

INTERIM SUPPLEMENTARY GUIDANCE: ONSHORE WIND ENERGY

MARCH 2012

**Approved as Interim
Supplementary Guidance
by Committee on 14 March 2012**

(A FULL PUBLICATION VERSION INCLUDING LARGER SCALE
MAPS WILL BE MADE AVAILABLE SHORTLY)

CONTENTS

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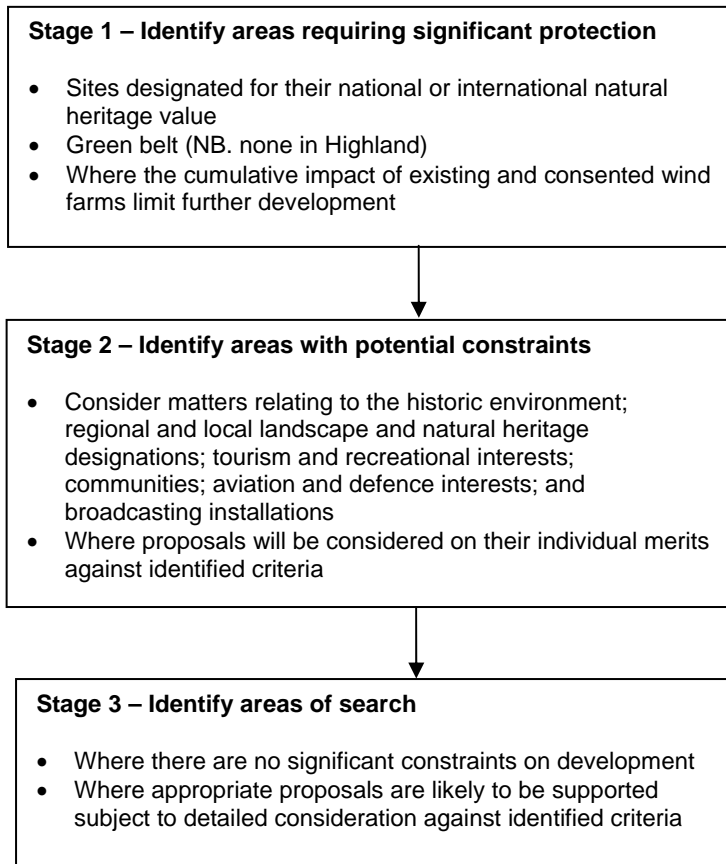
	Page
1 Planning for Onshore Wind Energy	3
Dealbhadh airson Lùth Gaoithe Air-tìr	
2 The Guidance	6
An Stiùireadh	
- Types of wind energy development	6
- Seòrsachan de leasachadh lùth gaoithe	
- The Spatial Framework	8
- Am Frèam Farsaingeachd	
- Development Guidelines	14
- Stiùiridhean air Leasachadh	
- Additional Guidance	24
- Stiùireadh a Bharrachd	

1 PLANNING FOR ONSHORE WIND ENERGY DEALBHADH AIRSON LÙTH GAOITHE AIR-TÌR

- 1.1 Moving energy production over to renewables is an essential part of reducing greenhouse gas emissions and combating climate change. Stretching targets have been set by both UK and Scottish Governments. The Council is nurturing growth of a wide range of renewables types, as evidenced by the Highland Renewable Energy Strategy (2006), by this guidance and by other work. The Council expects that further Onshore Wind Energy development of all types and sizes (single turbines, small groups of turbines, larger windfarms) will be required as part of that in order to meet targets. The Council therefore needs to plan effectively for further onshore wind energy development in Highland.
- 1.2 Scottish Planning Policy (2010) states that “Planning authorities should support the development of wind farms in locations where the technology can operate efficiently and environmental and cumulative impacts can be satisfactorily addressed”. It also states: “The design and location of any wind farm development should reflect the scale and character of the landscape. The location of turbines should be considered carefully to ensure that the landscape and visual impact is minimised.” In the interests of an efficient and effective planning system, these principles underpin The Highland Council’s approach to planning for onshore wind energy. Scottish Planning Policy indicates that the policies expressed in it should inform the content of development plans, should be a consideration in decisions on planning applications and should be used to inform development proposals from initial concept to implementation. There is also a legal requirement for the planning authority to take into account the National Planning Framework in preparing Local Development Plans. Formal Supplementary Guidance provides further information or detail in respect of the policies or proposals set out in the Local Development Plan. This document is Interim Supplementary Guidance and will be given weight as a material consideration. It follows consideration of comments received on draft guidance consulted upon April to June 2011. The Council is progressing additional guidance material and once that has been consulted upon further and revised if necessary it will be added to this interim guidance which will then be progressed to statutory adoption as Supplementary Guidance.
- 1.3 Scottish Planning Policy indicates that planning authorities should set out in the development plan a spatial framework for onshore wind farms of over 20 MW generating capacity. Authorities may incorporate wind farms of less than 20 MW generating capacity in their spatial framework if considered appropriate. A specific methodology has been set out by Scottish Government for preparing that spatial framework. The first version appeared in Scottish Planning Policy 6 - Annex A in 2007 (which has been replaced by Scottish Planning Policy 2010) and the approach was detailed in Planning Advice Note 45 – Annex 2 in 2008. The Council prepared the first draft of its Supplementary Guidance with particular reference to PAN45 Annex 2. Scottish Government subsequently reviewed PAN45 and its Annexes and, in February 2011, published replacement [national guidance and advice](#); this revised, interim version of the Supplementary Guidance document takes into account that latest methodology.

- 1.4 Applications for onshore wind farms in excess of 50 MW are considered by Scottish Ministers. Only applications below this threshold are determined by the Council. This Supplementary Guidance does however set out the Council's approach to considering and determining planning applications itself or to making observations on development proposals to Scottish Government where appropriate.
- 1.5 The Scottish Government is very clear that planning authorities should continue to determine applications for wind farms while local policies are being updated.
- 1.6 This planning policy guidance covers onshore wind energy development in the Highlands. It is being produced as formal "Supplementary Guidance" under Section 22 of [the Town and Country Planning \(Scotland\) Act 1997 as amended by the Planning etc. \(Scotland\) Act 2006](#). It supplements the [Highland-wide Local Development Plan](#), setting out detailed policies and guidance where the main principles have already been established in the Local Development Plan. This means that certain requirements relating to the content, preparation and adoption of this document are set out in law and any such guidance will, once statutorily adopted, form part of the development plan. In dealing with applications for planning permission, the planning authority is required by law to have regard to the provisions of the development plan, so far as material to the application, and to any other material considerations. The Highland-wide Local Development Plan as modified following examination has (March 2012) progressed to the 'Intention to Adopt' stage.
- 1.7 Taken together the Local Development Plan and this Supplementary Guidance represent the Council's current response to Scottish Government's indication of the methodology that should be followed in planning for onshore wind energy.
- 1.8 The overall approach set out in national guidance and advice to the preparation of a spatial framework for wind farms which is part of this guidance is summarised in the following diagram (NB. within each stage the issues are not necessarily arranged in order of importance).

Approach to the preparation of a spatial framework for wind farms



2 THE GUIDANCE AN STIÙIREADH

- 2.1 This interim Supplementary Guidance provides:
- a spatial framework to guide the location of large windfarms;
 - development guidelines for all locations;
 - additional guidance.
- 2.2 When assessing planning proposals, regard will be had to this guidance. The spatial framework provides a steer in particular to large windfarm proposals; by identifying spatial constraints this should assist prospective developers of such schemes in finding sites which are less constrained or have no significant constraints.
- 2.3 Large windfarm proposals within Areas of Significant Protection, or otherwise ones which are sited such that they could impact significantly on the interests for which those areas have been identified, are in general unlikely to be able to be accommodated satisfactorily. In such cases a heavy burden of proof would lie with the developer to demonstrate why their proposal should be supported. However, the spatial framework and this guidance in general do not prevent proposals coming forward in any part of Highland and these need to be able to be assessed and considered having regard to the constraints. Furthermore, in respect of proposals for wind energy developments that are not large scale, this document will also guide those and assist in their assessment through its identification of constraints.

Types of wind energy development

Seòrsachan de leasachadh lùth gaoithe

- 2.4 The Table below, intended as a guide only, sets out a typology of wind energy developments, with five categories (micro; small; medium; large; very large). While capacity is the preliminary way of identifying the appropriate category for a development, there are a number of specific conditions (in relation to height, rotor diameter or number of turbines) which influence the actual impact of a proposal and which can therefore change the categorisation of a proposal regardless of output. A proposal will normally be considered as falling within the category that represents the biggest type for which it qualifies.
- 2.5 The typology (categorisation) given in this Table will be of assistance in the development of additional guidance which will deal with the capacity of specific areas of Highland to either accommodate certain types of wind energy development or requiring protection from certain types of wind energy development - for example having regard to landscape character and visual considerations; it will also enable the Council to target guidance at specific scales of development using these category definitions. As the Council moves forward with that work we will consider further amending these categories if necessary, taking into account comments we received on the previous draft guidance about the table. This may include amendment to the thresholds between categories, advice on how extensions to windfarms will be considered and adaptation to the categories to enable consideration of different types of turbine, such as vertical axis turbines.

2.6 References in the table to “community” and to “commercial” are only providing illustrative examples of typical schemes types and are not intended to imply any difference of approach between the handling of these schemes.

Table: Wind Energy Development Categories

Clàr: Roinnean Leasachadh Lùth Gaoithe

Category	Capacity Criteria (sets minimum size category)	Supplementary Criteria (meets one or more of the criteria) (determines whether this category applies or whether a larger one does)
MICRO (e.g. micro turbine)	<ul style="list-style-type: none"> • under 50KW 	<ul style="list-style-type: none"> • Only applicable to single turbine applications • Turbine below 15 metres to hub and with a rotor diameter not exceeding 4m • Applications that are considered ‘permitted development’
SMALL (e.g. small scale community development)	<ul style="list-style-type: none"> • 50KW to 5MW 	<ul style="list-style-type: none"> • Turbines below 30 metres to hub • Turbines up to 3 in number
MEDIUM (e.g. large scale community development or small scale commercial)	<ul style="list-style-type: none"> • over 5MW and up to 20MW 	<ul style="list-style-type: none"> • Turbines below 50 metres to hub • Turbines up to 7 in number • Applications which fall into a category within the scope of an Environmental Impact Assessment
LARGE (e.g. large scale commercial wind farm development)	<ul style="list-style-type: none"> • over 20MW 	<ul style="list-style-type: none"> • Turbines 50 metres or more to hub and/or above 80 metres to tip will automatically be considered ‘large scale’ • Groupings of 8 or more turbines will be considered ‘large scale’ regardless of output or height
VERY LARGE (e.g. very large scale commercial wind farm development)	<ul style="list-style-type: none"> • over 100MW 	<ul style="list-style-type: none"> • Turbines above 100 metres to hub and/or above 140 metres to tip • Groupings of 45 or more turbines.

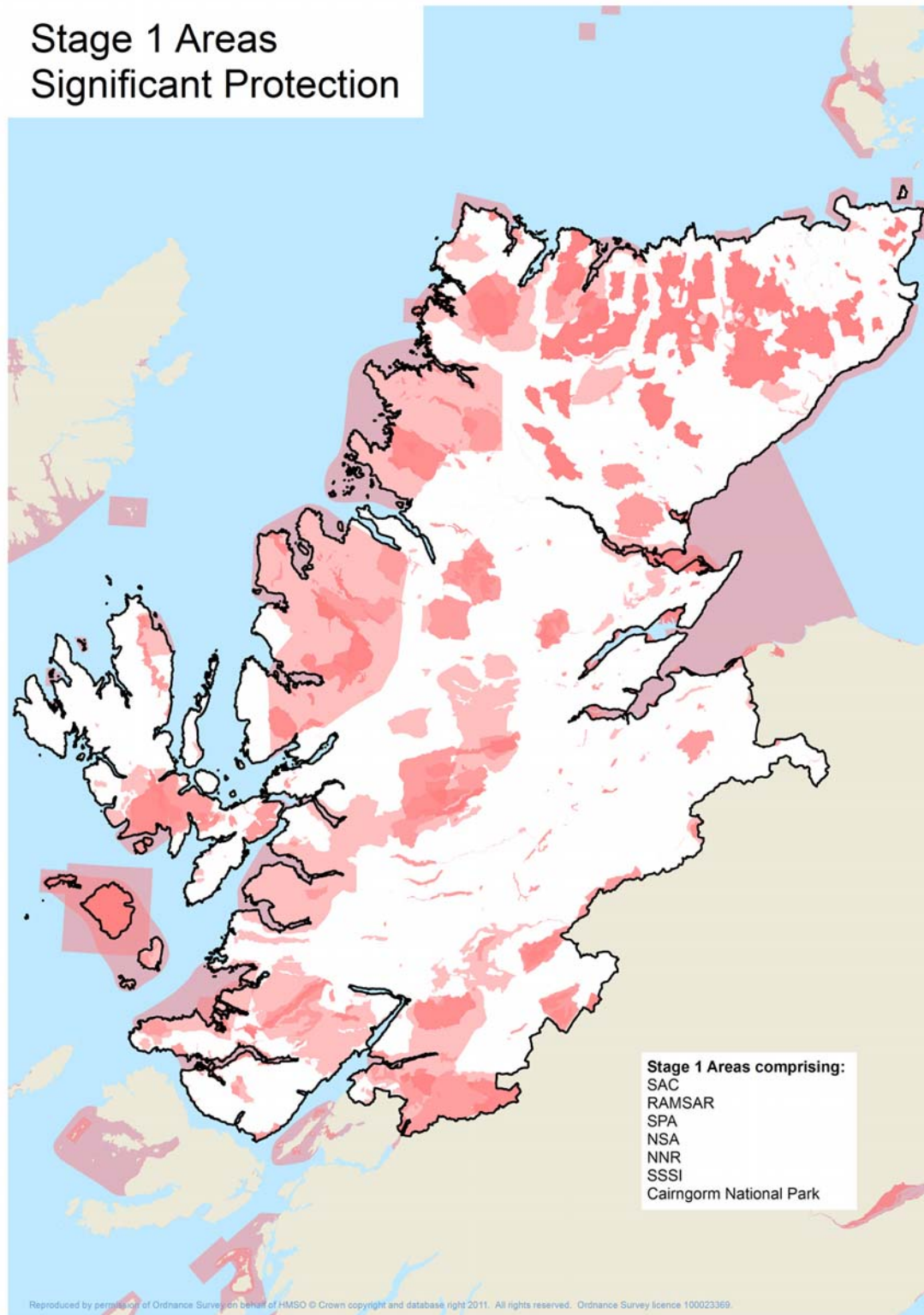
THE SPATIAL FRAMEWORK AM FRÈAM FARSAINGEACHD

- 2.7 The spatial framework provides a steer in particular to large windfarm proposals; by identifying spatial constraints this should assist prospective developers of such schemes in finding sites which are less constrained or have no significant constraints.
- 2.8 The following should be noted:
- A development outwith a safeguarded area could impact on the area and will require assessment in the context of the Highland-wide Local Development Plan and the Development Guidelines section of this Interim Guidance.
 - In addition to constraints which have been included in this mapping, there are other constraints which generally are small 'point' features but which nevertheless may significantly constrain development and will require assessment in the context of the Highland-wide Local Development Plan and the Development Guidelines section of this Interim Guidance.
 - If further constraint features are mapped in the future then we will review this guidance including its maps in the light of that.

Stage 1 - Areas requiring significant protection

- 2.9 We have mapped the following features, which require significant protection in the context of the Highland-wide Local Development Plan, in particular policies 57 and 67 and the Development Guidelines section of this interim guidance:
- Special Protection Areas
 - Special Areas of Conservation
 - Ramsar sites
 - Sites of Special Scientific Interest
 - National Nature Reserves
 - National Scenic Areas
 - National Park (does not lie within but adjacent the area covered by the guidance)
- 2.10 The areas covered by these features have been excluded from the Areas of Search.
- 2.11 Cumulative Impact: The Council will continue to work on the identification of areas within Highland which require significant protection due to the cumulative impact of existing and consented windfarms limiting further development. (This will include consideration of such areas both within and outwith the two 'pilot areas' that were referred to in the April 2011 draft of the Onshore Wind Energy Supplementary Guidance). Cumulative impact is in any case recognised by the Council as an important consideration, identified in Policy 67 of the Highland-wide Local Development Plan and will require to be considered in respect of planning applications.

Map - Stage 1 - Areas requiring significant protection



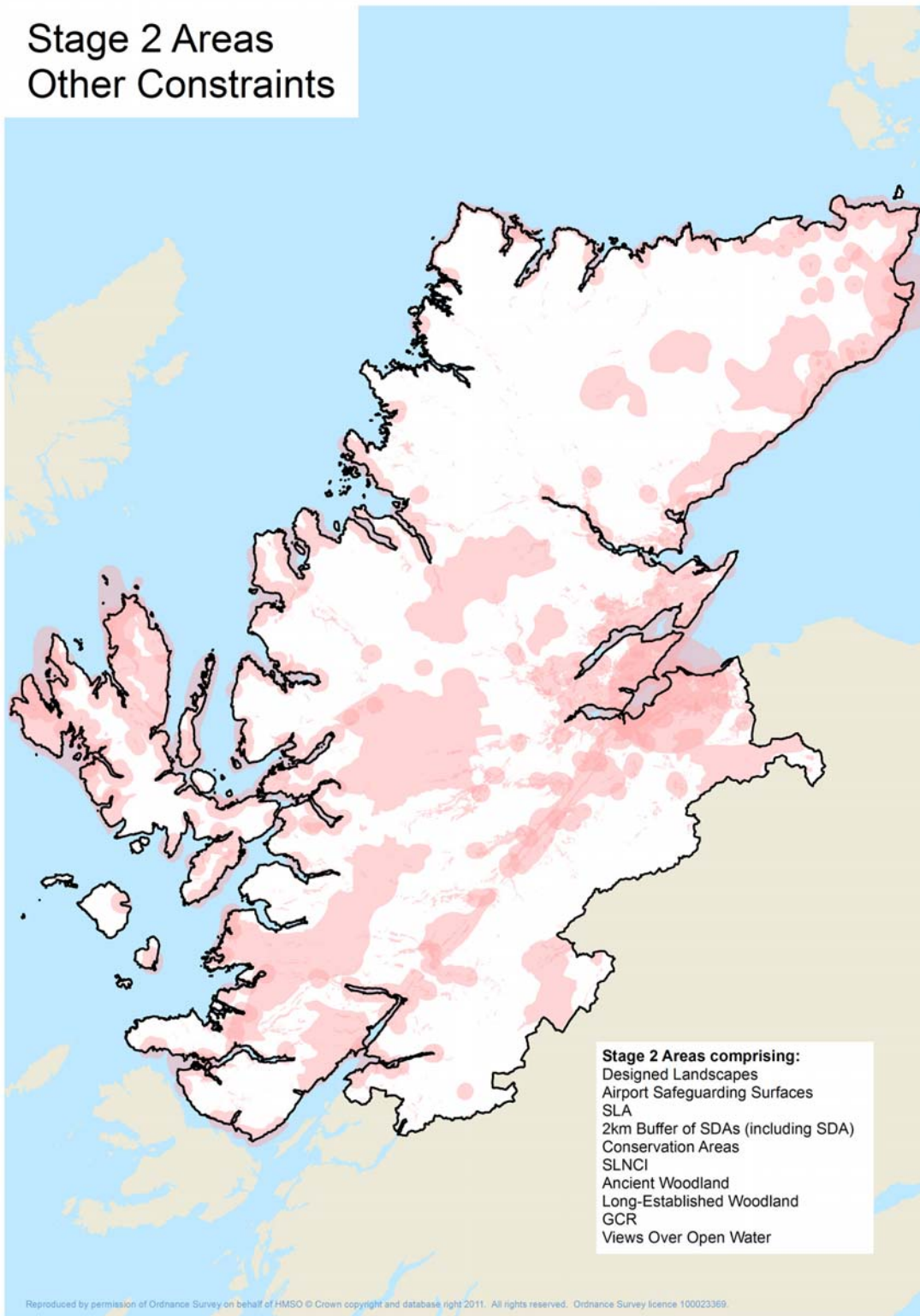
Stage 2 - Areas with potential constraints

2.12 We have mapped the following features, being areas where proposals will be considered on their individual merits in the context of the Highland-wide Local Development Plan, in particular policies 57 and 67 and the Development Guidelines section of this interim guidance:

- Historic Gardens and Designed Landscapes
- Conservation Areas
- Special Landscape Areas
- Sites of Local Nature Conservation Importance
- Ancient Woodland of semi-natural origin
- Geological Conservation Review sites
- Views Over Open Water
- Long Established Woodland of Plantation Origin
- Settlement Development Areas (SDAs) and Zone extending 2km beyond SDA boundary
- Airport Safeguarding Surfaces

2.13 The areas covered by these features have been excluded from the Areas of Search.

Stage 2 - Areas with potential constraints

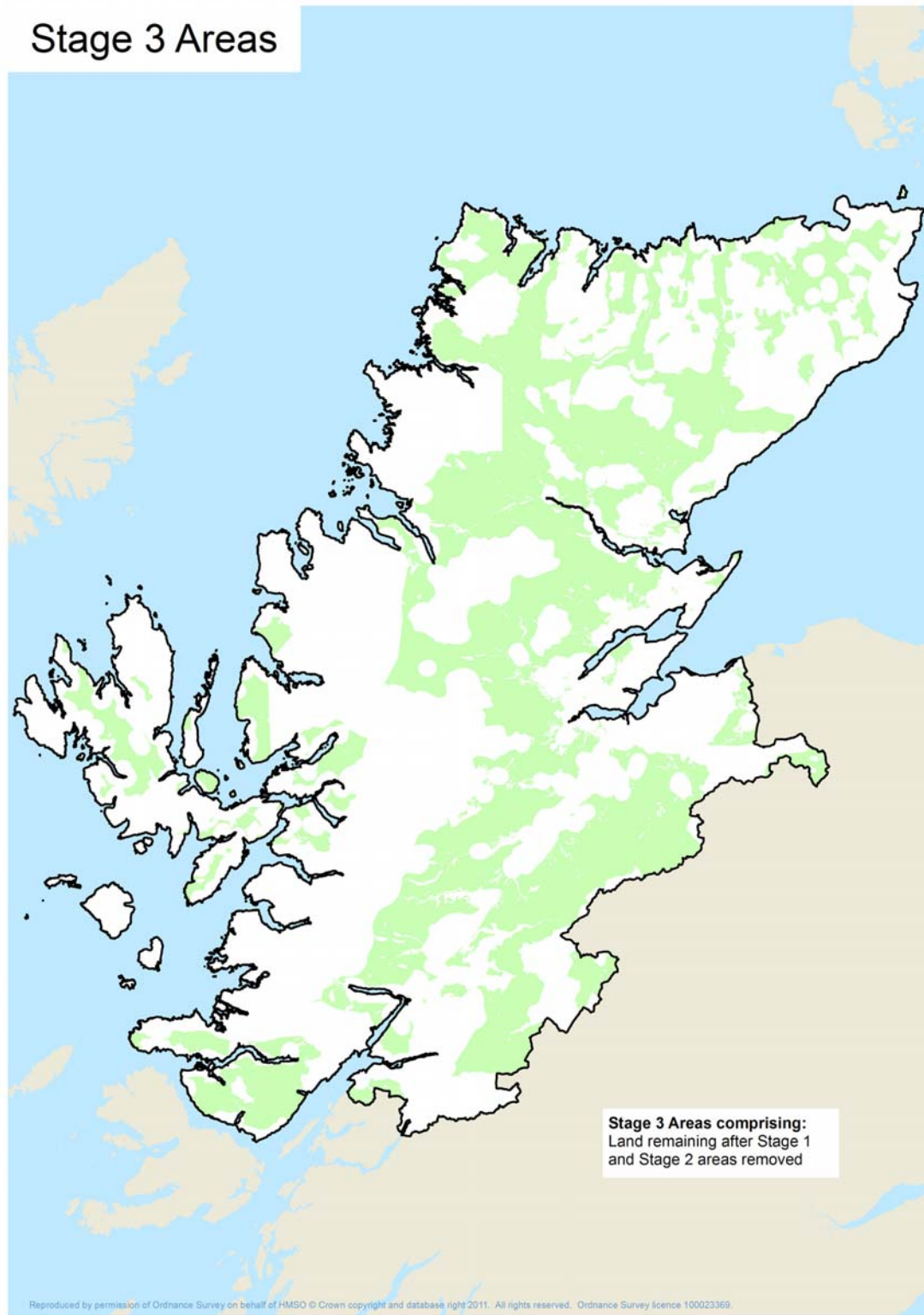


Stage 3 - Areas of search

- 2.14 These are the areas within which appropriate proposals are likely to be supported subject to detailed consideration against the Highland-wide Local Development Plan, in particular policies 57 and 67 and the Development Guidelines section of this interim guidance.

- 2.15 These are the areas of Highland that are not covered by any of the features mapped in Stages 1 and 2 above.

Map - Stage 3 - Areas of search



DEVELOPMENT GUIDELINES STIÙIRIDHEAN AIR LEASACHADH

Amplification of Development Plan Policy 67

Meudachadh air Poileasaidh Plana Leasachaidh 67

2.16 Policy 67 of the Highland-wide Local Development Plan sets out the Council's overall policy for renewable energy in the Highlands. The advice that follows provides a fuller interpretation of the 11 criteria (listed below) within the main body of that policy in regard to proposals for on-shore wind energy developments. The guidelines offer advice on assessing the degree and significance of impact where there is likely to be some impact or effect on a feature or interest. As indicated within Policy 67, it will be necessary for the planning authority to balance these considerations and also the contribution that would be made to renewables targets and any effects on the economy before arriving at a planning decision. **Please note that effects and impacts may still occur even if the development is outwith the boundary of any designated feature or interest. These development guidelines are applicable across the whole of Highland and do not relate to a particular stage in the spatial framework.**

1. Natural, Built and Cultural Heritage
2. Other Species and Habitat Interests
3. Landscape and Visual Impact
4. Amenity at Sensitive Locations
5. Safety and Amenity of Individuals and Individual Properties
6. The Water Environment
7. Safety of Airport, Defence and Emergency Service Operations
8. The Operational Efficiency of Other Communications
9. The Quantity and Quality of Public Access
10. Other Tourism and Recreation Interests
11. Traffic and Transport Interests

1 Natural, Built and Cultural Heritage Dualchas Nàdarra, Togte agus Cultarail
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2.17 Reference should be made to Policy 57 of the Highland-wide Local Development Plan. Consideration will be given to the potential impact of development on all the features covered by the policy which includes those indicated by this policy but not mapped and not just those expanded upon in this guidance.

2.18 Any proposal for a wind energy development likely to have a significant effect on a European site (Special Area of Conservation, Special Protection Area or Ramsar site) should be accompanied by sufficient information to enable the Council to carry out an appropriate assessment under the Conservation (Natural habitats &c.) Regulations 1994 as amended. Such development may only be permitted if the Council can conclude that the development including its associated infrastructure would not have an adverse effect alone or in combination with other proposals on the integrity of any European site unless there are no alternative solutions and there are

imperative reasons of overriding public interest for doing so. Where a priority habitat or species (as defined in Annex 1 of the EC Habitats Directive) would be affected, reasons of overriding interest should relate to human health, public safety, beneficial consequences of primary importance for the environment or their reasons subject to the opinion of the European Commission (via Scottish Ministers). The HRA must ensure it considers any connectivity between international nature conservation designation/s. Where a habitat management plan is necessary developers should consult the guidance within [Good Practice During Windfarm Construction](#).

- 2.19 Any proposal must also demonstrate it will not compromise the amenity and heritage resource, for example, National Scenic Areas, Sites of Special Scientific Interest and National Nature Reserves where there may be significant adverse effects on these nationally important features, these must be clearly outweighed by social or economic benefit of national importance. Policy 57 of the Highland-wide Local Development Plan, its supporting text and Appendix 2 of the Plan provide the full list of feature types that are safeguarded by this policy.
- 2.20 SNH has recently published [Special Qualities reports for National Scenic Areas](#) and for [National Parks](#) which should be referred to where proposals may affect National Scenic Areas or National Parks. These reports have not been formally adopted by the Council.
- 2.21 In respect of Special Landscape Areas (formerly Areas of Great Landscape Value), the Council has published [citations](#) which summarise: key landscape and visual characteristics, its special qualities, its key sensitivities to landscape change, and possible measure for enhancement. These should be referred to as they will assist in the assessment of impact of development proposals.
- 2.22 Any wind energy proposal must demonstrate that the development including its associated infrastructure will not have a significant adverse effect on the site, context and setting of historic environment assets. These considerations should extend to designated and significant undesignated assets and areas. Developers are required to adequately consider the implications of development on direct physical impact, indirect impacts and detail any potential for cumulative effects on historic environment assets, their setting and visual amenity and the impacts of any secondary developments such as power lines or transmission stations as part of the process of preparing an Environmental Statement.
- 2.23 Historic Environment Assets are defined as those identified in the [Highland Historic Environment Record](#) and/or in National listings, schedules or registers held by Historic Scotland or other competent authorities, including: conservation areas; listed buildings; historic gardens and designed landscapes; sites and settings of Scheduled (Ancient) Monuments and other unscheduled assets and areas of archaeological significance. Developers are encouraged to consider The Councils' standards for Archaeological work and seek early discussions with the Council and other interested agencies regarding national, regional and local archaeological issues.
- 2.24 Wild Land is identified in the HwLDP as a feature the resource of which is to be safeguarded. As part of a national programme SNH in consultation with the Highland Council will map wildness qualities across the Highlands to identify these regionally or potentially nationally important areas of wild land. SNH intend that this wildness map and some revised guidance will be

available on their website from the end of March 2012. The assessment of wildness qualities will include the following:

Physical attributes

- Perceived naturalness;
- Lack of modern artefacts or structures;
- Little evidence of contemporary land uses;
- Rugged or otherwise challenging terrain;
- Inaccessibility/accessibility;
- Extent of area;

Perceptual responses

- Sense of sanctuary or solitude;
- Risk or sense of awe or anxiety;
- Perceived arresting or inspiring qualities; and
- Fulfilment from physical challenge.

- 2.25 Supplementary Guidance will be produced that will also contain advice on how to best accommodate change within these areas of wild land while safeguarding their qualities. Prior to wild land being identified, proposals that may have an adverse impact on the wild land resource should undergo an assessment process. Please refer to the SNH Search Areas for Wild Land available on the SNH website - if your proposal lies within one of these areas then you will need to produce a wild land assessment to consider its potential impact. To produce this assessment applicants should refer to [Scottish Natural Heritage: Assessing the Impacts on Wild Land interim guidance note](#).
- 2.26 The assessment should include consideration of impacts that occur cumulatively as well as individually; they may occur incrementally, particularly through fragmentation and/or erosion in marginal areas. There may be cases where wildness could be adversely affected by development close to wild land but not within it. When determining whether there is an unacceptable impact from outwith wild land areas, noise, impact on views, and light pollution will need to be assessed.

2 Other Species and Habitat Interests Gnothaichean Gnèithe is Àrainn Eile
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- 2.27 Wind energy developments have the potential to impact upon species and habitats for example by disturbing species, creating collision risks or disturbing feeding areas. Developers should refer to policies 58, 59, 60 and 74 of the Highland-wide Local Development Plan for details of the legal protection given to species and habitats. Where through Habitats Regulations Appraisal it is identified that proposals are likely to have a significant effect on a European nature conservation site, alone or in combination with another proposal, it must be subject to an assessment by the competent authority, of the implications for the conservation interests for which the site is designated. In respect of animal and plant species identified in Schedules 2 and 4 of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (European Protected Species), wind energy proposals

including associated infrastructure should seek to avoid any adverse impacts on these species. Where a licence will be required under Regulation 44, the Council must be satisfied that all three tests for a licence could be met. In addition, the Council will give due consideration to the wider natural heritage beyond the confines of designated sites, particularly those listed below, where they are of major importance or contribute to the coherence of the Natura network of European sites:

- Areas of habitats listed in Annex 1 and the habitats of species of community interest listed in Annexes 2, 4 and 5 of the Habitats Directive;
- Areas which support habitats of naturally occurring wild birds, particularly those on Annex 1 of the Birds Directive, migratory species and birds of conservation concern on the Red and Amber Lists.

2.28 Consideration will also be given to species listed in [Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 \(as amended\)](#). Licensing requirements have been added by s. 18 of the Wildlife and Natural Environment (Scotland) Act 2011 inserting s. 16 (3) of the Wildlife and Countryside Act 1981 as amended. Thus where a license is required the Council will need to be satisfied that (a) undertaking the conduct so authorised will give rise to, or contribute towards the achievement of, a significant social, economic or environmental benefit, and (b) there is no other satisfactory solution.

2.29 The Council is producing Supplementary Guidance on protected species and this should be referred to by any prospective developer.

2.30 SNH's website provides [guidance on bird impact assessment for wind farms](#), as well as guidance on bats and wind turbines. Applicants should also be aware of the composite sensitivity map for the location of onshore wind farms with respect to a suite of sensitive bird species produced by RSPB/SNH. This can be found at:

http://www.rspb.org.uk/Images/sensitivitymapreport_tcm9-157990.pdf

http://www.rspb.org.uk/Images/sensitivitymap_tcm9-157991.pdf

2.31 Further information can be found on the SNH website at <http://www.snh.gov.uk/protecting-scotlands-nature/protected-species/legalframework/habitats-directive/euro/>

3 Landscape and Visual Impact **Cruth-tìre agus Buaidh Lèirsinneach**

2.32 The Highland landscape is valued by those who live there and by those who visit. It is also valued by certain industries such as tourism, recreation and film-shooting.

2.33 Any proposal for a wind energy development must demonstrate that the development including its associated infrastructure will not have a significant adverse effect individually or cumulatively (with other built, permitted or lodged wind energy proposals) on:

- local landscape character (as defined within a Landscape Character Assessment);
- any Special Landscape Areas;

- any National Scenic Area (noting that such areas fall within Areas requiring Significant Protection in the Spatial Framework);
 - wild areas;
 - important public views (this includes important views from popular public viewpoints, the adopted road network especially designated tourist routes, the public footpath network particularly core paths network and other recognised visitor locations);
 - the setting of any Scheduled (Ancient) Monument; Designed Landscape, listed building or conservation area and other historic sites as agreed with the Council;
 - the spatial framework including areas of search for wind energy development and areas of constraint, having regard to the purpose and reasons for which those areas have been identified whilst also having regard to the “Assessment of Landscape Sensitivity to Wind Turbine Development in Highland” (2010) and any associated documentation that the Council may publish for this purpose.
- 2.34 Developers are urged to consider adequate mitigation of any adverse effects. This should include consideration of such matters as:
- Micro-siting of turbine positions to reduce overall impact of the scheme;
 - Turbine heights, including hub height and rotor diameter;
 - Number of turbines;
 - Turbine colour, including consideration of and reasons for any variance from the typical off white/ pale grey colours;
 - Design and arrangement of any lighting required, to minimise its impact;
 - Undergrounding of any power lines connecting individual turbines to any on-site sub-station;
 - Undergrounding or sensitive treatment of those power lines connecting any wind farm sub-station to the electricity distribution system;
 - Arrangements for any transformers for individual turbines (the Council expects these to be accommodated and enclosed within the turbine mast in order to reduce the landscape and visual impact of the development);
 - Length, route, visibility and construction of access tracks, which can have significant impacts.
- 2.35 Developers may refer to the SNH publication [Siting and Designing Windfarms in the Landscape \(2009\)](#).
- 2.36 The Council has produced [Visualisation Standards for Wind Energy Developments](#) (2010) and developers will be expected to follow those in preparing their submission. It may be noted that these differ from guidance by SNH in their publication ‘*Visual Representation of Windfarms – SNH*’ (2006); however, the Council’s standards do not seek additional information but the information to be presented in a particular way. Developers are encouraged to discuss and confirm intentions for the preparation of visualisations with the Council in advance of preparing their submission.
- 2.37 With regard to Electricity Transmission Infrastructure specifically, Policy 69 of the Highland-wide Local Development Plan refers.

4 Amenity at Sensitive Locations **[Gaelic translation]**

- 2.38 The Council would encourage turbines associated with large-scale wind energy developments to be located at a distance of at least 2km from the development boundaries of settlements (as defined in Local Plans) especially where they are likely to be a prominent feature in an open landscape. Within this distance, applications will continue to be judged on a case-by-case basis. Community amenity impact should be assessed at a range of receptors including residential properties, work places and recognised visitor sites. This should include consideration of receptors outwith any defined settlement boundary. In respect of residential amenity specifically, a development that is judged to have significant long-term detrimental impacts will not be supported.
- 2.39 Highland generally has lower levels of background noise than elsewhere. Due to this the Council expects wind energy developments to achieve a standard whereby noise arising from wind turbines does not have a detrimental impact on the amenity at noise sensitive receptors. The Council will continue to apply the standards of noise arising from wind turbines not exceeding 35dB at any noise sensitive location. A technical appendix is being developed for the guidance which will outline the standards the Council will expect to be met and any assessments that will be required to accompany a planning application. The Council is currently looking at developing guidance on the issue of cumulative noise impacts.
- 2.40 ETSU-R-97 permits a higher level of noise at properties where the occupant has a financial involvement in the development. For financial involvement to be applicable the person must play an active and direct part in the development. Site specific noise assessment will enable the Council to specify a minimum separation distance which the Council will require to be maintained between a proposed turbine and both existing and future dwellings in the vicinity. The Council may consider a relaxation of this separation distance and noise levels in respect of a dwelling which is occupied by a person with an ongoing financial involvement in the wind turbine(s).
- 2.41 Developers are urged to consider adequate mitigation of any adverse effects. This should include planning conditions or agreements to control issues such as: noise levels; traffic management; commissioning and decommissioning arrangements and correction of any electro-magnetic interference. Scottish Government [Planning Advice](#) discusses these matters further and provides links to further guidance and assessment methods. The Council has prepared draft guidance for small-scale wind turbine proposals which will provide advice on issues such as noise and what will be required for assessment.

5 Safety and Amenity of Individuals and Individual Properties **Sàbhailteachd is Goireas Dhaoine Fa Leth is Seilbh Fa Leth**

- 2.42 Any proposal for a wind energy development must demonstrate that the development will not have a significant adverse effect on the safety and amenity enjoyed by any residential property. This will include consideration of noise pollution, ice throw in winter conditions, shadow flicker or shadow

throw. It may be appropriate to set back turbines from such properties or implement turbine shut-down when necessary, although significant separation will normally be expected in any case.

- 2.43 With regards to shadow flicker and as per Scottish Government advice, the Council will expect wind energy developments to be located at least a minimum distance equivalent to 10 times the blade diameter from any regularly occupied buildings not associated with the development and at least a minimum distance equivalent to the height of the turbine to blade tip from main public roads and railways. In some locations further work would need to be done in respect of a specific proposal if shadow flicker is to be assessed with a high degree of accuracy and certainty.
- 2.44 Due to the potential impacts arising from wind energy developments, the presence of wind turbines may have some limiting effects on the potential to subsequently develop land in the area for other uses. It is therefore important to consider the impact of proposed wind energy development not only on existing land uses but also those permitted or which are included as specific proposals in the Development Plan. The Scottish Government's Sustainable Land Use Strategy should be referred to.

6 The Water Environment **An Àrainneachd Uisge**

- 2.45 Any proposal for a wind energy development must have regard to the requirements of the Water Framework Directive. It should demonstrate that the development including its associated infrastructure will not have a significant adverse effect individually or cumulatively (with other built, permitted or lodged wind energy proposals) on the water environment. The water environment includes ground water, surface water (including water supply) and aquatic ecosystems. Developments should be designed to avoid impacts upon the water environment wherever possible. Where impacts on the water environment cannot be avoided then developers will be expected to demonstrate how these impacts will be mitigated. SEPA's [Planning Guidance on Windfarm Developments](#) provides detailed advice as to what information would be required to demonstrate this. The interactive River Basin Management Plan provides useful site specific data which could help inform these assessments.
- 2.46 Where peat is present onsite, developers will be expected to provide geotechnical and hydrological information in support of applications identifying the presence of peat at each site, including the risk of landslide connected to any development work. Further guidance is provided in the Scottish Government's Peat Landslide Hazard and Risk Assessments; Best Practice Guide for Proposed Electricity Generation Developments (2007).
- 2.47 When formulating ideas and designs for the site prior to submitting their planning application, applicants should contact SEPA at an early stage to discuss their proposals and to ensure they meet SEPA's requirements.
- 2.48 Policy 63 of the Highland-wide Local Development Plan relates to the Water Environment.

7 Safety of Airport, Defence and Emergency Service Operations

Sàbhailteachd Gnìomhan Port-adhair, Dìon is Seirbheisean Èiginn

- 2.49 Any proposal for a wind energy development must demonstrate that the development including its associated infrastructure will not have a significant adverse effect individually or cumulatively (with other built, permitted or lodged wind energy proposals) on airport, defence or emergency service operations. This includes flight activity; navigation and surveillance systems; and associated infrastructure.
- 2.50 A consultation proforma has been agreed between the British Wind Energy Association and key aviation consultees such as the Ministry Of Defence, National Air Traffic Service and the UK Civil Aviation Authority to initiate a consultation, so when there are aviation issues the applicant is encouraged to complete the pre application proforma which can be found on the Renewable UK website <http://www.bwea.com/aviation/proforma.html> to learn how their proposal could be affected by an aviation constraint. Furthermore the MOD has also set up a wind energy and aviation helpline number: 0121 311 3847.
- 2.51 Following 24 December 2010, the Civil Aviation Authority (CAA) Directorate of Airspace Policy (DAP) will no longer respond to Windfarm Pre-Planning Applications. The consultation proforma, that has been agreed between the BWEA and key aviation issue consultees such as the MOD, NATS and CAA to initiate a consultation, should now be sent direct to the appropriate airport.
- 2.52 Developers should make themselves aware of the full extent of the aviation stakeholders in their area who may be affected by their proposal. The CAA general advice continues to be that developers of potential wind farms should engage with aviation stakeholders at the earliest opportunity, using the guidance provided in CAA Publication 764. Any impact on aviation can therefore be mitigated ahead of the formal planning process.
- 2.53 When designing and siting proposals developers should pay particular regard to:
- MOD 'Safeguarding Extents'
 - Health & Safety Executive Safeguarding Zones
 - NATS En Route Plc Safeguarding Maps³
 - Department of Trade and Industry "Wind Energy and Aviation Interest – Interim Guidance"

8 The Operational Efficiency of Other Communications Èifeachdas Obrachaidh Chonaltraidhean Eile

- 2.54 The siting of wind turbines must have regard to radio, TV, telecoms and other communication systems. Developments shall be assessed by consultation with relevant operators. Planning conditions or legal agreements may require developers to correct any electromagnetic interference at their own expense. The Joint Radio Company should be contacted for joint screening for telemetry or microwave links in use by either electricity or gas utilities.

9 The Quantity and Quality of Public Access Uimhir is Inbhe Ruigsinneachd Poblach

- 2.55 Any proposal for a wind energy development must demonstrate that the development including its associated infrastructure will not have a significant adverse effect on the quality and quantity of public access. This will include any effect on a route included in a [Core Paths Plan](#), an access point to water, wider access rights or Rights of Way as provided by the Scottish Rights of Way Society. The Council will encourage developers to improve path networks and create new opportunities for access. Members of the public occasionally access land around wind farms so applicants are encouraged to erect information boards at entrances to sites to make members of the public aware of potential risks.
- 2.56 Developers are urged to consider adequate mitigation of any adverse effects.
This should include:
- retention of any existing path or water access point while maintaining or enhancing its amenity value; or
 - alternative access provision that is no less attractive, and is safe and convenient for public use.
- 2.57 For a proposal classified as a Major Development, the Council will require the developer to submit an Access Plan. This should show the existing public, non-motorised public access footpaths, bridleways and cycleways on the site, together with proposed public access provision, both during construction and after completion of the development (including links to existing path networks and to the surrounding area, and access point to water). The right of responsible access must be maintained during construction.
- 2.58 SNH's [Guidance for the Preparation of an Outdoor Access Plan](#) should be referred to.
- 2.59 Applicants should refer to The Right to Roam: The Land Reform (Scotland) Act 2003.
- 2.60 Policy 77 of the Highland-wide Local Development Plan refers to public access.

10 Other Tourism and Recreation Interests **[Gaelic translation]**

- 2.61 In giving consideration to positive or negative effects that a proposal may be likely to have on the local and national economy, the Council will have regard to a range of considerations which may include but not be limited to:
- the scale and nature of any potential economic spin-offs for local businesses, employment opportunities, etc. arising from the proposals (evidence for this may be available as an output from discussions on community benefit, which are carried out separately from planning matters);
 - effects on industries for which Highland's landscape is important – for example tourism and recreation;
 - effects on industries such as forestry brought about through changes to land use and management.

11 Traffic and Transport Interests **Gnothaichean Trafaig is Còmhdhail**

- 2.62 Any proposal for a wind energy development must demonstrate that the development including its associated infrastructure will not have a significant adverse effect individually or cumulatively (with other built, permitted or lodged wind energy proposals) on the public road network. Ideally locations should be chosen that have spare capacity in the road network to carry abnormal loads and the construction traffic associated with the scale of the development proposed. That spare capacity (or mitigation to create capacity) should address the lifetime impact of the development from construction through maintenance to replacement or decommissioning.
- 2.63 Developers will be required to undertake a Transport Assessment to establish the transport impacts of the construction traffic associated with the development, the suitability of the existing road network, the impact on existing road users and adjacent communities, and the requirements for any mitigation works. This should include pre-application negotiation with the Roads Authority to agree the extent and nature of necessary strengthening, improvements and other mitigation works.
- 2.64 The proposals for the use of the public roads and the mitigation works required will require the approval of the Roads Authority. Developers will be required to enter into a section 96 (Roads Scotland Act) agreement with the Council to cover damage to the public roads by construction traffic and may be required to provide a bond as surety. Developers should consider measures to reduce the impact of construction traffic on the road network such as the use of on site borrow pits and on site concrete batching. The passage of the abnormal loads required for the transport of turbine components can be problematic and should be given very early consideration in the planning of projects

ADDITIONAL GUIDANCE **STIUIREADH A BHARRACHD**

- 2.65 In addition to the further interpretation of certain development plan policy above, a number of other considerations will need to be taken into account in the determination of any planning application for wind energy developments. This section sets out a number of the key issues.

Community Renewable Energy Developments **Leasachaidhean Lùth Ath-nuadhachail Coimhearsnachd**

- 2.66 A wide range of models exist whereby a community may develop renewable energy schemes for the benefit of the community. For a scheme to be considered to be a 'community' scheme, appropriate measures must normally be in place for the lifetime of the development for community ownership arrangements and for the power and/or income to go directly to an approved community organisation.
- 2.67 The Council/ Highlands & Islands Enterprise ['Community Toolkit'](#) and the Scottish Government/ Community Energy Scotland publication ['Community Renewable Energy Toolkit'](#) provide useful information.
- 2.68 Policy 68 of the Highland-wide Local Development Plan refers.

Design and Layout of Windfarms **Dealbhadh is Cruth Thuathan-gaoithe**

- 2.69 The design and layout of a windfarm will be influenced by a wide range of environmental and technical considerations.
- 2.70 The number, positions and heights of turbines will be influenced by balancing a number of considerations, including but not limited to:
- the benefits of increasing the separation between turbines in order to reduce turbulence and losses across turbine arrays;
 - the benefits of reducing the separation between turbines in order to reduce the footprint (area) of that size of windfarm, which may enable additional turbines to be added or impact to be mitigated;
 - the effects of different numbers, positions and heights of turbines on the landscape impact of the windfarm, which may help in reducing impact and/or freeing up capacity in the landscape for additional turbines;
 - the effect of different numbers, positions and heights of turbines on the operational efficiency of the windfarm.
- 2.71 Whilst the operational efficiency of a windfarm is a matter for commercial decision making, the Council does expect consideration to be given both to optimising development (to facilitate achievement of renewable energy targets) and where necessary striking a balance with mitigation of impacts.
- 2.72 Where cumulative impacts of multiple windfarm developments may occur, using turbines of similar dimensions and specification to those existing when in close proximity to those existing schemes may help reduce the impact.

- 2.73 Design and layout of access tracks and of other infrastructure will also be important considerations in terms of the overall impact of a scheme.
- 2.74 It can be helpful for developers to illustrate and explain the steps taken in developing the design and layout of their project, for example how it has responded through iterations to any issues that have been identified through that process.
- 2.75 Developers may refer to the SNH publication [Siting and Designing Windfarms in the Landscape \(2009\)](#).

Forestry

Coilltearachd

- 2.76 There has been a trend towards targeting commercial forestry plantations for windfarm developments; such areas often are less constrained in terms of conservation designations and can benefit from existing road infrastructure. However, where felling would be required the individual or cumulative effect of these proposals could result in a substantial loss of commercial woodland. This could have a significant impact on longer term local employment and timber supply. The objective of the [Scottish Forest Strategy \(2006\)](#) is to increase Scotland's forest cover from 17% to around 25% by the second half of the century and significant loss of woodland would make that Government aim more difficult to achieve.
- 2.77 Therefore generally developers should look to minimise loss of woodland. The Council is producing [Supplementary Guidance on Trees, Woodlands and Development](#) and this should be referred to by any prospective developer.
- 2.78 The Scottish Government has published a new policy on the '[Control of Woodland Removal](#)'. Annex B of that policy paper identifies windfarms as being one of the principal causes of woodland removal between 1990 and 2008. This gives criteria for determining the acceptability of woodland removal both with and without a requirement for compensatory planting. Annex C provides broad guidance on meeting acceptability criteria for woodland removal and any prospective developer should demonstrate that this proposal meets the necessary criteria.
- 2.79 Policies 51 and 52 of the Highland-wide Local Development Plan refer.

Peat

Mòine

- 2.80 Where development is proposed on peatland, applicants should refer to 'Calculating Carbon Savings from Wind Farms on Scottish Pentlands – A New Approach (2011)'. Applicants are encouraged to provide relevant information with regard to the whole life carbon balance of a development where possible, for example using a 'Carbon Calculator'. However applicants with Section 36 applications will be expected to use the carbon calculator in preparing their application if it is on an area of deep peat. The Council may ask for a habitat management plan which may include consideration of peatland habitat to be submitted by the applicant. Applicants should also

refer to ‘Good Practice during Windfarm Construction’ guidance recently developed by Scottish Renewables, SNH, SEPA and FCS.

- 2.81 If there are peatland or mire systems present, the planning submission should demonstrate how the layout and design of the proposal, including any infrastructures, avoid impacts upon such areas where possible. For areas where avoidance is impossible details of how impact is minimised and mitigated should be provided, including a detailed map of peat depth for all construction elements that affect peatland habitats. The peat depth survey should include details of the basic peatland characteristics. Peatland impacts that should be considered include those from waste management, drainage, dewatering, excavation and pollution. By adopting an approach of minimising disruption to peatland, the volume of excavated peat can be minimised and the commonly experienced difficulties in dealing with surplus peat reduced. Further guidance on peatlands can be found in SEPA’s Regulatory Position Statement – Developments on Peat.
- 2.82 SEPA in collaboration with Scottish Renewables has published new guidance on the assessment of peat volumes, reuse of excavated peat and the minimisation of waste, which is aimed at developments on peat. It supports SEPA’s Regulatory Position Statement – Developments on Peat.
- 2.83 Applicants should refer to the Scottish Government’s Land Use Strategy particularly maps 6 and 8.
- 2.84 Regard should be had to any published management strategies for peatlands.
- 2.85 There is also the issue of peat slide/bog burst risk; Scottish Government’s [Peat Hazard and Risk Assessment Guide](#) is available and developers should demonstrate how proposals will not pose any increased risk of peat slide or bog burst.
- 2.86 Policy 55 of the Highland-wide Local Development Plan refers.

Electricity Transmission Cables and Lines and Gas Transmission Underground Pipelines

Càbalan is Loidhnichean Sgaoilidh Dealain Pioban Fo-thalamh Sgaoilidh Gas

- 2.87 An appropriate separation distance is required for in vicinity of electricity transmission underground cables, overhead lines and underground gas transmission pipelines. The proposed turbines need to take account of factors beyond the immediate wayleave by providing sufficient distance to safeguard the infrastructure and a sufficient operation and maintenance distance. Also other parts of the proposal or activities which the developer intends to undertake may trigger need for consultation with the relevant grid company and developers are therefore advised to consult the relevant grid company for further advice on whether the work they are intending to undertake has the potential to affect their infrastructure. Developers are also strongly advised that they should obtain their written consent prior to submission of the planning application.

Impacts of Other Proposed Developments on Existing or Consented Windfarms

Buaidh Leasachaidhean Eile San Amharc air Tuathan-gaoithe Maireann no Aontaichte

- 2.88 It will be necessary to consider the potential impacts of other proposed development or land use change on any existing or consented windfarms in the vicinity. This may include impacts on the operational efficiency of the windfarm due to potential changes to wind patterns or introduce potential conflict between neighbouring uses which are incompatible without mitigation, for example with regard to the standards of residential amenity that can be achieved.
- 2.89 This Supplementary Guidance will generally be read by those seeking to propose wind energy developments rather than by those seeking to propose other types of development which happen to be in the vicinity of windfarms. Therefore this consideration will also be identified within the Physical Constraints Supplementary Guidance to be prepared to supplement Highland-wide Local Development Plan Policy 30 – Physical Constraints, which is applicable to development proposals generally.

Site Restoration **Cuidhteachadh Làraich**

- 2.90 The Council will seek assurance that the landowners of a proposed windfarm site can access funds to restore their land at the end of the operational life of the development. The Council will also seek to ensure that funds are available to enable the Council itself to undertake such site restoration if the need arises. Where windfarms are concerned, the Council needs to ensure, as far as it can, that there will be robust financial guarantees in place over sufficiently long periods to enable this to be undertaken if required, bearing in mind that windfarm permissions typically span a 25 year period. These should be secured either by bond of caution (Bond) or by irrevocable letter of credit (LoC) from an appropriate bank. Parent Company Guarantees will not be accepted. Bonds/LoCs from major banks are a safer way of securing the Council's interests in these cases.

Mitigation **Maothachadh**

- 2.91 Where mitigation is to be provided by the developer in response to likely impacts of the development, developers should ensure that suitable mitigation will be available throughout the lifetime of the development and the Council will require arrangements to be in place to secure this. Mitigation may include both on-site and off-site measures, which may be covered by management plans, and will be secured where appropriate by planning conditions or by Section 75 Agreements.
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