

Planning for Solar Photovoltaic (PV) Development

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1 EXECUTIVE SUMMARY

- 1.1 Renewable energy development is a key issue for North Lincolnshire's communities. The area has been, and continues to be, the subject of proposals for renewable energy development, firstly for wind turbines, and more recently for solar photovoltaic (PV) arrays. These have placed pressure on the area's landscape, environment and communities. A number of these developments have already gone ahead, including a solar PV array near Scunthorpe.
- 1.2 Whilst committed to helping to tackle climate change, North Lincolnshire Council consider that this should not be to the detriment of the countryside, landscapes and those living and working in the area and that they are protected from inappropriate development. With this, and national policy in mind proposals for solar PV arrays should be concentrated on previously developed or industrial land, as well as on existing roofs, or integrated into new roofs and buildings. Where proposals involve agricultural land, it needs to be demonstrated that this is necessary, and that poorer quality land (ALC Grades 3b, 4 & 5) is to be used rather than land of a higher quality (ALC Grades 1, 2 & 3a). Impacts on the landscape and visual amenity (including cumulative impacts), biodiversity and heritage assets are also key considerations. Any proposals must ensure that they are minimised.
- 1.3 This Supplementary Planning Document (SPD), expands on existing policies CS18 from the adopted Core Strategy DPD (June 2011) and DS21 from the North Lincolnshire Local Plan (May 2003). It sets out a clear planning policy framework for developers, communities and decision makers on those issues that need to be addressed as part of any proposal for solar PV arrays in North Lincolnshire. This includes:
- Section 2 provides a brief background to the growth in solar PV across the country, whilst section 3 provides an overview of the SPDs coverage.
 - Sections 4 & 5 set out details of existing national and local planning policy relating to renewable energy development and solar PV arrays in particular. National planning policy is a material consideration in making planning decisions.
 - Section 6 sets out in detail those policy considerations that should be addressed by developers in preparing their proposal and will be used by decision makers in determining planning applications. These considerations include:
 - Communities
 - Site selection & agricultural land
 - Landscape & visual impacts including cumulative impacts
 - Impacts on heritage, biodiversity, flood risk & drainage and public rights of way
 - Managing impacts from glint and glare
 - Provision of site security
 - Managing the impacts of construction & groundworks
 - Decommissioning

2 SOLAR ENERGY DEVELOPMENT - BACKGROUND

- 2.1 Solar Photovoltaic (PV) panels are recognised in the government's "*Solar PV Strategy part 1: Roadmap to a brighter future*" as one of the priority renewable energy technologies to assist the United Kingdom to meet its renewable energy targets, help to deliver secure, cleaner energy at the lowest possible cost to the consumer and ensure security in supply.
- 2.2 Generating energy through the use of photovoltaic (PV) panels has increased significantly in recent years. As the costs of the equipment, installation and operation have reduced, solar PV has increasingly been installed in a range of contexts, from domestic and commercial properties up to large scale grid-connected facilities, sometimes known as solar farms, solar parks or solar PV arrays.

- 2.3 The Solar PV Roadmap makes it clear that new large scale solar installations need to be sensitively placed, setting out guiding principles which includes that: *‘Support for solar PV should ensure proposals are appropriately sited, give proper weight to environmental considerations such as landscape and visual impact, heritage and local amenity and **provide opportunities for local communities to influence decisions that affect them**’.*

3 WHAT THIS DOCUMENT COVERS?

- 3.1 This SPD has been prepared to set out the planning policy considerations that would be taken into account when assessing proposals for solar PV arrays in North Lincolnshire and ensures that the recent changes in government policy set out in the Planning Practice Guidance for Renewable and Low Carbon Energy are properly addressed in the North Lincolnshire context.
- 3.2 It should be read alongside the adopted existing adopted Supplementary Planning Document – *Planning for Renewable Energy Development (November 2011)*, the National Planning Policy Framework (NPPF), National Policy Statements on Energy, the Planning Practice Guidance - Renewable and Low Carbon Energy, and the ministerial letter, speeches and statements on solar PV development.
- 3.3 It **does not** cover planning advice for smaller building mounted PV systems. Many are covered under permitted development rules, unless they are on listed or protected buildings or in conservation areas – in which case it is likely they will require planning permission.
- 3.4 **In all circumstances, it is recommended that planning advice is sought from the local planning authority prior to commencing development or submitting a planning application.**

4 NATIONAL PLANNING POLICY CONTEXT

- 4.1 National planning policy for renewable and low carbon energy is established in the National Planning Policy Framework (March 2012) (NPPF) and is further amplified via the on-line Planning Practice Guidance (2014 onwards) (PPG). Both are material considerations in the drawing up planning policy and determining planning applications. Similarly ministerial statements (written and oral) together with letters from ministers are also material considerations.
- 4.2 The NPPF sets out the Government’s policy on a wide range of planning issues and provides the overarching context of local planning policy. It establishes a presumption in favour of sustainable development. With regard to renewable and local carbon energy, it encourages its use as part of supporting a transition to a low carbon future in dealing with climate change and encouraging the use of renewable resources. However, it does not specifically mention solar PV development. The relevant paragraphs are 14, 17 and 93 to 98
- 4.3 Applicants should provide an indication of the energy generating capacity of the proposed scheme to accompany the application. This is in order to help demonstrate scale and put the application into a context that can be easily understood.
- 4.4 To provide further detail and clarification on policy set out in the NPPF, in 2014 the Department for Communities & Local Government, issued its on-line Planning Policy Guidance (PPG). This guidance, which is updated as changes are made to national policy, sets out advice to local planning authorities, developers and others on those matters to be considered when drawing up planning policies and making decisions on planning applications. It also provides detailed advice relating to specific renewable energy technologies. These are hydropower, active solar technology, solar farms and wind turbines

- 4.5 Taking its lead from the NPPF, the PPG adopts a positive approach to renewable energy development. However, it is clearly stated 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 override the 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”***.
- 4.6 In relation to large scale solar farms, it notes that *“The deployment of large-scale solar farms can have a negative impact on the rural environment, particularly in undulating landscape”*. It also details particular factors that the local planning authority will need to consider when determining planning applications. These 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 2013¹ and Written Ministerial Statement – Solar energy: protecting the local and global environment – made on 25 March 2015².
 - 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;
 - 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.
- 4.7 It also highlights that 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.
- 4.8 The overarching National Policy Statements for Energy EN-1 and EN-3 are used to make decisions on Nationally Significant Infrastructure Projects. For energy, this on-shore generating stations above 50MW. They may also be a material consideration for other proposals falling below the threshold, although this should be determined on a case by case basis. North Lincolnshire Council is responsible for determining applications for onshore renewable energy schemes up to 50MW generation capacity. The Planning Inspectorate & Secretary of State will determine applications for installations with a generation capacity greater than the 50MW threshold.

1 Gregory Barker speech to the Large Scale Solar Conference – 25th April 2013 - <https://www.gov.uk/government/speeches/gregory-barker-speech-to-the-large-scale-solar-conference>

2 Solar Energy: Protecting the Local and Global Environment section of Planning Update: Written Ministerial Statement (HCWS488) by Rt Hon Eric Pickles MP – 25th March 2015 - <http://www.parliament.uk/business/publications/written-questions-answers-statements/written-statement/Commons/2015-03-25/HCWS488/>

- 4.9 In 2014, the Government published its Solar PV Roadmap. This sets out its ambition for the technology as an important part of the United Kingdom’s energy mix. In doing so, the strategy underlined the importance of focusing growth on domestic and commercial roof space and previously developed land. It is clear that new solar installations need to be sensitively placed.
- 4.10 This stance has been reinforced in a letters³, speeches⁴ and written statements⁵ issued by ministers. These recognise the importance of solar PV energy in generating power as well as the potential growth of large scale solar farms and their impacts. These outline support for the installation of solar PV panels on existing buildings and previously developed land and that where proposals do come forward, they are **“appropriately sited, give proper weight to environmental considerations such as landscape and visual impact, heritage and local amenity, and provide opportunities for local communities to influence decisions which affect them”**.
- 4.11 It should also be noted that the Government is reviewing the level of subsidies that are available to the renewables sector. This may have a longer term effect on the deployment of renewable technologies.

5 LOCAL PLANNING POLICY CONTEXT

- 5.1 When assessing a planning application for a solar PV array the council will consider the proposal alongside a range of policies and guidance. The council’s key principle is that solar PV arrays should be concentrated on previously developed or industrial land, as well as on existing roofs, or integrated into new roofs and buildings. Where proposals involve agricultural land, it needs to be demonstrated that this necessary, and that poorer quality land (ALC Grades 3b, 4 & 5) is to be used rather than land of a higher quality (ALC Grades 1, 2 & 3a). In all cases, there should be no detriment to the local environment.
- 5.2 National policy as detailed above is a material consideration. In North Lincolnshire, the planning policy framework consists of the Local Development Framework Core Strategy DPD (adopted June 2011) and the saved policies of the North Lincolnshire Local Plan (adopted May 2003). Of particular relevance are Core Strategy policy CS18 and Local Plan policy DS21. Other key policies for consideration are CS1, CS2, CS6, CS16 and CS17 (Core Strategy) and RD2, LC7, LC14, HE5, HE8, HE9 and DS1 (Local Plan). In order to address the pressing issue of renewable energy development, a Supplementary Planning Document (SPD) entitled *Planning for Renewable Energy Development*, was adopted in November 2011 and is used to assess proposals. The SPD expands on the existing policies mentioned above and should be read alongside this document.

6 POLICY CONSIDERATIONS

- 6.1 This SPD has been prepared to set out the planning policy considerations that would be taken into account when assessing proposals for solar PV arrays in North Lincolnshire and ensures that the recent changes in government policy set out in the Planning Practice Guidance - Renewable and Low Carbon Energy are properly addressed in the North Lincolnshire context.
- 6.2 All the policies in the document should be read together alongside existing Core Strategy and saved Local Plan policies, the adopted Supplementary Planning Document – *Planning for Renewable Energy Development (November 2011)*, the National Planning Policy Framework, National Policy Statements on Energy, the Planning Practice Guidance - Renewable and Low Carbon Energy, and the ministerial letter, speeches and statements on solar PV development.

3 Solar Energy – Letter from Rt. Hon. Gregory Barker MP, Minister of State for Energy & Climate Change (November 2013) - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/255051/Letter_from_Greg_Barker_to_LAs.pdf

4 as 1, above

5 as 2, above

PERMITTED DEVELOPMENT

- 6.3 The installation of 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. However, 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 or other designated areas;
 - the colour and appearance of the modules, particularly if not a standard design
- 6.4 Those considering installing active solar technology are advised to contact the council to discuss their proposals and ascertain whether or not planning permission required.

COMMUNITIES

- 6.5 Community involvement and engagement have long been cornerstones of the planning system. However, in relation to renewable energy developments in particular, there have been concerns that planning decisions have not always reflected the locally led planning system and the views of local communities. With this in mind **the Planning Practice Guidance is clear that the need for renewable energy does not automatically override environmental protections and the planning concerns of local communities.**
- 6.6 The NPPF 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 such it is important that these planning concerns are properly heard.

Community Consultation

- 6.7 The Government wants to give communities greater say over renewable and low carbon energy developments in their areas, including solar PV arrays. The use of high quality, positive engagement with communities has been seen to lead to a better quality development as well as more positive outcomes for local people. Effective dialogue about solar PV proposals between developers, the local authority, stakeholders, local communities, interest groups and statutory consultees is essential to tease out issues of concern and discuss options for mitigation and provision of any benefits to the local area. Therefore, as a matter of course the community should be engaged before a planning application is submitted.
- 6.8 The 'community' is likely to be made up of many different interest groups, which will come together for a whole variety of reasons. There will be community groups representative of towns and villages, as well as community groups brought together by shared interests in a topic or issue. Community groups will also vary in their organisation, capacity and knowledge of formal decision making processes. The council is keen to ensure that all types of group are able to make their views known effectively and good opportunities are provided for this.
- 6.9 This policy should be read in conjunction with paragraphs 6.44 to 6.47 and Policy 7 of the adopted Supplementary Planning Document, *Planning for Renewable Energy Development* (November 2011). Developers should closely examine the contents of Chapter 6 of the council's adopted Statement of Community Involvement (2010) and Interim Guidance – Planning Applications in North Lincolnshire: A Guide to Community Involvement (2015). These documents require developers to undertake community engagement/involvement on all major planning applications, and sets out the standards/requirements they should follow in doing so. Developers must provide evidence of their engagement with local communities and how they have addressed any concerns/issues raised as part of their proposals.

Policy A: Community Consultation

The National Planning Policy Framework explains that all communities have a responsibility to help increase the use and supply of green energy. **However this need for renewable and low carbon energy, including solar PV development does not automatically over-ride the environmental and planning concerns of local communities. As with other types of development, it is important that the planning concerns of North Lincolnshire's communities are properly heard in matters that directly affect them.**

Developers should positively engage with local communities at each stage when preparing their proposals for solar PV development in North Lincolnshire. Evidence of this engagement, the form of a consultation statement must be provided as part of any planning application submitted to the council.

The consultation statement must include details of the level of engagement that has taken place and how this has shaped the proposed development. The content of this statement will be taken into account when the council considers the formal application for planning permission and referred to in the officer's assessment and report to Planning Committee on major applications.

Community Benefits/Community Energy Initiatives

- 6.10 In addition to giving communities a greater say on renewable energy proposals, the Government wants to see communities that have these developments located in their areas to benefit from them. Developers should as part of the pre-application community engagement process should seek to enter into an agreement with local communities about potential community benefits. Community benefits tend to be derived from either planning obligations or community funds/investment. However, it should be noted that there is a clear distinction between the status of planning obligations and community funds/investment (see below).
- 6.11 Planning obligations are secured through legal agreements (s. 106 agreements) between the council and the developer as part of planning permissions. These agreements require the developer to provide for any matters that are necessary to make a development acceptable in planning terms. This can include contributions to the provision of services and infrastructure that benefit affected communities. Obligations must be:
- I). directly related to the development;
 - II). necessary to make the proposal acceptable in planning terms; and
 - III). fairly and reasonably related in scale and kind to the proposal.
- 6.12 The provision of community funds and other community investment typically do not meet the criteria set out above for planning obligations, and as such cannot be considered as part of the decision making process on planning applications. They are a matter for discussion between the developer and the community. These funds/investments can take a number of forms, from goodwill funding (e.g. lump sum payments; annual revenue payments) to agreed actions (e.g. benefits in kind; community equity stakeholding; local contracting). This may include:
- Establishment of a Local Environmental Trust or Community Benefits Trust, with funds being contributed annually by the developer and used for energy conservation measures.
 - Local share issue.
 - Local or community ownership of panels.
 - Investment in Green Infrastructure provision and management, especially at the landscape scale.
- 6.13 The value of community benefits will be different for each project and will need to be defined on a case by case basis. In order to establish appropriate local benefits, the developer needs to be able to identify community representatives with whom to undertake discussions and negotiations. The council will facilitate this dialogue where possible and will encourage all prospective renewable energy developers to enter into an agreement with the local community early in the process. It is for the community to decide on the appropriate benefits it wishes to pursue.

6.14 Once any agreement is reached appropriate arrangements should be put in place to safeguard the management and spending of any community benefit(s). There are a range of routes through which community benefit funds are administered, the main ones being via:

- community bodies;
- local authorities and
- independent fund administrators (specialists in community fund administration).

For some developments a mixture of all three have played a role in administering community benefits.

6.15 North Lincolnshire Council's funding team already administer community benefit funds from the SSE Keadby Windfarm project. Local groups/bodies in the North Axholme area can apply for funding if they meet the eligibility criteria. Decisions on applications are taken by a panel made up of members from each parish in the North Axholme. If it is considered appropriate, the council could be considered as a suitable administrator for community benefits.

6.16 There is no formal guidance on solar PV arrays and community benefits, although Regen SW (for the Department for Energy & Climate Change) have produced good practice guidance entitled *Community Benefits from Onshore Wind Developments: Best Practice Guidance for England* in October 2014. Much of the principles set out in this document can be applied to solar PV developments, therefore developers should give it due consideration.

Policy B: Community Benefits

Where planning permission granted for solar PV development in North Lincolnshire, local communities affected should be able to benefit directly from them. Therefore, as part of early engagement stages in developing their proposals, applicants should work with communities to identify the impacts on the area. This work should include identifying any benefits that the community wish to pursue.

Community benefits can be secured through planning obligations via a legal agreement. These obligations must be:

- I). directly related to the development;
- II). necessary to make the proposal acceptable in planning terms; and
- III). fairly and reasonably related in scale and kind to the proposal.

Where developers seek to provide community funds/investments these should be the subject of separate discussions and agreement between the developer and the community regarding the nature of the fund/investment and its management. Their provision cannot be considered as part of the planning application decision making process. The council should also be involved in these discussions, and may be considered as a suitable administrator for any community funds.

6.17 The Planning Practice Guidance also encourages a greater role for community-led renewable energy initiatives. They are seen as a way of providing positive local benefits from renewable energy development. A Community Energy Strategy (January 2014) and Update (March 2015) has produced by the Department for Energy & Climate Change (DECC). This sets out how community ownership and investment in renewable projects can be encouraged. It is possible for neighbourhood plans to identify community led renewable energy development proposals as part of their policy framework. This may include solar energy development.

SITE SELECTION & AGRICULTURAL LAND QUALITY

- 6.18 National policy seeks to make the most effective use of land. Developers of solar PV arrays should locate them on previously developed and/or contaminated and industrial land and its margins, and should avoid areas that are undeveloped. Non-agricultural land can be used, provided it is not of high environmental value. They should avoid sites of acknowledged or recognised ecological and archaeological importance. Government policy also indicates a preference for solar PV arrays being mounted on top of existing roofs, or integrated into new roofs and buildings.
- 6.19 If there is a reason to believe contamination could be an issue, National Policy also requires that developers should provide proportionate but sufficient site investigation information (and risk assessment) to determine the existence or otherwise of contamination, its nature and extent, the risks it may pose and to whom/what (the 'receptors') so that these risks can be assessed and satisfactorily reduced to an acceptable level.
- 6.20 Only a site specific investigation can establish whether there is contamination at a particular site, however a desk study and site walkover may be sufficient to identify how pollutant linkages might be broken. Unless this initial assessment clearly demonstrates that the risk from contamination can be satisfactorily reduced to an acceptable level, further site investigations and risk assessment will be needed before the application can be determined. After remediation, as a minimum land should not be capable of being determined as contaminated land under Part 2A of the Environmental Protection Act 1990.
- 6.21 In England and Wales, the Agricultural Land Classification (ALC) system classifies land into five grades (Grades 1 to 5), with Grade 3 subdivided into sub-grades 3a and 3b. The best and most versatile land is defined as Grades 1, 2 and 3a. It is the land which is most flexible, productive and efficient and can best deliver food and non-food crops for future generations. Information about the ALC system can be found on the Natural England website.
- 6.22 The NPPF (paragraph 112) states that *"local planning authorities should take into account the economic and other benefits of the best and most versatile agricultural land"* alongside other sustainability considerations. It also states that *"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"*.
- 6.23 Should any proposal for a solar PV array involve the use of agricultural land, in line with the NPPF and the ministerial statement (March 2015), it should be demonstrated that there is a need for the solar PV array to be located on agricultural land and that land being used is of poorer quality (ALC Grades 3b, 4 or 5) rather than that of a higher quality (ALC Grades 1, 2 or 3a). Any proposal for a solar farm involving the best and most versatile agricultural land (ALC Grades 1, 2 or 3a) must be justified by the most compelling evidence.
- 6.24 It should be noted that the generally available ALC maps may not distinguish whether a site within ALC grade 3 is 3a or 3b. If the site is within ALC grade 3, it must be specifically assessed to establish whether the land meets the criteria for grade 3a or 3b. This will have a bearing on the acceptability of the proposals.
- 6.25 Furthermore, proposals should allow for complimentary use of the land around the solar PV array for agricultural purposes, for example grazing, or biodiversity enhancement/habitat creation. Developers should also specify an end date for the solar PV array in order to demonstrate its temporary nature.

Policy C: Site Selection & Agricultural Land Quality

In line with national planning policy, developers must locate solar PV arrays on previously developed and/or contaminated and industrial land and its margins, and should avoid areas that are undeveloped. Non-agricultural land can be used, provided it is not of high environmental value. Sites that are of acknowledged or recognised ecological, archaeological importance or interest should be avoided. Proposals on existing roofs, or integrated into new roofs and buildings will be supported, provided that they are appropriately designed and sited.

Where proposals are located on agricultural land, it should be demonstrated that there is a need for the development to be located on agricultural land and it is located on poorer quality land (ALC Grades 3b, 4 or 5) rather than that of a higher quality (ALC Grades 1, 2 or 3a). Any proposal for a solar farm involving the best and most versatile agricultural land (ALC Grades 1, 2 or 3a) must be justified by the most compelling evidence. Where proposals are not clearly justified they will be refused.

Proposals should allow for complimentary use of the land around the solar PV array for agricultural, for example grazing, or biodiversity enhancement/habitat creation. Developers should also specify an end date for the solar PV array in order to demonstrate its temporary nature.

It should be noted that not all poorer grade land will be suitable for the provision of solar PV arrays. For example, they may often support important habitats or species, which could constrain site selection. This should be considered as part of any ecological assessments undertaken as part of the site selection process.

LANDSCAPE & VISUAL IMPACTS

- 6.26 North Lincolnshire's landscape is a fundamental part of the area's character and provides an attractive backdrop for residents, visitors and investors to live and work. The deployment of large-scale solar farms can have a negative impact on the rural environment, particularly in undulating landscapes.
- 6.27 The approach to landscape and renewable energy development is set out in paragraphs 6.19 to 6.27 and policy 2 of the adopted Supplementary Planning Document – *Planning for Renewable Energy Development (November 2011)*. Developers are required to consult the council's approved Supplementary Planning Guidance, North Lincolnshire Landscape Character Assessment & Guidelines (1999) and North Lincolnshire Countryside Design Summary (1999), as well as the current policies on landscape and conservation set out in the Adopted Core Strategy and the North Lincolnshire Local Plan
- 6.28 Based on the above, developers of solar PV arrays must give due consideration to landscape impacts at the earliest possible stage in formulating their proposals. Proposals must complement the character of the local landscape, particularly its scale and pattern.
- 6.29 Adverse visual impacts should be avoided. Therefore, locations where they will have prominent impact on the landscape and visual such as hillsides should be avoided. To mitigate any adverse impacts, visual screening should be provided either by the making use of existing landscape features or by planting hedges or vegetation, preferably incorporating species rich mix of native trees and shrubs.
- 6.30 The Planning Practice Guidance states that in identifying impacts on landscape, considerations could include:
- direct and indirect effects,
 - cumulative impacts and
 - temporary and permanent impacts.
- 6.31 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.

- 6.32 Similarly the Guidance states that 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.
- 6.33 All planning applications for solar farms must be accompanied by a Landscape & Visual Impact Assessment (LVIA). Developers should discuss the LVIA with the council at an early stage in formulating their proposals. The LVIA will be required to include an assessment of the visual impact on surrounding communities/properties. It should also look at detail of the potential for solar PV panels, frames and supports to have a combined reflective quality, through providing a glint and glare statement. A full assessment of glint and glare will need to be completed (see paragraphs 6.46 to 6.49 and policy H).
- 6.34 The Planning Practice Guidance provides some guidance for developers in relation to LVIA's for wind energy development. However, it states that the same guidance can be applied to assessing cumulative impacts of large scale solar photovoltaic farms. The Guidance also recommends that cumulative landscape impacts and cumulative visual impacts are assessed separately. It also sets out what type of information should be put together to inform landscape and visual impact assessment. Developers of solar farms, should pay close attention to this guidance when preparing planning applications (see Figure 1, below).

Figure 1: Extract for Planning Practice Guidance - Information to Inform Landscape and Visual Impact Assessments

It should be noted that this applies to windfarms, however the Planning Practice Guidance considers that the approach to assessing cumulative landscape and visual impact of large scale solar farms is likely to be the same. 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.

- 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 (i.e. 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 (i.e. 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 (e.g. 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

Policy D: Landscape & Visual Impact

Developers must consider the landscape impacts of their proposal for solar PV arrays at the earliest stage in the design process. They should examine the character and quality of the landscape, the extent of the physical change involved, and the ability of the landscape to accommodate the change.

All proposals will be rigorously assessed in relation to their impacts on the areas' landscapes. Proposals should be sensitively located in order to minimise impacts landscape and visual amenity as well as surrounding communities. If adverse impacts are identified, these should be avoided or mitigated. Should this prove impossible the proposal will be refused.

A Landscape and Visual Impact Assessment (LVIA), which must be agreed with the council, should be prepared and submitted alongside any planning application. Developers should also consult the council's approved Supplementary Planning Guidance on Landscape Character Assessment and Guidelines, and Countryside Design Summary, alongside relevant landscape and conservation policies in the adopted Core Strategy DPD (June 2011) and the adopted North Lincolnshire Local Plan (Saved Policies) (May 2003)

CUMULATIVE IMPACTS

- 6.35 The issue of cumulative impact of renewable energy development is a key concern in North Lincolnshire. Previously this has centred on the cumulative impact of wind energy development. With the increased number of proposals for solar PV arrays, there is a clear need to address their cumulative impact on the area. Cumulative impacts can relate to landscape and visual amenity, bird populations and other wildlife, the historic environment, the local economy or any other matter.
- 6.36 This must be considered when developers bring forward proposals and when the council are making decisions on planning applications. The adopted Supplementary Planning Document, *Planning for Renewable Energy Development* (November 2011) recognises this in paragraphs 6.58 to 6.62 as well as Policy 10.
- 6.37 In relation to solar PV arrays, the Planning Practice Guidance states that the approach to assessing the cumulative landscape and visual impact of large scale solar farms is likely to be the same as assessing the impact of wind turbines.
- 6.38 North Lincolnshire Council maintains a record of all EIA screening requests received in respect of proposals for large scale solar PV arrays and a record of all planning decisions. Applicants should 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.
- 6.39 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.

Policy E: Assessing Cumulative Impacts

Cumulative impact of renewable energy development is a key planning issue for North Lincolnshire. Developers must ensure that a full assessment of cumulative impacts (in particular cumulative landscape impacts and cumulative visual impacts) is undertaken when putting together their proposals and submitting planning applications.

Accordingly, developers should refer to the Planning Practice Guidance - Renewable and Low Carbon Energy when assessing the cumulative landscape and visual impacts of their proposals in addition to the requirements of policy 10 of the adopted Supplementary Planning Document – Planning for Renewable Energy Development (November 2011). Where cumulative impacts are considered to be unacceptable, proposals will be refused.

HERITAGE

- 6.40 The protection of heritage assets is a fundamental part of national planning policy. This is reflected in the legal duties set out under sections 66⁶ and 72⁷ of the Town & Country Planning (Listed Buildings & Conservation Areas) Act 1990. These are specific to the planning system. The topic is already covered under paragraphs 6.38 and 6.39 as well as policy 4 of the adopted SPD – *Planning for Renewable Energy Development (November 2011)*. However, it is considered important to provide some additional policy guidance on the subject.
- 6.41 North Lincolnshire has a wide range of designated and non-designated heritage and cultural assets that form an important part of its character and setting. These include listed buildings, conservation areas, Scheduled Monuments, Registered Parks and Gardens, Historic Landscapes, Archaeological Sites and Monuments and other non-designated assets. Solar PV arrays and associated infrastructure can have above and below ground impact on these assets through direct and indirect effects.
- 6.42 Developers must address how their proposals impact on the historic environment, heritage and cultural assets and their settings. Particular attention should be given to the cumulative impacts of solar farms on these important assets.
- 6.43 Care must be given to ensure that heritage assets are conserved in a manner that is appropriate to their significance. It should be noted that the significance of a heritage asset is not just based on its physical presence, but also on its setting. Therefore, careful consideration should be given to the impact of solar farms on these assets, as depending on their scale, design and prominence within the setting of a heritage asset, arrays may cause substantial harm to the significance of the asset.
- 6.44 Developers must provide a heritage assessment outlining the impacts of their proposals on heritage assets and their settings as part of their planning applications. The scope and content of the assessment must be agreed by the council's Historic Environment Record at each stage. It must include all or some of the following stages:
- Desk based assessment
 - Historic landscape character assessment
 - Archaeological field evaluation
 - Assessment of the significance of heritage assets and the contribution made by their settings
 - Assessment of the impact of the proposals on the heritage assets and their settings (photomontages to demonstrate visual impacts, including cumulative impacts, may be required)
 - Mitigation proposals

6 Section 66 - requires special regard to the desirability of preserving the listed building or its setting or any features of special architectural or historic interest which it possesses

7 Section 72 - requires that special attention is paid to the desirability of preserving or enhancing the character or appearance of that area as a duty in respect of conservation areas in the exercise of planning functions

- 6.45 The completion of all stages of assessment prior to the submission of a planning application is required to inform the planning decision in line with national and local planning policy; it is not appropriate to undertake the assessments following the determination of a planning application. The implementation of mitigation proposals may be conditional on the grant of a planning permission.

Policy F: Heritage

As highlighted in paragraphs 6.38 and 6.39 as well as policy 4 of the adopted Supplementary Planning Document – Planning for Renewable Energy Development (November 2011) and the Planning Practice Guidance, developers must consider the impact of their proposals on heritage assets and the historic environment. This includes direct and indirect impacts on designated and non-designated assets and their settings. Particular attention should be paid to the cumulative impacts on heritage assets of solar energy developments both above and below ground.

Proposals for solar energy development within and around the Isle of Axholme Area of Special Historic Landscape Interest and other historic landscapes such as the Ancholme Vale will be subject to close scrutiny by the Council.

Developers should prepare and submit a heritage assessment with any applications outlining the impact of development on any heritage assets and any appropriate mitigation proposals. Before commencing work on this assessment, developers must contact the Council's Historic Environment Record to agree its scope and content. This is required for each stage of the assessment. Where any adverse impacts cannot be mitigated or avoided, proposals will be refused.

BIODIVERSITY

- 6.46 North Lincolnshire's predominately rural nature has resulted in landscapes which are rich in biological and geological diversity. In terms of nature conservation value, the area is home to a number of sites of international and national importance alongside those of more local importance. These include one Ramsar site, two Special Areas of Conservation and Two Special Protection Areas on the Humber Estuary, River Trent, Thorne Moor and Thorne and Hatfield Moors, 29 Sites of Special Scientific Interest, 10 Local Nature Reserves (LNRs), approximately 200 Local Wildlife Sites (Sites of Importance to Nature Conservation – SINC's) and 22 Local Geological Sites (Regionally Important Geological Site) In preparing proposals for solar farms, developers should consider the impacts of all aspects of the proposed development including the solar farm, transport routes, other infrastructure and proposed grid connections on biodiversity, habitats and species.
- 6.47 National policy states that the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, geological conservation interests and soils, as well as recognising the wider benefits of ecosystem services. Also it should minimise the impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity. Further it encourages the incorporation of biodiversity in and around developments.
- 6.48 The issue of biodiversity is highlighted in paragraphs 6.9 to 6.18 as well as policy 1 of the adopted Supplementary Planning Document – *Planning for Renewable Energy Development (November 2011)*. This guidance requires developers to assess the impacts that their proposal may have on biodiversity and species and to identify mitigation measures to address them. However, it is considered appropriate to provide further policy guidance regarding the ecological survey and data requirements that the council expect developers to provide as part of planning applications (see Annex 1). In undertaking any surveys and putting together applications, developers should contact the council's Ecologist to discuss exact survey and data requirements. Developers should also refer to Natural England's advice set out in their Technical Information Note (TIN) 101: Solar Parks: Maximising Environmental Benefits.

Policy G: Biodiversity

As set out in paragraphs 6.9 to 6.18 as well as Policy 1 of the adopted Supplementary Planning Document – Planning for Renewable Energy Development (November 2011), developers are required to assess the impact of all aspects of the proposed development including the solar farm, transport routes, other infrastructure and proposed grid connections on area’s designated biodiversity sites, habitats and species. Where development does impact on these assets, developers should identify measures to avoid or mitigate harm to them and secure their conservation and enhancement. Ecological and biodiversity surveys should be provided as part of planning applications (see Annex 1). Biodiversity enhancement proposals should be submitted with all solar farm applications. Where significant harm cannot be mitigated or avoided, or compensated for proposals will be refused.

Proposals located in internationally, nationally or locally designated sites for nature conservation will not be permitted.

Where habitat creation is proposed as mitigation, compensation or planning gain, the underlying survey information should be adequate for regulatory authorities to assess whether the proposals are feasible. In addition to information on species and habitats, it will also be necessary to measure physical conditions including (but not exclusively) soil conditions and hydrology. Where applicable, the applicant should follow the standards set out in Natural England Technical Information Notes.

Any enhancements proposed as planning gain must be additional to the enhancements already proposed under agri-environment schemes.

In undertaking ecological/biodiversity surveys and assessments, developers should contact the council’s Ecologist to discuss the council’s requirements.

GLINT & GLARE

- 6.49 Glint is the direct reflection of sunlight, whereas glare is diffuse reflection (or reflection of the bright sky around the sun). Any metallic or shiny surface has scope to cause reflection of sunlight, which may in turn have a negative impact on neighbouring uses, aircraft etc. In line with the Planning Practice Guidance, due consideration must be given to the impact of glint and glare from proposals for solar farms.
- 6.50 The solar cells used in solar farms are designed to absorb as much light as possible in order to generate electricity, not reflect it. As a result they are much less reflective than other sources of glint or glare (such as glass windows that may be found in agricultural buildings such as greenhouses etc.).
- 6.51 There may be instances, where due to aspects such as the proposed site location or the orientation of the solar farms infrastructure, including PV panels, that there is scope for glint or glare to be a problematic impact of the solar farm.
- 6.52 The potential for PV panels, their frames and supports alongside other materials used for the construction of the solar farm, to have a reflective quality that results in glint and glare, should be assessed. This should have particular reference to:
- The effect on the landscape of glint and glare and on neighbouring uses and aircraft safety should be fully considered. Developers are advised to examine the Civil Aviation Authority’s (CAA) interim guidance on Solar Photovoltaic Systems⁸.
 - The extent to which there may be additional impacts if solar arrays follow or track the daily movement of the sun.

8 Interim CAA Guidance – Solar Photovoltaic Systems (December 2010) - https://www.caa.co.uk/docs/697/srg_asd_solarphotovoltaicsystguidance.pdf

Policy H: Glint & Glare

An assessment of the potential for PV panels, frames and supporting alongside other materials used for the construction of a solar should be provided as part of any planning application. This should assess the effect on landscape of glint and glare and give full consideration to effects on neighbouring uses and aircraft safety. Developers should contact the relevant aviation safeguarding bodies (the Ministry of Defence, National Air Traffic Services, airports and aerodromes). Where proposals are adjacent to the rail network and strategic road network, Network Rail and Highways England should be contacted.

It should be demonstrated that close liaison has taken place with these bodies and that any effects from glint and glare on aircraft safety and road and rail networks can be appropriately mitigated to their satisfaction. This assessment should also consider the extent to there may be additional impacts if solar arrays follow or track the daily movement of the sun. If it is not possible to mitigate against impacts of glint and glare, proposals will be refused.

FLOOD RISK & DRAINAGE

- 6.53 Due to the size of solar PV arrays, planning applications should be accompanied by a Flood Risk Assessment. This will need to consider the impact of drainage. Solar panels will drain to the existing ground.
- 6.54 In particular, surface water treatment needs to be carefully considered, given the development of infrastructure associated with sites, including inverter housings, access tracks and hard standing. This may affect surface water run-off rates and volumes. Any concentration of run-off could lead to localised flood risk, especially where underlying soils are not naturally free draining. To overcome this, sustainable drainage techniques (SuDS) should be adopted, such as small swales and infiltration trenches.
- 6.55 Where sites are of one hectare or more and are in Flood Zone 1 and in the case of all sites located within Flood Zone 2 or 3 (classified as having a medium or high probability of flooding), then the flood risk assessment should also include the following:
- Details of how surface water run-off will be stored and disposed of in a sustainable way. The objective will be to prevent any increase in surface water flow from leaving the site or causing localised undersigned flooding on site. Calculations and a drainage layout proposal will be required.
 - Provision for compensatory flood storage should be provided for any loss of fluvial floodplain volume.
 - Details of the measures to be taken to ensure the safety of a solar PV site in the event of flooding. These will include raising electrical equipment off the ground and raising floor levels of any buildings and any electrical controls within them above the flood level. Other infrastructure should be made resilient to flooding.
- 6.56 The increased surface water flow to be contained and the flood level to be protected against should be established by reference to the effects of a 1 in 100 year plus climate change storm.
- 6.57 Given the temporary nature of these developments, solar PV sites should be configured or selected to avoid the need to impact on existing drainage systems and watercourses. Access should avoid the need to culvert existing watercourses. Where culverting is required, it should be demonstrated that no reasonable alternatives exist, and where possible this should only be temporary for the construction period.
- 6.58 Developers should check whether their proposals affect the water supply network or public sewers. They should contact the relevant water company. In the case of North Lincolnshire, these are Anglian Water, Severn Trent or Yorkshire Water.

Policy I: Flood Risk & Drainage

Proposals for solar energy development should consider the impact on flood risk and drainage at the earliest possible stage. As such a Flood Risk Assessment should be submitted as part of any planning application. This assessment should in particular address how surface water run-off will be managed and include details of any compensatory storage, where required. The safety of the development in event of flooding should also be addressed.

Sites should be configured or selected to avoid the need to impact on existing drainage systems and watercourses. Access should avoid the need to culvert existing watercourses. If this is required, developers must demonstrate that no reasonable alternatives exist. Such works should be temporary for the construction period.

Where proposals do not appropriately address flood risk and drainage issues they will be refused.

If their proposals affect the water supply or public sewer networks, developers should contact the relevant water companies.

PUBLIC RIGHTS OF WAY

- 6.59 North Lincolnshire boasts approximately 320 miles of Public Rights of Way (PROW) that give walkers, horse riders, cyclists and off-road motorists access into the local countryside. Public footpaths, bridleways and restricted byways are part of the overall highway network. The council maintains and protects the use of these footpaths and bridleways.
- 6.60 Any impacts on the PROW network must be considered in preparing proposals and determining planning applications for solar PV arrays. Developers should contact the council's PROW officers to ascertain whether there are any PROWs that cross, or run adjacent to, the proposed site. This will allow them to understand any potential implications for accessibility and enjoyment by a range of legal users. PROWs are recorded on the Definitive Map. This is the legal record of all PROWs in North Lincolnshire and can be viewed on the council's website⁹.
- 6.61 The route of any PROW has legal protection and the impact of a proposal on a route is a material consideration when a planning application is being decided. If the proposal anticipates any change to a public right of way, developers will need to take account of this when submitting a planning application. Where possible PROWs crossing a proposed site should not be diverted as it should be possible to configure the solar PV arrays to allow it the PROW to continue through the site. Any diversion should be fully justified and will be subject to relevant procedures and legislation governing this matter.
- 6.62 Paragraphs 6.80 & 6.81 and Policy 13 of the adopted Supplementary Planning Document – *Planning for Renewable Energy Development (November 2011)* also cover the issue of PROWs.

Policy J: Public Rights of Way

Developers should ascertain whether a proposed site is crossed by or is adjacent to existing Public Rights of Way. The impact of their proposals on PROWs should be addressed as part of a planning application and appropriate mitigation measures identified. Proposals should be configured to allow for continued use of the PROW through the site. Diversions should be justified and will be subject to relevant procedures and legislation.

Contact should be made with the council's PROW officers to ascertain whether or not the proposed solar PV array would affect any PROWs crossing or running adjacent to the proposed site.

9 Definitive Map- <http://www.northlincs.gov.uk/planning-and-environment/natural-environment/countryside-access/definitive-map/>

SITE SECURITY

- 6.63 The need to consider the need for and impact of security measures must be taken into account when preparing proposals for solar farms and in planning decisions. The level of security required for solar farms depends to a large extent on their location and the scale/extent of the site. Security measures, depending on their nature have the potential to have an impact on the landscape and visual amenity. Therefore developers should ensure that any security measures, such as fencing, lighting installations or CCTV, used as part of their proposals must minimise landscape and visual impacts.
- 6.64 The following guidance should be considered when designing lighting and security measures:
- Minimising the use and height of security fencing.
 - Wherever possible using existing features, such as hedges or landscaping, to screen security fencing.
 - Minimising the use of security lighting. Wherever possible use passive infra-red (PIR) technology and design lighting in a manner which minimises glare, light pollution and impacts on biodiversity, in particular bats
 - Ensuring appropriate measures to enable continued access by larger mammals, such as badgers and foxes.
 - In some instances specialist deer fencing may be necessary. Such deer fencing can be much less intrusive than other forms of fencing and should be considered where possible.
 - Where pole mounted CCTV facilities are required, their location should be carefully considered to minimise visual and landscape impact. In exposed landscapes such structures should be avoided.
 - Public Rights of Way should not be obstructed.
- 6.65 All planning applications should contain full details and specifications of all security and lighting installations in order to allow an accurate landscape and visual assessment of the proposal to be made.

Policy K: Site Security

In accordance with the Planning Practice Guidance the need for and impact of security measures required to protect the solar PV array must be assessed. The measures proposed must minimise any landscape and visual impacts. Developers should consider the guidance set out in paragraph 6.64 (above) in preparing their proposals, and provide details of all security and lighting installations as part of planning applications. This will allow a full and accurate assessment to be made of the landscape and visual impact of proposals.

If adverse impacts of any of the proposed site security measures are identified, these should be avoided or mitigated. Should this prove impossible the proposal will be refused.

CONSTRUCTION

- 6.66 The construction phase of a solar farm is where most impacts and disruption are likely to occur. Compared with the timescales for deploying other forms of renewable energy, the construction period for a solar is relatively short. Nonetheless, the construction phase needs to be managed appropriately. Therefore, developers should provide details of their approach to the construction as part of a planning application. This information could include:
- Details of the size and location of temporary construction compounds, which should be located in order to minimise environmental and amenity impact
 - Details of the methodology to be used in relation to soil stripping, storage and replacement. This should seek to minimise soil damage and provide the best conditions for site restorations.

- 6.67 Any hedges should as far as possible be retained. If any hedges/scrub are to be removed, further ecological surveys will need to be carried out. It is also expected that replacement planting of a higher quality is carried out (ideally elsewhere on site).
- 6.68 Highways impacts will vary on a site by site basis. At the earliest opportunity developers should discuss implications on the highways network, particularly during construction, with the Highway Authority (North Lincolnshire Council's highways service) and/or the Highways England (the manager of the motorway and trunk road network) to discuss their proposals to identify the suitability of the network to accommodate the relevant traffic and identify appropriate routes. In most cases a full Transport Statement, accompanied by Construction Phase Traffic Plan will be required.
- 6.69 An assessment of the full route to be used, including the site access, needs to be carried out in order to ensure that the road network can accommodate the loads and, where necessary, identify any measures that might be required. The full route should include consideration of the motorway and trunk road network outside the North Lincolnshire Council area in liaison with the Highways England and other neighbouring highway authorities.

Policy L: Construction

As part of drawing up proposals and submitting planning applications, developers of solar farms should give due consideration to the impact of construction on the site and the surrounding area. Developers should submit details of how they will manage the construction phase to council with any planning applications. This should include details of any construction compounds and soil stripping, storage and restoration. Any environmental and amenity impacts should be minimal. Where any adverse impacts are identified, they should be avoided or mitigated. If this is not possible the proposal will be refused.

In relation to highway matters, developers should liaise with the Highway Authority and (where relevant) Highways England at the earliest opportunity to discuss the impact of their proposals on the highway network, particularly during the construction phase. In most cases a full Transport Statement, accompanied by Construction Phase Traffic Plan will be required.

GROUND WORKS

- 6.70 Site levelling and groundworks should be kept to a minimum. Any site levelling works necessary to facilitate the development of a solar PV array should be discussed at the pre-application stage, and detailed within any planning application. Contractors should consider the noise impact at an early stage and implement measures to minimise instances of significant residential disturbance. Actions to be implemented will include avoidance of weekend working, provision of reliable information on the commencement of noisy development and avoidance of early morning disturbance.
- 6.71 Solar PV installations 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 mass concrete should be avoided. Where possible Solar PV arrays should be installed using 'pile' driven or screw foundations, or pre-moulded concrete blocks (shoes), and capable of easy removal. The use of shoes may be required for archaeological sensitive areas. Where 'pile' driven foundations are proposed applicants should consider impacts during construction on nearby noise sensitive properties.

Policy M: Groundworks

Where site levelling and groundworks are required, these should be kept to a minimum and not have an adverse impact on the landscape or disturb local communities. Developers should discuss any works and mitigation measures with the council and provide details as part of a planning application. If adverse impacts are identified, these should be avoided or mitigated. Should this prove impossible the proposal will be refused.

Any solar PV arrays installed on agricultural land must be reversible. Sites should be capable of being easily restored to agricultural use. Intrusive development such as trenching and foundations must be minimised and the large scale use of concrete avoided. Foundations should be appropriate to the location and capable of being easily removed (see section on Decommissioning). Details of how the site will be restored must be submitted with any planning application.

DECOMMISSIONING

- 6.72 By their nature, solar farms are temporary structures. This makes them easily and economically removable at the end of their working lives. Based on this all planning applications should clearly set out the length of time that the development will be in place. Where planning permissions are granted they will have a condition imposing a time limit attached. Developers should outline plans for decommissioning at the planning application stage. Issues to be addressed include restorative measures, the removal of above ground structures and equipment, landscaping and/or reseeded tracks. On occasion it may be appropriate to allow tracks to remain, e.g. as part of a walking route after decommissioning.
- 6.73 A decommissioning plan may be covered in conditions and/or a legal agreement accompanying planning permission and will be triggered by the expiry of the consent or in the event of the project ceasing to operate for a specified period. Developers should demonstrate that funding to implement decommissioning will be available when required. It should also be noted that any restoration and decommissioning conditions will continue to apply if ownership of the solar farm changes at any point during their lifetime.
- 6.74 It is likely that the duration of the planning permission will be linked to the expected operational life of the solar farm. However during this period, proposals may be forthcoming to extend the life of the project by re-equipping or to replace the solar panels with new ones. Such cases will have to be determined on their individual merit and in the light of the then prevailing policy and other relevant considerations.

Policy N: Decommissioning of Solar Farms

Where solar farms reach the end of their operating life or are no longer in use, they should be removed, and the site restored to an appropriate use for the location. All planning applications should clearly set out the length of time that the development will be in place. Where planning permissions are granted they will have a condition imposing a time limit attached.

A decommissioning and restoration plan should be submitted as part of any planning application. This will be enforced through use of a planning condition applied to solar farms where they receive planning permission. Any future use of a site should be considered against all relevant planning policy in place at the time. Responsibility for decommissioning will rest with the site operator and the landowner.

7 REFERENCES

The following have been used to develop this document and should be given due consideration by developers in preparing proposals for solar PV arrays and in submitting planning applications. They will also be used by the council in making decisions on planning applications.

National Planning Policy Framework (DCLG, March 2012) – paragraphs 17, 93, 94, 95, 96, 97 & 98 - <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

Planning Practice Guidance – Renewable & Low Carbon Energy (DCLG, 2014 – updated June 2015) - <http://planningguidance.planningportal.gov.uk/blog/guidance/renewable-and-low-carbon-energy/>

Gregory Barker speech to the Large Scale Solar Conference – 25th April 2013 - <https://www.gov.uk/government/speeches/gregory-barker-speech-to-the-large-scale-solar-conference>

Solar Energy – Letter from Rt. Hon. Gregory Barker MP, Minister of State for Energy & Climate Change (November 2013) -

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/255051/Letter_from_Greg_Barker_to_LAs.pdf

UK Solar PV Strategy – Part 1: Roadmap to a Brighter Future, Department for Energy & Climate (October 2013) - <https://www.gov.uk/government/publications/uk-solar-pv-strategy-part-1-roadmap-to-a-brighter-future>

Solar Energy: Protecting the Local and Global Environment section of Planning Update: Written Ministerial Statement (HCWS488) by Rt Hon Eric Pickles MP – 25th March 2015 - <http://www.parliament.uk/business/publications/written-questions-answers-statements/written-statement/Commons/2015-03-25/HCWS488/>

Community Energy Strategy, Department for Energy & Climate Change (January 2014) - <https://www.gov.uk/government/publications/community-energy-strategy>

Community Energy Strategy – Update, Department of Energy & Climate Change (March 2015) - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/414446/CESU_FINAL.pdf

Interim CAA Guidance – Solar Photovoltaic Systems (December 2010) - https://www.caa.co.uk/docs/697/srg_asd_solarphotovoltaicsystguidance.pdf

Technical Information Note (TIN) 010 - Solar Parks: Maximising Environmental Benefits, Natural England (October 2011) – <http://webarchive.nationalarchives.gov.uk/20150909000001/http://publications.naturalengland.org.uk/publication/32027>

North Lincolnshire Local Development Framework – Core Strategy DPD (June 2011) - <http://www.northlincs.gov.uk/planning-and-environment/planning-policy/local-dev-framework/core-strategy/>

Planning for Renewable Energy Development – Supplementary Planning Document (November 2011) - <http://www.northlincs.gov.uk/EasySiteWeb/GatewayLink.aspx?allid=5920>

North Lincolnshire Local Plan – Saved Policies (May 2003) - <http://www.northlincs.gov.uk/planning-and-environment/planning-policy/local-plan/north-lincolnshire-local-plan/>

8 ANNEX 1: ECOLOGICAL SURVEY & DATA REQUIREMENTS

Habitat Survey - Extended Phase 1 survey with target notes should be carried out and submitted before the application is determined. The results of the Phase 1 survey may reveal the need for more detailed protected or priority species survey. Phase 1 survey should ideally be carried out between May and September.

Given the generally arable nature of land in North Lincolnshire, a standard Phase 1 approach may result in much of the area not being coloured-in or simply being coded with an "A", giving little useful information. It would be useful to describe the arable land in more detail, in order to help interpret the distribution of Humber Estuary SPA-listed bird species using the land for roosting, feeding and loafing. Features such as surface water, fallow, stubbles ploughed land and crop types/stage of growth may need to be described.

Where priority habitats are present within the survey zone, the land should be surveyed using Local Wildlife Site Survey methods as described in "Local Wildlife Site Guidelines for Greater Lincolnshire 3rd edition" (Greater Lincolnshire Nature Partnership 2013).

Designated sites - Statutory and non-statutory designated sites within and near the application site should be described, along with any potential impacts on the features for which they are designated. In terms of the Habitats Regulations, this would include the Humber Estuary SPA, Ramsar and SAC, Thorne and Hatfield Moors Special Protection Area (SPA) and Thorne Moor Special Area of Conservation (SAC) in accordance with the legislation and with the guidance in the National Planning Policy Framework.

Circular 06/2005 - Circular 06/2005 states that "It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision."

Breeding Birds - Surveys should be carried out by a competent person at the appropriate time of year in accordance with the Common Birds Census Methods. In terms of territory mapping, attention should focus on Schedule 1, Priority and red/amber listed species of conservation concern. A number of evening/crepuscular visits will be necessary to assess to use of the area by barn owls and other species for breeding and foraging.

Passage and Wintering Birds - Surveys for usage of land by passage and wintering birds should be carried out. Survey effort and frequency will be greatest where land has the potential to support waterbirds associated with the Humber Estuary SPA and Ramsar site. Data searches should include WeBS data in addition to data from the Lincolnshire Environmental Records Centre and the Humber Environmental Data Centre.

Birds: Nocturnal Observations - Nocturnal surveys of bird movements should be carried out. Due to the proximity of the Humber Estuary SPA and Ramsar Site to much of North Lincolnshire, it is necessary for survey work to cover breeding, winter, spring passage and autumn passage periods. SPA/Ramsar birds including Golden Plover and Lapwing are known to feed at night and may move between feeding grounds and the Humber Estuary after dark or before first light.

Within six kilometres of the Thorne and Hatfield Moors Special Protection Area (SPA) nocturnal survey work during the summer months will be required, to build an accurate picture of nightjar foraging behaviour.

Bats - Bat surveys and data searches should be carried out in accordance with Hundt (2012) "Bat Surveys: Good Practice Guidelines: 2nd Edition, Bat Conservation Trust." or any later published edition.

Badgers - Construction of solar farms, haul roads or other infrastructure within 30 metres of a badger sett could lead to disturbance of this species, such that a licence may be required. Badger surveys should be carried out by a competent person at the appropriate time of year. They should include searches for field signs such as setts (main setts, annexe setts, subsidiary setts and outliers), foraging trails, snuffle holes, latrines, guard hairs, footprints etc. Where badger field signs are discovered, it may be necessary for bait marking studies to be carried out, to reveal the foraging behaviour of each social group. This will enable any potential impacts on badgers to be assessed in accordance with paras 123-124 of Circular 06/05.

Water voles - Construction of solar farms, haul roads or other infrastructure within 10 metres of wet ditches, ponds or reedbeds could lead to damage to water vole habitat. Surveys should be carried out by a competent person at the appropriate time of year in accordance with Strachan, R. (1998) Water Vole Conservation Handbook. Surveys should cover all wet ditches and water bodies. If any ditches or water bodies are excluded from the search, the criteria used for this selection should be justified in any submitted report. The following link gives the standing advice relating to water voles: http://www.naturalengland.org.uk/Images/Water%20Voles%20feb11_tcm6-21714.pdf

Otters - Construction of solar farms, haul roads or other infrastructure near rivers or wetlands could lead to disturbance of otters, their resting places or habitats. Surveys should be carried out in accordance with Natural England Standing Advice.

Great crested newts - Great crested newts are European Protected Species (EPS), given very strong protection in law (see Annex). Construction of solar farms, haul roads or other infrastructure within 250 metres of a newt breeding pond could lead to disturbance of this species, such that a licence may be required. For great crested newts, surveys should be carried out by a licensed and experienced surveyor using standard methods at the appropriate time of year (April-June), in accordance with English Nature (2001) Great Crested Newt Mitigation Guidelines. The results should be made available before the application can be determined. The following link gives the standing advice relating to great crested newts: http://www.naturalengland.org.uk/Images/Newt%20April11_tcm6-21705.pdf

Other amphibians - Surveys should be carried out by a competent person at the appropriate time of year in accordance with Gent, T. and Gibson, S. (2003) Herpetofauna Workers' Manual (JNCC). The area of search should be described and justified in the submitted report.

Reptiles - Surveys should be carried out by a competent person at the appropriate time of year in accordance with Gent, T. and Gibson, S. (2003) Herpetofauna Workers' Manual (JNCC). The area of search should be described and justified in the submitted report.

Vascular plants - Any notable records of species or communities should be highlighted in the Phase 1 survey. More detailed survey should be carried out at the appropriate time of year where interest is identified in the Phase 1 survey. This should use either Lincolnshire Local Wildlife Site methods or National Vegetation Classification methods to be agreed with the North Lincolnshire Council Environment Team.

Any invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) need to be clearly recorded, as without mitigation, works on site could lead to such species being spread in the wider countryside.

Invertebrates - Phase 1 survey may identify the need to survey for various invertebrate taxa. Such surveys should be carried out by a competent person at the appropriate time of year. Taxa surveyed, methods used and the area of search should be described and justified in the submitted reports.

Other species - It will also be necessary to survey for Species of principle importance as listed in accordance with Section 41 of the Natural Environment and Rural Communities Act (2006). These species are broadly equivalent to Priority or UKBAP species. These species, and any other protected species not listed above, must be addressed if they are revealed through surveys or if there is a reasonable likelihood of them being affected by the proposal.

Desktop data - In addition to survey data, it will be necessary for applicants to submit desktop data for the habitats and species described above. It will not be acceptable to present information gleaned from the NBN Gateway alone. Species records should also be sought from:

- Lincolnshire Environmental Records Centre
- Humber Environmental Data Centre
- Lincolnshire County Recorders

Natural England standing advice states that, "Surveys should not be over 2-3 years old for medium to high impact schemes or multi-plot or phased developments."

