Fenland District Council

Resource Use, Renewable Energy and Allowable Solutions: A Supplementary Planning Document in Support of Core Strategy Policy CS14 (Part A)

Please note that this is a draft document approved by Cabinet on the 21 November 2013 for consultation. It has not been formally adopted by the Council. The consultation will take place in the New Year.

Fenland District Council

Resource Use, Renewable Energy and Allowable Solutions: A Supplementary Planning Document in Support of Core Strategy Policy CS14 Part (A)

('Resource Use SPD')

Consultation Draft
January 2014

Foreword

Policy CS14 of the Fenland Core Strategy focuses on resource use, renewable energy and allowable solutions.

The purpose of this Resource Use, Renewable Energy and Allowable Solutions Supplementary Planning Document ('Resource Use SPD' in short) is to set out in detail Fenland District Council's policies in respect of these issues, in order to suitably expand on Policy CS14 and thus ultimately achieve more sustainable development within the Fenland area, which in turn will help drive the Fenland economy, minimise expenditure on fuel and generate income for residents and businesses.

In providing additional detail in relation to Policy CS14, it is intended that this SPD will not only provide additional guidance to planning officers and councillors assessing relevant planning applications, but that it will also provide prospective applicants with the necessary information that they should consider when submitting a planning application for such developments.

This 'January 2014' version of the SPD is a consultation draft, and we welcome your views on it. We intend to prepare and adopt a final version in Spring 2014.

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Part 1: Introduction and Context

1.1 The Purpose of this SPD

1.1.1. Local Planning Authorities can prepare Supplementary Planning Documents (SPDs) to expand on the policies contained within their adopted Local Plan. SPDs can be generic, or can focus on a specific topic or locality.

1.1.2. The Resource Use, Renewable Energy and Allowable Solutions Supplementary Planning Document ('Resource Use SPD' in short) has been prepared to support Part A of Policy CS14 - 'Responding to climate change and managing the risk of flooding in Fenland' - of the emerging Core Strategy.

1.1.3. In addition, the SPD has also been prepared in light of the number of applications for renewable energy generation developments received by the Council.

Recent Planning Applications

1.1.4. A key driver behind the need for this document was clearly demonstrated in the recent appeal decision in respect of six turbines known as Treading Wind Farm, an appeal which was dismissed by the Secretary of State on 9 October 2013.

1.1.5. What that appeal decision highlighted was the lack of local Fenland policy available to determine such proposals (whether wind, solar or other form of renewable energy). Instead, the Inspector and, subsequently, the Secretary of State relied heavily on national policy and guidance. Whilst the Council was successful in having the appeal dismissed, the case demonstrated that a lack of local policy could place a significant risk on the Council in the future. For example, at paragraph 9 of the Secretary of State's decision, he explicitly says as a result of a lack of up to date local policy in Fenland "*that, in accordance with paragraph 14 of the* [National Planning Policy] *Framework, permission should be granted unless adverse impact would significantly and demonstrably outweigh the benefits*" i.e. the Secretary of State is saying that his starting point in determining this appeal was, on the basis that there are no relevant local policies, the application should be approved unless there is evidence to persuade him otherwise.

1.1.6. Thus, to assist applicants in making appropriate and quality applications, and to place Fenland District Council in the best position in the future to respond to such applications for renewable energy (wind proposals or otherwise), the Council has decided to set out clear policies and have a local framework for dealing with such proposals.

Economic and Social Benefits

1.1.7. The SPD is not all about 'control' and prevention of inappropriate development proposals. Yes, it will help ensure inappropriate developments are refused and help prevent an excessive amount of renewable energy schemes blotting the Fenland landscape and impacting on the amenity of residents. But some renewable energy proposals should be welcomed to the district because of the social and economic benefits they can bring, and this SPD will encourage appropriate schemes to come forward. We must remember that supporting the development of sensitively designed and well located low carbon technology has brought the following benefits

to the district and we can continue to experience these benefits in the future by welcoming appropriate, well thought out schemes:

- economic benefits (job creation, business opportunities, lower fuel bills so money can be spent elsewhere in support of the economy, energy security for the Fenland economy, etc); and
- social benefits (less in fuel poverty, community energy schemes, energy security).

1.1.8. This point was echoed by the Energy Secretary, Edward Davey, on 5 November 2013 when he said:

> *"The renewable energy sector supports 35,000 green jobs and the sector is crucial to green growth and energy security. A mix of technologies is vital to secure Britain's energy supplies and reduce the environmental impact of powering our homes and businesses."*[1]

1.1.9. In the days of ever rising fuel bills, the Council considers it important we enable local residents and businesses to take advantage of fuel saving measures, thus taking residents out of fuel poverty and creating local job opportunities. This will ensure more money circulates within Fenland, not out to the 'big six' (mostly foreign) energy companies.

1.1.10. Following earlier presentations to Members on sustainable energy and the benefits to the area for future 'green' environmental projects by Cheryl French of CCC, the SPD has been forwarded to CCC to ensure our respective policies and approaches in such areas align for the long term benefit of Fenland.

Mapping Areas for new development

1.1.11. It should be noted that identifying the capacity of, and locations within, the Fenland area to accommodate renewable energy generation schemes is not within the remit of this SPD. This task is technically too difficult as no two proposals are the same: for example, a 100m turbine in one location may be totally inappropriate, but a 10m turbine in exactly the same location may be absolute fine - a capacity study will not reflect such distinction.

1.1.12. However, the SPD does contain details of the number and type of large turbines (supported by a map) that have been installed or approved in Fenland to date to demonstrate the scale, cumulative impact and past commitment to such sustainable energy.

1.1.13. The SPD will effectively replace Fenland District Council's 2009 Wind Turbine Guidance

1.2. Planning Policy Context of SPD

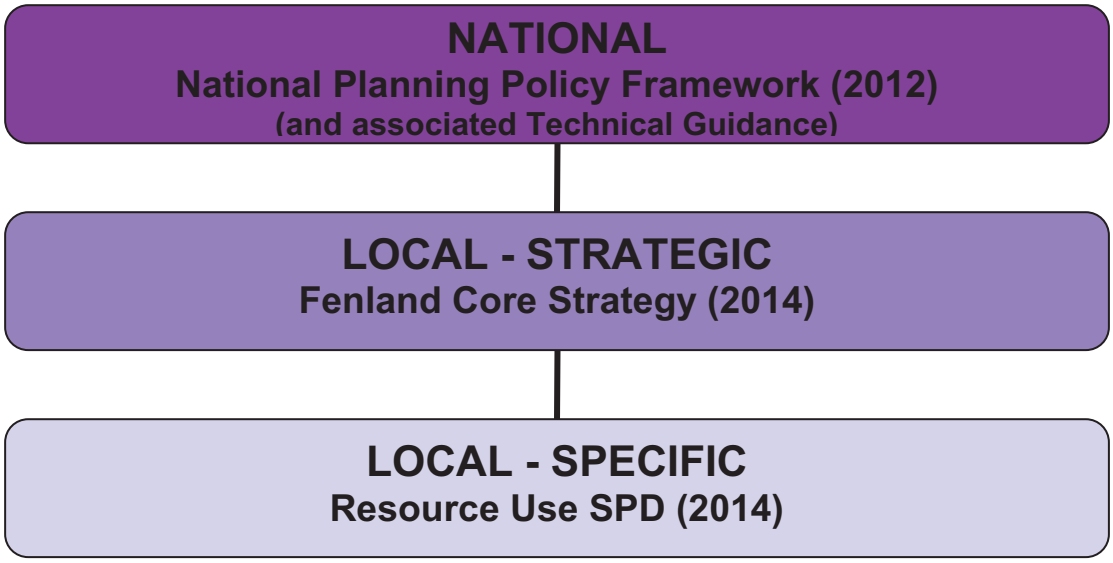
1.2.1. The SPD will be used (alongside other Local Plan documents and national planning policy guidance) by the Council when determining planning applications for proposals which include renewable energy generation from wind, solar or biomass

[1] See: https://www.gov.uk/government/news/renewable-energy-delivering-green-jobs-growth-and-clean-energy

developments. It will also be used to help ensure new buildings (dwellings and other developments) take simple and effective measures to reduce their impact on resource use.

1.2.2. Figure 1, overleaf, highlights what position this SPD has in the planning policy hierarchy.

Figure 1: Context of the 'Resource Use' SPD



1.2.3. The National Planning Policy Framework (NPPF) dictates, for example, that:

- *"Local planning authorities should adopt proactive strategies to mitigate and adapt to climate change*" (para 94, page 22).
- The planning system should *"mitigate and adapt to climate change including moving to a low carbon economy"* (page 2).
- *"planning should…encourage the use of renewable resources"* (page 5).

1.2.4. The Fenland Core Strategy (due for adoption in 2014) includes:

- Objective 4.1: *"increase use of renewable energy sources"*.
- Objective 5.1: *"reduce emissions of greenhouse gases and other pollutants".*
- Policy CS14 'Responding to climate change and managing the risk of flooding in Fenland' (see text below on next page)

Structure of the SPD

1.2.5. This SPD has been split into 'Parts'. Part 1 is this introduction, whilst Part 2 relates to resource use, Part 3 contains policies for the assessment of renewable energy generation proposals, and Part 4 contains information and guidance on allowable solutions.

Policy CS14 of the Fenland Core Strategy (Submission Version: September 2013)

Policy CS14 – Responding to Climate Change and Managing the Risk of Flooding in Fenland

Part (A) Resource Use, Renewable Energy and Allowable Solutions

Resource Use:
In order to address the following:

(a) the urgent need to combat the causes of, and adaptation to, climate change;
(b) the chronic levels of fuel poverty in selected parts of the district;
(c) the need to compensate for the embodied energy of new buildings;
(d) the need to create local jobs in Fenland;
(e) the increasing need to use water more efficiently;
(f) the desire to develop skills and experience in the 'green economy';
(g) the desire to minimise, as a result of new development, the need for costly and resource intensive upgrades and capacity increases to the wider power infrastructure network, and
(h) the need, generally, to upgrade existing dwellings to better energy performance (acknowledging the fact that 85% of today's existing, mostly energy inefficient, homes in the UK will likely still be in existence in 2050),

The Council will expect all developments of one dwelling or more, or 100 sq m or more for non-dwellings, to explicitly demonstrate what reasonable contribution the development will make towards minimising resource consumption above and beyond what is required by Building Regulations and/or other standard planning policies.

To meet this policy requirement, a developer could, through negotiation,:

- for dwellings, go beyond what is required by the Building Regulations in force at that point in time in terms of meeting the relevant sections of the Code for Sustainable Homes.
- for dwellings, generate significant amounts of on or near-site renewable energy or heat, the majority of which is consumed on-site.
- for dwellings, to achieve water consumption at a minimum Level 2 of the Code for Sustainable Homes.
- for non dwellings, to achieve at least a BREEAM rating above that required by Building Regulations.
- demonstrate how the developer is making a reasonable contribution to reducing energy use elsewhere, such as through the provision of free energy saving materials to homes in fuel poverty, existing business, schools or the public in the local area.

All developments (dwellings and non-dwellings) are encouraged to incorporate on site renewable and/or decentralised renewable or low carbon energy sources, water saving measures and measures to help the development withstand the longer term impacts of climate change.

Renewable Energy:
Renewable energy proposals will be supported and considered in the context of sustainable development and climate change. Proposals for renewable energy technology,

associated infrastructure and integration of renewable technology on existing or proposed structures will be assessed both individually and cumulatively on their merits taking account of the following factors;

- The surrounding landscape, townscape and heritage assets
- Residential and visual amenity
- Noise impact
- Specific highway safety, designated nature conservation or biodiversity considerations
- Aircraft movements and associated activities
- High quality agricultural land

The granting or refusal of planning permission for wind turbines will be informed by up-to-date local evidence and, if produced as anticipated, a Wind Turbine SPD (due for adoption in 2013 or early 2014).

Renewable energy proposals which will directly benefit a local community in the medium and long term and/or are targeted at residents experiencing fuel poverty will be particularly supported.

Allowable Solutions

Development proposals will, through Building Regulations or other regulations, need to meet all or the majority of their required reduction of carbon emissions on-site. Where these cannot be fully met on-site, and where a lawful mechanism exists to do so, the Council will be prepared to accept, as an 'allowable solution', a financial contribution to make up the difference. To implement this policy the Council intends to participate in a local offset fund, such as a Community Energy Fund, into which the developer contribution could either be required or encouraged to pay into. The contribution will be used to finance renewable energy projects within the local area identified through the Cambridgeshire Carbon Reduction Infrastructure Framework (CRIF) or subsequent updates or similar approaches.

Part 2: Resource Use

2.1 Points System

2.1.1 Part (A) of Policy CS14 of the Core Strategy states that:

> *"The Council will expect all development of one dwelling or more, or 100 sq m or more for non-dwellings, to explicitly demonstrate what reasonable contribution the development will make towards minimising resource consumption above and beyond what is required by Building Regulation and/or other standard Planning Policies".*

2.1.2 To assist developers in meeting this 'reasonable contribution' policy requirement, planning proposals for all new residential (one dwelling or more) and non-residential development (100sq m floor space or more) are, by virtue of this SPD, expected to achieve **a minimum of ten (10) points** through commitment to deliver measures from either List 1 or List 2 below, or a combination of measures from both lists. It should be noted that additional measures may be identified post adoption of this SPD (details of any additional measures will be featured on the Council's website). Developers may also identify other measures which could meet the requirements of Policy CS14. The Council will be happy to discuss these with the developer.

2.1.3 It should be noted that demonstration that the proposal will achieve a minimum of ten points does not necessarily mean that the application will be granted planning permission, but rather it will be one factor in assessing any proposal which will be considered in light of National and Local planning policies, including other SPDs where relevant.

2.1.4 While a minimum of ten points will normally be required, developers are strongly encouraged to consider the potential economic, social and environmental benefits that could be derived through delivering additional measures (i.e. achieving more than ten points) in relation to their specific proposal.

2.1.5 List 1 contains 'small' scale measures: it is considered that these measures could be delivered at relatively low cost and could be integrated easily into most new residential (one dwelling or more) and non-residential (100sq m or more) development proposals. Developers are encouraged to consider the incorporation of any measures from List 1 into their proposal at an early stage, so that any measures chosen can be integrated into the scheme rather than simply 'added on' at a later stage. It should be noted that where residential development proposals consist of multiple dwellings, the requirements stated below are per dwelling.

2.1.6 List 2 contains 'more substantial' measures: these measures would be more costly to deliver, but have the potential to deliver a more significant contribution towards sustainable development through the reduction of carbon emissions and resource consumption. It is strongly advised that should developers choose to implement one or more of the measures featured in List 2, that they consider the integration of the measure/s from an early stage, again to ensure that the measure/s are fully integrated into the scheme in order to derive maximum benefit and design quality.

List 1*

ITEM	MEASURE	SUSTAINABILITY BENEFITS	POINTS
1	For dwellings, install at least one raised, ready to use fruit/ vegetable planting bed within the garden (minimum footprint 1m² per bedroom).	Enables habitants to grow their own food: benefits include people not buying food from shops which would have a greater carbon footprint due to packaging and transportation. There are also substantial health benefits from 'growing your own', and a healthy society is a more sustainable and less resource using society. Also increases biodiversity.	3
2	In flat developments, provide window boxes.	Enables habitants to grow their own food: benefits include people not buying food from shops which would have a greater carbon footprint due to packaging and transportation. There are also substantial health benefits from 'growing your own', and a healthy society is a more sustainable and less resource using society. Also increases biodiversity.	2
3	For dwellings, install a water butt (could be attached to main dwelling or garage).	Recycles rain water and reduces consumption of treated water which has a greater carbon footprint.	3
4	For dwellings, install a composting bin/ facility within the garden of the dwelling.	If occupiers use the facility to compost food waste this could reduce the amount of waste being sent to landfill sites. Direct benefits include less landfill site space being used by waste food, less waste being transported to landfill sites, and the occupier getting compost from their waste rather than purchasing compost which has a greater carbon footprint.	3
5	For non- residential developments, use motion sensitive lighting where appropriate (e.g. in corridors, and large open plan office spaces where sections of the office may not be in use and thus not require lighting all the time).	Reduce energy consumption.	3

6	For dwellings without garages, provide a secure bike storage area which can accommodate a minimum of two adult bikes.	Encourages people to make journeys by cycle rather than car which reduces carbon dioxide emissions and consumption of fossil fuels.	4
7	For non-residential developments which would result in people travelling to the site on a regular basis (e.g. staff to offices, hotels, etc), provide secure, covered bike storage in a prominent location and internal locker space. Spaces and lockers should be provided at one stand and locker per 100 sqm (of internal floor space) for staff.	Encourages people to cycle to work: thus may result in people using a bike to get to work rather than a car which ultimately reduces carbon dioxide emissions and consumption of fossil fuels.	4
8	For non-residential developments which would result in visitors / customers frequenting a building, provide bike storage at one stand per 200 sqm (of internal floor space).	Encourages visitors/ customers to cycle to the premises rather than travel by car, which ultimately reduces carbon dioxide emissions and consumption of fossil fuels.	3
9	In dwellings, include electric car charging points within the garage or in a suitable external position. In non- residential developments which include car parking, include electric car charging points at a ratio of at least 1 charging point per 10 spaces.	Makes the use of electric cars a viable option for motorists: electric cars produce lower carbon dioxide emissions than petrol and diesel cars.	2 (or 5 if connected to a solar PV source)
10	Include electricity metering and display technology within the dwelling or non-residential development (at least one meter for a one bed dwelling, at least two meters for dwellings with two or more bedrooms. At least one meter per floor for non-residential developments.)	Would promote the awareness of energy consumption and may result in lower energy consumption.	2
11	Use only species native to the UK in the site landscaping.	Non- native plants may require additional watering during periods of low rainfall, thus this measure could effectively reduce water consumption.	2
12	Include drought resistant plants in the site landscaping.	Drought resistant plants would not require additional watering during periods of low rainfall, thus this measure could effectively reduce water consumption.	2

13	Use permeable materials for driveway/ car park and external surfaces (guidance can be found at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7728/pavingfrontgardens.pdf)	Reduces direct surface run off which can contribute towards localised flooding in instances of heavy rainfall or snow melt.	3
14	Provide evidence of investment in carbon reduction measures or schemes (such as retrofitting for example) or payment to an initiative, charity or organisation which specialises in combating or adapting to climate change (e.g. carbon offsetting). In the case of the latter, where possible, local initiatives, charities or organisations should be supported in order to derive direct benefits for Fenland. NOTE: Eligible initiatives/ charities/ organisations are those which focus on delivering measures to adapt to or combat climate change (general environmental institutions/ charities/ projects would not meet the requirements of this item). Developers must demonstrate the eligibility of their chosen initiative, charity or organisation: specifically, they must outline how the investment will be used by the initiative, charity or organisation to address climate change.	Various benefits, depending on the nature of the initiative/ charity/ organisation.	1 per £100 per dwelling/ 100 sq m (Maximum of 5 points)

List 2*

ITEM	MEASURE	SUSTAINABILITY BENEFITS	POINTS
1	Dwellings: Design and build the dwelling to meet at least the 3 star rating standard set out in the Code for Sustainable Homes (CfSH) (details can be found at http://www.planningportal.gov.uk/buildingregulations/greenerbuildings/sustainablehomes/technicalguide). IMPORTANT NOTE: if Building Regulations are revised to require standards above those required to achieve a CfSH 3 star rating, the Building Regulation requirements will prevail.	Various sustainability benefits. Notably, the nine categories against which a dwelling is assessed can derive varying degrees of benefits in areas including: - energy efficiency and carbon dioxide emissions; - internal and external water saving; - material sourcing; - flood risk reduction; - waste recycling; - insulation and heating; - as well as health and wellbeing, management, and ecology.	10
2	Non-residential developments: Achieve at least an overall BREEAM 'Pass' score for the building (for further details of BREEAM refer to (http://www.breeam.org/). IMPORTANT NOTE: if Building Regulations are revised to require standards above those required to achieve a 'Pass' rating, the Building Regulation requirements will prevail.	Various sustainability benefits. Notably the criteria against which a proposal is assessed can derive varying levels of benefits in areas including: - operational energy and carbon dioxide; - transport related carbon emissions and location factors; - water consumption and efficiency; - impacts of building materials; - waste, including construction resource efficiency and operational waste management and minimisation; - external air and water pollution; - ecology; - land use, management, and health and wellbeing.	10
3	Install and connect a wind turbine for the use of the associated dwelling/ building.	Reduces the need to utilise non-renewable energy and consequently reduces carbon emissions.	8

4	Install and connect solar panels and/or collectors upon the roof space of the dwelling/ building, for use by said dwelling/ building.	Reduces the need to utilise non-renewable energy and consequently reduces carbon emissions.	8
5	Non- residential developments: Provide shower and changing facilities for staff. Showers should feature water saving fittings.	Further encourages people to cycle to work: thus may result in people using a bike to get to work rather than a car which ultimately reduces carbon dioxide emissions and consumption of fossil fuels.	2 (or 6 if in conjunction with suitable cycle storage facilities)

*Please check the Fenland District Council website for details of any additional measures which have been added, which may also be used to achieve the necessary points, or deleted post adoption of this SPD. Items will only be deleted if such measures become a compulsory national standard (e.g. through Building Regulations).

Part 3: Renewable Energy

3.1 Introduction – the Economic Opportunity

3.1.1 This part of the SPD sets out more detailed guidance and policies to help implement Core Strategy Policy CS14 Part A, subsection headed 'Renewable Energy' (see page 3 of this SPD). The district of Fenland is already seeing renewable energy generated from wind, solar and biomass sources. In light of this, it is these renewable energy sources that are the focus of Part 3 of this SPD.

3.1.2 Utilising energy from wind, solar and biomass in viable locations, notably locations where such development would not result in unacceptable adverse impacts which cannot be suitably mitigated against, provides the district with several opportunities. Potential opportunities associated with the various renewable energy technologies include:

- **Local job creation:** may be direct employment in installation/ construction works; employment to deliver associated works such as site landscaping or highway improvements; or employment in ongoing maintenance works.
- **Local businesses reducing their carbon footprint and electricity/gas costs:** this may result in further indirect benefits to the business, such as further finance available to upgrade facilities or provide staff training for example.
- **Households reducing their electricity and/ or heating costs:** this may reduce the number of households experiencing, and those vulnerable to, fuel poverty.
- **Diversification of the rural economy:** Specifically in the case of biomass, opportunities include creating increased demand for locally sourced biofuel wood; diversification of the rural economy and individual farm incomes; and contribution to waste management through the utilisation of materials which may have otherwise gone to landfill.

3.2 Permitted Development Rights

3.2.1 Domestic and non-domestic micro-generation equipment which meets certain specific criteria may fall under *The Town and Country Planning (General Permitted Development) (England) Order 1995, as amended in 2011 and 2012:* commonly referred to as 'Permitted Development Rights'. As such, domestic and non-domestic wind turbine developments, solar installations and biomass facilities which meet the specified criteria may not need planning permission.

3.2.2 Permitted Development Rights which specifically apply to the three renewable energy generation categories are:

Wind: Classes 'H' and 'I' of Part 40, Installation of Domestic Microgeneration Equipment (Order as amended in 2011)

Solar: Classes 'A' and 'B' of Part 40, Installation of Domestic Microgeneration Equipment (Order as amended in 2011)

Classes 'A' and 'B' of Part 43, Installation of Non-Domestic Microgeneration Equipment (Order as amended in 2012)

Biomass: Class 'E' of Part 40, Installation of Domestic Microgeneration Equipment (Order as amended in 2011)

Class 'E' of Part 43, Installation of Non-Domestic Microgeneration Equipment (Order as amended in 2012)

3.2.3 The Town and Country Planning (General Permitted Development) (England) Order 1995, as amended in 2011 and 2012 and the Permitted Development Rights outlined within it may be amended post adoption and publication of this SPD. Full details of the Town and Country Planning (General Permitted Development) (Amendment) Order 1995 and amendments can be found at: www.legislation.gov.uk

3.3 Context - Existing Renewable Energy Generation in Fenland

3.3.1 The exact number of wind turbines, solar installations and biomass facilities with the Fenland District are unknown due to the fact that qualifying wind, solar and biomass developments can be undertaken without planning permission (under Permitted Development Rights).

3.3.2 In relation to wind turbine developments which do require planning permission, there have been numerous wind turbine developments within the Fenland district, ranging from individual turbines to wind farm developments. As of 5th November 2013 [to be updated], within the Fenland district there are:

- 38 existing turbines
- 35 approved wind turbines

3.3.3 To put these figures into context, in a recent press release from the DCLG (notice 13/057, 6 June 2013) the statistics for onshore wind in the United Kingdom are as follows:

- 4,074 turbines (6.3GW) in operation
- 2,857 turbines (6.7GW) under construction or awaiting construction
- 2,995 turbines (5.7GW) in the planning system

3.4 Context - Planning Policy and Guidance

3.4.1 In addition to the national and local policy outlined in Part 1, the following guidance and documents have also influenced the policies in this part of the SPD.

Planning practice guidance for renewable and low carbon energy (Department for Communities and Local Government, 2013)

3.4.2 This guidance provides advice on the planning issues associated with the development of renewable energy: specifically, it highlights how local planning

authorities can develop a positive strategy to promote the delivery of renewable and low carbon energy.

3.4.3 While the guidance highlights the importance of increasing the amount of energy from renewable and low carbon sources in order to ensure a secure energy supply, reduce green house gas emissions and to stimulate investment in businesses and job creation, it emphasises that the need for renewable energy does not automatically override environmental protections or the planning concerns of local communities.

3.4.4 Furthermore, the guidance identifies particular planning considerations for large scale ground mounted solar photovoltaic farms and for wind turbines: these considerations have informed the policies of this SPD, as noted throughout Part 3.

National Policy Statement for Renewable Energy Infrastructure (EN-3) (Department of Energy and Climate Change, 2011)

3.4.5 This statement highlights that *"onshore wind farms will continue to play an important role in meeting renewable energy targets"* (page 61). Furthermore, it outlines various impact assessment principles in relation to: biodiversity and geological conservation; the historic environment; landscape and visual; noise and vibration; shadow flicker; traffic and transport. Although the statement was intended for the decision making of the Infrastructure Planning Commission *(now abolished and responsibilities now taken over by the National Infrastructure Directorate)* and not directly intended for local planning authorities, the information is nonetheless a useful point of reference for the formulation of policies relating to wind turbine developments. Furthermore, the statement outlines mitigation measures in relation to each of the above topics.

Onshore Wind- Call for Evidence, Part A- Community Engagement and Benefits (Department of Energy and Climate Change, 2012)

3.4.6 This call for evidence sought information on "*the various community benefit packages offered across the UK… outside the planning system, but including local economic content of windfarm development, support levels for community owned projects, local benefit packages and innovative ways of delivering them"* (page 2).

3.4.7 The document emphasises that following the publication of the NPPF, local planning authorities are encouraged to put a positive strategy in place to promote energy from renewable and low carbon sources. The document identifies that community benefits can be delivered outside the planning system and that in many cases benefits are being provided on a voluntary basis. It also recognises that while such benefits can be perceived as 'cultivating acceptance' of a scheme, they *"have the potential to support lasting improvements in the areas around wind farms"* (page 19). The current means of delivering community benefits from onshore wind developments are identified as:

- Community funds (including an annual payment per megawatt; a lump sum payment; a payment based on the revenue generated)
- Supporting local energy efficiency initiatives
- Wider environmental and social benefits
- Provision of cheaper electricity

Planning for Climate Change- Guidance and Model Policies for Local Authorities (Town and Country Planning Association, 2010)

3.4.8 This document was produced by the Town and Country Planning Association for the Planning and Climate Change Coalition. The primary purpose of the guide is to provide detailed guidance on the climate change principles which should underpin policy plan making and development management. The nature of the guidance means that it can influence supplementary planning documents such as this one.

3.4.9 The guidance emphasises that planning policy should *"actively support and help drive the delivery of renewable and low-carbon energy"* (page 8). It also highlights that local planning authorities should *"design their policies to support and not unreasonably restrict renewable and low-carbon energy developments"* but also *"provide appropriate safeguards, so that any adverse impacts are addressed satisfactorily"* (page 10).

3.4.10 Furthermore, the guidance states that local planning authorities should *"not require applicants for energy development to demonstrate the overall need for renewable or low-carbon energy"* (page 16) and that permission for a renewable energy project should not be refused because a renewable energy target set out in the local plan has been reached.

Wind Turbine Policy Guidance (Fenland District Council, 2009)

3.4.11 In 2007 Fenland District Council commissioned The Landscape Partnership to undertake an independent wind turbine study. The primary objectives of this study were to assess the impact of existing turbine development within the Fenland district and to assist in the formulation of appropriate policies to inform consideration of future proposals. The study resulted in the production of The Fenland District Council Wind Turbine Development Policy Guidance (2009). This study focussed primarily on the landscape capacity for commercial turbines, with a specific focus on: landscape sensitivity; visual impact; cumulative impact; and environmental constraints. It should be noted that the capacity mapping produced as part of the Policy Guidance focused only on 'landscape capacity', was theoretical and did not take the existing turbine developments into consideration.

3.4.12 This Resource Use SPD will replace the 2009 Guidance, however some of the research and conclusions of the 2009 study remain relevant and therefore have been used to inform this SPD. Notably, the shadow flicker information; categories of magnitude of visual impact; considerations and thresholds for cumulative visual and landscape impacts; heritage, biodiversity and mitigation considerations; as well as notes on form and siting, have all contributed to the formulation of wind turbine policies.

Natural England Technical Information Note TIN049, Agricultural Land Classification: protecting the best and most versatile agricultural land

3.4.13 The Agricultural Land Classification (ALC) provides a method for assessing the quality of agricultural land. The ALC is a five-grade system (although it should be noted that Grade 3 is subdivide into 3a and 3b): Grades 1, 2 and 3a are defined as the best and most versatile land.

3.4.14 TIN049 advises 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 higher quality."* Furthermore, it

highlights that the ALC *"helps underpin the principles of sustainable development".* The document also notes that the Town and Country Planning (Development Management Procedure) (England) Order 2010 (as amended) statutorily requires Natural England to be consulted on proposals involving the 'best and most versatile land'.

3.5 Community Led Renewable Energy Initiatives

3.5.1 The 'Planning practice guidance for renewable and low carbon energy' (DCLG, 2013) encourages local planning authorities to positively support renewable and low carbon energy initiatives which have clear evidence of local community involvement and leadership. This is because community initiatives are likely to play an increasingly important role in the future delivery of renewable and low carbon energy. Policy RE1 reflects this sentiment.

RE1: Community Led Renewable Energy Initiatives
Particular weight will be given to proposals which are clearly demonstrated to be led by the local community or have involved significant community involvement, providing that the impacts of the proposal are acceptable, or can be made acceptable.

3.6 Wind Turbines

Introduction

3.6.1 This section gives more clarity and certainty to future applicants as to what proposals are likely to be acceptable or unacceptable in the future, and what information is required in order to determine proposals.

3.6.2 The energy generated by a wind turbine can vary due to a variety of factors: ultimately it is the type of turbine used, the mean wind speed at the hub height of the turbine, and the predicted wind speeds about this mean which will determine the amount of energy captured. It is not the intention of this SPD to assess whether the design specifics of a wind turbine proposal have maximised the potential energy generation of a scheme: the aim of the policies within this SPD is to ensure that proposals do not result in unacceptable adverse impact that cannot suitably be mitigated against. It is considered to be the responsibility of the developer to research site specific circumstances and devise a proposal which can deliver the greatest energy generation relative to these circumstances.

3.6.3 The 'Planning practice guidance for renewable and low carbon energy' (DCLG, 2013) outlines numerous planning considerations which should be considered when determining applications for wind turbines and solar installations. Policies WT9 to WT16 of Part 3 reflect these planning considerations.

3.6.4 In instances where a policy requires the impact of a proposal to be considered in relation to existing turbine developments, this includes those in neighbouring districts as well as Fenland.

Policy Approach

3.6.5 In light of the wide height range of wind turbine structures, three policy categories have been devised. While the majority of the policies outlined in this SPD are applicable to all development proposals irrespective of the category in which they

fall, certain policies are specific to a particular category. Where this is the case, the '(C1)', '(C2)' or '(C3)' following the policy title denotes whether it applies to a Category 1, Category 2 or Category 3 proposal respectively.

3.6.6 The three policy categories and the justification of the definition of these categories are outlined below.

Category 1: Applications for developments of one to three turbines which are up to and including 15m in hub height

3.6.7 Justification:

- Permitted Development Rights allow (with several conditions and restrictions) stand alone domestic wind turbines up to 11.1m in height (highest point). Therefore this category encompasses domestic turbines up to and including 15m (hub height) which do not fall under Permitted Development Rights.
- Fenland District Council has been receiving many applications for turbines up to 15m hub height: such applications are mostly for developments of three or fewer turbines.
- It is considered that four or more turbines would have a greater cumulative impact.
- The policy variations between the three Categories reflect the fact that Category 1 applications will typically have less overall impact than Category 2 or 3 applications.
- Due to the smaller scale and associated impacts of Category 1 applications compared to Category 2 and 3 applications, the information required from the Applicant (as detailed in the Applicant Checklist, Appendix A) is not as extensive as for Category 2 and 3 applications.

****PHOTO OF EXAMPLE OF CATEGORY 1 TURBINE TO BE INSERTED HERE****

Category 2: Applications for up to five turbines which are up to and including 50m in hub height, unless covered by Category 1

3.6.8 Justification:

- This is an interim Category between Categories 1 and 3 which aims to incorporate medium commercial scale turbines which are not as large as the Category 3 turbines (which typically have greater overall impact than Category 2 turbines); and which are larger than Category 1 turbines (which typically have less of an overall impact). Thus the policies for this Category and the information required under the Applicant Checklist (Appendix A) are intended to reflect this.
- Developments of four or five turbines which are up to and including 15m hub height would also be determined under this Category (i.e. because they exceed the threshold of Category 1): this is to reflect the likelihood that four or five turbines will have a greater cumulative impact than three or less.
- Category 2 only includes developments of up to and including five turbines because it is considered that six or more turbines of any height would have a greater cumulative impact and therefore the policies and information required for Category 3 are more appropriate.

****PHOTO OF EXAMPLE OF CATEGORY 2 TURBINE TO BE INSERTED HERE****

Category 3: Applications for turbine developments which have six or more turbines of any size, and applications for one or more turbines which have a hub height of greater than 50m

3.6.9 Justification:

- This Category aims to incorporate large scale single and group turbine developments.
- The policies and information required for a Category 3 development aim to reflect the likelihood that Category 3 developments will have the greatest overall impact of all three Categories.
- This Category also includes developments of six or more turbines: this is to reflect the cumulative impact of six or more turbines.

****PHOTO OF EXAMPLE OF CATEGORY 3 TURBINE TO BE INSERTED HERE****

Assessment of Wind Applications: Consideration of Constraints

3.6.10 All wind turbine applications will be assessed in light of the policies outlined herein, as well as the policies of other relevant planning documents such as the Fenland Core Strategy (2014) and the National Planning Policy Framework (2012). In order to undertake a comprehensive assessment of an application in light of the relevant policies, the Applicant will be required to provide information on the proposal, and supporting documentation, mapping and photomontages, as specified in the Applicant Checklist (Appendix A).

3.6.11 As part of the development of a Category 2 or 3 wind turbine proposal, it is the applicant's responsibility to consider and provide details of the overall scheme feasibility (refer to 'Design and Access Statement (Scheme Feasibility)' in Applicant Checklist, Appendix A).

3.6.12 Mapping of features and potential constraints will be used to assist in the assessment of applications, in light of the policies outlined in this SPD. The map (which the Council will aim to update quarterly), available at www.fenland.gov.uk/xxxxxx, includes details of:

3.6.13 Turbines:

- Existing turbines
- Approved turbines (turbines with full planning permission. It should be noted that, for whatever reason, the turbine schemes shown as 'approved' which are not yet under construction may not necessarily be built. Where

necessary, during the assessment of an application, the operational 'approved' turbines will be verified by the case-officer).

3.6.14 Built environment:

- OS map background (details the existing built environment).

3.6.15 Land designations:

- International and national protected sites for wildlife or geology.
    - International designations include Special Areas of Conservation (SAC); Special Protection Areas (SPA); Ramsar Sites;
    - National designations include Sites of Special Scientific Interest (SSSI); National Nature Reserves.

3.6.16 Other:

- Operational airfields

3.6.17 The mapping of features and potential constraints will particularly assist in the consideration of proposals in relation to policies WT5 (Turbine Siting), WT8 (Visual Impact Upon Dwellings), WT12 (Biodiversity and Ecology Considerations), WT13 (Heritage Considerations), WT14 (Shadow Flicker and Reflected Light), WT15 (Cumulative Landscape Impact and Capacity), and WT16 (Cumulative Visual Impact).

3.6.18 The mapping will also assist in the assessment of the capacity of the landscape to accommodate new turbine developments. All applications will be assessed on a case-by-case basis: capacity is not a 'one size fits all' blanket judgement due to the variation in situation and scheme specifics.

3.6.19 It should be noted that the mapping is advisory only and does not form part of the development plan for Fenland. It is intended as an indicative tool to assist in the determination of applications and for the general information of developers, applicants and members of the public. If areas are not indicated as 'constrained' on the mapping, this does not necessarily mean that the area is not constrained by another un-mapped factor and thus it does not necessarily mean that the site is deemed suitable for development.

3.6.20 Similarly, if an area is indicated as 'constrained' this does not necessarily mean that the area is unsuitable for wind turbine development and that a proposal in the area will automatically be refused. It is the intention that the indicative mapping will highlight the features and potential constraints which must be given due weight in the consideration and determination of a proposal. Whether a feature or potential constraint will render an area unsuitable for a proposed development is dependent on various factors, most notably: the specifics of the individual proposal; the significance (locally, nationally and internationally) of the feature; and the likely anticipated impacts of the development proposal in question.

Wind Turbine Policies

Turbine Design and Siting

3.6.21 High design standards can assist in minimising the visual impact of wind turbines. Both the characteristics of the Fenland landscape and existing wind turbine developments in the local area should be taken into account when considering the design and siting of proposed turbine development.

WT1: Colour

The colour of turbine/s should broadly be between the range of off-white and light grey.

WT2: Aesthetic Design and Appearance

Aesthetically, turbine designs should respond to and be in keeping with any existing or approved wind turbine developments which are in relatively close proximity to the application site.

A three bladed wind turbine with a solid, tapering tower is generally considered the most elegant form and is most in keeping with existing turbines in Fenland District, though other designs will be considered on their merits.

WT3: Blade Rotation

Proposals will only be permitted if they adhere to the following principles.

i) In order to ensure visual conformity, for developments of 2 or more turbines, the blades shall rotate in the same direction. In instances where the proposed turbine/s are an extension to an existing site **or** would be visually read as part of an existing group of turbines, the blade rotation of the proposed turbine/s shall be the same direction as that of the existing turbines.

ii) Significant overlapping of rotating blades (commonly referred to as 'clashing blades') should be avoided in order to prevent detrimental visual impact. This includes the overlapping of blades within the proposed development if more than one turbine is proposed, as well as between a proposed turbine and an existing turbine.

iii) Where a proposed turbine would be viewed alongside another turbine in a direct line of sight, consideration should be given to the rotation speed of the blades of the proposed turbine in relation to that of the other turbine/s. In order to minimise undesirable visual annoyance, the siting of turbines with considerably different blade rotation speeds within the same direct line of sight as each other should be avoided.

WT4: Ancillary Equipment

Ancillary equipment relating to the turbine/s should be housed within the turbine structure/s as far as possible.

In the event that ancillary equipment cannot be housed within the turbine structure/s, the Applicant will be required to provide supporting evidence detailing why this is not possible. The Applicant will also be required to demonstrate how the impact of the ancillary equipment will be mitigated. Excessive or poorly designed ancillary equipment will be refused permission.

3.6.22 In addition to the physical design of turbines, the strategic arrangement of turbines is fundamental to the successful integration of new turbine developments into the landscape. Therefore, it is important that all turbine developments either cohere with, or are positively distinct from, existing turbines within the landscape.

WT5: Turbine Siting

For developments of 2 or more turbines, **or** in instances where the proposed turbine/s are an extension to an existing site **or** would be visually read as part of an existing group of turbines, planning permission will only be granted if:

i) The turbines are of the same size and appearance and thus create visual harmony.

ii) The layout of the turbines would be such to create visual order and conformity.

Local Economy and Businesses

3.6.23 It is recognised that the ability of businesses to respond to and adapt to climate change issues must not be impeded by planning policy. In addition to the climate change benefits associated with wind turbine developments, businesses can benefit from reduced electricity costs which in turn can result in additional benefits for the local economy: for example, businesses could utilise the financial saving to expand their premises or services, or to increase their workforce.

WT6: Local Economy and Businesses

Wind turbine developments with the main purpose of supplying energy for the use of an existing or proposed business (including farm use), service (such as hospitals or schools for example), or community group will be supported in principle, providing that they do not conflict with any of the other policies outlined in this SPD and the policies of any other relevant policy guidance.

Visual Impact and Protection of Important Views

3.6.24 The character and quality of the Fen landscape varies across the District. Policy WT7 aims to ensure that the impacts of wind turbine development upon the character of the immediate and wider landscape are taken into consideration. It also aims to ensure that the quality of the landscape is maintained, and enhanced where possible.

WT7: Visual Impact and Protection of Important Views

Proposed wind turbine development should:

i) Not result in development which would be a visually intrusive and predominant feature of the skyline from public view points, except in instances whereby the proposal would be an extension, or visually read as an extension, to an existing wind turbine site.

ii) Not wholly dominate and detract from the important views* identified in Conservation Area Appraisals (refer to mapping).

iii) Include landscape mitigation which is appropriate and proportionate to the proposal in terms of scale and design, including off site enhancements where necessary and

appropriate.

Development which would result in adverse impact upon important views (relative to their significance and value) will not be permitted.

* Important views defined as views which contribute to the special character, appearance, architectural or historical interest of an area, or which contribute positively to the special interest of an area by visually linking the street scene with the wider fen landscape.

Visual Impact Upon Dwellings

3.6.25 Visual impact is a key consideration of wind turbine developments. Wind turbine developments can impact upon residents' and visitors' enjoyment of a landscape from a visual perspective. Therefore it is essential to prevent development which would result in unacceptable visual impact from residential areas and public view points (Policy WT7 specifically refers to the protection of important views from public view points).

3.6.26 The visual impacts of turbine developments vary depending on turbine height, the number of turbines in a scheme, the location of the development and the sensitivity of the landscape and viewpoints.

3.6.27 The presence of existing natural and manmade landscape features, such as buildings and vegetation for example, can mitigate against adverse visual impact. Developers may also need to propose scheme specific measures to mitigate the visual impact, such as planting new vegetation for additional screening.

3.6.28 Policy WT8 aims to ensure that wind turbine development does not result in unacceptable visual impacts, and specifically reflects the need to prevent residents experiencing adverse visual impact from their homes.

3.6.29 For the purpose of this policy, the following definitions apply:

Dominant impact-	Turbines form the principle element of the view and may overpower the viewer.
Prominent impact-	Turbines form a very large element of the view, commanding and controlling the view.
Conspicuous impact	Turbines form a large element of the view, standing out from the surroundings and forming an unmistakable feature within the panorama.

WT8: Visual Impact Upon Dwellings

Wind turbine development should not have a dominant, prominent or conspicuous impact which is detrimental to the overall quality of views from habitable rooms within residential buildings.

Noise

3.6.30 Unacceptable noise levels can be detrimental to residents, visitors, workers, animals and birds.

3.6.31 As part of any wind turbine application submitted, Fenland's Environmental Health department will be consulted and will assess the anticipated noise outputs of the turbine/s in light of relevant current guidance. If found to be acceptable in principle, conditions will be imposed on the scheme to ensure compliance with the agreed noise level.

3.6.32 In instances where the proposed development would be within audible range of another wind turbine/ wind farm, the impact of the proposed development upon the cumulative noise levels shall also be taken into consideration: a cumulative noise impact assessment may be required.

3.6.33 The 'Planning practice guidance for renewable and low carbon energy' (2013) states that local planning authorities should use 'The assessment and rating of noise from wind farms' report (ETSU-R-97) to assess and rate noise from wind turbine developments.

3.6.34 Policy WT9 therefore refers to the ETSU-R-97 noise limits. The ETSU-R-97 publication was prepared by the Department of Trade and Industry (DTI) and outlines a framework for the measurement of wind farm noise and provides indicative noise levels which are thought to offer a reasonable level of protection to the neighbours of wind turbines.

WT9: Noise

Planning permission for wind turbine development will only be granted provided the development would not result in noise levels that would be unacceptable to occupiers and users of residential buildings, schools, hospitals, business premises and well used public areas, in accordance with ETSU-R-97.

In the event that there is another wind turbine development within the vicinity of a proposed development, the noise limits for the proposed turbine/s should not result in the cumulative noise (i.e. that of the proposed development and of other turbines within the vicinity) exceeding a reasonable noise limit in accordance with ETSU-R-97. Noise limits for a proposed development will be determined (and imposed via condition/s) so as to prevent cumulative noise levels exceeding the total ETSU-R-97 noise limit.

Applicants are required to demonstrate how they intend to reduce and manage adverse noise impacts within a Mitigation Proposal (see Appendix A for Applicant Checklist).

Safety

3.6.35 The 'Planning practice guidance for renewable and low carbon energy' (2013) stipulates specific safety risks in relation to buildings, power lines, air traffic and safety, defence, radar, and strategic road networks which should be taken into consideration, as necessary, during the determination of wind turbine proposals. Policy WT10 incorporates these various considerations.

WT10: Safety

Proposals should meet the following criteria:

i) The proposed turbine/s must not be within falling distance* of the following:

   a. Residential buildings (or their curtilage), business premises, buildings of other

important use (including, but not limited to, schools, hospitals, ambulance stations, fire stations), or well used public open space.

b. Overhead power lines. **

c. The highway boundary of A and B roads (for turbines with a power output of upto 50kW). For turbines with a power output greater than 50kW, a set back distance of the total turbine height plus 50m is required. (This distance may be relaxed if the applicant can demonstrate that a lesser distance would not pose unacceptable risk, subject to the approval of the Highways Agency.)

d. The boundary of an operational railway line.

e. Navigable watercourses.

f. The exclusion areas around airports, airfields and Ministry of Defence (MOD) land (exclusion areas as defined by relevant bodies).

ii) In relation to air traffic, safety and defence operations, wind turbine proposals should not adversely affect or interfere with: air traffic movement and safety; the operation of radar; seismological recording equipment; communications facilities; naval operations; or low flying.

iii) Wind turbine proposals should not adversely affect or interfere with other radar installations, including, but not limited to, weather radar operated by the Meteorological Office. In instances where there may be potential interference, suitable mitigation measures should be proposed as necessary, relative to the significance of the radar operation and the anticipated impact

* Falling distance is defined as the distance from the base of the tower (ground level) to the tip of the blade, when the blade is positioned vertically inline with the tower, plus 10%.

** Falling distance (as defined above) is the indicative separation distance required between wind turbines and existing overhead power lines. Subject to input from National Grid, the actual safety separation distance required may be greater or less than this, depending on the scheme specifics of an individual proposal.

3.6.36 Note: Policy WT10 above states that wind turbine development should not be located within falling distance of the exclusion areas around airports, airfields and MOD land (part 'i') and that development should not adversely affect or interfere with air traffic and safety and defence operations (part 'ii'). The relevant bodies and organisations (such as the MOD, the Civil Aviation Authority, National Air Traffic Services (NATs) Safeguarding) will be consulted, as necessary, during the assessment of all formal planning applications for wind turbine development. The consultation zone around civilian air traffic radar is 15km, with a 30/32km advisory zone. The statutory safeguarding consultation zone around MoD aerodromes is circa 15km.

3.6.37 However, the MOD's Wind Energy team advise applicants to consult them **prior** to submitting a formal planning application, if a proposed turbine is 11 meters to blade tip or taller, **and** has a rotor diameter of two meters or more. Developers are urged

to consult the MOD Wind Energy team at the earliest possible stage and maintain contact throughout the process, so that any MOD concerns can be addressed. Applicants can initiate such consultation by completing a 'pre-application proforma'. Further details can be found at:

https://www.gov.uk/mod-safeguarding

3.6.38 The Civil Aviation Authority (CAA) is responsible for providing aviation safety advice, with the Authority's Directorate of Airspace Policy (DAP) responsible for wind turbine related issues. While the CAA no longer provides voluntary involvement in the pre-planning process, they have produced guidance to assist wind turbine developers. Both the 'CAP 764 CAA Policy and Guidelines on Wind Turbines' and 'CAA Advice for Pre-Planning' guidance can be found at:

http://www.caa.co.uk/default.aspx?catid=1959&pageid=10956

3.6.39 It should be noted that this information is correct at time of publication of this SPD. The MOD and Civil Aviation Authority may subsequently amend their advice following publication of this SPD. Applicants should contact the MOD and Civil Aviation Authority for their latest advice with regards to wind turbine applications.

Impact of Wind Turbines on Electromagnetic Transmissions

3.6.40 The operation of wind turbines can potentially affect electromagnetic transmissions such as television, radio and phone signals. The 'Planning practice guidance for renewable and low carbon energy' (2013) highlights this issue and the fact that OFCOM acts as a central point of contact for identifying the particular consutlees which are relevant to a specific site. Policy WT11 provides guidance in relation to the impact of wind turbines upon electromagnetic transmissions.

WT11: Impact of Wind Turbines on Electromagnetic Transmissions

Wind turbine proposals should demonstrate that due consideration has been given to the potential interference to electromagnetic transmissions that may result from the development: the extent of consideration should be relative to the number of turbines proposed, the scale of the turbine/s and the proximity of the development to points which may be affected.

If there are numerous sites which may experience electromagnetic transmission interference as a result of the development, the developer may be required to complete a desktop assessment or reception surveys.

Where a wind turbine development is permitted, a condition/s will be imposed as necessary whereby committing the developer to prepare a scheme to investigate any reports of electromagnetic transmissions interference resulting from the operation of the turbine/s, should any such reports be received, and to deliver mitigation works as deemed necessary.

Biodiversity and Ecology

3.6.41 Preserving the biodiversity and ecology of Fenland is a key overarching factor. Furthermore, maintaining and enhancing the geographical range, amount and viability of habitats and species in Fenland is a key priority.

3.6.42 The 'Planning practice guidance for renewable and low carbon energy' (2013) explains that while wind turbines pose ecology risks in terms of bird and bat collision, disturbance, displacement, and potentially fatal bat lung expansion, these risks are generally relatively low. However, it is highlighted that the risks may be greater in some situations, such as when turbines are sited in close proximity to important bird or bat habitats, and therefore these risks should be assessed in line with Natural England's advice. Policy WT12 is applicable to birds and bats, but also wider ecology and biodiversity issues.

WT12: Biodiversity and Ecology Considerations

Where a wind turbine development is in close proximity to a protected habitat, species or designated area (in line with Natural England standing advice and guidance), the relevant stakeholders will be consulted to assess the impact that the proposed development would have on said habitat, species or area. Applicants should complete surveys as necessary and provide the results of these alongside their application.

Decisions on applications will be informed by the hierarchy of international, national and local designations.

Proposals which would have a significant adverse impact upon any protected habitat, species or designated area, relative to the aforementioned hierarchy, including developments which would result in the loss or deterioration of irreplaceable habitats, ancient woodland or veteran trees outside ancient woodland, will be refused permission unless:

i) The applicant has demonstrated that, in consultation and agreement with the appropriate bodies, any unacceptable impacts can be suitably mitigated against. Where mitigation measures are required to address potential adverse impacts, onsite mitigation (such as retaining the ecological features onsite or constructing wildlife habitats onsite) is preferable to offsite mitigation (such as the translocation of species or creating new habitats elsewhere). Offsite mitigation will only be permitted if it is clearly demonstrated that onsite mitigation is not feasible.

ii) It is clearly demonstrated that the need for, and benefits of, the development would outweigh the harm caused.

Heritage

3.6.43 The impact that a wind turbine development would have on heritage sites, features and areas, 'heritage assets', must be considered in order to prevent development that would have a detrimental impact upon the historic fabric of the Fen landscape.

3.6.44 The 'Planning practice guidance for renewable and low carbon energy' (2013) emphasises that the significance of a heritage asset derives not only from its physical presence, but also from its setting. The Guidance highlights that impacting upon the setting of a heritage asset may consequently harm the significance of the asset. Policy WT13 reflects these principles.

WT13: Heritage Considerations

All designated heritage assets within 100 times the hub height of the turbine/s will be taken into consideration when assessing applications for turbine developments.

All proposals must meet the following criteria:

i) A turbine/s shall not be erected on or within the curtilage of a designated heritage asset.

ii) By virtue of its scale, design and prominence, a turbine development shall not result in an unacceptable adverse impact (which cannot be suitably mitigated against) upon the quality or appeal of a designated heritage asset or it's setting, nor shall it be detrimental to the significance of the asset.

Proposals which would have a significant adverse impact on a heritage asset or its setting will be refused permission unless it is clearly demonstrated that the need for and benefits of the development would outweigh the harm caused. Applicants will be required to detail the mitigation measures they propose in relation to the likely adverse impacts.

As detailed in the Applicant Checklist (Appendix A), Applicants will be required to:

- Describe and assess the significance, locally, regionally and nationally, of the heritage asset;
- Identify the impacts of the proposed development upon all heritage assets identified; and
- If the proposed development would harm the heritage asset or its setting, provide justification for the development and demonstrate how the anticipated benefits would outweigh the harm.

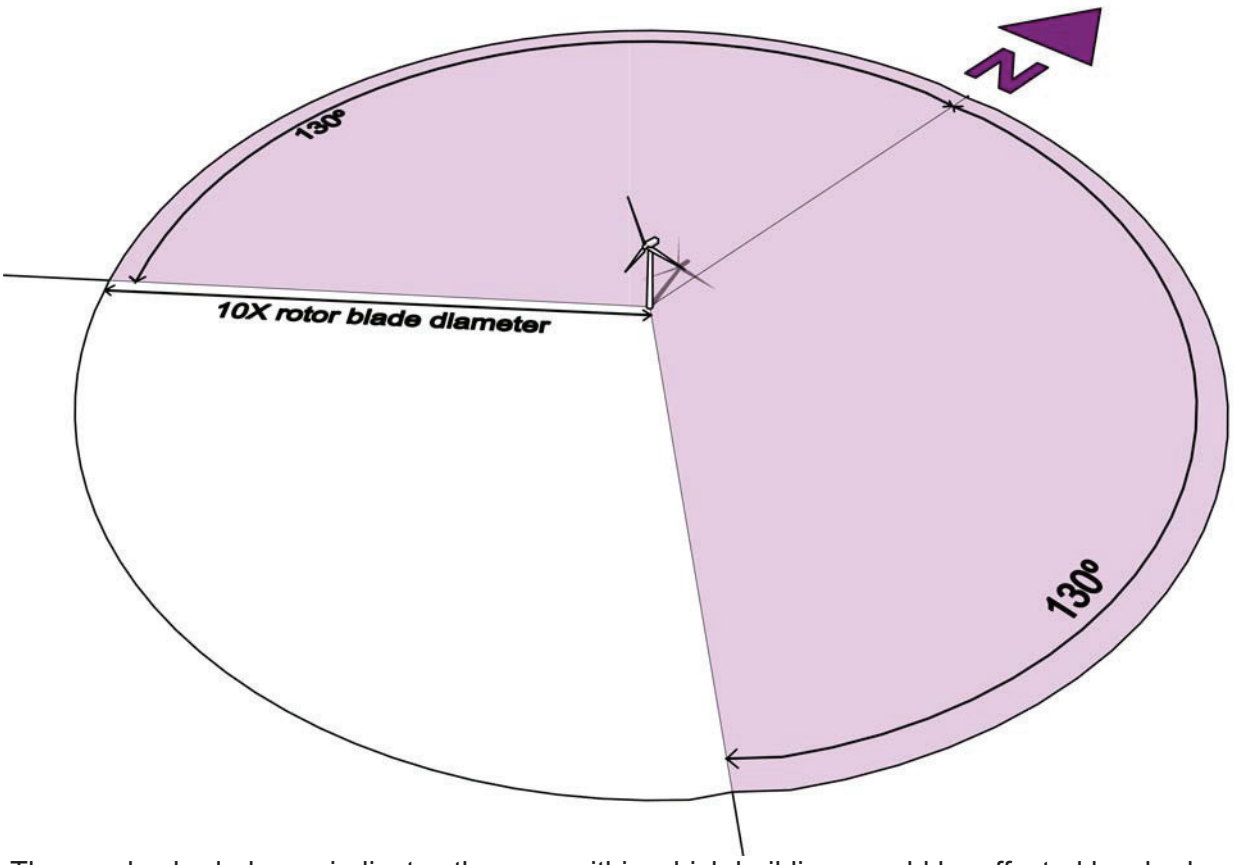
Shadow Flicker and Reflected Light

3.6.45 Wind turbines may create shadow flicker and reflect light which can be an annoyance for those living, working and studying in areas affected. Shadow flicker can affect buildings that are both within 130° either side north of a turbine and ten times the rotor diameter of a turbine, as depicted by Figure 2 below.

3.6.46 The 'Planning practice guidance for renewable and low carbon energy' (2013) advocates the use of the 130 degree principle. Furthermore it emphasises that mitigation can be secured through the use of conditions, and provides that where proposals could give rise to shadow flicker applicants should be required to provide an analysis which quantifies the impact. In relation to reflected light, the guidance highlights that whilst the 'flashing' of reflected light can be ameliorated, it is not possible to eliminate it.

3.6.47 Policy WT14 is intended to minimise the impact of shadow flicker and reflected light.

Figure 2: Shadow Flicker Diagram



The purple shaded area indicates the area within which buildings could be affected by shadow flicker. The diagram is not to scale and is provided for information only.

WT14: Shadow Flicker and Reflected Light

With regard to shadow flicker and reflected light:

i) The impact of shadow flicker upon occupiers of residential dwellings, business premises or buildings of other important use (including, but not limited to, schools, hospitals, ambulance stations, fire stations) that are within 130° either side of North of a turbine **and** that are within 10 times the rotor diameter of the turbine will be considered. Shadow flicker will **not** be regarded as an issue outside of these parameters. In instances where a proposal may result in shadow flicker impacting upon any of the aforementioned occupiers, applicants should undertake an analysis and quantify the anticipated impact. Planning permission will only be granted providing that the turbine/s would not result in unacceptable shadow flicker to any of the aforementioned occupiers within the stated parameters. Where necessary, mitigation measures will be secured through the use of conditions.

ii) Proposals should aim to prevent unacceptable reflected light. Applicants are required to demonstrate how they intend to prevent the impacts of reflected light within a Mitigation Proposal (see Appendix A for Applicant Checklist). Such measures may include the use of non-reflective/ matt materials for example.

Cumulative Landscape Impact and Capacity

3.6.48 The 'Planning practice guidance for renewable and low carbon energy' (2013) recommends that the cumulative landscape impacts of wind turbine development are best considered separately to the cumulative visual impacts and therefore Policy WT15 relates to Cumulative Landscape Impact and Capacity while policy WT16 relates to Cumulative Visual Impact.

3.6.49 As per the Guidance, it is recognised that cumulative landscape impacts relate to the degree to which a proposed development will be a defining characteristic of the landscape.

3.6.50 Cumulatively, turbine development can impact upon the fabric, quality and character of a landscape. In order to take into consideration the overall cumulative impacts of wind turbine development, the impacts of proposed development must be considered in relation to existing and approved wind turbine developments within the landscape, as well as applications which are currently under consideration and have not yet been determined.

3.6.51 Over time, the landscape capacity for wind turbine developments will alter as further developments are installed and established developments are decommissioned at the end of their useful life or expiry of their permission.

WT15: Cumulative Landscape Impact and Capacity

All proposals shall be assessed on the interrelationship with, and/or impact upon, the following:

Turbines
- Existing turbines
- Approved turbines
- Sites with formal planning applications under consideration

Built environment
- Existing built environment
- Approved developments
- Sites with formal planning applications currently under consideration

Land designations
- Designated areas, including-
    - International designations (Special Areas of Conservation (SAC); Special Protection Areas (SPA); Ramsar Sites)
    - National designations (Sites of Special Scientific Interest (SSSI); National Nature Reserves)
    - Heritage Designations (Scheduled Ancient Monuments; Listed Buildings; Registered Parks and Gardens; Conservation Areas)
- Operational airfields

Approved wind turbine developments will be taken into consideration when determining wind turbine applications. In turn, and in light of the other policies outlined in this SPD, a judgement will be made on the capacity of the landscape to accommodate proposed turbine development.

In light of the above considerations, proposals should not result in unacceptable adverse

impacts upon the character, the quality or the fabric of the landscape. Furthermore, proposals should not result in excessive turbine development that causes the existing key characteristics of the landscape to be unbalanced and overpowered.

Cumulative Visual Impact

3.6.52 As detailed in the 'Planning practice guidance for renewable and low carbon energy' (2013), cumulative visual impacts relate to the extent to which proposed development will become a feature in particular views, or indeed sequences of views. Cumulative visual impacts can arise where two or more wind turbine developments are visible from a single view point, or are visible after each other in short sequence. In light of this, the Guidance highlights that it should not be assumed that there will be no cumulative visual impact if no other turbine development will be visible from the proposed development site.

3.6.53 All existing turbines need to be taken into consideration when considering the impact that a proposed development is likely to have in relation to cumulative impact.

WT16 (C1): Cumulative Visual Impact

Category 1 turbines should not result in adverse cumulative visual impacts. Such turbines should be sited where possible to avoid the unnecessary collection of turbines of different scales within a particular local view.

3.6.54 In relation to Category 2 and Category 3 proposals, it is desirable to either concentrate turbine developments together or to make new turbine developments distinct from existing turbine sites, so that turbine developments do not sprawl across the landscape, consequently affecting many view sequences and resulting in an adverse cumulative visual impact. Policy WT16 aims to mitigate the cumulative visual impact of wind turbine developments.

WT16 (C2) & (C3): Cumulative Visual Impact

In order to prevent detrimental cumulative visual impact, the siting of Category 2 or Category 3 wind turbine development should either confine wind turbines within the landscape or result in the development being distinct from existing and approved turbine sites. To ensure this, proposed turbine developments should either:

i) Be within 500m of an existing or approved Category 2 or 3 turbine site.

OR

ii) Be greater than 4km from an existing or approved Category 2 or 3 turbine site.

Wind Turbines and Developer Considerations

Section 106

3.6.55 In some instances Section 106 developer contributions may be sought in order to make a proposal acceptable in planning terms. Further details on this process are available from the Council.

Community Benefits and Community Engagement

3.6.56 In addition to Section 106 contributions, it is at the discretion of the developer if they wish to consider and provide non-planning related community benefits as part of their proposed scheme. Any such community benefits cannot be secured through the planning system and will not be considered as a material consideration in the assessment of the proposal. However, developers may choose to provide community benefits for a variety of reasons, including, but not limited to:

- Delivering their commitments to corporate social responsibility;
- Providing compensation for the inconvenience caused by the construction process;
- Generating community buy in and support for the proposal, and subsequent community 'ownership' of the scheme. Such good, long term, relations can be of considerable benefit to both the developer and the community.

3.6.57 In instances where a developer opts to provide some form of community benefit as part of their proposal, the Council encourages the developer to liaise closely with members of the local community/ communities at the earliest appropriate stage. It is hoped that this will both facilitate open communication between developers and members of the local community, and also enable developers to explore the potential benefits which would be most beneficial to that specific locality and the needs of the local communities.

3.6.58 Community benefits can be financial, but this is not always the case. Examples of community benefits which developers may choose to provide include, but are not limited to:

- Community funds (examples include an annual payment to local parish councils per megawatt; a lump sum payment; a payment based on the revenue generated)
- Supporting local energy efficiency initiatives
- Provision of social benefits
- Provision of cheaper electricity
- Educational visits to local schools and colleges
- Site conservation and habitat creation

3.7 Solar Installations

Introduction

3.7.1 Various policies to enable the consistent judgement of solar proposals are set out in this section. This SPD does not, however, provide detailed guidance on the various solar options available, the advantages and disadvantages of the technologies, and the practicalities associated with the installation of solar equipment.

3.7.2 The energy generated by a solar installation can vary due to a variety of factors, for example aspect, latitude, proximity to vegetation which causes overshadowing. It is not the intention of this SPD to assess whether the design specifics of a solar proposal have maximised the potential energy generation of a scheme: the aim of the policies within this SPD is to ensure that proposals would not result in unacceptable adverse impact that cannot suitably be mitigated against. It is considered to be the responsibility of the developer to research site specific circumstances and devise a proposal which can deliver the greatest energy generation relative to these circumstances.

3.7.3 Due to the varying scale of solar installations, some policies within this SPD make separate policy provision for domestic and medium scale, and some for large scale solar installations.

3.7.4 For the purpose of this SPD, domestic and medium scale installations are defined as all domestic and commercial installations up to a total area of 300m². Large scale installations are defined as all installations which have an area of 300m² or greater. This policy distinction recognises that, typically, larger scale installations will result in greater impact; thus the policies by which they are assessed aim to reflect this.

3.7.5 When calculating the area of an installation, where the panels are not arranged as a single collective (for example if a single application relates to two arrays of panels/ collectors on a roof) the total area would include the area of each array, but not the spacing between the arrays, providing that the arrays are distinctly separate.

3.7.6 The categories have been devised based on area rather than power output. This approach has been adopted in anticipation of potential future technological advances. While at the moment a 50kW solar installation is typically the size of a tennis court (which is approximately 261m²), future technological advances in solar system technology may mean that this power output could be achieved from a smaller area.

3.7.7 It is recognised that tracker solar installations (those which move to follow the daily movement of the sun) may have additional impacts compared to static installations. Most policies (with the exception of policy S2) do not stipulate additional or alternative criteria for tracker installations: all policies apply to both static and tracker installations and the criterion of each policy, where applicable, should be duly taken on board during the determination of an application.

3.7.8 While the majority of the policies within this section are applicable to all installations, some policies are only applicable to certain installations, such as stand alone installations only. Where this is the case it is clearly indicated within the policies.

Solar Installations Policies

Siting

3.7.9 Site selection is an important consideration of any development proposal. The 'Planning practice guidance for renewable and low carbon energy' (2013) states that the use of previously developed land should be encouraged and that in the event that greenfield land is used, proposals should allow for continued agricultural use. Furthermore the Guidance iterates that it should be possible to restore land to its previous use following the removal of a solar installation, and also urges the consideration of the additional impacts which may arise from 'tracker' solar installations. The need to consider the effect of glint and glare is also noted in the Guidance.

3.7.10 Policy S1 below relates to site selection for stand alone solar PV and solar thermal installations.

S1: Siting (for stand alone installations only)

In order to obtain planning permission, stand alone installations should:

i) Aim to protect the highest quality and most versatile agricultural land (Grades 1, 2 and 3a): permission for development on Grade 1, 2 or 3a land will only be granted if it can be demonstrated that the installation can be easily removed (above and below ground) at the end of its operational life thus returning the land back to its previous agricultural land Grade (a condition to this effect will be applied). Furthermore proposals for development on Grade 1, 2 or 3a land should include provision for biodiversity improvements around the array/s.

ii) Be sited so as to minimise the impact on agricultural operations. Where opportunity exists, installations should be sited at the periphery of fields rather than in central positions within fields: the access tracks to such central positions for installation, maintenance and decommissioning would result in a loss or disturbance of agricultural land, and/ or disturb livestock. Locations close to field boundaries, agricultural buildings, or the dwelling/ premises of the applicant would typically have less impact on agricultural operations. Where it is not possible to locate the proposal on the periphery, or another material consideration renders such positioning unviable, the installation should be sited in a strategic position to avoid unnecessary disruption to agricultural operations.

iii) Utilise previously developed 'brownfield' land where the opportunity exists. Where a site includes both brownfield and greenfield land, applicants should endeavour to utilise the brownfield elements over the greenfield. In instances where this is not possible, the applicant shall provide full and satisfactory explanation as to why the brownfield land is not suitable for the development.

iv) The design and positioning of solar panels should be carefully considered to avoid the nuisance of glint and glare to neighbouring residents, passers by, users of neighbouring offices and buildings of importance use, and aircraft operations.

Design and Context

3.7.11 The design of solar installations should be carefully considered so as to minimise both visual impact and the impact upon the character of the immediate site and wider locality.

S2: Design and Context

Building mounted installations:

Permission will only be granted for solar installations providing that the development would not conflict with the following design criteria, where applicable:

i) The size, scale and positioning of the panels, individually and as a collective, should be proportionate to the roof and should not be overbearing or unbalanced. As such:
   a. Installations should not overhang any part of the roof.
   b. On pitched roofs, installations should not protrude higher than any part of the roof structure (excluding all chimneys).
   c. On pitched roofs, installations should not be unreasonably and unnecessarily elevated above the roof plane (the height of the elevation will vary depending on the technology used and the associated mounting structures).
   d. On pitched roofs, the solar installations should be positioned parallel to the roof slope (i.e. should not be raised at either end so as to position the installation at a greater or lesser angle than the roof pitch).
   e. On pitched roofs, in instances where the panels are separated into two or more arrays (i.e. not installed as a single 'collective' installation) the panels should be positioned uniformly, to create visual conformity. This does not necessarily mean that panels/ collectors should be located symmetrically.
   f. On flat roofs, in residential areas the installation should be set back from the roof edge so that it is not visible from the public highway. Where possible, this should also be the case in non-residential areas. The highest point of the installation should not exceed 1 meter on residential buildings and 2 meters on non-residential buildings, unless it can be demonstrated that a height greater than this is required. Where a height greater than 1m/ 2m is proposed, the height should be kept to an absolute minimum.

ii) If not a standard design, the colour and appearance of solar modules should not be stark in relation to the setting.

Stand alone installations:

Stand alone installations should:

iii) If situated within a predominantly residential setting, be of a size and scale that is suitable for the setting.

iv) Be uniformly arranged so as to create visual conformity.

v) Where multiple arrays are proposed, the arrays should be located in close proximity and not unnecessarily outspread in order to minimise visual impact and to limit the impact upon agricultural operations, where applicable.

vi) Where a proposal is for a 'tracker' installation, the design and positioning of said panels or collectors should:
   - Minimise the risk of injury to livestock and wildlife which may be in close

proximity to the installation;
- Operate with minimal noise output to avoid undue disturbance to nearby residents, wildlife and livestock.

Visual and Landscape Impact

3.7.12 The impact of solar installations upon either the host building or site, and upon the surrounding locality are important considerations in relation to all solar applications. The 'Planning practice guidance for renewable and low carbon energy' identifies that due consideration should be given to the potential to mitigate landscape and visual impacts, as well as to the need for security lighting and fencing, and any impacts which may result from the establishment of these.

3.7.13 Policy S3 aims to ensure that solar installations do not result in unacceptable visual impacts or adverse impacts upon the landscape.

S3: Visual and Landscape Impact

All installations:

i) Solar installations are considered to be temporary installations and as such should not result in long term, irreversible impacts upon either the building they are mounted on, or the land or landscape within which they are situated.

Building (roof and wall) mounted installations:

Building mounted installations should:

ii) Not have a negative impact upon the character and appearance of the host building: the installation should retain or enhance the character and appearance of the building.

iii) Not be a dominant feature of the local area, detract from the street scene, or spoil the character of the local surrounding area.

Wall mounted installations on existing buildings:

iv) In order to maintain the established visual integrity of an **existing dwelling**, wall mounted installations on a **principle elevation** should be avoided: permission will only be granted if no alternative means of generating renewable energy (solar or other) exist and if the installation would not be visually intrusive.

v) **Wall mounted** installations on a **non-principle elevation** of an existing dwelling will be permitted provided that the design, positioning, size and scale of the installation would not result in adverse visual impact.

vi) In relation to **non-residential development, wall mounted** installations (on any elevation) will only be permitted if the design, positioning, size and scale of the installation would not result in adverse visual impact, especially within residential areas.

Wall mounted installations on new buildings (residential and non-residential):

vii) **On new developments**, permission for **wall mounted** panels or collectors will only be granted provided that the panels/ collectors are an integral part of the overall design concept and would not result in an unacceptable adverse visual impact,

particularly in residential areas.

Building mounted installations on listed buildings:

viii) **Domestic and medium scale installations** on the principal elevation of listed buildings will not normally be permitted. They will only be permitted in exceptional circumstances where it is demonstrated that the installation is required to make the occupation of a listed building viable and no other reasonable alternative for the installation of renewable energy generation technology (solar or other) exists. An installation on the principal elevation of a listed building must be subservient in size and well designed to minimise its impact. Applicants should demonstrate that they have given due consideration to the use of solar tiles which, compared to panels, result in the installation being a more integral part of the roof structure.

ix) **Large scale solar installations** will not be permitted on the principal elevation of listed buildings.

x) Installations on non-principal elevations of listed buildings will only be permitted provided that the installation:
   a. Is well designed and as such would not be an invasive, dominant feature of the elevation or building as a whole.
   b. Would not have an adverse impact upon, or detract from, the character of the building or setting.

xi) The installation of solar equipment should not unnecessarily disturb or destroy the historic fabric of listed buildings: all works undertaken should be reversible and the intervention to the building fabric should be minimal. In order to achieve this, the following criteria should be adhered to:
   a. Clear installation, maintenance and removal procedures should be defined so as to ensure that minimal damage is caused during these periods.
   b. Solar installations and associated equipment should be located so as to permit easy access for maintenance and repair.
   c. If a solar installation is fixed to walls (including any associated internal equipment) the number of attachment points should be minimal. For example, the use of a frame for mounting should be considered.

Building mounted installations on non-listed buildings within a conservation area:

xii) Permission for **domestic and medium scale** solar development on the principle elevation of a building or elevation fronting a highway will only be granted if the solar installation would be discrete. The installation should not be a dominant feature that detracts wholly from the visual appeal of the building, nor the character of the building or its setting.

xiii) **Large scale solar installations** will not normally be permitted within a Conservation Area. In instances where it can be demonstrated that the benefits of a proposal outweigh any adverse impacts, permission will only be granted if:
   a. The installation would be on an existing agricultural building **and** would not be on a principle elevation **and** would not face a public highway.

   OR

   b. For non-agricultural buildings, the installation would not be on a principle elevation, would not face a public highway **and** would not be overlooked by

residential properties.

OR

c. The installation would be on a new building **and** would be an integral design feature which does not dominate the building **and** would not detract from the character of the setting.

Thatch:

xiv) Permission will not normally be granted for the installation of solar equipment on thatched roofs which are composed of organic material[1].

Stand alone installations:

Permission will only be granted if the proposal demonstrates that the following criteria have been taken on board (where applicable):

xv) Stand along installations should not detract from the street scene, negatively impact upon the character of the locality, or result in unacceptable adverse visual impact that cannot suitably be mitigated against. As such, where possible, stand alone installations should be sited so that they are not readily seen from public highways or residential properties (other than the applicant dwelling/ premises if applicable). The use of native hedgerows or other vegetation for screening purposes should be considered where necessary and should be strategically incorporated into the proposal.

xvi) Where security fencing is proposed:

a. Fencing will only be permitted where it is demonstrated to be necessary for security purposes and it is clearly demonstrated that hedgerows could not provide a suitable level of security: in instances where installations would be sited in locations which are not visible from the public highway and to which access would be relatively difficult, security fencing will only be permitted in exceptional circumstances.
b. Security fencing should not form a solid visual barrier within the landscape (with the exception of sites adjacent to residential properties, see point 'e' below): fencing such as close welded mesh panel fencing for example has a lower visual and landscape impact than solid wood panel fencing.
c. The height of fencing should be kept to a minimum.
d. The fencing should not restrict the movement of wildlife: there should be sufficient space at the bottom of fencing to allow wildlife to move freely.
e. For proposals on sites adjacent to residential properties, fencing should: not exceed 2 metres; not be of an industrial appearance; provide security which is appropriate to the site context.

xvii) Security lighting (other than minor domestic) will only be permitted where there is demonstrable need. In the event that security lighting is demonstrated to be essential:

a. The lighting and all fittings should be minimal and discrete: the height at which lighting fittings are mounted (including the height of any structure used to mount the lighting) should be kept to a minimum.
b. The level of light emission should be discrete.
c. The lighting should be designed so as to minimise light pollution: uplighting and light spillage should be avoided through the use of good design.
d. If intermittent sensor triggered lighting, the lighting should be set so as to not be

triggered by insignificant movement (such as animal movements) to avoid nuisance.

e. All lighting should be strategically directed: it should not result in nuisance to the occupiers or users of neighbouring buildings; nor in undue disturbance to wildlife habitats; and it should not pose a distraction to the public highway.
f. All light fittings must be energy efficient.

Additional notes:
Security lighting (minor domestic)

Light itself, and minor domestic light fittings, are not subject to planning controls. While planning permission is not needed for the installation of minor domestic external lighting, the guidance outlined in point 'xvii' above should be taken as 'good practice' which will avoid detrimental visual impacts and impacts upon the landscape. (It should be noted that although planning permission may not be required, listed building consent may be required for any works to a listed building, including installing external lighting). In addition to the above, lighting in open rural areas should be avoided due to the resultant detrimental visual and landscape impacts for local residents and passers by, as well as the impact upon wildlife.

[1] English Heritage do not recommend the installation of solar equipment on organic thatch due to the thickness of thatch decreasing over time. See English Heritage guidance "Small Scale Solar Electric (photovoltaics) energy and traditional buildings" (2008) and "Small Scale Solar Thermal Energy and Traditional Buildings" (2008).

Heritage

3.7.14 The impact of solar installations on heritage sites, features and areas, 'heritage assets', must be considered in order to prevent development that would have a detrimental impact upon the historic fabric of the Fen landscape.

3.7.15 The 'Planning practice guidance for renewable and low carbon energy' emphasises that great care should be taken to ensure that heritage assets are conserved in a manner appropriate to their significance and highlights that the setting of a heritage asset should be a particular consideration in addition to the asset itself. Policy S4 reflects these principles.

S4: Heritage Considerations

For the purpose of this policy only, reference to heritage assets **excludes** listed buildings. *(Policy S3 features considerations specific to listed buildings and the curtilage of listed buildings.)*

Solar installations will only be permitted if they comply with the following criteria:

i) A solar installation shall not be sited on a designated heritage asset.

ii) A solar installation shall not be sited within the immediate curtilage of a designated heritage asset.

iii) A solar installation, by virtue of its scale, design and prominence, shall not result in unacceptable adverse impacts (which cannot suitably be mitigated against) upon the

setting of a designated heritage asset.

iv) A solar installation, by virtue of its scale, design and prominence, should not adversely impact upon views to and from a heritage asset, whereby the views contribute to the setting and appeal of said heritage asset.

Any proposal which would have a significant adverse impact on a heritage asset or it's setting (relative to the asset's importance) will be refused permission unless it is clearly demonstrated that the need for and benefits of the development would outweigh the harm caused. Applicants will be required to detail the mitigation measures they propose in relation to the likely adverse impacts.

As detailed in the Applicant Checklist (Appendix A), Applicants will be required to identify all heritage assets within an appropriate distance of the proposed solar installation and:

- Describe and assess the significance, locally, regionally and nationally, of any heritage assets identified;
- Identify the impacts of the proposed development upon the heritage assets identified; and
- If the proposed development would harm a heritage asset or its setting, provide justification for the development and demonstrate how the anticipated benefits would outweigh the harm.

Archaeology

3.7.16 Where an applicant site is deemed to be of archaeological interest or located near designated remains, Applicants are encouraged to consult Cambridgeshire County Council's Historic Environment Services at the earliest opportunity. If the site is near designated remains English Heritage should also be consulted at the earliest opportunity.

3.7.17 Policy S5 only applies to stand alone installations as such installations may directly impact upon archaeological remains. Solar panels or collectors mounted on existing buildings would not impact upon archaeological remains: where the proposed solar installation would be mounted on a new building or structure, the impact of the proposed building or structure itself would be assessed in line with the Core Strategy, specifically Policy CS18 'The Historic Environment', and other relevant policies.

S5: Archaeology Considerations (for stand alone installations only)

Stand alone solar installations will only be permitted if they would not adversely impact upon sites of archaeological interest.

Where an applicant site is deemed to be of archaeological interest, archaeological features and remains should be suitably protected. The means of protection should reflect the significance of the feature/ remains; the outcomes of liaison between the developer and Cambridgeshire County Council's Historic Environment Services; and the outputs of any necessary trial excavations, surveys or assessments.

Examples of potential measures to protect archaeological features include:

- Relocation of the proposed installation within the site, or to another site where opportunity exists.

- The use of non-penetrative foundations.
- Reducing the height of the installation (to lessen foundation requirements).

Where permission is granted, a programme of work and/or the implementation of any necessary mitigation measures may be required in order to minimise any adverse impact.

Biodiversity and Ecology

3.7.18 The NPPF states that Local Planning Authorities should set criteria based policies for the assessment of proposals which would impact upon protected wildlife or geodiversity sites or landscape areas, and that distinctions should be made "*between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance*" (para 113).

3.7.19 Policy S6 aims to ensure that solar development is not detrimental to the biodiversity of Fenland and to sites of ecological importance or significance.

3.7.20 Policy S6 only applies to stand alone installations. As for policy S5, where a solar installation would be mounted on a new building or structure, the biodiversity and ecology impacts of the development as a whole would be assessed in line with the Core Strategy, specifically Policy CS19 'The Natural Environment', and other relevant planning policies.

S6 Biodiversity and Ecology Considerations (for stand alone installations only)

Solar development will only be permitted provided that it would not result in undue adverse impact upon designated sites of local, national or international ecological importance which cannot be suitably mitigated against.

Proposals should demonstrate that due consideration has been given to the impacts that would result from the installation, maintenance and decommissioning of solar equipment. Relative to the hierarchy of international, national and local designations, proposals which would have a significant adverse impact upon any protected habitat, species or designated area will be refused permission unless:

i) The applicant has demonstrated that, in consultation and agreement with the appropriate bodies, any unacceptable impacts can be suitably mitigated against. Where mitigation measures are required to address potential adverse impacts, onsite mitigation (such as retaining the ecological features onsite or constructing wildlife habitats onsite) is preferable to offsite mitigation (such as the translocation of species or creating new habitats elsewhere). Offsite mitigation will only be considered if it is clearly demonstrated that onsite mitigation is not feasible.

ii) It is clearly demonstrated that the need for, and benefits of, the development would outweigh the harm caused.

Cumulative Visual and Landscape Impact

3.7.21 Cumulatively, solar installations should not have an adverse impact upon the visual appeal and quality of the landscape within which they are situated, nor should they be detrimental to the character of the landscape.

S7: Cumulative Visual and Landscape Impact
Cumulatively, solar installations should not result in unacceptable visual impact or adversely impact upon the character and quality of the landscape within which they are situated. In relation to stand alone installations, where multiple solar arrays are proposed, or where the proposed installation is within the vicinity of an existing installation, permission will only be granted if the panels are arranged strategically so as to create visual conformity and avoid adverse cumulative visual impact.

3.8 Biomass Facilities

3.8.1 Various policies have been devised to enable the consistent judgement of applications for biomass facilities.

3.8.2 The policies within this Section are not categorised into various scales of development: instead, the policies are intended to be overarching.

Biomass Facilities Policies

Siting

3.8.3 The siting of biomass facilities is an important consideration. In order to ensure the viability of a scheme various factors, including siting, must be taken into consideration during the development of a proposal.

3.8.4 The 'Planning practice guidance for renewable and low carbon energy' highlights that proximity to appropriate transport links is a consideration that can affect the siting of biomass facilities.

3.8.5 Policy B1 aims to ensure that the siting of biomass development does not have negative implications.

B1: Siting

The siting of stand alone biomass equipment, biomass facilities within existing buildings or biomass facilities housed within new buildings, should be compliant with the following criteria, where applicable:

i) The scale of the proposed equipment or facility should respond sympathetically to the setting and not have an undue overbearing impact upon the local landscape.

ii) The proposal should not adversely impact upon important landmarks and viewpoints.

iii) The proposal should avoid the occupation of Grade 1, 2 and 3a agricultural land if possible. Where a proposal is for the occupation of such land, it should be demonstrated that:
   a. The environmental and/or economic benefits of the proposal would significantly outweigh the harm of losing the agricultural land;
   b. That the impact of the development on agricultural operations has been minimised through strategic micrositing.

iv) Where opportunity exists, micro siting should ensure that the existing built environment and/ or existing vegetation is utilised for screening.

v) For commercial proposals, it should be demonstrated that the proposed site is served by appropriate transport links.

Additional note: as detailed in the Applicant Checklist (Appendix A), it should also be demonstrated that due consideration has been given to the siting of the facility/ equipment in relation to:

- The source of biomass.
- Where the heat/ power generated will be utilised/ connected to the National Grid.

Design

3.8.6 Upholding high design standards is of utmost importance in order to maintain and improve the built and rural environment across the Fen landscape. As stated in the Core Strategy, new development will be managed in such a way that it protects and improves the diverse natural environment of the district and preserves and enhances its rich built and cultural heritage.

3.8.7 Due to the significant range in the size of biomass facilities, from domestic installations where the only external visual component may be the flue, to small scale commercial equipment which may be housed externally, to large scale combined heat and power facilities which can be a major development involving significant construction, the design principles outlined in the policies below should be given due consideration in relation to the scale of the proposal and its specific design details.

B2: Design

Proposals for biomass energy generation facilities and proposals which incorporate biomass facilities should deliver high design standards by:

i) Positively contributing to the locality through the use of appropriate design finishes, materials and colours.

ii) In instances where a site is within an area which has a particular architectural quality and character, where appropriate, the design of new buildings or extensions to existing buildings should be in keeping with buildings in the immediate locality.

iii) Ensuring that all external flues are as unobtrusive as possible, in terms of size, design and position.

iv) Incorporating appropriate screening details into the proposal where necessary to make the proposal more aesthetically pleasing: where opportunity exists, existing screening such as existing vegetation and the built environment should be utilised. In the event that no existing screening is present or that the existing screening is not sufficient, the proposal should incorporate screening measures which are suitable to the scale and nature of the development.

Landscape Character and Visual Impact

3.8.8 Adverse visual impact and adverse impact upon the character of a landscape must be avoided in order to uphold the visual appeal and quality of the Fen landscape.

3.8.9 The NPPF states that an application should be approved it its impacts are acceptable, or if they can be made acceptable. Where a proposal is likely to have adverse impact either visually, or upon the character of the landscape, or both, developers should strive to address these impacts through design and mitigation.

B3: Landscape Character and Visual Impact

Proposals should respond positively to the established characteristics of the recipient landscape and as such should not negatively impact upon the visual quality or character of their setting.

Proposals which would be detrimental to the character of the landscape or which would result in an unacceptable impact in visual terms (which cannot be suitably addressed through mitigation) will not be permitted.

Mitigation against adverse visual impact through the use of screening should be considered where necessary. The scale and form of screening should be proportional to the nature and level of impact; furthermore it should respond appropriately to the context of the area and be sympathetic to the local setting.

Biodiversity and Ecology

3.8.10 Preserving and, where possible, enriching the biodiversity and ecology of the Fens is important to the long term protection of Fenland's natural environment.

B4: Biodiversity and Ecology Considerations

The operation and construction of the facility should not result in adverse impacts upon Fenland's biodiversity and ecology. In order to fulfil this, proposals should not conflict with the following principles:

i) If a scheme would be detrimental to the biodiversity and ecology of the proposal site or wider area, permission will only be granted if it is clearly demonstrated that: firstly the benefits of the scheme, whether environmental, economic or social, would outweigh the harm caused; and secondly, that no reasonable alternatives exist and appropriate mitigation measures (in line with point ii below) are integrated within the proposal.

ii) Where mitigation measures are required to address potential adverse impacts, onsite mitigation (such as retaining the ecological features onsite or constructing wildlife habitats onsite) is preferable to offsite mitigation (such as the translocation of species or creating new habitats elsewhere). Offsite mitigation will only be permitted if it is clearly demonstrated that onsite mitigation is not feasible.

iii) Designated areas should be avoided where possible: where a proposal is within a designated area, it should be demonstrated that firstly, there are no reasonable alternative sites available outside the designated area and secondly that the proposal would not result in any adverse impacts upon the designated area, relative to its significance in terms of biodiversity and ecology.

iv) Furthermore, proposals which are sited adjacent to a designated area should not have negative implications on the biodiversity and ecology of said designated area.

Heritage and Archaeology

3.8.11 Having due regard to Fenland's heritage assets and sites of archaeological interest is imperative to the preservation of the historic fabric of the district.

3.8.12 It is recognised that heritage assets and places of general historic interest are not simply valued for their status, but that they can also contribute to the creation of a sense of place, and thus their value should not be underestimated.

3.8.13 Where an applicant site is deemed to be of archaeological interest, located near designated remains, or the proposal is on or near a heritage asset, Applicants are encouraged to consult the Historic Environment Services at Cambridgeshire County Council at the earliest opportunity. English Heritage should also be consulted at the earliest opportunity.

B5: Heritage and Archaeology

Proposals should not detract from, disturb or have irreversible impacts upon heritage assets or sites of archaeological interest. The weight given to the anticipated impacts should reflect the significance of the heritage asset.

In relation to heritage assets:

i) In terms of its scale, positioning and proximity to, a proposal (including any associated works and lighting), should not adversely impact upon or dominate the appearance, character or setting of a heritage asset.

ii) A proposal should avoid physically impacting (externally and internally) upon a heritage asset: direct impacts will only be permitted where the impact would not be detrimental to the character or overall integrity of the asset. As far as reasonably possible, the impacts of a proposal upon the physical fabric of a heritage asset should be reversible.

iii) Any excavation works associated with the installation of biomass facilities should not harm a heritage asset or be detrimental to the quality, character or form of the land within its curtilage.

In relation to sites of archaeological interest:

iv) The installation of biomass equipment or erection of a building which is part of a biomass facility should not result in adverse impacts upon sites of archaeological interest. Where an applicant site is deemed to be of archaeological interest, following liaison with the County Council's Historic Environment Services and the completion of any necessary trial excavations, surveys or assessments, measures to protect archaeological features and remains will be stipulated as required.

v) Where permission is granted, a programme of work and/or the implementation of any necessary mitigation measures will be secured by condition or as part of a planning obligation in order to minimise any adverse impact.

Traffic and Highways

3.8.14 Traffic congestion and highway safety issues must be addressed for all development which will result in traffic generation or the creation of a new access from a public highway.

3.8.15 Traffic and highway considerations are of a particular concern for larger scale, commercial developments, which will require larger and more frequent deliveries to site, as well as staff traffic.

3.8.16 To minimise traffic and avoid any adverse impact on highway safety, traffic movements (of both deliveries and staff, where applicable) should be minimised where possible, for example by locating the biomass facility close to a biomass source.

B6: Traffic and Highways

In order to minimise traffic congestion and ensure highway safety, proposals should demonstrate compliance with the following measures.

Access:

i) Where possible, for commercial biomass facilities, primary access for deliveries and staff should avoid sensitive areas such as, but not limited to, residential areas and areas in close proximity to school or hospital accident and emergency entrances.

Deliveries:

ii) The site layout should allow for the turning and manoeuvring of all delivery and staff vehicles to take place on-site: it should not be necessary for vehicles to utilise the public highway for turning.

iii) For larger facilities which may have numerous delivery vehicles onsite at any one time (regardless of the frequency at which this occurs), sufficient space for vehicle waiting should be incorporated onsite to avoid vehicle congestion on public roads and at the entrance to the site.

iv) For larger facilities which may have numerous delivery vehicles arriving onsite at any one time (regardless of the frequency at which this occurs), the developer must prepare a delivery management plan which addresses how traffic to and from site will be managed to ensure no adverse impacts upon traffic and highway safety.

Parking:

v) There should be sufficient onsite staff and visitor parking. As per the Core Strategy, parking needs for a sui-generis use (such is a biomass facility) will be assessed on the scheme's merits in relation to the demand for parking which is likely to be generated.

Other:

vi) For permanent buildings, all surfaces must be appropriately finished to avoid material (such as mud) being deposited on the public highway.

Water and Flood Risk

3.8.17 The NPPF stipulates that Local Planning Authorities should take full account of flood risk issues in their proactive approach to mitigating and adapting to climate change.

3.8.18 In light of this, development in areas which are at risk of flooding should be avoided where possible. Furthermore, to safeguard buildings, services, infrastructure and

facilities, and avoid risk to safety, development should not consequently increase flood risk elsewhere.

3.8.19 Policy B7 is applicable to 'stand alone' external biomass equipment and proposals for commercial biomass facilities within new buildings. For biomass facility proposals within new buildings which are part of a wider scheme proposal (whether private households, businesses or commercial operations) the overall scheme will be assessed as a whole: thus for such proposals policy B7 is indicative only and other scheme factors may render the proposal unviable from a water and flood risk perspective.

B7: Water and Flood Risk

A site specific Flood Risk Assessment will be required for all proposals which are not entirely within flood zone level 1. A Flood Risk Assessment should demonstrate, where applicable, that:

i) A sequential approach to site selection has been adopted. With the exception of proposals which are an extension to an existing facility or are to serve existing business premises, major development will not be permitted on non-flood zone level 1 land unless it is demonstrated that a sequential approach has identified that no suitable and reasonably available level 1 sites are available.

ii) The sequential test has been passed at site level to ensure that development is steered to areas with the lowest probability of flooding within the site.

iii) That the Exception Test has been passed if required (as per the NPPF flood risk vulnerability and flood zone compatibly matrix, Table 3, NPPF Technical Guidance).

iv) The risks of all forms of flooding to and from the development have been identified and assessed. Development should not increase the risk of flooding elsewhere by, for example, reducing the capacity of a functional floodplain; interfering with or impeding the flow of flood water; or hindering rainfall infiltration. How flood risk will be managed throughout the lifetime of the development should also be demonstrated.

In order to fulfil the above requirements, where applicable, proposals should incorporate appropriate sustainable urban drainage systems (SUDs) and design mitigation measures, such as flood defences and flood resilient construction.

Impact on Local Economy

3.8.20 The installation and operation of biomass facilities has the potential to positively impact upon the local and regional economy through job creation, investment in facilities and commercial operations.

B8: Impact on Local Economy

The potential economic benefits of a proposal will be considered, with particular weight given to proposals which:

i) Would generate local employment opportunities for the installation of the biomass facility and/ or any associated works (for example the creation of access roads).

ii) Would generate local employment opportunities during the operation of the facility:

including direct employment at the facility and indirect employment such as biomass delivery drivers and bio-crop farmers.

iii) Involve investment in biomass facilities/ equipment to establish, sustain or grow a business. For example, a proposal to replace an oil boiler with a biomass boiler to reduce business running costs (which could help sustain the business in the longer term).

iv) Are for a Community Heating Scheme.

In addition to the consideration of the potential economic benefits of a scheme, if a proposal would have negative implications for the local economy, these implications will be given due consideration. Where a proposal would have an adverse impact upon the local economy (through loss of productive agricultural land which is economically viable for example), the benefits of the proposal should be carefully weighed against the negative impact upon the existing local economy. Permission will not be granted if the negative implications of a development cannot be clearly justified against the benefits.

Noise

3.8.21 Excessive and unmanaged noise can be an annoyance to those living and working in close proximity. It can also be detrimental to wildlife. Therefore, an acceptable noise emission level from biomass facilities and equipment must be maintained, relative to the time of the day and to the setting.

3.8.22 For all biomass applications submitted, the Council's Environmental Health department will be consulted to assess the anticipated noise outputs of the equipment in relation to relevant current guidance.

B9: Noise

Planning permission for biomass facilities and developments which include biomass equipment will only be permitted if the development would not result in noise levels which would be deemed unacceptable to occupiers of nearby residential buildings, schools, hospitals, business premises and well used public areas.

Applicants are required to demonstrate how they intend to reduce and manage adverse noise impacts within a Mitigation Proposal (see Appendix A for Applicant Checklist).

Emissions and Air Quality

3.8.23 The operation of biomass facilities and equipment may impact upon air quality, emit dust and result in smoke. Policy B10 is aimed at ensuring that biomass operations do not have a detrimental impact upon air quality which could have implications for human health and welfare, as well as for the environment and ecology of the local and wider area.

B10: Emissions and Air Quality

In order to ensure that biomass facilities do not negatively impact upon air quality or have undesirable emissions, proposals should demonstrate, where applicable, that the following considerations have been taken on board.

Dust and smoke:

i) For facilities (particularly larger facilities) which may generate dust from the deposition and/or transfer of biomass within the site, the design and positioning of the facilities should be such as to minimise the levels of dust expelled. For example, the drop off bay for biomass material may be required to be enclosed rather than open air.

ii) For proposals which are in close proximity to sensitive receptors such as residential dwellings or a known habitat, dust or smoke resulting from the operation of the proposed facility should not have notable negative impact upon these receptors. As such, proposals should reflect due consideration of the prevailing wind direction at the site and the juxtaposition of the equipment in relation to any sensitive receptors surrounding the site.

Air quality:

iii) Proposals for commercial facilities will be required to detail the measures that will be implemented in order to control air quality as well as the procedure for responding to any problematic air quality issues that arise.

Lighting

3.8.24 The NPPF highlights that:

> *"By encouraging good design, planning policies and decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation."*

3.8.25 To limit the impact of light pollution, external lighting should only be used when absolutely necessary. In the event that it is necessary, it should be subtle in relation to its setting. Not only can unnecessary and 'over' lighting be a nuisance, but it is also a waste of energy.

B11: Lighting

Security lighting (other than minor domestic) will only be permitted where there is demonstrable need. In the event that security lighting is demonstrated to be essential:

i) The lighting and all fittings should be minimal and discrete: the height at which light fittings are mounted, including the height of any structure used to mount the lighting, should be kept to a minimum.

ii) The level of light emission should be discrete.

iii) The lighting should be designed so as to minimise light pollution: uplighting and light spillage should be avoided through the use of appropriate equipment and good design.

iv) If intermittent sensor triggered lighting, the lighting should be set so as to not be triggered by insignificant movement (such as animal movements) to avoid nuisance.

v) All lighting should be strategically directed: it should not result in nuisance to the occupiers or users of neighbouring buildings, nor in undue disturbance to wildlife habitats. Furthermore it should not result in a distraction to the public highway.

Additional notes:

Security lighting (minor domestic): Light itself, and minor domestic light fittings, are not subject to planning controls. While planning permission is not needed for the installation of minor domestic external lighting, the guidance outlined above should be taken as 'good practice' which will avoid detrimental visual impacts and impacts upon the landscape. (It should be noted that although planning permission may not be required, listed building consent may be required for any works to a listed building, including installing external lighting). In addition to the above, lighting in open rural areas should be avoided due to the resultant detrimental visual and landscape impacts for local residents and passers by, as well as the impact upon wildlife.

Part 4: Allowable Solutions

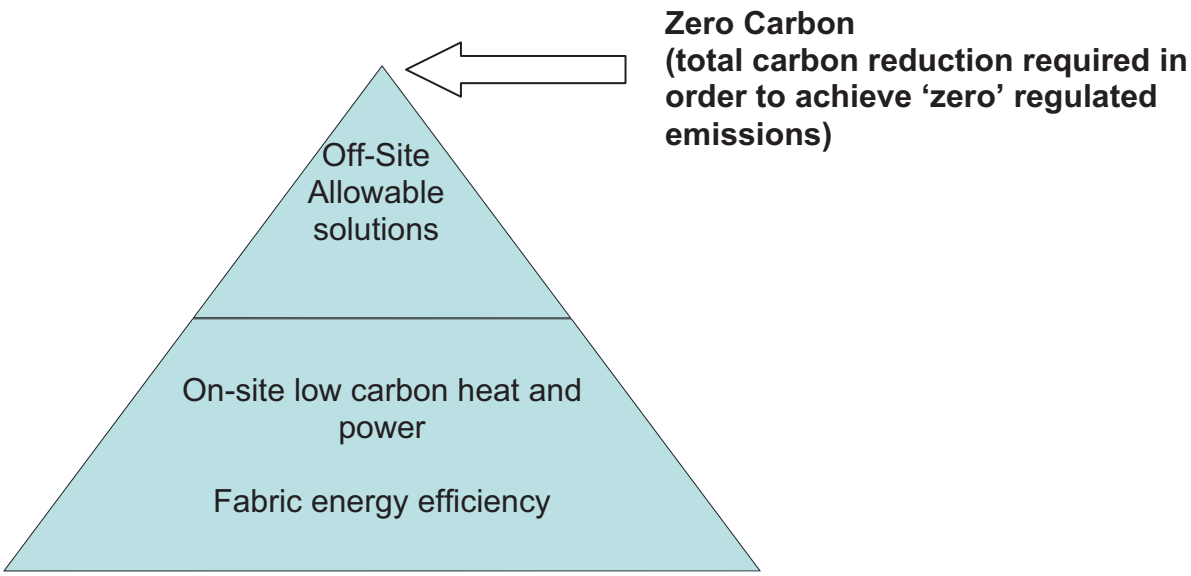
4.1 What are Allowable Solutions?

4.1.1 The 'Zero Carbon' initiative, due to be introduced nationally in 2016 for dwellings and 2019 for non-residential development, will require new development to achieve 'zero' regulated emissions. It is expected that developers will be required to achieve a minimum reduction in carbon emissions onsite (their carbon compliance target), but will be permitted to offset the remaining required carbon reductions via 'allowable solutions' (see Figure 3 below).

4.1.2 At present the Council is unable to prescribe a policy requirement in relation to Allowable Solutions in light of National policy not yet being finalised. Following the anticipated introduction of Allowable Solution Guidance, if necessary, the Council will make policy provision for Allowable Solutions.

4.1.3 If at the time of adoption of this SPD further clarity is available, then further details and local considerations will be included here.

Figure 3: The Zero Carbon Hierarchy



Sources of Further Information

Outlined below are details of where the key documents referred to in this SPD can be found.

Fenland District Council Local Plan (including the Core Strategy):
http://www.fenland.gov.uk/article/3041/Neighbourhood-Strategy-Planning-Policy

National Planning Policy Framework (NPPF) (2012):
http://www.communities.gov.uk/planningandbuilding/planningsystem/planningpolicy/planningpolicyframework/

Details of permitted development rights with regard to wind turbines, solar installations and biomass facilities can be found via:
http://www.legislation.gov.uk/

Useful information on permitted development rights can also be found at:

http://www.planningportal.gov.uk/permission/commonprojects/

Please note that permitted development rights are subject to change and that some dwellings may be exempt from permitted development rights. For more information on the permitted development rights of your property, please contact Fenland District Council's Planning Department.

Fenland District Council:

Fenland Hall,
County Road,
March
PE15 8NQ

info@fenland.gov.uk

01354 654321

Glossary

Word/ Term	Definition in the context of this SPD
Allowable solutions	The term allowable solutions refers to the element of carbon reduction in the zero carbon hierarchy which developers will be permitted to deliver offsite in order to achieve their 'zero' regulated carbon emissions target (when the 'Zero Carbon' initiative is introduced nationally, as is expected in 2016).
Array (solar array)	A single collection of solar panels or collectors mounted on a single mounting structure. 'Arrays' refers to two or more sets of mounted solar panels or collectors.
Category / Categories	The three wind turbine categories defined in Part 3, Section A of this SPD.
Collector (solar collector)	Solar thermal equipment used for water heating. There are two types solar collectors: - evacuated tubes - flat plate collectors.
Designated Area	Examples of designated areas include, but are not limited to: Sites of Specific Scientific Interest (SSSI); Special Areas of Conservation (SAC); Special Protection Areas (SPA); National Parks; Areas of Outstanding Natural Beauty (AONB); National Nature Reserves (NNR); and Ramsar Sites.
Falling distance	The distance from the base of the tower of a wind turbine structure (ground level) to the tip of a blade, when the blade is positioned vertically in line with the tower, plus 10%.
Grid	The national electricity grid.
Habitable room (within a residential building)	Rooms such as lounges, kitchens and conservatories are considered to be 'habitable rooms' as occupants typically spend a higher proportion of their time in such rooms compared to secondary living spaces such as bathrooms and utility rooms.
Heritage assets (Heritage site/ Heritage feature/ Heritage area)	Buildings, monuments, sites and areas which are designated or locally valued for their heritage interest. Includes, but is not limited to, Scheduled Monuments, Listed Buildings, Registered Parks and Gardens.
Hub height (of a wind turbine structure)	The height of the rotor axis above the ground. (This height does not include the blades.)
Installations (solar installations)	This term has been used in instances which refer to both photovoltaic solar panels and solar thermal collectors.

Principal elevation	As defined by the DCLG (Technical Guidance, 2013): “In most cases, the principal elevation will be that part of the house which fronts (directly or at an angle) the main highway serving the house (the main highway will be the one that sets the postcode for the house concerned). It will usually contain the main architectural features such as main bay windows or a porch serving the main entrance to the house. Usually, but not exclusively, the principal elevation will be what is understood to be the front of the house. There will only be one principal elevation on a house. Where there are two elevations which may have the character of a principal elevation (for example, on a corner plot), a view will need to be taken as to which of these forms the principal elevation."
Solar panels/ PV cells	Photovoltaic (PV) cells or solar panels are used for the generation of electricity from solar power. Solar panel units can be fitted to a surface such as a roof or wall, or can be stand alone.
Solar thermal	See ‘collector’
Renewable and low carbon energy	As defined in the NPPF (2012): “Renewable energy covers those energy flows that occur naturally and repeatedly in the environment – from the wind, the fall of water, the movement of the oceans, from the sun and also from biomass and deep geothermal heat. Low carbon technologies are those that can help reduce emissions (compared to conventional use of fossil fuels).”
Residential buildings	Buildings used for both permanent and temporary residential purposes, e.g. private houses, holiday homes, hotels, care homes. This includes dwellings which are currently uninhabited, or currently in an uninhabitable state.
Rotor diameter	The diameter measurement of the area within which the rotor blades of a wind turbine rotate, i.e. the straight line distance from edge of the ‘circle’ in which the blades turn, to the centre point, to the opposite edge.
Shadow flicker	Under certain combinations of geographical position and time of day, the sun may pass behind the rotor blades of a wind turbine and cast a shadow. When the blades rotate, the shadow flicks ‘on’ and ‘off’.
Solar tiles/ slates	Like solar panels, solar tiles are used to generate electricity from solar power. Solar tiles are designed to replace ordinary roof tiles and thus they integrate into the roof plane, rather than sit on top of it, as is the case for solar panels.
Stand alone (installations)	Installations not mounted on a building or other structure (e.g. car port). Stand alone installations are sometimes referred to as ‘ground mounted’ installations.
Tracker	Solar panels or collectors which move to follow the daily movement of the sun in order to maximise solar capture.

Appendices

Appendix A: Applicant Checklist for Wind Turbine, Solar and Biomass Applications

This Applicant Checklist is provided to assist those submitting applications for wind turbine, solar installation and biomass facility development.

Please note that at the time of publication of this SPD, the checklist items below are essential in order for your application to be validated. If any items are missing from your submission, the Council will not be able to validate your application and your application will be delayed.

For applications for new dwellings, buildings or structures which include a solar installation/s as part of the proposal and for applications for new buildings which include biomass facilities within the proposal, Applicants will be required to provide additional information to that listed below in relation to the overall proposal. Applicants should refer to the Fenland District Council website for further information on what is required in relation to their specific scheme.

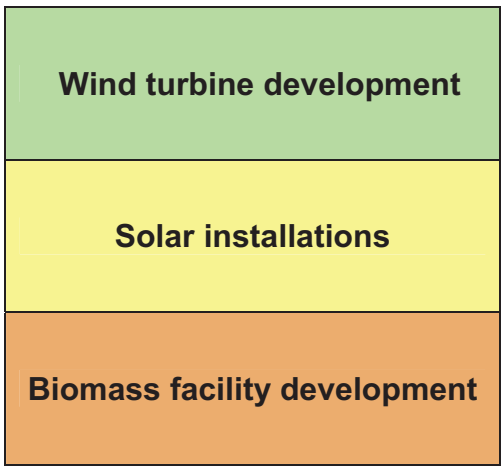
In some instances the Council may require additional supporting information to be supplied in order for the application to be assessed. The need for additional supporting information may be identified by the planning department or by a consultation body whom has been consulted on the application.

It should be noted that the items required, as specified on this checklist, may be revised following adoption of this SPD. Applicants should contact the Council prior to submitting an application to verify whether there have been any revisions to the Applicant Checklist.

If you have any queries on the documents or information required as part of your submission, please contact the Council.

Where items featured in the Applicant List are only applicable to a certain type of development, the item is highlighted as below.

In the event that an item is only applicable to some types of development (e.g. Category 2 wind turbine proposals), it is clearly indicated in the 'Applications Applicable to' column.



Applications applicable to	Item	APPLICANT CHECKLIST Supplied / not applicable
Wind **Solar** **Biomass**	**Application form:** 3 forms if hard copy is submitted 1 electronic submission Check that all questions have been completed: if not applicable, please enter 'N/A' for the avoidance of doubt. The appropriate fee should be paid upon submission of the application form. For details of fees please contact Fenland District Council.	
Wind **Solar** **Biomass**	**Certificates:** Completed Ownership Certificate (A, B, C or D – as applicable) as required by Article 12 of the Town and Country Planning (Development Management Procedure) (England) Order 2010. In addition, where Ownership Certificates B, C or D have been completed, notice(s) as required by Article 11 of the Town and Country Planning (Development Management Procedure) (England) Order 2010 must be given and/or published in accordance with this Article. Agricultural Holdings Certificate as required by Article 12 of the Town and Country Planning (Development Management Procedure) (England) Order 2010.	
Wind **Solar** **Biomass**	**Location plan:** The location plan must show the location of the proposed development (turbine/s / solar installation / biomass facility), any ancillary equipment and the access road with continuous red lines. Plans must be drawn to a scale of 1:2500 or 1:1250, include a scale bar and North point, and indicate the landownership/ dwelling boundary (outlined in blue). Any other adjacent land owned/ controlled by the applicant should also be outlined in blue. 3 copies of all plans must be submitted if a 'hard' application is made. If the application is submitted electronically, 1 electronic copy of each plan should be submitted.	
Wind **Solar** **Biomass**	**Site Plan/ Block Plan:** The site plan needs to be to a scale of 1:500 or 1:200. The site plan needs to show to scale the position of the wind turbine/s / solar installation / biomass facility, the position of ancillary equipment (such as cabinets and transformers), as well as the position of access roads, hard standings and fencing. The plan should also show: - any existing/ proposed trees - any proposed demolitions (clearly annotated or indicated)	

Wind **Solar** **Biomass**	**Elevation Plans:** The elevation plans need to be to a scale of 1:100 or 1:50. Elevation drawings are required for the turbine/s / solar installation / biomass facility and any ancillary equipment and fencing if applicable. The plans should be clearly annotated, including annotations of the directional sides, e.g. 'north side'.	
Wind-Categories 1, 2, 3 (Where applicable)	**Floor Plans:** The floor plans need to be to a scale of 1:100 or 1:50. Floor plans are required if the proposal includes any ancillary buildings.	
Wind-Categories 1, 2, 3	**Design and Access Statement (Scheme Feasibility):** **A) Summary information:** The Statement should provide reasoned explanation of the following: - Anticipated power output (capacity); - Amount: why the number of turbines proposed has been chosen; - Layout: why the layout and positioning of the turbine/s and any ancillary equipment is proposed; - Scale and appearance: why the proposed turbine size and appearance has been selected; - Landscaping: what landscaping measures have been proposed (if any) and why.	
Wind-Categories 2, 3 (Where applicable)	The Statement should also detail the following, if applicable: **B) Site Selection:** If the development is <u>not</u> associated with a single private dwelling, farm or business, the Applicant is to provide details of all other potential sites considered and details of why these alternative sites have been discounted. The Applicant should demonstrate that the following items were adequately taken on board during the consideration of all potential sites: • wind levels and receptors • proximity of site to dwellings • capacity of the site • grid connection (see 'Grid Connection' below) • access (see 'Access for construction' below)	
Wind-Categories 1, 2, 3	**C) Viability of proposed site:** The Applicant is required to demonstrate that the proposed site is feasible. As a minimum, evidence of the following should be provided: • Investigations into wind levels and the identification of the most suitable wind receptor positioning. • Means of grid connection (if applicable).	
	- Grid connection: If the turbine will be supplying power to the National Grid, the Applicant shall provide: • details of the proposed means of connection (if other means of	

Wind- Categories 1, 2, 3 (Where applicable)	connection were explored and discounted, details of these alternative means and reasons for discounting should also be supplied); • evidence of liaison with the appropriate electricity body regarding connection to the National Grid. **- Access for construction:** If an abnormal load, details of the temporary and permanent access works required for the erection of the wind turbine/s and ancillary equipment should be supplied by the Applicant. The proposal should include details of access required from the public highway. A transport assessment detailing how the turbine/s would be transported to site if it was an abnormal load and an access strategy for future ongoing maintenance works and the decommissioning of the wind turbine/s are not required at this stage, but may be required (by condition) should the scheme be approved. Mapping should be supplied as necessary.	
Solar- All applications	**Design and Access Statement (Scheme Feasibility):** **A) Summary information:** The Statement should provide reasoned explanation of the following: - Anticipated power output (capacity); - Amount: why the number of solar panels/ collectors has been chosen; - Layout: why the layout and positioning of the panels/ collectors and any ancillary equipment is proposed; - Technology: why the proposed technology has been selected; - Landscaping: what landscaping measures have been proposed (if any) and why.	
Solar- Large scale applications	The Statement should also detail the following, if applicable: **B) Site Selection:** For large scale developments, the Applicant is to provide details of all other potential sites considered and details of why these alternative sites have been discounted.	
Solar- Large scale and commercial medium scale applications	**C) Viability of proposed site:** The Applicant is required to demonstrate that the proposed site is feasible. As a minimum, evidence of the following should be provided: • Investigations into solar levels and the identification of the most suitable solar receptor positioning. • Means of grid connection (if applicable).	
Solar- All applications (Where applicable)	**- Grid connection:** If the solar installation will be supplying power to the National Grid, the Applicant shall provide: • details of the proposed means of connection (if other means of connection were explored and discounted, details of these alternative means and reasons for discounting should also be supplied); • evidence of liaison with the appropriate electricity body regarding connection to the National Grid. **- Access for construction:** Details of the temporary and permanent access works required for the	

	installation of the solar equipment and ancillary equipment should be supplied by the Applicant. The proposal should include details of access required from the public highway. An access strategy for future ongoing maintenance works and the decommissioning of the installation is not required at this stage, but may be required (by condition) should the scheme be approved. Mapping should be supplied as necessary.	
Biomass	**Design and Access Statement (Scheme Feasibility):** **A) Summary information:** The Statement should provide reasoned explanation of the following: - Anticipated power output (capacity); - Number: if more than one, why the number of boilers has been chosen. - Positioning: why the location of the facility/ equipment and any ancillary equipment is proposed. - Technology: why the proposed technology has been selected. - Landscaping: what landscaping measures have been proposed (if any) and why.	
Biomass (Where applicable)	The Statement should also detail the following, if applicable: **B) Site Selection:** The Applicant is to provide details of all other potential sites considered and details of why these alternative sites have been discounted. **C) Viability of proposed site:** The Applicant is required to demonstrate that the site proposed is feasible. As a minimum, it should be demonstrated that consideration has been given to the following: • The source of biomass; • The relationship between the site and the end point where the heat/ heat and electricity generated will be used; **- Access for construction (where applicable):** Details of the temporary and permanent access works required for the development should be supplied by the Applicant. The proposal should include details of access required from the public highway. Mapping should be supplied as necessary.	
Wind-Categories 1*, 2, 3 (* not required for Category 1 applications for a single turbine)	**Photomontages:** As a minimum, photomontages should: • Include a range of receptor locations including residential locations, open space, public roads and rights of way. • Ensure that the view points represent the impacts from a range of distances, with good coverage from within 5km of the proposed development. The Applicant should provide an accompanying map indicating the position and direction that each photomontage is 'taken' from. Photomontages **must** be representative of the true size, scale, colour and positioning of the proposed development.	

Wind- Categories 1, 2, 3	**Details and drawing/s of proposed wind turbine/s:** To include (as a minimum) details of: • turbine height (hub height and total maximum height to blade tip); • blade length; • number of blades; • colour; • materials; • anticipated power outage; • anticipated noise output per turbine (as per manufacturers published guidance); • details and drawing/s of any other equipment which will be visible above ground which is directly necessary for the operation of the wind turbine/s; • drawing of turbine, including details of minimum ground-to-blade distance; • model details/ manufacturer reference number. All drawings to show measurements and to be drawn to an identified scale.	
Solar- All applications	**Details and drawing/s of the proposed panels/ collectors:** To include (as a minimum) details of: • model details/ manufacturer reference number; • size; • colour; • materials; • anticipated power outage. All drawings to show measurements and to be drawn to an identified scale.	
Biomass- Applications for external stand alone biomass boilers only	**Details and drawing/s of the proposed biomass equipment:** To include (as a minimum) details of: • model details/ manufacturer reference number; • size; • colour; • materials; • anticipated power outage. All drawings to show measurements and to be drawn to an identified scale.	
Wind- Categories 1, 2, 3	**Mitigation Proposal:** The Applicant shall prepare a mitigation proposal report. The report shall include, as a minimum, details of the measures proposed to mitigate against adverse: • visual impact upon dwellings (Policy WT8) • noise (Policy WT9) • impacts upon biodiversity and ecology (Policy WT12) • impacts upon heritage (Policy WT13) • shadow flicker and reflected light (Policy WT14) • impacts in terms of cumulative landscape impacts and capacity (Policy WT15) The report should outline: • The anticipated impacts of the proposed development that	

	have been identified; • The proposed measures to mitigate against said impacts and details of any alternative mitigation measures explored; • Details of why the proposed mitigation measures were selected as the preferred options over any alternatives. • If applicable, the report should outline the benefits of the proposed mitigation measure in the short, medium and long term.	
Solar **Biomass**	**Mitigation Proposal:** The Applicant shall prepare a mitigation proposal report. The report should outline: - The anticipated impacts of the proposed development that have been identified; - Details of why the proposed mitigation measures were selected as the preferred options over any alternatives.	
Wind **Solar** **Biomass** (Where applicable)	**Biodiversity and Ecology Considerations and Report:** Completion of the Natural England checklist is required. An accompanying report may also be required, as indicated on the checklist or if the site is within any international, national, regional or locally designated area for nature conservation. In the case of major applications, a report is also required if the site is within 200m of any of the above. Supporting surveys should be submitted as necessary. More Information at: http://www.naturalengland.org.uk/ (Search for: 'Standing Advice')	
Wind **Solar** **Biomass** (Where applicable)	**Heritage Considerations Report:** Required if there are any designated heritage sites, features or areas (heritage 'assets') within: - 100 times the hub height of a proposed turbine/s; - An appropriate distance of a proposed solar installation; - An appropriate distance of a proposed biomass facility. If there are no heritage assets within this distance the Applicant should provide a statement to this effect. A Heritage Considerations Report shall: • describe and assess the significance, locally, regionally, nationally and internationally, of the heritage asset/s within the distance stated above in order to determine its value; • identify the impacts (if any) of the proposed development upon the heritage asset/s identified; • if the proposed development would harm the heritage asset/s or it's /their setting, provide justification for the development and demonstrate how the anticipated benefits of the development would outweigh the harm.	
Wind **Solar** **Biomass**	**Site Specific Flood Risk Assessment:** Applicants should check the Environment Agency matrix (see http://www.environment-agency.gov.uk/) to establish what flood zone the site lies within. The website will indicate whether a proposal in that flood zone will require a flood risk assessment to be submitted.	

(Where applicable)		
Wind **Solar** **Biomass** (Where applicable)	**Tree Report (Arboricultural Implications):** For proposals on sites that have a tree/s with a Tree Preservation Order (TPO), or sites that have trees (with or without TPOs) and fall within a Conservation Area, a tree report and corresponding scaled plan is required. This also applies to trees which are within 5 meters of the site which fall under the above criteria. A tree report needs to detail any trees that are proposed to be removed and an explanation as to why, and also needs to detail those trees that are to remain along with what methods would be used to protect them during the construction/ installation period. A corresponding scaled plan is required showing the position of all trees on site, highlighting those that are proposed to be removed. This could be shown on the site plan.	
Wind **Solar** **Biomass** (Where applicable)	**Contamination:** Applicants may need to submit a contamination desk study or report if the site is potentially contaminated. If unsure of whether the site is potentially contaminated and thus whether a report is required, applicants should contact either the Scientific Officer at Fenland District Council or the Technical Support Team.	
Biomass- Application for facilities which may have more than one delivery vehicle on site at any one time	**Delivery Management Plan:** As detailed in part 'iv' of Policy B6. The plan must outline how traffic to and from site will be managed (including staff traffic if applicable) to ensure that traffic issues do not arise and that the site operations will not generate any threat to highway safety.	

Appendix B: Examples of Planning Conditions Imposed on Approved Wind Turbine and Solar Developments

The table below outlines examples of conditions imposed on approved wind turbine and solar applications and the reasons for said conditions being imposed. It should be noted that the conditions have been provided for information and are examples only. The wording of, content of and reasons for any condition imposed in relation to the approval of a wind turbine or solar development may vary to those listed below. Furthermore the examples listed below are not exhaustive and conditions relating to condition themes different to those listed below may be imposed.

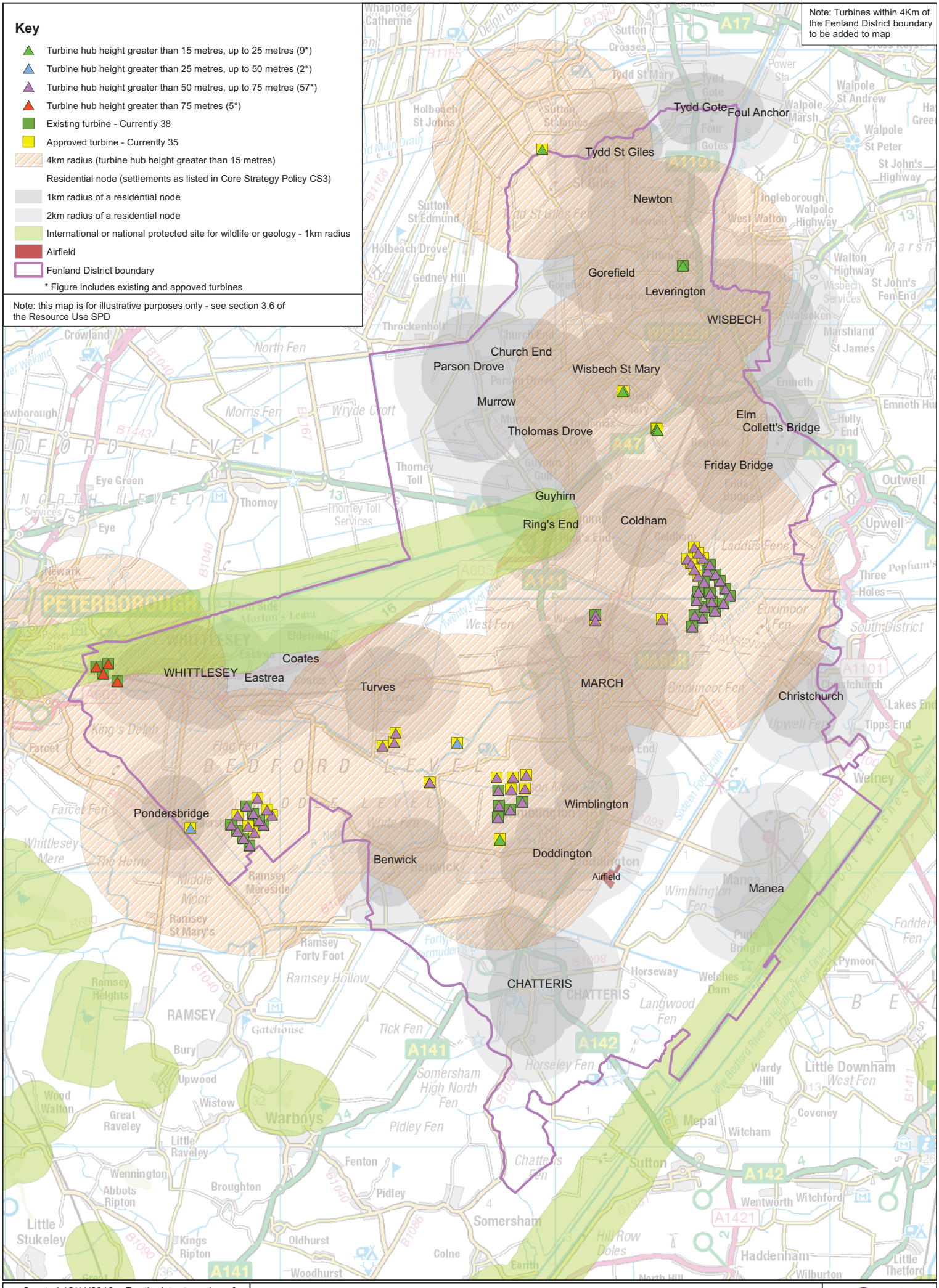
Condition theme	Condition example	Reason/s for the imposition of such a condition
Time limit	The development permitted shall be begun before the expiration of 3 years from the date of this permission.	To ensure compliance with Section 51 of the Planning and Compulsory Purchase Act 2004.
Time period	Within a period of 25 years from the date of the first electricity generation on site the development hereby permitted shall be removed from the site in its entirety and the site restored to its former condition unless otherwise agreed in writing by the Local Planning Authority.	The proposal is not one that the Council is prepared to permit other than for a temporary period in the interests of the amenity of the area as the development has a limited operational life. To allow the Local Planning Authority to re-assess the condition of the development in line with the potential life span of the development.

Decommissioning	Not later than 12 months before the end of this permission, a decommissioning and site restoration scheme shall be submitted for the written approval of the Local Planning Authority. The scheme shall make provision for the removal of the wind turbines and associated ancillary equipment to a depth of at least 0.2 metres below ground. The scheme shall include: the management and timing of any works; a traffic management plan to address likely traffic issues during the decommissioning period; an environmental management plan to include details of measures to be taken during the decommissioning period to protect wildlife and habitats and a programme of implementation. The approved scheme shall be fully implemented within 12 months of the expiry of this permission.	In the interests of the amenity of the area.
Failure to produce electricity	If any wind turbine fails to produce electricity for a continuous period of 12 months then, unless otherwise agreed in writing by the Local Planning Authority, the wind turbine and its associated ancillary equipment shall be removed from the site within a period of 3 months from the end of the 12 month period. The land shall be reinstated in accordance with a scheme (including management and timing of the works and a traffic management plan) submitted to and approved in writing by the Local Planning Authority. ……. Unless otherwise agreed in writing with the Local Planning Authority, within 6 months of cesstation of electricity generation at the site (or the expiry of the permission, whichever is the sooner), all parts of the development hereby approved shall be dismantled and removed from the site.	In the interests of the appearance of the locality.

Noise	The noise emissions from effects of the wind turbines, as measured in free field conditions at any dwelling and in accordance with ETSU-R-97, shall not exceed: a) between 07:00 and 23:00 hours on any day the greater of 35dB L A90,10mins or 5dB(A) above the quiet Waking Hours Day Time Background Noise Level at that property; or b) between 23:00 hours on any day and 07:00 on the following day, the greater of 43dB L A90, 10mins or 5dB (A) above the Night Hours Background Noise Level at that property.	To protect the residential amenity of neighbouring properties.
Highways	No development shall take place until a scheme to secure any repairs to the proposed access route required as a consequence of the development have been submitted to and approved in writing by the Local Planning Authority. The scheme shall include proposals for a condition survey of the length of road shown as the access route and a programme and methodology for any necessary repairs following the completion of construction. The scheme shall be implemented as approved.	In the interests of highway safety.
Construction hours	Construction work shall only take place between the hours of 07:00 – 18:00 on Monday to Friday inclusive, 08:00 – 13:00 hours on Saturdays with no such construction work on a Sunday or Public Holiday. Outside these hours, works at the site shall be limited to emergency works and dust suppression, unless otherwise approved in writing by the Local Planning Authority. The Local Planning Authority shall be informed in writing of emergency works within three working days of the occurrence.	In the interests of residential amenity.
Temporary construction compound	The temporary construction compound and all materials, plant and structures within it shall be removed and the land returned to its former use within a period of three months following the commissioning of the wind turbine.	In the interest of the appearance of the locality.

Colour, finish and signage	Prior to the erection of any turbine, details of the finish and colour of the wind turbines and any external transformer units shall be submitted to and approved in writing by the Local Planning Authority. No name, sign, symbol or logo shall be displayed on any external surfaces of the turbines or any external transformer units other than those required to meet statutory health and safety requirements. The agreed colour finishes of the wind turbines shall not be changed without the prior consent in writing of the Local Planning Authority.	In the interests of the appearance of the locality.
Blade rotation	The blades of all of the wind turbine generators shall rotate in the same direction.	To safeguard the visual amenities of the area.
Television interference	Prior to the First Export Date a scheme providing for the investigation and alleviation of any electro-magnetic interference to television caused by the operation of the turbines shall be submitted to and approved in writing by the Local Planning Authority. The scheme shall provide for the investigation by a qualified television engineer of any complaint of interference with television reception at a lawfully occupied dwelling (defined for the purposes of this condition as a building within Use Class C3 and C4 of the Use Classes Order), which lawfully exists or had planning permission at the date of this permission, where such complaint is notified to the developer by the Local Planning Authority within 12 months of the First Export Date. Where impairment is determined by the qualified television engineer to be attributable to the wind farm, mitigation works shall be carried out in accordance with the scheme which has been approved in writing by the Local Planning Authority.	In the interests of residential amenity.
Archaeological work	No development shall take place until the applicant has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved in writing by the Local Planning Authority.	In the interest of the historic environment.

Contamination	If during development contamination not previously identified is found to be present at the site, no further development shall be carried out until a report detailing the nature of the contamination and how it will be remediated has been submitted to and approved by the Local Planning Authority and implemented as approved.	In the interest of health and safety.
Bats	No development shall take place before details of likely bat habitats, if any, within the vicinity of the site, and an assessment of the potential risk of bats colliding with the proposed wind turbine, have been submitted to the Local Planning Authority and approved in writing. If bat activity and potential risk of collision is confirmed, no development shall take place before a detailed scheme for the post construction monitoring of bats and bat activity on the site during the first active season following the commissioning of the wind turbine has been submitted to the Local Planning Authority and approved in writing. The monitoring shall thereafter be undertaken in accordance with the approved scheme.	In the interest of the welfare of bat species and habitats.
Omni- directional red light	No development shall take place before details for the provision of a 25 candela omni-directional red light on the wind turbine have been submitted to the Local Planning Authority and approved in writing. The light shall be installed in accordance with the approved scheme and it shall thereafter be retained and operated until the wind turbine is dismantled.	In the interest of aviation safety.
Shadow flicker	No development shall take place until a scheme detailing the protocol for the assessment of any complaint of shadow flicker resulting from the development, including remedial measures, has been submitted to the Local Planning Authority and has been approved in writing. Operation of the turbine shall take place in accordance with the agreed protocol.	In the interest of residential amenity.


Key
Turbine hub height greater than 15 metres, up to 25 metres (9*)
Turbine hub height greater than 25 metres, up to 50 metres (2*)
Turbine hub height greater than 50 metres, up to 75 metres (57*)
Turbine hub height greater than 75 metres (5*)
Existing turbine - Currently 38
Approved turbine - Currently 35
4km radius (turbine hub height greater than 15 metres)
Residential node (settlements as listed in Core Strategy Policy CS3)
1km radius of a residential node
2km radius of a residential node
International or national protected site for wildlife or geology - 1km radius
Airfield
Fenland District boundary
* Figure includes existing and appoved turbines
Note: this map is for illustrative purposes only - see section 3.6 of the Resource Use SPD
Note: Turbines within 4Km of the Fenland District boundary to be added to map
Tydd Gote
Foul Anchor
Tydd St Giles
Newton
Gorefield
Leverington
WISBECH
Church End
Parson Drove
Wisbech St Mary
Murrow
Tholomas Drove
Elm
Collett's Bridge
Friday Bridge
Guyhirn
Ring's End
Coldham
WHITTLESEY
Coates
Eastrea
Turves
MARCH
Christchurch
Pondersbridge
Wimblington
Benwick
Doddington
Airfield
Manea
CHATTERIS
RAMSEY
Somersham
Warboys
Mepal
Sutton
Haddenham
Created 12/11/2013. For the latest version of this map visit www.fenland.gov.uk/XXXXX
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Map of existing turbines and key constraints
0 1 2 3 4 5 6 7 8 9 10 Km
N
Scale = 1:120,000 A3
Fenland
CAMBRIDGESHIRE
Fenland District Council