

# LARGE SCALE SOLAR ARRAYS



## Position Statement on Development Large Scale Solar Arrays

August, 2014

# SUMMARY OF KCC POSITION

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- 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

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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

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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

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## ***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.