



Supplementary Guidance: Wind Energy



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Context

The [South Ayrshire Local Development Plan](#) was adopted by the Council in September 2014, together with this supplementary guidance they establish the policy framework within which all wind energy proposals within South Ayrshire will be assessed and determined.

The purpose of this guidance is twofold;

- firstly to inform the reader of the spatial strategy for wind energy –in line with the requirements of Scottish Planning Policy the strategy identifies areas within South Ayrshire which are afforded significant national protection and those areas within which there is potential for a range of wind turbine typologies
- secondly to provide guidance to developers on how the policy criteria within the Local Development Plan will be applied and the information the Council will seek from them when assessing their proposals.

The guidance has been informed by [national planning policy](#), the [South Ayrshire Landscape Wind Capacity Study](#) and its [supporting appendix](#), the distribution of existing and consented wind farm and wind farm developments previous guidance and advice on this matter and the views and comments from those responding to the consultations which were undertaken earlier this year between April and August 2015.

The guidance is structured in two parts. The first part establishes the spatial framework whilst the second part provides further detail on how policy criteria that will be applied in the assessment of proposals. The structure of the guidance is therefore consistent with the approach advocated in Scottish Planning Policy.

The guidance is intended to cover a range of wind turbine typologies and applies to new schemes and future extensions or re-powering of existing schemes. The guidance will also inform the response of the Council to proposals over 50MW, although these are currently determined by the Energy Consents Unit under s36 of the [Electricity Act 1989](#).

The Guidance has been prepared under Part 2 of the Town and Country Planning (Scotland) Act 1997, specifically Section 22 as amended by the [Planning Etc. \(Scotland\) Act 2006](#) and forms part of the Local Development Plan for South Ayrshire. It has a status in decision making in line with section 25 of the Town & Country Planning (Scotland) Act.

To support this guidance a web page has been prepared with additional information this can be found at <http://www.south-ayrshire.gov.uk/planning/windenergy.aspx>. This page also includes links to a web mapping facility, this identifies in more detail the areas with potential for wind turbine development and areas which are nationally important and afforded significant protection.



Background

The Scottish Government through the publication of [National Planning Framework 3 \(NPF3\)](#) and [Scottish Planning Policy \(SPP\)](#) in the summer of 2014 have emphasised the role the planning system has to play in the transition toward a low carbon economy within Scotland.

Both documents reaffirm the need for an 80% reduction in green house gas emissions by 2050 and the need in the short term to have at least 30% of overall energy demand by 2020 met from renewables- this includes generating the equivalent of at least 100% of electricity demand from renewable sources, equivalent to 16GW of installed capacity ([2020 Routemap for Renewable Energy in Scotland](#))



Hadyard Hill Wind Farm

Scottish Planning Policy

Scottish Planning Policy (paragraph 154) also requires planning authorities, through their development plan,

- to support the development of a diverse range of electricity generation from renewable energy technologies-including the expansion of renewable energy generation capacity
- to guide development to appropriate locations and to advise on the issues that will be taken into account when specific proposals are being assessed

thus ensuring within their area the full potential for renewable energy generation is achieved; whilst at the same time giving due regard to environmental, community and cumulative impacts.

As a guide to developers and communities and to deliver national consistency within local development plans in the preparation of spatial frameworks Scottish Planning Policy also, through Table 1, advocates a new approach to identifying those areas which are considered most appropriate for wind farms. This requires the mapping of national areas, designations and interests considered sensitive to wind farm development. The approach advocated is set out in detail in Part 1: Spatial Framework of this Guidance.

Local Development Plan Policy

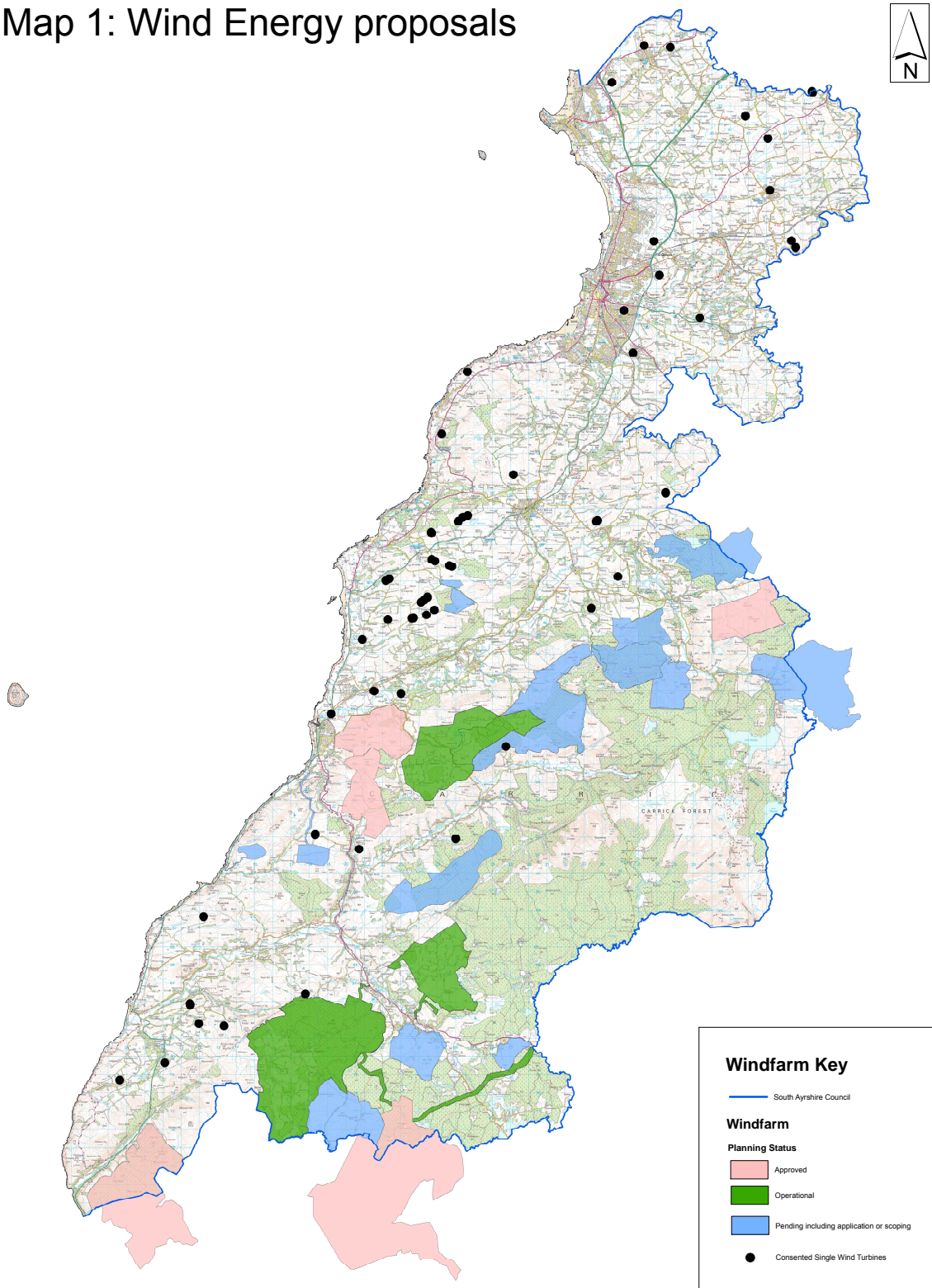
The Council acknowledge and recognise that they have a responsibility to identify those areas which are the most appropriate for onshore wind energy, that contribute to the overall national supply and which can offer benefits which can be important to the well being of rural communities. They also recognise that current national renewable energy policies present challenges, which could lead to a significant landscape change and community concern. It is the Councils view that this change has to be managed in ways which ensure that an appropriate balance is achieved between the advantages of wind energy with wider economic and community interests

The principles of sustainable development which underpin the policies of the Local Development Plan are overarching and will therefore be applied to in the assessment of all wind farm development.

Renewable Energy in South Ayrshire

Developments generating power from wind energy are one the most significant uses of land within South Ayrshire. To date around 243 turbines of different scale and size have been consented, these proposals have the potential to generate some 800 MW of energy and supply the domestic energy needs of some 450,000 households. Major wind energy schemes are concentrated in the southern Carrick southern uplands and include operational schemes at Arecleoch (60 turbines, 120 m high), Mark Hill (28 turbines, 110m high). In the foothills south of Girvan , Hadyard Hill wind farm is operational (53 turbines 111m high). Recent consents have also been issued by Scottish Ministers for proposals within the coastal foothills to the south east of Girvan at Assel Valley (10 turbines, 110m high), Tralorg Hill (8 turbines, 100m) and by South Ayrshire Council, Glenapp (11 turbines 126m high). Dersalloch wind farm (23 turbines, 115/125m high), east of Straiton and Kilgallioch (96 turbines 146m high) are under construction. These developments along with a number of schemes under consideration are illustrated on Map 1.

Map 1: Wind Energy proposals



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Map 1 Wind Energy Proposals (November 2015) the map above illustrates consented schemes and proposals.

Spatial Framework

This section of the guidance sets out the Spatial Framework for wind energy development within South Ayrshire. To accord with national planning policy the spatial framework identifies and maps a range of national interests and designations. (Group 1 and Group 2 interests)

Group 1 interests are areas in Scotland where wind farms are deemed not to be acceptable. These are National Parks and National Scenic Areas. There are none of these designations within South Ayrshire and are therefore not mapped. Areas which will be afforded significant protection by national policy, Group 2 interests, include Natura 2000 sites, Sites of Special Scientific Interest, sites identified on the Inventory of Gardens and Designed Landscapes, nationally important environmental interests, which include areas of wild land and carbon rich soils and a community separation distance of 2km from towns and villages identified in the local development plan. These areas have been mapped and are illustrated in the accompanying series of maps. They can be viewed in greater detail in the web mapping facility which accompanies this guidance.

Within the **areas which are identified as having potential for wind energy developments (Group 3) a wide range of turbine typologies** of various heights may be acceptable, for example smaller turbines, those below 15m height relate better to the scale of woodlands, mature trees and buildings within this area and can therefore be more easily accommodated. In contrast the opportunities to accommodate turbines above 70m are likely to be more limited and will focus on the less sensitive upland landscapes where the more extensive scale of these landscapes can better accommodate and provide an appropriate setting for larger turbines.

Within the **areas of significant protection** there may be some limited opportunities for development where it can be demonstrated that the significant effects on the qualities of these areas can be substantially overcome by siting, design or other mitigation and that these measures fully accord with the local development policies that safeguard these national interests.

Table 1, p39 of Scottish Planning Policy is repeated in this guidance and is set out below.

The Spatial Strategy applies to all turbines which exceed a height of 15m.

Group 1: Areas where wind farms will not be acceptable:

National Parks and National Scenic Areas.

Note: There are no national parks or national scenic areas within South Ayrshire

Group 2: Areas of significant protection:

Recognising the need for significant protection, in these areas wind farms may be appropriate in some circumstances. Further consideration will be required to demonstrate that any significant effects on the qualities of these areas can be substantially overcome by siting, design or other mitigation.

National and international designations:

- World Heritage Sites;
- **Natura 2000** and Ramsar sites;
- **Sites of Special Scientific Interest;**
- National Nature Reserves;
- **Sites identified in the Inventory of Gardens and Designed Landscapes;**
- Sites identified in the Inventory of Historic Battlefields.

Note: National & international designations

There are currently no World Heritage sites, Ramsar sites, National Nature Reserves or sites identified in the inventory of Historic Battlefields within South Ayrshire.

Other nationally important mapped environmental interests:

- areas of wild land as shown on the 2014 SNH map of wild land areas;
- carbon rich soils, deep peat and priority peatland habitat.

Note: Carbon rich soils and Wild Land

The Government have recently concluded a consultation on the extent of land within Scotland that has carbon rich soils, deep peat and priority peatland habitat. It is recognised that pending the outcome of this consultation the area shown for this constraint may change. The mapping used to identify carbon rich soils in the spatial framework is that contained on the Natural Scotland web site SNH Guidance-[Spatial Planning for Onshore Wind Turbines-S3.2](#) provides further guidance on this issue.

SNH have confirmed the Merrick as an area of wild land. By its nature, wild land and its setting is particularly sensitive to a range of developments, including windfarms. Further guidance on these sensitivities in relation to the Merrick is expected. Pending this guidance proposal should take into account SNH's guidance note "[Assessing the impact of wild land](#)".

Community separation for consideration of visual impact:

- an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge. The extent of the area will be determined by the planning authority based on landform and other features which restrict views out from the settlement.

Note: Community separation

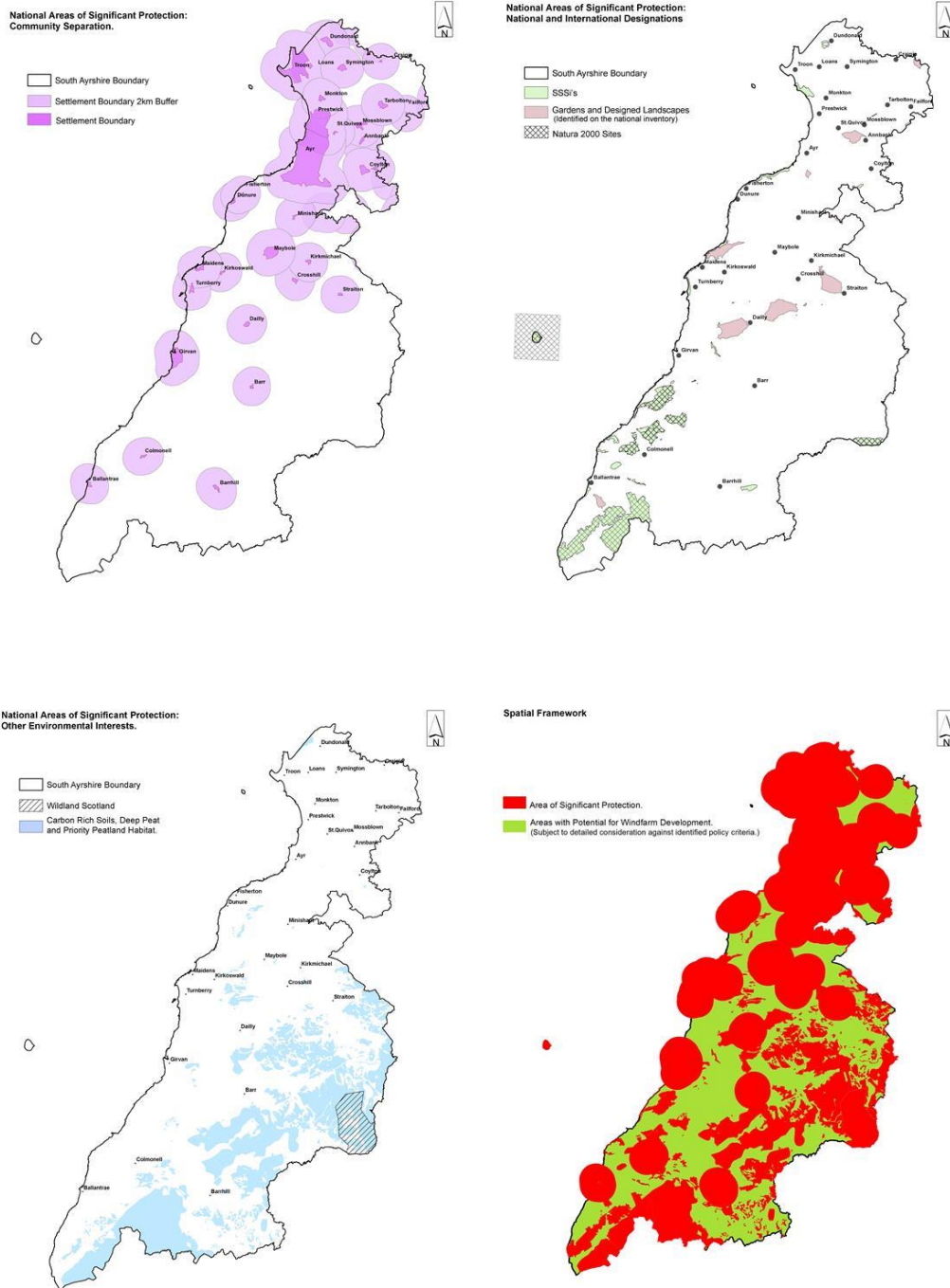
Within South Ayrshire the towns and villages identified in the local development plan are: Ayr, Prestwick, Troon/Loans, Girvan (including Grangestone IE), Maybole, Annbank, Ballantrae, Barr, Barrhill, Colmonell, Coyton/Joppa, Coyton/Hillhead, Craigie, Crosshill, Dailly, Dundonald, Dunure, Failford, Fisherton, Kirkmichael, Kirkoswald, Maidens, Minishant, Monkton, Mossblown, St. Quivox,

Straiton, Symington, Tarbolton, Turnberry.

Group 3: Areas with potential for wind farm development:

Beyond groups 1 and 2, wind farms are likely to be acceptable, subject to detailed consideration against identified policy criteria.

Table 1 : Spatial Framework





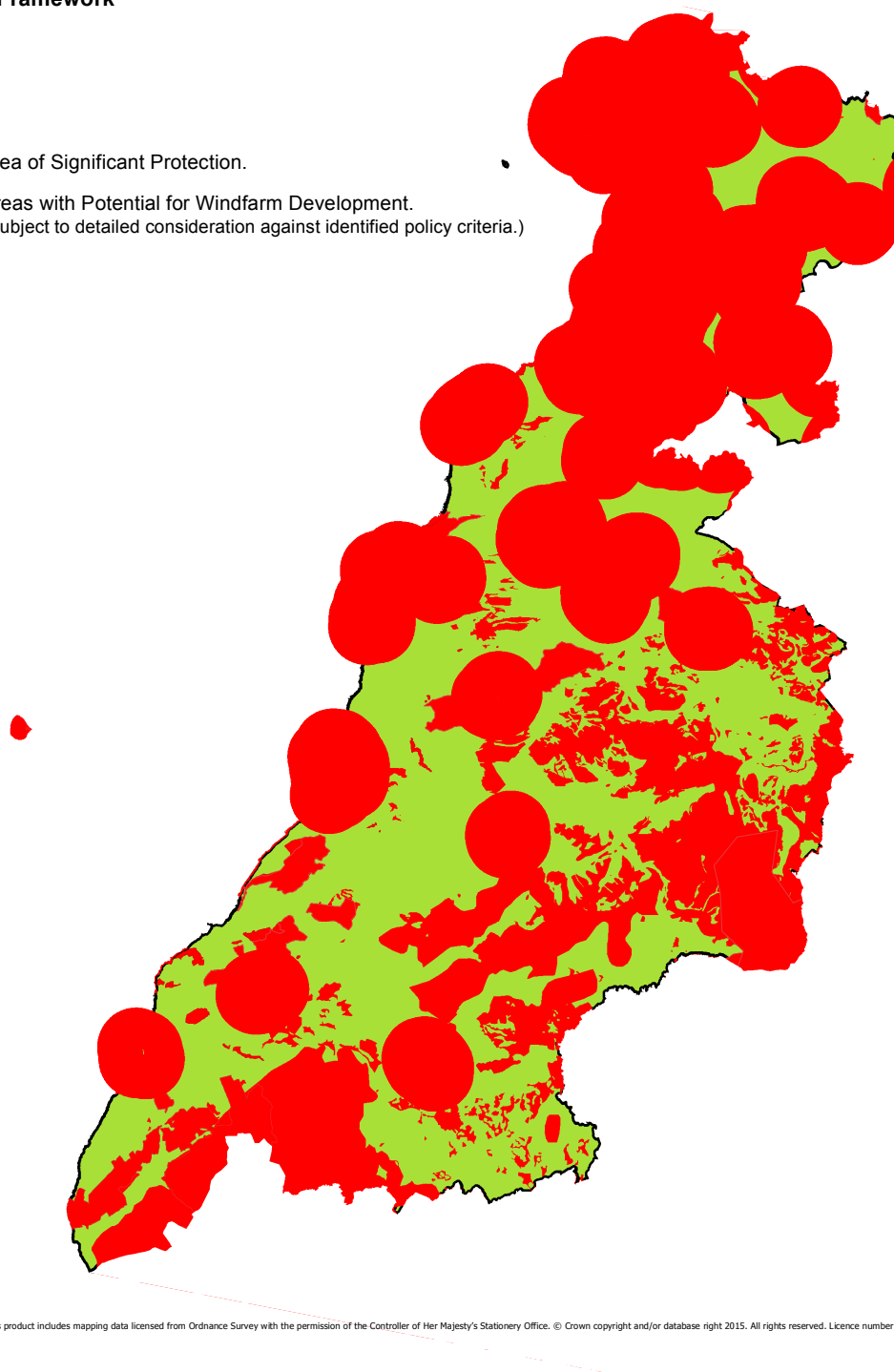
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Picture 2 National Interests within South Ayrshire and Spatial Framework

Spatial Framework



-  Area of Significant Protection.
-  Areas with Potential for Windfarm Development.
(Subject to detailed consideration against identified policy criteria.)



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Picture 3 Spatial Framework

Development Criteria

Scottish Planning Policy makes it clear that the spatial strategy set out above should be complemented by an assessment against a range of considerations.

This section provides more detail on how the criteria within the local development plan will be applied in the assessment of future proposals for wind farm and wind turbine development. These criteria will also be applied to proposals which involve the extension of or the re-powering of existing schemes. The guidance in this section covers the following issues:

- impacts on landscape and landscape character
- visual impacts
- residential amenity, noise, shadow flicker, visual impact and traffic
- natural heritage including national and locally protected species and habitats
- impacts on the historic environment and archaeology
- aviation, defence and broadcasting interests
- cumulative impacts
- environmental management
- hydrology and the water environment
- borrow pits
- carbon losses
- flooding
- decommissioning and restoration bond obligations
- re-powering
- extensions
- monitoring

Each section includes a reference to the Council's policy on these issues and the matters which will be taken into account in the assessment of proposals.

A: Landscape Character

We will support proposals if:

they are capable of being accommodated in the landscape in a manner which respects its main features and character (as identified in the South Ayrshire Landscape Wind Capacity Study or in any subsequent updates to that study), and which keeps their effect on the landscape and the wider area to a minimum (through a careful choice of site, layout and overall design);

The diversity in character of landscape within South Ayrshire was analysed by Land Use Consultants in 1998, "Ayrshire Landscape Assessment 1998". This identified, within South Ayrshire distinct landscape character types.

The description of landscape character areas provided a basis for the formulation of recommendations on landscape management and planning. In general these recommendations reflect both the strength of landscape character and its quality. In areas where the landscape character was strong and intact, the emphasis was placed on conserving the qualities and features that contribute to that character, in areas where the landscape had become weakened by change, the emphasis was on restoring character that has been lost. In areas where profound change has resulted in a loss of landscape character there was opportunity to recreate new landscapes eg the use of commercial forestry areas for wind power.

Key issues addressed by the planning and management guidelines published within the study included advice on the potential of the landscape to accommodate renewable development, particularly wind power. This part of the guidance has recently been updated, with the publication of the South Ayrshire Landscape Wind Capacity Study.

The South Ayrshire Landscape Wind Capacity Study took the opportunity to sub-divide and reclassify landscape character types to better reflect local character and context and also to reflect potential issues in relation to operational and consented wind farm developments. In total the study considered 20 landscape character types within South Ayrshire and their sensitivity to accommodate wind turbines between 15m and over 70m in height. Additional generic **design guidance** on the siting of small turbines below 50 m was provided in the study. The design guidance is not repeated within this document but its content will form a consideration when assessing proposals of this scale. The report also provides advice on the sensitivity of different types of wind farm and wind turbine development on and within each landscape character type. This analysis highlights landscapes which have a high sensitivity to wind turbine development and areas where there is no scope to accommodate that scale of development, this advice is summarised within Appendix 3 of this guidance. All proposals should have regard to this advice.

In summary the South Ayrshire Landscape Wind Capacity Study provides advice on:

- local landscape sensitivities
- the range of windfarm typologies which can be located within each landscape character area
- thresholds of acceptable levels of landscape change
- emerging cumulative issues and guidance and objectives to manage this change
- scope and limits to future development.

Chapter 25 of that document summarises the key findings of the sensitivity assessment..This section of the document also addresses the landscape and visual issues associated with wider strategic planning of wind farm and turbine developments in South Ayrshire and outlines recommendations for a landscape strategy. The strategy that is outlined in this document have informed the content of Table 2 within this guidance.

It is the Councils view that the design and location of any wind farm must reflect the scale and character of local landscapes, in this respect the Ayrshire Landscape Character Assessment and the South Ayrshire Windfarm Capacity Study will inform the assessment of future wind energy proposals.

Relevant Local Development Plan Policy

Sustainable Development, Landscape Quality, Protecting the Landscape, The Coast and supporting Appendix B.

Landscape Strategy

The landscape strategy set out below in Table 2 has been informed by the Ayrshire Landscape Character Assessment and the findings of the South Ayrshire Landscape Wind Capacity Study.

In line with the recommendations contained within these documents proposals will be assessed against the objectives set out in Table 2. Proposals should seek to mitigate direct impacts on these interests through careful siting and design. In areas identified as “sensitive cumulative zones” cumulative landscape and visual issues have been identified which will limit the capacity for further development, refer also to Section G on Cumulative Impact of this guidance.

Key Objectives of the landscape strategy	
Coastline of South Ayrshire	Protect the character of the rugged and highly scenic coastline of South Ayrshire. This coastline is a key asset for South Ayrshire and features dramatic headlands, extensive woodland policies around Culzean, remote coastlines in the south and dramatic views of the Firth of Clyde and Ailsa Craig. Even small turbines could affect the character of the coast and intrude on views. Turbines in adjacent landscapes will require to be sited to avoid being visible on containing skylines against the coast.
A77 Gateway	Glen App is a key entry point to South Ayrshire. It is important that the setting of this Glen and the open views across the Firth of Clyde to Ailsa Craig from the road are protected by avoiding turbines which intrude or are visible on skylines
Rugged scenery and sense of wildness associated with Loch Doon and the Carrick Hills	Wind farm development will be directed away from this landscape, developers will also be required to demonstrate that development sited in surrounding landscapes avoid significant impact on its setting and experiential qualities.
Landmark Hills and their setting	Protect land mark hills and their setting. There are 28 landmark hills within South Ayrshire. These are steep sided and well defined hills which generally lie on the edge of more complex foothills. They form highly visible backdrops and diverse skylines to the Girvan and Stinchar valleys and the South Ayrshire coast. Wind turbine development on or near these hills would detract from their distinct form and character and would also be visually prominent from sensitive coasts and valleys.
Ayr, Doon, Girvan, Stinchar and lower Duisk valleys.	Protect Ayr, Doon, Girvan, Stinchar and lower Duisk valleys and setting. These river valleys have a diverse character. Larger scale turbines in these valleys would dominate the small scale of these valleys and significantly detract from their land cover pattern and built heritage. Proposals for turbines situated within adjacent upland landscapes will require to be set well back into the upland interior to minimise intrusion on containing skylines and avoid significant cumulative impacts with operational wind farm developments.
Less sensitive Upland Landscapes	Within South Ayrshire the upland landscapes are a more extensive scale and can better accommodate larger scale turbines. The strategy will seek to consolidate the generally successful association of larger turbines with this particular landscape character type. Mitigation of their visual impact will be sought by setting development well back into the upland interior and considering limitations in the height of turbines.
Sensitive Foothill landscapes	The integrity of sensitive foothill landscapes should be retained. The recent consents (North east of A714) and their cumulative impacts have impacted on the integrity of local landscapes in this area. To retain the integrity of the remaining area further development within the coastal foothills (south west of A714) and Maybole foothills will be discouraged.
Sensitive Cumulative Zones*	Minimise Cumulative impacts. Cumulative landscape and visual issues have been identified in the following areas this will limit the capacity for further development: A714 and Duisk River Stinchar Valley Knockdolian, Beneraid and Byrne Hill Water of Girvan Valley Merrick Hill Maybole Foothills

* Refer also to section G Cumulative Impact and paragraph 169 Scottish Planning Policy.

Table 2: Landscape Strategy

B: Visual Impact

We will support proposals if:

they do not have a significant detrimental visual impact, taking into account views experienced from surrounding residential properties and settlements, public roads and paths, significant public viewpoints, and important recreational assets and tourist attractions;

Wind turbines are large structures and taken together with associated development such as, access tracks and associated buildings have the potential to create significant visual and landscape impacts.

These impacts will be influenced by the distance from which the turbines will be viewed and whether the turbines are seen in isolation or with other features in the landscape, including other wind farms. As a general rule, it is the experience within South Ayrshire that windfarms visible within 5-8km from a feature will be relatively prominent and within 4-5km a dominant feature in the landscape⁽¹⁾. (this general rule will vary depending on weather conditions landform , screening and the height of the turbine)

An assessment of visual effects deals with the effects of change and development on the views available to people and their visual amenity. Guidance from Scottish Natural Heritage(SNH) advises that wind farms should be of a minor vertical scale in relation to key features of the landscape (typically less than a third), and of minor size compared to other features and foci within the landscape, or separated from these by sufficiently large area of open space so that direct scale comparison does not occur. To inform the visual assessment of future proposals the Council will request that proposals should [reflect the good practice published by Scottish Natural Heritage](#) and include:

- A zone of visual influence map showing the areas from which turbines may be seen
- Computer generated wire line diagrams where appropriate
- An analysis of the visual impacts on viewpoints, these include representative samples from a variety of short and long range positions.
- Photo montages of the proposed development from sensitive receptors..
- Video montages (if appropriate)

An assessment of the visual effects on the following interests (where relevant) will be requested:

- Homes and towns and villages within 5km of a windfarm
- Significant landscape features (including the area of wild land and landmark hills, identified within the South Ayrshire Landscape Wind Capacity Study)
- Scheduled ancient monument and significant archaeological buildings⁽²⁾
- Locally prominent and valued buildings, including listed buildings and conservation areas*
- Historic gardens and designed landscapes*
- Archaeological locations and landscapes*
- Designated coastal and scenic areas
- Robert Burns designated buildings, locations and their settings*
- Scenic driving/recreational routes, including A719, A77, Ayrshire Alps Cycling Park, Carrick Forest Drive
- Nationally recognised cycle and walking routes
- Core path network
- Significant transport corridors
- Internationally significant Golf Courses and their settings (Troon, Turnberry, Prestwick Old Course)
- Galloway Dark Sky Park
- Firth of Clyde, including the island of Ailsa Craig
- The scenic landscape area identified in the Local Development Plan
- Merrick Wild Land Area and its character

1 Construction schemes, Scottish Office Reporters assessment of proposals and EIA's associated with proposals.

2 *Note; An assessment of the visual effects on the historic environment does not negate the requirement for their consideration within a historic or cultural assessment

A range of viewpoints should be chosen which are representative of issues in the area and which are likely to experience significant effects. In choosing viewpoints applicants should consider the likely effects on residents living, travelling to work on a regular basis and involved in recreation within the area and mode of transport that may be used for example foot, train, cycle, train etc.

To improve public access to visualisations “Viewpoint Packs” should be prepared and made available to Community Councils in areas affected by the proposal.

The extent of likely visibility of different types of windfarms/turbines on the local landscape features and viewpoints is also considered within the [South Ayrshire Landscape Wind Capacity Report Appendix Report](#). The degree of openness or enclosure, which influences visibility, including the amount of screening created by topography and woodland is also considered. Guidance on the micro- small wind turbines below 15m to blade tip, small turbines 15-30m and small to medium turbines 30-50m in height to blade tip height is provided in section 24 of the South Ayrshire Landscape Wind Capacity Study (Main Report). This guidance supplements SNH’s published guidance Siting and Designing [Windfarms in the Landscape version 2 \(2014\)](#) and [Siting and Designing of small Scale Wind turbines of between 15 to 50 metres in height \(2012\) Good practice advice](#) on the visual representation of wind farms was published by SNH in 2014. Developers should reflect this advice within their proposals.

Relevant Local Development Plan Policy

Sustainable Development, Landscape Quality, Protecting the Landscape, the Coast

C: Communities Quality of Life and Amenity

We will support proposals if:

They do not have significant detrimental effect on the amenity of nearby residents, including from noise and shadow flicker

The potential of wind turbines through noise, shadow flicker and visual effects to create significant long term impacts on the amenity of an area, well being and quality of life of people living or working near to them is of significant concern to local communities and residents within South Ayrshire. Rather than attempting to lessen these impacts after a development has taken place it is the Councils’ policy is to avoid developing areas where problems could occur. Initial site selection, careful design and layout of the development, distance thresholds and the introduction of appropriate standards can all contribute to preventing or mitigating these impacts.

Noise

There are two distinct types of noise generated by turbines, mechanical noise, associated with gearbox or generator and aerodynamic noise, produced by the blade moving through the air, which is generally the dominant noise source.

All wind turbine or wind farm proposals will require a ‘Noise Impact Assessment’, which may require to be site specific. The scale of information submitted must be appropriate to the size and capacity of the development. A desktop assessment may only be appropriate for the assessment of small wind turbines.

To address cumulative noise from other wind turbines, any proposed, consented or existing wind turbines within a search area of 5km radius of the proposed development should be established. Cumulative noise impacts must be considered in accordance with the following guidance and where required must be submitted with the Noise Impact Assessment. Developers should refer to:

ETSU-R-97, the IoA Good Practice Guide to the Application of ETSU (May 2013) and the IoA Supplementary Guidance Notes that accompany these documents. Refer also to

<http://www.ioa.org.uk/publications/good-practice-guide>

Further guidance on information required in the Noise Impact Assessment is contained in 'Environmental Health; Noise Impact Assessment Requirements for Wind Turbine Developments'. This document which is based on the above guidance, establishes allowable noise limits for neighbouring property at different wind speeds. A copy can be downloaded from the South Ayrshire Council website.

Recent research, [*SLR Wind Farm Impacts Study- Review of visual, shadow flicker and noise impacts of onshore wind farms*](#) has highlighted the importance of not only calculating noise levels but also considering the duration and character of noise exposure. Planning policy on noise in Scotland requires qualitative impacts to be assessed and considered at the application stage. This should describe the potential for audibility of wind turbine noise and the duration and character of this noise. Audibility of turbines can be over significant distance, 2-3 km or greater in some cases. Noise from a wind farm is reported as not audible if predicted levels fall below 25db(A) however at 38db(A) wind farms will be audible and create annoyance. **Residential amenity surveys(noise)** which assess predicted noise impacts will be requested to help inform potential impacts.

Shadow Flicker, Blade Glint Glare, Light effects

Under certain combinations of geographical position, time of day and time of year when the sun passes behind rotating blades a shadow can be cast over neighbouring property. The rotation of the blades creates a shadow which appears to flick on and off, this "shadow flicker" can be disruptive and create significant annoyance.

Shadow flicker can be minimised through the careful layout of turbines within a development ensuring turbines are separated sufficiently from neighbouring properties. Developers will be required to assess the impacts of shadow flicker on adjoining properties. The design of their development should seek to eliminate the effects of shadow flicker or ensure neighbouring property do not experience the effects for more than 10 hours per year.

During these periods mitigation should be provided which would shut down the turbine(s).

There is some recent evidence that shadow flicker can be experienced at greater than 10 rotor diameter distance [*SLR Wind Farm Impacts Study- Review of visual, shadow flicker and noise impacts of onshore wind farms*](#) and that the modelling of those residences within 10X rotor diameter may not capture all homes where people experience shadow flicker effects.

the Council will require shadow flicker assessments are modelled to take into account all residential property within 2.5km of a wind turbine (This distance threshold should take into account any screening of turbines offered by topography)

Blade Glint, Glare and light effects happen when sunlight reflects or bounces off turbines causing annoyance to the eye and shadow effects. The effects of glint and glare can be ameliorated with the coating of wind turbine blades with a low reflectivity treatment. An assessment of the potential glint, glare and light effects may have on sensitive receptors, for example local housing and road traffic, should be included as part of supporting material for an application.

Visual

The siting and design of a windfarm provide the most effective means of minimising visual and landscape impacts. Design objectives should take into account local residential property and the extent that the proposal will be visible. This design process should seek to minimise **significant** visual effects on private property work place or community facility. As a general rule a minimum separation distance of 2km from towns and villages to a turbine will be required. Individual dwellings should be sufficiently distant to minimize significant visual effects. This assessment should be informed by residential visual amenity surveys, all property within 2.5km of wind turbines should be considered in this assessment.

Traffic & Transport Routes

The construction of windfarms can have significant short term impacts on local road networks. During the assessment of a proposal applicants will be required to provide a transport assessment of possible impacts, and will require to show the suitability of the route for future construction traffic. Pre and post construction surveys will be required. Where appropriate the Transport Assessment should demonstrate the likely impacts of the development on the trunk road network. If a proposal involves locating wind turbines close to the Trunk Road Network, approval will be required from Transport Scotland who will require to be satisfied that the proposal will not adversely affect the safety and free flow of the trunk road network. It should be noted that any changes proposed to the trunk road will require approval from Transport Scotland. The design of the new modified access junction will require to be designed in accordance with the Design Manual for Roads and Bridges (DMRB).

During the construction and a future subsequent decommissioning phase the Council will require the preparation of a traffic management plan and encourage within it the adoption of good traffic management procedures. These will include early discussion with the Ayrshire Roads Alliance, Police Scotland, Transport Scotland and other key agencies, such as network rail, continued dialogue with local communities including providing advance notice of abnormal load deliveries, the avoidance of school opening and closing peaks, pre construction surveys and an assessment of environmental risks.

Where the trunk road network is to be used to transport turbine components to site then an abnormal load route assessment should be undertaken and submitted to Transport Scotland for consideration. The assessment should identify the preferred route to site and any pinch points on the trunk road network where mitigation may be required. Swept path analysis should be included to help identify the nature and extent of the trunk road mitigation required.

Active Travel Access Routes and Recreation

Core paths and other access routes provide an important network which give people confidence to move freely about the countryside and encourage enjoyment of outdoors for recreation. Wind farm developments can cover significant areas of countryside and can offer opportunities for active travel and recreation. The Council wish to improve and protect core paths and significant access routes and will therefore encourage developers to demonstrate how links to the wider active travel network can be made and how safe attractive facilities particularly those for walking, cycling and horse riding can be incorporated within their development.

Proposals which will have a negative effect on a core path or other significant access routes will only be supported if it can be demonstrated that a suitable alternative route can be provided.

In the interests of safety and amenity the Council will request that all turbines are set back a minimum 180m (or 1.5 turbine height, whichever is the greater) from rail, road routes and active travel routes.

Relevant Local Development Plan Policy

Sustainable Development, Air Noise and Light Pollution, Freight Transport, Outdoor Public Access and Core Paths.

D: Natural Heritage including international, national and locally protected species and habitats

We will support proposals if:

they do not have significant detrimental effect on natural heritage features, including protected habitats and species, and taking into account the criteria of the LDP policy: natural heritage;

South Ayrshire has a rich and varied natural heritage which comprises of a wide range of habitats containing important plants, animals as well as geological features. These are protected through European and National legislation and a variety of non-statutory designations. At a national level protection is offered by the designation of a number sites which are of Special Scientific Interest (SSSI's). European legislation offers further support to sites which are of international significance. These are designated as Natura sites, a term given to Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPA's) designated under the birds directive. Any development which is likely to have a significant effect on sites within the Natura 2000 network will be subject to an appropriate assessment of the implications for the site in view of the site's conservation objectives.

Development on or affecting a Natura site is only likely to be approved if that assessment concludes that the development will not adversely affect the integrity of the site or it can be shown that there are no alternative solutions, and there exist imperative reasons of overriding public interest, including those of a social or economic nature and compensatory measures are provided to ensure that the overall coherence of the Natura network is protected.

Development which would affect a designated or proposed Site of Special Scientific Interest will only be permitted where an ecological appraisal has demonstrated to the satisfaction of the Council that the objectives of the designation and overall integrity of the area will not be compromised and any adverse effects are outweighed by social, environmental and economic benefits.

In recognition of their International and National status the European and national sites which are illustrated on Map 2 and are afforded significant protection in the spatial framework.

Local natural heritage designations include:

- Local nature reserves
-Sites containing species protected by the Habitats Directive, Wildlife and Countryside Act 1981 or the Badgers Act 1992*
- Wildlife sites
- Tree Preservation Orders
- Galloway Forest Park
- Wildlife Corridors
- Ornithological sites

Development which would affect the above local sites and designations will only be supported where the developer can show that the integrity of the site will not be put at risk.

Through Local Development Plan policy the Council takes a broader approach to protecting the natural heritage than just conserving designated or broader sites and species. Where development impacts on areas of nature conservation value (non designated) which may include woodlands, hedgerows, wildlife corridors and water features the Council may seek compensation for their loss where the Council is satisfied that loss can be justified. This approach reflects its duty as a Council and Planning Authority under the Nature Conservation (Scotland) Act 2004 to further the conservation of biodiversity when taking decisions which affect the significant use of land.

***Protected Species**

The presence or potential presence of a legally protected species is an important consideration when considering future development. If there is evidence that protected species are present on site or will be affected by the development it will be necessary to take steps to establish their presence. RSPB can provide further information on the distribution of species listed in Annex I of the EU Birds Directive and or species of conservation concern with know or suspected sensitivity to the effects of wind turbines , notably through collision mortality and disturbance displacement . Refer RSPB Research Report 20:Bird Sensitivity Map to Provide Locational Guidance for Onshore Windfarms in Scotland

The council will expect mitigation to be integrated into the planning and design of the development. Planning permission will not be granted for development that would be likely to have an adverse effect on protected species unless it can be justified in accordance with relevant protected species legislation.

The opportunities for wind turbine development to introduce environmental improvement and mitigate climate change through the restoration of degraded ecosystems is recognised. This can be achieved through changes to land management practices or through active restoration as part of the scheme. These opportunities should be set out within the Environmental Statement and in detail within a draft Habitat Management Plan, The Council will encourage the development of habitat management plans and subsequent restoration plans that promote the actions identified within the Ayrshire Local Biodiversity Action Plan and the Galloway and Southern Ayrshire Biosphere Habitats and Species Action Plan.

Biosecurity and invasive species, pests and diseases

Invasive non-native species (INNS) can spread rapidly and have adverse ecological and economic impacts. INNS may also affect health. Pre construction surveys to establish the status and distribution of INNS should be undertaken and appropriate mitigation policies and procedures should be confirmed during construction and restoration phases of the windfarm to mitigate the risk of spread. Refer to SNH "[Good practice during wind farm construction-version 3](#)"

Additional Information:

SNH provide a range of information on managing the risk from wind turbines to habitats and species, this includes impacts on peat,bats and birds. Applicants should reflect this guidance and advice in their assessment of the site and future management. Refer:SNH, [General advice and information](#).

Relevant Local Development Plan Policy

Natural Heritage. Sustainable Development

E: Historic Environment and Archaeology

We will support proposals if:

they do not have significant detrimental effect on the historic environment, taking into account the criteria in LDP policy: historic environment and LDP policy: archaeology;

The historic environment of South Ayrshire provides a background against which we all live and work, a link between ourselves and the past which helps define local distinctiveness and our sense of place and belonging. It comprises of a wide range of, historic communities, historic and architecturally important buildings, conservation areas scheduled ancient monuments, archaeological locations and landscapes, historic gardens and designed landscapes. It is particularly important in supporting the growth of tourism and leisure.

The Council will require a full assessment of the implications of the development on these resources. This includes indirect effects which would include the setting of the historic environment assets, changes to surface drainage patterns, removal of peat etc. To fully assess and understand the implications of their development on nationally important heritage assets developers should consult with [Historic Environment Scotland](#) and with [West of Scotland Archaeological Service](#) on the archaeology of the area.

The following resources and their settings* are protected:

- listed buildings of architectural and historic interest
- conservation areas
- scheduled ancient monuments
- historic gardens & designed landscapes
- locations and landscapes and buildings associated with Robert Burns
- archaeological locations and landscapes
- historic battlefields

Inventory Gardens and Designed Landscapes

Sites identified in the Inventory of Gardens and designed landscapes are afforded significant protection within the spatial framework. Proposals will require to demonstrate that any impacts on the features or setting of these landscapes have been overcome by siting, design or other mitigation and that this is acceptable. The Council will not accept development which would have a negative affect on gardens and designed landscapes of regional and local importance. s.

Setting

Developers should assess the impact of their development on the setting of a historic asset. Guidance on undertaking this assessment is provided by Historic Environment Scotland, [“Managing Change Guidance Note on “Setting”](#). The assessment should be undertaken by suitably qualified historic environment consultant and incorporated within an Environmental Statement or provided as supporting information if the proposal falls below the environmental assessment threshold.

Relevant Local Development Plan Policy

Historic Environment, Archaeology, Sustainable Development

F: Aviation, Defence & broadcasting interests

We will support proposals if:
they do not adversely affect aviation, defence interests and broadcasting installations;

Aviation

Airports and their associated airspace are recognised as significant components of national infrastructure. Within South Ayrshire Glasgow Prestwick Airport provides an international gateway to and from Scotland and has assets which offer competitive advantage to the region. It has substantial spare capacity and specialism in maintenance, repair overhaul and freight. Prestwick Airport is afforded national development status within National Planning Framework 3.

Gradual erosion of airspace through windfarm development has the potential to compromise safety, flexibility, capacity and potentially the viability of the airport.

Wind turbines are also known to have significant adverse impacts on instrument landing systems, navigational aids, radar systems and air traffic control. Applicants are therefore encouraged to have early discussions with airport operators, [NATS \(National Air Traffic Services\)](#), CAA (civil Aviation Authority) and the MOD prior to an application being submitted. Where developers can specify technological or other mitigation solutions in relation to specific developments they will be required to demonstrate agreement between themselves and the relevant operator that it can be delivered within a reasonable timeframe and will provide appropriate mitigation.

Developers will require to demonstrate that their development does not impinge on the current operation of Prestwick Airport and should work with the operators, the Government and the Council to ensure future growth aspirations are taken into account.

Defence Interests

A large part of South Ayrshire is designated by the Ministry of Defence as a tactical training area for low flying aircraft (LFA 20T). Wind farms present obstacles and interference on radar and have the potential to create a safety hazard to aircraft engaged in operational low flying, tactical radar avoidance training and specialised night flying. Within a military low flying zone the MOD request that they are consulted on all proposals over 11m.

Development will not be supported in locations which are known to have adverse impacts on instrument landing systems, navigational aids, radar systems and air traffic control.

Dark Sky Lighting

Within the designated Dark Sky area lighting solutions should accord with Council policy and guidance. The Council will not support development proposals within the boundaries of the park that would produce levels of lighting that would adversely affect its “dark sky” status or would lead to any detriment to the designation.

If turbine lighting is sought by the MOD or Airport operators in the interest of safety all applications will require to demonstrate that the proposed lighting will have no detrimental impact on the status of the Galloway Forest Dark Sky Park and that it would not impede reasonable astronomic observations within the park and the Scottish Dark Sky Observatory.

Broadcasting Installations

Wind turbines have the potential to interfere with electronic communication media, this includes **television, radio and micro wave links.**

With television reception this could result in a loss of picture or sound or ghosting effects. This may occur if the viewer is in the “shadow” of or within a few kilometres of a wind farm if the aerial is pointing through the wind farm. Interference can also be create a “bounce” effect over significant areas of water. The siting of the turbine or turbines can reduce the severity of disruption. If possible, turbines should be at least 500 metres from any viewer.*

Micro waves can be affected by reflection, diffraction, or blocking if the turbines are in “line of sight” of the transmitting or receiving station.

These interference effects can be reduced through changes to turbine siting and discussion with operators.

A minimum clearance distance of 200m should be set between the alignment of the microwave and any turbine

A minimum clearance distance of 450m (5 times rotor diameter whichever is the greater) should be set between any adjacent transmission line.

Developers should consult with and demonstrate that network owners and Ofcom are satisfied that no adverse impact will occur to receiving or transmitting equipment. Where this is found likely a technical solution should be provided as part of the scheme.

Applicants will, through an appropriate planning condition, be required to enter into an agreement to rectify any interference should this occur after construction. This could include the removal of turbines if this form of mitigation is found necessary.

Areas subject to aviation and defence constraints are shown on the accompanying online mapping facility that supports this guidance.

Relevant Local Development Plan Policy

Glasgow Prestwick Airport

G: Cumulative Impact

We will support proposals if:

Their cumulative impact in combination with other existing and approved wind energy developments, and those for which applications for approval have already been submitted, is acceptable.

With a large number of operational and consented windfarms within South Ayrshire or its borders the assessment of the cumulative impact of proposals will be increasingly relevant in determining the acceptability of future proposals.

Cumulative impacts will most frequently involve landscape and visual impacts but may also affect ornithological aviation and historic interests. Cumulative impact assessments will require to consider existing windfarms, those which have permission and those that are the subject of valid but undetermined applications. In addition windfarm impacts will be assessed along with other impacts from other land uses (eg quarry uses) which in combination may produce significant adverse cumulative impacts. The threshold of acceptability will be monitored and where it is judged the limit of acceptable cumulative impact has been reached this will limit the capacity for further development.

Landscape and Visual Impacts

During the consultation on “issues” undertaken in April/May of this year concerns were raised about the cumulative impacts of existing developments. This issue was also highlighted within the the South Ayrshire Wind Capacity Study which identified a number of existing and potential impacts, which would limit scope for development in some areas.

- Simultaneous and sequential cumulative visual effects experienced from the A714, an important tourist route into South Ayrshire, where large wind farms such as Arecleoch and Mark Hill are already prominent in more open and elevated sections of this route south-east of Barrhill
- Cumulative landscape and visual effects on the Stinchar Valley where Mark Hill wind farm is prominent and in the Poundland area and where Hadyard Hill forms a dominant feature.
- Cumulative impacts on the setting and on views from popular accessed hills including Knockdolian, Beneraird and Byne Hill
- Cumulative effects on the Girvan Valley, which may emerge from developments proposed in this area..
- Cumulative effects on the character and setting of the Merrick if windfarms were to extend northwards.
- Cumulative effects could also quickly arise from multiple developments of smaller turbines within the South Ayrshire lowlands and lower Maybole foothills.

Establishing boundaries and maintaining visual separation from other wind farms would allow for a clear distinction to be perceived between the wind-farmed landscape and the landscape beyond. It is therefore proposed, consistent with Scottish Planning Policy (Paragraph 169), to provide significant protection to the sensitive foothills and valley areas in the immediate vicinity of these windfarm landscapes in order that the integrity of local landscapes and their character can be retained. These areas have been incorporated within table 2, Landscape Strategy

[SNH Siting and Designing Wind Farm Guidance](#) and [SNH Assessing the cumulative impact of onshore wind energy developments](#) provide information on setting windfarms within landscapes and methods which can be used to assess cumulative impacts on landscapes and birds(see below)

Cumulative Impacts on Ornithology

Operational wind farms are known to have a number of impacts on birds and bird populations. To date the most common impacts are from bird strikes as birds fly through the area swept by the blades. This can cause injury or death. However with increasing numbers of turbines within the landscape other impacts have been noted. These include displacement from traditional feeding grounds, breeding disturbance or barriers on regular movements or migration. These impacts can be considered at the scoping stage of the proposal and addressed through Environmental Impact Assessments. The developer should seek the advice of SNH on this matter. Guidance published by SNH identifies the approach which should be taken and which species should be prioritised for assessment. ([Assessing the Cumulative Impact of Onshore Wind Energy Developments, March 2012](#), Annex C).

Aviation Interests

Multiple wind turbines can create “clutter” on radar displays. Wind-farms will not be permitted in locations where the cumulative impact will adversely affect aviation safety and operations. It is for the developer to demonstrate that NATS, CAA, MOD and Glasgow Prestwick Airport have been consulted and are satisfied with the proposal. If mitigation is required then it must be demonstrated that the relevant consultee agrees to the specific mitigation being implemented in the anticipated timescale.

Historic Environment

Setting can be important in the way which historic structures and places are understood and appreciated. Setting extends beyond the boundary of an individual historic asset into the broader landscape. Depending on the nature of the historic asset relatively small changes, or a series of small changes, in the landscape can have a major impact. In addition to visual impacts the effect of the proposed change on qualities of the existing setting such as sense of remoteness, evocation of historical past, sense of place, cultural identity, spiritual responses can occur. Factors in assessing the impact of a change from development are set out in [Managing Change in the Historic Environment-Setting](#). An assessment of the cumulative impacts on historic assets close to turbines sites should be provided within the Environmental Impact Assessment or as supporting information when smaller schemes are being considered.

There will be a presumption against all wind farm developments in areas where cumulative impacts on landscape, ornithological, aviation and historic interests are judged significant.

H: Other Matters

Environmental management

Major windfarms during their construction, operation, maintenance, demolition and restoration phases can present risks to the environment which require to be prevented and minimised through an effective environmental management process. Developers should through the EIA process or within additional information submitted with a planning application identify all aspects of site work that might impact upon the environment, the risks associated with their proposal and the principles of preventative measures and mitigation. All the environmental sensitivities and mitigation measures identified to avoid or minimise environmental effects should be included within a **draft Schedule of Mitigation**. This approach will ensure a robust environmental management process for the development.

A **Construction Environmental Management Document** is a key management tool in implementing the schedule of mitigation and forms the basis of more detailed site specific Construction Environmental Management Plans. It sets out in full the approach to be taken to safeguard all environmental interests, particularly as highlighted within the Environmental Statement in the Schedule of Mitigation and the conditions of consent associated with the planning permission. Highland Council (in conjunction with industry and other key agencies) has developed referenced good practice guidance note [Construction Environmental Management Process for Large Scale projects, this sets out in more detail the content of CEMD's](#) refer paragraph 13 and Annex 3. A sample construction Environmental Management Plan is also included in Annex 4. Best practice advice, [Good Practice During Windfarm Construction](#) has also been prepared by SNH and SEPA The Council would expect CEMD's submissions to reflect this good practice guidance.

Relevant Local Development Plan Policy

Sustainable Development and relevant policies within the Environment and Climate Change section of the LDP

Water Environment

Under the Water Framework Directive, planning authorities have a duty to safeguard and seek improvements to the water environment. As a consequence the potential impact of a wind farm construction on the local hydrology requires to be assessed and protective and preventive strategies put in place to reduce potential risk to the ecology of the area.

The water environment includes burns, rivers, lochs, wetlands, groundwater and reservoirs. The applicant will require to show that every effort has been made to leave the water environment in its natural state. Engineering activities such as culverts, bridges, water course diversions, bank modifications or dams should be avoided unless there is no practical alternative. (Refer paragraph 255, Scottish Planning Policy). Where a watercourse crossing cannot be avoided, bridging solutions or bottomless or arched culverts which do not affect the bed and banks of the watercourse should be used. Refer : [SEPA guidance: River Crossings Good Practice Guide](#) and SEPA [engineering guidance](#).

Groundwater Dependent Terrestrial Ecosystems (GWTE)

Groundwater Dependent Terrestrial Ecosystems are types of wetland, specifically protected under the Water Framework Directive. A phase 1 habitat survey should be carried out for the whole site and the guidance [A Functional Wetland Typology for Scotland](#) should be used to identify all wetland areas. National Vegetation Classification (NVC) should be completed for any wetlands identified. If GWDEs are located within 100m of excavations shallower than 1m, such as tracks, roads and cable trenches, or 250m from features with excavations deeper than this further assessment will be required.

Ground Water Abstractions

Roads, foundations and other works associated with windfarm developments can disrupt groundwater flow and impact on groundwater abstractions. To address this risk all groundwater abstractions both within and outwith the site boundary should be identified. SEPA provides [planning guidance on assessing the impacts of development proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems](#)

As a general rule all turbine bases and associated infrastructure should be set back a minimum 50m from watercourses. **The Council will only permit development if it can be demonstrated that there will be no harm to the water environment or local diversity and the development does not pose an unacceptable risk to controlled waters including groundwater and surface water which also include domestic water supplies.**

Should proposals be consented the Council will, through an appropriate condition, request the long term monitoring of impacts on the water environment.

Relevant Local Development Plan Policy

Water Environment



Borrow Pits

The Scottish Government included within Scottish Planning Policy (paragraph 243) a new approach to the use of Borrow Pits for windfarm construction materials.

Borrow pits can be extensive areas within the site of a windfarm and are commonly used for the extraction of sand and aggregates used in the associated developments, such as crane pads, access routes etc.

The policy advice is to limit their use and to only permit them on site if there are significant environmental or economic benefits compared to obtaining material from local quarries. It advocates an approach which time limits their use and ties them to a particular project whilst also ensuring appropriate reclamation measures are in place.

The Council are of the view that there is significant merit in this approach, helping sustain local employment opportunities in existing quarries, but recognise that this could lead to additional trucks on local roads. The Environmental Statement or planning submission should provide sufficient information to address the national policy statement. The impact of borrow pits (including dust, blasting and impact on water) must be assessed in accordance with Planning Advice Note PAN50 Controlling the Environmental Effects of Surface Mineral Workings (Paragraph 53) (Borrow pits should be sited well away from watercourse, groundwater abstractions and GWTEs. Restoration measures for borrow pits must be detailed as part of the overall development proposals.

Carbon Losses

Forestry

In the past the construction of windfarms in South Ayrshire, and other parts of Scotland, have resulted in the felling of significant areas of woodland. As a consequence **a strong presumption in favour of protecting South Ayrshire's woodland resources will be applied.** Developers will be required to demonstrate how through initial site selection or windfarm design they have sought to minimise or avoid woodland losses.

The Scottish Government's Control of [Woodland Removal Policy](#) seeks appropriate compensatory replacement for woodland losses should this be unavoidable. This is reiterated with the [Ayrshire and Arran Woodland Strategy](#). Sections 3 and 8 of this strategy provide guidance on how and where such woodland can be accommodated. Where it is proposed that woodland is removed developers will be expected to provide compensatory planting. The Environmental Statement should incorporate a stand-alone chapter on woodland management and felling, this should include a baseline condition of the woodland and include information on the areas that will be felled to accommodate new turbines, access roads and infrastructure. During the assessment stage of the proposal developers will be required to confirm the location of new planting, with the Forestry Commission Scotland and South Ayrshire Council, as planning authority, in conjunction with Ayrshire Green Network Partnership. **The provision of compensatory planting will be referenced in the conditions of the planning consent to reflect [recent guidance issued by the forestry commission.](#)**

Where it is proposed to fell significant quantities of trees during the construction of a windfarm operations should be undertaken with a view to preventing and reducing waste arisings. SEPA provide guidance on this issue. (Refer: [SEPA Guidance, Management of Forstry Waste.](#)

Peat

Peat soils form in areas of high rainfall or permanently waterlogged conditions, where vegetation decays and accumulates on the surface. This soil type provides a significant national carbon store (70% of soil carbon estimated at 1,600million tonnes). Peat is also listed in annex 1 of the EU Habitats Directive as a significant habitat for a range of plants and birds and mammals. In South Ayrshire significant sites are found in the Stinchar Valley, Glen App and Galloway Moors, Knockdaw Hill, Drumlamford, High Altercannoch to Loch Duisk. Protecting and where possible, restoring this resource is of strategic national and [local importance](#)

Where peat and other carbon rich soils are present on site, applicants will be required to assess the likely effects of development on carbon dioxide (CO₂) emissions (Scottish Planning Policy advocates the use of the carbon calculator). CO₂ may be released when peatland is drained and developments will be required to demonstrate how release will be minimised.

The Council will as a general principle seek benefits from new development, which could include the restoration of degraded habitats and the improvement of the connectivity of habitat networks. Peatland that has been over-planted with trees may also be capable of habitat restoration. Proposals should be set out in a habitat management plan.

The spatial strategy in the guidance seeks to direct development away from carbon rich soils, deep peat and priority peatland habitat. Where proposed infrastructure from a windfarm does impact upon peatlands it is important to limit the volume of peat being disturbed, an approach to minimising peat disruption, thus reducing the volume of peat extracted should be demonstrated. This would include a map of peat depths (to full depth) showing all built elements and storage areas overlain, a table which details the quantities of acrotelmic, catotelmic and amorphous peat which will be excavated and where it will be re-used during re-instatement. Proposals should accord with joint Scottish Renewables and SEPA guidance on the Assessment of Peat Volumes, Reuse of excavated Peat and Minimisation of Waste and SEPA's Regulatory Position Statement-[Developments on Peat](#).

Dependant upon the volumes of peat likely to be encountered and the scale of the development, applicants must consider whether a full Peat Management Plan is required or whether information would be best submitted as part of the schedule of mitigation.

Flooding

Proposals should avoid areas which are likely to be affected by flooding or if the development would increase the likelihood of flooding elsewhere. The Council will assess the risk of flooding against the framework set out in the Local Development Plan. The Scottish Environment Protection Agency has produced maps of flood risk and these are a starting point when considering development locations.

Site drainage should take account of likely flood events and local storm intensity. To minimise pollution risks to local water courses and sensitive habitats and groundwater infrastructure such as culverts, settlement ponds and other pollution mitigation techniques on site should be designed to accommodate 1-200 year flood events

Relevant Local Plan Policy

Sustainable Development, Natural Heritage, Woodland and Forestry, Flooding

Decommissioning, restoration obligations extensions and repowering of existing schemes

Restoration and decommissioning statements are often brief, vague lack adequate environmental or ecological appraisal of preferred methods and evidence to inform decommissioning options. The Council wish to introduce best practice in this area and will request

- the preparation of a Restoration and Decommissioning Plan (RDP) which reflect Best Practicable Environmental Options (BPEO). This framework will consider the balance between removal of infrastructure and the environmental effects of their retention.
- sufficient information on the possible impacts arising from decommissioning during the assessment stage of the application
- regular reviews of RDP's, consistent with bond review periods

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- the integration of other processes, such as a habitat management plan with RDP's
- information on preferred options for restoration during the lifetime of the proposal which reflect good practice gathered from experience and legislative frameworks current at the time. (eg Waste, protected species licensing, controlled activities regulations etc.)

It is likely that at least 25 years may exist between construction and decommissioning of a wind farm. This will require the RDP to be sufficiently flexible to reflect changing environmental conditions, legislation and restoration techniques over this period. Prior to consent an outline RDP should be included within the environmental statement or supporting information associated with a planning application (non EIA applications) and should include the likely aims and objectives of the restoration scheme and details of the restoration of the main infrastructure proposed for the site. Post consent the developer should review RDP's every 5 years (or at a time period consistent with bond reviews) and submit a copy to South Ayrshire Council. Each review period should include further details on proposals for decommissioning. The final RDP should include a level of detail similar to a construction and Environment Management Plan and be informed by any pre restoration surveys considered appropriate at the time (eg species/watercourses etc.).

The RDP should therefore include;

- restoration objectives for the site (these should seek to return the site to the same or better than the pre-construction phase)
- aims of the RDP (these will include the removal of the wind farm, its associated infrastructure and associated restoration details)
- a timetable for restoration
- current legislation requirements
- map of constraints
- schedule of required surveys/species protection plans (required prior to decommissioning work starts)
- schedule of mitigation
- traffic management plan
- waste management plan
- noise management plan
- community liaison plan
- decommissioning environmental management plan
- watercourse restoration plan
- access/right of way plan.
- associated mapping and site specific plans
- ECOW /site environment manager appointment
- reporting procedures

To ensure that future restoration and decommissioning costs are met conditions will be placed on the consent which require a financial bond to be in place prior to energy generation from the site. The Council will request that the arrangements for **restoration and bond provisions are published with the application** and made available for public comment and scrutiny prior to the determination of the application. This will help ensure openness and transparency of the provisions being made by the applicant. The costs associated with decommissioning, restoration and aftercare phase will require to be **independently assessed**.

Financial guarantee arrangements will be required to show how they will minimise future risk should the operator be unable to meet future obligations. A range of financial assurances from developers will be considered, however ESCROW arrangements supplemented by a bond are favoured. Parent company guarantees will not be acceptable to the Council. Conditions and legal agreements will be put in place to ensure **regular reviews and cost indexing of bond provisions**. For major developments approved by the Planning Service the review time periods will be set not to exceed five years and may vary during this period depending on the operation being consented. The Planning Service will seek that conditions attached to S36 bond reviews also to reflect this provision. New bond agreements will require to be in place prior to the lapsing of existing provisions.

Extensions and proposals to re-power existing windfarms which are already in suitable sites can help to maintain or enhance the installed capacity, underpinning renewable energy generation targets. The current site will be a material consideration in any such proposals. Refer Scottish Planning Policy (Paragraph 174), extensions or repowering of an existing windfarms should however reflect the design objectives and principles of the existing scheme. Extensions should use turbines compatible with those in the existing wind farm, this includes aspects of scale, form, colour and rotation speed. Extensions should not

compromise the landscape setting of neighbouring wind farms and should respect existing focal points in the landscape. The potential for a wind farm to “outlive” the existing wind farm should also be considered in the design process. Refer to SNH guidance [Siting and Design of windfarms in the landscape](#), Version 2, May 2014

For proposals involving an extension to existing working areas and/or where infrastructure is to be utilised from the existing operational site (& covered by a existing restoration agreement) a new decommissioning restoration and aftercare bond will be sought that covers the shared infrastructure which is applicable to both areas. This will require to be submitted with the new application and will be subject to assessment during the application phase. Evidence of phased and progressive restoration of existing workings will be required prior to the granting of any future development.

Planning Monitoring Officer

To ensure compliance with the conditions attached to future consents, and to ensure best practices are adopted to mitigate possible impacts of the development on the environment the Planning Service will through an appropriate condition request the appointment of an independent environmental consultant to provide regular reports and assist the Council in monitoring the impact of the development on the site.

Community Benefit

It is recognised that renewable energy can present an opportunity for communities to share in the benefits of their local energy resources. Community benefits are often offered by developers to communities on a voluntary basis and where a proposal is acceptable in land use terms, and consent is being granted, there is an opportunity to secure benefit which is in line with the [Scottish Government Good Practice Principles for community benefits from onshore renewable energy developments](#)

As the above guidance outlines community benefits packages are not just limited to annual monetary payments derived from energy generation but can also include various forms of support such as funding for job creation initiatives, support funding for apprenticeships, providing local discounted energy schemes and direct investment in community amenities and visitor/recreation attractions.

National schemes such as the Community and Renewable Energy Scheme (CARES) and the Renewable Energy Investment Fund (REIF) have also been established to encourage local and community ownership of renewable energy across Scotland and can provide supportive advice and funding for communities to develop their own generation schemes.

Key principles of national guidance are the promotion of a national rate for onshore wind community benefits packages equivalent to at least £5,000 per MW per year, index linked for the operational lifetime of the development, together with the consideration by developers of the scope for community investment. This protocol applies to all energy projects over 50kw.

The Council would, where schemes are acceptable in planning terms, wish to ensure that local communities share in the mutual benefits that can be derived from locally generated renewable energy. Draft advice on [good practice principles for shared ownership of onshore renewable energy developments](#) has recently been published by the Government.

Appendix 1 Supporting studies and assessments

A number of studies and assessments have informed the preparation of this supplementary guidance, these are listed below.

Ayrshire Landscape Character Assessment

[The Ayrshire Landscape Character Assessment](#) was prepared by Scottish Natural Heritage in partnership with local authorities in Ayrshire. It formed part of a national programme of landscape character assessment. The commissioning of assessment reflected a recognition that the landscape in Ayrshire is a major asset for economic development, tourism and recreation and a source of pride and pleasure for its residents. The commitment to ensure that the concepts of sustainability and stewardship enshrined in national legislation and local policy required that the character and qualities of landscape be maintained and taken into account in decision making. The guidance within this document advises on the scale, rate and nature of change which would be acceptable and in keeping with the character and capacity of the environment to accommodate it.

South Ayrshire Wind Farm Capacity Study

The landscape management guidelines within the Ayrshire Landscape Character Assessment have recently been complemented with further advice within the [South Ayrshire Wind Capacity Study](#). This document reviewed the sensitivity of 20 landscape character areas and informs the siting and design of windfarms taking into account potential impacts on the landscape character of South Ayrshire. It also considers and provides guidance to minimise the potential cumulative effects of this form of development. It was approved by [South Ayrshire Council](#) in August 2013 as a material consideration in the determination of wind energy proposals and informing this guidance.

Strategic Environmental Assessment

To accord with the European Directive 2001/42/EC, (Environmental Assessment Directive) and the Environmental Assessment (Scotland) Act 2005 an environmental report has been prepared in respect of this supplementary guidance.

Equalities Impact Assessment

The Equality Act 2010 introduces a duty on public bodies and others carrying out public functions to ensure that they consider the needs of all individuals in their day-to-day work – in shaping policy, in delivering services, and in relation to their own employees. The purpose of an Equalities Impact Assessment (EqIA) is to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity and foster good relations to help

ensure that the Council does not discriminate in the delivery of its services or in the design of its policies and, where possible, the Council identifies opportunities to promote equality and good relations between individuals and groups.

The Equalities Impact Assessment of the South Ayrshire Local Development Plan concluded in general terms the proposed plan is likely to have a positive impact on particular characteristic groups covered by the legislation and the diversity themes relevant to South Ayrshire.

Habitat Regulations Appraisal

In accordance with the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994, as amended ('the Habitats Regulations'), this Supplementary Guidance has been the subject of a 'Habitats Regulations Appraisal'. The Appraisal determined that the Supplementary Guidance would result in no adverse impacts upon the integrity of any Natura 2000 sites.

Appendix 2 Summary of Landscape Sensitivity by turbine typology

Micro-small wind turbines (Below 15m to blade tip)

A 15m turbine generally relate well to the size of existing farm buildings and existing wooded areas and with careful siting the landscapes of South Ayrshire can accommodate turbines of this size. Constraints on their siting are the tops of coastal features such as raised beaches and headlands and in areas where cumulative thresholds have been met.

Small Turbines (15-30m to blade tip)

Turbines of between 15 and 30 m are going to be one of the most significant structures in the landscape and will be similar in height to taller pylons and communication masts. The South Ayrshire lowlands, Maybole Foothills and Coastal foothills have the greatest scope, subject to careful design and siting, to accommodate this type of development.

Small /Medium Turbines (30-50m to blade tip)

An illustrative example of this type of structure is Girvan Hospital wind turbine which has a height of 47.4 m. With careful siting and design this scale of turbine may be acceptable within the Ayrshire Lowlands, Maybole Foothills and Coastal Foothills.

Medium Turbines: (Between 50-70m to blade tip)

An illustrative example of this type of turbine is at Dowhill Farm, (near Turnberry), 77m. This is a significant structure and has a dominant effect on the local landscape character. Within the “Area of Potential” there may be some **limited scope**, within the Foothills with Forest and windfarm for this type of windfarm typology. The recent Dersalloch consent now limits further development in the Foothills with Forest west of Doon Valley.

Large Turbines: (Over 70 in height)

Within an area south and north of Barrhill there is some scope to accommodate further turbines of this scale as “stand alone” new windfarms or as extensions of existing windfarms, provide they are well sited and set well back from the adjacent smaller scale settled valleys. There are a number of national sensitivities in this area which include the setting of the Galloway and Carrick Forest hills and Merrick wild land area and areas of deep peat. These constraints will require to be addressed in any design as will potential cumulative effects emerging from future development.

Appendix 3 Illustrative examples of windfarm/turbine opportunities

Summary of landscape sensitivity by wind farm typology and landscape character area

Landscape Character Areas	Landscape Sensitivity to Windfarms				
	Large (70m+)	Medium (50-70m)	Small/Medium (30-70m)	Small (15-30m)	Micro
Raised Beach Coast with Flat Fields and Headlands (1C)	High	High	High	High Medium	High
Raised Beach coast with Rocky Shore (1d)	High	High	High	High Medium	High
Coastal edge (2b)	High	High	High	High Medium	High
Coastal headlands-Brown Carrick Hills (4b)	High	High	High Medium	Medium	High
Coastal valley with policies(5)	High	High	High	High Medium	Medium /low
South Ayrshire Lowlands(7d)	High	High	Medium	Medium /low	Medium /low
Lowland River Valley (9)	High	High	High	Medium	Medium /low
Lower Dale (11)	High	High	High Medium	Medium	Medium /low
Middle Dale (12)	High	High	High Medium	Medium	Medium /low
Intimate Pastoral Valley (13)	High	High	High Medium	Medium	Medium /low
Upland Glen (14)	High	High	High Medium	Medium	Medium /low
Lowland Hills (16)	High	High	High Medium	Medium	Medium /low
Foothills with Forest west of Doon Valley (17b)	High Medium	Medium	High	High	Medium /low
Foothills + forestry with wind farm (17c)	High Medium	Medium	High	High	Medium /low
Maybole Foothills (17d)	High	High Medium	Medium	Medium /low	Medium /low
Coastal Foothills (17e)	High Medium	High Medium	Medium	Medium /low	Medium /low
Plateau Moorlands, Forestry + windfarms (18c)	Medium /low	Medium	High	High	Medium /low
South Ayrshire southern Uplands (20b)	High	High	High	High	Medium /low
Rugged Uplands, Lochs & Forest (21)	High	High	High	High	Medium /low
Coastal Rolling Farmland and policies (22)	High	High	Medium	Medium	Medium /low

High	
High - Medium	
Medium	
Medium - Low	
Low	

Sensitivity

[Refer: South Ayrshire Landscape Wind Capacity Study July 2013.](#)

Note caution is needed in interpreting the sensitivity scores outlined in the table above, considerable variation can occur within these landscapes and these “summarised” assessments should be read and fully reviewed in terms of the specific constraints and opportunities identified in the landscape capacity assessments for each character type. The table however is indicative of the scope to site additional wind turbines within the landscape of South Ayrshire. Further information on how to interpret the sensitivity scores can be found in section 25.2..1 of the South Ayrshire [Landscape Capacity Study](#).

Mapping of the boundaries of the landscape character areas can be found online or within the South Ayrshire Landscape Wind Capacity Study.

Text only versions of this publication are available in Polish, Chinese and Urdu.

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