be particularly important if 'tracking' panels are proposed as these may cause differential diurnal and/or seasonal impacts.

The potential for PV panels, frames and supports to have a combined reflective quality should be assessed. This assessment needs to consider the likely reflective capacity of all of the materials used in the construction of the solar farm.



Solar PV facility adjacent to Saarbruecken airport



East Langford 5MW solar PV farm, Cornwall. Image courtesy of Low Carbon Solar

w) *Community Involvement*

Community Involvement - Community involvement should be considered as an integral part of the development process. The local community should be engaged, by the developer, at the pre-design, conceptual stage, ideally utilising a local exhibition/presentation where community views can be sought and recorded. Consultation should allow sufficient time to seek community views/opinions, and take them into consideration, prior to the submission of any planning application. Any planning application should detail the exhibitions/presentations, any views/representations received and how any planning application was influenced/amended to accord with such representations.

The developer may also wish to undertake an exhibition/presentation following the submission of a planning application.



Howton 5MW solar PV farm, Cornwall. Image courtesy of Low Carbon Solar Partners

x) *Airport Safety*

The Civil Aviation Authority (CAA) is seeking to develop its policy on the installation of solar photovoltaic systems and their impact on aviation. Further information may be viewed at; www.caa.co.uk/homepage.aspx?catid=752

y) *Electricity Generating Capacity*

Planning applications for commercial scale solar PV development should clearly indicate the installed capacity (MW) of the proposed facility. While it is accepted that the performance of the solar panels may degrade over time the initial installed capacity should be provided. The 'capacity factor' and estimated annual production (MWh p.a.) should also be provided together with the number of residential properties electricity equivalent for UK, south east and Swale properties. A pro forma table, explaining these terms, is attached as Appendix B. This information will allow members of the public, and elected Members, to clearly understand the generating capacity of the proposed facility.

z) *Duration of Planning Permission and potential conditions*

The Feed in Tariff for solar PV applies for a period of 20 years. Solar farms should normally be regarded as a temporary use of land, and hence the need for 'reversibility', and the ability for all structures to be removed and the land returned to its original use. Planning permissions will normally;

- Need to be implemented within a period of three years
- Contain a timeframe for the completion of the construction and commissioning of the development
- Be for a temporary period only, and a maximum period of 20 or 25 years from the commissioning of the facility should be applied.

Planning applications should specify the length of time being applied for. A 20 or 25 year time limit will normally be imposed. An example of planning conditions used on a solar farm in Swale are set out in Appendix C.

Appendix A: Guidance on the information which should be provided within a Landscape and Visual Impact Assessment

It is vital that landscape considerations are embedded in the decision making process, as the most significant environmental effect of a development such as this, will frequently be the impact on landscape character and visual amenity.

One question to be addressed is whether this solar farm scheme is likely to give rise to significant environmental effects on the landscape of Swale Borough, and thereby whether an Environmental Statement will be required.

There are a number of elements associated with a solar farm development which have the potential to influence the significance of the impacts on landscape character and visual amenity :-

- Gradient of the site and the surrounding landform,
- Extent of the application site,
- Height and layout of the panels,
- Colour of the panels' surrounding frames,
- Treatment of the ground below and between the panels, for example to grow crops, graze livestock, or to lay down mulch to reduce maintenance,
- Perimeter fencing.

Landscape and Visual Impact Assessment – Third Edition – Landscape Institute and Institute of Environmental Management and Assessment 2011 provides advice on an appropriate approach to landscape assessment. The council would expect any application to be accompanied by an assessment based on the principles set out in this document.

Whether the EIA Regs are applied to the application or not, the impact of the proposal on landscape character and visual amenity needs to be examined through a comprehensive Landscape and Visual Impact Assessment. Such an assessment will need to cover the following detail:

1 Description of the development

- The need for the development set within local regional and national strategies;
- The timescale for construction, operation and decommissioning;
- The site's location and overall layout;
- Solar panel design and specification, method of construction /installation;
- Reasonable estimates of quantity and type of traffic which will be generated through construction and operation.

2 Site Description

- Description of the main reasons for the site selection and any alternatives in site selection, or layout which have been considered.
- Area of proposed land which the panels will occupy, clearly described and indicated on a map or diagram;
- Illustrated description of the land use of the surrounding area;
- Description of the policies, plans and designations which are relevant to the proposal;
- Evaluation of the direct, indirect, secondary and cumulative, short medium and long term effects resulting from the existence of the development.

3 Landscape Baseline Conditions

- The current condition of the landscape;
- Swale's Landscape Character and Biodiversity Appraisal 2011 provides the framework landscape character information, this should be supplemented by a study to assess the specific impact of the development
- Relationship of the site to any designated areas of landscape at a national, regional or local level, and to areas of landscape value or scenic quality.
- Description of all baseline data sources, and methods used to supplement this information;
- The landscape baseline should be evaluated in relation to its sensitivity and importance. The sensitivity evaluation of each landscape element should reflect its quality, value, contribution to landscape character and the degree to which the particular element or characteristic can be replaced or substituted.

4 Predictions of Impact

- Assess the scale, or magnitude of change to the landscape and visual elements as a deviation from the baseline conditions for each phase of the proposal. Consideration will need to be given to visitor and resident populations, and seasonal variations;
- Provide a Zone of Theoretical Visibility (ZTV) diagram for the development indicating as a minimum 1km, 2km, and 4km radii from the site;
- The methods used to establish the magnitude should be clearly described and be appropriate and reasonable in relation to the importance of the landscape and visual impact;
- Where assumptions or unsupported data has been used in the predictions, these should be highlighted and accompanied by an indication of the reliability / confidence of those assumptions or data;
- Evaluation of the direct, indirect, secondary and cumulative, short medium and long term effects resulting from the existence of the development.

5 Impact Significance

- Clearly describe the judgements which underpin the attribution of significance;
- The assessment of significance should consider the impact's deviation from the established landscape baseline condition, the sensitivity of the landscape and receptors and the extent to which the impact will be mitigated or is reversible;
- The range of factors which are likely to influence the assessment of significance should be clearly identified;
- Provide detail of how these variables will affect the significance of the impacts over the life of the development;
- Identify the significance of impacts that remain following mitigation.

6 Mitigation

- Describe the measures proposed to avoid, reduce and if possible remedy significant adverse impacts on both landscape character and visual amenity;
- Provide an indication of the anticipated effectiveness of the stated measures;
- Give a clear indication of how the mitigation measures will be implemented.

7 Presentation of the Landscape and Visual Impact Assessment

- The document should be clear and logical in its layout and presentation and be capable of being understood by a non-specialist;
- It should be a balanced document providing an unbiased account of the landscape and visual effects, with reasoned and justifiable arguments;
- A glossary of all technical terms and full reference list should be provided;
- Plans, diagrams and visual representations should be provided to assist in the understanding of the development and its impact, and should be clearly labelled with all locations referenced in the text.

8 Non-Technical Summary

1. A standalone document should be available to enable a non-specialist reader to understand the landscape and visual impacts of the proposal;
2. It should include a summary description of the development; the aspects of landscape character and visual amenity likely to be significantly affected; the likely significant effects; the mitigation measures to be implemented;
3. Should also include as a minimum the plans, maps and other visual representations which illustrate the location of the application site, the footprint of the development, and the location of key features.

Should you require any further advice or clarification of matters raised here, please contact planningpolicy@swale.gov.uk

Appendix B: Electricity Generating Capacity

Planning applications for commercial scale solar PV development should be accompanied by the following information.

Installed capacity (MW) ¹	Capacity factor ²	Estimated annual production (MWh p.a.) ³	Number of residential properties electricity equivalent ⁴

Notes:

¹ Installed capacity is the full-load, continuous rating of generating equipment under specific conditions as designated by the manufacturer. In other words, this is the power generated when the equipment is working at full capacity.

² Capacity factor is the calculated factor which compares the plant's actual production over a given period of time with the amount of power the plant would have produced if it had run at full capacity for the same amount of time. The capacity factor should take account of the specific equipment and the specific location. It is expressed as a percentage.

³ Estimated annual production of electricity based upon the installed capacity and the capacity factor.

⁴ Number of residential properties that would be powered by the estimated annual production based upon the U.K. average household consumption of 4,629 KWh/year,

Appendix C: Example of Planning Conditions for Standalone or Ground Mounted Solar PV Installations

The following Notification of Grant of Permission to Develop Land is an example of typical planning conditions that may be required for a large scale solar farm. Please note that further or different conditions may be required on other proposals on different sites.

Notification of Grant of Permission to Develop Land at Old Rides Farm, Eastchurch, Sheppey - PTO

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TOWN AND COUNTRY PLANNING ACT 1990

Application SW/12/1448

Case no. 04678

NOTIFICATION OF GRANT OF PERMISSION TO DEVELOP LAND

TO: Sunsave 9 (Old Rides) Ltd
C/o Mr J Stone
28 Church Road
Burgess Hill
West Sussex.
RH15 9AE

TAKE NOTICE that Swale Borough Council, in exercise of its powers as a Local Authority under the Town and Country Planning Acts, HAS GRANTED PERMISSION for development of land situated at:

Old Rides Farm, Leysdown Road, Eastchurch, Sheppey, Kent, ME12 480

and being Installation of an 8 MWP solar photovoltaic farm; comprising 32,832 solar panels and associated transformer inverter units, and substation, with associated security fence, grid connection and landscaping

referred to in your application for permission for development accepted as valid on 15 November 2012

SUBJECT TO THE CONDITIONS specified hereunder:-

- (1) The development to which this permission relates must be begun not later than the expiration of three years beginning with the date on which the permission is granted.

Grounds: In pursuance of Section 91 of the Town and Country Planning Act 1990 as amended by the Planning and Compulsory Purchase Act 2004.

YOUR ATTENTION IS DRAWN TO THE NOTES OVERLEAF

For further conditions and grounds-see attached sheet

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TOWN AND COUNTRY PLANNING ACT 1990

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Condition listing approved drawings:

(2) The development hereby approved shall be carried out in accordance with the following approved plans:

- (i) Solar Boundary Map (1:10,000 at A4)
- (ii) 2100.AP.004.0.B
- (iii) 2100.AP.004.0.C
- (iv) E554-28-01-0
- (v) MP-TEC 2:25-69/01 revision 01
- (vi) 2100.EP.Q02.3.A (grid connection)
- (vii) 21.00.EP.00'1 3.A (inverter and transformer approval)
- (viii) 2100.AP:ao3.3.A (temporal construction storage)
- (ix) 2100.AP.002.3.A (fence detail)
- (x) 2100.AP.000,3.C: (array layout)
- (xi) 175-01-04B (site)ayout)
- (xii) 175/02/01A (planting section)

Grounds: For the avoidance of doubt and in the interests of proper planning.

Pre-commencement conditions

- (3) During construction: of the development space shall be provided on site, in the position shown on drawing number 2100.AP.003.3.A, to enable all employees and contractors vehicles to park, load and off load and turn within the site. Before the development is commenced, details of the surfacing of this area, shall be submitted to and agreed in writing by the Local Planning Authority and shall be carried out as approved.

Grounds: In the interests of highway safety and convenience in accordance with Policy E1 of the Swale Borough Local Plan 2008.

- (4) Adequate precautions shall be taken during the period of site preparation and construction to prevent the deposit of mud and/or other debris on the public highway, in accordance with details that shall first have been submitted to and approved in writing by the Local Planning Authority.

Grounds: In the interests of highway safety and convenience in accordance with Policy E1 of the Swale Borough Local Plan 2008.

For further conditions and grounds- see attached sheet



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- (5) The boundary fence to the perimeter of the site, as shown on drawing number 2100.AP.002.3.A, shall be powder coated green (RAL 6005).

Grounds: In the interests of visual amenity and in pursuance of Policies E1, E9 and E19 of the Swale Borough Local plan 2008.

- (6) Notwithstanding the details shown on 175-01-04B (site layout) and 175/02/01A (planting section), none of the solar arrays hereby approved shall be installed, until full details of both hard and soft landscape works have been submitted to and approved in writing by the Local Planning Authority. These details shall include existing trees, shrubs and other features, planting schedules of plants, noting species, plant sizes and numbers where appropriate, means of enclosure, hard surfacing materials, and an implementation programme.

Grounds: In the interests of the visual and landscape amenities of the area and in pursuance of Policies E1, E9 and E19 of the Swale Borough Local Plan 2008.

- (7) The sub-station and inverter buildings hereby approved shall be finished in cladding of a type and colour to be agreed in writing by the Local Planning Authority before they are erected, and shall be retained as such for the duration of the development.

Grounds: In the interests of the visual amenities of the area and in pursuance of Policies E1, E9 and E19 of the Swale Borough Local Plan 2008.

- (8) No development shall take place until full details of the scheme for surface water drainage has been submitted to and approved by the Local Planning Authority. The approved details shall be implemented before the first use of the development hereby permitted.

Grounds: In order to ensure controlled surface water drainage and in pursuance of Policy E1 of the Swale Borough Local Plan 2008.

- (9) No development shall take place until there has been submitted to and approved in writing by the Local Planning Authority a detailed ecological management and enhancement plan for the site to include, and build upon, the principles and the recommendations set out in the 'Environmental Site Management Plan' (received 29/11/12). The requirements of the agreed Plan shall then be adhered to throughout the operational life of the development.

For further conditions and grounds-see attached sheet

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Grounds: To ensure there is no detrimental impact upon ecological interest at the site, and in the wider area, and to enhance biodiversity in accordance with Policies E11 and E12 of the Swale Borough Local Plan 2008 and the NPPF 2012.

- (10) No development shall take place until a scheme setting out arrangements to safeguard the public sewer (and access to it) where it crosses the site, both during the construction phase and the operational phase, has been submitted to and approved by the Local Planning Authority. The development shall then be implemented in accordance with the approved details.

Grounds: In the interests of safeguarding the foul sewerage system, and in pursuance of Policy E1 of the Swale Borough Local Plan 2008.

- (11) No development shall take place until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work in accordance with a written specification and timetable which has been submitted to and approved in writing by the District Planning Authority¹.

Grounds: To ensure that features of archaeological interest are properly examined and recorded in pursuance of policies E1 and E16 of the Swale Borough Local Plan 2008.

Non pre-commencement conditions

- (12). No construction work in connection with the development shall take place on any Sunday or Bank Holiday, nor on any other day except between the following times:-

Monday to Friday 0730 – 1900 hours, Saturdays 0730 – 1800 hours unless in association with an emergency or with the prior written approval of the Local Planning Authority.

Grounds: In the interests of residential amenity and in pursuance of Policy E1 of the Swale Borough Local Plan 2008.

- (13) All hard and soft landscape works shall be carried out in accordance with the approved details. The works shall be carried out prior to the occupation of any part of the development or in accordance with the programme agreed in writing with the Local Planning Authority.

Grounds: In the interests of the visual amenities of the area and in pursuance of Policies E1 and E9 of the Swale Borough Local Plan 2008.

For further conditions and grounds- see attached sheet

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- (14) Upon completion of the approved landscaping scheme, any trees or shrubs that are removed, dying, being severely damaged or becoming seriously diseased within ten years of planting shall be replaced with trees or shrubs of such size and species as may be agreed in Writing with the Local Planning Authority, and within whatever planting season is agreed.

Grounds: In the interests of the visual amenities of the area and in pursuance of policies E1 and E9 of the Swale Borough Local Plan 2008.

- (15) Within 25 years of the date of this decision, or within six months of the cessation of electricity generation by the solar PV facility, or within six months following a permanent cessation of construction works prior to the solar facility coming into operational use, whichever is the sooner, all development hereby permitted including the solar PV panels, frames, inverter modules, all foundations, track ways and all associated structures and fencing shall be dismantled and removed from the site. The developer shall notify the Local Planning Authority in writing no later than five working days following cessation of power production. The site shall subsequently be restored to agricultural land in accordance with a scheme, the details of which shall be submitted and approved in writing by the Local Planning Authority prior to the commencement of electricity generation from the development.

Grounds: To ensure the achievement of satisfactory restoration of the land in accordance with Policies E1, E9 and E19 of the Swale Borough Local Plan, Policies NRM15 and C4 of the South East Plan 2009 and the NPPF 2012.

- (16) No external lighting (whether permanent or temporary) shall be installed or retained at the site once operational;

Grounds: In the interests of visual amenity and biodiversity in accordance with Policies E11 and E12 of the Swale Borough Local Plan 2008 and the NPPF 2012.

Reason for approval

Having taken all material considerations into account, it is considered that subject to compliance with the attached conditions, the proposal would be in accordance with the development plan and would not cause unacceptable harm to the amenities of the area or prejudice highway safety or convenience. In resolving to grant permission, particular regard has been had to the following policies: NRM13, NRM14, NRM15 and NRM16 of the South East Plan (2009); and SP1, SP2, SP3, E1, E6, E9, E10, E11, E12, E13, E16, E19, RC1, T1, T3, and U3 of the Swale Borough Local Plan; and the Supplementary Planning Document 'Swale Landscape Character and Biodiversity Appraisal' (2011).

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Council's approach to this application:

The Council recognises the advice in paragraphs 186 and 187 of the National Planning Policy Framework (NPPF) and seeks to work with applicants in a positive and proactive manner by offering a pre-application advice service; having a duty planner service; and seeking to find solutions to any obstacles to approval of applications having due regard to the responses to consultation, where it can reasonably be expected that amendments to an application will result in an approval without resulting in a significant change to the nature of the application and the application can then be amended and determined in accordance with statutory timescales.

In this case the Council has worked with the applicant's agent to successfully resolve issues that would otherwise have prevented the grant of planning permission.

14th February 2013

Dated: **James Freeman, Head of Planning**

Appendix D Advice on Security and Crime Prevention

The following text has been kindly provided by Kent Police.

The site should be fully enclosed within a minimum 2m security fencing system (or higher). It is however, important that the gap between the base of any fencing and the ground is minimal, so that any equipment, such as the PV panels themselves or copper cable, cannot be easily passed underneath by thieves.

Additional defensive planting of natural hedging can also be considered around the boundary as an added layer of security.

All inverter, substation, transformer and control buildings/cabinets should be fully alarmed with a monitored system and covered by CCTV.

Appropriate security locks and devices should be installed on all equipment cabinets and associated buildings. Locking device screws/bolts should not be easily accessible when closed, to deter by-passing of the locks themselves by a determined offender. One way security clutch head security bolts/screws or similar can also be utilised to prevent easy removal.

Hinge pins for equipment cabinets, associated buildings and gates should be hidden when closed and/or fitted with anti-lift devices.

We recommend that all photovoltaic (PV) solar panels are individually security marked and all serial numbers recorded within a site inventory.

We recommend that PVs are installed using one way security clutch head security bolts/screws or similar, as an added layer of security and in order to make removal more difficult for thieves.

Copper cable; transformers; inverters; switch gear and any other equipment of high value should be security marked. This can be achieved by using unique identifiers, such as serial numbers on the insulation sheathing and / or with the use of forensic marking solutions. A full equipment inventory should be kept.

Appropriate crime prevention/security signage warning of the use of CCTV and forensic marking solutions should be installed on the exterior face of the security fencing and any gates.

Given the amounts of equipment and copper cable likely to be on site during construction, it is essential that the site is secured and appropriate temporary alarm and CCTV systems are installed, particularly if a security guard is not to be employed during construction. Any plant and associated fuel bowsers should also be secured, alarmed and immobilised at the end of each working day.

We would also highly recommend that the developer meet with Kent Policy to discuss security measures for any solar farm array applications.

Copies of this Swale Borough Council document are available on the Council website **www.swale.gov.uk** If you would like further hard copies or alternative versions (i.e. large print, audio, different language) we will do our best to accommodate your request please contact the Council at:

Swale Borough Council
Swale House, East Street
Sittingbourne
Kent, ME10 3HT

Customer Service Centre **01795 417850**

1. [Home](#)
2. [Housing, local and community](#)
3. [Planning and building](#)
4. [Planning system](#)

Guidance

Renewable and low carbon energy

Guidance to help local councils in developing policies for renewable and low carbon energy and identifies the planning considerations.

Published 18 June 2015

From:

[Ministry of Housing, Communities & Local Government](#)

Contents

1. [Planning for renewable and low carbon energy: introduction](#)
2. [Developing a strategy for renewable and low carbon energy](#)
3. [Particular planning considerations for hydropower, active solar technology, solar farms and wind turbines](#)

Where plans are being prepared under the transitional arrangements set out in Annex 1 to the revised [National Planning Policy Framework](#), the policies in the [previous version of the framework published in 2012](#) will continue to apply, as will any previous guidance which has been superseded since the new framework was published in July 2018. If you'd like an email alert when changes are made to planning guidance please [subscribe](#).

Planning for renewable and low carbon energy: introduction

Why is planning for renewable and low carbon energy important?

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.

Paragraph: 001 Reference ID: 5-001-20140306

Revision date: 06 03 2014

Are all energy developments handled by local planning authorities?

Local planning authorities are responsible for renewable and low carbon energy development of 50 megawatts or less installed capacity (under the Town and Country Planning Act 1990).

Renewable and low carbon development over 50 megawatts capacity are currently considered by the Secretary of State for Energy under the [Planning Act 2008](#), and the local planning authority is a statutory consultee. It is the government's intention to amend legislation so that all applications for onshore wind energy development are handled by local planning authorities. Microgeneration is often [permitted development](#) and may not require an application for planning permission.

Paragraph: 002 Reference ID: 5-002-20150618

Revision date: 18 06 2015 See [previous version](#)

Developing a strategy for renewable and low carbon energy

How can local planning authorities develop a positive strategy to promote the delivery of renewable and low carbon energy?

The National Planning Policy Framework explains that all communities have a responsibility to help increase the use and supply of green energy, but this does not mean that the need for renewable energy automatically overrides environmental protections and the planning concerns of local communities. As with other types of development, it is important that the planning concerns of local communities are properly heard in matters that directly affect them.

Local and neighbourhood plans are the key to delivering development that has the backing of local communities. When drawing up a Local Plan local planning authorities should first consider what the local potential is for renewable and low carbon energy generation. In considering that potential, the matters local planning authorities should think about include:

- the range of technologies that could be accommodated and the policies needed to encourage their development in the right places;
- the costs of many renewable energy technologies are falling, potentially increasing their attractiveness and the number of proposals;
- different technologies have different impacts and impacts can vary by place;
- the UK has legal commitments to cut greenhouse gases and meet increased energy demand from renewable sources. Whilst local authorities should design their policies to maximise renewable and low carbon energy development, there is no quota which the Local Plan has to deliver.

There is information below on community-led renewable energy initiatives.

Paragraph: 003 Reference ID: 5-003-20140306

Revision date: 06 03 2014

What is the role for community led renewable energy initiatives?

Community initiatives are likely to play an increasingly important role and should be encouraged as a way of providing positive local benefit from renewable energy development. Further information for communities interested in developing their own initiatives is provided by the Department of Energy and Climate Change. Local planning authorities may wish to establish policies which give positive weight to renewable and low carbon energy initiatives which have clear evidence of local community involvement and leadership.

Neighbourhood plans are an opportunity for communities to plan for community led renewable energy developments. Neighbourhood Development Orders and Community Right to Build Orders can be

used to grant planning permission for renewable energy development. To support community based initiatives a local planning authority should set out clearly any strategic policies that those producing neighbourhood plans or Orders will need to consider when developing proposals that address renewable energy development. Local planning authorities should also share relevant evidence that may assist those producing a neighbourhood plan or Order, as part of their duty to advise or assist. As part of a neighbourhood plan, communities can also look at developing a community energy plan to underpin the neighbourhood plan.

Paragraph: 004 Reference ID: 5-004-20140306

Revision date: 06 03 2014

How can local planning authorities identify suitable areas for renewable and low carbon energy?

There are no hard and fast rules about how suitable areas for renewable energy should be identified, but in considering locations, local planning authorities will need to ensure they take into account the [requirements of the technology](#) and, critically, the potential impacts on the local environment, including from [cumulative impacts](#). The views of local communities likely to be affected should be listened to.

When identifying suitable areas it is also important to set out the factors that will be taken into account when considering individual proposals in these areas. These factors may be dependent on the investigatory work underpinning the identified area.

There is a methodology available from the Department of Energy and Climate Change's website on assessing the capacity for renewable energy development which can be used and there may be existing local assessments. However, the impact of some types of technologies may have changed since assessments were drawn up (eg the size of wind turbines has been increasing). In considering impacts, assessments can use tools to identify where impacts are likely to be acceptable. For example, landscape character areas could form the basis for considering which technologies at which scale may be appropriate in different types of location. Landscape Character Assessment is a process used to explain the type and characteristics

of landscape in an area. Natural England has used Landscape Character Assessment to identify 159 National Character Areas in England which provide a national level database. Landscape Character Assessment carried out at a county or district level may provide a more appropriate scale for assessing the likely landscape and visual impacts of individual proposals. Some renewable energy schemes may have visual impacts on the marine and coastal environment and it may be appropriate to also to assess potential impacts on seascape character.

Identifying areas suitable for renewable energy in plans gives greater certainty as to where such development will be permitted. For example, where councils have identified suitable areas for large scale solar farms, they should not have to give permission outside those areas for speculative applications involving the same type of development when they judge the impact to be unacceptable.

In the case of [wind turbines](#), a planning application should not be approved unless the proposed development site is an area identified as suitable for wind energy development in a Local or Neighbourhood Plan.

There is information in the rest of the guidance on [technical considerations](#), [criteria-based policies](#), [buffer zones](#) and [decentralised energy](#).

Related policy: [paragraph 154](#).

Paragraph: 005 Reference ID: 5-005-20150618

Revision date: 18 06 2015 See [previous version](#)

How are ‘suitable areas’ defined in relation to wind energy development?

[Suitable areas](#) for wind energy development will need to have been allocated clearly in a Local or Neighbourhood Plan. Maps showing the wind resource as favourable to wind turbines or similar will not be sufficient.

Paragraph: 032 Reference ID: 5-032-150618

Revision date: 18 06 2015

What technical considerations relating to renewable energy technologies affect their siting?

Examples of the considerations for particular renewable energy technologies that can affect their siting include proximity of grid connection infrastructure and site size, and:

- for biomass, appropriate transport links,
- for hydro-electric power, sources of water,
- for wind turbines, predicted wind resource, considerations relating to air safeguarding, electromagnetic interference and access for large vehicles.

Discussions with industry experts can help to identify the siting requirements and likely impacts of technologies. The [National Policy Statements](#) on the Department of Energy and Climate Change's website give generic and technology specific advice relevant to siting particular technologies. The Environment Agency has published advice showing which areas may be suitable for [open loop ground source heat pumps](#) as well as advice on the technologies it regulates.

Paragraph: 006 Reference ID: 5-006-20140306

Revision date: 06 03 2014

Do criteria based policies have a role in planning for renewable energy?

Policies based on clear criteria can be useful when they are expressed positively (ie that proposals will be accepted where the impact is or can be made acceptable). In thinking about criteria the [National Policy Statements](#) published by the Department of Energy and Climate Change provide a useful starting point. These set out the impacts particular technologies can give rise to and how these should be addressed.

In shaping local criteria for inclusion in Local Plans and considering planning applications in the meantime, it is important to be clear that:

- the need for renewable or low carbon energy does not automatically override environmental protections;

- cumulative impacts require particular attention, especially the increasing impact that wind turbines and large scale solar farms can have on landscape and local amenity as the number of turbines and solar arrays in an area increases;
- local topography is an important factor in assessing whether wind turbines and large scale solar farms could have a damaging effect on landscape and recognise that the impact can be as great in predominately flat landscapes as in hilly or mountainous areas;
- 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;
- proposals in National Parks and Areas of Outstanding Natural Beauty, and in areas close to them where there could be an adverse impact on the protected area, will need careful consideration;
- protecting local amenity is an important consideration which should be given proper weight in planning decisions.

Paragraph: 007 Reference ID: 5-007-20140306

Revision date: 06 03 2014

Are buffer zones/separation distances appropriate between renewable energy development and other land uses?

Local planning authorities should not rule out otherwise acceptable renewable energy developments through inflexible rules on buffer zones or separation distances. Other than when dealing with set back distances for safety, distance of itself does not necessarily determine whether the impact of a proposal is unacceptable. Distance plays a part, but so does the local context including factors such as topography, the local environment and near-by land uses. This is why it is important to think about in what circumstances proposals are likely to be acceptable and plan on this basis.

Paragraph: 008 Reference ID: 5-008-20140306

Revision date: 06 03 2014

How can decentralised energy opportunities be identified?

There is an important contribution to be made by planning that is independent of the contribution from other regimes such as building regulations. For example, getting the right land uses in the right place can underpin the success of a district heating scheme. Similarly, planning can influence opportunities for recovering and using waste heat from industrial installations.

Planning can provide opportunities for, and encourage energy development which will produce waste heat, to be located close to existing or potential users of the heat. Planning can also help provide the new customers for the heat by encouraging development which could make use of the heat.

Information on local heat demand is published by the Department of Energy and Climate Change to assist planners and developers in identifying locations with opportunities for heat supply. See the [national heat map](#) and the [UK combined heat and power \(CHP\) development map](#). This information will be supplemented in future by further work, including detailed mapping, on the potential for combined heat and power and district heating and cooling. View the [National Planning Policy Framework definition of 'decentralised energy'](#).

Paragraph: 009 Reference ID: 5-009-20140306

Revision date: 06 03 2014

Particular planning considerations for hydropower, active solar technology, solar farms and wind turbines

What are the planning considerations that relate to specific renewable energy technologies?

Renewable energy developments should be acceptable for their proposed location. In addition to the factors that should be considered regarding the acceptability of a location for any form of [renewable energy development](#) there are particular considerations for the following technologies: [hydropower](#), [active solar technology \(photovoltaics and solar water heating\)](#), [solar farms](#) and [wind turbines](#).

Also, local planning authorities may wish to consider how planning conditions or planning obligations can mitigate the impacts described.

Paragraph: 010 Reference ID: 5-010-20140306

Revision date: 06 03 2014

What are the particular planning considerations that relate to hydropower?

Planning applications for hydropower should normally be accompanied by a Flood Risk Assessment. Early engagement with the local planning authority and the Environment Agency will help to identify the potential planning issues, which are likely to be highly specific to the location. Advice on environmental protection for new hydropower schemes has been published by the [Environment Agency](#).

Paragraph: 011 Reference ID: 5-011-20140306

Revision date: 06 03 2014

What are the particular planning considerations that relate to active solar technology (photovoltaic and solar water heating)

Active solar technology, (photovoltaic and solar water heating) on or related to a particular building is often [permitted development](#) (which does not require a planning application) provided the installation is not of an unusual design, or does not involve a listed building, and is not in a designated area. Where a planning application is required, factors to bear in mind 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.

Paragraph: 012 Reference ID: 5-012-20140306

Revision date: 06 03 2014

What are the particular planning considerations that relate to large scale ground-mounted solar photovoltaic farms?

The deployment of large-scale solar farms can have a negative impact on the rural environment, particularly in undulating landscapes. However, the visual impact of a well-planned and well-screened solar farm can be properly addressed within the landscape if planned sensitively.

Particular factors 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](#) and [written ministerial statement on solar energy: protecting the local and global environment made on 25 March 2015](#).
- 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.

The approach to assessing cumulative landscape and visual impact of large scale solar farms is likely to be the same as assessing the [impact of wind turbines](#). However, in the case of ground-mounted solar panels it should be noted that with effective screening and appropriate land topography the area of a zone of visual influence could be zero.

Related policy: [paragraph 170](#)

Paragraph: 013 Reference ID: 5-013-20150327

Revision date: 27 03 2015 See [previous version](#)

What are the particular planning considerations that relate to wind turbines?

The following questions should be considered when determining applications for wind turbines:

- [Do local people have the final say on wind farm applications?](#)
- [How are noise impacts of wind turbines assessed?](#)
- [Is safety an issue when wind turbine applications are assessed?](#)
- [Is interference with electromagnetic transmissions an issue for wind turbine applications?](#)
- [How can the risk of wind turbines be assessed for ecology?](#)
- [How should heritage be taken into account in assessing wind turbine applications?](#)
- [Is shadow flicker and reflected light an issue for wind turbine applications?](#)
- [How to assess the likely energy output of a wind turbine?](#)
- [How should cumulative landscape and visual impacts from wind turbines be assessed?](#)

- [What information is needed to assess cumulative landscape and visual impacts of wind turbines?](#)
- [Decommissioning wind turbines](#)

Paragraph: 014 Reference ID: 5-014-20150618

Revision date: 18 06 2015 See [previous version](#)

Do local people have the final say on wind farm applications?

The [written ministerial statement](#) made on 18 June 2015 is quite clear that when considering applications for wind energy development, local planning authorities should (subject to the transitional arrangement) only grant planning permission if:

- the development site is in an area identified as suitable for wind energy development in a Local or Neighbourhood Plan; and
- following consultation, it can be demonstrated that the planning impacts identified by affected local communities have been fully addressed and therefore the proposal has their backing.

Whether the proposal has the backing of the affected local community is a planning judgement for the local planning authority.

Paragraph: 033 Reference ID: 5-033-150618

Revision date: 18 1506

How are noise impacts of wind turbines assessed?

The report, [ETSU-R-97: The assessment and rating of noise from wind farms](#) should be used by local planning authorities when assessing and rating noise from wind energy developments. Good practice guidance on noise assessments of wind farms has been prepared by the Institute of Acoustics. The Department of Energy and Climate Change accept that it represents current industry good practice and endorses it as a supplement to ETSU-R-97. It is available on the [Department of Energy and Climate Change's website](#).

Paragraph: 015 Reference ID: 5-015-20140306

Revision date: 06 03 2014

Is safety an issue when wind turbine applications are assessed?

Safety may be an issue in certain circumstances, but risks can often be mitigated through appropriate siting and consultation with affected bodies:

Buildings

Fall over distance (ie the height of the turbine to the tip of the blade) plus 10% is often used as a safe separation distance. This is often less than the minimum desirable distance between wind turbines and occupied buildings calculated on the basis of expected noise levels and due to visual impact.

Power lines

National Grid, and/or the relevant Distribution Network Operators will be able to advise on the required standards for wind turbines being separated from existing overhead power lines.

Air traffic and safety

Wind turbines may have an adverse affect on air traffic movement and safety. Firstly, they may represent a risk of collision with low flying aircraft, and secondly, they may interfere with the proper operation of radar by limiting the capacity to handle air traffic, and aircraft instrument landing systems. There is a 15 kilometre (km) consultation zone and 30km or 32km advisory zone around every civilian air traffic radar, although objections can be raised to developments that lie beyond the 32km advisory zone. There is a c.15km statutory safeguarding consultation zone around Ministry of Defence aerodromes within which wind turbine proposals would be assessed for physical obstruction. See the [Town and Country Planning \(safeguarded aerodromes, technical sites and military explosives storage areas\) direction 2002](#). Further advice on wind energy and aviation can be found on the [Civil Aviation Authority](#) and [National Air Control Transport Services](#) websites.

Defence

Wind turbines can adversely affect a number of Ministry Of Defence operations including radars, seismological recording equipment, communications facilities, naval operations and low flying. Developers and local planning authorities should consult with the [Ministry of Defence](#) if a proposed turbine is 11 metres (m) to blade tip or taller, and/or has a rotor diameter of 2m or more.

Radar

In addition to air traffic radar, wind turbines may affect other radar installations such as weather radar operated by the Meteorological Office.

Strategic Road Network

The Highways Agency/Department for Transport have produced advice for siting wind turbines safely in relation to the strategic road network titled [The strategic road network and the delivery of sustainable development \(2013\)](#).

Paragraph: 016 Reference ID: 5-016-20140306

Revision date: 06 03 2014

Is interference with electromagnetic transmissions an issue for wind turbine applications?

Wind turbines can potentially affect electromagnetic transmissions (eg radio, television and phone signals). Specialist organisations responsible for the operation of electromagnetic links typically require 100m clearance either side of a line of sight link from the swept area of turbine blades. Ofcom acts as a central point of contact for identifying specific consultees relevant to a site.

Paragraph: 017 Reference ID: 5-017-20140306

Revision date: 06 03 2014

How can the risk of wind turbines be assessed for ecology?

Evidence suggests that there is a risk of collision between moving turbine blades and birds and/or bats. Other risks including disturbance and displacement of birds and bats and the drop in air pressure close to the blades which can cause barotrauma (lung expansion) in bats, which can be fatal. Whilst these are generally a relatively low risk, in some situations, such as in close proximity to important habitats used by birds or bats, the risk is greater and the impacts on birds and bats should therefore be assessed. Advice on assessing risks is available from [Natural England's website](#).

Paragraph: 018 Reference ID: 5-018-20140306

Revision date: 06 03 2014

How should heritage be taken into account in assessing wind turbine applications?

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 wind turbines on such assets. Depending on their scale, design and prominence a wind turbine within the setting of a heritage asset may cause substantial harm to the significance of the asset.

Paragraph: 019 Reference ID: 5-019-20140306

Revision date: 06 03 2014

Is shadow flicker and reflected light an issue for wind turbine applications?

Under certain combinations of geographical position and time of day, the sun may pass behind the rotors of a wind turbine and cast a shadow over neighbouring properties. When the blades rotate, the shadow flicks on and off; the impact is known as 'shadow flicker'. Only properties within 130 degrees either side of north, relative to the turbines can be affected at these latitudes in the UK – turbines do not cast long shadows on their southern side.

Modern wind turbines can be controlled so as to avoid shadow flicker when it has the potential to occur. Individual turbines can be controlled to avoid shadow flicker at a specific property or group of properties on sunny days, for specific times of the day and on specific days of the year. Where the possibility of shadow flicker exists, mitigation can be secured through the use of conditions.

Although problems caused by shadow flicker are rare, where proposals for wind turbines could give rise to shadow flicker, applicants should provide an analysis which quantifies the impact. Turbines can also cause flashes of reflected light, which can be visible for some distance. It is possible to ameliorate the flashing but it is not possible to eliminate it.

Paragraph: 020 Reference ID: 5-020-20140306

Revision date: 06 03 2014

How to assess the likely energy output of a wind turbine?

As with any form of energy generation this can vary and for a number of reasons. With wind turbines the mean wind speed at hub height (along with the statistical distribution of predicted wind speeds about this mean and the wind turbines used) will determine the energy captured at a site. The simplest way of expressing the energy capture at a site is by use of the 'capacity factor'. This though will vary with location and even by turbine in an individual wind farm. This can be useful information in considering the energy contribution to be made by a proposal, particularly when a decision is finely balanced.

Paragraph: 021 Reference ID: 5-021-20140306

Revision date: 06 03 2014

How should cumulative landscape and visual impacts from wind turbines be assessed?

Cumulative landscape impacts and cumulative visual impacts are best considered separately. The cumulative landscape impacts are the effects of a proposed development on the fabric, character and quality of the landscape; it is concerned with the degree to which a proposed renewable energy development will become a significant or defining characteristic of the landscape.

Cumulative visual impacts concern the degree to which proposed renewable energy development will become a feature in particular views (or sequences of views), and the impact this has upon the people experiencing those views. Cumulative visual impacts may arise where two or more of the same type of renewable energy development will be visible from the same point, or will be visible shortly after each other along the same journey. Hence, it should not be assumed that, just because no other sites will be visible from the proposed development site, the proposal will not create any cumulative impacts.

Paragraph: 022 Reference ID: 5-022-20140306

Revision date: 06 03 2014

What information is needed to assess cumulative landscape and visual impacts of wind turbines?

In identifying impacts on landscape, considerations include: direct and indirect effects, cumulative impacts and temporary and permanent impacts. When assessing the significance of impacts a number of criteria should be considered including the sensitivity of the landscape and visual resource and the magnitude or size of the predicted change. Some landscapes may be more sensitive to certain types of change than others and it should not be assumed that a landscape character area deemed sensitive to one type of change cannot accommodate another type of change.

In assessing the impact on visual amenity, factors to consider include: establishing the area in which a proposed development may be visible, identifying key viewpoints, the people who experience the views and the nature of the views.

The [Historic England website](#) provides information on undertaking historic landscape characterisation and how this relates to landscape character assessment.

The bullets below set out the type of information that can usefully inform assessments.

Information to inform landscape and visual impact assessments:

- a base plan of all existing windfarms, consented developments and applications received, showing all schemes within a defined radius of the centre of the proposal under consideration
- for those existing or proposed windfarms within a defined radius of the proposal under consideration, a plan showing cumulative 'zones of visual influence'. (A zone of visual influence is the area from which a development or other structure is theoretically visible). The aim of the plan should be to clearly identify the zone of visual influence of each windfarm, and those areas from where one or more windfarms are likely to be seen
- the base plan and plan of cumulative zones of visual influence will need to reflect local circumstances, for example, the areas covered should take into account the extent to which factors such as the topography and the likely visibility of proposals in prevailing meteorological conditions may vary

- maps of cumulative zones of visual influence are used to identify appropriate locations for visual impact studies. These include locations for simultaneous visibility assessments (ie where two or more schemes are visible from a fixed viewpoint without the need for an observer to turn their head, and repetitive visibility assessments (ie where the observer is able to see two or more schemes but only if they turn around)
- sequential effects on visibility occur when an observer moves through a landscape and sees two or more schemes. Common routes through a landscape (eg major roads; long distance paths or cycle routes) can be identified as 'journey scenarios' and the proposals impact on them can be assessed
- photomontages showing all existing and consented turbines, and those for which planning applications have been submitted, in addition to the proposal under consideration. The viewpoints used could be those identified using the maps of cumulative zones of visual influence. The photomontages could be annotated to include the dimensions of the existing turbines, the distance from the viewpoint to the different schemes, the arc of view and the format and focal length of the camera used
- at the most detailed level, description and assessment of cumulative impacts may include the following landscape issues: scale of development in relation to landscape character or designations, sense of distance, existing focal points in the landscape, skylining (where additional development along a skyline appears disproportionately dominant) and sense of remoteness or wildness

Paragraph: 023 Reference ID: 5-023-20140306

Revision date: 06 03 2014

Decommissioning wind turbines

Local planning authorities should consider using planning conditions to ensure that redundant turbines are removed when no longer in use and land is restored to an appropriate use.

Paragraph: 024 Reference ID: 5-024-20140306

Revision date: 06 03 2014

When is pre-application consultation with the local community compulsory for wind turbine proposals?

There is a legal requirement to carry out pre-application consultation with the local community for planning applications for wind turbine development involving more than 2 turbines or where the hub height of any turbine exceeds 15 metres as identified in [article 3 of the Town and Country Planning \(Development Management Procedure\) \(England\) \(Order\) 2015](#).

The following questions should be considered when undertaking compulsory pre-application consultation with the local community for wind turbine proposals:

- [Who is responsible for conducting compulsory pre-application consultation with the local community for wind turbine proposals?](#)
- [What must a prospective applicant for planning permission for a wind turbine do when undertaking compulsory pre-application consultation with the local community?](#)
- [How can a prospective applicant for planning permission for a wind turbine establish who needs to be consulted?](#)
- [Will compulsory pre-application consultation with the local community apply to planning applications for wind turbine\(s\) determined by the Secretary of State?](#)
- [What role can the local planning authority play in compulsory pre-application consultation with the local community for wind turbine proposals?](#)
- [What happens if a prospective applicant for a wind turbine does not comply with the requirement to undertake compulsory pre-application consultation with the local community?](#)

Paragraph: 025 Reference ID: 5-025-20150415

Revision date: 15 04 2015 See [previous version](#)

Who is responsible for conducting compulsory pre-application consultation with the local community for wind turbine proposals

The requirement to undertake compulsory pre-application consultation with the local community is the responsibility of the prospective applicant for planning permission.

Paragraph: 026 Reference ID: 5-026-20140410

Revision date: 10 04 2014

What must a prospective applicant for planning permission for a wind turbine(s) do when undertaking compulsory pre-application consultation with the local community?

The requirements that must be fulfilled are set out in [sections 61W and 61X of the Town and Country Planning Act 1990](#) and [article 4 of the Town and Country Planning \(Development Management Procedure\) \(England\) \(Order\) 2015](#). In summary, a prospective applicant for planning permission must:

- publicise the proposal in such a way as the applicant reasonably considers is likely to bring it to the attention of a majority of the people who live at, or otherwise occupy, premises in the vicinity of the land;
- set out how persons may contact them regarding the proposal. The applicant must give sufficient information about the proposed timetable to ensure that people wishing to comment on the proposed development may do so in good time;
- if they decide to go ahead with making an application for planning permission, have regard to any responses received when finalising the application to be submitted;
- when submitting their application explain how the local community has been consulted, what comments have been received, and how account has been taken of those comments.

These are minimum requirements, but it is in the prospective applicant's interest to conduct pre-application consultation to an appropriate standard to ensure that they fully understand the views of those within the vicinity of the land to which the application relates.

Paragraph: 027 Reference ID: 5-027-20150415

Revision date: 15 04 2015 See [previous version](#)

How can a prospective applicant for planning permission for a wind turbine(s) establish who needs to be consulted?

Where it is required, compulsory pre-application consultation must meet the legislative requirements set out in [section 61W of the Town and Country Planning Act 1990](#). These require that applicants must publicise the proposal in such a way as the applicant reasonably considers is likely to bring it to the attention of a majority of persons who live at or otherwise occupy premises in the vicinity of the land.

There is no one size fits all approach to pre-application consultation and, providing it meets the legislative requirements, decisions on the

nature and extent of consultation will need to be made on a case by case basis and in light of the relevant circumstances. Pre-application consultation should be proportionate to the scale and nature of a proposed development, the local context and the people that might be materially affected by the planning impacts of the development.

When deciding how and who to consult, prospective applicants will need to consider what is necessary in the specific circumstances of their proposal but a useful starting point is to consider the extent of engagement with the local community a local planning authority would normally undertake if a formal planning application were to be submitted. Prospective applicants are encouraged to [discuss these matters with the local planning authority](#).

Paragraph: 028 Reference ID: 5-028-20140410

Revision date: 10 04 2014

Will compulsory pre-application consultation with the local community apply to planning applications for wind turbine(s) determined by the Secretary of State?

Compulsory pre-application consultation with the local community applies to applications under [Part 3 of the Town and Country Planning Act](#) which meet the [criteria](#). Specific provision is made so that the duty applies to applications meeting the [criteria](#) made directly to the Secretary of State where a local planning authority has been designated as poorly performing under [section 62A of the 1990 Act](#).

Paragraph: 029 Reference ID: 5-029-20140410

Revision date: 10 04 2014

What role can the local planning authority play in compulsory pre-application consultation with the local community for wind turbine proposals?

Local planning authorities are encouraged to work constructively with prospective applicants undertaking compulsory pre-application consultation with the local community. Under [section 61W\(7\) of the Town and Country Planning Act 1990](#), an applicant must have regard to the advice (if any) given by the local planning authority about local good practice. See more general information on the [role of the local planning authorities at the pre-application stage](#).

Paragraph: 030 Reference ID: 5-030-20140410

Revision date: 10 04 2014

What happens if a prospective applicant for a wind turbine does not comply with the requirement to undertake compulsory pre-application consultation with the local community?

If the requirements set out in [sections 61W and 61X of the Town and Country Planning Act 1990](#) and [article 4 of the Town and Country Planning \(Development Management Procedure\) \(England\) Order 2010](#) have not been met and a planning application is submitted, the local planning authority will not be able to validate it until the prospective applicant complies.

Paragraph: 031 Reference ID: 5-031-20150415

Revision date: 15 04 2015 See [previous version](#)

Published 18 June 2015

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Creating a solar park

What we're looking for

We work hard to make sure each of our sites reach their full potential and produce as much clean and renewable energy as possible. For this reason, we particularly look for suitable sites with strong levels of solar irradiation, which in England goes from Lancashire and Lincolnshire to Cornwall and Kent, and in Wales from Anglesey to the Severn Bridge.



There are three main factors which we take into account when we consider a site:

- Location
- Land characteristics
- Legal issues

In order to proceed with a site we would usually ask that the land is:

- Well screened from visibility to people in the local area
- Grade 2/3 or poorer – we don't use land that would be better suited for growing food and other crops
- Not in or next to a designated protected area such as an Area of Outstanding Natural Beauty (AONB), Site of Specific Scientific Interest (SSSI), Ancient Woodland, National Park, World Heritage Site or Scheduled Ancient Monument
- Well drained, with no flood risk
- Not crossed by footpaths or rights of way – we want to preserve and encourage access to the countryside
- South facing
- Flat or gently sloping south – to minimise visibility for people in the area whilst maximising the energy generated
- Between 30-200 acres (12-81) hectares in size
- Under single ownership

- Unobstructed by any pylons, towers or large trees which could shade the panels
- Crossed by 33kv power lines and/or close to an 11-33kv electricity substation, both of which must have the capacity to carry the power generated by the solar park.

After conducting detailed surveys to make sure a site is suitable we will work with you to progress the project. This involves making a number of agreements which will allow:

- Access to the land for the Distribution Network Operator. The operator must be legally allowed to access the land which is why landowners need to sign an Authorisation Letter.
- An option to lease the land for 26 years. This is the period during which solar panels are at their most efficient and can produce the maximum amount of clean energy. In order to protect the funding for the park, our lease agreements have fixed terms and are not ordinarily able to be negotiated. This document is signed later in the development process of the site when the landowner has become familiar with the project.
- A Heads of Terms Agreement to be put in place.
- A 12 month Exclusivity Agreement to be made between the landowner and Hive Energy.

What you can expect from us

We really believe in choosing the right project for the right place. We're dedicated to ensuring that not only do our parks generate clean and renewable energy to power thousands of homes, but that our sites are compatible with local people and the environment.

Should we take a project forward, we will work closely with you throughout the entire process, from initial environment and ecological studies to park installation and operation:

- We consult local people and stakeholders to gauge their feedback and listen to their views on the project
- We commission independent assessments to investigate whether the land quality, location and environmental factors meet strict planning requirements
- We submit a thorough planning application to the local authority
- We manage the installation of solar panels and their connection to the local grid
- We maintain the panels throughout their lifetime
- We dismantle the park at the end of its life

Contact us

If you want to find out more about how energy captured from the sun can bring a positive difference to your business, contact us now:

Hugh Brennan

Tel: 01794 324 343

Mob: 07926 523 187

Email: hugh.brennan@hiveenergy.co.uk