

Angus Local Development Plan (2016)

Renewable and Low Carbon Energy Development Draft Supplementary Guidance

Committee Draft

2016

PREFACE

There is ongoing interest in developing renewable energy projects throughout the Angus Local Development Plan (ALDP) area. Whilst the majority of proposals submitted to date have been for wind turbines, increasingly other technologies such as hydro, solar/PV, and biomass installations have come forward. The ALDP as adopted on 23rd September 2016 sets out the Council's land use planning policies for assessing renewable and low carbon energy proposals.

This Draft Supplementary Guidance (SG) was approved for consultation by Angus Council on ... and is designed to provide additional information and guidance for developers, members of the public and council officers

A Strategic Environmental Assessment and Habitats Regulation Assessment (HRA) have been undertaken and are published for consultation alongside this SG.

The period for consultation on both the draft SG and Environmental Report extends until xx xxxxxx 2016 and copies of the documents are available to view at ...

On completion of the consultation period for the Draft SG all comments, proposed modifications and Statement of Publicity will be reported back to a future meeting of Angus Council for approval prior to submission to the Scottish Ministers who will have 28 days to respond. Angus Council will then adopt the Supplementary Guidance unless Scottish Ministers have directed otherwise. The Environmental Report and HRA, as amended if required, will be considered at the same Council meeting.

Angus Council xxx 2016

Contents

1. Introduction

- **Background Policy Context**
- **The Development Plan**
- **Supporting Documents**
- **How to use this SG**

2. Spatial Framework for Onshore Wind Energy Development

- **Mapping the Spatial Framework**
- **Landscape and Visual Assessment of Wind Energy Proposals**

3. Renewable and Low carbon Energy Development

- **Local Plan Context**
- **Community Ownership/Benefit**
- **Applications Checklist**

4. Guidance for Applicants - Development Management Considerations

- **Development Principles**
- **Policy PV9 Renewable and Low Carbon Energy Development**

- **Introduction to the Interactive Map**

5. Interactive Map

Maps

1-4 Spatial Framework for Onshore Wind Energy Development

5 Angus Geographic Areas

Tables

1 SPP Spatial Framework (Onshore Wind Energy Development) - Criteria

2 Spatial Framework (Onshore Wind Energy Development) - supporting information

3 Determining Authority

4 Renewable and Low Carbon Energy Overview

Appendices

- 1 Applications Checklist**
- 2 Legislation Guidance and Links**
- 3 ALDP and SPP compatibility**
- 4 Acronyms used in this Report**

Policy PV9: Renewable and Low Carbon Energy Development

Proposals for renewable and low carbon energy development* will be supported in principle where they meet the following criteria:

- the location, siting and appearance of apparatus, and any associated works and infrastructure have been chosen and/or designed to minimise impact on amenity, landscape and environment, while respecting operational efficiency;
- access for construction and maintenance traffic can be achieved without compromising road safety or causing unacceptable change to the environment and landscape;
- the site has been designed to make links to the national grid and/or other users of renewable energy and heat generated on site;
- there will be no unacceptable impact on existing or proposed aviation, defence, seismological or telecommunications facilities;
- there will be no unacceptable adverse impact individually or cumulatively with other existing or proposed development on:
 - landscape character, setting within the immediate and wider landscape (including cross boundary or regional features and landscapes), sensitive viewpoints and public access routes;
 - sites designated for natural heritage (including birds), scientific, historic, cultural or archaeological reasons;
 - any populations of protected species; and
 - the amenity of communities or individual dwellings including visual impact, noise, shadow flicker.
- during construction, operation and decommissioning of the energy plant there will be no unacceptable impacts on:
 - groundwater;
 - surface water resources; or
 - carbon rich soils, deep peat and priority peatland habitat or geodiversity.

Where appropriate mitigation measures must be supported by commitment to a bond commensurate with site restoration requirements.

Consideration may be given to additional factors such as contribution to targets for energy generation and emissions, and/or local socio-economic economic impact.

Supplementary guidance will be prepared to set out a spatial framework to guide the location of onshore wind farm developments, consistent with the approach set out in Table 1 of Scottish Planning Policy. It will also provide further detail on the factors which should be taken into account in considering and advising on proposals for all types of renewable energy development.

(* Sensitive Areas are defined in the Regulations as :- Sites of Special Scientific Interest; Land subject to Nature Conservation Orders; International Conservation Sites; National Scenic Areas; World Heritage Sites; Scheduled Monuments; and National Parks.)

1. Introduction

This Supplementary Guidance (SG) has been prepared to support the use and implementation of Angus Local Development Plan (ALDP) Policy PV9 Renewable and Low Carbon Energy Development. It sets out the Spatial Framework for onshore wind turbines and detailed criteria to assist the development and assessment of proposals for renewable and low carbon energy development, facilitating consistent interpretation and application of the policy.

The main objectives of the Supplementary Guidance are to:

- Establish a spatial framework for onshore wind energy development;
- Provide advice on the interpretation of ALDP Policy PV9 to provide a consistent approach to decision-making for all renewable and low carbon energy development;
- Guide new development to appropriate and sustainable locations, where impact including on landscape quality, amenity, and natural and built heritage can be minimised; and
- Develop policy guidance from the Scottish Government on development management considerations for renewable and low carbon energy development.

The SG is supported by an online interactive mapping facility (insert web link) designed to allow different features and/or designations to be viewed and overlain providing an indication of factors for consideration in preparing and assessing development proposals. Links to guidance, advice and legislation are included (APPENDIX 3) to help the user access relevant information, but these are not exhaustive.

Applications should meet the terms of this SG as appropriate, and information submitted with an application should be proportionate to the proposed development as agreed with the planning service in advance. Early discussion with council officers will help applicants submit proposals which meet the policy criteria.

Background Policy Context

Tackling climate change is one of the biggest environmental challenges we face. As a global response the United Nations Framework Convention on Climate Change was adopted in 1992. Subsequently at the Paris Climate Conference (2015) 195 countries adopted the first-ever universal, legally binding global climate deal. It includes emissions reduction, incorporating:-

- a long-term goal of keeping the increase in global average temperature to well below 2°C above pre-industrial levels;
- aiming to limit the increase to 1.5°C, since this would significantly reduce risks and the impacts of climate change;
- the need for global emissions to peak as soon as possible, recognising that this will take longer for developing countries;
- undertaking rapid reductions thereafter in accordance with the best available science.

Global targets are delivered through national legislation and targets, including Scotland's National Planning Framework (NPF) and Scottish Planning Policy (SPP). The planning system will contribute to achieving these targets and the Development Plan will help ensure that well located and designed projects in Angus contribute to the delivery of the national targets including, by 2020:-

- ...reduce total final energy demand by 12% through continued energy efficiency and diversification of supplies.
- ...meet at least 30% of overall energy demand from renewables which includes generating the equivalent of at least 100% of gross electricity consumption from renewables.
- ... source 11% of heat demand and 10% of transport fuels from renewable sources.
- ... achieve 16 GW of installed capacity.

SPP states that planning should aid the transition to a low carbon economy through support for a diverse range of renewable energy technologies and guiding individual developments to appropriate locations. Additionally, the planning system should help reduce carbon emissions from new buildings, through inclusion of renewable electricity and heat or reducing greenhouse gas emissions from non-renewable heat and electricity sources. Specifically, the SPP requires LDPs to:-

- make provision for and application of heat mapping (Policy PV 11);

- include a spatial framework for wind energy at a scale of development defined by the local planning authority(SG); and
- define development management considerations for renewable energy proposals as they apply in the LDP area. Guidance should address location, visual, landscape and cumulative impact, designated sites and species, amenity etc. (SG and various ALDP policies).

The Development Plan

The Development Plan comprises TAYplan Strategic Development Plan and Angus Local Development Plan. It is supportive of renewable energy in principle and makes provision for the development of renewable and low carbon energy proposals in Angus outwith the area of the Cairngorms National Park Authority (CNPA).

ALDP Policy PV9 requires a spatial framework for onshore wind energy and defines appropriate criteria against which to assess renewable and low carbon energy development proposals. This is in accordance with TAYplan Policy 6: Energy and Waste/Resource Management Infrastructure (Appendix) NPF and SPP. It provides the basis for more detailed development management guidance contained within this SG. The ALDP contains a range of policies that should be taken into account in the preparation of any development proposal and against which proposals will be assessed as appropriate.

On adoption this SG will form part of the ALDP. Heat mapping, Decarbonised Heat and Energy Efficiency are addressed directly by Policies PV10 and 11 and Waste Management Facilities in policy PV17, but where appropriate the principles established in this SG will also apply.

SPP promotes an integrated approach to coastal planning and requires that development planning takes the Marine Plan into account and vice versa. This is recognised in the ALDP and over the life of the Plan and this SG, the Marine Plan and subsequent Regional Marine Plans should help better integrate on and off shore planning.

Supporting Documents

Strategic Environmental Assessment

This SG qualifies for the requirements of a Strategic Environmental Assessment (SEA) under the Environmental Assessment (Scotland) Act 2005. An Environmental Report (ER) has been prepared which illustrates the SEA process and all potentially significant

environmental effects associated with the SG, and should be read in conjunction with the parent ER submitted with the ALDP which provides the initial assessment of policy PV9. Habitats Regulation Appraisal

A Habitats Regulation Appraisal (HRA) screening exercise has been undertaken for the SG. The requirement to consider the effect on Natura 2000 sites of development plans is transposed into national legislation through the Conservation (Natural Habitats, &c.) Regulations 1994, as amended, and are normally referred to as the Habitats Regulations. The HRA for this SG is incorporated as an annex to that for the ALDP.

How to use this SG

Section 2 sets out the spatial framework for onshore wind turbines and local considerations for the preparation and assessment of wind energy proposals;

Section 3 provides an overview of the main renewable and low carbon technologies and general planning considerations they raise;

Section 4 sets out guidance for applicants on development management considerations used in the assessment of all renewable and low carbon development proposals and appropriate ;

Section 5 provides an interactive map tool, allowing development proposals to be considered within a spatial context

Appendix 1 - Applications Checklist summarises the supporting information that may be required to accompany a planning application for renewable energy development. it is an aid for applicants, and should be read in conjunction with the rest of this SG, the Development Plan and other relevant legislation, policy and advice.

Appendix 2 - information sources and contacts as per the Development Management considerations.

Appendix 3 - ALDP and SPP renewable and low carbon energy compatibility.

Appendix 4 – Glossary.

2. Spatial Framework for Onshore Wind Energy Development.

The spatial framework follows the approach outlined in SPP Table 1. It identifies areas in the ALDP area which have potential for wind farm development as defined by the SPP Spatial Framework Criteria. The Spatial Framework for Onshore wind Energy is illustrated in Table 1 and Maps 1-4 below.

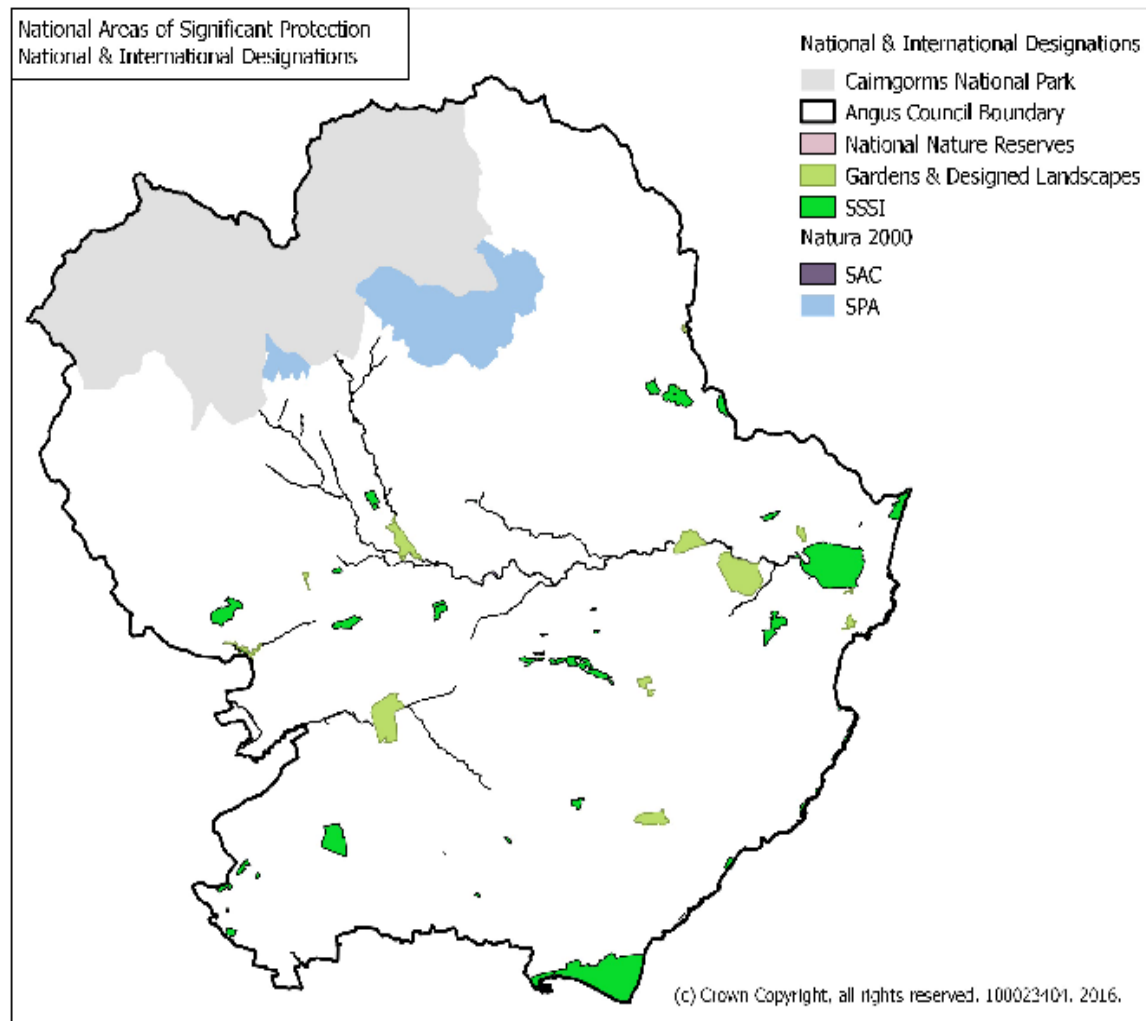
Mapping the Spatial Framework for Onshore Wind Energy Development

There are no Group 1 Areas (where wind farms will not be acceptable) within the plan area. Group 2 Areas of Significant Protection as listed in Table 1 below are shown on Maps 1 to 3. These combine to define the Spatial Framework and Areas with Potential for Wind Farm development on Map 4 where wind farms are likely to be acceptable, subject to detailed consideration against identified policy criteria (as defined in policy PY9 and this SG in accordance with SPP). Within Angus the spatial framework for the ALDP area applies to all wind turbines greater than 50m, and turbines less than this height will be considered within the context of the spatial framework as appropriate.

Wind energy applications that fall within the Cairngorms National Park will be referred to the Park Authority for determination. Those within the ALDP area which might affect the integrity of the National Park will be referred to the Cairngorms Park Authority for comment

Table 1: SPP Spatial Framework (Onshore Wind Energy Development) - Criteria

Category	Designation	Angus Spatial Framework Layer
Group 1 – Areas where wind farms will not be acceptable	National parks and National Scenic Areas	None
Group 2 - Areas of Significant protection	National and International Designations	Map1 – <ul style="list-style-type: none"> • 9 Natura 2000 and Ramsar sites; • 36 SSSIs within ALDP area, 32 SSSI only; • 14 Sites identified in the Inventory of Gardens and Designed Landscapes;
	Other nationally important mapped environmental interests	Map 2 - <ul style="list-style-type: none"> • Angus Glens within the ALDP area include part of wild land area 16: Lochnagar-Mount Keen • carbon rich soils, deep peat and priority peatland habitat as defined by Scottish Natural Heritage
	Community separation for the consideration of visual impact	Map 3 - 2km development boundaries identified on the local development plan with an identified settlement envelope or edge
Group 3- Areas with potential wind farm development	Beyond groups 1 and 2, wind farms are likely to be acceptable, subject to detailed consideration against identified policy criteria.	Map 4 – Spatial Framework Combine Group 2 areas (Maps 1-3) to define Areas of Significant Protection and - Areas with Potential Wind Farm Development

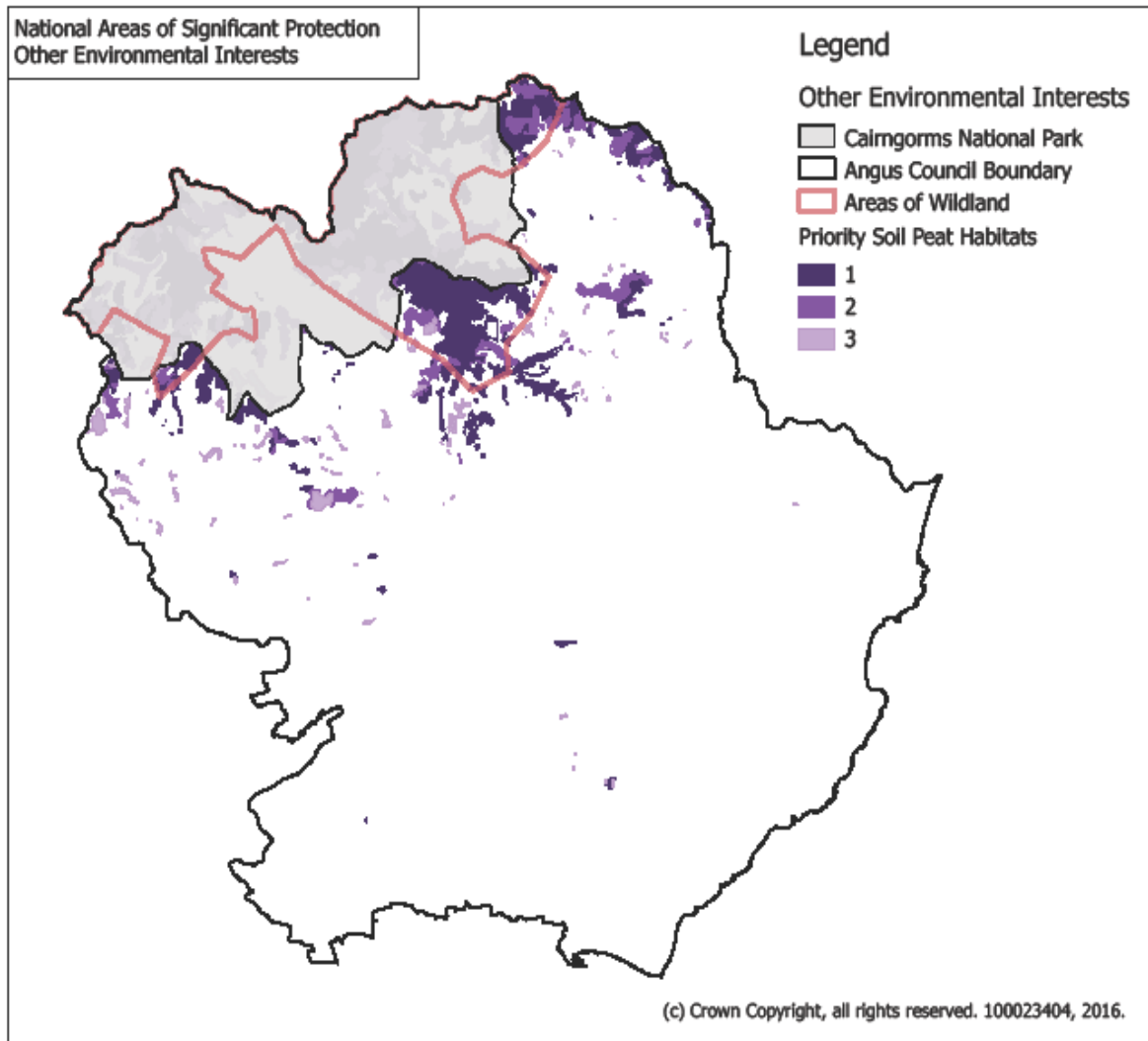


MAP 1 - National and International Designations

Map 1 illustrates the National and International designations within the Angus ALDP area. There are no World Heritage Sites; National Nature Reserves or sites identified in the Inventory of Historic Battlefield within the ALDP area.

The sites in this category within the ALDP area are designated for their natural heritage or landscape value. SSSIs and Natura 2000 sites are protected by legislation. HES identifies sites included in the Inventory of gardens and Designed Landscapes and any changes which affect them are considered under Town Planning Regulations

Layers can be viewed on the interactive map at (insert link) and site details can be found at SNH Sitelink <http://gateway.snh.gov.uk/sitelink/index.jsp>



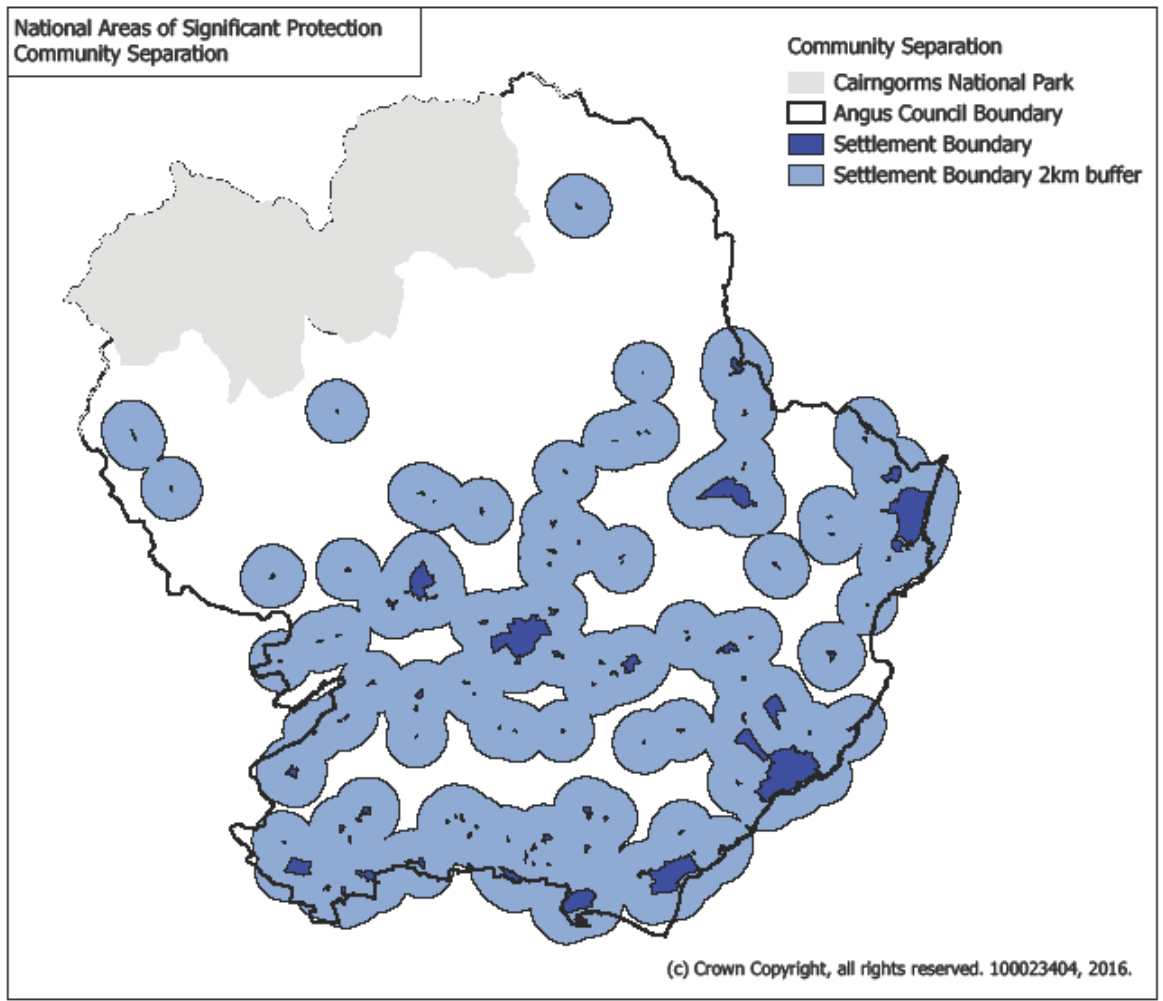
MAP 2 – Other nationally important mapped environmental interests.

Wild Land Area 16 Lochnagar and Mount Keen extends into north-east Angus, highlighting the connection with the Cairngorm Massif.

Significant deposits of Class 1, 2 and 3 Priority Peatland and Carbon Rich Soils are to be found on the Glens Plateau, extending north into the Cairngorms National Park. Minor deposits and myre systems are found throughout Angus, usually associated with small lochs and valleys. They are important biodiversity, water resource, natural carbon storage system assets.

These layers can be viewed in more detail on the interactive map at..

Layers can be viewed on the interactive map at (insert link) and SNH wild land and Priority Peatland and Carbon Rich Soil information on their website <http://www.snh.gov.uk/planning-and-development/planning-renewable-guidance/>



MAP 3 - Community Separation within the ALDP area

The areas illustrated on MAP 3 are 2km zones around development boundaries as identified in the ALDP.

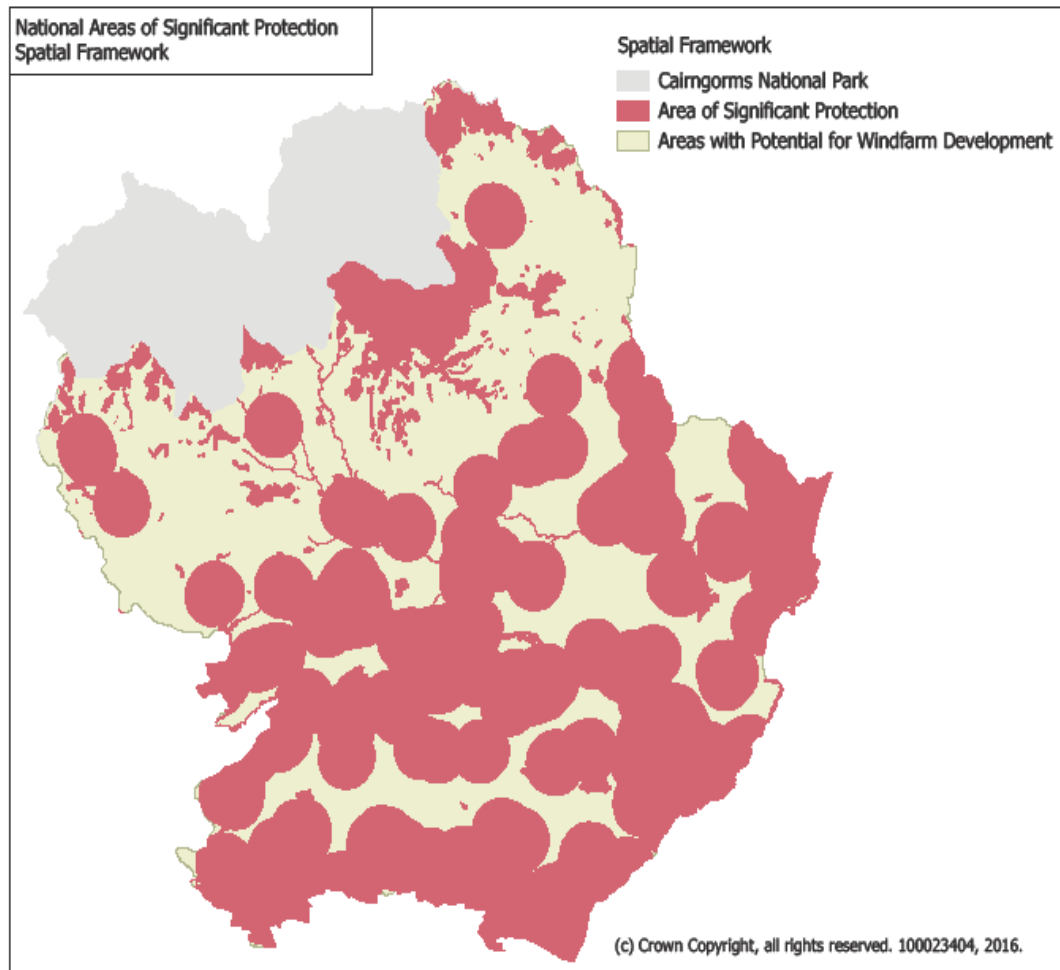
They should be considered as indicative of where visual amenity should be fully addressed in any planning application. Within these areas, landform, the built environment and natural features may mitigate or prevent any visual impact. Visual representations and maps can be submitted with an application demonstrating mitigating factors.

(SPP includes visual impact on individual buildings which is not mapped here but considered in relation to individual applications.)

These layers can be viewed in more detail on the interactive map at

Details about development boundaries can be found in the ALDP Policy DS1 and can be viewed on the interactive map at (insert link)

MAP 4: Spatial Framework for Onshore Wind Energy Development



Areas with potential for wind farm development

The spatial framework (MAP 4) identifies those areas without significant protection as areas with potential for wind farm development. Within Angus it applies to all turbines over 50m. The spatial framework identifies approximately half of Angus as having potential for windfarms and half as areas of significant protection.

The ALDP and this SG provide advice and policy context for specific proposals and it is likely that while there may be parts of Areas with Potential for Wind Turbines which are not able to accommodate wind energy development, equally sites and locations falling within the areas of significant protection may have capacity to accommodate wind farms of suitable scale, location and design.

This SG aims to help guide appropriate development to appropriate locations and assist applicants in finding those locations. The interactive map ([insert link](#)) can help identify spatial constraints which may influence development decisions.

Landscape and Visual Assessment of Wind Energy Proposals

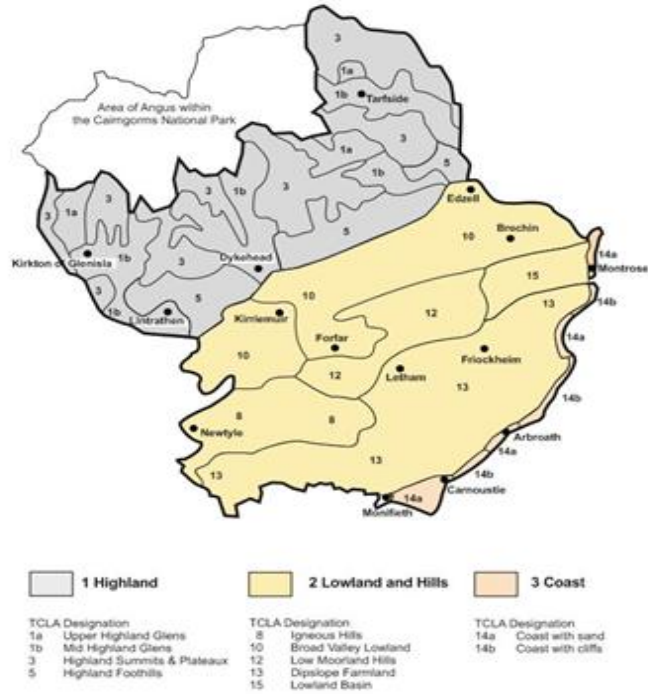
This section considers landscape and visual impact of wind turbines as a primary characteristic in determining site specific proposals following application of the wider parameters of the spatial framework. Other development considerations are addressed in Table as part of the general checklist for renewable and low carbon energy development.

The Tayside Landscape Character Assessment (TLCA), prepared by Land Use Consultants in 1999, is part of a series of assessments for Scotland prepared on behalf of SNH and the local authorities. It develops a landscape classification which identifies and describes a range of character areas and provides guidance on accommodating development and land use change. Whilst much of this guidance has been superseded, the definition of the landscape character areas and their vulnerability to some types of development remain valid, and should be used in conjunction with current SNH guidance.

The landscape character areas identify the three basic geographic areas of Angus (Figure 1 below):-

- Area 1 Highland - primarily the Angus Glens along and to the north of the Highland Boundary Fault;
- Area 2 Lowland and Hills - mainly rolling farmland and low hills;
- Area 3 Coast - a mix of sand, cliffs and, around Montrose, lowland basin.

Figure 1 : Angus Geographic areas



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The TCLA and geographic character of Angus inform and are refined in the Assessment of Strategic Capacity for Wind Energy in Angus (2014) and updated 2016. This report is a material consideration in the assessment of wind energy development (of turbines over 50m) outwith defined development boundaries and will assist in consideration of individual and cumulative landscape and

visual effects. It establishes a landscape analysis and classification for wind turbines, which defined available capacity for further wind turbines including cumulative impact limitations.

Within Development Boundaries it is not possible to define maximum turbine heights. Proposals for turbine development in towns and villages will be considered in the context of the ALPD policies and this SG and taking account of the following considerations:

- Scale and location;
- Landscape setting;
- Residential amenity including noise, shadow flicker, visual impact etc;
- Historic environment including townscape;
- Compatibility with adjacent uses;
- Proximity to sensitive receptors such as educational buildings, open space and leisure facilities, hospitals, residential care homes, cemeteries, visitor facilities and accommodation and proposed development areas
- Access;
- Design;
- Security of equipment/facility and
- Ancillary works

As the number of sites generating energy from wind increase, so does potential for conflict between different scales of development, and between proposed and existing development. Where proposals are submitted, the relative height and style of turbine (e.g. tower construction, number of blades, blade length) should increasingly reflect those already consented to promoted a harmonious development pattern from all directions from which the wind farms or turbines are viewed in combination.

Table 3: Spatial Framework for Onshore Wind Energy Development - supporting information (see also Section 4 Guidance for Applicants)

Potential Impact	Supporting Information
Landscape and Visual Representation	Landscape and Visual Impact (LVIA) should assess the sensitivity, magnitude and significance of landscape and visual impact. The level of information should reflect the scale of development and should be agreed with

	<p>planning officers. For proposals under 50m it may include and turbines over 50m will require:</p> <ul style="list-style-type: none"> • ZTV map covering an area appropriate to the height and extent of the turbine(s); • wireline drawings and/or photomontages from agreed viewpoints; • assessment of landscape sensitivity, magnitude of change and residual impacts. • viewpoints to be agreed with Angus Council, and SNH where appropriate; • design statement identifying design objectives and process; and • eight figure Ordnance Survey grid reference for each proposed turbine.
<p>Cumulative Assessment – Landscape and Visual</p>	<p>A cumulative ZTV (CZTV) should be produced on a clear and legible 1:50k Ordnance Survey Base plan. The CZTV would typically have a radius of up to 60km, in accordance with SNH guidance. The CZTV should:-</p> <ol style="list-style-type: none"> 1. include all consents and operational turbines over 50m to blade tip; 2. include extant planning consents and submitted applications which pre-date the submission and which are assessed by the Council to have a realistic expectation of a decision within 12 months; 3. include turbines under 50m (applications at an advanced stage, consents or operational) depending on their scale and location in relation to the application site i.e. visual interaction. This will only apply in specific circumstances; 4. include consented and proposed offshore proposals; 5. other relevant proposals in the public domain; 6. consider potential impact on viewpoints and access routes; 7. viewpoints for cumulative assessment, selected to provide representative views of all intervisible turbines, not from viewpoints selected to assess the application site. For example, a viewpoint may provide views in succession as defined by SNH (SNH Cumulative Effect of Windfarms (revised 2005)); and 8. cumulative assessments should include combined or simultaneous visibility; successive or repetitive visibility and sequential effects and perceived in accordance with SNH guidance. <p>Following the production of a CZTV, proposed viewpoints should be added and submitted to Angus Council for approval prior to carrying out the assessment. Angus Council does not use file share software. All submissions should be provided in a format which permits high resolution images to be provided. The use of CDs is advised.</p>

	<p>Cumulative assessments have not normally been required where turbines are 25-50m to blade tip, but as more turbines under 50m are constructed, a cumulative assessment may be required if turbine density within the area of a ZTV map is deemed to have a potentially unacceptable cumulative impact.</p>
<p>Environmental Impact Assessment (EIA)</p>	<p>Under the terms of The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011 a Screening Opinion should be sought for</p> <ul style="list-style-type: none"> • turbines over 15m; • more than 2 turbines; or • located in a 'sensitive area'* <p>* Sensitive Areas are defined in the Regulations as :- Sites of Special Scientific Interest; Land subject to Nature Conservation Orders; International Conservation Sites; National Scenic Areas; World Heritage Sites; Scheduled Monuments; and National Parks.</p>

Wind energy technology is advancing with a wide range of turbines available to the market. Initial discussions between the Council and developers should however seek to establish some basic characteristics such as proposed number and size of turbines, height (hub and blade tip), blade number, colour and style although it is recognised that this may be amended as the project feasibility is developed. Similarly where a full planning application is submitted this must include details of all aspects of the proposal. Where a specific proposal has been approved by the Council any alteration to that project must be agreed in writing with the Council prior to implementation.

3: Renewable and Low Carbon Energy Development.

Planning permission will normally be required for most renewable energy developments:-

Table 3: Determining Authority

Determining Authority	Responsibility
Local Planning Authority	<ul style="list-style-type: none"> • proposals <50MW capacity • comment on onshore proposals >50MW
Scottish Ministers http://www.gov.scot/Topics/Business-Industry/Energy/Infrastructure/Energy-Consents/	<ul style="list-style-type: none"> • electricity generating stations in excess of 50MW capacity • large oil and gas pipelines • overhead power lines and associated infrastructure
Marine Scotland http://www.gov.scot/Topics/marine/Licensing/marine	<ul style="list-style-type: none"> • offshore wind turbines • tidal generation • wave generation

The installation of micro-generation equipment, outwith Conservation Areas, is likely to be exempt from planning permission. These exemptions are outlined in Section 6 of the Scottish Government Circular 1/2012 'Guidance in Householder Permitted Development Rights' which can be viewed at <http://www.gov.scot/Resource/0038/00388268.pdf> (as reviewed) and for non-domestic permitted development rights at: <http://www.gov.scot/Publications/2015/11/2264>. The Scottish Government also provides a range of online planning advice for renewables which provides a good starting point for developers and applicants (<http://www.gov.scot/Topics/Built-Environment/planning/Policy/Subject-Policies/low-carbon-place/Heat-Electricity/renewables-advice>).

Local Plan Context

The Development Plan, comprising Angus Local Development Plan and TAYplan, is supportive of renewable energy in principle. Policy PV9 establishes the criteria against which individual renewable energy proposals will be assessed providing the basis for the more detailed development management guidance contained within this SG. The ALDP contains a range of policies and where relevant these should be taken into account in the preparation of any development proposal and against which proposals will be assessed. (Appendix 3 lists PV 9 criteria, cross-referencing these to SPP (2014) and other ALDP policies.)

Community Ownership/Benefit

Although community owned renewable energy generation is supported in principle where proposals are compatible with development plan policy, it must be made clear that negotiating or securing local community benefit is wholly separate from the planning application process and will not be considered as part of any planning application. Such local community benefit initiatives will therefore not fall within the obligations required under Section 75 Planning Agreements and will require to be managed by other means.

Applications Checklist

The checklist summarises the supporting information that may be required to accompany a planning application for renewable energy development. This is an aid for applicants, and for detailed information should be read in conjunction with the rest of this SG, the Development Plan and other relevant legislation, policy and advice (Appendix 1).

Overview

Renewable and low carbon energy development is increasingly common across Angus providing a growing input to green energy targets, with a number of innovative projects in the pipeline and a developing supply chain contributing to and diversifying Angus' economy.

Changes to support measures for renewable energy projects have had an impact on new projects coming forward, both in terms of numbers and timing. The longer term impact of these changes is not yet clear but will affect the sector during the life of the ALDP. We need to be flexible and responsive to emerging opportunities and how to accommodate them.

All forms of renewable energy development may be subject to planning regulation, and SPP established material considerations for the assessment of energy proposals. Whilst each case is different and impacts will relate to the technology, scale and location, in summary these include:-

- Landscape and visual impact;
- Cumulative impact (consented and existing)
- Access, tourism and recreation;
- Infrastructure – transport and communications;
- The water environment
- Socio-economic
- Emissions
- Amenity
- Restoration

Planning applications may require supporting information - check with the planning department to confirm information required for your specific proposal. Applications should indicate their contribution to meeting national emission reduction targets. Proposals will require to accord with a number of relevant ALDP policies, not only PV (see Section 4 and Appendix 1 for details).

Table 4 – Renewable and Low Carbon Energy Overview

Source	Types	Planning considerations	Supporting Information
Wind Energy	Onshore commercial wind turbines in Angus range from medium individual farm turbines to wind farms comprising three or more turbines. Whilst farm turbines have been widely approved and constructed across the ALDP area, wind farm development has focussed on the Sidlaw Hill and the Angus Glens.	strongly influenced by the scale and location of the proposal including:- <ul style="list-style-type: none"> • the spatial framework as defined in this SG; and • material considerations as they apply to wind energy proposals particularly visual, landscape and cumulative impacts. 	<ul style="list-style-type: none"> • Landscape & Visual Impact • EIA Screening • Radar/ communications • Traffic & Access • Peat & Soils • Water Environment • Air Quality • Noise • Amenity • Economic benefit/ community

			ownership
	Offshore wind farm proposals use larger turbines and are more extensive than onshore wind farms. Wind speeds and therefore output is greater offshore. Energy generated is centrally gathered offshore and transferred to onshore distribution points, Seabed cables are undergrounded as they come ashore. Landfall and energy transmission and distribution are subject to the land use planning process.		
Hydro	Run of river schemes where water is abstracted from a water course, diverted through pipes to a turbine and returned to the water course is the primary hydro plant installed in Angus. Most are very small, and often make use of existing infrastructure such as managed fishing lochs and Scottish Water installations.	include:- <ul style="list-style-type: none"> • water abstraction (usually by a low, ground or underwater intake weir) and return (usually in the form of a tailrace); • ancillary works such as pipeline, turbine house and access; and • effect on the water course and its ecology. 	Landscape & Visual Impact EIA Screening Traffic & Access Peat & Soils Water Environment Noise Amenity Economic benefit/ ownership community
	Where dams are constructed these are likely to be small scale and in addition to the above may raise issues relating to the scale and location and hydrogeology.	consideration should also be given to <ul style="list-style-type: none"> • transmission of power, construction works/compound and access routes, and environmental impact should be considered by the applicant; and • landscaping and planting proposals to reduce 	

		landscape and/or visual impact and improve biodiversity <ul style="list-style-type: none"> • 	
Biomass	<p>Ranges from small scale domestic boilers up to major commercial generators. The main issues will relate to commercial electricity generation, but proposals for domestic bio-energy facilities will still require to demonstrate there are no unacceptable adverse effects, particularly emissions. The Scottish Government has indicated that fuel source over the life of the plant will be a valid planning consideration to ensure sustainable bio-energy can be sourced. While woody biomass is the major source, there are increasingly projects based on other carbon based materials such as straw, distillery and food processing waste etc. (See section on Anaerobic Digestion (AD) and other Energy from Waste).</p>	<p>For large biomass plants will include:</p> <ul style="list-style-type: none"> • Scale, design and location; • Emissions; • Sustainable fuel source; • Access; and • Storage. 	<p>Landscape & Visual Impact EIA Screening Traffic & Access Peat & Soils Water Environment Air Quality Noise Amenity Economic benefit/ community ownership</p>
Anaerobic Digestion(AD) and other Energy from Waste	<p>Potential interest to the agriculture and food processing sectors in Angus, where biodegradable waste, farm slurry and energy crops such as maize are broken down by micro-organisms (digestion) in the absence of oxygen (anaerobic). This generates a bio-gas comprising methane and carbon dioxide methane and if treated can be injected into the gas grid or used as a vehicle or used directly in combined heat and power gas engines to produce electricity and heat. It is a constant and manageable process with a product that can produce energy for onsite or</p>	<ul style="list-style-type: none"> • Siting and location; • Fuel source and transport implications of importing material; • Disposal of digestate; • Landscape and visual impact; and • Proposed management and mitigation measures. <p>As a method of waste treatment and as such may also require to meet</p>	

	<p>offsite use and the residue (digestate) provides a nitrogen rich fertiliser.</p> <p>Limited landfill sites in Angus, current waste to heat plant arrangements with Dundee and improved recycling and waste management restrict potential.</p>	<p>regulations relating to emissions, odour and noise;</p> <p>The main planning issues will relate to location, design and emissions.</p>	
Solar/ Photovoltaics (P/V)	<p>Use energy from the sun to generate hot water (solar thermal) or electricity (solar p/v). Roof or ground mounted domestic arrays are common and large agricultural buildings provide opportunity for on-site generation for on farm use or export to the grid network.</p> <p>Solar farms can contribute to biodiversity and maintenance of land fertility through environmental management programmes, such as planting species that encourage and foster bee populations and allowing hive placement; contribute to the green network and interconnectivity of habitat and foster soil fertility. Solar farms may be located on good quality agricultural land and where possible grazing options should be considered.</p>	<p>reflect the scale and location of a development proposal and include:-</p> <ul style="list-style-type: none"> • landscape and visual impacts; • soil quality and farm viability; and • biodiversity and reinstatement. 	<p>Angus Council has approved as a material consideration a Strategic Landscape Capacity Assessment for Solar Energy in Angus. It provides a technical assessment of the landscape capacity to accommodate solar farms.</p>
Heat Pumps	<p>There are three types – ground, air and water. Heat pumps basically extract and discharge latent heat from one of these three sources. Ground source is an extensive, external installation requiring network of underground pipes and a ground level pump. The</p>	<p>Domestic heat pumps - noise and localised visual impacts. Commercial - additional environmental, access, ancillary development and pipework issues.</p>	

	<p>water/antifreeze in the pipes is pumped round the loop; extracting heat which is then transferred by the pump to a domestic heating. The pump itself further increases the water temperature. These systems require planning permission, but are relatively uncommon with minimal above ground works once installed and tend to relate to an individual property. Air source take heat from outside air and boost it to a higher temperature using a heat pump. Whilst small heat pumps may be classed as permitted development (PD), it is advisable to check with the Development Management service of Angus Council. Water source heat pumps work to the same principle, extracting heat from a water body through a pipe loop through a compressor (heat pump) providing hot water and heating.</p>	<p>Waste water treatment works heat extraction and AD should also be addressed under waste management policies, legislation and licensing.</p>	
Other Technologies			
CCS	Proposed reuse of existing pipeline – Local Planning Authority responsible for change of use and above ground works.		
Tidal	Responsibility of Marine Scotland – Angus Council comments on/inputs into the process		
Deep Geothermal	Scottish Government investigating potential – unlikely to be economic resource in Angus		
Fracking	Geological Survey suggests no economic resource in Angus.		
Non Local Authority			
Microrenewables	Normally permitted development –if within a Conservation Area, property is listed or any other queries contact Development Standards.		
Transmission	Most overhead transmission is proposals are determined by the Scottish Government, but are included in an EIA if required		

4. Guidance for Applicants - Development Management Considerations

There is a wide range of renewable energy infrastructure and in most cases the scale, type and location of a proposal will determine potential planning matters that may arise.

Local Plan Context

Policy PV9 in establishes the criteria against which individual renewable energy proposals will be assessed providing the basis for the more detailed development management guidance contained within this SG. It should be noted that some developments will require to be considered under other legislation such as noise, emissions, or pollution control which are not part of the planning process and may therefore require additional consents or licences. Certain proposals may also trigger the threshold for Environmental Impact Assessment or Habitats Regulation Appraisal.

Development Principles

- Wind and water powered renewable energy schemes tend to be located within the rural landscape and their design should reflect this.
- Design statements can help applicants preparing development proposals to consider and articulate the processes undertaken in reaching final layout, siting and design and help inform the decision making process. Historic Environment Scotland, Architecture and Design Scotland (A&DS) and the local planning authority can advise on the built environment.
- Well sited and designed developments can, at best, enhance their setting or at least minimise potential impacts. Poorly sited or designed development can do the opposite – and may have an adverse impact on amenity for decades to come. Appropriate landscaping and planting can help a building or other appropriately scaled structure to blend into the landscape.
- Enhancement opportunities should be identified and information on associated benefits included with an application.
- Development proposals should identify where site selection can enhance an area, and provide added value such as improving access, parking provision, visitor facilities on site such as interpretative facilities and amenities.
- The choice of equipment may be of particular importance - wind turbines for example should be chosen to reflect the scale of the landscape, light and visibility conditions and should respect residential amenity including noise and shadow flicker. The method of generation may also raise specific considerations - hydro-electric dams for example should be designed to respect the scale, colours and contours of the surrounding landscape.
- It is accepted that technology is advancing rapidly and initial discussions between the Council and developers should consider the implications of their specific proposal. Early discussions with the planning service can establish what supporting information is

required, if an EIA will be necessary, and agree methodologies and parameters for assessments such as noise, habitat surveys, visual representations etc.

- Where a specific proposal has been approved by the Council any alteration to that project must be agreed in writing with the Council prior to implementation. The selected site should be compatible with existing land uses and economic activities including tourism, leisure and recreation (particularly outdoors); tourist routes and viewpoints, forestry and woodland and quiet or remote places valued for their tranquillity.
- Where a planning consent lapses, a re-application will be assessed in relation to PV9 and relevant planning policy, legislation and capacity current at the time of resubmission.

Community Ownership/Benefit

Although community owned renewable energy generation is supported in principle where proposals are compatible with development plan policy, it must be made clear that negotiating or securing local community benefit is wholly separate from the planning application process and will not be considered as part of any planning application. Such local community benefit initiatives will therefore not fall within the obligations required under Section 75 Planning Agreements and will require to be managed by other means.

Policy PV9: Renewable and Low Carbon Energy Development

Proposals for renewable and low carbon energy development* will be supported in principle where they meet the following criteria:

*(*In all instances 'renewable and low carbon energy developments' include: infrastructure, activity and materials required for generation, storage or transmission of energy where it is within the remit of the council as local planning authority (or other duty). Includes new sites, extensions and/or repowering of established sites for onshore wind.')*

4(a) the location, siting and appearance of apparatus, and any associated works and infrastructure have been chosen and/or designed to minimise impact on amenity, landscape and environment, while respecting operational efficiency;

Applicants should present their rationale for site selection demonstrating that site selection considered all technical, environmental, amenity issues; visual and landscape impact; and mitigation where feasible, including ancillary works.

Most overhead power lines will be determined by Scottish Government under S37 of the Electricity (Scotland) Act 1989 but transmission of electricity from the site should form part of any renewable energy development proposal to ensure inclusion in any EIA if necessary. Where possible the undergrounding of cables and pipe work should be considered.

4(b) access for construction and maintenance traffic can be achieved without compromising road safety or causing unacceptable change to the environment and landscape;

Renewable energy sites may well have limited or no existing vehicular access. Construction, repair, maintenance and decommissioning will normally require access by heavy and/or long vehicles over the life of the project. In some cases, there may be a continuation of the life of a scheme with consequent renewal, replacement or upgrading in the longer term.

Any project proposal may be required to prepare and submit a route assessment and traffic management plan, which demonstrates:-

- how access is to be achieved;
- selected routes have been assessed and are capable of accommodating traffic generated;
- traffic management over the construction phase; and
- longer term access requirements.

If road improvements are required, these must be approved by Angus Council Roads. Site access should allow all vehicles visiting the site to have space to manoeuvre to ensure safe access and egress.

The formation of new or upgrading of existing tracks over open countryside/uplands should be designed to avoid generating run off/surface water flooding and be re-instated on completion of construction, where they will not be regularly in use.

Provision must be made for the re-instatement of any existing and proposed tracks when the site is decommissioned.

4(c) the site has been designed to make links to the national grid and/or other users of renewable energy and heat generated on site;

Access to the National Grid can be straight forward where grid capacity exists and it is integral to determining the viability of a project. Increasingly however energy storage, heat exchange and reuse is seen as an opportunity to reduce costs, emissions, fuel poverty and to make better use of resources. Renewable energy sources can be intermittent - wind is infinitely variable, hydro is seasonally variable or constant such ground source heat pumps or geothermal. Angus Council is keen to support development of innovative energy storage, sharing and distribution to maximise local energy use. Methods for storing or transferring energy to meet changing demand patterns is an area of research and innovation and provide opportunity to meet government targets for emission reduction and decarbonisation of heat. Such schemes will be supported in principle and assessed on their individual merits. Whilst district heating may not be financially viable for all development, new development can make provision to accommodate the necessary physical infrastructure in future. Where carbon based district heating is installed, conversion to renewable sources should be considered where generating plant is renewed.

4(d) there will be no unacceptable impact on existing or proposed aviation, defence, seismological or telecommunications facilities;

Renewable energy proposals affecting such facilities are referred to standard consultees by the planning authority as appropriate, primarily wind turbines including:-

Telecommunications

ATKINS for **TAUWI** (The **Telecommunications Association of the UK Water Industry**)

- Ofcom microwave fixed links managed and assigned by Ofcom; and
- Joint Radio Company for UK Fuel & Power Industry and the Water Industry in north-west England

Military Aircraft

There are MOD bases at Leuchars in Fife, Condor at Arbroath, and Barry Buddon Camp and the safety of military personnel and aircraft will be taken into account by Angus Council in considering planning applications. Wind turbines may create a physical obstruction to air traffic movements and cause interference to Air Traffic Control and Air Defence radar installations. Where radar interference is identified as a potential constraint and effective mitigation measures have been agreed with the MOD, these must be submitted in writing to Angus Council. Only where a scheme is demonstrated to be deliverable or can be secured through application of a condition, will planning permission be granted. The MOD may request wind turbines be fitted with aviation safety lighting.

Civilian Aircraft

Dundee Airport is the local civilian airport. The CAA advise on aircraft safety, including lighting and Nats for NERL Safeguarding Office on management of en route air traffic. Their advice will be acted upon by Angus Council.

There is an international civil aviation requirement for all structures of 91.4 metres or more to be charted on aeronautical charts. However, on behalf of other non-regulatory aviation stakeholders, in the interest of Aviation Safety, the CAA requests that any feature/structure 70 feet in height, or greater, above ground level is notified to the Defence Geographic Centre

Any structure of 150 metres or more must be lit in accordance with the Air Navigation Order and should be appropriately marked. Smaller structures may also be required to be lit by aviation stakeholders particularly if they fall under Section 47 of the Aviation Act.

4(e) there will be no unacceptable adverse impact individually or cumulatively with other existing or proposed development on:

- **landscape character, setting within the immediate and wider landscape (including cross boundary or regional features and landscapes), sensitive viewpoints and public access routes;**

Cumulative impact can apply to various forms of development and includes effects on landscape character, designated sites and protected species, amenity and other land uses. Development proposals should consider the potential for cumulative impact in its widest sense.

Impact on landscape character varies with the location, scale and type of renewable energy scheme proposed. Wind turbines require exposed locations and are often visible over a long distance while hydroelectric schemes may be contained within a river valley. The same technology can have differing degrees and types of impact depending on scale. Solar panels are normally permitted development when fitted to an existing property roof and tend to have a localised impact. When they are on most or all properties collective impact can alter the roofscape. Solar farms can extend to tens of hectares and thousands of ground mounted panels and landscape and visual impact may be a significant consideration, but can be contained within a relatively localised area. Supporting information and accompanying visual/graphic information should be commensurate with the scale, location and potential impact, individual and cumulative of the proposal and should include options for mitigation where appropriate.

All forms of renewable energy development should be considered within their landscape context taking account of relevant ALDP policies and advice and guidance from Scottish Natural Heritage on assessing the landscape impact of renewable energy developments on the landscape. The Council will seek advice from SNH as appropriate.

Potential landscape and visual impacts of wind turbines were acknowledged by SNH, Angus Council and Aberdeenshire Council who jointly commissioned a Strategic Landscape Capacity Assessment for Wind Energy in the two authorities (published 2014). The original study was approved as a material consideration in the assessment of planning applications for wind turbines in November 2013. In September 2016 updated baseline data and residual capacity map and, using the same landscape assessment base and comparable methodology, a Strategic Landscape Capacity Study for Solar Energy Developments developed by Angus Council were recognised as material consideration in the determination of planning applications for wind or solar energy proposals.

Cumulative impact will be different for each application and over the passage of time. Wind turbines in particular have potential landscape and visual impacts and cumulative effect of wind energy developments and this is recognised and addressed in the Spatial Framework for Onshore Wind Turbines. Major landscape features such as the highland boundary fault can extend across Council boundaries and should be addressed where a proposed development may/will impact on any neighbouring authority.

- 4(f) there will be no unacceptable adverse impact individually or cumulatively with other existing or proposed development on:**
- **sites designated for natural heritage (including birds), scientific, historic, cultural or archaeological reasons;**

Designated sites in Angus range in scale from individual listed properties to extensive areas such as Montrose Basin. Their value is established, and they are safeguarded for present and future generations, through legislation. The integrity of such designations may be affected by activity beyond site boundaries and even into other authority areas. Much will depend on the individual proposal – scale, location and type. In assessing development proposals, priority will be given to the maintenance of the quality of the built and natural heritage. Where appropriate, mitigation measures should be investigated and their efficacy demonstrated to ensure compatibility with protected sites.

Natural heritage and scientific designations are subject to a range of legislation, policy, and guidance. Development proposals must be able to demonstrate that there will be no unacceptable direct or indirect adverse effects on the integrity of designated sites or the reason for their protection. There is a hierarchy of designated sites, habitats and species ranging from international to

local significance with levels of protection proportionate to status. Where remediation measures can successfully redress potential adverse impact, these must be agreed with the relevant advisory agency and subject to a planning condition or legal agreement.

This criterion includes site designated under the European Habitats and the European Birds Directives for their significance to birds (Natura 2000 sites), and to the flight paths of protected species; and those protected under the Convention on Wetlands of International Importance (Ramsar sites). As well as these, there are a number of nationally important sites such as Sites of Special Scientific Interest (SSSIs) and RSPB significant bird habitats (which are adjacent to and support designated sites at Kinnordy Loch and Montrose Basin). The protection afforded to these sites extends beyond their boundaries to allow for foraging, roosting and flight paths. Further information can be found on SNHi Sitelink <http://gateway.snh.gov.uk/sitelink/index.jsp>

There are currently no local landscape or nature conservation sites designated in Angus but their preparation is timetabled in the ALDP Action Programme. In the interim sites identified by the Scottish Wildlife Trust, RSPB, locally important habitats, landscapes and geodiversity sites identified at site selection and appraisal should be afforded appropriate protection. Where identified through EIA screening and scoping studies should be addressed by supporting information if appropriate.

There is also potential for the combined effect of development, particularly to increase impact on sensitive habitats and/or protected species to an unacceptable level. Where existing development already affects a protected or vulnerable habitat, applicants must demonstrate subsequent proposals through the combined effect of development, will not cause impacts to be intensified to an unacceptable level. This will be particularly important where sites are designated as of international or national importance, but damage to all vulnerable habitats and species should be avoided. (Natura 2000 sites may require a Habitats Regulation Assessment (HRA) by Angus Council as competent authority)

Cumulative ecological impact can be addressed through a formal EIA or an environmental statement, the terms of which should be agreed with the local authority, and other agencies as appropriate. Where the responsibility lies with the local authority to determine acceptable level of impact or viability of mitigation measures, advice will be sought from relevant agencies.

There is a growing body of experience on the specific management and design of wind farms to reduce or prevent unacceptable impact on birds which may help in the design and layout of a proposed wind farm.

Sites and areas designated for historic and archaeological reasons are also subject to a range of policy, guidance and legislation. No World Heritage Sites have been identified within Angus, and Historic Environment Scotland (HES) is responsible for the protection

of sites of national and international status. Angus Council is responsible for determining applications for Listed Building Consent (LBC) and the identification of Conservation Areas and their subsequent protection. Protection of the built heritage extends beyond the actual property and curtilage to encompass its character and setting. This includes Historic Gardens and Designed Landscapes; all listed buildings; and scheduled monuments. HES and the Council's Archaeological Service are consulted on all applications as appropriate. Where local archaeological sites and areas are known, or suspected, the Council will seek advice on the assessing and recording of any features.

Appropriate Level of Assessment

Where a proposal affects a designated site an Environmental Impact Assessment (EIA) may be required, depending on the scale of the proposal and anticipated impact. Development proposals in Angus may require a screening opinion from the planning authority to determine whether a formal EIA is required if they fall within or affect:

- Sites of Special Scientific Interest
- Land subject to Nature Conservation Orders
- International Conservation Sites
- Scheduled Monuments and their settings
- National Parks.

Where appropriate, proposals will be judged in conjunction with the consultation agencies as to whether a formal EIA is required. While only a small proportion of development proposals are likely to require EIA, an EIA is *not* discretionary if significant effects on the environment are likely and should be prepared in accordance with the relevant legislation and guidance. The Scottish Government's online renewables advice identifies EIA and SEA requirements for different technologies.

Where a development is of a scale or in a location where a formal EIA is deemed not necessary, the applicant must submit a planning statement on impact, including any proposed mitigation measures. The level of detail should also reflect the scale and location of the proposal.

Proposals which come within the provisions of the Electricity Act 1989 will require to meet the terms of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000.

Certain species are identified for special protection through the Habitats Regulations 1994 (as amended for Scotland) which make provision for the implementation of the EU habitats Directive as it applies to protected species in Scotland. The list of protected species is defined in the Habitats Directive and current protected species and degrees of protection can be found on the SNH

website. Development proposals are required to demonstrate that they will not cause unacceptable impacts on protected species or measures to mitigate such impact or to enhance habitat of protected species eg timing of works; habitat management plans; habitat creation or enhancement. Many renewable energy developments can and have enhanced existing and degraded habitats, and provided interpretation and educational opportunity.

4(g) there will be no unacceptable adverse impact individually or cumulatively with other existing or proposed development on the amenity of communities or individual dwellings including visual impact, noise, shadow flicker.

Amenity is protected under a number of regulatory regimes and Policy DS4 Amenity in the ALDP addresses potential impacts of all proposed development.

Wind Turbines - SPP Spatial Framework approach identifies within 2km of a development boundary as 'areas of significant protection' for consideration of visual impact of wind farms. Angus Council will use 2km as a guide to determine information and LVIA required to assess potential for visual impact. Applicants should be able to demonstrate that factors such as scale, location and topography will allow the development without unacceptable detrimental effect. Views from garden ground and principal rooms looking towards a proposed turbine, together with approaches will be factors in considering potential impact on residential amenity. It is expected that the visualisations from the most affected houses will typically be included as part of the visual assessment.

Wind Turbines can cause moving shadow flicker through a narrow window opening. This can be predicted and Scottish Government on-line guidance for Onshore Wind Turbines advises that in most cases the problem can be resolved through separation between wind turbines and nearby dwellings (as general rule 10 rotor diameter).

Turbines can also cause flashes of reflected light, which can be visible for some distance. It is possible to ameliorate the flashing but not to eliminate it. Careful choice of blade colour and surface finish can help reduce the effect. Non-reflective finished and Agate Grey (RAL 7038) should be used unless otherwise agreed with the planning service.

There are two sources of noise from wind turbines - the mechanical noise from the turbines and the aerodynamic noise from the blades. Mechanical noise can be reduced through engineering design. Good acoustical design and siting of turbines is essential to ensure there is no significant increase in ambient noise levels as they affect the environment and any nearby sensitive

property/receptors. Where appropriate planning conditions will be imposed to control any impact to within reasonable levels. Applicants preparing noise assessments should agree the methodology with the Council's Environmental Health Officers.

General - all energy proposals should assess potential impact on wider residential amenity. Where issues are identified these should be discussed with Angus Council Regulatory and Protective Services to ensure assessment of nuisance during construction, operation and decommissioning (including noise, dust, fumes, air quality etc) is undertaken to agreed standards.

4(h) during construction, operation and decommissioning of the energy plant there will be no unacceptable impacts on:

- **groundwater;**
- **surface water resources;**

The water environment - including coastal waters, water courses, standing water, peat soils, wetlands and ground water – is an important environmental and commercial asset in Angus. The condition of the water environment has been assessed and through river basin management planning measures put in place to protect and enhance its quality and applicants must demonstrate their proposal maintains or enhances ground and surface waters features, not cause deterioration throughout the life time of the proposal, including mitigation and restoration.

Groundwater wetlands should be incorporated in Phase 1 Habitat surveys and where appropriate should include a buffer zone of 100m between features and roads, tracks and trenches, increasing to 250m for borrow pits and foundations.

Water Supply

The protection of drinking water, both public and private supplies, will be a priority. Where a development proposal is deemed to affect a potable supply the applicant will require to demonstrate there are no unacceptable adverse effects, or how these can be mitigated if feasible. This may include the requirement for a buffer zone of 100m between features and roads, tracks and trenches, increasing to 250m for borrow pits and foundations. Any works within these distances should demonstrate (e.g. through a hydrogeological assessment) that impacts on abstractions are acceptable.

Flooding

The SPP www.scotland.gov.uk/Resource/Doc/300760/0093908.pdf establishes a risk framework incorporated into the ALDP against which development proposals will be assessed and referred to SEPA where necessary. Angus Council Roads is the Flood Prevention Authority and advise on flood prevention and flood risk standards for new roads, car parks and footpaths.

Local Flood Risk Management Plans are in place throughout Scotland which aim to aim to avoid and reduce risk of flooding. Development proposals will be considered within the context of these plans. Also SEPA have produced an Indicative River and Coastal Flood Map which can be viewed at www.sepa.org.uk/flooding/flood_map/view_the_map.aspx. [Flood risk may be required depending on location and details of the proposal.](#)

Water Quality

The water environment is a potential constraint to renewable energy development, particularly in relation to construction works. Applicants should demonstrate that:-

- any development will protect and or the water environment;
- all pollution risks and mitigation measures during construction, operation and decommissioning have been identified;
- developments are designed to avoid engineering activities (such as culverts) in the water environment; and
- project management is in place to mitigate potential adverse impacts during the construction phase.

Coasts

Integration of marine and terrestrial planning should result in better assessment of on and offshore renewable energy proposals and their potential impacts on the environment and economic activity around our coasts. Development proposals must recognise the need to maintain the quality of coastal environment and the Angus Shoreline Management, Marine Plan and in due course Regional Marine Plans will inform the assessment of such applications

4(i) during construction, operation and decommissioning of the energy plant there will be no unacceptable impacts on:

- **carbon rich soils, deep peat and priority peatland habitat or geodiversity.**

Peat soils are a key natural carbon store and in some cases an important and fragile habitat. Where carbon rich soils, deep peat and priority peatland habitat soils are affected by potential renewable energy development applicants should consider:-

- possible ground water contamination;

- potential damage to peatland habitat, especially on or adjacent to designated sites. Early consultation with SNH and SEPA is advised where a proposed development is likely to affect peatland or mire systems;
- in relation to wind energy proposals, Scottish Government advice on calculating carbon savings should be used when preparing applications;
- measures to minimise soil disturbance during construction, operation and decommissioning to maximise carbon balance savings;
- potential for slippage;
- need for a peat depth survey to demonstrate that the layout and design of the proposal avoids areas of deep peat and minimises disturbance to other areas of peat; and
- procedures for any extraction and disposal of peat during construction.

Applicants should consult SNH and SEPA at an early stage where proposed development is likely to affect carbon rich soils, deep peat and priority peatland habitat.

Geodiversity is the variety of rocks, minerals, fossils, landforms, sediments and soils, together with the natural processes which form and alter them. Applicants should consider potential impact on geodiversity outwith designated sites which have statutory protection and work with SNH and Angus Council to ensure development impact is avoided, managed or minimised.

4(j) Where appropriate mitigation measures must be supported by commitment to a bond commensurate with site restoration requirements.

Where mitigation measures are proposed and agreed, these will be subject to the application of conditions or legal agreement as appropriate. Post operational monitoring of impact on habitat and species may be required and will be subject to the application of conditions or legal agreement as appropriate.

The applicant will be required by planning conditions or legal agreement to ensure acceptable re-instatement standards. Applications should be accompanied by a Restoration and Decommissioning Plan (RDP) based on Best Practical Environmental Options. The RDP should be regularly reviewed. The RDP should detail removal of all extant apparatus and associated works; restoration of the site and any after care arrangements; and timescale. It should be updated prior to the cessation of energy generation.

Financial guarantees should be agreed (for example a bond and ESCROW deposit) and monitored to demonstrate risk minimisation. A financial bond is required by Angus Council to ensure restoration is implemented should the applicant/operator cease to trade.

The Scottish Opencast Coal Task Report 'Surface Coal Mine Restoration – Towards Better Regulation recommendations can provide advice applicable for other activities - '...other onshore minerals, landfill and electricity infrastructure developments, specifically the works associated with solar/PV and transformer and energy storage systems.'
<http://www.gov.scot/Resource/0048/00489130.pdf>

Where a wind turbine site has been inactive for six months, the planning authority will require the instigation of the decommissioning process within the six months of the site being confirmed inactive.

The anticipated lifespan of a wind farm/turbine is currently around 25 years and is likely to be subject to repowering if the site is productive. Upgraded turbines can increase the output from an existing serviced site making a greater contribution to renewable

4(k) Consideration may be given to additional factors such as contribution to targets for energy generation and emissions, and/or local socio-economic economic impact.

energy generation. Extension of existing consents will be assessed in accordance with legislation and guidance pertaining at that time, and continued use of an existing location may be an appropriate option. Where time of operation is extended, the decommissioning statement and re-instatement plan will also be reviewed, updated to contemporary standards, and extended.

SPP identifies the need for renewable energy proposals to be assessed on their net economic, and contributions to electricity generation and emissions targets. Depending on the scale of the proposed turbine, applicants will be should information on:

- local socioeconomic impact including effects on local business (positive and negative), employment (permanent and temporary FTEs; and direct and indirect supply chain effects;
- potential output (megawatts/ kilowatts and anticipated performance based on wind monitoring studies); potential contribution to energy targets and potential number of households which might be supplied by electricity generated by the project; and
- potential contribution to meeting the Scottish Government's targets for greenhouse gas reduction.

5. Interactive map

This mapping tool helps identify factors which will be taken into consideration in the assessment of applications for renewable and low carbon energy proposals in the ALDP area. The map is indicative and any information must be confirmed from source for example planning applications should be viewed on the Council's website, natural heritage designations should be confirmed on the SNHi website to confirm accuracy at the time of application and detail of boundaries and designation

APPENDIX 1 - Development Checklist

	Wind Energy Development (Height to blade tip unless otherwise stated)	Other Renewable Energy Development
Landscape and Visual Representation	VIA or LVIA may be required for larger structures depending on scale, type and location of the proposal. Landscape and Visual Impact (LVIA) should address the sensitivity, magnitude and significance of landscape and visual impact and include. Prior to the undertaking of an LVIA, the proposed assessment viewpoints, shown on a 1:50k Ordnance Survey base, should be submitted to Angus Council for approval prior to undertaking the assessment. The level of information should reflect the scale of development and should be agreed with planning officers	
Cumulative Assessment	<p>Depending on scale, type and location of the proposal there may be a requirement to assess impact in conjunction with other existing or proposed development. Development proposals will be considered in the context of:</p> <ul style="list-style-type: none"> • Water quality; • Protected species; • Natural and built heritage designations; • Amenity; and • Noise; 	
	<ul style="list-style-type: none"> • Strategic Landscape Assessment for Wind Energy in Angus 2014 (updated 2016). <p>A cumulative ZTV (CZTV) should be produced on a clear and legible 1:50k Ordnance Survey Base plan.</p> <p>Prior to the undertaking of a CLVIA, details of turbines to be scoped in or out of the cumulative assessment, together with the rationale underpinning the proposal should be submitted to Angus Council for agreement. Turbines can be scoped in out by a combination of size and distance from the proposed development (a sliding scale); transport corridors; inter-visibility; and/or landscape character types as appropriate. Following the production of a CZTV for the agreed cumulative developments, proposed cumulative viewpoints should be added and submitted to Angus Council</p>	<ul style="list-style-type: none"> • Strategic Landscape Assessment for Solar Energy in Angus 2016;

	for approval prior to carrying out the assessment. All submissions should be provided in a format which permits high resolution images to be provided. The use of CDs is advised.	
Environmental Impact Assessment (EIA)	An EIA will not generally be required.	<p>Environmental Impact Assessment (EIA) may be required under the terms of The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011</p> <ul style="list-style-type: none"> • scoping for the Environmental Report should be prepared in accordance with ANNEX B of Circular 3/2011 • an EIA will demonstrate potential impacts, including length and significance of effect and mitigation measures for all components of an application • where EIA is not be required, environmental information may still be needed to consider agreed impacts. • Formal screening requests and determination will be publically available. Screening Determinations are valid for 12 months.
Natural Heritage Designation	<p>International and National Designation – Supporting information must demonstrate that proposals (including all associated works) will not affect such sites to an unacceptable degree. Where proposals may have a significant effect on European Sites (SAC or SPA), they should be screened in accordance with the Habitats Regulations Directive. A Habitats Regulation Appraisal may be required. Where mitigation measures are proposed these must be shown to be:-</p> <ul style="list-style-type: none"> • achievable; • agreed with SNH and any organisation responsible for managing the designated site or with responsibility for the maintenance of the site and the integrity of the reason for its designation; and • subject to planning conditions or a Section 75 agreement as appropriate. 	
	Other Natural Heritage designations should be accorded appropriate protection and/or mitigation	
Historic Environment	Supporting information should identify historic and archaeological sites affected by the proposal, proportionate with the scale and number of turbines; the effect of the proposal and all associated works on the integrity of a site, its setting; requirements for archaeological survey and recording; and any proposed mitigation measures.	
	Guidance on assessing impacts on historic views has recently been published by English Heritage and may be used to inform the Council's assessment of wind energy developments.	

Noise Assessment	Where a noise assessment is required the methodology and cumulative considerations must be agreed with Angus Council Environmental and Consumer Protection. Failure to agree the methodology or to provide sufficient information may result in the application being recommended for refusal on the basis of lack of information.	
Residential Amenity	Shadow Flicker assessment methodology should be agreed with angus council environmental and consumer protection NB Angus council has experienced impacts out-with a 10 rotor diameter zone therefore an assessment should be done taking account of all properties within a zone of 10x rotor diameter + 1Km and a mitigation scheme should be proposed for all developments	
Peat and soils	Where proposals affect peat soils, applicants should demonstrate carbon savings are calculated in accordance with Scottish Government advice and that SEPA and SNH have been consulted. A peat depth survey will be required where appropriate.	
	Development should minimise disruption to soils in accordance with the Scottish Soils Framework	
	Impact on Prime Agricultural land and farm viability	
Water Environment	Development proposals should not lead to the deterioration in the condition of any water body, in accordance with the Tay Area Management Plan.	
	Where proposals are within the source catchment area or supply network of any private water supply potential impact must be considered and, if necessary, mitigation measures implemented	
	Supporting information should include a drainage assessment as appropriate.	
Health and Safety	Wind turbines proposals should take cognisance of pipeline corridors and comply with guidance from the Health and Safety Executive	

APPENDIX 2 - Information sources and links

Legislation

- The Electricity Works (Environmental Impact Assessment) (Scotland) Amendment Regulations 2008 (Revised 2009)

<http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Infrastructure/Energy-Consents/Guidance/EIA-Amendment-Regs-2008>

- Town and Country Planning (Scotland) Act 1997 (As Amended) Environmental Impact Assessment (Scotland) Regulations 2011
- Planning Circular 3 The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations (2011): <http://www.scotland.gov.uk/Publications/2011/06/01084419/10>
- EU Birds Directive and Annex 1 and EU Habitats Directive and Annexes 1 and 2 : [Habitats/protectedareas/NATURA](http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Infrastructure/Energy-Consents/Guidance/EIA-Amendment-Regs-2008)
- Flood Risk Management (Scotland) Act 2009 www.scotland.gov.uk/Topics/Environment/Water/Flooding/FRMAct
- Scottish Government Water Framework Directive in Scotland (WFD) www.scotland.gov.uk/Topics/Environment/Water/15561/WFD

Scottish Government

Policy

- Scottish Planning Policy
- Scottish Government Marine Plan; <http://www.gov.scot/Resource/0047/00475466.pdf>
- Heat Policy Statement <http://www.gov.scot/Topics/Business-Industry/Energy/Energy-sources/19185/Heat>
- Scottish Government Wind Farms and Carbon: <http://www.gov.scot/Topics/Business-Industry/Energy/Energy-sources/19185/17852-1/CSavings>
- A Policy Statement on Hydropower and Water Environment Protection www.scotland.gov.uk/Topics/Business-Industry/Energy/Energy-sources/19185/17851-1/HydroPolicy

Advice and Guidance

- PAN 1/2011 Planning and Noise: <http://www.gov.scot/Resource/Doc/343210/0114180.pdf>
- PAN 2/2011 Planning and Archaeology: <http://www.gov.scot/Resource/Doc/355385/0120020.pdf>
- PAN 60 Planning for Natural Heritage: <http://www.gov.scot/Resource/Doc/927/0016396.pdf>
- PAN 1/2013 Environmental Impact Assessment and further reading: <http://www.gov.scot/Publications/2013/08/6471/downloads#res432581>
- Online Renewables Planning Advice: <http://www.gov.scot/Topics/Built-Environment/planning/Policy/Subject-Policies/low-carbon-place/Heat-Electricity/renewables-advice>

Angus Council Policy and Guidance

- Angus Local Development Plan
- [Angus Council Design Quality and Placemaking SG insert link](#)
- Angus Council Shoreline Management Plan
- Adopted Core Paths Plan; http://www.angus.gov.uk/info/20388/outdoor_access/516/angus_core_paths_plan
- Angus Woodland and Forestry Framework;
http://www.angus.gov.uk/downloads/file/973/angus_woodland_and_forestry_framework_2011
- State of the Environment Report: http://www.angus.gov.uk/info/20385/sustainable_angus/659/state_of_the_environment_report
- Biodiversity Action Plan: http://www.angus.gov.uk/info/20385/sustainable_angus/448/biodiversity
- Council Wind Strategic Landscape Capacity for Wind Energy in Angus (2014 and 2016)- [insert links](#)
- Council Wind Strategic Landscape Capacity for Solar Energy in Angus 2016

Contacts

- Environment and Consumer Protection - Communities, Angus Council, County Buildings, Market Street, Forfar, Angus, DD8 3LG (email ENVHEALTH@angus.gov.uk)
- Roads - Communities, Angus Council, County Buildings, Market Street, Forfar, Angus, DD8 3LG (email ROADS@angus.gov.uk)
- Planning - Communities, Angus Council, County Buildings, Market Street, Forfar, Angus, DD8 3LG (email PLANNING@angus.gov.uk)

Historic Environment Scotland

- Scottish Historic Environment Policy Statement 2016 and Historic Environment Circular 1
<https://www.historicenvironment.scot/advice-and-support/planning-and-guidance/legislation-and-guidance/historic-environment-scotland-policy-statement/>
- Environmental Assessment:
<https://www.historicenvironment.scot/advice-and-support/planning-and-guidance/environmental-assessment/>
- Gardens and Designed Landscapes: <https://www.historicenvironment.scot/advice-and-support/listing-scheduling-and-designations/gardens-and-designed-landscapes/>
- [Managing Change in the Historic Environment: Microrenewables](https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationId=7604a41c-077c-42ab-941f-a60b009a4f95) <https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationId=7604a41c-077c-42ab-941f-a60b009a4f95>

- Short Guides 1 Fabric Improvements for Energy Efficiency in Traditional Buildings and 8 Micro-renewables in the Scottish Environment:
https://www.historicenvironment.scot/archives-and-research/publications/?audience=5&language=en&publication_type=41&q=

Scottish Natural Heritage

Scottish Natural Heritage (SNH) provides a comprehensive range of advice and guidance in relation to natural heritage and energy –

- general: <http://www.snh.gov.uk/planning-and-development/>
- wind: <http://www.snh.gov.uk/docs/A1666404.pdf>
- hydro: <http://www.snh.gov.uk/docs/C278964.pdf>
- web-links to useful information sources: <http://www.snh.gov.uk/docs/C252875.pdf>
- Environment Impact Assessment: <http://www.snh.gov.uk/planning-and-development/environmental-assessment/eia/>
- Renewable Energy Information page: <http://www.snh.gov.uk/planning-and-development/renewable-energy/>
- Wild Land : <http://www.snh.gov.uk/protecting-scotlands-nature/looking-after-landscapes/landscape-policy-and-guidance/wild-land/>
- Guidance on Assessing Connectivity with Special Protection Areas (SPAs): <http://www.snh.gov.uk/docs/A675474.pdf>
- Soils and Natural Heritage:
<http://www.snh.gov.uk/docs/A327906.pdf>
- River Tay Special Area of Conservation (SAC) – Advice to Developers; SNH, Perth and Kinross Council, SEPA and Angus Council:
<http://www.snh.org.uk/pdfs/publications/designatedareas/River%20Tay%20SAC.pdf>
- River South Esk Special Area of Conservation (SAC) – Advice to Developers; SNH, SEPA and Angus Council:
<http://www.snh.org.uk/pdfs/publications/designatedareas/River%20South%20Esk%20SAC.pdf>
- The RSPB and SNH Bird Sensitivity Map:
www.rspb.org.uk/news/details.aspx?id=tcm:9-179628
- SNH guidance on protected species:
<http://www.snh.gov.uk/planning-and-development/advice-for-planners-and-developers/>
- SNH Hydroelectric Schemes and the Natural Heritage: <http://www.snh.gov.uk/docs/C278964.pdf>
- SNH Assessing the Cumulative Impacts of Onshore Wind Energy Developments <http://www.snh.gov.uk/docs/A675503.pdf>
- Visual Representation of Wind farms Good Practice Guidance <http://www.snh.gov.uk/docs/A305436.pdf>
- Soils and Development Page: <http://www.snh.gov.uk/planning-and-development/advice-for-planners-and-developers/soils-and-development/>
- Safeguarding Geodiversity Page: <http://www.snh.gov.uk/protecting-scotlands-nature/safeguarding-geodiversity/>

- SNH Constructed Tracks in the Scottish Uplands 2015:
<http://www.snh.org.uk/pdfs/publications/heritagemanagement/Constructedtracks.pdf>
- Historic and Ancient Woodlands www.snh.gov.uk/land-and-sea/managing-the-land/forestry-and-woodlands/history/

SEPA

- Water Environment: <http://www.sepa.org.uk/environment/water/>
- Local Flood Risk Management Plans

Other

- Scottish Wind farm Bird Steering Group:
<http://www.swbsg.org/index.php/about-swbsg>
- Scotland's Geodiversity Charter: <https://scottishgeodiversityforum.org/charter>
- Working Group on Noise and Turbines, Final Report 1996 – ETSU-R-97; www.semantise.com/~lewiswind farms/FOV1-00021BAE/FOV1-00021BD2/1996:00:00%20ETSU-R-97%20-%20Exec%20Summary.pdf?FCItemID=S000C081A
- Technical Advice note on Assessment of noise: <http://www.gov.scot/Publications/2011/02/28153945/0>
- IEEM Guidelines for Ecological Impact Assessment in the United Kingdom 2006:
<http://www.cieem.net/data/files/Resource Library/Technical Guidance Series/EcIA Guidelines/TGSEcIA-EcIA Guidelines-Terrestrial Freshwater Coastal.pdf>
- Tayside Landscape Character Assessment: www.snh.org.uk/pubs/detail.asp?id=310
- Scottish Renewables, SNH, SEPA and Forestry Commission Scotland – Good Practice During Wind farm Construction 2010
<http://www.snh.org.uk/pdfs/strategy/renewables/Good%20practice%20during%20wind farm%20construction.pdf>
- Forestry Commission Scotland – Native Woodland Survey of Scotland <http://scotland.forestry.gov.uk/supporting/strategy-policy-guidance/native-woodland-survey-of-scotland-nwss>
- Health and Safety Executive Land Use Planning Methodology – Planning Advice Web App:
<http://www.hse.gov.uk/landuseplanning/methodology.pdf>

APPENDIX 3 - ALDP and SPP compatibility

ALDP 2016		Scottish Planning Policy 2014
PV9: Renewable and Low Carbon Energy Development (and other relevant policies)		Development Management Considerations (para 169) – proposals for energy infrastructure development
1	Consideration may be given to additional factors such as contribution to targets for energy generation and emissions, and/or local socio-economic economic impact.	net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities;
2		the scale of contribution to renewable energy generation targets;
3		effect on greenhouse gas emissions;
4	there will be no unacceptable adverse impact individually or cumulatively with other existing or proposed development on: landscape character, setting within the immediate and wider landscape (including cross boundary or regional features and landscapes), sensitive viewpoints and public access routes; sites designated for natural heritage (including birds), scientific, historic, cultural or archaeological reasons;	planning authorities should be clear about likely cumulative impacts arising from all of the considerations below, recognising that in some areas the cumulative impact of existing and consented energy development may limit the capacity for further development;
5	any populations of protected species; and the amenity of communities or individual dwellings including visual impact, noise, shadow flicker.	
		impacts on communities and individual dwellings, including visual impact, residential amenity, noise and shadow flicker;

6	<p>Other relevant ALDP policies</p> <p>Policy DS4 Amenity</p> <p>Policy PV4 Sites Designated for Natural Heritage and Biodiversity Value</p>	<p>landscape and visual impacts, including effects on wild land;</p>
7	<p>Policy PV5 Protected Species</p> <p>Policy PV6 Development in the Landscape</p> <p>Policy PV7 Woodland, Trees and Hedges</p>	<p>effects on the natural heritage, including birds;</p>
8	<p>during construction, operation and decommissioning of the energy plant there will be no unacceptable impacts on:</p> <ul style="list-style-type: none"> • groundwater; • surface water resources; or • carbon rich soils, deep peat and priority peatland habitat or geodiversity. <p>Other relevant ALDP policies</p> <p>Policy PV20 Soils and Geodiversity</p>	<p>impacts on carbon rich soils, using the carbon calculator;</p>
9	<p>there will be no unacceptable adverse impact individually or cumulatively with other existing or proposed development on:</p> <p>landscape character, setting within the immediate and wider landscape (including cross boundary or regional features and landscapes), sensitive viewpoints and public access routes;</p> <p>Other relevant ALDP policies</p> <p>Policy PV3 Access and Informal Recreation</p>	<p>public access, including impact on long distance walking and cycling routes and scenic routes identified in the NPF;</p>
10	<p>there will be no unacceptable adverse impact individually or cumulatively with</p>	<p>impacts on the historic environment, including scheduled monuments, listed buildings and their</p>

	<p>other existing or proposed development on sites designated for natural heritage (including birds), scientific, historic, cultural or archaeological reasons;</p> <p>Other relevant ALDP policies</p> <p>Policy PV8 Built and Cultural Heritage</p>	settings;
11	<p>Consideration may be given to additional factors such as contribution to targets for energy generation and emissions, and/or local socio-economic economic impact.</p>	impacts on tourism and recreation;
12	<p>there will be no unacceptable impact on existing or proposed aviation, defence, seismological or telecommunications facilities;</p>	impacts on aviation and defence interests and seismological recording;
13		impacts on telecommunications and broadcasting installations, particularly ensuring that transmission links are not compromised;
14	<p>access for construction and maintenance traffic can be achieved without compromising road safety or causing unacceptable change to the environment and landscape;</p> <p>Other relevant ALDP policies</p> <p>Policy DS5 Developer Contributions</p>	impacts on road traffic;
15		impacts on adjacent trunk roads;
16	<p>during construction, operation and decommissioning of the energy plant there will be no unacceptable impacts on:</p> <p>groundwater;</p> <p>surface water resources; or</p>	effects on hydrology, the water environment and flood risk;

	<p>carbon rich soils, deep peat and priority peatland habitat or geodiversity</p> <p>Other relevant ALDP policies</p> <p>Policy PV12 Managing Flood Risk</p> <p>Policy PV14 Water Quality</p> <p>Policy PV16 Coastal Planning</p> <p>Policy PV20 Soils and Geodiversity</p>	
17	<p>Where appropriate mitigation measures must be supported by commitment to a bond commensurate with site restoration requirements.</p>	<p>the need for conditions relating to the decommissioning of developments, including ancillary infrastructure, and site restoration;</p>
18	<p>Proposals for renewable and low carbon energy development* will be supported in principle</p> <p>Other relevant ALDP policies</p> <p>Policy PV10 Heat Mapping and Decarbonised Heat</p>	<p>opportunities for energy storage;</p>
19	<p>Where appropriate mitigation measures must be supported by commitment to a bond commensurate with site restoration requirements.</p>	<p>the need for a robust planning obligation to ensure that operators achieve site restoration.</p>
	<p>Other relevant ALDP policies</p> <p>Policy PV17 Waste Management Facilities</p> <p>Policy PV10 Heat Mapping and Decarbonised Heat</p> <p>Policy PV11 Energy Efficiency - Low and Zero Carbon Buildings</p>	

APPENDIX 4 - Acronyms used in this Report

AC	Angus Council
FCS	Forestry Commission Scotland
GRoS	General Registrar of Scotland
JNCC	Joint Nature Conservation Committee
HES	Historic Environment Scotland
HSE	Health and Safety Executive
JNCC	Joint Nature Conservation Committee
LAs	Local Authorities
RSPB	Royal Society for the Protection of Birds
SEPA	Scottish Environment Protection Agency
SG	Supplementary Guidance
SNH	Scottish Natural Heritage
SPP	Scottish Planning Policy
SWT	Scottish Wildlife Trust

TBAP	Tayside Biodiversity Action Programme
TRC	Tayside Regional Council