

**DAVA MOOR, NAIRN AND MONADHLIATH AREA  
WIND ENERGY LANDSCAPE SENSITIVITY PILOT STUDY**

**Final Report**

**Carol Anderson Landscape Associates**

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# **1 INTRODUCTION**

## **1.1 Policy context**

The Scottish Government is committed to increasing the amount of electricity generated from renewable sources. Scottish Planning Policy (SPP2014) requires planning authorities to ensure that an area's full potential for electricity and heat from renewable resources is achieved, while giving due regard to relevant environmental, community and cumulative impact considerations.

SPP requires planning authorities to identify areas likely to be most appropriate for onshore wind farms as a guide to developers and communities. Development plans should also set out the criteria for deciding all applications for wind farms of different sizes, including extensions and re-powering, and taking into account cumulative impacts and landscape and visual impacts, including effects on wild land.

Landscape sensitivity studies are intended to help inform consideration of strategic capacity for wind energy and to assist in the evaluation and preparation of specific development proposals.

## **1.2 Background to the 2021 Landscape Sensitivity Pilot Study**

This study has been commissioned by NatureScot to test the methodology set out in their draft Landscape Sensitivity Assessment Guidance issued as a consultative draft in November 2020. The study is also intended to provide The Highland Council with an updated landscape sensitivity assessment which can support strategic planning and assist in the appraisal of specific development proposals. The study area is shown in Figure 1.

## **1.3 Study aims and outputs**

The objectives of this landscape sensitivity assessment for wind energy are to provide clear spatial guidance as to what size of wind energy development would be appropriate, in landscape and visual terms, within different landscapes in the Dava Moor, Nairn and Monadhliath study area. The study also considers potential cumulative and cross-border landscape and visual effects and considers broad constraints and opportunities for new wind energy developments, including extensions to, and repowering of, operational wind farms.

The study brief also required a review of the practical application of NatureScot's draft guidance on Landscape Sensitivity Assessment and this has been set out in a separate report issued to NatureScot.

## **1.4 Highland Council's Onshore Wind Energy Supplementary Guidance**

The Highland Council produced landscape sensitivity appraisals for the Loch Ness area which is included in their Onshore Wind Energy Supplementary Guidance (November 2016). A similar landscape sensitivity appraisal for the Black Isle, Surrounding Hills and Moray Firth Coast is set out in an addendum (Part 2b) to this Supplementary Guidance dated December 2017.

The Council's landscape sensitivity appraisals cover much of the study area set for this Pilot Study with the exception of an upland area lying to the east of Dava Moor and



north of the Cairngorms National Park and the south-eastern part of the Monadhliath which also lies close to the Cairngorms National Park. The Council's landscape sensitivity assessment studies have been reviewed and have provided useful background information on key receptors, views and on landscape value which has informed this Pilot study.

## **1.5 Structure of the report**

Section 2 of the report sets out the methodology adopted for the study, the Assessment Units (AU) which form the basis of the sensitivity assessment and the turbine development typologies which are considered in the assessment. Operational and consented wind farm and turbine developments which form the landscape and visual baseline for the study are also identified. Landscape and visual sensitivity assessments have been produced for 14 AUs within the study area and these are set out in Sections 4 to 17 of the report. These consider sensitivity against key landscape and visual criteria for different sizes of turbine. Guidance is provided on the effects on wind farm development pattern and design, opportunities and constraints for development and on siting and design for each AU. A summary of the findings and a recommended landscape strategy for accommodating wind energy development in this part of Highland is set out in Section 18 of the report.

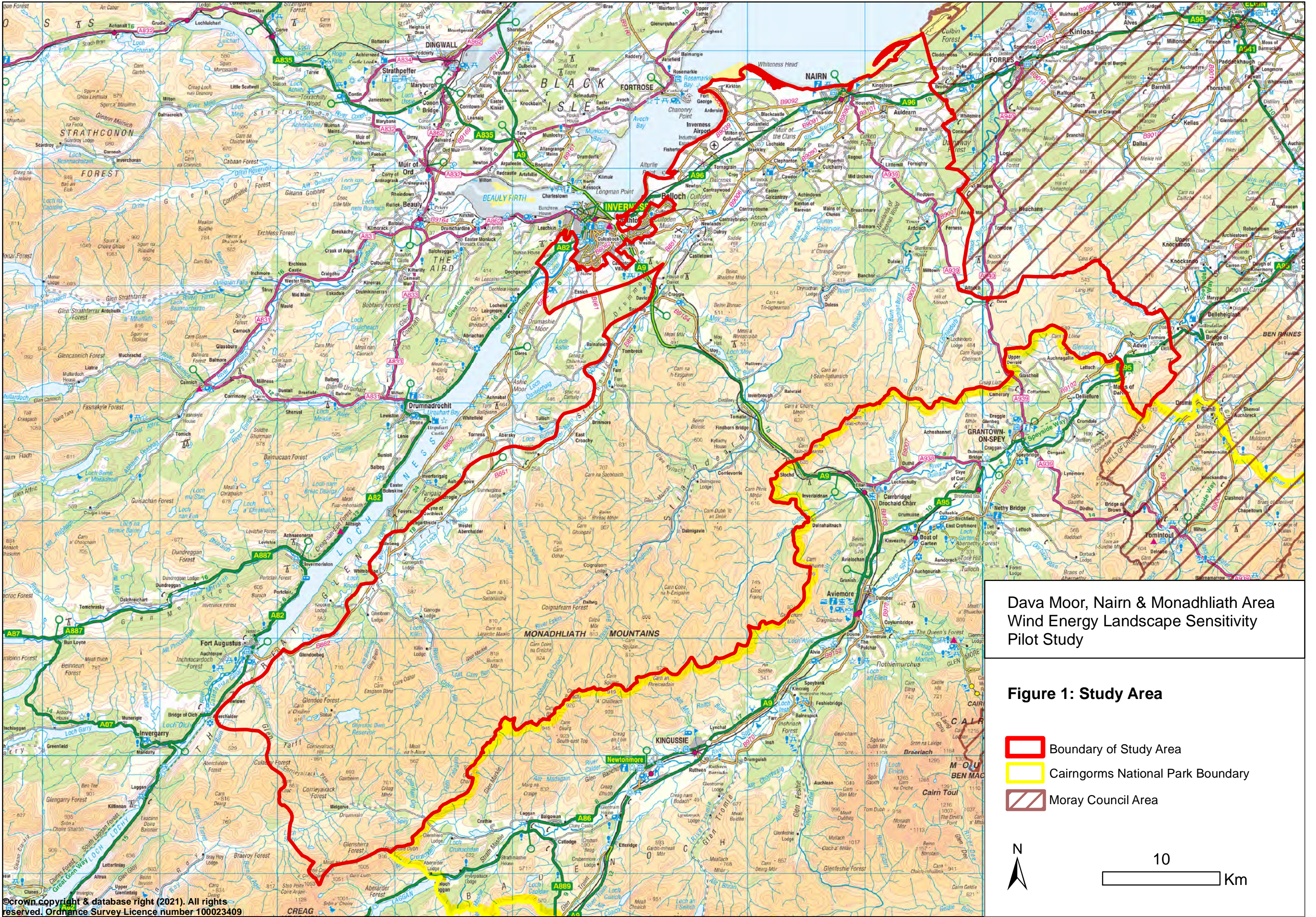
## **1.6 How to use the study**

The study considers landscape and visual sensitivities only and a range of other factors need to be considered in determining the acceptability of specific developments. The assessment identifies constraints and opportunities at a strategic scale and Landscape and Visual Impact Assessment (LVIA) will provide more detailed assessment of specific wind energy developments.

The sensitivity assessments have been undertaken for AUs which are based on Landscape Character Types classified by NatureScot. These units often have 'fluid' boundaries with a gradual transition occurring with adjacent AUs where similar characteristics occur. Wind turbines are also tall structures likely to have an influence on adjoining AUs. It is therefore recommended that when considering individual proposals, both the AU that the development lies in, and immediately adjoining AUs, are reviewed as wider sensitivities may apply. This should include consideration of planning authority cross-boundary landscape and visual issues where relevant.

The study considers the sensitivity of AUs to a limited number of pre-determined turbine typologies which are based on height. Individual applications need to be considered on a case-by-case basis with some flexibility on turbine heights being applied within close range of the upper height threshold used in the assessment. All development proposals should be subject to thorough consideration with the developer being required to demonstrate how they have dealt with potential landscape and visual effects identified in the list of constraints in the sensitivity assessment at a more detailed level.

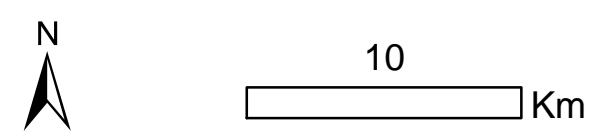




Dava Moor, Nairn & Monadhliath Area  
Wind Energy Landscape Sensitivity  
Pilot Study

Figure 1: Study Area

- Boundary of Study Area
- Cairngorms National Park Boundary
- Moray Council Area





## 2 STUDY METHODOLOGY

### 2.1 Introduction

The study considers the sensitivity of different landscapes within the Dava Moor, Nairn and Monadhliath study area to changes that would be brought about by new wind energy development. Although the focus is on landscapes within this part of Highland Council, landscape and visual sensitivities and potential cumulative issues associated with adjoining authorities are also considered.

### 2.2 Background to the landscape sensitivity assessment

This study is based on the guidance contained in NatureScot's draft *Guidance on Landscape Sensitivity Assessment* (November 2020). The guidance defines Landscape Sensitivity Assessments as strategic appraisals of the relative sensitivity of landscapes to development or land use changes. Landscape sensitivity is described as being 'a measure of the ability of a landscape to accommodate change arising from specified development types or land management scenarios without undue negative effects on the landscape and visual baseline and their value'.

Landscape sensitivity assessment is undertaken on the basis of Assessment Units (AUs) which are based on the Landscape Character Types identified in the NatureScot 2019 online national classification. The susceptibility of key landscape and visual criteria and the value associated with the landscape are considered in making judgements on sensitivity. Landscape sensitivity assessment considers the principle of a particular type of change rather than a specific development in a defined location.

In this Pilot Study, the approach set out in the draft guidance has been followed and tested with the assistance of a Steering Group comprising NatureScot and The Highland Council. Aspects of the methodology have been discussed in detail and clarification gained where needed by the consultant during the process of undertaking the sensitivity assessment. A separate technical report has been produced by the consultant which records the key issues discussed with the Steering Group and evaluates the draft guidance.

### 2.3 Definition of terms

The following definitions of terms apply to this study:

**Landscape character assessment** is the starting point for landscape sensitivity work. It identifies and explains the combination of elements and features that make landscapes distinct from one another by mapping and describing Landscape Character Types (LCT) that are generic, and Landscape Character Areas (LCA), that are place specific. The description of their distinctive characteristics often includes how the landscape is perceived and experienced by people. Landscape Character Assessment analyses in detail the three main physical landscape components of landform, landcover, settlement and how all these combine to form the landscapes we see and experience. Landscape Character Assessment provides baseline information – including a shared written understanding of the key characteristics of a landscape.

**Landscape sensitivity**, can be defined as a measure of the ability of a landscape to accommodate change arising from specified development types or land management practices, Landscape Sensitivity Assessment provides an indication of this in a manner which is rigorous, robust, repeatable and capable of standing up to scrutiny. The findings are strategic and indicative in contrast to site-and project-specific Landscape and Visual Impact Assessment (LVIA).

**Landscape susceptibility** within the context of sensitivity studies can be defined as 'the degree to which a defined landscape and its associated visual qualities and attributes might respond to the specific development type/development scenario or other change without undue negative effects on landscape character and the visual resource' <sup>1</sup>. In this study, change relates to wind energy development and any findings on landscape sensitivity are restricted to this. Landscapes may have different susceptibilities to other forms of change or development.

### **Landscape value**

This is a measure of the relative value attached to different landscapes by society. It includes nationally and locally important designated landscapes and other formally recognised landscape interests as well as other aspects of the landscape which may be valued by a variety of stakeholders for a range of reasons such as recreation, tourism or cultural interest.

### **Landscape sensitivity**

This is defined as a measure of the ability of a landscape to accommodate change arising from specified development types or land management practices. The sensitivity of a landscape is judged by considering the susceptibility of key characteristics to a defined development type and the value associated with the landscape.

## **2.4 General approach to the study**

The study has involved the following key tasks:

- Identification of operational and consented wind energy developments which form the baseline for this study.
- Identification of the different sizes of wind turbine to be assessed in the study in collaboration with the Steering Group which comprises representatives of The Highland Council and NatureScot.
- Definition of the landscape and visual sensitivity criteria to be used in the assessment in collaboration with the Steering Group.
- Field work to define appropriate Assessment Units (AU), based on the Landscape Character Types (LCTs) defined in the 2019 NatureScot classification, which form the basis of the study and assessment of their sensitivity to different sizes of wind turbine.

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<sup>1</sup> Landscape Institute and Institute of Environmental Management and Assessment (2013) *Guidelines for Landscape and Visual Impact Assessment 3<sup>rd</sup> Edition*.

- An overview of landscape and visual sensitivities across the study area and recommendations on strategic landscape and visual considerations for wind energy developments within the study area.

## 2.5 Baseline landscape character

The AUs considered in the sensitivity assessment are shown in Figure 2. These generally accord with the online NatureScot 2019 landscape classification with the exception of the following:

- *Beaches, Dunes and Links* (281) and the *Coastal Forest* (283) LCTs which have been amalgamated for the purposes of the study.
- The *Farmed Strath* (227) which has been divided into two AUs, the *Upper Farmed Strath* and the *Lower Farmed Strath*
- The Strathdearn valley which is included in the *Rolling Uplands* (221) has been defined as an AU called *Strath in Rolling Uplands*.

## 2.6 Operational and consented wind farms and turbines

The operational and consented wind farm developments lying in the study area, and those developments sited sufficiently close to its boundaries to be clearly visible are listed in Table 1. These form the baseline for the sensitivity assessment. Figure 3 shows wind farms located within the study area and those developments located just outside the study area boundaries which have a particularly strong influence on views.

Table 1: Baseline wind energy developments

Windfarm	Turbines	Height to blade tip	Landscape Character Type
<b>Operational wind farms</b>			
Tom nan Clach	13	125m	<i>Open Rolling Uplands</i>
Moy	20	124.9m	<i>Rolling Uplands</i>
Farr	40	100m	<i>Rolling Uplands</i>
Dunmaglass	33	117.5m	<i>Rolling Uplands</i>
Corriegarth	23	119.3m	<i>Rolling Uplands</i>
Stronelairg	66	135m	<i>Rolling Uplands</i>
Bhlaraidh*	32	135m	<i>Rocky Moorland Plateau</i>
Millennium + extensions*	26	115m	<i>Rugged Massif</i>
Beinneun + extension*	32	133.5/136m	<i>Rocky Moorland Plateau</i>
Paul's Hill*	28	100m	<i>Open Rolling Uplands</i>
Berry Burn*	29	104m	<i>Open Rolling Uplands</i>
Hill of Glaschyle*	12	99.5m	<i>Upland Moorland and Forestry</i>
Novar*	49	60/106m	<i>Rounded Mountain Massif</i>
Fairburn*	20	100m	<i>Rounded Rocky Hills</i>
Glen Kyllachy	20	110m	<i>Rolling Uplands</i>
<b>Consented wind farms</b>			
Cairn Duhie	20	110m	<i>Open Rolling Uplands</i>
Aberarder	12	130m	<i>Rolling Uplands</i>
Dell	14	130.5m	<i>Rolling Uplands</i>
Millennium South*	10	132m	<i>Rugged Massif</i>
Pauls Hill Extension*	6	135/149.9m	<i>Open Rolling Uplands</i>

\*Indicates wind farms lying outside the study area

## 2.7 Wind turbine types

### 2.7.1 *Smaller turbines*

The height of turbines relative to other structures in the landscape is a key consideration in terms of landscape fit. Different sensitivities come into play once turbines exceed the height of other common landscape features, for example trees and small wood pole lines.

The focus of this study is on larger wind turbines rather than smaller turbines <100m high which are no longer considered economic by the renewables industry for commercial wind farm developments. Smaller turbines <100m are principally considered in more settled lowland areas as these are the areas where there has been interest in single and small groups of turbines of this size in the past. Whilst manufacture of turbines <100m may have slowed, older smaller turbines within existing wind farms may be available for re-use in the future.

### 2.7.2 *Larger turbines*

The majority of operational and consented turbines within Highland comprise turbines between 100-140m high to blade tip. The trend is for turbine to increase in size with applications for turbines of 220m recently proposed in neighbouring Moray and also evident in a review of scoping applications within Highland. We have considered two sizes within the larger turbine category, 100-149.9m high and >150m high (to a possible upper height of 250m). The 149.9m high threshold has been principally determined because of the requirement for visible aviation lighting on turbines over that height and the potential landscape and visual effects of this.

While the Very Large turbine type height band is broad, once turbines are 150m and over specific landscape and visual susceptibilities are triggered which would not change in a strategic study such as this, for example most of Scotland's upland landscapes are not expansive in terms of their extent and an overwhelming or dominant effect on scale would be likely to occur whether turbines were 150m or 250m. The guidance for each AU indicates in broad terms the height of turbine most likely to be able to be accommodated whilst minimising significant landscape and visual effects.

We have not specifically considered pre-determined numbers of turbines within the types assessed as this would make the sensitivity assessment complex and potentially difficult to follow. Some indication is given in the guidance set out for each AU of the likely extent of development that may be accommodated taking into account, where relevant, the area already occupied by operational and/or consented wind farm development. The assessment therefore is applicable to both single, small groups and larger groups of turbines comprising 'wind farm' developments.

### 2.7.3 *Development types considered in the sensitivity assessment*

The study considers the following turbine sizes (taken to blade tip):

- Small turbines 20-50m
- Medium turbines 50-100m
- Large turbines 100-149.9m
- Very Large turbines 150m-250m

Turbines <20m generally have fewer landscape and visual effects as they relate better to the scale of other features in lowland settled landscapes where they are most likely to be used.

Not all development typologies are considered in all AUs. A broad scoping exercise was undertaken to focus the assessment on the key AUs where there is/or may be interest in commercial scale developments because of sparse settlement and the more extensive scale of the landscape. The scoping exercise principally considered the key susceptibility criteria of scale, landform and landcover and is included in Appendix B.

Individual applications need to be considered on a case-by-case basis with some flexibility on turbine heights being applied where these are within close range of the upper height threshold used in the assessment.

#### 2.7.4 *Turbine design*

There is greater consistency in the design of larger wind turbines than smaller domestic models. The majority of turbines of this size are coloured pale grey and have a simple, three-bladed form. The streamlined appearance of larger wind turbines is maintained by integral transformers housed in the structure. However, in some schemes, transformers are housed in a separate box at the tower base which can result in a cluttered appearance when seen in elevated and/or close-by views. Recent pre-application discussions with developers prompted The Highland Council to request that the study consider the design of turbines with longer blades and with proportions and rotation speeds at variance with other turbines in operational wind farms.

We have observed differently proportioned wind turbines in the field noting that a longer blade length tends to give a squatter and less aesthetically pleasing appearance. However, this generally tends to be noticeable in situations where different designs of turbines are closely juxtaposed and where the full height of turbines are seen from base to tip in relatively close views. Differences in rotation speed can occur with longer blades but again, this is generally only perceived as an issue when a comparison can be made with a nearby turbine of different specification.

It is difficult to assess more detailed turbine design issues in a strategic sensitivity study and each proposal therefore needs to be considered on a case-by-case basis with turbine design one of the factors assessed with reference to the specific site location, the availability of closer unobstructed views and proximity to more conventionally designed existing and consented wind turbines.

#### 2.7.5 *Aviation lighting*

All onshore wind turbines 150m and over require visible red aviation warning lighting under Civil Aviation Authority (CAA) rules. These generally comprise lights fixed to the top of the turbine nacelle and half-way up the tower. Many current lighting systems comprise 2000 candela nacelle lights which can be dimmed to 200 candela in clear visibility. Shielding of the light is an increasingly common mitigation measure adopted to reduce the intensity of lighting experienced in closer lower-level views. Further mitigation of lighting is currently being considered for many wind farms in the planning system. This includes measures to reduce the number of turbines within a wind farm

proposal which need to be lit to cardinal lighting. The use of Aircraft Detection Lighting Systems, where the lights are only activated when an aircraft approaches, is also currently being considered by developers in association with the CAA. Radar activated systems are likely to significantly reduce the duration of lighting on wind turbines given the low levels of flight activity in Scotland although there are differences in specification that may influence how often lighting is activated.

The assessment assumes that mitigation to reduce the intensity of lighting will be universally adopted by developers but that lighting will be on permanently during hours of darkness.

## 2.8 The sensitivity assessment

The study considers the susceptibility of key landscape and visual characteristics of different landscapes within the study area to the different sizes of turbine described in paragraph 2.7.3. The value associated with the landscape is also judged with susceptibility and value being combined to arrive at an overall sensitivity rating for each of the turbine types. Table 2 sets out the landscape and visual criteria considered in the sensitivity assessment.

*Table 2: Landscape and visual sensitivity criteria*

<b>Sensitivity criteria</b>	<b>Factors considered in the assessment</b>
<b>Scale</b>	Consideration of the scale of the landscape based on the degree of topographical relief, openness and enclosure and the presence of smaller scale features. In general, larger scale landscapes are likely to be less susceptible to larger wind turbines.
<b>Landform</b>	Consideration of the degree of complexity of landform including identification of any distinct topographical features. Assessment of how development, including ancillary works such as access tracks and energy storage infrastructure, could impact on or relate to landform. Simpler and more gently graded landform would generally be less susceptible while more complex, steeper and distinctive landform would be more susceptible.
<b>Land cover</b>	Consideration of the degree of complexity and diversity of land cover including field enclosure pattern, woodlands, water courses and lochs but also distinctive landcover features. More diverse and intricate landcover pattern would be more susceptible to development in general with broader, simpler landcover pattern being less susceptible. Effects include loss of the feature and diminishment of the integrity if removed to accommodate turbines or a detractive effect if turbine were located nearby.
<b>Built environment</b>	Consideration of the pattern, density and character of settlement and other built features, including prominent cultural heritage features, their relationship to topography or other natural features and their setting. Assessment of how development might impinge on these features and where there may be scope to attain some visual separation to minimise effects. Where larger scale buildings and built structures such as pylons, masts and operational/consented wind farms are present, the relationship of additional turbine development to these is assessed which includes consideration of cumulative effects.



<b>Landscape context</b>	The role of adjacent AUs (and other landscapes outside the study area) in contributing to the landscape setting and character of the AU being assessed and vice versa. The degree of inter-visibility and effects on key characteristics are assessed. Smaller AUs that are more closely juxtaposed and contrast strongly with surrounding landscapes are likely to be of increased susceptibility while AUs which are large in extent, or which have a similarly large scale and simple landcover pattern to neighbouring landscapes, may be less susceptible.
<b>Perceptual aspects</b>	Consideration of the degree of modification by human intervention and how development could affect perceptions of naturalness and remoteness and the sense of space and openness. Identification of landscapes where the number and distinctiveness of archaeological or historic features, and scarcity of modern built features, can give a strong sense of history or 'timelessness'. In general, landscapes which are more modified and developed are likely to be less susceptible while landscapes with a distinct sense of wildness or timelessness will be more susceptible.
<b>Visual amenity</b>	The extent of relative visibility of the landscape (including considerations of whether it is well-settled and easily accessible) and key views to and from the landscape. The degree of openness or enclosure which influences visibility, including the amount of screening created by topography and woodland. The type of views, including elevated, extensive views which are sustained or more intermittent views where woodland or landform provides some screening. Appraisal of the significance of skylines and key vistas including the presence of landmark features. More densely settled and open landscapes would generally be of increased susceptibility although the presence of key visitor attractions and routes (including areas popular for recreation) can increase susceptibility in more sparsely settled landscapes. Susceptibility is also generally reduced if landform and woodland have the potential to provide screening. Prominent skylines and views to landmark natural or built features are of increased susceptibility.
<b>Landscape Value</b>	Presence of designated and similarly valued landscapes, which in the study area comprise Special Landscape Areas (SLAs), Conservation Areas and Inventory listed Gardens and Designed Landscapes (GDL). The presence of indicators of related interests such as promoted viewpoints and recreational/tourist routes are also considered. Designations or values that reinforce landscape features, for example Sites of Special Scientific Interest (SSSI) for landform or landcover features are also considered. Judgements are made on the contribution to landscape value taking into account the nature, importance, extent and number of designations and recognised interests. Valued landscapes which are close to the study area, including SLAs in Moray and other parts of Highland, Wild Land Areas (WLA) and the Cairngorms National Park, are additionally considered. Where citations exist for designated and other formally valued landscapes, the effect of development on identified key characteristics and qualities of these areas is appraised.

## 2.9 Judgements on overall sensitivity

The overall sensitivity level is judged by considering the combined weight of evidence on landscape and visual susceptibility and value rather than using a numerical scoring system. The score attributed to landscape value comprises one of the eight landscape and visual sensitivity criteria (an eighth of the score) when judging overall sensitivity rather than contributing half of the score. A five-point scale has been used in the assessment of each susceptibility criterion and with regard to the value associated with the AU. This is also adopted in the overall sensitivity ratings accorded to each AU as interpreted in Table 3 below.

The overall sensitivity rating does not represent a median score across all criteria but rather considers the degree of susceptibility of each criterion to a development type and the nature of likely effects on valued landscapes. In general, an AU which has been judged in the assessment to have a high susceptibility across three or more criteria would be considered to have a high overall sensitivity rating. A similar approach has been adopted for high-medium susceptibility across three or more criteria.

*Table 3: Explanation of overall sensitivity ratings*

<b>Overall Sensitivity rating</b>	<b>Definition</b>
High	Key characteristics and qualities of the landscape are highly vulnerable to change from the development type. Development would conflict with several of the assessment criteria with severe and potentially widespread adverse impacts likely to arise.
High-medium	Key characteristics and qualities of the landscape are vulnerable to change from the development type. Development would conflict with some of the landscape and visual criteria but may be able to be accommodated in small parts of some assessment units.
Medium	Some of the key landscape characteristics or qualities of the landscape are vulnerable to change from the development type. There is some ability to accommodate development in some situations without widespread or severe changes to the landscape; the development type relates to some key aspects of landscape character.
Medium-low	Fewer of the key characteristics and qualities of the landscape are vulnerable to change from the development type. There are opportunities to accommodate the development type in most locations without widespread or severe effects on the assessment criteria; the development type relates to many aspects of landscape character.
Low	Key characteristics and qualities of the landscape are unlikely to be adversely affected by the introduction of the development type. The development type relates well to the assessment criteria and change may be accommodated without widespread significant adverse impacts on the landscape.

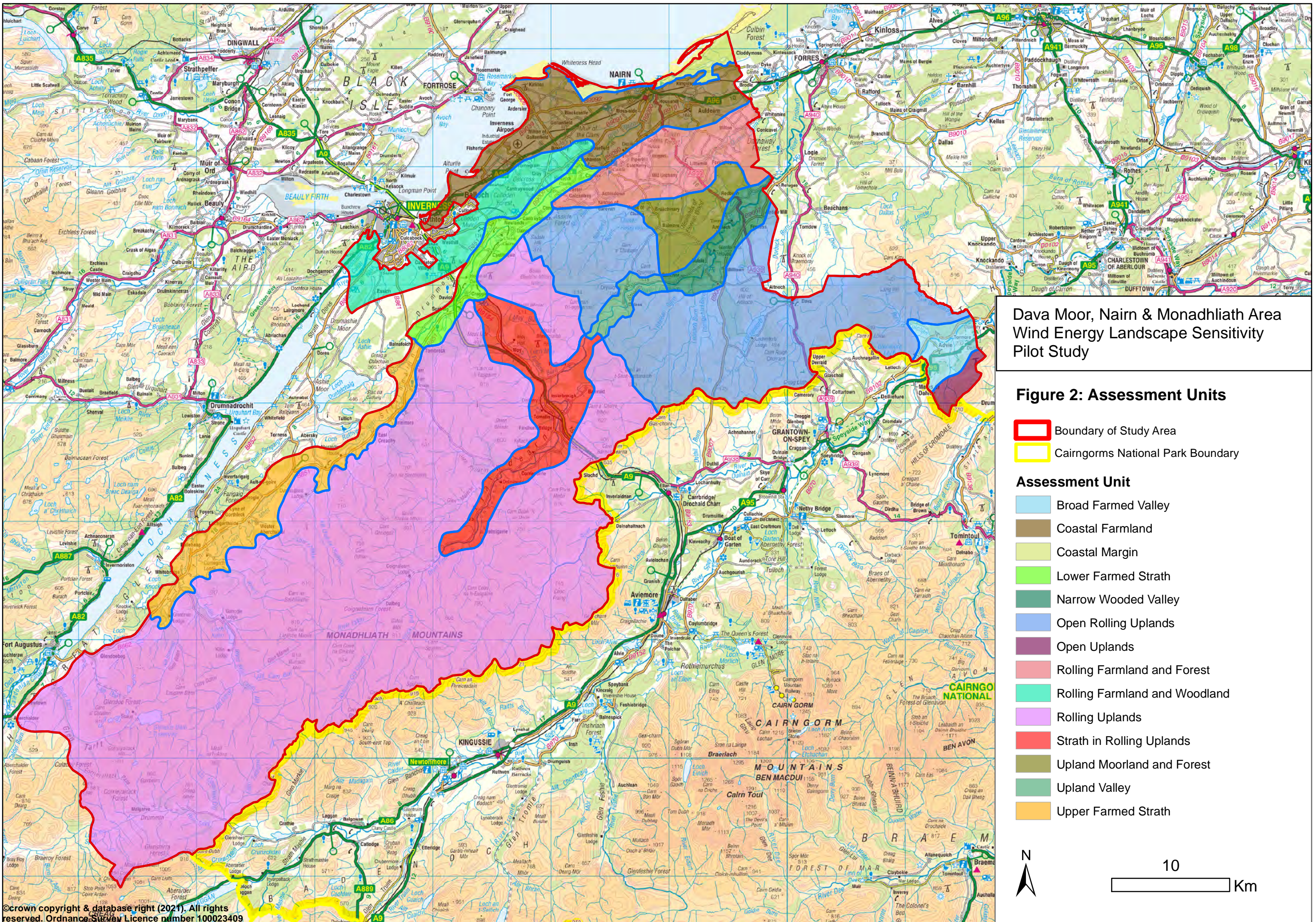
## 2.10 Existing wind energy development

We have considered landscape and visual effects related to the introduction of different wind turbine types with other existing large infrastructure, including operational and consented wind farms, in the detailed assessment under the susceptibility criterion of *'built environment'*.

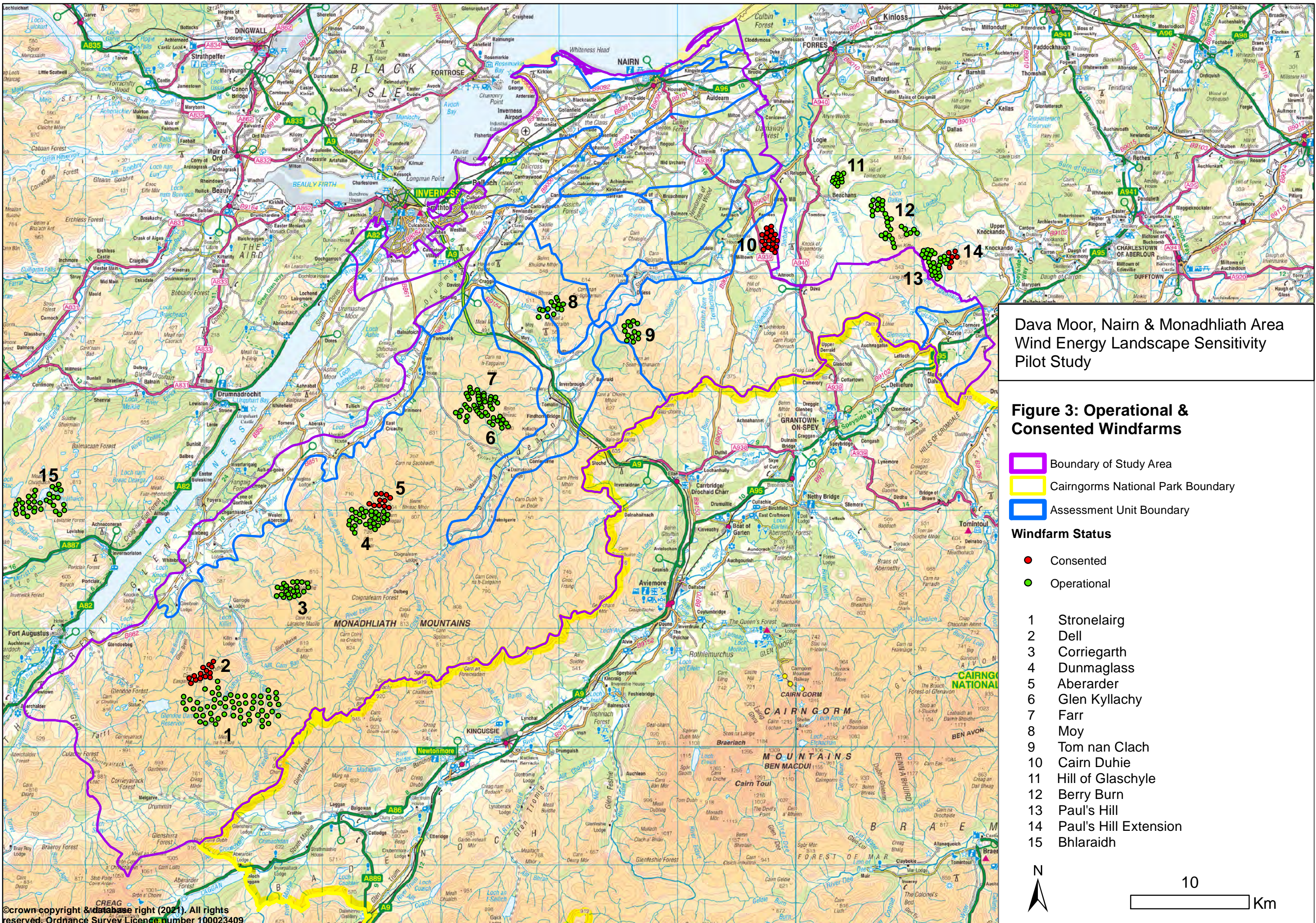
We have also identified potential landscape and visual issues which could arise in relation to other large infrastructure, including wind farms, under the sub-heading of *'Potential effects of additional turbines in the context of existing development'* in the text preceding the detailed sensitivity tables. These identify more speculative potential effects and reflect what might happen depending on the number and type of developments which could be introduced into the AU which is the subject of the assessment. These potential issues are listed prior to identifying opportunities and constraints to different turbine types within the sensitivity assessments undertaken for each AU and consider the following:

- Change in landscape character – i.e. where an addition to existing and consented wind farms and turbines is likely to result in wind turbines becoming a recognisable and consistent characteristic associated with a specific landscape character type, rather than an incidental one-off feature (this may not necessarily be a negative impact);
- Significant alteration to a defining characteristic of the landscape where the distinctive identity of the character of an area is likely to be lost or significantly diminished by the addition of one or more wind farms or multiple wind turbines;
- Loss of a recognisable development pattern – i.e. where wind farms or turbines are introduced into a landscape where existing wind farms or turbines already create a recognisable pattern of development which relates strongly to particular landscape characteristics but additional development diminishes the integrity and robustness of the pattern leading to fragmentation of landscape character
- Visual dominance – i.e. where wind farms or turbines become a visually dominant feature because of their combined presence as multiple or merged developments affecting a skyline as viewed from a significant viewpoint, or encountered sequentially as a series of focal points from a road or stretch of coast which is a definable journey
- Visual clutter – where different types of turbines, including different heights and styles of design, combine to create a muddled visual distraction from the landscape or key feature.









Dava Moor, Nairn & Monadhliath Area  
Wind Energy Landscape Sensitivity  
Pilot Study

**Figure 3: Operational & Consented Windfarms**

- Boundary of Study Area
- Cairngorms National Park Boundary
- Assessment Unit Boundary

**Windfarm Status**

- Consented
- Operational

- 1 Stronelairg
- 2 Dell
- 3 Corriegarth
- 4 Dunmaglass
- 5 Aberarder
- 6 Glen Kyllachy
- 7 Farr
- 8 Moy
- 9 Tom nan Clach
- 10 Cairn Duhie
- 11 Hill of Glaschyle
- 12 Berry Burn
- 13 Paul's Hill
- 14 Paul's Hill Extension
- 15 Bhlaraidh



### 3 INTRODUCTION TO THE SENSITIVITY ASSESSMENT

This section of the report contains the detailed sensitivity assessment undertaken for each of the AUs considered in the study. An introduction describes the location of the AU and outlines operational and consented wind energy developments located in the AU and surrounding area (and clearly visible from parts, if not all, the landscape being assessed). Constraints and opportunities for wind energy development are identified and guidance is given on scope for development and on general siting and design matters. Detailed sensitivity assessment tables are included for each AU.

An initial scoping exercise was undertaken to determine the size of turbine considered in each AU principally based on consideration of key landscape and visual susceptibility criteria and is included in Appendix B. Table 4 sets out the turbine typologies considered in each AU.

*Table 4: Turbine typologies considered in each AU*

<b>Assessment Unit</b>	<b>Turbines &lt;50m</b>	<b>Turbines 50-100m</b>	<b>Turbines 100-150m</b>	<b>Turbines &gt;150m</b>
<i>Coastal Margin</i>	√	√	√	x
<i>Coastal Farmland</i>	√	√	√	x
<i>Narrow Wooded Valley</i>	√	√	x	x
<i>Upland Valley</i>	√	√	x	x
<i>Strath in Rolling Uplands</i>	√	√	x	x
<i>Broad Farmed Valley</i>	√	√	x	x
<i>Lower Farmed Strath</i>	√	√	x	x
<i>Upper Farmed Strath</i>	√	√	x	x
<i>Rolling Farmland and Woodland</i>	√	√	√	x
<i>Rolling Farmland and Forest</i>	√	√	√	x
<i>Upland Moorland and Forestry</i>	x	x	√	√
<i>Open Rolling Uplands</i>	x	x	√	√
<i>Open Upland</i>	x	x	√	√
<i>Rolling Upland</i>	x	x	√	√

The study has focussed on assessing the relationship between the height of the turbine and the landscape and visual sensitivity criteria. In undertaking this analysis, single turbines and groups of turbines have been considered and the assessment also considers scope for multiple developments located across the AU. The general extent of wind turbine development that can be accommodated is determined by the landscape and visual constraints outlined in the assessment and the remaining area which does not already accommodate operational and consented wind farm development.

Detailed assessment of sensitivity to turbines <100m high has not been undertaken for sparsely settled upland areas where demand for these smaller typologies is likely to be very limited. Some general guidance is, however, given on appropriate locations for these smaller turbines where relevant.

## 4 COASTAL MARGIN - SENSITIVITY ASSESSMENT

### 4.1 Introduction

The *Coastal Margin* AU combines the *Beaches, Dunes and Links* and *Coastal Forest* LCTs defined in the NatureScot national landscape character classification. These LCTs extend eastwards into Moray.

#### 4.1.1 *Operational/consented wind energy development*

There are no operational or consented wind turbines >50m high located in this AU.

There are views from more open parts of this AU to the operational Hill of Glaschyle wind farm which is located to the south-east within the uplands of Moray. While distant views are also possible to the north to the Novar and Beinn Tharsuin wind farms, these developments do not have a strong influence on landscape character and on views from this AU.

### 4.2 Summary description and assessment

This landscape comprises a narrow coastal band either side of Nairn but widens to the east, where it includes Culbin Forest, and to the west where it covers the Carse of Delnies. The coast has a natural, complex and dynamic character particularly where sand bars, curving shingle spits, extensive dune systems, basins and marshy estuaries are present east of Nairn. These features are also present west of Nairn and extensive inter-tidal sand bars occur between Whiteness Head and Fort George. The sense of naturalness experienced in the Whiteness Head area is, however, diminished to some degree by a derelict oil platform construction yard on the Carse of Ardersier. Culbin Forest backs the eastern part of the coast and although it largely comprises managed pine, a mosaic of glades, underlying dunes and older plantings support a richly diverse ecology. Elsewhere, the coast is more open particularly where the broad and flat, gorse-studded rough grassland of the Carse of Delnies merges with the salt marsh and tidal inlet behind the bar of Whiteness Head. Apart from the resort town of Nairn, and occasional farms sited at the foot of a raised beach bank in the Delnies area, this landscape is largely unsettled with limited vehicular access.

This landscape is popular for recreation. Views are expansive across the inner Moray Firth and focus on the Black Isle. Views inland are often restricted by Culbin Forest east of Nairn and, to the west, by dunes, the raised beach bank and coniferous plantations in the adjacent *Coastal Farmland*. This AU is also seen from the inner Moray Firth where wildlife boat trips attract visitors. A distinct sense of seclusion and naturalness can be experienced along the less developed sections of this coast.

The Whiteness Head to Fort George part of this coast lies in the *Sutors of Cromarty, Rosemarkie and Fort George* SLA. The eastern part of this coast lying within the study area is not designated but lies adjacent to the *Culbin to Burghead Coast* SLA in Moray.

#### 4.2.1 *Potential effects of additional turbines in the context of existing development*

Operational wind farm developments sited within adjacent landscapes do not have a significant effect on character or on views from the *Coastal Margin*.

Key issues that could potentially arise within the *Coastal Margin* are likely to include:

- Multiple wind turbines sited within both the *Coastal Margin* and the *Coastal Farmland* AUs which would be inter-visible where the landscape is more open and could form dominant features particularly if concentrated in close proximity to each other
- Variations in the type and size of single and small groups of small turbines proposed within the *Coastal Margin* and also cumulative effects with masts and pylons sited close to the coast (principally located on and near the former Ardersier construction yard) which could adversely affect the sense of naturalness and seclusion associated with the less settled parts of this landscape.

#### 4.2.2 Constraints

- The rich diversity of natural coastal features including dune systems, inter-tidal sands, long narrow bars and inlets and salt marsh.
- The relatively unmodified coastal edge, which although well-used for recreation, often has a strong sense of naturalness and feels secluded away from Nairn.
- The setting and views from the historic resort town of Nairn and the landmark features of Fort George and the lighthouse on Chanonry Point which could be adversely affected by wind turbines sited close-by.
- The attraction of the coast and the Moray Firth for recreation increasing sensitivity to wind turbines which would be seen from beaches and from the water.
- Views from the open hinterland of the *Coastal Farmland* (including from the A96 and railway) but also from the more distant north-facing settled hill slopes of the *Rolling Farmland and Forest* and the *Rolling Farmland and Woodland* AUs where larger wind turbines sited in this landscape would be particularly prominent and could intrude on key views to the Moray Firth and Black Isle.

#### 4.2.3 Opportunities

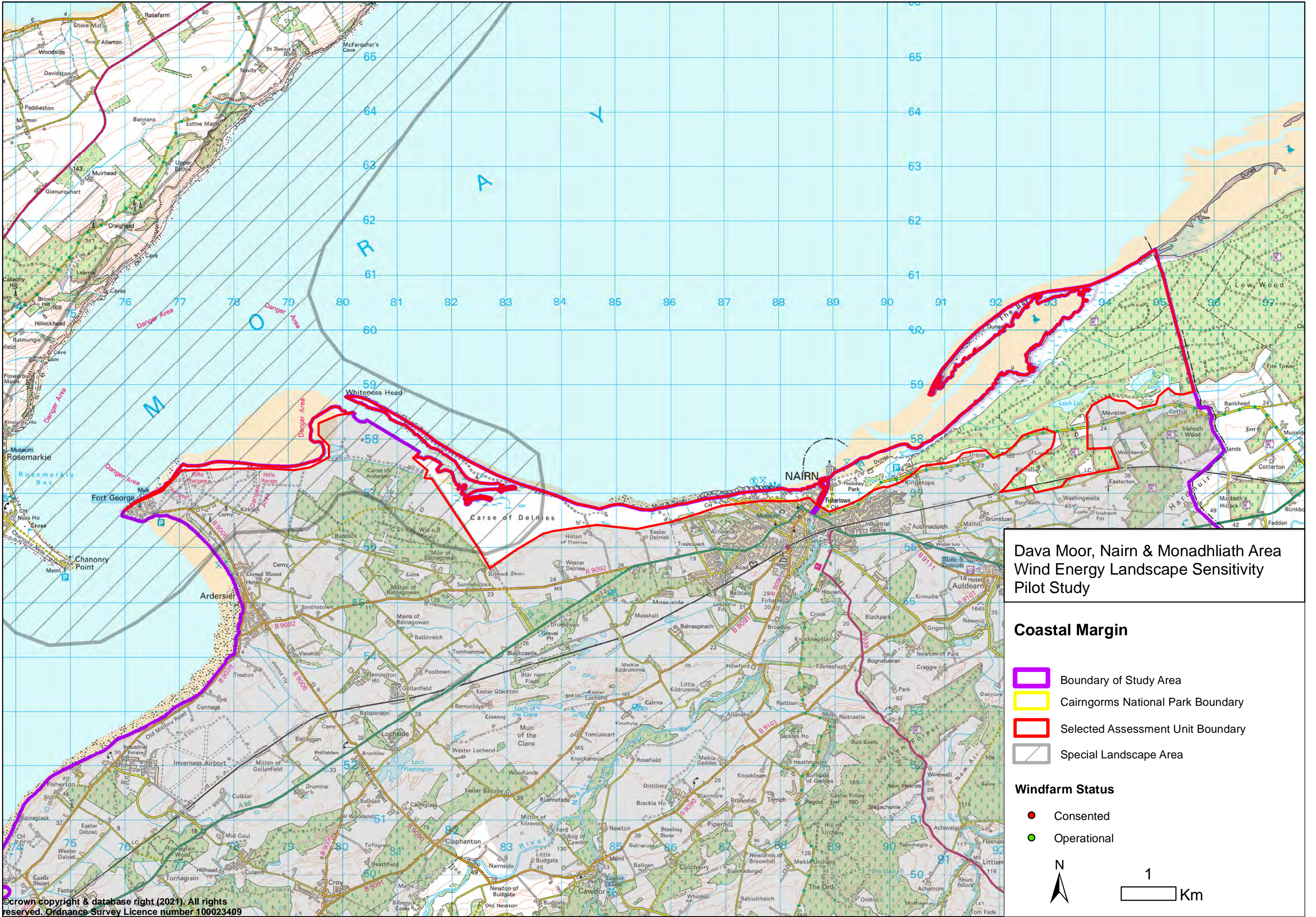
- Broader areas of farmland with a simple landform and land cover pattern at the transition with the *Coastal Farmland* in the western parts of this AU where small turbines <50m could be set sufficiently well back from the more sensitive beaches and dunes.

### 4.3 Overall sensitivity and guidance

The strong sense of naturalness and seclusion that can be experienced on stretches of this coast, its scenic diversity and popularity for recreation increase sensitivity to larger wind turbines. There would be a **High** sensitivity to turbines >50m and a **High-medium** sensitivity for turbines <50m.

Single and small groups of wind turbines under 50m could potentially be sited in the broader parts of this landscape at the transition with the *Coastal Farmland* AU and set well back from the coastal edge. The more isolated and unmodified coastal areas and complex geomorphological features should be avoided. Care should be taken to avoid intrusion on the setting of historic settlements and landmark features.





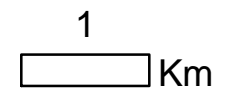
**Dava Moor, Nairn & Monadhliath Area  
Wind Energy Landscape Sensitivity  
Pilot Study**

**Coastal Margin**

- Boundary of Study Area
- Cairngorms National Park Boundary
- Selected Assessment Unit Boundary
- Special Landscape Area

**Windfarm Status**

- Consented
- Operational







*Dunes, salt marsh and inlets influence the complex and dynamic character of the coast east of Nairn*



*The gentle arc of sandy beach at Delnies which extends along the narrow bar of Whiteness Head*



*Salt marsh merges with gorse-studded grassland inland on the Carse of Delnies*



*Views across the narrow inner Moray Firth focus on the southern cliffs of the Black Isle*

### Coastal Margin – Detailed Sensitivity Assessment

Summary description	Assessment of turbines 100-149.9m	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p><b>Scale</b> The Moray Firth gives a sense of expansiveness although the stretch of water is narrower to the west and the Black Isle appears close to this AU. Long, even beaches are open and extensive but dune systems, and also forest in the Culbin area east of Nairn, contain space and reduce scale. Low-lying and open carse has an increased scale.</p>	<p>Turbines of this size could relate to the scale of the more open expanse of the outer Moray Firth but would appear very large in relation to the narrower inner firth and features such as dunes and the cliffs on the Black Isle. Flatter, simple and more open carse areas would be of lesser susceptibility although these areas are not extensive. <b>High</b></p>	<p>Although this turbine type (and particularly turbines towards the lower height band) could relate to the scale of more open, long even sections of coastline, the wider Moray Firth and the broader areas of carse backing the coast, areas of more complex dunes and more intimately scaled areas in the Culbin area are of increased susceptibility. <b>High-medium</b></p>	<p>Turbines of this size could relate to the scale of more open, long even sections of coastline and more expansive flatter hinterland areas. Small scale shoreline features including dunes are susceptible particularly to turbines towards the upper height band of this turbine type. <b>Medium</b></p>
<p><b>Landform</b> The coastal edge is complex, intricate and dynamic in the Culbin and Whiteness Head areas. Elsewhere the coastal edge is relatively simple with long, even shingle and sand beaches backed by a narrow band of dunes, marsh and rough grassland.</p>	<p>The complex form of dune systems and more intricate coastal features would be highly susceptible to this turbine type. Turbines of this size would relate better to the simpler stretches of coast and the flat areas of carse present in some areas although these areas are not extensive and they could affect the appreciation of nearby more complex landform features. <b>High-Medium</b></p>	<p>The complex form of dune systems and more intricate coastal features would be highly susceptible to this turbine type. Turbines of this size would relate better to the simpler stretches of coast and the flat areas of carse present in some areas although these areas are not extensive and they could affect the appreciation of nearby more complex landform features. <b>High-Medium</b></p>	<p>The complex form of dune systems and more intricate coastal features would be highly susceptible to this turbine type. Turbines of this size could relate better to simpler stretches of coast and carse where they could minimise effects on the appreciation of more complex landform pattern. <b>Medium</b></p>
<p><b>Landcover</b> Culbin Forest east of Nairn comprises pine planted on dunes, poorer soils and gravels. This forest features a unique flora. Mudflats and saltmarsh are present against the coast and the Carse of Delnies comprises expansive rough grassland and gorse scrub. Golf courses are present east and west of Nairn.</p>	<p>This turbine type would detract from the diverse vegetation pattern which is associated with parts of Culbin Forest and salt marsh areas. Simpler areas of rough grassland and farmland would be less sensitive. Multiple turbines would have more of an effect on susceptible vegetation cover. <b>High-medium</b></p>	<p>This turbine type would detract from the diverse vegetation pattern which is associated with parts of Culbin Forest and salt marsh areas. Simpler areas of rough grassland and farmland would be less sensitive. Multiple turbines would have more of an effect on susceptible vegetation cover. <b>High-medium</b></p>	<p>This turbine type would detract from the diverse vegetation pattern which is associated with parts of Culbin Forest and salt marsh areas. Simpler areas of rough grassland and farmland would be less sensitive. This turbine type is more likely to comprise single and small groups of turbines associated with farms or other buildings and thus likely to limit effects on more susceptible vegetation. <b>Medium</b></p>
<p><b>Built environment</b> The former Port of Ardersier industrial site located in the adjacent <i>Coastal Farmland</i></p>	<p>Turbines of this size sited near Nairn and in the western part of this AU would be likely to affect the setting and significantly</p>	<p>Turbines of this size sited near Nairn and in the western part of this AU would also be likely to affect the setting and diminish</p>	<p>Smaller turbines would be better able to be sited to avoid or minimise effects on the setting of Nairn and landmark built</p>

Summary description	Assessment of turbines 100-149.9m	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p>AU influences the character of the coast in the Whiteness Head area. Although few large buildings remain on this site, lattice transmission towers are visible from the beach. The resort town of Nairn lies on this coast and the landmark features of Fort George and the Chanonry Point lighthouse lie near this landscape. There are no operational wind turbines in this AU.</p>	<p>diminish the prominence of historic features such as Fort George (appreciated in views from the coast and sea). Cumulative effects with operational and consented wind turbines would not be significant but this turbine type would be likely to cumulatively increase clutter and accentuate negative aspects of character if sited on, or close-by, the derelict Ardersier industrial site. <b>High</b></p>	<p>the prominence of historic features such as Fort George although smaller turbines may minimise effects if set further back and/or sited to benefit from screening by woodland. Cumulative effects with operational and consented wind turbines would not be significant but this turbine type would be likely to cumulatively increase clutter and accentuate negative aspects of character if sited on or nearby the derelict Ardersier industrial site. <b>High-medium</b></p>	<p>features. Cumulative effects with infrastructure on and near the Ardersier industrial site could still occur if this turbine type were to be sited nearby. <b>Medium</b></p>
<p><b>Landscape context</b> This landscape forms a relatively narrow coastal margin in the west but is broader in the east where it includes the coastal forest of Culbin. It lies adjacent to the <i>Coastal Farmland</i> which is particularly flat and open west of Nairn and accommodates the airport and some dispersed industrial development. There is strong inter-visibility between the coastal edge and the <i>Coastal Farmland</i> in parts of this western area. This coast forms part of the wider inner Moray Firth seascape which includes the southern shore of the Black Isle.</p>	<p>This turbine type would impact on the <i>Coastal Farmland</i>, which although expansive and relatively simple in terms of its landform and land cover, is well settled which increases sensitivity. The character of the inner Moray Firth could also be affected by large wind turbines which would detract from the diverse coastal edge, narrow extent of the firth and the unusual 'pinch-point' formed by Chanonry Point and Fort George. <b>High</b></p>	<p>This turbine type would impact on the <i>Coastal Farmland</i>, which although expansive and relatively simple in terms of its landform and land cover, is well settled which increases visual sensitivity. The character of the inner Moray Firth could also be affected although there may be opportunities to site smaller turbines in this turbine type to minimise effects on adjoining landscapes and seascapes <b>High-medium</b></p>	<p>Smaller turbines would have less of an effect on the adjoining <i>Coastal Farmland</i> and on the inner Moray Firth <b>Medium</b></p>
<p><b>Perceptual aspects</b> A distinct sense of naturalness and seclusion can be experienced on the Culbin coast and also in the Whiteness Head/Fort George area, particularly in areas where dunes and woodland screen visibility of the derelict industrial Ardersier yard. The coast close to Nairn is busier.</p>	<p>This turbine type would be likely to diminish the sense of seclusion and naturalness associated with the less modified and settled parts of this coastline. <b>High</b></p>	<p>This turbine type would be likely to diminish the sense of seclusion and naturalness associated with the less modified and settled parts of this coastline. <b>High</b></p>	<p>Smaller turbines could be sited well away from the more sensitive undeveloped coastal edge to minimise visibility and therefore effects on the sense of seclusion and naturalness. <b>Medium</b></p>

Summary description	Assessment of turbines 100-149.9m	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p><b>Visual amenity</b> Long stretches of the <i>Coastal Margin</i> are unsettled with the resort town of Nairn the only settlement. Popular destinations for visitors include beaches close to Nairn, Culbin and Whiteness Head; dolphin watching boat trips to the inner Moray Firth are also popular. There are open views from this coastal landscape across the Moray Firth to the Black Isle and the distant Sutherland hills. Views from the coast to the adjacent <i>Coastal Farmland</i> and hills to the south are often screened by landform and woodland. This AU is principally seen in views from the Black Isle and Moray Firth and from more elevated ground to the south.</p>	<p>This turbine type would be highly visible from well-used beaches if turbines were located close to the coast. Turbines of this size would also be highly visible from major roads, the railway and settlement to the south within the adjacent <i>Coastal Farmland</i> and from more elevated landscapes. There would be wide visibility from the Black Isle and Moray Firth from the north (wherever the turbines were located within the AU) where they would be likely to form a dominant feature significantly detracting from other coastal features. <b>High</b></p>	<p>This turbine type would be highly visible from well-used beaches if turbines were located close to the coast. Turbines of this size would also be highly visible from major roads, the railway and settlement to the south within the adjacent <i>Coastal Farmland</i> and from more elevated landscapes. There would be wide visibility from the Black Isle and Moray Firth from the north (wherever the turbines were located within the AU) where they would be likely to form a dominant feature significantly detracting from other coastal features. <b>High</b></p>	<p>The openness of the coast and high recreational use increases visual sensitivity. Turbines of this size would be intrusive from areas used for recreation, particularly if sited on the edge of beaches although smaller turbines could be sited further inland to minimise effects on more frequented areas and to benefit from a degree of screening by woodland in this and adjacent AUs. This turbine type would be less prominent than larger turbines in more distant views. <b>High-medium</b></p>
<p><b>Landscape value</b> The Whiteness Head to Fort George part of this coast lies in the <i>Sutors of Cromarty, Rosemarkie and Fort George</i> SLA. An SLA also applies to the Culbin coast in neighbouring Moray but not in the study area despite it having similar qualities. Nature conservation designations apply to the Inner Moray Firth and Culbin Sands and Culbin Forest and these parts of the coast are valued for peace and solitude and a place to see wildlife.</p>	<p>Key qualities of the SLA relevant within this AU include distinctive coastal scenery, varied views and the dramatic location of Fort George. Turbines of this size sited within the SLA and close-by could detract from coastal features, views and from the setting and prominence of Fort George. Elsewhere qualities of naturalness could be adversely affected. <b>High-medium</b></p>	<p>Key qualities of the SLA relevant within this AU include distinctive coastal scenery, varied views and the dramatic location of Fort George. Turbines of this size sited within the SLA and close-by it could detract from coastal features, views and from the setting and prominence of Fort George. Elsewhere qualities of naturalness could be adversely affected. <b>High-medium</b></p>	<p>Smaller turbines could be sited to avoid effects on the key special qualities of the SLA and on the valued solitude and naturalness of the coastal edge. <b>Medium</b></p>
<p><b>Sensitivity assessment findings:</b></p> <ul style="list-style-type: none"> <li>• Turbines &gt;100m: High sensitivity</li> <li>• Turbines 50-100m: High-medium sensitivity</li> <li>• Turbines &lt;50m: Medium sensitivity</li> </ul>			

## 5 COASTAL FARMLAND – SENSITIVITY ASSESSMENT

### 5.1 Introduction

The *Coastal Farmland* AU forms a low-lying plain extending in a broad band behind the *Coastal Margin* east of Fort George and directly abutting the inner Moray Firth to the west. The LCT that this AU is based on extends eastwards into Moray.

#### 5.1.1 *Operational/consented wind farms*

No wind farm developments are located in this AU. There are distant views of the Hill of Glaschyle wind farm in Moray from the more open parts of this landscape and of the Novar and Beinn Tharsuin wind farms in views to the north-west. These developments do not have a strong influence on this AU.

### 5.2 Summary description and assessment

This landscape forms an extensive low-lying plain which is generally gently undulating to flat but also includes areas of more rolling and complex landform particularly in the Auldearn area, along the coast west of the airport and to the north of the Nairn valley. This coastal plain is intensively farmed with large fields of arable crops and pasture interspersed with small to medium-sized conifer blocks. It is a well-settled landscape and accommodates Nairn and smaller clustered settlements, a regular pattern of farms, major roads and railway. Inverness Airport and a timber processing plant are located in the more open western part of this landscape. Views are long and tend to focus on the *Open Rolling Uplands* to the south and across the Inner Moray Firth to the Black Isle.

A small part of this landscape lies in the *Sutors of Cromarty, Rosemarkie and Fort George* SLA. Cultural heritage and geological features which make a strong contribution to landscape character are also of recognised value but occur in relatively confined parts of this AU.

#### 5.2.1 *Potential effects of additional turbines in the context of existing development*

There are no operational or consented wind turbines located in this AU. While wind farm development located in other landscapes is visible from parts of this landscape it is very distant and does not have a strong influence on character or key views.

Key cumulative issues that may arise within the *Coastal Farmland* are likely to include:

- Multiple wind turbines (and particularly turbines >50m) which would be inter-visible across more open areas and could be seen from the A96, railway and other roads and from elevated settlements such as Culloden, forming dominant features if repeated across this landscape and potentially intruding on views across the Moray Firth to the Black Isle.
- Variations in the type and size of single and small groups of small turbines which could exacerbate the clutter of infrastructure and other built features present in this landscape.

### 5.2.2 Constraints

- Pockets of more rolling landform and small mixed woodlands, including the policies of Kinstearry House, which create a smaller scale and scenically diverse landscape in the Auldearn area.
- The intricate ribbed landform and distinctive striated vegetation cover associated with the Kildrummy Kames SSSI north of the River Nairn.
- The irregular landform and coastal edge of this landscape where it abuts the Moray Firth to the west of the airport.
- The well-settled character of this landscape where turbines could dominate the scale of most buildings.
- Areas with a more modified and fragmented character in the Fort George to Whiteness Head area where larger wind turbines could exacerbate clutter and further diminish the sense of naturalness and seclusion experienced within the adjacent *Coastal Margin*.
- The *Sutors of Cromarty, Rosemarkie and Fort George* SLA which covers the northern part of this AU and where larger turbines could affect its key qualities, deflecting from the prominence of Fort George and the lighthouse on Chanonry Point in views from the coast and sea.
- The openness of this landscape and its well-settled character which increases visual sensitivity and reduces scope for multiple developments, particularly larger turbines >50m high.

### 5.2.3 Opportunities

- The simple landform and land cover characteristic of much of this landscape.
- Industrial development where wind turbines could be located to concentrate large built structures and thus potentially reduce effects on more sensitive areas (the proximity of the airport is however likely to be a technical constraint to development)
- The broad extent of much of this landscape which offers opportunities for development to be sited away from adjacent more sensitive landscapes such as the *Coastal Margin* and allows space for a limited number of turbines <50m high to form repeated but widely spaced features thus avoiding a visually dominating effect.

## 5.3 Sensitivity and guidance

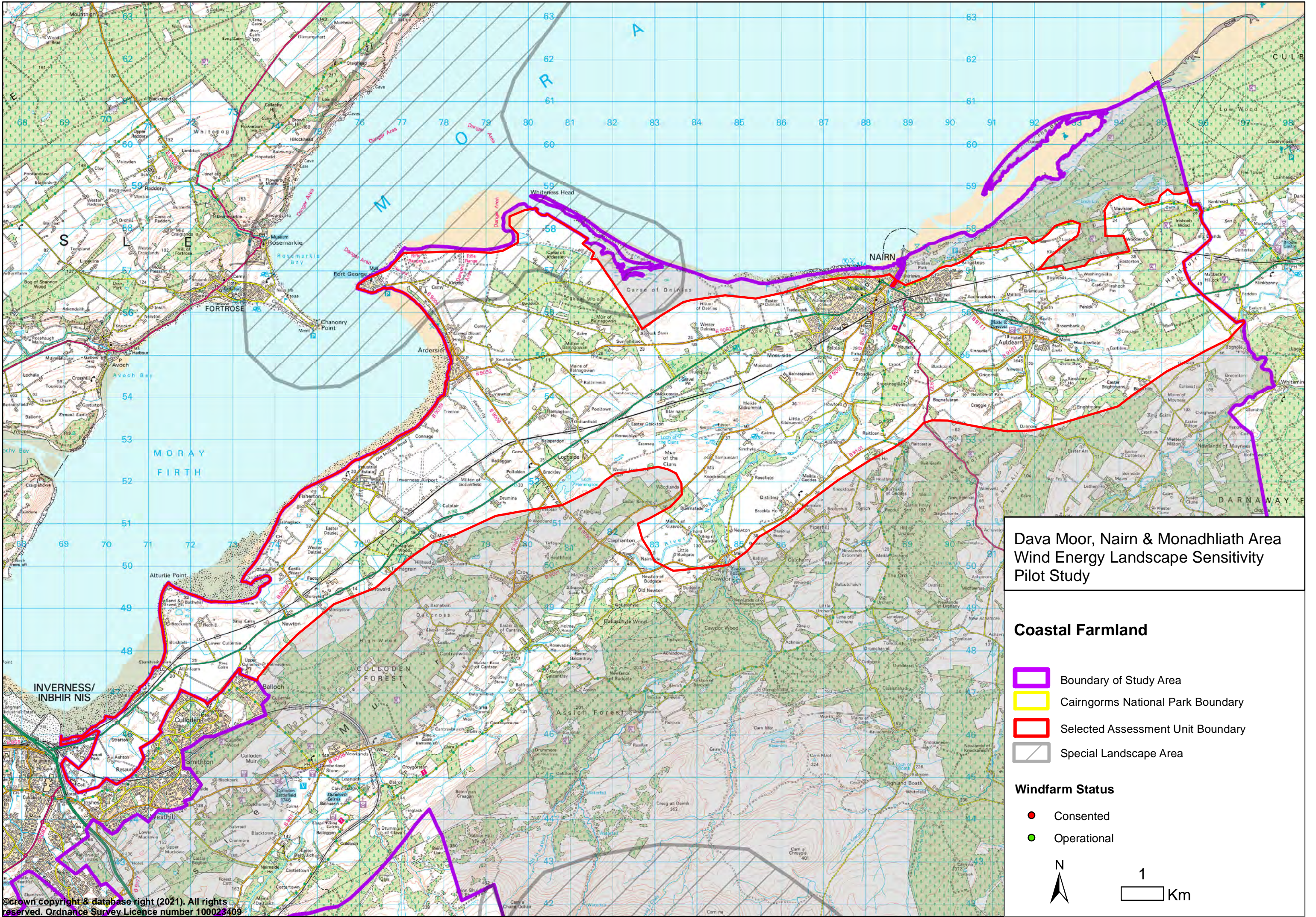
Although the landform of this AU is simple, it is well-settled which increases sensitivity to larger wind turbines >50m high in relation to scale and visual aspects. There would be a **High** sensitivity to turbines >100m high, a **High-medium** sensitivity to turbines 50-100m and a **Medium** sensitivity to turbines <50m.

- While **larger turbines >50m** could relate to the generally simple landform and land cover pattern of this AU, they would dominate the scale of farms and residential buildings which are evenly dispersed across this landscape. Turbines around 50-100m high could be associated with the larger industrial buildings which form occasional features as there would be less of a contrast with scale and some rationale to their location although they would be highly visible across this open, well-settled and frequently traversed landscape and also from the Inner Moray Firth and Black Isle. They could also exacerbate the fragmented and cluttered nature of infrastructure present in some areas, for example close

to the airport in the west of the AU and close to the coast where an MOD facility and the derelict Ardersier fabrication yard have a negative impact on the character of the adjacent *Coastal Margin*.





- **Turbines <50m high** would be less likely to overwhelm the scale and setting of individual buildings and settlements and would be less prominent particularly in relation to multiple developments. They could be sited to be visually associated with larger farm and industrial buildings or within less densely settled areas. Areas of more complex landform, land cover and the setting of settlements, key historic/archaeological features and designed landscapes should be avoided. The well-settled nature of this landscape increases potential for cumulative effects to arise with multiple turbines associated with farms and other buildings. Turbines <25m could be accommodated with fewer associated cumulative effects as, if well sited, they would be more likely to form incidental rather than dominant features if repeated across this landscape. The use of wind turbines of different sizes and designs in close proximity should be avoided as this can lead to a discordant appearance. Locating turbines so closely associated with larger farm and industrial buildings would concentrate development and reduce widespread clutter of built features across this landscape.







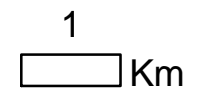
**Dava Moor, Nairn & Monadhliath Area  
Wind Energy Landscape Sensitivity  
Pilot Study**

**Coastal Farmland**

-  Boundary of Study Area
-  Cairngorms National Park Boundary
-  Selected Assessment Unit Boundary
-  Special Landscape Area

**Windfarm Status**

-  Consented
-  Operational







*Intricate rolling landform and coastal edge against the inner Moray Firth west of the airport*



*Isolated industrial features are present in the western part of this landscape*



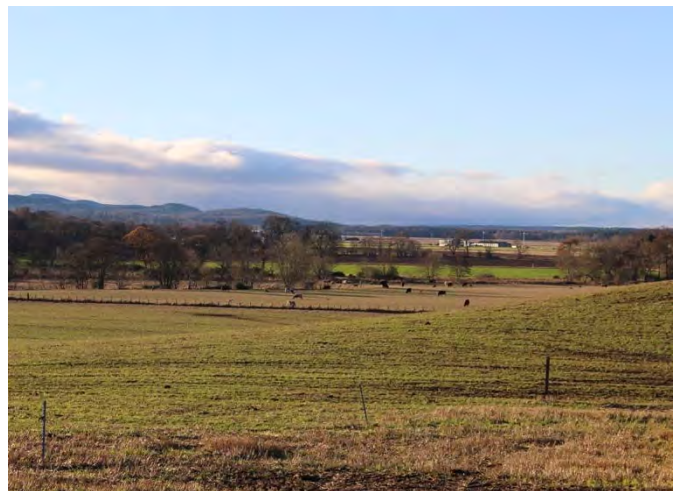
*Long views across the Coastal Farmland focus on the cliffs between Rosemarkie and Sutor on the Black Isle*



*Subtly rolling landform, accentuated by roundel plantings and small water bodies in hollows, in the Auldearn area*



*Large open fields on flatter ground with bands of woodland providing containment in places.*



*The open uplands of the study area form a backdrop to views from this landscape.*

**Coastal Farmland – Detailed sensitivity assessment**

Summary description	Assessment of turbines 100-149.9m	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p><b>Scale</b> A generally open and expansive coastal plain but with more rolling landform and woodlands providing containment and reducing scale in some areas. This landscape is well-settled with a regular pattern of farms, houses and settlements providing ready scale references.</p>	<p>Although this turbine type could relate to the scale of areas with a more open character where landform is simple and landcover features less diverse, turbines of this size would dominate the scale of buildings and small settlements which are evenly dispersed across this landscape and areas with a smaller scale rolling landform. <b>High</b></p>	<p>Turbines of this size could relate to the scale of broader lower lying areas although they would appear very large in relation to residential buildings and areas with a more complex landform and landcover. Industrial development which includes larger scale buildings would be less sensitive. <b>High-medium</b></p>	<p>This turbine type could relate to broader low-lying basins where settlement is sparser although turbines of this size would still appear large in relation to residential buildings and smaller scale rolling landform. <b>Medium</b></p>
<p><b>Landform</b> This landscape has a predominantly subtly undulating landform becoming flatter close to the coast near the Carse of Delnies. The River Nairn cuts a narrow valley through this landscape and more complex gently rolling landform is present to the south-east of Auldearn and close to the Moray Firth in the western part of this AU. The Kildrummie Kames form an intricate ribbed landform NW of the River Nairn.</p>	<p>The generally simple, gently undulating landform of this landscape reduces susceptibility although this turbine type would detract from the areas of more complex landform if sited on or nearby them. <b>Medium</b></p>	<p>The generally simple, gently undulating landform of this landscape reduces susceptibility although this turbine type would detract from the areas of more complex landform if sited on or nearby them. <b>Medium</b></p>	<p>The generally simple, gently undulating landform of this landscape reduces susceptibility and there is increased scope for smaller turbines to be sited to avoid detracting from areas of more complex landform. <b>Medium-low</b></p>
<p><b>Land cover</b> Land cover is generally simple with large fields with a weak enclosure pattern interspersed with blocky coniferous plantations. Small pockets of more diverse land cover pattern are associated with wooded policies around Auldearn and gorse, rough grassland, mixed woodlands and occasional small water bodies are associated with the Kildrummie Kames.</p>	<p>This turbine type could relate to the simple and generally open character of farmland although policy features and diverse natural vegetation cover would be more susceptible. <b>Medium</b></p>	<p>This turbine type could relate to the simple and generally open character of farmland although policy woodlands and diverse natural vegetation cover would be more susceptible. <b>Medium</b></p>	<p>This turbine type could relate to the simple and generally open character of farmland and there is increased scope for smaller turbines to be sited to avoid detracting from more diverse landcover features. <b>Medium-low</b></p>
<p><b>Built environment</b> Inverness airport and associated industrial estate, the Norbord timber processing plant and remnant infrastructure at the</p>	<p>This turbine type would dominate the setting of small settlements, farms and houses in this well-settled landscape. Historic built features would also be</p>	<p>This turbine type could dominate the setting of small settlements, farms and houses in this well-settled landscape. Historic built features would also be</p>	<p>This turbine type could dominate the setting of small settlements, farms and houses in this well-settled landscape if sited nearby.</p>

Summary description	Assessment of turbines 100-149.9m	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p>former Ardersier Port are prominent in this open landscape. Major rail and trunk road routes (A96) are aligned through this AU and it is a well-settled landscape with an even dispersal of farms (some with large sheds, pig and poultry farming) houses, small and larger settlements. Fort George is a notable cultural heritage feature on the coast and other smaller historical buildings provide occasional features. There are no wind farms or larger wind turbines located in this AU.</p>	<p>susceptible to intrusion on their setting although these features are widely dispersed. The presence of some infrastructure and industrial development in this landscape reduces susceptibility to an extent, although the introduction of large turbines could accentuate this more negative aspect of landscape character. Multiple developments of single and small groups of turbines of this size could increase the clutter of disparate elements in this landscape. <b>High</b></p>	<p>susceptible to intrusion on their setting although these features are widely dispersed. The presence of some infrastructure and industrial development in this landscape reduces susceptibility and turbines towards the lower height band would have less of a negative effect on character. Multiple developments of single and small groups of turbines of this size could increase the clutter of disparate elements in this landscape. <b>High-medium</b></p>	<p>Historic built features would also be susceptible to intrusion on their setting although these features are widely dispersed and smaller turbines could be sited to minimise effects. This turbine type could accentuate clutter in parts of this landscape. Single turbines towards the lower height band of this type and closely related to existing industrial development, would have a better scale relationship to these buildings and would minimise the spread of built infrastructure. <b>Medium</b></p>
<p><b>Landscape context</b> This landscape merges gradually with the <i>Coastal Margin</i> west of Nairn although a more defined boundary occurs to the east on the southern edge of Culbin Forest. There is greater inter-visibility between these AUs west of Nairn due to the general absence of screening features. The more elevated landscapes of the <i>Rolling Farmlands and Forest</i> in the east and the <i>Rolling Farmland and Woodland</i> in the west contrast with the lower lying and generally more open plain of this AU. The Moray Firth and Black Isle also lie close to parts of this AU.</p>	<p>Turbines of this size sited towards the southern boundaries of this AU would impact on the scale and character of the <i>Rolling Farmland and Forest</i> and <i>Rolling Farmland and Woodland</i>. Turbines of this size could also affect the sense of seclusion and naturalness experienced along the less developed parts of the <i>Coastal Margin</i> and the inner Moray Firth particularly if located close to the coast. Fort George and Chanonry Point with its lighthouse would be susceptible to large turbines which could diminish their landmark status and gateway function. <b>High-medium</b></p>	<p>Turbines of this size sited towards the southern boundaries of this AU would impact on the scale and character of the <i>Rolling Farmland and Forest</i> and <i>Rolling Farmland and Woodland</i>. Turbines of this size could also affect the sense of seclusion and naturalness experienced along the less developed parts of the <i>Coastal Margin</i> and the inner Moray Firth particularly if located close to the coast. Fort George and Chanonry Point with its lighthouse would be susceptible to large turbines which could diminish their landmark status and gateway function. <b>High-medium</b></p>	<p>There would be increased scope for this turbine type to be sited within this extensive landscape to avoid potentially significant impact on adjoining more sensitive smaller scale landscapes. Sensitive skylines seen from the less built-up sections of coast within the <i>Coastal Margin</i> would still need to be avoided. <b>Medium</b></p>
<p><b>Perceptual aspects</b> This is a well-settled and generally intensively managed landscape (with some large industrial and infrastructure features). There is no distinct sense of seclusion and naturalness apart from less modified areas close to the River Nairn and the Kildrummy Kames area.</p>	<p>There is scope to locate turbines to minimise effects on the relatively small parts of this AU which are little modified <b>Medium-low</b></p>	<p>There is scope to locate turbines to minimise effects on the relatively small parts of this AU which are little modified. <b>Medium-low</b></p>	<p>There is increased scope to site smaller turbines to avoid effects on less modified parts of this AU. <b>Low</b></p>

Summary description	Assessment of turbines 100-149.9m	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p><b>Visual amenity</b> This landscape is very open in places with extensive views possible from the A96 and the dense network of minor roads which criss-cross it. Coniferous plantations and subtle ridges limit the extent of views in other areas. The Moray Firth and the cliffs between Rosemarkie and Cromarty on the southern shore of the Black Isle are key features in views from this AU. This AU is less distinctive in views from the Black Isle due to its low-lying landform. Industrial development, including the airport, are visually prominent features in the western part of this AU. The north-facing settled slopes of the <i>Rolling Farmland and Forest</i> and the <i>Rolling Farmland and Woodland</i> have open and elevated views across this landscape and over the Moray Firth.</p>	<p>This size of turbine would be likely to be intrusive from roads and settlement within this open landscape where it would be likely to form a dominant feature. Turbines of this size would also be highly visible from the well-settled north-facing slopes of adjacent AUs where it could intrude on key views over the Moray Firth to the Black Isle. Views from the more open western part of the <i>Coastal Margin</i> and from the Moray Firth and the Black Isle could be affected. <b>High</b></p>	<p>This size of turbine would be likely to be intrusive from roads and settlement within this open landscape where it would be likely to form a dominant feature. Turbines of this size would also be highly visible from the well-settled north-facing slopes of adjacent AUs where it could intrude on key views over the Moray Firth to the Black Isle. Views from the more open western part of the <i>Coastal Margin</i> and from the Moray Firth and the Black Isle could be affected. <b>High</b></p>	<p>This size of turbine would be visible from roads and settlement but turbines of this size would generally be less prominent than the larger typologies in the expansive views possible across this AU. There would also be increased scope to site smaller turbines to minimise effects on views from the sensitive <i>Coastal Margin</i>. <b>High-medium</b></p>
<p><b>Landscape value</b> The <i>Sutors of Cromarty, Rosemarkie and Fort George</i> SLA covers a small part of this AU close to the Moray Firth. Kildrummie Kames SSSI lies to the north-west of the River Nairn. There are a number of valued cultural heritage features including designed landscapes at Both and Kinsteary House near Auldearn. Other cultural heritage features tend to be discrete rather than widespread in nature. Fort George is a key visitor attraction.</p>	<p>Key qualities of the SLA relevant within this AU include distinctive coastal scenery varied views and the dramatic location of Fort George. Turbines of this size sited within the SLA and close-by could detract from coastal features, views and from the setting and prominence of Fort George. Turbines could however be sited to avoid valued landscapes and features within much of this AU. <b>Medium</b></p>	<p>Key qualities of the SLA relevant within this AU include distinctive coastal scenery, varied views and the dramatic location of Fort George. Turbines of this size sited within the SLA and close-by it could detract from coastal features, views and from the setting and prominence of Fort George. Turbines could however be sited to avoid valued landscapes and features within much of this AU. <b>Medium</b></p>	<p>There is increased scope to site smaller turbines to avoid effects on the key special qualities of the SLA and on other valued features. <b>Medium-low</b></p>
<p><b>Sensitivity assessment:</b></p> <ul style="list-style-type: none"> <li>• Turbines &gt;100m: High sensitivity</li> <li>• Turbines 50-100m: High-medium sensitivity</li> <li>• Turbines &lt;50m: Medium sensitivity</li> </ul>			

## 6 NARROW WOODED VALLEY – SENSITIVITY ASSESSMENT

### 6.1 Introduction

The *Narrow Wooded Valley* AU covers the incised and densely wooded valley of the River Findhorn. A very gradual transition occurs between this landscape and the adjacent *Upland Moorland and Forestry* AU to the north-west because of the extensive woodland cover common to both these landscapes. This AU also lies adjacent to the *Open Rolling Upland* to the south and east where the transition is more marked due to the openness and increased height of these uplands. The LCT this AU is based on extends north-eastwards into Moray.

#### 6.1.1 *Operational/consented wind farms*

A small single turbine is located close to Logie in Moray. The operational Hill of Glaschyle wind farm is located in the *Upland Moorland and Forestry* within Moray and is seen from rare open areas within this AU. The operational Tom nan Clach wind farm, located in the *Open Rolling Uplands*, is visible from rare open parts of this densely wooded valley. The consented Cairn Duhie wind farm, which is also located in the *Open Rolling Uplands*, will be seen in closer proximity on the skyline of wooded hills in views from more open areas, for example from Ardlach.

### 6.2 Summary description and assessment

The River Findhorn occupies a narrow, sinuous and dramatic rocky gorge. Steep undulating slopes rising from this gorge are densely wooded with a diverse mix of Scots pine peppered with mature beech and oak. Occasional pockets of pasture on more gently sloping higher valley sides appear carved out of the forest and are commonly fringed with birch. The sequence and irregular shape of small open spaces and extensive dense woodland creates an intricate pattern and is a key characteristic of this landscape. This area is managed by large estates and this strongly influences the historic character of built features and the appearance of mixed woodlands. Several estate lodges are set within woodland overlooking the river gorge with farms and cottages associated with small areas of farmland on the more level shoulders of the valley. There are relatively few roads although the A939, which forms a key approach into Nairn, crosses the Findhorn, as does a narrow single-track road via the historic bridge at Dulsie providing access to the southern part of the valley. Woodland walks along the river are popular although access is restricted in the more deeply incised gorge. Views are limited by the dense woodland cover although rare areas of farmland on upper sides and occasional small hills provide long views across and along the valley and to adjacent uplands.

This AU is not covered by a landscape designation although it is valued for its nature conservation and recreational interest. The LCT that this AU is based on extends into Moray where it is designated as the *Findhorn Valley and Wooded Estates* SLA.

#### 6.2.1 *Potential effects of additional turbines in the context of existing development*

There is potential for cumulative landscape and visual effects to arise with operational and consented wind farms located in adjacent upland areas. Key cumulative issues that may arise include:

- An absence of rationale which could occur with wind farms associated with simple and more expansive upland areas and any larger wind turbines sited within this smaller scale landscape.
- Inter-visibility between any wind turbines located on open farmland on the upper slopes of this landscape and operational and consented wind farms sited within the *Upland Moorland and Forestry* and *Open Rolling Uplands* (both in the study area and within Moray) in longer views from the A939 and B9007.
- Variations in the type and size of any single or small group of turbines proposed.
- Sequential visual impacts experienced when travelling through this landscape.

#### 6.2.2 Constraints

- The small and often complex landform features including the steep-sided gorges which characterise this landscape.
- The small scale of areas of farmland within extensive forest cover which reinforce a sense of intimacy and discovery experienced when travelling on narrow roads through this landscape – turbines are more likely to be visually prominent and become the focus of views within these rare open spaces.
- The integrity and richness of the woodlands which cover much of this valley.
- The setting of historic buildings and their wooded policies and other features such as bridges which contribute to character.
- Views from the A939 and the B9007 which are important scenic routes into the lowlands surrounding Nairn.
- Cumulative effects with operational and consented wind farm developments sited in the adjacent *Upland Moorland and Forestry* and *Open Rolling Uplands* in the study area and neighbouring Moray.

#### 6.2.3 Opportunities

- Gently graded open slopes set away from the more complex and distinctive landform features and the setting of the dramatic river gorge.
- The edges of clearings next to farm buildings where smaller turbines could be sited to create ‘clusters’ of development thus minimising clutter.

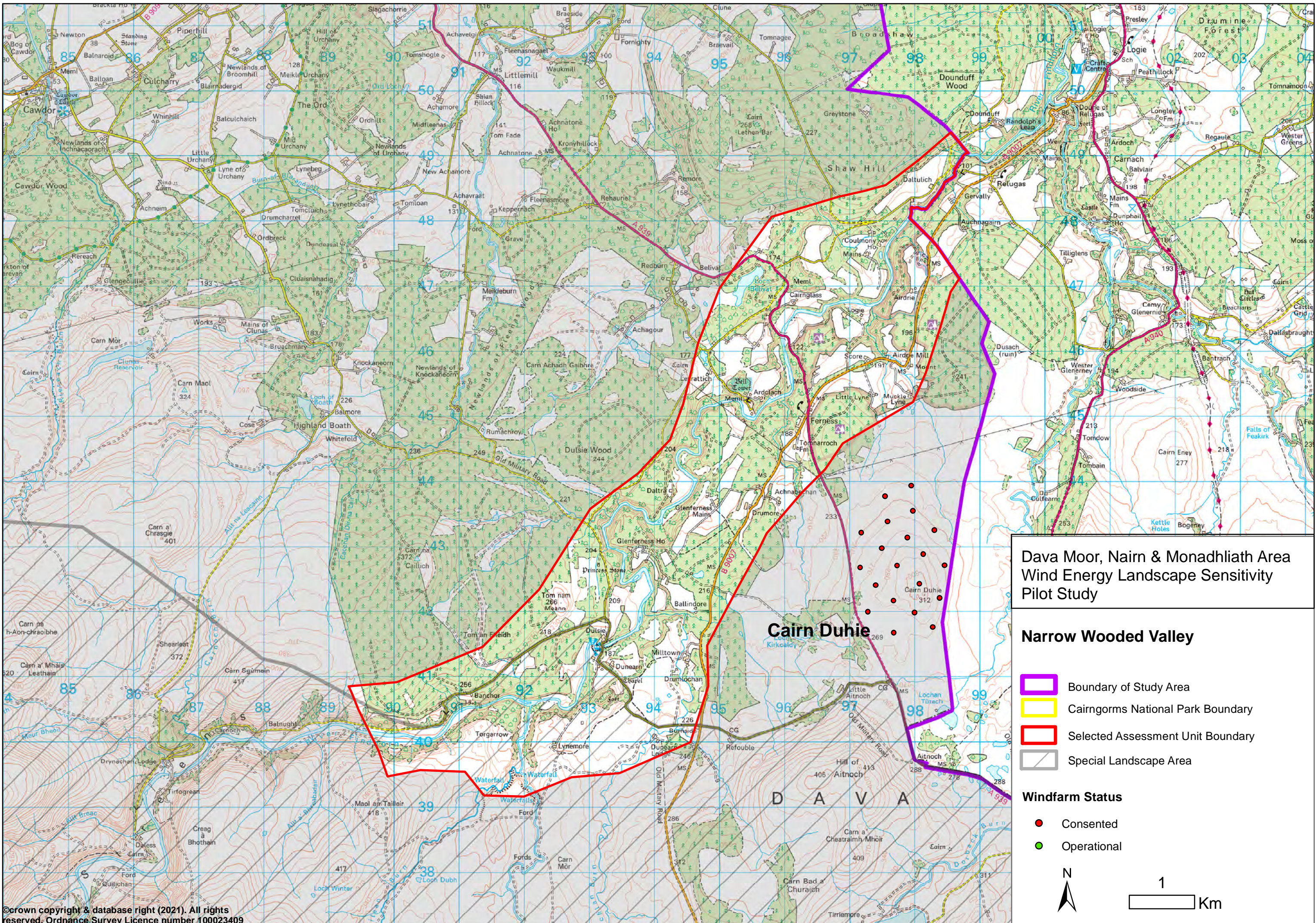
### 6.3 Sensitivity and guidance for development

The dramatic river gorge and its diverse wooded setting, the small scale of the landscape, the sense of naturalness and seclusion and the historic built character of this landscape increase susceptibility. Sensitivity would be **High** sensitivity to turbines >50m high and **High-medium** for turbines <50m.

This landscape is also highly sensitive to larger turbines located within the adjoining *Open Rolling Uplands* and *Upland Moorland and Forestry* AUs.

Turbines around 50m high could be located on the broader, gently sloping open shoulders of the valley at the transition with the *Open Rolling Upland* AU to the south. They should be sited to avoid more complex small-scale landform features (including the setting of the prominent Dunearn hill fort near Dulsie) and significant intrusion on sensitive skylines above the Findhorn gorge. Smaller turbines <25m could be sited in larger areas of farmland elsewhere but should avoid intruding into the centre of these open spaces and could also be located so visually associated with buildings to reinforce the settlement pattern and minimise visual clutter.

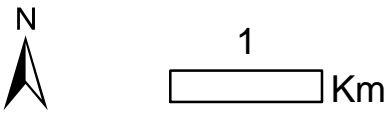




**Dava Moor, Nairn & Monadhliath Area  
Wind Energy Landscape Sensitivity  
Pilot Study**

- Narrow Wooded Valley**
- Boundary of Study Area
  - Cairngorms National Park Boundary
  - Selected Assessment Unit Boundary
  - Special Landscape Area

- Windfarm Status**
- Consented
  - Operational







*The narrow rocky gorge of the Findhorn seen from Dulsie Bridge*



*The rich variety of woodland is a key characteristic – this AU merges gradually with similarly densely wooded landscapes including the Upland Moorland and Forestry.*



*A diverse pattern of pasture and woodland, including the distinctive hill fort of Dunearn, backed by the Open Rolling Upland AU*



*Pocket pastures are strongly contained by woodland – the sequence of dense woodland and open space is an important feature of this landscape*

**Narrow Wooded Valley (lower Findhorn) – Detailed sensitivity assessment**

Summary description	Assessment of turbines 50-100m	Assessment of turbines <50m
<p><b>Scale</b> The narrow, incised valley landform, complex meanderings of the river and intricate patterning of woodland and small pockets of open farmland influences the small scale of this landscape. Individual trees and buildings provide consistent reference points against which the size of turbines can be judged.</p>	<p>This size of turbine would dominate the small-scale landform, the limited scale of open spaces, buildings and other small features within this AU. <b>High</b></p>	<p>This size of turbine would impact on the small scale of much of this AU although could relate better to larger areas of open farmland on the broader southern shoulders of the valley where landform is more gently sloping. <b>High-medium</b></p>
<p><b>Landform</b> Landform is variable with sheer rocky gorges, small floodplain arcs, a diverse pattern of knolls and promontories responding to the twisting form of the river. The shoulders of the valley are more gently sloping.</p>	<p>The irregular and small-scale landforms and steep sided river valleys and their immediate setting are all susceptible to this turbine type. Larger turbines would detract from complex and dramatic landform features even if sited on more gently sloping upper slopes. <b>High</b></p>	<p>The more irregular and smaller scale landforms and the steep sided river valleys and their immediate setting are sensitive to this turbine type. Gentler slopes on upper valley sides would be less susceptible. <b>High-medium</b></p>
<p><b>Landcover</b> This landscape is strongly characterised by the variety of woodland, which includes pine forest, riparian woodland and wooded policies. The predominantly wooded cover is broken by occasional grazed fields of different scales. These open spaces are frequently irregular in shape, creating a richly interlocking landcover pattern.</p>	<p>The diversity of woodland and its contribution to the scenic character of this valley and the importance of open spaces within the woodland increases susceptibility. Turbines of this size (and particularly multiple turbines) would disrupt the sense of openness if located on open farmland and would detract from the integrity of the distinctive landcover pattern. <b>High</b></p>	<p>Multiple turbines of this size would also disrupt and detract from the intricate pattern of open spaces and woodland although broader areas of farmland where the interlocking landcover pattern is less diverse would be less susceptible to limited numbers of turbines of this height. <b>High-medium</b></p>
<p><b>Built environment</b> This landscape is not extensively settled, with farms and houses generally located at the edge of the open spaces overlooking the fields. The historic houses of Coulmony and Glenferness are strongly associated with the dramatic river gorge. There are no wind turbines in this part of the Findhorn valley although a small single turbine is located at Logie in this same AU within Moray. The operational wind farms of Tom nan Clach, Berry Burn and Hill of Glaschyle are visible from rare open areas but do not have a strong influence on character and views. The consented Cairn Duhie wind farm will be visible in closer proximity from open areas.</p>	<p>Historic buildings and other cultural heritage features would be susceptible to intrusion of turbines of this size affecting their setting. The character of the road network within this valley could be compromised by improvements to accommodate large vehicles required to transport this turbine type. While operational wind farms are distant limiting scope for significant cumulative effects to occur with any wind turbines of this size located in this landscape, there could be significant cumulative effects with the consented Cairn Duhie wind farm which will be much more prominent in views from open parts of this valley. <b>High-medium</b></p>	<p>Historic buildings and other cultural heritage features would also be susceptible to intrusion on their setting although turbines of this size may be able to be sited to minimise cumulative effects with operational and consented wind farms. <b>Medium</b></p>
<p><b>Landscape context</b> The deeply incised and well-wooded Findhorn Valley is</p>	<p>While turbines of this size sited in this landscape would be likely to breach the strong visual containment of this</p>	<p>This size of turbines would be less likely to have an influence on adjacent AUs particularly if partially</p>

Summary description	Assessment of turbines 50-100m	Assessment of turbines <50m
strongly contained and this limits inter-visibility with the adjacent <i>Upland Moorland and Forestry</i> and the <i>Open Rolling Uplands</i> AUs.	wooded valley, the more expansive scale of adjacent upland AUs reduces susceptibility. <b>Medium</b>	contained by landform and/or woodland <b>Medium-low</b>
<b>Perceptual aspects</b> Extensive woodland creates a sense of seclusion and this, together with the complexity of the landform and the sparse network of narrow roads, contributes to the perception of a hidden place. The most striking features are the river gorges and steep wooded slopes, which are dramatic and naturalistic in character. Travelling through the sequence of open spaces and woodland is a key experiential quality of this character.	This turbine type could affect the sense of seclusion in this landscape, and the sense of naturalness and drama associated with the river gorges. Larger turbines could easily dominate open spaces and diminish the experience of travelling through this landscape. <b>High</b>	Small turbines are less likely to have a widespread visual influence and would, if sited at the transition with the <i>Open Rolling Upland</i> and well away from the more secluded river gorge, minimise effects on perceptual aspects. The contrast between small pastures and woodland could be diminished by multiple turbines filling open spaces. <b>High-medium</b>
<b>Visual amenity</b> Woodland and landform limit the extent of views from this AU. There are views from rare open spaces to the higher ground of the adjacent <i>Upland Moorland and Forestry</i> and <i>Open Rolling Uplands</i> AUs. Open views from the A939, B9007 and minor roads are rare. Key views include those near Dulsie bridge and Ardlach.	While open views are generally rare from this AU, turbines of this size would be likely to be visible above woodland in views from more extensive open spaces and would also intrude on key views, for example from the elevated A939. <b>High</b>	Key visual sensitivities, such as the setting of the gorge and views from more open farmland and roads such as the A939 remain sensitive to this turbine type. Turbines towards the lower height band of this type (<25m) would be less prominent and could benefit from a greater degree of screening by woodland in key views. <b>High-medium</b>
<b>Landscape value</b> The <i>Drynachan, Dava and Lochindorb Moors</i> SLA covers a relatively small part of this landscape. Key qualities of this SLA include the intimate scale of the Findhorn valley and its contrast with expansive moorland, the strong sense of tranquillity and distinctive estate buildings. An SLA covers the lower Findhorn Valley within Moray which has a similar character to this AU. Dulsie Bridge and Ardlach Tower and church are popular visitor attractions. The nature conservation value of woodlands and the river gorge is recognised by designations.	This size of turbine would dominate the scale of this valley and could also diminish its tranquillity and affect the setting of buildings. Diverse and valued woodlands and the appreciation of the dramatic river gorge could also be affected, particularly by multiple, and/or poorly sited turbines. <b>High-medium</b>	This size of turbine is more likely to comprise single and very small groups of turbines associated with farms which could be sited to minimise effects on the scale of the valley, valued woodlands and the setting of the river gorge. <b>Medium</b>
<b>Sensitivity assessment:</b> <ul style="list-style-type: none"> <li>• Turbines 50-100m: High sensitivity</li> <li>• Turbines &lt;50m: High-medium sensitivity</li> </ul>		



## 7 UPLAND VALLEY – SENSITIVITY ASSESSMENT

### 7.1 Introduction

The upper section of the River Findhorn within the study area is aligned in an open and sparsely settled upland glen. This AU cuts through the *Open Rolling Upland* AU and the steep slopes of these uplands provide the backdrop and skyline to this valley. A clear boundary with the *Narrow Wooded Valley* AU occurs to the east due to the markedly more wooded character of this section of the Findhorn valley.

#### 7.1.1 *Operational/consented wind farms*

There are no wind turbines located in this AU. The operational Tom nan Clach wind farm is located within the *Open Rolling Upland* AU and is prominent on the southern upland skyline seen from this valley. The consented Cairn Duhie wind farm is also likely to be visible from parts of this landscape, particularly from the south-east facing slopes on the north side of the valley but with little visibility from the valley floor.

### 7.2 Summary description and assessment

The River Findhorn occupies a narrow and deeply incised valley. The river winds a gently sinuous alignment through flat arcs of floodplain pastures. Steep slopes against the river are often wooded although areas of slippage and erosion are also present. Native woodland is more extensive in the upper reaches of the river with natural regeneration evident on south-eastern valley sides. Alternating steep-sided hill spurs produce a distinct rhythm to this landscape, responding to the curves of the river. The valley floor significantly constricts further upstream where it is interrupted by large steep-sided river terraces. An estate influence is evident in the traditional cottages and lodges at Drynachan. The valley is accessed by narrow single-track dead-end roads at either end with the middle section of the valley more remote and difficult to access.

The *Drynachan, Dava Moor and Lochindorb Moors* SLA covers much of this AU and there are also nationally valued river terraces in the upper reaches of the valley.

#### 7.2.1 *Potential effects of additional turbines in the context of existing development*

There is potential for cumulative landscape and visual effects to arise with operational and consented wind farms located in the *Open Rolling Upland* AU. Key cumulative issues that may arise are likely to include:

- An absence of rationale which could occur between operational and consented wind farms clearly associated with simple and more expansive upland areas and any potential similarly large wind turbines sited within this smaller scale landscape.
- Increases in the extent of turbine development seen on the prominent skyline of hills which contain the valley.
- Variations in the type and size of any single or small group of turbines proposed within this landscape.

#### 7.2.2 *Constraints*

- The small-scale of this narrow and strongly contained valley.

- The distinct sense of seclusion and naturalness that can be experienced in this valley (which is diminished to some degree by the operational Tom nan Clach wind farm).
- Cumulative effects with operational wind farm developments sited in the adjacent *Open Rolling Uplands*.

### 7.2.3 Opportunities

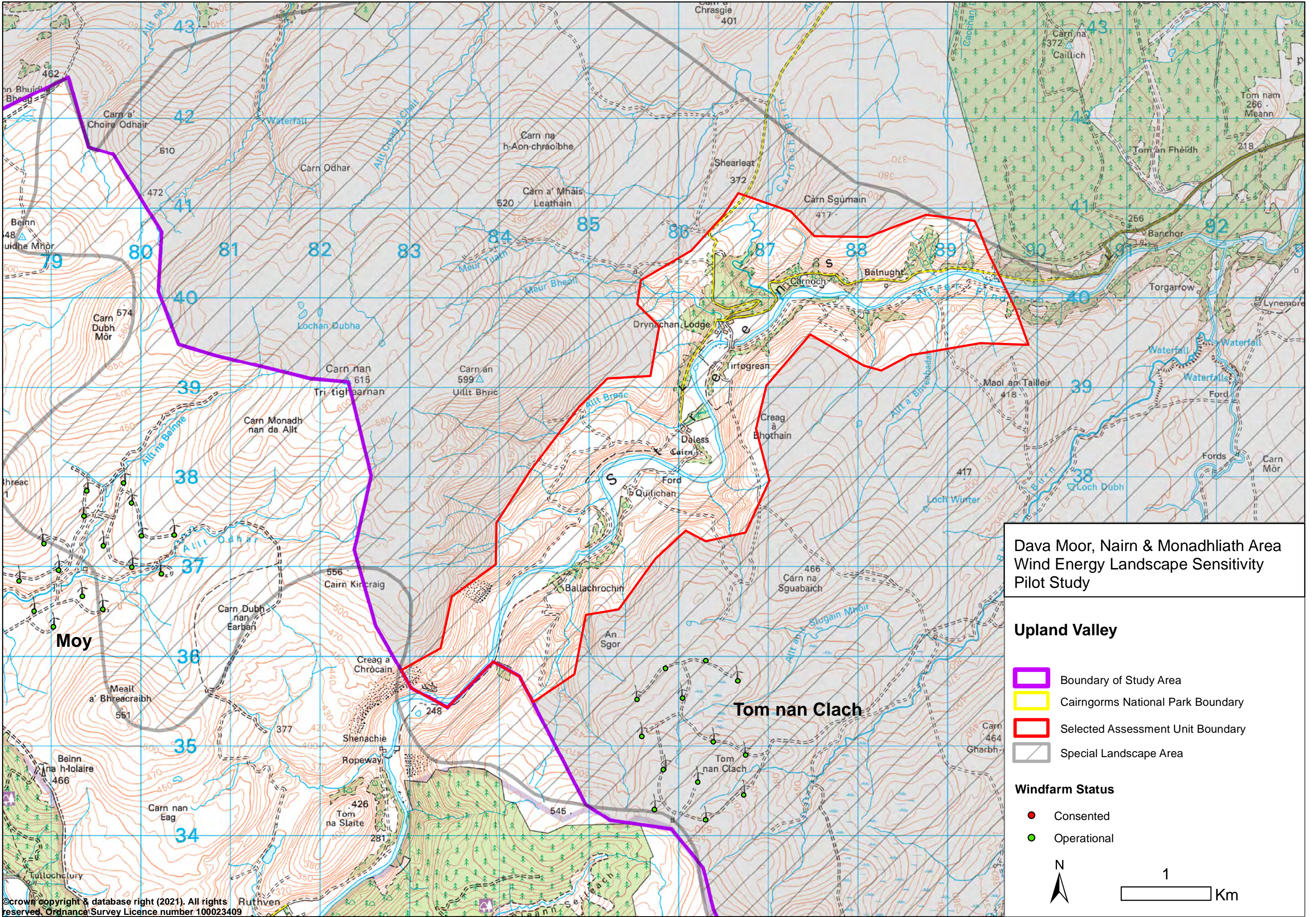
- Rare areas of more gently graded lower valley sides and the edges of larger areas of floodplain pasture close to farms where single small turbines <25m could potentially be sited

## 7.3 Sensitivity and guidance

The small scale of this narrow valley, its diverse landform and the strong sense of seclusion and naturalness that can be experienced (particularly in the upper reaches of the Findhorn) increase susceptibility. The value of some of these key characteristics are recognised in the SLA designation which covers this landscape. There would be a **High** sensitivity to turbines >50m high. Sensitivity would be **High-medium** for turbines <50m.

Smaller turbines could be located on gently graded slopes at the edges of farmland. Turbines <25m could be visually associated with buildings to reduce clutter although set back sufficiently to avoid impacting on distinctive estate lodges. Individual turbines are likely to be easier to accommodate than groups. Turbines sited in these areas should avoid intruding into the centre of floodplain pastures.





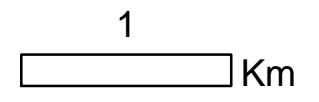
**Dava Moor, Nairn & Monadhliath Area  
Wind Energy Landscape Sensitivity  
Pilot Study**

**Upland Valley**

- Boundary of Study Area
- Cairngorms National Park Boundary
- Selected Assessment Unit Boundary
- Special Landscape Area

**Windfarm Status**

- Consented
- Operational







*The highest hills of the Open Rolling Uplands AU form a scenic rugged backdrop to this valley to the north – The Tom nan Clach wind farm is visible on the southern skyline of lower hills*



*The remote upper reaches of the Findhorn where the valley is pinched between steep sides hills and the floor filled with large steep-sided river terraces*



*Woodland covers steeper valley sides - more extensive native woodland is present in the upper reaches of the valley*



*The rhythmic sequence of winding river, rounded spurs and floodplain pastures seen along the valley*

***Upland Valley (upper Findhorn) – Detailed sensitivity assessment***

Summary description	Assessment of turbines 50-100m	Assessment of turbines <50m
<p><b>Scale</b> The narrowness of the valley together with the meandering alignment of the river and alternating hill spurs results in an intimate scale and a strong sense of containment. The valley is very sparsely settled but buildings, where present, are small and individual trees and woodlands also provide ready scale references.</p>	<p>Turbines of this size would dominate the intimate scale and narrow extent of this valley. <b>High</b></p>	<p>Larger turbines within this type would impact on the intimate scale of this valley. Smaller turbines towards the lower height band could relate better to the scale of this landscape. <b>High-medium</b></p>
<p><b>Landform</b> The Findhorn winds through a narrow floodplain contained by steep slopes cut by numerous tributary burns. The higher hill tops of the <i>Open Rolling Uplands</i> provide the skyline in views from the floor of this valley. Areas of scree and small rocky gorges pattern valley sides and the river cuts sheer eroded banks in places. High river terraces are present in the upper reaches of the valley in the study area.</p>	<p>Dramatic river terraces and gorges and the contrast between the smooth, simple floodplain and rugged valley sides are all characteristics of increased susceptibility to turbines of this size which would detract from these complex and dramatic landform features. <b>High</b></p>	<p>Dramatic river terraces and gorges are of increased susceptibility. Gentler slopes on lower valley sides would be less susceptible to smaller turbines although the contrast between the simple smooth floodplain and rugged valley sides would be susceptible to turbines which could introduce clutter and diminish their openness if sited on floodplain areas. <b>High-medium</b></p>
<p><b>Landcover</b> There is a generally simple landcover of rough grass and heather on valley sides with mixed woodlands around Drynachan and more extensive native woodlands in the upper valley. Areas of semi-improved pasture occupy the floodplain of the valley.</p>	<p>The intricate pattern and diversity of heather and grass moorland interspersed with native woodlands in parts of this valley increase susceptibility. Multiple turbines and access tracks would disrupt the characteristic integrity of landcover which allows the dramatic landform to be appreciated. <b>High-medium</b></p>	<p>This turbine type is more likely to comprise single or very small groups of turbines which would have minimal effects on more managed land cover although diverse woodlands would be of increased susceptibility. <b>Medium</b></p>
<p><b>Built environment</b> This landscape is very sparsely settled with narrow single-track access roads. Buildings have a distinct estate influence. While there are no wind turbines located in this landscape, the operational Tom nan Clach wind farm located in the adjacent <i>Open Rolling Upland</i> is prominent on the southern skyline seen from the valley floor and slopes.</p>	<p>Large turbines could detract from the character and setting of distinctive estate buildings. The character of narrow roads and tracks could be compromised to accommodate large vehicles required to transport this turbine type. Significant cumulative effects would be likely to arise with the Tom nan Clach wind farm due to the differences between siting rationale and likely increase clutter of inter-visible turbines in key views. <b>High</b></p>	<p>The character and setting of buildings and roads would be less susceptible to smaller turbines &lt;25m; they would also be clearly different with larger turbines within the Tom nan Clach wind farm reducing cumulative effects. <b>High-medium</b></p>
<p><b>Landscape context</b> The narrow and deeply incised upper Findhorn valley is</p>	<p>Susceptibility is generally reduced in terms of this criterion. Turbines of this size sited on valley sides may</p>	<p>This turbine type would have minimal effects on adjacent landscapes unless sited on upper valley sides where</p>

Summary description	Assessment of turbines 50-100m	Assessment of turbines <50m
hidden within the folds of an extensive tract of rolling uplands. There is limited inter-visibility with adjacent AUs although higher hills within the <i>Open Rolling Uplands</i> form the skyline seen from the floor and lower slopes of this valley.	be visible from parts of the <i>Open Rolling Uplands</i> and could affect the integrity of the high open uplands NW of this valley and/or result in cumulative effects with Tom nan Clach wind farm. <b>Medium</b>	turbines could introduce an element of visual clutter affecting the integrity of the higher uplands to the north-west of this valley and/or result in cumulative effects with Tom nan Clach wind farm. <b>Medium</b>
<b>Perceptual aspects</b> A strong sense of seclusion can be experienced in this landscape and especially in the less accessible middle section of the valley. The absence of modern development gives a perception of timelessness although the operational Tom nan Clach wind farm seen on the southern skyline of this valley has diminished this, and the sense of remoteness, to some degree.	This landscape is highly susceptible to larger turbines which would significantly diminish the sense of naturalness and remoteness that can be experienced. <b>High</b>	Smaller turbines <25m would be likely to have less of an effect on this criterion although the more remote upper reaches of the valley are of increased susceptibility. <b>High-medium</b>
<b>Visual amenity</b> The valley landform and its sinuous nature limits the extent of views possible from within this landscape. The valley is also hidden within the folds of the <i>Open Rolling Upland</i> in longer views from the surrounding area. Views westwards up the valley on the minor public road east of Drynachan are special.	Turbines of this size would form the focus of views from minor roads and tracks within the narrow confines of this valley and would significantly detract from the appreciation of the rich scenic composition of this landscape. They would also be visible from higher ground in surrounding areas <b>High</b>	The sinuous nature of the valley would be likely to limit visibility of turbines towards the lower height band <25m when looking along its length. Upper slopes of the valley are of increased susceptibility as visibility from surrounding areas may increase although rolling uplands are likely to provide a degree of screening. <b>High-medium</b>
<b>Landscape value</b> The <i>Drynachan, Dava Moor and Lochindorb Moors</i> SLA covers much of this valley. Key qualities of this SLA relevant to the Findhorn valley include its enclosed and intimate relief which contrasts with the elevated and exposed moorland and the distinctive estate architecture. The Findhorn Terraces SSSI cover an important geomorphological feature of a series of high river terraces in the upper reaches of the river within the study area.	This size of turbine, and particularly multiple turbines, would affect the SLA key qualities relating to the intimate scale of this valley, the sense of tranquillity and the setting of distinctive estate buildings. Valued geological features could also be affected by turbines sited on or nearby them or seen in key views to them in the middle part of the valley. <b>High</b>	Turbines towards the upper height band of this type would appear large in relation to the narrowness and depth of this valley and the intimate scale of this landscape could be diminished. Estate buildings could also be affected by nearby wind turbines. Valued geological features could also be affected by turbines sited on or nearby them or seen in key views to them in the middle part of the valley. <b>High-medium</b>
<b>Sensitivity assessment:</b> <ul style="list-style-type: none"> <li>• Turbines 50-100m: High sensitivity</li> <li>• Turbines &lt;50m: High-medium sensitivity</li> </ul>		



## 8 BROAD FARMED VALLEY – SENSITIVITY ASSESSMENT

### 8.1 Introduction

The *Broad Farmed Valley* AU covers the part of the Spey valley lying between Moray and the Cairngorms National Park. The *Broad Farmed Valley* LCT, which this AU is based on, extends beyond Highland to the south-west of Fochabers in Moray. The *Undulating Wooded Farmland* LCT lies adjacent to this AU within the Cairngorms National Park and includes a more extensive area of woodland and farmland together with the Spey valley. This AU is contained by the *Open Rolling Uplands* to the north/west and the *Open Uplands* (which covers part of the Cromdale Hills) to the south/east.

#### 8.1.1 Operational/consented wind turbines

There are no operational or consented wind turbines located in this AU. The operational Paul's Hill wind farm, and the consented extension to this development, are visible from the A95 on the southern side of the valley in the area of Tormore Distillery close to the Moray boundary.

### 8.2 Summary description and assessment

The Spey forms a broad sinuous channel aligned through open floodplain pastures and contained by steeply rising largely wooded slopes to the north-west and more open and gently undulating farmed slopes to the south-east. The heather-clad slopes of the Cromdale Hills rise steeply beyond these south-eastern farmed slopes with these hills increasing in height and ruggedness to the south. The course of the Spey is traced by native riparian woodlands and well-managed mixed policy woodlands are a feature on side slopes and capping small hills. Large pastures occupy the broad floodplain of the river and are interrupted by occasional angular small shelterwoods. Tributary rivers and burns cut narrow valleys to the Spey. The A95 is aligned on the more gently graded lower slopes on the southern side of the valley with the less busy B9102 closely following the northern banks of the river. The Speyside Way is aligned through this valley. The Spey valley is well-settled with farms and a series of estate lodges associated with the northern banks of the Spey.

This landscape is not designated but is bordered by the *Spey Valley* SLA to the north in Moray and the Cairngorms National Park to the south. The *Drynachan, Lochindorb and Dava Moors* SLA covers the prominent hills of Gheal Charn and Carn an Fhuarain Mhor which form a scenic backdrop to the Spey valley near Advie.

#### 8.2.1 Potential effects of additional turbines in the context of existing development

There is potential for cumulative effects to arise with the Paul's Hill wind farm located in the adjacent *Open Rolling Upland*. Key cumulative issues that may arise are likely to include:

- Further wind farm development extending along the skyline of the uplands containing the Spey Valley with cumulative impacts likely to be increased where turbines are large and/or sited on the outer edges of the uplands in closer proximity to this landscape and to roads and settlement.
- Potential sequential effects on views from the A95.

- An absence of rationale which could occur between operational and consented wind farms comprising larger turbines clearly associated with simple and expansive upland areas and any potential similarly large wind turbines sited within this smaller scale landscape.
- Variations in the type and size of any single or small group of turbines proposed within this landscape.

### 8.2.2 Constraints

- The scenic juxtaposition of the settled pastoral Spey Valley with the steep-sided, rugged and open hills which contain it.
- The consistent presence of small-scale features such as farms and houses, enclosed fields, field trees and woodlands which provide ready scale references.
- The integrity of mixed estate-influenced woodlands which contribute to the character of the Spey valley particularly experienced from the B9102.
- The popularity of the Spey Valley for tourism and the distinct sense of place associated with whisky production
- Potential cumulative effects with operational and consented wind farms in adjacent upland areas.

### 8.2.3 Opportunities

- More gently graded and open southern valley slopes where smaller turbines could be discretely sited to minimise effects on character and views.

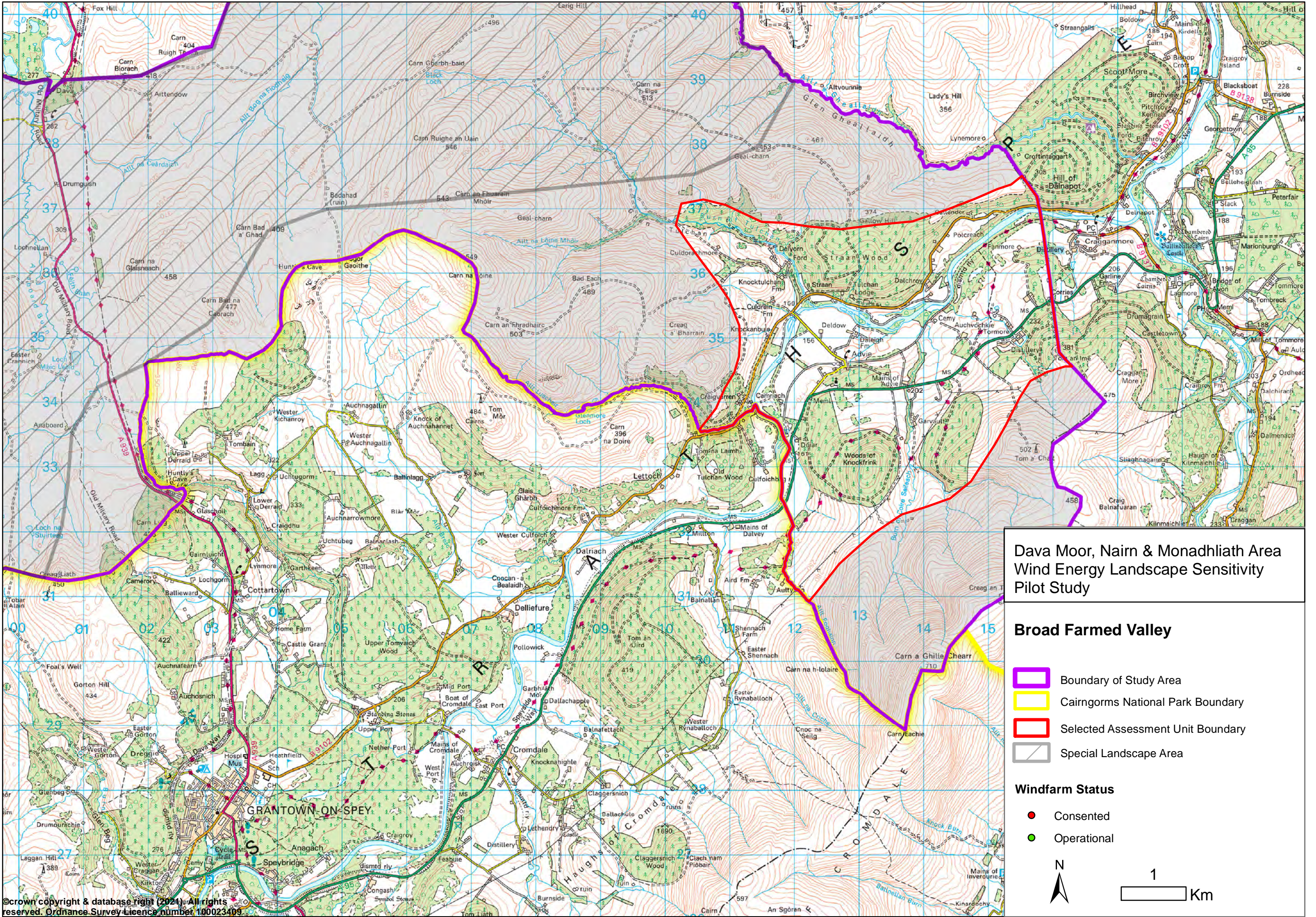
## 8.3 Sensitivity and guidance

There would be a **High** sensitivity to turbines 100-149.9m, a **High-medium** sensitivity to turbines 50-100m and a **Medium** sensitivity for turbines <50m high.

The more gently undulating, open and expansive southern valley sides would be less sensitive to single and small groups of smaller wind turbines. Locating turbines on the upper side of the A95 and using turbines <50m high would minimise intrusion on views from this route and from within the more settled parts of the valley. There would be very limited scope for multiple turbines to be accommodated in these areas. Care should be taken to avoid impacting on views towards the higher and more dramatic Cromdale Hills seen from the B9102 and on the open and largely uncluttered floodplain pastures of the Spey.

This AU is sensitive to wind farm development sited on the outer edges of adjoining upland areas where it may form a prominent feature in views from settlement and the important tourist route of the A95 and could have cumulative effects with other operational wind farms. It will be important to avoid a dominant effect in terms of the size of turbines, their proximity to key views and the extent of development seen on containing skylines.

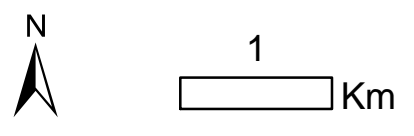




**Dava Moor, Nairn & Monadhliath Area  
Wind Energy Landscape Sensitivity  
Pilot Study**

- Broad Farmed Valley**
- Boundary of Study Area
  - Cairngorms National Park Boundary
  - Selected Assessment Unit Boundary
  - Special Landscape Area

- Windfarm Status**
- Consented
  - Operational







*The Spey meanders through a relatively broad and open farmed floodplain. The south-eastern side of the valley is contained by the high and steep-sided Cromdale Hills.*



*The north-western sides of the valley are largely wooded with extensive birch and pine – this part of the valley has a strong estate-influence.*



*Long views along the valley floor focus on Ben Rinnes - the Speyside Way is aligned on the former railway line seen above*



*The broad valley of the Spey seen from the A95 near Advie – the hills on the southern edge of the Open Rolling Uplands AU form the backdrop to these views*

**Broad Farmed Valley (the Spey Valley) – Detailed sensitivity assessment**

Summary description	Assessment of turbines 100-149.9m	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p><b>Scale</b> The Spey valley is fairly broad but contained by steep slopes, particularly to the north. More gently graded and open southern valley sides have a larger scale although the regular pattern of farms and other buildings, small woodlands and enclosed fields contribute to the generally small to medium scale of this landscape.</p>	<p>This turbine type would dominate the small to medium scale of this landscape including the more open and expansive southern valley sides, the extent of the open flat floodplain of the Spey and the smaller hills which lie on the edges of this valley. The even dispersal of buildings and other small features across this well-settled landscape increases susceptibility. <b>High</b></p>	<p>Turbines of this size would dominate the scale of much of this landscape although the broader and more expansive gently graded southern valley sides would be less susceptible particularly where these are less densely settled to minimise comparisons of scale with smaller features. <b>High-medium</b></p>	<p>This turbine type would still appear very large in relation to the smaller scale of more well-settled and more intricately patterned lower slopes and parts of the valley floor. Less settled, more gently undulating and open slopes would be of reduced susceptibility. <b>Medium</b></p>
<p><b>Landform</b> The Spey loosely meanders across a broader floodplain in the south-west which becomes more restricted by rising valley sides to the north-east. Valley sides are steeper on the northern side where this landscape abuts the <i>Open Rolling Hills</i> and Glen Tulchan cuts a deeply incised narrow channel to the Spey in this area. The southern valley sides are more gently undulating between the flat valley floor and the A95 before rising more steeply to meet the <i>Open Uplands</i> which covers the adjacent Cromdale Hills.</p>	<p>Steeper valley sides and narrow tributary valleys are more susceptible to turbines of this size sited on or nearby these areas. More gently graded southern slopes and the flatter valley floor would be less susceptible although the contrast between open flat floodplain and steep valley sides could be affected particularly by multiple turbines. <b>High-medium</b></p>	<p>Steeper valley sides and narrow tributary valleys are more susceptible to turbines of this size sited on or nearby these areas. More gently graded southern slopes and the flatter valley floor would be less susceptible although the contrast between open flat floodplain and steep valley sides could be affected particularly by multiple turbines. <b>High-medium</b></p>	<p>Steeper valley sides and narrow tributary valleys would still be susceptible. More gently graded southern slopes would be less susceptible and there may be increased scope to site single turbines towards the lower height band of this turbine type closer to the open floodplain without compromising its contrast with steep valley sides. <b>Medium</b></p>
<p><b>Landcover</b> The broader sections of floodplain accommodate large fields with a generally open character. Undulating pastures on southern valley sides are interspersed with small woodlands. Diverse woodlands, dominated by Scots pine and birch, clothe the steeper northern valley sides and these have a distinct estate influence in places in their management and composition.</p>	<p>This turbine type could disrupt and detract from more diverse land cover pattern. The scenic contrast between the open simple valley floor and steep wooded slopes would be affected by turbines located on the floodplain pastures although more extensive pasture on southern valley sides would be less susceptible. <b>Medium</b></p>	<p>This turbine type could disrupt and detract from more diverse land cover pattern. The scenic contrast between the open simple valley floor and steep wooded slopes would be affected by turbines located on the floodplain pastures although more extensive pasture on southern valley sides would be less susceptible. <b>Medium</b></p>	<p>Susceptibility to smaller turbines is reduced as may be increased opportunity to locate them to minimise effects on the perceived openness of the floodplain. More extensive pastures on the southern valley sides would be less susceptible. <b>Medium-low</b></p>



Summary description	Assessment of turbines 100-149.9m	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p><b>Built environment</b> A settled landscape with a distinctive estate architecture of lodges and farms. Tormore distillery is an unusual feature located close to the A95. There are no wind turbines in this AU but the operational Paul's Hill wind farm and its consented extension located in Moray are visible in a dip between more pronounced hills from the A95 at Tormore.</p>	<p>Turbines of this size could affect the setting of settlement and historic built features. Cumulative effects could arise with the Paul's Hill wind farm from the A95, A9102 and from the southern slopes of this valley. <b>High-medium</b></p>	<p>Turbines of this size could affect the setting of settlement and historic built features although there would be increased scope to site turbines towards the lower height band of this turbine type to minimise intrusion. Cumulative effects could arise with the Paul's Hill wind farm from the A95, A9102 and from the southern slopes of this valley. <b>Medium</b></p>	<p>Smaller turbines would appear clearly different in scale to commercial wind farms sited in more expansive upland areas. Cumulative effects and effects on settlement could be reduced by siting this development on less well-settled upper valley sides and away from key views from the A95. <b>Medium-low</b></p>
<p><b>Landscape context</b> This valley is visually contained by adjacent uplands limiting its influence on the wider landscape. However, the scenic composition between the settled, farmed and wooded valley of the Spey with the rugged backdrop of steep-sided and pronounced hills within the <i>Open Rolling Uplands</i> to the north and the <i>Open Uplands</i> to the south is an important characteristic of this landscape.</p>	<p>While the valley landform reduces wide inter-visibility with other landscapes, turbines of this size sited within this AU would be likely to detract from the setting and appreciation of adjacent well-defined hills present within the <i>Open Rolling Uplands</i> and <i>Open Uplands</i>. <b>High</b></p>	<p>Turbines of this size, and particularly those towards the lower height band, could be sited to minimise detractive effects on the setting and appreciation of adjacent well-defined hills present within the <i>Open Rolling Uplands</i> and <i>Open Uplands</i> <b>High-medium</b></p>	<p>This turbine type would have less of an effect in terms of landscape context particularly if sited where the valley is backed by more gently undulating upland areas. <b>Medium-low</b></p>
<p><b>Perceptual aspects</b> Although there is no pronounced sense of naturalness or seclusion associated with this settled and farmed valley, a distinct sense of place is associated with the production of whisky within the Spey valley.</p>	<p>Large turbines could affect the sense of place associated with this valley and its whisky heritage. <b>Medium</b></p>	<p>Large turbines could affect the sense of place associated with this valley and its whisky heritage. <b>Medium</b></p>	<p>Smaller turbines are less likely to affect the 'sense of place' that may be experienced by some people particularly if carefully sited to minimise visibility from key tourist routes and visitor destinations. <b>Low</b></p>
<p><b>Visual aspects</b> Views across the valley from the key tourist route of the A95, and the quieter B9102 aligned on the north side, are intermittent due to screening by woodland. The Speyside Way long distance footpath is aligned through this landscape and the B9102 is popular with cyclists. Distilleries and fishing provide other pursuits for</p>	<p>Turbines of this size would be highly visible in views across and along the valley from roads and settlement, from hill walking routes and from sections of the Speyside Way. The well-settled nature of this valley and the focus it provides for tourism and recreation increases susceptibility. <b>High</b></p>	<p>Turbines of this size would be highly visible in views across and along the valley from roads and settlement, from hill walking routes and from sections of the Speyside Way. The well-settled nature of this valley and the focus it provides for tourism and recreation increases susceptibility. <b>High</b></p>	<p>Turbines towards the upper height band would be much larger than other landscape features and could be prominent if sited within the more settled and traversed lower valley areas. They would be likely to be less intrusive if sited on upper valley sides at the transition with adjacent uplands where rising ground and woodland could reduce visual prominence</p>

Summary description	Assessment of turbines 100-149.9m	Assessment of turbines 50m-100m	Assessment of turbines <50m
visitors. The skylines formed by steep-sided and often wooded small hills bordering the floodplain and the outer edge of the higher adjacent upland landscapes are prominent from the valley floor, settlement and key routes.			in key views from lower roads and settlement. <b>High-medium</b>
<p><b>Landscape value</b></p> <p>This AU is not covered by any landscape designations. It does however lie adjacent to the <i>Spey Valley</i> and <i>Ben Rinnes SLAs</i> designated within Moray, the <i>Drynachan</i>, <i>Lochindorb</i> and <i>Dava Moors SLA</i> in Highland and to the Cairngorms National Park.</p>	<p>Views from the Cromdale Hills within the Cairngorms National Park and from the southern hills within the <i>Drynachan</i>, <i>Lochindorb</i> and <i>Dava Moors SLA</i> and <i>Ben Rinnes SLA</i> in Moray would be affected by turbines sited in this AU. There would be likely to be limited inter-visibility with the <i>Spey Valley SLA</i> within Moray due to screening by landform and woodland. The appreciation of the hills covered by SLA/NP designations and the sense of wildness that can be experienced when walking in them could be affected by turbines of this size.</p> <p><b>Medium</b></p>	<p>Views from the Cromdale Hills within the Cairngorms National Park and from the southern hills within the <i>Drynachan</i>, <i>Lochindorb</i> and <i>Dava Moors SLA</i> and <i>Ben Rinnes SLA</i> in Moray would be affected by turbines sited in this AU. There would be likely to be limited inter-visibility with the <i>Spey Valley SLA</i> within Moray due to screening by landform and woodland. The appreciation of the hills covered by SLA/NP designations and the sense of wildness that can be experienced when walking in them could be affected by turbines of this size.</p> <p><b>Medium</b></p>	<p>Views from adjacent hills which lie in designated landscapes would be unlikely to be significantly affected by smaller turbines sited in this AU.</p> <p><b>Medium-low</b></p>
<p><b>Sensitivity assessment:</b></p> <ul style="list-style-type: none"> <li>• Turbines &gt;100m: High sensitivity</li> <li>• Turbines 50-100m: High-medium sensitivity</li> <li>• Turbines &lt;50m: Medium sensitivity</li> </ul>			



## 9 LOWER FARMED STRATH – SENSITIVITY ASSESSMENT

### 9.1 Introduction

The *Farmed Strath* LCT identified in NatureScot's 2019 landscape character classification extends a considerable distance, covering the narrow and incised valley of the River Nairn in the north-east of the study area and continuing south-west to encompass a broader strath which lies on a rocky platform above Loch Ness. This LCT differs in its character and context and has been sub-divided into the *Lower Farmed Strath* AU and the *Upper Farmed Strath* AU for the purposes of this sensitivity assessment.

The *Lower Farmed Strath* AU is contained by the low ridge of the *Rolling Farmland and Woodland* to the north and the higher rising ground of the *Open Rolling Uplands/Rolling Uplands* to the south.

#### 9.1.1 *Operational/consented wind turbines*

No operational or consented wind turbines are located in this landscape and wind farms located in the wider area (outside the study area to the north) are seen at distance and do not have a strong influence on character and views.

### 9.2 Summary description and assessment

Lower Strathnairn is narrow and strongly contained by steep side slopes. The River Nairn is bordered by riparian woodland in the east with broader arcs of open floodplain more prevalent in the west. The sides of the valley are relatively low although the relief increases to the south where this AU merges with the rising slopes of adjacent upland areas. This is a well-settled landscape with many small farms, crofts and residential buildings accommodated on the valley sides. The settlement of Newlands lies close to the boundary of this AU with the adjacent *Rolling Farmland and Woodland* AU. Some larger farm buildings are present close to the valley floor in the north-east. The valley sides are largely under pasture although some fields are unmanaged and colonised by regenerating birch, gorse and broom. Horse paddocks are a common feature. Woodlands are interspersed with larger pastures on the southern valley sides and mainly comprise commercial coniferous species. More diverse mixed policy woodlands are associated with a more constricted section of the valley between Nairnside House and Daviot and at Kilravock Castle. Transmission lines are aligned within and close-by this AU and roads and the railway line, with its prominent viaduct, add to the busyness of this landscape. Quarrying is evident close to the A9. Views are restricted within the valley but Ben Wyvis forms a focus in long views from the upper southern slopes.

This AU is not covered by any landscape designations. Important cultural heritage features lie within the Culloden Muir Conservation Area which covers part of this AU and the adjacent *Rolling Farmland and Woodlands*.

#### 9.2.1 *Potential effects of additional turbines in the context of existing development*

Cumulative effects with other operational and consented wind energy developments would not occur due to the limited influence of these developments on this AU. More general cumulative issues that may arise with any wind energy development located in this AU could include:

- An absence of rationale which could occur between operational and consented wind farms clearly associated with simple and more expansive upland areas and any potential similarly large wind turbines sited within this smaller scale and more settled landscape.
- Variations in the type and size of any single or small group of turbines proposed within this landscape.

### 9.2.2 Constraints

- The narrowness of this valley and low relief of valley sides, together with the well-settled character of this AU, which increases susceptibility in relation to scale.
- Potential intrusion on cultural heritage features, and particularly those lying within the Culloden Muir Conservation Area which straddles this AU and the adjacent *Rolling Farmland and Woodland* AU.
- The presence of prominent overhead transmission lines on either side of this narrow valley which could increase clutter with any wind turbines sited in this AU.

### 9.2.3 Opportunities

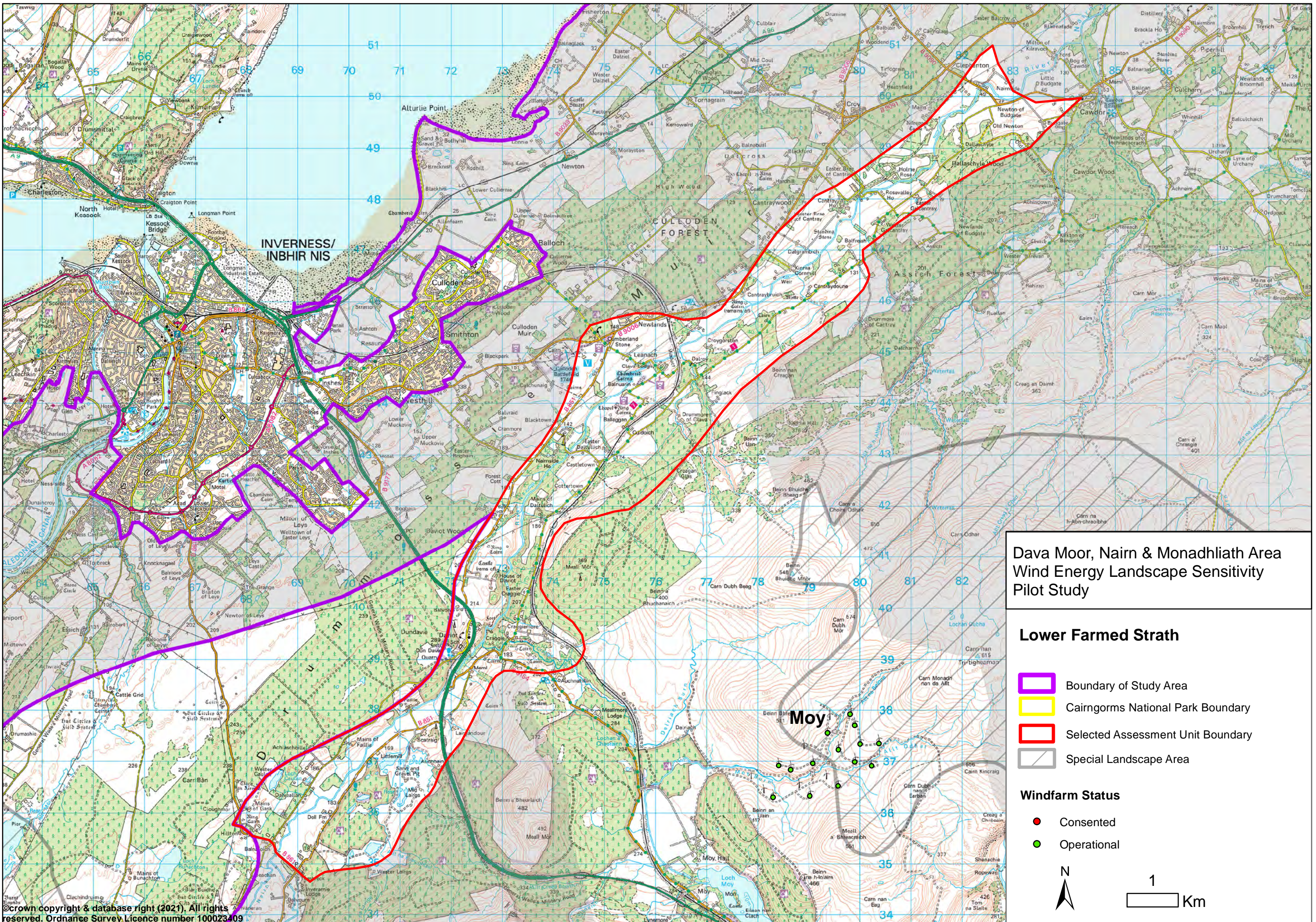
- Upper valley sides on the south-eastern side of the lower strath and at the transition with adjacent upland AUs where smaller wind turbines <50m could be located.

## 9.3 Sensitivity and guidance for development

The small to medium scale of this landscape, which is influenced by the narrowness and low relief of the valley and the presence of many small buildings, increases susceptibility to larger turbines which would form dominant features. Potential cumulative effects with transmission lines and the setting of nationally important cultural heritage features further increase sensitivity. There would be a **High** sensitivity to turbines >50m high. Sensitivity would be **High-medium** for small turbines <50m high.

More gently graded hill slopes at the transition with the *Open Rolling Uplands* and the *Rolling Uplands* AUs could provide opportunities for single and small groups of turbines <50m provided significant intrusion on the setting of cultural heritage features, including the Culloden Battlefield site, is avoided. Care should be taken to avoid exacerbating the already cluttered appearance of parts of this landscape where transmission lines and many buildings are present.

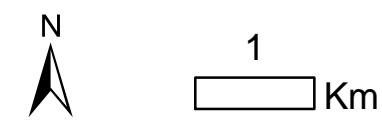




**Dava Moor, Nairn & Monadhliath Area  
Wind Energy Landscape Sensitivity  
Pilot Study**

- Lower Farmed Strath**
- Boundary of Study Area
  - Cairngorms National Park Boundary
  - Selected Assessment Unit Boundary
  - Special Landscape Area

- Windfarm Status**
- Consented
  - Operational







*Rolling farmed and wooded terraces on the southern slopes of Strathnairn, backed by the upland AUs, seen from Culloden Battlefield*



*Woodland spills down slopes and fills the valley floor in places – larger fields are located on the gently graded shoulders of the valley*



*The railway swings in a broad arc through this valley - the railway viaduct crossing the River Nairn is a prominent feature.*



*Broader floodplain pastures west of the A9 with many new residential buildings located on south-facing valley sides*



**Lower Farmed Strath – Detailed sensitivity assessment**

Summary description	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p><b>Scale</b> The narrow extent and limited relief of this incised valley reduces scale especially within the more strongly contained floor and lower slopes. Small woodlands, enclosed farmland and the many residential buildings additionally influence the small scale of much of this landscape. The upper shoulders of the valley are more open and expansive particularly where they border the upland AUs to the south and are less densely settled.</p>	<p>Turbines of this size would dominate the narrow extent of the lower strath and the many small residential buildings which characterise this landscape – more open upper slopes still lie close to the incised and smaller scale part of the valley which would be influenced by larger turbines. <b>High</b></p>	<p>Smaller turbines would appear large in relation to the narrow extent and relief of the floor and lower sides of the more incised strath and the size of the many buildings (as exemplified by the prominence of the existing Beauty-Keith 132kV transmission line which comprises towers of around 25m high). The broader upper slopes lying at the transition with the upland AUs to the south are of lower susceptibility. <b>High-medium</b></p>
<p><b>Landform</b> The valley has a narrow floor and steep sides which rise on upper slopes in a series of gently rolling terraces. It is tightly constricted by very steep slopes, creating more of a gorge, between Nairnside House and Daviot.</p>	<p>The deeply incised and gorge-like sections of this valley have an increased susceptibility to turbines of this size which would detract from their dramatic form. Broader valley sides which are more gently graded would be less susceptible. <b>High-medium</b></p>	<p>This size of turbine would be better able to be sited to avoid significant impact on more complex landform. <b>Medium</b></p>
<p><b>Landcover</b> Small fields pattern steep valley sides with many of these unmanaged and filled with blocks of regenerating broom, gorse and birch. Many fields are used for grazing horses. The southern side of the strath is more wooded with predominantly coniferous plantations straddling the transition between this AU and the adjacent upland AUs. More extensive pasture and moorland is also present in this transitional area. Mixed policy influenced woodlands fill the more constricted western part of the valley and are also associated with Kilravock Castle where they merge with the riparian woodlands which trace the River Nairn.</p>	<p>More diverse riparian and policy influenced woodlands have an increased susceptibility where wind turbines could affect their integrity (if felling was required) or detract from the appreciation of these positive landscape features if located nearby. More extensive pasture and uniform coniferous plantations would be less susceptible. <b>Medium</b></p>	<p>Susceptibility would be reduced for smaller turbines which could be more easily located to minimise effects on the appreciation of more diverse woodlands. Areas of pasture and uniform coniferous plantations would be less susceptible. <b>Medium-low</b></p>
<p><b>Built environment</b> The settlement of Newlands is located on the top of the northern valley sides. A number of cultural heritage features lie within the Culloden Muir Conservation Area in the central part of this AU and include the prominent Nairn viaduct and the Clava Cairns. There are no wind</p>	<p>The setting and appreciation of prominent cultural heritage features and settlement could be affected by larger wind turbines. The variety and density of settlement and modern built infrastructure within this relatively narrow and small AU increases susceptibility in terms of cumulative effects if wind turbines were to be</p>	<p>The setting and appreciation of prominent cultural heritage features and settlement could be affected by nearby wind turbines. The variety and density of built infrastructure within this relatively narrow and small AU increases susceptibility in terms of cumulative effects if wind turbines were to be added to the mix. Visual clutter</p>

Summary description	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p>farms or turbines and views of wind farms in other areas are limited. This landscape is well settled and contains many roads, a railway line and a transmission line aligned on the northern slopes of the valley (towers around 25m high). Another transmission line also crosses the River Nairn at Daltulich and is aligned to the south of this AU on the outer edge of the adjacent uplands (this is proposed to be upgraded to a 400kV line and may comprise new towers 50-60m high). Quarrying and the A9 influence character in the western part of this valley.</p>	<p>added to the mix. Visual clutter and confusion would arise with turbines of this size which could be seen in close juxtaposition with taller features such as transmission line towers. <b>High</b></p>	<p>and confusion would arise with turbines of this size which could be seen in close juxtaposition with taller features such as transmission line towers. <b>High</b></p>
<p><b>Landscape context</b> The valley landform limits inter-visibility with other AUs although it is contained by the <i>Rolling Farmland and Woodlands</i> AU to the north and the <i>Open Rolling Uplands</i> and <i>Rolling Uplands</i> AUs to the south.</p>	<p>The limited relief of this valley would mean that tall turbines sited on side slopes would be visible from more open parts of the <i>Rolling Farmland and Woodlands</i> AU. While susceptibility would be increased in relation to the small to medium scale of the <i>Rolling Farmland and Woodlands</i> AU, the larger scale adjacent upland AUs would be less susceptible. The setting of the Culloden Muir Conservation Area which is partly located in this AU further increases susceptibility. <b>High-medium</b></p>	<p>Susceptibility would be reduced for this size of turbine as, although it may be visible, it would be less dominant in relation to the scale of the <i>Rolling Farmland and Woodlands</i> AU. Adjacent upland AUs would also be less susceptible to this turbine type. The setting of the Culloden Muir Conservation Area remains susceptible. <b>Medium</b></p>
<p><b>Perceptual aspects</b> This is a well-settled landscape with little perception of naturalness or seclusion apart from within the more constricted parts of the valley and/or where more diverse woodlands are present. Built infrastructure and extensive new residential development influence character across much of this AU. The Clava Cairns which lie within the Culloden Muir Conservation Area, may evoke perceptual responses.</p>	<p>Susceptibility is generally reduced in respect of perceptual qualities although relatively small less developed areas with a greater degree of seclusion and/or a strong sense of history would be of increased susceptibility. <b>Medium</b></p>	<p>Susceptibility is generally reduced in respect of perceptual qualities although relatively small less developed areas with a greater degree of seclusion and/or a strong sense of history would be of increased susceptibility. <b>Medium</b></p>
<p><b>Visual aspects</b> This AU is well-settled with many roads and the railway. Views from within this landscape are often short range although roads and settlement on higher slopes have more open views with Ben Wyvis a focus to the north</p>	<p>Visual susceptibility is increased due to the well-settled nature of this landscape. This turbine type would be prominent and could interrupt views to Ben Wyvis (particularly if comprising multiple turbines) and would be visible from surrounding landscapes including the coast</p>	<p>Visual susceptibility is increased due to the well-settled nature of this landscape although there is greater scope to site smaller turbines to minimise effects on key views. <b>High-medium</b></p>



Summary description	Assessment of turbines 50m-100m	Assessment of turbines <50m
and the upland backdrop to the south. This landscape is seen in close views from the railway and particularly from the viaduct. This valley is not prominent in views from adjacent AUs.	and Moray Firth although less visible to the south due to the screening provided by upland AUs. <b>High</b>	
<b>Landscape value</b> This landscape is not covered by any landscape designations although the presence of the Culloden Muir Conservation Area increases value. National Cycle Routes 1 and 7 are aligned through this AU.	Susceptibility is higher to larger turbines which could intrude on nationally important cultural heritage features lying within the Culloden Muir Conservation Area. <b>Medium</b>	While the setting of features within the Culloden Muir Conservation Area would still be susceptible, there is likely to be increased scope to site smaller turbines to minimise these effects. <b>Medium-low</b>
<b>Sensitivity assessment:</b> <ul style="list-style-type: none"> <li>• Turbines &gt;50-100m: High sensitivity</li> <li>• Turbines &lt;50m: High-medium sensitivity</li> </ul>		

## 10 UPPER FARMED STRATH – SENSITIVITY ASSESSMENT

### 10.1 Introduction

The *Farmed Strath* LCT identified in NatureScot's 2019 landscape character classification extends a considerable distance, covering the narrow and incised valley of the River Nairn in the north-east of the study area and continuing south-west to encompass a broader strath which lies on a rocky platform above Loch Ness. This LCT differs in its character and context and has been sub-divided into the *Lower Farmed Strath* AU and the *Upper Farmed Strath* AU for the purposes of this sensitivity assessment.

The *Upper Farmed Strath* is strongly contained by the *Rolling Uplands* AU on its southern side and by the *Farmed and Wooded Foothills* which lie close to Loch Ness (and outside the study area).

#### 10.1.1 Operational/consented wind turbines

No operational or consented wind farms are located in this AU although two small, operational single turbines are present. The Farr, Dunmaglass/Aberarder and Corriegarth operational wind farms, located in the adjacent *Rolling Uplands* (Monadhliath) AU, are visible from the strath floor in parts of this landscape. The Bhlaraidh wind farm, located north of Invermoriston, is also visible from the more open and elevated south-western part of this AU in the area of Loch Tarff and the Suidhe viewpoint. These wind farms are sufficiently close to have a strong influence on views from this landscape.

### 10.2 Summary description and assessment

The strath floor is broad but irregular in form as it is broken by numerous small rocky stand-alone hills and knolls. The smaller and often pronounced craggy hills which lie on the outer edge of the Monadhliath uplands and the hills within the adjacent *Farmed and Wooded Hills* LCT to the north-west additionally contribute to the complexity of this landscape. Water courses fall through incised valleys cut into the Monadhliath uplands, creating alluvial fans at the foot of steep slopes which are utilised for farming. The River Nairn forms one of these water courses with its source lying in the hills near Aberarder House. Small settlements align the B851 and B862 roads which are aligned through this strath and include Farr, Errogie and Whitebridge. Individual farms, estate houses and residential buildings are dispersed with these generally being associated with lower hill slopes set above the strath floor. Mixed woodlands cover lower slopes, extending onto wetter parts of the strath floor in places. This AU continues south-west beyond the River Nairn, to include Loch Mhor and the upper River Foyers, tapering to the high point of the B862 near the Suidhe viewpoint.

The *Loch Ness and Duntelchaig* SLA covers small parts of this AU south and east of Loch Ruthven and south-east of Loch Knockie. The area around Loch Ruthven, including part of this AU, is also valued for its many prehistoric features.



### 10.2.1 *Potential effects of additional turbines in the context of existing development*

There is potential for cumulative effects to arise with operational and consented wind energy developments located in the adjacent *Rolling Uplands* (the Monadhliath) AU. Key cumulative issues that may arise are likely to include:

- Further wind farm development extending along the skyline of the Monadhliath uplands with cumulative impacts on character and views from the *Upper Farmed Strath* likely to be increased where turbines are substantially larger than those in operational wind farms, where the horizontal spread of development is significantly extended and/or where turbines are sited on or closer to the more pronounced steep-sided craggy hills located on the outer edge of these uplands.
- Potential sequential effects on views from the B851 and B862.
- An absence of rationale which could occur between operational wind farms clearly associated with the simple and more expansive interior of the Monadhliath uplands and any similarly large wind turbines sited within this smaller scale and more settled landscape.
- Variations in the type and size of any single or small group of turbines proposed within this landscape.

### 10.2.2 *Constraints*

- The scenic backdrop provided to this strath by the steep, craggy and pronounced smaller hills which lie on the edge of the Monadhliath uplands.
- The location of this landscape close to Loch Ness and the potential for larger turbines to be visible from the open north-western slopes above the loch, for example from the popular vantage point of Meall Fuar-mhonaidh.
- The presence of the *Loch Ness and Duntelchaig* SLA, both within and outside this AU, where the intricate landscape mosaic which is a key characteristic of this designated landscape could be particularly affected by larger and multiple wind turbines.
- The small to medium scale of this landscape which is influenced by settlement and farmland but also by the prominent but small rocky hills and knolls which outcrop on the strath floor.
- Potential cumulative effects with operational wind farms sited in the adjacent Monadhliath uplands but also with the plethora of 'woodpole' transmission lines present in parts of this landscape.

### 10.2.3 *Opportunities*

- Occasional smoother and more gently graded hill slopes on the north-western sides of this AU where single and small groups of turbines <50m could be accommodated to avoid impacts on more dramatic landform and cumulative effects with operational and consented wind farms sited in the Monadhliath uplands.

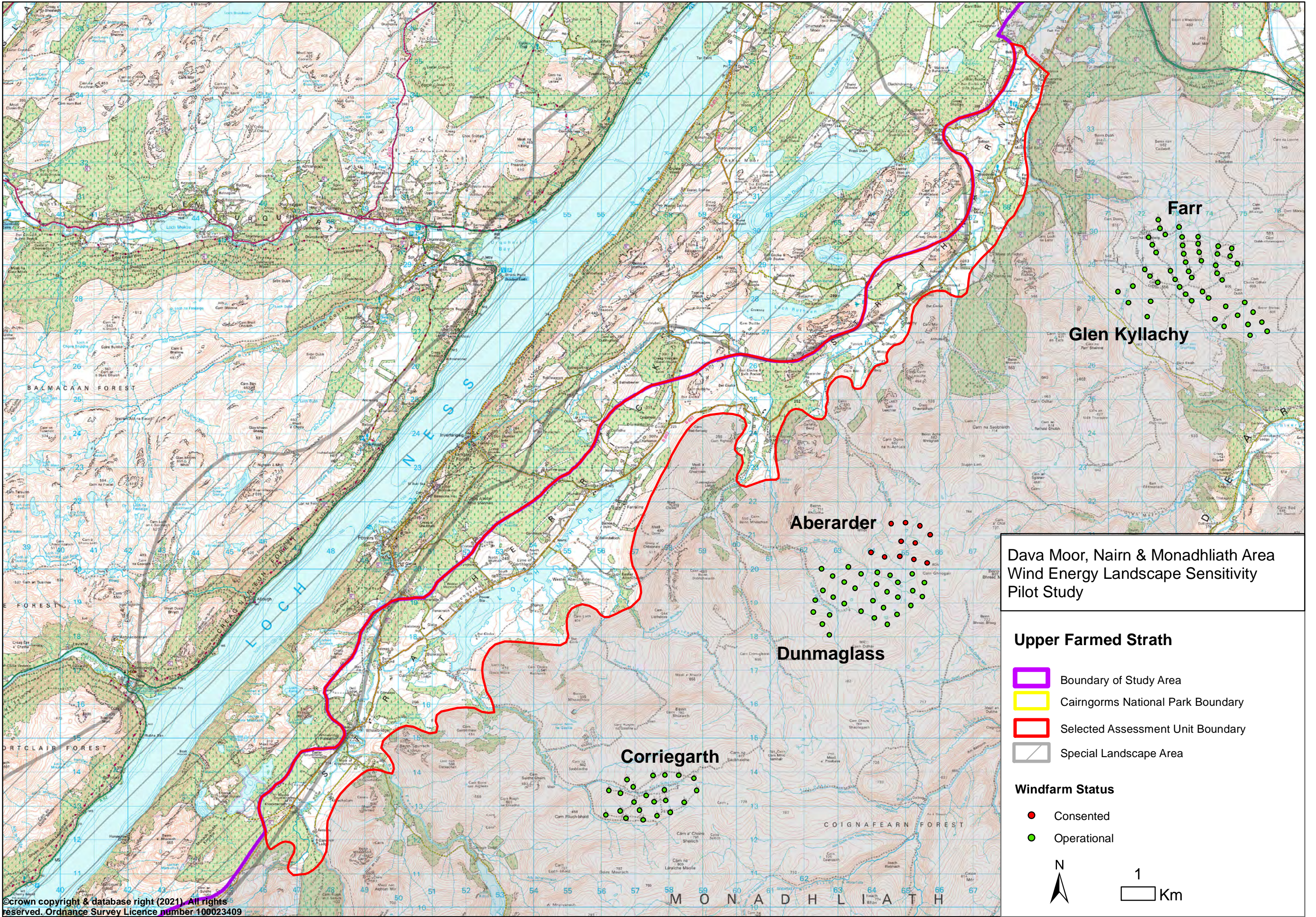
## 10.3 **Sensitivity and guidance for development**

The small to medium scale of this AU, which is influenced by the limited relief of small outcrop hills and by dispersed settlement and farmland, together with cumulative effects with wind farm development located in the adjacent *Rolling Uplands* (Monadhliath) AU, are key factors increasing susceptibility to larger wind turbines. There would be a **High**

sensitivity to turbines >50m high. Sensitivity would be **High-medium** for smaller turbines <50m high.

Turbines <50m would fit better with the scale of this landscape and could relate to more gently graded hill slopes set back from the more intricately patterned settled strath floor. Turbines should not be located on or near the steep-sided and craggy hills which form prominent stand-alone features on the strath floor or close to similarly pronounced hills lying on the edges of the Monadhliath uplands. Occasional smoother hill slopes, particularly those lying on the north-western edges of the AU (and therefore further away from operational wind farms in the Monadhliath uplands), provide opportunities for this size of turbine to be more successfully accommodated. Turbines should be sited to avoid significantly impacting on the setting of Loch Ruthven which lies close to this AU. Care should be taken to avoid exacerbating the already cluttered appearance of parts of this landscape where many newly constructed transmission lines are intrusive on the strath floor and lower side slopes.

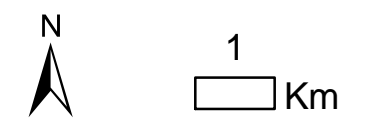




**Dava Moor, Nairn & Monadhliath Area  
Wind Energy Landscape Sensitivity  
Pilot Study**

- Upper Farmed Strath**
- Boundary of Study Area
  - Cairngorms National Park Boundary
  - Selected Assessment Unit Boundary
  - Special Landscape Area

- Windfarm Status**
- Consented
  - Operational







*Water courses fall through incised valleys from the adjacent Monadhliath uplands. The smaller and more pronounced craggy hills lying on the edge of the Monadhliath provide a scenic backdrop to this strath.*



*Rocky knolls and hills punctuate the flatter strath floor – these hills are deceptively small and larger wind turbines would dominate their scale.*



*Operational wind farms located in the adjacent Monadhliath uplands are generally visible on lower dipped sections of the skyline and this, together with the size of older turbines, reduces their prominence in views from settlement and roads on the strath floor.*



*Loch Mhor is a key feature in the south-western part of this strath. The diversity of this landscape is influenced by the irregularity of the landform but also the intricate landcover pattern of farmland, small woodlands and areas of moorland and bog.*



**Upper Farmed Strath – Detailed sensitivity assessment**

Summary description	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p><b>Scale</b> The strath is generally broad but not expansive. Steep-sided outcrop hills (which lie in this AU and the adjacent <i>Farmed and Wooded Foothills</i> LCT) although appearing high and dramatic, are of relatively low relief. Settlement is sparse but widely dispersed and this, together with small woodlands, enclosed farmland and the outcrop hills, gives a small to medium scale. Occasional more open lower hill slopes are more expansive.</p>	<p>Turbines of this size would dominate the low relief of the rocky outcrop hills and the general scale of this settled landscape. <b>High</b></p>	<p>While susceptibility would reduce, turbines of this size would still appear large in relation to the smaller rocky outcrop hills and if sited close to buildings, small woodlands and trees. Broader sections of more open strath floor and more expansive lower hill slopes would be of reduced susceptibility to turbines &gt;25m <b>High-medium</b></p>
<p><b>Landform</b> The Nairn and Foyers rivers meander across a broad floodplain which is punctuated by prominent small rocky knolls and craggy hills. The edge of the Monadhliath uplands which contain the strath to the east is characterised by a series of pronounced 'foothills' and numerous tributary steep-sided glens. More gently graded lower slopes occur in a few parts of this landscape.</p>	<p>Larger wind turbines would detract from the complex landform of rocky outcrop hills and pronounced hills on the edges of the Monadhliath even if located on more gently graded lower hill slopes or parts of the simpler strath floor. The deeply incised glens are also of increased susceptibility although there would be scope to locate single and small groups of turbines of this size away from such features. <b>High</b></p>	<p>This turbine type, which would be more likely to comprise single and small groups of turbines, would be better able to be sited to avoid significant impact on more complex landform although pronounced craggy-topped hills would be susceptible to turbines sited on or nearby them. <b>High-medium</b></p>
<p><b>Landcover</b> Wetlands, lochs, smooth fields of arable and pasture interspersed with broadleaved woodlands and rough pasture and moorland on upper slopes contribute to the diversity of this landscape. Some larger coniferous plantations extend on lower slopes and on wetter and higher parts of the strath floor.</p>	<p>Any new proposals of this size would be likely to comprise single and small groups of turbines which could be sited to avoid impacting on more intricate and diversely patterned landcover. More extensive areas of coniferous plantation or rough grassland would be less susceptible to turbines of this size. <b>Medium</b></p>	<p>Any new proposals of this size would be likely to comprise single and small groups of turbines which could be accommodated to minimise effects on more diverse and intricately patterned areas of landcover. <b>Medium-low</b></p>
<p><b>Built environment</b> A number of small settlements are present along the B862 and B851 including Farr, East Croachy, Errogie and Whitebridge. Dispersed small farms and houses are widespread, generally sited on raised ground above the flat strath floor. There are many estate-influenced buildings and prehistoric features such as duns and hut circles. No wind farms are located in this AU although</p>	<p>Turbines of this size could affect the setting of settlement and historic built features although there would be increased scope to site turbines towards the lower height band of this turbine type to minimise intrusion. Cumulative effects could arise with operational wind farms visible in the adjacent <i>Rolling Uplands</i> (Monadhliath) and with transmission lines. <b>High-medium</b></p>	<p>Smaller turbines would appear clearly different in scale to commercial wind farms sited in more expansive upland areas. Cumulative effects (with operational wind farms and transmission lines) and effects on settlement could be reduced by siting turbines on less well-settled north-western lower valley sides. <b>Medium</b></p>

Summary description	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p>two small single turbines are present near East Croachy and on higher slopes at the transition with the <i>Rolling Uplands</i> AU. Many new transmission lines are present on the open strath floor and lower valley sides. The Farr, Dunmaglass/Aberarder and Corriegarth operational wind farms located in the adjacent Rolling Uplands (Monadhliath) are visible from roads and settlement on the strath floor. These are usually seen on lower 'dipped' sections of the upland skyline which reduces their prominence.</p>		
<p><b>Landscape context</b> This landscape comprises a narrow upland strath strongly contained by the <i>Rolling Uplands</i> of the Monadhliath to the south-east. The undulating rocky platform of land which borders this AU to the north-west (the <i>Farmed and Wooded Foothills</i> LCT) provides visual containment in longer views although the lochs and rocky hills of this LCT are visible from this strath and the two landscapes share similar key characteristics.</p>	<p>The setting of lochs and rocky hills located in the adjacent <i>Farmed and Wooded Foothills</i> and the more pronounced hills and deep glens on the edges of the Monadhliath uplands increases susceptibility to turbines of this size located in many parts of this AU. <b>High</b></p>	<p>Susceptibility would generally reduce in relation to smaller turbines where there would be increased scope to site single and very small groups of turbines to avoid impacting on the setting of features in adjacent landscapes. The upper slopes and tops of craggy outcrop hills which border the <i>Farmed and Wooded Foothills</i> to the NW would however be particularly susceptible due to the setting these hills provide to Loch Ruthven. <b>High-medium</b></p>
<p><b>Perceptual aspects</b> This landscape can feel secluded because of the sparse settlement and limited access. The rugged landform and diverse landcover also increases the sense of naturalness although wind farms visible in adjacent upland areas and the clutter of woodpole transmission lines in places reduces the perception of a less modified landscape.</p>	<p>Susceptibility is increased to larger (and particularly multiple) turbines which could diminish the perception of seclusion and naturalness in this landscape. <b>Medium</b></p>	<p>Smaller turbines would tend to form incidental features confined in their extent and degree of intrusion and usually associated with settlement. They would be unlikely to significantly diminish the perception of seclusion and naturalness. <b>Medium-low</b></p>
<p><b>Visual aspects</b> Views from within this landscape area are often limited and intermittent due to the enclosure created by landform and woodland. Long views south-westwards along the strath from the B851 and B862 reveal an attractive layering of the smaller hills in this AU, the pronounced hills on the edge of the Monadhliath and</p>	<p>Large turbines would interrupt the distinct layered effect of successive outcrop hills and larger hill ranges seen in long views from within this strath. While the visual containment of this AU reduces susceptibility in terms of views from the south, turbines closer to 100m high sited on higher ground would be likely to be seen from vantage points NW of Loch Ness and could significantly</p>	<p>Susceptibility is reduced in terms of single and very small groups of smaller turbines which would be generally less intrusive in key views. Prominent hills tops and the open strath floors are of increased susceptibility. <b>Medium</b></p>



Summary description	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p>the complex and rugged mountainous profiles of the Glendoe Forest area and beyond. This landscape is screened from the south by the Monadhliath and there are few popular walking routes in the part of these uplands lying close to this AU. Views from Loch Ness and its largely wooded shores are restricted although occasional vantage points such as Meall Fuar-mhonaidh on the NW side of Loch Ness offer views towards this AU.</p>	<p>detract from views of the dramatic trough of the Great Glen. <b>High</b></p>	
<p><b>Landscape value</b>  The <i>Loch Ness and Duntelchaig</i> SLA covers small parts of this AU close to Loch Ruthven and Loch Knockie. Key qualities of this SLA include the intricate landscape mosaic of the undulating moorland plateau, woodlands and lochs and its contrast with the Great Glen and its rich prehistoric heritage.</p>	<p>Larger turbines could adversely affect the intricate landscape mosaic of the SLA and the setting of the many prehistoric features characteristic of this landscape. Turbines sited in this AU would lie closer to the Great Glen and could potentially affect its setting.  <b>High-medium</b></p>	<p>The key qualities of the SLA would be less susceptible to smaller turbines, which are more likely to comprise single and very small groups of turbines.  <b>Medium</b></p>
<p><b>Sensitivity assessment</b></p> <ul style="list-style-type: none"> <li>• Turbines &gt;50-100m: High sensitivity</li> <li>• Turbines &lt;50: High-medium sensitivity</li> </ul>		

## 11 STRATH IN ROLLING UPLANDS (STRATHDEARN) – SENSITIVITY ASSESSMENT

### 11.1 Introduction

Strathdearn cuts through the Monadhliath uplands (classified as the *Rolling Uplands* AU in this study). The strath encompasses the broader valley containing Loch Moy in the north and extends south-west to Coignafearn where the public road through the strath ends and the valley floor increasingly narrows, pinched by the steep-sided and high hills of the Monadhliath.

#### 11.1.1 *Operational/consented wind farms*

The operational Moy wind farm is partially located in this AU and the adjoining *Rolling Uplands* AU and is seen spilling down the valley of the Moy burn in views from the A9 near Daviot and from the railway and B9154 near Loch Moy. The operational Tom nan Clach wind farm is located in the *Open Rolling Uplands* AU and is principally visible from the railway line south of Loch Moy. The Farr wind farm, also located in the *Rolling Uplands* AU, is briefly visible, with blade tips being visible in the main, from sections of the A9 where it is aligned through Strathdearn. The under-construction Glen Kyllachy wind farm will be more intrusive in views than the Farr wind farm from parts of this AU including from the A9.

### 11.2 Summary description and assessment

Strathdearn forms a relatively broad and open valley in its northern reaches where Loch Moy and areas of improved farmland, enclosed by a distinctive grid pattern of mature broadleaves, wooded policies and wetland are present on the valley floor. The River Findhorn continues the strath south of Loch Moy, weaving across a narrow floodplain which is contained by increasingly steep-sided slopes as it penetrates deeper into the high Monadhliath uplands. The valley floor accommodates pastures with rougher grazing and heather dominated moorland extending onto valley sides. Coniferous plantations are present close to Glen Kyllachy and broadleaved woodlands cover steep side slopes in places. The valley is accessed by a narrow single-track dead-end road which terminates at Coignafearn. The A9 and railway are aligned through the northern part of Strathdearn, south of the small settlement of Tomatin to Strathnairn. The B9154 provides access to the Moy area. Settlement is dispersed along the strath, comprising farms, cottages and occasional estate lodges. The strath becomes more secluded and less developed in its upper reaches where the character of the adjacent Monadhliath uplands is more dominant.

The *Drynachan, Dava Moor and Lochindorb Moors* SLA covers the *Upland Valley* AU which lies adjacent to Strathdearn, encompassing a lower section of the Findhorn valley and surrounding uplands. The *Monadhliath* WLA lies close to the southern edge of the upper strath.

#### 11.2.1 *Potential effects of additional turbines in the context of existing development*

There is potential for cumulative landscape and visual effects to arise with operational and consented wind farms located in the *Open Rolling Upland* AU. Key cumulative issues that may arise are likely to include:



- An absence of rationale which could occur between operational and consented wind farms clearly associated with simple and more expansive upland areas and any potential similarly large wind turbines sited within this smaller scale valley.
- Increases in the extent of turbine development and the size of turbines seen in conjunction with operational wind farms on the prominent skyline of hills which contain the valley.
- Variations in the type and size of any single or small group of turbines proposed within this landscape.

#### 11.2.2 *Constraints*

- The small to medium scale of this narrow, strongly contained and settled strath.
- The distinct sense of seclusion and naturalness that can be experienced in the upper reaches of the strath.
- Steep side slopes and occasional craggy-topped and more pronounced hills lying on the edges of the strath.
- Policy features associated with the Moy Estate including the distinctive framework of broadleaved trees enclosing farmland, ornamental plantings and Loch Moy with its island castle.
- The setting of the small settlement of Tomatin.
- Cumulative effects with operational wind farm developments sited in the adjacent *Open Rolling Uplands* and *Rolling Uplands AUs*.

#### 11.2.3 *Opportunities*

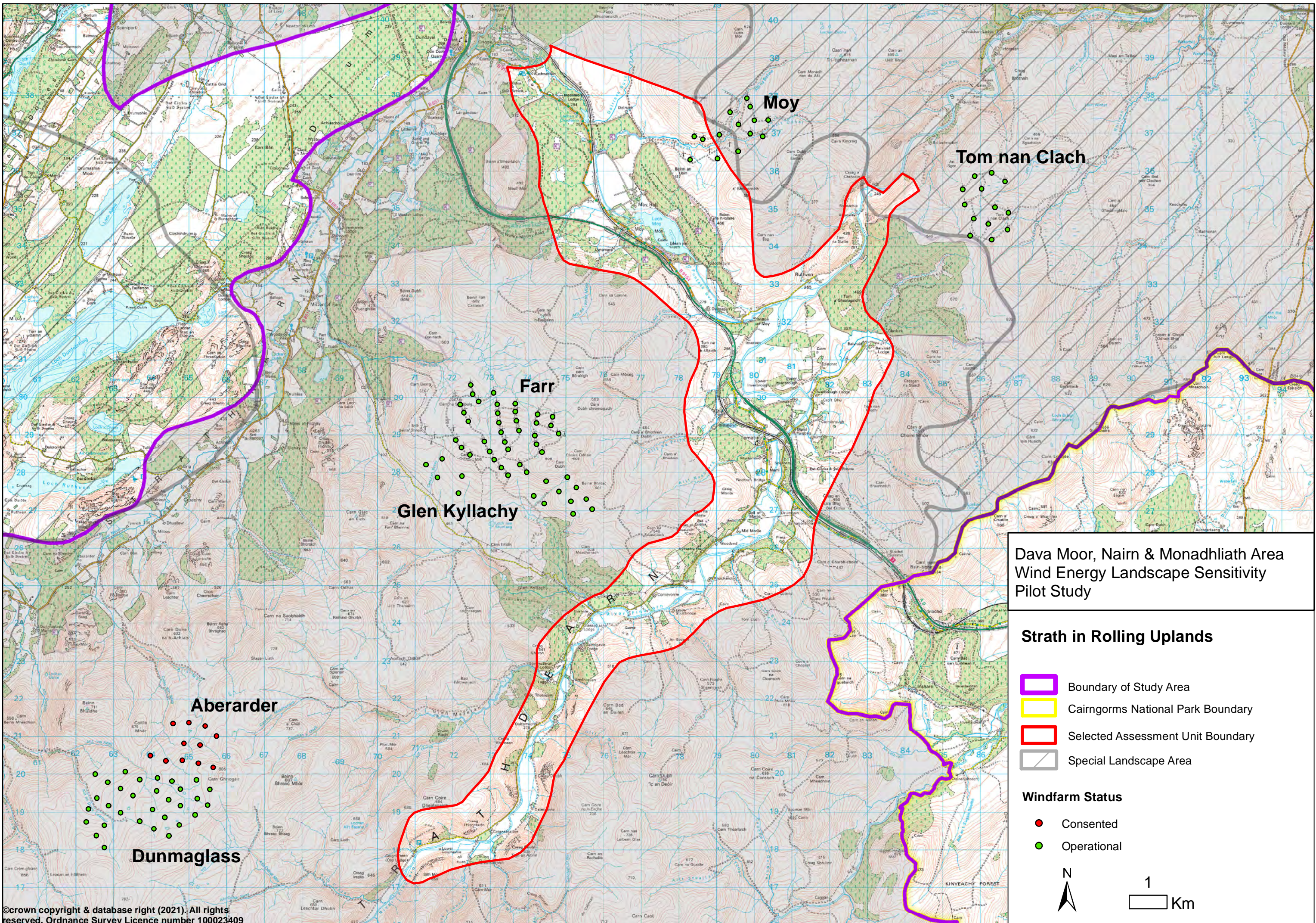
- More gently graded lower valley sides and the edges of broader areas of floodplain pasture where single small turbines <30m could potentially be sited

### 11.3 **Sensitivity and guidance**

The small to medium scale of this narrow strath, which is additionally influenced by the presence of settlement, and the strong sense of seclusion and naturalness that can be experienced in the upper reaches of the Findhorn, increase susceptibility to larger wind turbines. The Monadhliath WLA lies close to the upper strath and policy features around Moy are also of value. There would be a **High** sensitivity to turbines >50m high. Sensitivity would be **High-medium** for turbines <50m.

Small turbines could be located on gently graded slopes at the edges of farmland. Turbines <30m could be visually associated with buildings or small settlements to reduce clutter. Individual turbines are likely to be easier to accommodate than groups. Turbines sited in these areas should avoid intruding into the centre of floodplain pastures. Any small turbines sited in the Moy area should be set well away from distinctive policy plantings and should also be sited to avoid cumulative effects with operational wind farms sited close-by.





**Dava Moor, Nairn & Monadhliath Area  
Wind Energy Landscape Sensitivity  
Pilot Study**

**Strath in Rolling Uplands**

- Boundary of Study Area
- Cairngorms National Park Boundary
- Selected Assessment Unit Boundary
- Special Landscape Area

**Windfarm Status**

- Consented
- Operational

N

1 Km





*The Moy wind farm is a prominent feature seen from the railway and A9 which are aligned through the lower part of Strathdearn. Distinctive tree belts around large, improved fields form part of the Moy Estate policies.*



*The strath floor is broad in the Moy area but becomes narrower as the valley cuts into the high Monadhliath uplands. Low valley sides are often wooded with a mix of broadleaves and coniferous plantation*



*The River Findhorn weaves through the strath – a public road terminates at Coignafearn where the strath floor becomes confined by the steep-sided Monadhliath uplands*



*South-west of Tomatin the uplands which contain the strath are higher with occasional more pronounced hills lying on the upland edge.*

**Strath in Rolling Uplands (Strathdearn) – Detailed sensitivity assessment**

Summary description	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p><b>Scale</b> The strath is fairly broad close to Moy but significantly narrows in the upper reaches of the Findhorn where steep-sided and higher hills also increase containment. Small buildings and enclosed farmland and woodland further reduce scale.</p>	<p>Turbines of this size would dominate the narrow extent of much of this strath. While the width of the strath is broader in the Moy area, the presence of settlement, woodlands and individual trees provides ready scale references. <b>High</b></p>	<p>While susceptibility to smaller turbines would be reduced they would still appear large in relation to buildings and individual trees. Broader and more open sections of strath floor would be of reduced susceptibility in terms of scale. <b>High-medium</b></p>
<p><b>Landform</b> The flat floor of the strath varies in width and is contained by lower relief hills in the north around Moy with relief increasing in the upper strath. Loch Moy with its island is a distinctive feature in the north. The strath sides are steeper with occasional scree slopes and craggy tops present south of Glen Kyllachy.</p>	<p>The contrast between the smooth, simple floodplain and rugged side slopes in the upper strath increases susceptibility to turbines of this size which would detract from this feature. Steep side slopes would be highly susceptible to intrusive engineering to accommodate turbines and access. Loch Moy is also susceptible to turbines of this size that could detract from its setting although susceptibility is generally reduced in the northern part of the strath around Moy as landform is generally less dramatic. <b>High-medium</b></p>	<p>The contrast between the smooth, simple floodplain and rugged side slopes in the upper strath increases susceptibility to turbines of this size which would detract from this feature. Loch Moy is also susceptible to turbines of this size that could detract from its setting although susceptibility is generally reduced in the northern part of the strath around Moy as landform is generally less dramatic. <b>High-medium</b></p>
<p><b>Landcover</b> The strath floor in the Moy area features a strong pattern of improved fields enclosed by a grid of mature broadleaved trees. Mixed policy woodland and parkland is also present as well as more uniform coniferous plantation and wet pasture. Small pastures occupy the narrow valley floor of the Findhorn in the upper reaches of the strath. Side slopes in the upper strath are predominantly covered with grass and heather moorland although coniferous plantation is present at Glen Kyllachy with small woodlands on lower slopes.</p>	<p>Ornamental woodlands, parkland and mature individual trees features in the Moy area are of increased susceptibility although more uniform coniferous plantation and simple grass/heather moorland and wet pasture would be less susceptible. <b>Medium</b></p>	<p>Ornamental woodlands, parkland and mature individual trees in the Moy area are of increased susceptibility although more uniform coniferous plantation and simple grass/heather moorland and wet pasture would be less susceptible. <b>Medium</b></p>
<p><b>Built environment</b> The strath is more settled in the north at Tomatin and Moy. The A9, B9154 and railway in this area emphasise the more developed character of this part of the strath. South of Tomatin, the strath is sparsely settled with widely dispersed estate lodges, small farms and cottages. No wind farms are located in this AU although</p>	<p>These larger turbines could detract from the character and setting of distinctive estate buildings. The character of narrow roads and tracks could be compromised to accommodate large vehicles required to transport this turbine type. Significant cumulative effects would be likely to arise with the Moy and Tom nan Clach wind farms in the northern part of this AU due to the</p>	<p>The character and setting of buildings and roads would be less susceptible to smaller turbines &lt;25m; they would also be clearly different from the larger turbines within the Moy and Tom nan Clach wind farms thereby reducing cumulative effects. <b>High-medium</b></p>



Summary description	Assessment of turbines 50m-100m	Assessment of turbines <50m
the Moy wind farm is a prominent feature located close to the Moy Burn in the northern part of this AU and the operational Tom na Clach wind farm is also visible.	differences between siting rationale and likely increase clutter of inter-visible turbines in key views. <b>High</b>	
<b>Landscape context</b> Strathdearn cuts a long but largely narrow trough extending deep into the <i>Rolling Uplands</i> of the Monadhliath. Intervisibility with other AUs is limited because of the strong containment of the strath.	Susceptibility is generally reduced in terms of this criterion. Turbines of this size sited on valley sides may be visible from parts of the <i>Rolling Uplands</i> and could affect the wild character of parts of this landscape. <b>Medium</b>	This turbine type would have minimal effects on adjacent landscapes unless sited on upper valley sides <b>Medium-low</b>
<b>Perceptual aspects</b> A strong sense of seclusion and naturalness is associated with the sparsely settled upper reaches of the strath. The northern part of the strath is more developed with major communications and more settlement present.	Susceptibility would be greater in the more remote upper reaches of the strath but reduced in the more developed northern area. <b>Medium</b>	Susceptibility would be greater in the more remote upper reaches of the strath but reduced in the more developed northern area. <b>Medium</b>
<b>Visual aspects</b> Views from within this strath are confined by the containment provided by surrounding uplands. Woodlands in the Moy area also screen views from sections of the A9, B9154 and railway which are aligned through the northern part of this AU. The strath is not well-frequented in its upper reaches although a promoted walk starts at Coignafearn and traverses part of the adjacent <i>Monadhliath</i> WLA.	Turbines of this size located in the narrower confines of the upper strath would be likely to dominate views from the minor road and promoted walking route. While greater numbers of people would be likely to see turbines sited in the northern part of this AU, the broader extent of the strath and intermittent screening by woodland could reduce a dominant effect although the proximity of the larger turbines within the Moy wind farm increases susceptibility. <b>High</b>	Turbines towards the upper height band of this type would still be likely to form a prominent feature in views within the narrower upper strath. the broader extent of the strath in the north, intermittent screening by woodland and the presence of other infrastructure reduces susceptibility. Turbines <25m high would be less prominent. <b>High-medium</b>
<b>Landscape value</b> The <i>Monadhliath</i> WLA lies close to the upper reaches of the strath. Remnant buildings and structures associated with the Moy estate are listed and planted policies in this area are also of cultural interest.	The qualities of wildness associated with the <i>Monadhliath</i> WLA could be affected by turbines of this size located on upper valley sides and ridgelines. Smaller turbines located on lower slopes and the strath floor would be unlikely to affect these qualities. <b>Medium</b>	Smaller turbines would be likely to have less of an effect on the adjacent WLA. <b>Medium-low</b>
<b>Sensitivity assessment</b> <ul style="list-style-type: none"> <li>• Turbines &gt;50-100m: High sensitivity</li> <li>• Turbines &lt;50: High-medium sensitivity</li> </ul>		

## **12 ROLLING FARMLAND AND WOODLAND – SENSITIVITY ASSESSMENT**

### **12.1 Introduction**

This landscape forms a long, low ridge set above the *Coastal Farmland* and the Inner Moray Firth, wrapping around the hill slopes on the southern side of Inverness. This landscape is bordered by the *Upper Farmed Strath* to the south-east.

#### **12.1.1 Operational/consented wind farms**

There are no wind energy developments located in this AU. Operational wind farms lying to the north of the study area and to the east of Ben Wyvis are theoretically visible but do not have a strong influence on character or views.

### **12.2 Summary description and assessment**

The elevation of this landscape varies greatly, rising from the north-east, where it comprises a relatively low gently rolling ridge, to the south-west where it forms steeply graded north-facing slopes which lie at nearly 300m AOD. Landform is generally simpler in the south-west with more uniform slopes while in the north-east the subtly rolling topography creates a series of ridges and dips with some of these filled with small water bodies. Occasional pockets of complex knolly landform are associated with small valleys in this lower part of the AU. The unifying characteristic of this landscape is its high proportion of woodland cover. This mainly comprises managed coniferous plantation which is interspersed with small areas of farmland. Some more extensive and open areas of rough grazing and moorland occur on an elevated platform high above Inverness. This is a well-settled landscape where the expansion of Inverness on southern slopes and in the Westhill area continues to reduce the extent of the AU. A complex network of roads, including the A9, and the railway are also aligned in the western part of this landscape. The north-eastern part of this landscape is generally less developed.

This AU is not covered by any landscape designations although the Culloden Muir Conservation Area and other archaeological sites contribute to the value associated with this landscape

#### **12.2.1 Potential effects of additional turbines in the context of existing development**

Operational and consented wind farms do not have a strong influence on this AU. Cumulative issues that may arise with any wind energy development located in this landscape could include:

- An absence of rationale which could occur between operational and consented wind farms clearly associated with simple and more expansive upland areas and any potential similarly large wind turbines sited within this smaller scale and more settled landscape.
- Variations in the type and size of any single or small group of turbines proposed within this landscape.
- Sequential impacts on views from the A9 and railway where any development located in this AU could be seen with the operational Moy and Tom nan Clach wind farms.



### 12.2.2 Constraints

- The small-medium scale of the north-eastern part of this AU which is influenced by the low relief and more complex landform
- The well-settled character of this landscape where small residential buildings and the many settlements could be dominated by larger turbines
- Views from the A9 and railway on the approach to Inverness where the Moray Firth and the mountains to the north are revealed at the top of the long slopes of this AU.
- The setting of the Caledonian Canal and the Culloden Muir Conservation Area

### 12.2.3 Opportunities

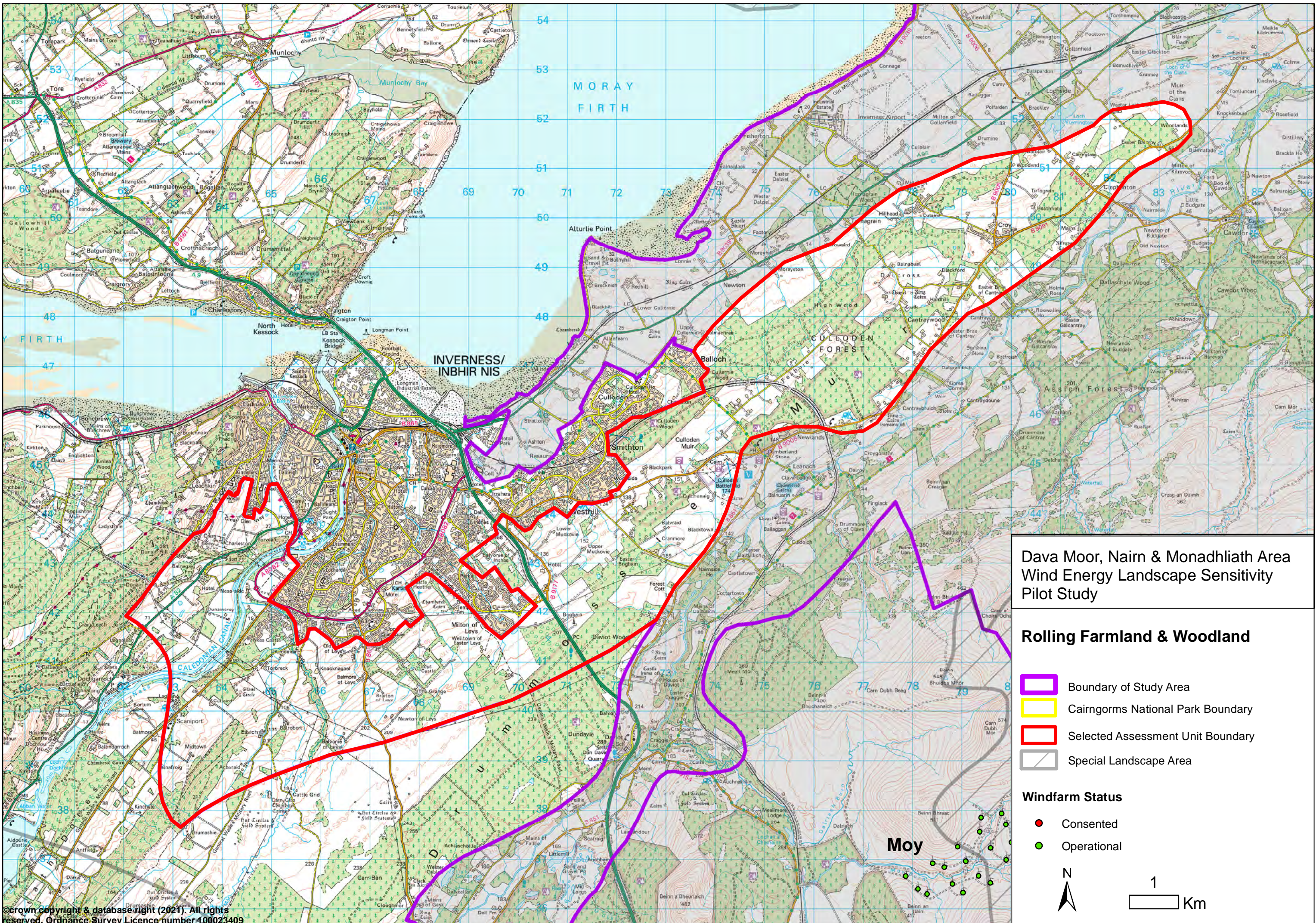
- Broader areas of upland pasture and more uniform commercial coniferous plantation on the elevated and gently graded slopes south of Inverness
- The edges of larger areas of farmland set within woodland where smaller turbines could be located next to farm buildings in order to create 'clusters' of development and limit visual clutter.

## 12.3 Sensitivity and guidance

The small to medium scale of this AU, including the particularly low relief and more complex landform found in the north-eastern part of this landscape, and the intricate patterning of policy woodlands and woodland and farmland increases susceptibility to larger wind turbines. The setting of the Caledonian Canal and Culloden Muir Conservation Area, which are valued as cultural heritage features and for recreation, further increase sensitivity. There would be a **High** sensitivity to turbines >100m, **High-medium** sensitivity for turbines 50-100m and **Medium** sensitivity for smaller turbines <50m.

More extensive areas of pasture in the larger scale hill slopes in the south-west of this landscape, where the pattern of woodland is broader and simpler, offer opportunities for single and small groups of wind turbines <50m to be accommodated while minimising landscape and visual effects. Turbines <25m could potentially be accommodated in the smaller scale north-eastern part of this landscape where they should be associated with flatter broader ridge tops and gently graded slopes and larger areas of farmland. Turbines should not be positioned in the centre of smaller pockets of farmland enclosed by woodland where they would dominate the space. Turbines could be visually associated with farm buildings in order to create 'clusters' of development thus minimising visual clutter in this settled landscape.





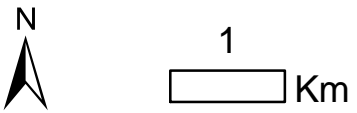
**Dava Moor, Nairn & Monadhliath Area  
Wind Energy Landscape Sensitivity  
Pilot Study**

**Rolling Farmland & Woodland**

- Boundary of Study Area
- Cairngorms National Park Boundary
- Selected Assessment Unit Boundary
- Special Landscape Area

**Windfarm Status**

- Consented
- Operational







*The north-eastern end of this landscape comprises subtly rolling ridges and dips, some filled with small water bodies*



*Long views to Ben Wyvis from the open elevated ridges of this landscape*



*Areas of farmland appear carved out of woodland – small houses and farms influence the often small scale of these spaces*



*Broader areas of gently undulating pasture on slopes above Inverness at the transition with the Flat Moorland Plateau with Woodland LCT (outside the study area)*

**Rolling Farmland and Woodland – Detailed sensitivity assessment**

Summary description	Assessment of turbines 100-149.9m	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p><b>Scale</b> The north-eastern part of the AU forms a long, low ridge with a small to medium scale occurring, influenced by the more complex rolling landform, limited relief and small buildings. Scale increases on the more evenly graded hill slopes which wrap around the southern edge of Inverness although this area is not extensive and scale reduces where a tighter pattern of woodlands occurs around Leys Castle and either side of the Caledonian Canal. The regular pattern of dispersed and more concentrated settlement provides ready scale references across this landscape.</p>	<p>The small to medium scale of this landscape, which is influenced by woodlands, buildings and, in places, the rolling landform, would be susceptible to turbines of this size. <b>High</b></p>	<p>This turbine type would fit better with the scale of broader and more gently graded ridge tops and slopes in the south-west although turbines of this size would overwhelm the smaller scale of much of this landscape. <b>High-medium</b></p>	<p>This turbine type would fit better with the scale of broader and more gently graded ridge tops and slopes although they would still appear large in relation to the smaller scale landscape present in the north-eastern part of this landscape. <b>High-medium</b></p>
<p><b>Landform</b> Landform is varied comprising more evenly graded north-facing slopes to the south-west where this landscape arcs around Inverness, more gently undulating to flat areas next to the Caledonian Canal and a more complex rolling landform to the north-east but interspersed with flatter ridge tops.</p>	<p>The more complex landform prevalent in the north-eastern part of this landscape would be of increased susceptibility to turbines of this size although more gently graded slopes and flatter ridge tops would be less susceptible. <b>Medium</b></p>	<p>The more complex landform prevalent in the north-eastern part of this landscape would be of increased susceptibility to turbines of this size although more gently graded slopes and flatter ridge tops would be less susceptible. <b>Medium</b></p>	<p>Smaller turbines could be sited to minimise effects on nearby more complex landform <b>Medium-low</b></p>
<p><b>Landcover</b> The large proportion of woodland cover is a key characteristic of this landscape. Woodland largely comprises small to medium size coniferous plantations in the north-east with these commonly coinciding with flatter ridge tops and slopes. A distinctive geometric framework of policy influenced woodlands is a feature of the hill slopes south of Inverness and mixed policy woodlands are present either side of the Caledonian Canal. Areas of birch and other broadleaves fringe coniferous plantations</p>	<p>The intricate pattern and diversity of policy influenced woodlands and the small-scale pattern of open farmland and woodland are key characteristics of this landscape. Susceptibility would increase in relation to development which removed or detracted from these landcover features, and particularly multiple turbines of this size. The setting of small water bodies are of increased susceptibility. <b>High</b></p>	<p>Turbines of this size, and particularly multiple turbines, could also affect diverse policy woodlands, the pattern of woodland and open farmland and the setting of small water bodies. There may be some limited scope to locate turbines towards the lower height band of this turbine type to minimise effects on areas with a more intricate and diverse landcover. The setting of small water bodies are of increased susceptibility. <b>High-medium</b></p>	<p>There may be more scope to site smaller turbines to minimise effects on more intricate landcover features in this AU. <b>Medium</b></p>



Summary description	Assessment of turbines 100-149.9m	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p>particularly in the north-east. Farmland generally comprises small areas of pasture set within woodland but also some broader upland pasture at the transition with the <i>Flat Moorland Plateau with Woodland</i> LCT south of Inverness. Small water bodies with associated wetland vegetation lie in the north-eastern part of this AU.</p>			
<p><b>Built environment</b> This landscape is well-settled and on-going expansion of Inverness and satellite settlements is likely to continue to change its character. Part of the Caledonian Canal and listed built features within the Culloden Muir Conservation Area lies in this AU. A dense network of roads, including the A9, the railway and transmission lines cross this AU. There are no wind energy developments in this AU but the Farr, Moy and Tom nan Clach are located nearby and seen from the A9.</p>	<p>The setting of settlements and cultural heritage features located within this AU increases susceptibility. Cumulative effects with transmission lines and with operational wind farms could occur if development were located in the south-western part of this AU. <b>High-medium</b></p>	<p>The setting of settlements and cultural heritage features located within this AU increases susceptibility. Cumulative effects with transmission lines and with operational wind farms could occur if development were located in the south-western part of this AU. <b>High-medium</b></p>	<p>Smaller turbines could be sited to minimise effects on settlement and cultural heritage features. Cumulative effects with transmission lines could occur in the south-western part of this AU although smaller turbines would minimise effects with other wind farms provided they were not prominently sited. <b>Medium</b></p>
<p><b>Landscape context</b> This landscape forms a low ridge of higher ground occurring between the <i>Coastal Farmland</i> and the <i>Farmed Strath</i>. The steep slopes of the south-western part of this AU form a rural backdrop to Inverness and are backed in turn to the south by the <i>Flat Moorland Plateau with Woodland</i> LCT (which lies outside the study area).</p>	<p>This size of turbine would compromise the rural backdrop to Inverness. It could also affect the character of the <i>Coastal Farmland</i> and the coast if sited in the north-eastern part of this AU. Large turbines could also dominate the small scale of the <i>Farmed Strath</i>. The larger scale <i>Flat Moorland Plateau with Woodland</i> LCT would be less susceptible although larger turbines could affect views and the setting of Loch Ness. <b>High</b></p>	<p>This size of turbine could compromise the rural backdrop to Inverness. It could also affect the character of the <i>Coastal Farmland</i> and the coast particularly if sited in the north-eastern part of this AU. The small scale and extent of the narrow <i>Farmed Strath</i> AU could also be dominated although there may be more scope to locate turbines towards the lower height band to minimise intrusion on prominent skylines particularly closer to the less susceptible <i>Flat Moorland Plateau with Woodland</i> LCT. <b>High-medium</b></p>	<p>Smaller turbines would have less of an effect on adjoining landscapes although more prominent ridge tops and the immediate skyline to the <i>Farmed Strath</i> would be more susceptible. <b>Medium</b></p>

Summary description	Assessment of turbines 100-149.9m	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p><b>Perceptual aspects</b> This landscape is generally well-settled with major communications also present. The sense of naturalness is not strong and the landscape generally feels well-developed and busy. There are some perceptual qualities associated with the Culloden Battlefield.</p>	<p>Susceptibility is generally reduced in respect of this criterion although the Culloden Muir Conservation Area and wider setting are of increased susceptibility. <b>Medium-low</b></p>	<p>Susceptibility is generally reduced in respect of this criterion although the Culloden Muir Conservation Area and wider setting are of increased susceptibility. <b>Medium-low</b></p>	<p>Susceptibility is generally reduced in respect of this criterion although the Culloden Muir Conservation Area and its setting are of increased susceptibility. <b>Medium-low</b></p>
<p><b>Visual aspects</b> Views within this AU are often limited by the extensive woodland. Views from elevated and open slopes tend to focus to the north towards Inverness, the Moray Firth and Ben Wyvis. Views from the A9 on the approach to Inverness are important and from the Culloden Muir Conservation Area and Caledonian Canal which are key visitor attractions in this landscape. The lower ridge to the north-east is not prominent from other landscapes although the steeper slopes lying to the south of Inverness are more visible.</p>	<p>The well-settled and easily accessible nature of this AU increases susceptibility. Turbines of this size would be widely prominent in views from the north. Key susceptibilities include views from the A9, from residential areas in Inverness, from parts of Loch Ness and vantage points around it and from the Culloden Muir Conservation Area and Caledonian Canal which are a focus for tourism and recreation. <b>High</b></p>	<p>The well-settled and easily accessible nature of this AU increases susceptibility. Turbines of this size would be widely prominent in views from the north. Key susceptibilities include views from the A9, from residential areas in Inverness, the Loch Ness area and from the Culloden Muir Conservation Area and Caledonian Canal which are a focus for tourism and recreation. <b>High</b></p>	<p>While turbines of this size would appear large in close views from settlement and the many roads in this AU, smaller well-sited turbines would generally be less prominent in views to and from within this landscape. <b>High-medium</b></p>
<p><b>Landscape value</b> There are a large number of relic prehistoric features, the Culloden Muir Conservation Area, the Caledonian Canal and designed landscapes, including the Inventory listed Leys Castle GDL in this landscape. Woodlands, the canal and Culloden Muir are additionally well-used for recreation. Parts of this AU are less constrained in terms of landscape value.</p>	<p>Turbines of this size sited within, or close-by, valued landscapes and cultural heritage features would be likely to significantly affect their character and the appreciation of their qualities. <b>Medium</b></p>	<p>Turbines of this size sited within, or close-by, valued landscapes and cultural heritage features would be likely to significantly affect their character and the appreciation of their qualities. <b>Medium</b></p>	<p>There is likely to be increased scope to site smaller turbines to minimise effects on more valued parts of this AU. <b>Medium-low</b></p>
<p><b>Sensitivity assessment:</b></p> <ul style="list-style-type: none"> <li>• Turbines 100-150m: High sensitivity</li> <li>• Turbines 50-100m: High-medium sensitivity</li> <li>• Turbines &lt;50m: Medium sensitivity</li> </ul>			



## **13 ROLLING FARMLAND AND FOREST – SENSITIVITY ASSESSMENT**

### **13.1 Introduction**

This landscape extends in an east/west band across Nairn and neighbouring Moray, forming a transition between the coastal plain and the uplands of the study area.

#### **13.1.1 *Operational/consented wind turbines***

There are no operational or consented wind turbines located in this AU. The operational Hill of Glaschyle and the Berry Burn wind farms located in Moray are visible from rare open and elevated areas within this well-wooded landscape.

### **13.2 Summary description and assessment**

The gently rolling landform of this AU is cut by many water courses, forming deeply incised and convoluted channels in some areas. There is a distinct south-west/ north-east grain to the landform reflected in the pattern of long, low ridges although more broadly rounded hills and the many narrow valleys also create a more irregular topography in places. The higher hill of The Ord forms a prominent feature which is visible more widely across the northern part of the study area. Extensive and diverse forest, much of this having a distinctive estate-policy influence, accentuates the rolling landform. Areas of farmland appear carved out of the forest, creating a sequence of spaces which provide a well-defined and consistent character.

Settlement is dispersed with small farms and other houses located at the edge of fields and in woodland clearings. The heavily wooded character of this landscape creates a sense of seclusion accentuated by the complicated network of narrow winding roads. Views within the area are limited by landform and woodland with long views only possible from rare open spaces.

This AU is not covered by any landscape designations although an Inventory listed GDL and a Conservation Area apply to Cawdor and woodlands at Darnaway and Cawdor are designated for their nature conservation interest.

#### **13.2.1 *Potential effects of additional turbines in the context of existing development***

While there are views of operational wind farms located in Moray, the distance of these developments and the well-wooded nature of this AU limits their influence. Key cumulative issues that may arise include:

- An absence of rationale which could occur between operational and consented wind farms clearly associated with simple and more expansive upland areas and any potential similarly large wind turbines sited within this smaller scale landscape.
- Inter-visibility between any wind turbines located on visually prominent hill tops or upper slopes within this landscape where they could be seen together with any consented or future wind farm developments located in the uplands of the study area in views from the north.
- Variations in the type and size of any single or small group of turbines proposed within this landscape (although the well-wooded nature of this landscape would be likely to limit inter-visibility and thus reduce discordancy).

- Sequential visual impacts associated with multiple wind turbines seen when travelling through this landscape.

### 13.2.2 Constraints

- The small to medium scale of this landscape which is characterised by a low relief and, in places, a complex rolling landform.
- The tops of the low rounded hills and ridges where turbines would form prominent features.
- The limited extent of areas of farmland set within extensive forest cover where larger turbines would be more likely to be visually prominent.
- The richly diverse, policy influenced woodlands which are associated with the Darnaway and Cawdor Estates.

### 13.2.3 Opportunities

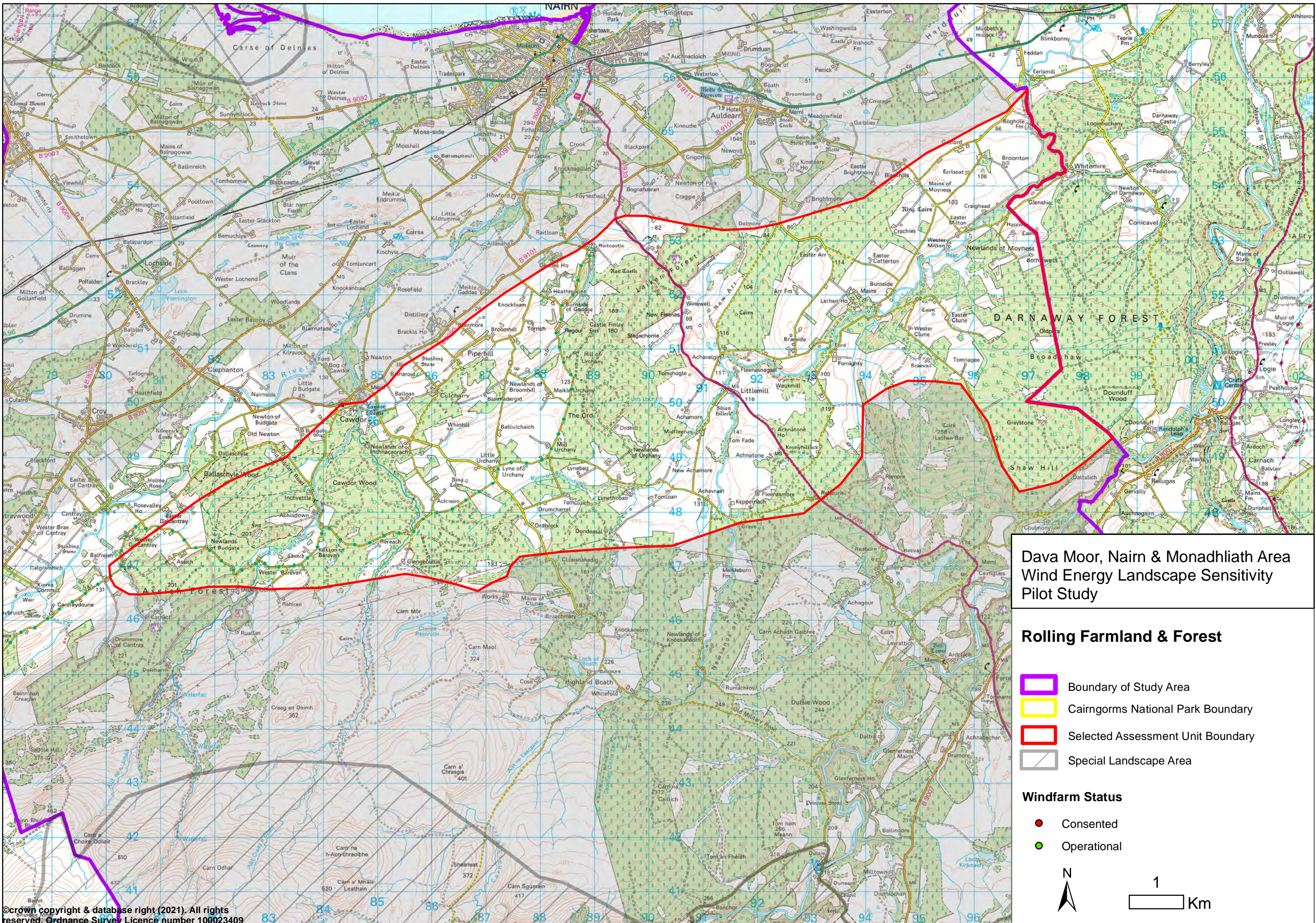
- The edges of more extensive areas of farmland set in woodland, particularly where broader and more gently graded hill slopes occur at the transition with the adjacent *Upland Moorland and Forestry AU*.

## 13.3 Sensitivity and guidance

The low relief and small scale of hills and ridges, the intricate pattern of farmland set within extensive woodland and the often richly diverse character of that woodland, increase susceptibility to larger wind turbines. There would be a **High** sensitivity to turbines >100m, **High-medium** sensitivity for turbines 50-100m and **Medium** sensitivity for smaller turbines <50m.

More extensive areas of gently sloping farmland, particularly found at the transition with the *Upland Moorland and Forestry AU*, offer opportunities for single and small groups of wind turbines to be accommodated while minimising landscape and visual effects. Turbines <50m high would have a better scale relationship with this landscape although care would need to be taken to minimise effects on views from the settled coastal plain to the north by avoiding more prominent hill tops and ridges. Turbines should not be positioned in the centre of smaller areas of farmland where they would dominate the space and affect the sequence of open space and woodland experienced when travelling through this landscape. Smaller turbines <25m could be visually associated with farm buildings with the aim of creating 'clusters' of development thus minimising a cluttered effect of built elements within open farmland.





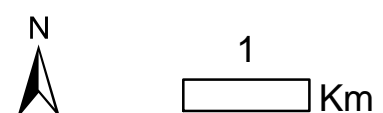
**Dava Moor, Nairn & Monadhliath Area  
Wind Energy Landscape Sensitivity  
Pilot Study**

**Rolling Farmland & Forest**

- Boundary of Study Area
- Cairngorms National Park Boundary
- Selected Assessment Unit Boundary
- Special Landscape Area

**Windfarm Status**

- Consented
- Operational







*Pockets of small-scale complex rolling ridges complemented by a naturalistic edge of diverse mixed woodland*



*The high open hills centred on Carn-nan-Tri-tighearnan which provide a scenic contrast with this densely wooded landscape,*



*Larger areas of farmland occur on more gently sloping ground at the transition with the adjoining uplands*



*Small walled pastures on gently rounded ridges in the eastern part of this landscape*



*The distinctive wooded hill of The Ord stands out amidst the generally subtly rolling landform of this landscape*



*Pockets of farmland next to the Allt Dearg forming the setting for Barevan Church – the Dun evan hill fort is located on the wooded ridge in the backdrop*



**Rolling Farmland and Forest – Detailed sensitivity assessment**

Summary description	Assessment of turbines 100-149.9m	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p><b>Scale</b> A generally small-scale landscape influenced by the rolling hilly landform, narrow valleys and a low relief. The extensive framework of mixed woodland, within which lie improved grass fields which appear to have been carved out of the forest, further emphasises the small scale. The constant presence of trees, and where there are open spaces, buildings, provide consistent small-scale features. Scale increases within larger areas of farmland where the topography is more gently graded.</p>	<p>This size of turbine would impact on the scale of this AU. In particular, this turbine type would dominate the low relief, small scale landform, pattern of small open spaces and regularly dispersed small buildings characteristic of this landscape. <b>High</b></p>	<p>This size of turbine would impact on the small scale of this AU. In particular, this turbine type would dominate the low relief, small scale landform, pattern of small open spaces and regularly dispersed small buildings characteristic of this landscape. <b>High</b></p>	<p>This size of turbine would also appear large in relation to areas of more complex landform and buildings although larger areas of farmland with more gently graded topography would be less susceptible. Turbines towards the lower height band of this type would be less likely to dominate the scale of buildings. <b>High-medium</b></p>
<p><b>Landform</b> This landscape gently rises, often in a series of small softly furled ridges, from the coastal plain at around 30m to 140m AOD. Tributaries of the Findhorn and Nairn cut narrow incised channels through this landscape and intricate patterns of terraces and knolls are often associated with these water courses. Low broad-topped ridges and occasional rounded hills break the generally rising slopes adding further complexity. Some areas of more gently graded landform occur at the transition with the <i>Upland Moorland and Forestry AU</i>.</p>	<p>The more prominent hills and ridges (many of these capped by woodland) and the complex knolly and interlocking landforms are of increased susceptibility. Turbines of this size would detract from the predominantly complex landform of this landscape although occasional more gently graded slopes would be of reduced susceptibility. <b>High-medium</b></p>	<p>The more prominent hills and ridges (many of these capped by woodland) and the complex knolly and interlocking landforms are of increased susceptibility. Turbines of this size would detract from the predominantly complex landform of this landscape although occasional more gently graded slopes would be of reduced susceptibility. <b>High-medium</b></p>	<p>The more prominent hills, the frequent low summits and the complex knolly and interlocking landforms are of increased susceptibility. Long evenly graded slopes are likely to offer more potential to accommodate turbines of this size without detracting from areas of intricate and complex landform. <b>Medium</b></p>
<p><b>Landcover</b> This landscape is very well-wooded with open areas of farmland alternating with forested areas which creates a distinct and consistent spatial sequence. It is a richly diverse landscape. The mixed woodland, including large areas of broadleaves and</p>	<p>The diverse woodland cover is an important characteristic of this landscape. Turbines of this size, and particularly multiple turbines, could affect the integrity of woodland cover if its removal were required. The distinctive pattern of small, fields enclosed by woodland is also</p>	<p>The diverse woodland cover is an important characteristic of this landscape. Turbines of this size, and particularly multiple turbines, could affect the integrity of woodland cover if its removal were required. The distinctive pattern of open farmland within the woodland is also</p>	<p>More open and simple land cover, especially more extensive grazing, would be of reduced susceptibility to smaller turbines (which are more likely to comprise single or very small groups &lt;3 of turbines). Larger areas of farmland set within woodland could relate to turbines</p>

Summary description	Assessment of turbines 100-149.9m	Assessment of turbines 50m-100m	Assessment of turbines <50m
Scots pine as well as policy-type mixes, and wide range of age structure, creates a diversity which is further enhanced by the range of woodland – extending from small clumps of trees to more extensive forest.	susceptible to larger turbines which could dominate the sense of openness within these spaces and diminish the contrast they provide with the extensive woodland cover. <b>High</b>	susceptible to larger turbines which could dominate the sense of openness within these spaces and diminish the contrast they provided with extensive woodland cover. More extensive and less strongly enclosed areas of pasture would be of reduced susceptibility to single turbines of this size although these areas are limited in extent. <b>High-medium</b>	<25m provided they were carefully sited so as not to dominate the space. <b>Medium</b>
<b>Built environment</b> Settlement is focussed within valleys with a regular pattern of dispersed farms across the open farmland. The small historic settlement of Cawdor lies on the northern boundary of this AU. A number of small cultural heritage features including hill forts, burial grounds and cairns are evident. Winding narrow rural roads respond to the rolling landform. There are no wind turbines in this landscape.	The settlement of Cawdor and the more prominent cultural heritage features would be of increased susceptibility to larger turbines which could detract from their setting. The narrowness and winding character of the road network would be likely to be compromised by improvements to accommodate the large vehicles required to transport turbines. There would be no cumulative effects with other wind turbines. <b>High-medium</b>	The settlement of Cawdor and the more prominent cultural heritage features would be of increased susceptibility to larger turbines which could detract from their setting. The narrowness and winding character of the road network could be compromised by improvements to accommodate large vehicles. There would be no cumulative effects with other wind turbines. <b>High-medium</b>	Susceptibility would be reduced for smaller turbines which would be likely to have minimal effects on the minor road network and could be sited to minimise impact on settlement and cultural heritage features. <b>Medium</b>
<b>Landscape context</b> This landscape forms a transition between the higher hills of the <i>Upland Moorland and Forestry</i> and the <i>Open Rolling Upland</i> and the lower-lying plain of the <i>Coastal Farmland</i> . The low elevation, rolling landform and extensive woodland limit inter-visibility with adjacent AUs although this landscape forms low wooded skylines to the <i>Lower Farmed Strath</i> covering the lower Nairn Valley.	Although views into this landscape are limited by the rolling landform and extensive woodland, the small extent of this AU increases susceptibility in so far as larger turbines could not avoid impact on adjacent landscapes, particularly if sited on higher ground and seen in the immediate backdrop to the smaller scale <i>Lower Farmed Strath</i> . <b>High-medium</b>	This turbine type, and particularly turbines towards the lower height band, could be sited to minimise effects on adjacent landscapes. <b>Medium</b>	Smaller turbines could be sited to have minimal impact on adjoining landscapes. <b>Medium-low</b>
<b>Perceptual aspects</b> Many areas of woodland have a distinctly natural character. Extensive woodland also	Susceptibility is increased in relation to this criterion in that larger (and particularly multiple) turbines could affect	Susceptibility is increased in relation to this criterion in that larger (and particularly multiple) turbines could affect the sense of	Susceptibility would be reduced for smaller turbines (and particularly turbines <25m) due to their ability to fit



Summary description	Assessment of turbines 100-149.9m	Assessment of turbines 50m-100m	Assessment of turbines <50m
<p>increases the sense of seclusion in this landscape which, because of the degree of enclosure, can quickly feel ‘set apart’ especially in comparison with the more open and developed <i>Coastal Farmland</i>. This sense of seclusion is reinforced by the network of quiet public roads and the presence of largely traditional buildings.</p>	<p>the sense of seclusion and less developed character of this landscape. <b>High-medium</b></p>	<p>seclusion and less developed character of this landscape. <b>High-medium</b></p>	<p>better with the scale of farms and to benefit from screening by landform and woodland thus minimising effects on perceptual qualities such as the sense of seclusion. <b>Medium</b></p>
<p><b>Visual amenity</b> Views within this landscape area are generally short-range and intermittent due to the enclosure created by both landform and woodland. Key views from this AU are from more open ridges to the north over the Moray Firth. The low elevation of this AU and presence of dense woodland also limits views into this landscape.</p>	<p>The low hills and woodland often screen parts of this landscape, so that views from roads, for example, are restricted. However, turbines of this size would appear above many of these smaller features and would be likely to be very prominent from more open ridges within this AU and seen more widely from the <i>Coastal Farmland</i> and Moray Firth. <b>High</b></p>	<p>The low hills and woodland often screen parts of this landscape, so that views from roads, for example, are restricted. However, turbines of this size would appear above many of these smaller features and would be likely to be visible from more open ridges within this AU and seen more widely from the <i>Coastal Farmland</i> and Moray Firth. <b>High-medium</b></p>	<p>Susceptibility would be reduced to smaller turbines in that the rolling landform and woodland offers scope for partial screening. This turbine type would also be less prominent in longer views from this AU and from surrounding areas. <b>Medium</b></p>
<p><b>Landscape value</b> Cawdor Castle GDL and Conservation Area cover a small part of this AU. Some woodlands within this AU are also valued for nature conservation and recreation. The <i>Findhorn Valley and Wooded Estates</i> SLA lies adjacent to this landscape in Moray. Key qualities of this SLA include diverse woodlands and designed landscapes.</p>	<p>The presence of formally valued woodlands and landscapes increases sensitivity in parts of this AU. <b>Medium</b></p>	<p>The presence of formally valued woodlands and landscapes increases sensitivity in parts of this AU. <b>Medium</b></p>	<p>There would be increased scope to locate smaller turbines to avoid impacting on formally valued parts of this AU and the adjacent SLA. <b>Medium-low</b></p>
<p><b>Sensitivity assessment:</b></p> <ul style="list-style-type: none"> <li>• Turbines &gt;100m: High sensitivity</li> <li>• Turbines 50-100m: High-medium sensitivity</li> <li>• Turbines &lt;50m: Medium sensitivity</li> </ul>			

## 14 UPLAND MOORLAND AND FORESTRY – SENSITIVITY ASSESSMENT

### 14.1 Introduction

The *Upland Moorland and Forestry* is a transitional landscape lying between the more expansive, sparsely settled uplands and the well-settled lowland farmlands of the study area. This AU merges gradually with the *Narrow Wooded Valley* (the Findhorn valley) to the south-east due to the extensive woodland cover of both landscapes. The transition with the *Rolling Farmland and Forest* AU to the north is also subtle because of the extent of woodland in both AUs although the key difference between the two is the increased elevation of the *Upland Moorland and Forest*.

#### 14.1.1 Operational/consented wind farms

There are no wind turbines located in this landscape. The extensive wooded cover of this landscape restricts views and the distant operational Hill of Glaschyle and Berry Burn wind farms located in Moray do not have a strong landscape and visual influence. The consented Cairn Duhie wind farm which will lie much closer to this AU although extensive woodland will be likely to restrict visibility across much of this landscape.

### 14.2 Summary description and assessment

The *Upland Moorland and Forestry* has a generally undulating landform with some gently graded rounded hills but with pockets of more intricate rolling relief around Loch Belivat and close to the north-western boundary of the AU. The hill of Carn na Callich (372m) in the south-west forms the highest point of the gradually sloping ground of this landscape. Extensive forest covers this landscape with much of this comprising managed pine, interspersed with substantial swathes of birch. Diverse mixed woodlands with stands of mature beech are also present and enrich the character of this landscape. Despite the name of the AU (taken from the LCT it is based on), there is little open moorland with rougher moorland now colonised by regeneration of birch and scrub. Small pockets of farmland appear carved out of the forest and accommodate loosely clustered crofts and houses. The A939 is aligned through this landscape and provides a scenic approach to the Nairn lowlands. Elsewhere narrow minor roads provide limited access and this, together with the sparse settlement and dense woodland cover, instil a strong sense of seclusion.

This AU lies adjacent to the *Drynachan, Lochindorb and Dava Moors* SLA. Some relatively small areas of woodland within this AU are valued for nature conservation.

#### 14.2.1 Potential effects of additional turbines in the context of existing development

Operational wind farms have a limited influence on this landscape although the consented Cairn Duhie wind farm is likely to be visible above woodland from rare open spaces. Key cumulative landscape and visual issues that may arise include:

- Potential sequential and simultaneous views of multiple developments visible on the long, low skylines of this landscape seen in views from more open parts of the *Coastal Farmland* and *Coastal Margin*.
- The close proximity of the consented Cairn Duhie wind farm and potential for cumulative effects to occur with any larger turbines located in this AU



particularly affecting the adjacent highly sensitive *Narrow Wooded Valley* (the Findhorn valley).

- Potential effects on views from the A939 where the Tom nan Clach and Cairn Duhie wind farms could be seen sequentially with any larger turbines sited in this AU.

#### 14.2.2 Constraints

- Pockets of small-scale complex landform, lochans, pastures and clusters of small residential buildings in the Belivat area and in the north-western part of this landscape.
- Views from the A939 which provides a scenic approach to Nairn through the open Dava Moor before being aligned through the dense and diverse forest of this landscape – regenerating woodland evident on presently open moorland may screen these views in time.
- Higher hills lying close to the Findhorn valley which provide the backdrop to views across the valley from rare open spaces on the shoulders of the valley, from the B9007 and, more extensively, from the elevated section of the A939 below Cairn Duhie.
- The integrity of the diverse woodland which characterises much of this landscape which would be disrupted by more extensive wind farm development.
- Cumulative effects with the consented Cairn Duhie wind farm seen from the north from the open coastal plain and the Moray Firth, from rare open views from the Findhorn valley and also seen sequentially from the A939

#### 14.2.3 Opportunities

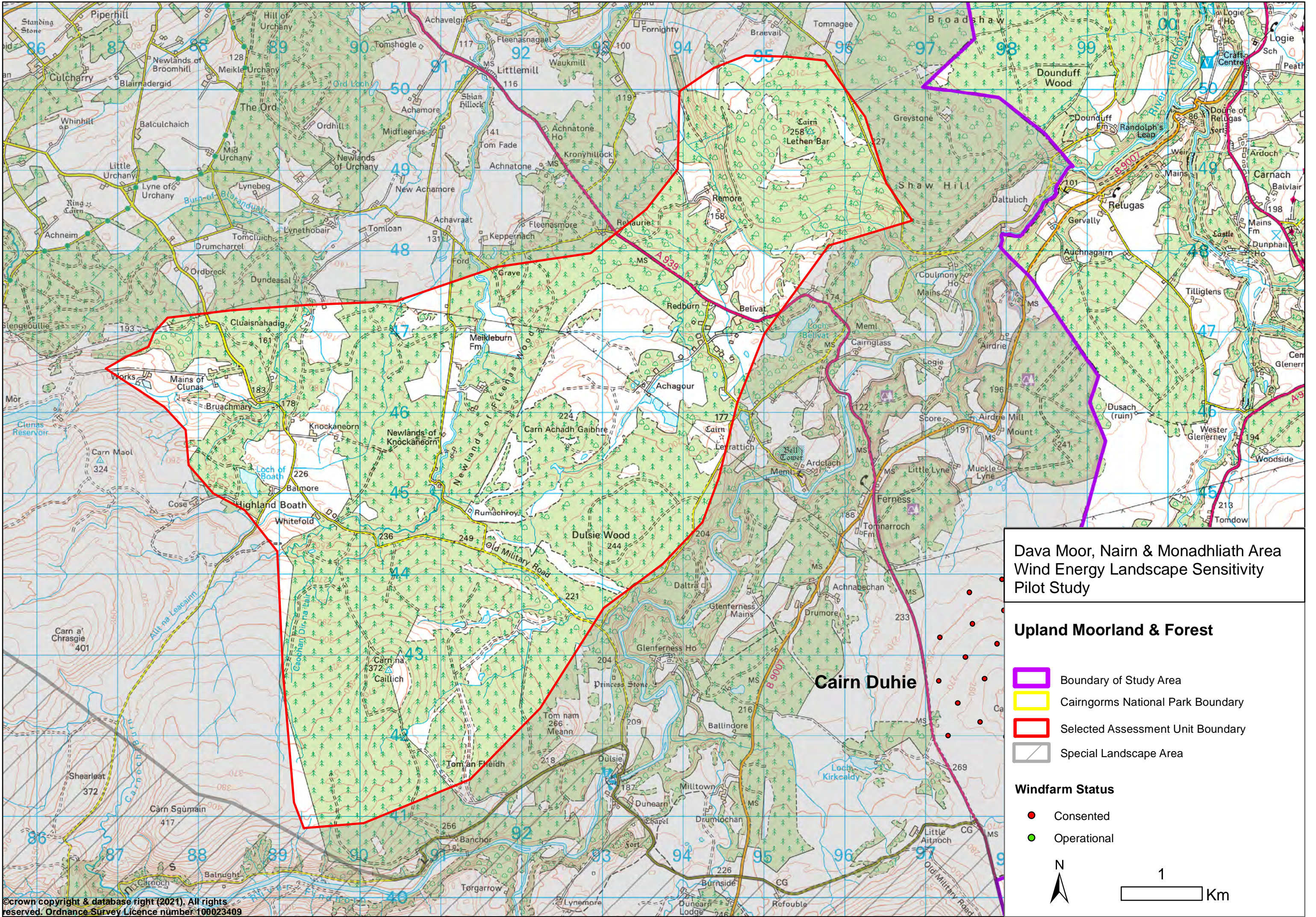
- The more gently graded landform found in the south-western part of this AU which coincides with more managed commercial forest.
- The extensive woodland which covers this landscape and which would be likely to restrict visibility of wind turbine development.

### 14.3 Sensitivity and guidance

The generally diverse and extensive forest cover characteristic of this landscape and the prominence of the higher ground lying on the edge of the Findhorn valley, and visible from the A939, increases susceptibility. This landscape has a **high** sensitivity to turbines >149.9m and a **high-medium** sensitivity to turbines 100-149.9m.

Turbines should be sited to avoid significant intrusion on the Findhorn valley and on smaller scale settled and farmed areas within this AU. Cumulative effects with the Cairn Duhie wind farm are likely to be a key constraint to development in terms of potential effects on the character and views from parts of the Findhorn valley. The integrity of the more diverse woodland which covers much of this landscape should be conserved. Multiple wind farm developments would be difficult to accommodate in this landscape without significant effects occurring on the majority of susceptibility criteria.



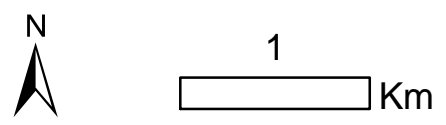


**Dava Moor, Nairn & Monadhliath Area  
Wind Energy Landscape Sensitivity  
Pilot Study**

**Upland Moorland & Forest**

- Boundary of Study Area
- Cairngorms National Park Boundary
- Selected Assessment Unit Boundary
- Special Landscape Area

- Windfarm Status**
- Consented
  - Operational







*The forested hill of Carn na Caillich - seen from the A939 to the right of foreground mature Scots pine – is the highest point of this AU*



*The subtle undulating landform and extensive wooded cover of this landscape*



*Diverse mixed woodland includes stands of oak and beech, extensive birch, managed continuous cover and mature Scots pine.*



*Complex interlocking small hills, lochans and dips in the Belivat area*

**Upland Moorland and Forestry – Detailed sensitivity assessment**

Summary description	Assessment of turbines >150m	Assessment of turbines 100-149.9m
<p><b>Scale</b> This landscape generally comprises a broad, gently undulating upland plateau rising to between 190-372m but with pockets of more complex landform and intricate patterns of woodland/open space creating a smaller scale in places.</p>	<p>While larger scale gently undulating landform would have a reduced susceptibility this size of turbine would dominate the relief of even the higher hills in key views from the south-east (from the A939 for example). This is also not an extensive AU (within the study area) which would limit scope for multiple and/or large wind farm developments. Smaller scale areas of settled farmland are of increased susceptibility although the dense forest cover of this landscape may limit visibility of turbines from these areas. <b>High</b></p>	<p>Larger scale gently undulating landform would have a reduced susceptibility although this is not an extensive AU (within the study area) which would limit scope for multiple and/or large wind farm developments. Smaller scale areas of settled farmland are of increased susceptibility although the dense forest cover of this AU may limit visibility of turbines from these areas. Turbines towards the lower height band of this turbine type would have less of an effect on scale. <b>High-medium</b></p>
<p><b>Landform</b> An undulating plateau with broad, gentle slopes and rounded summits although landform is more complex and rolling in the Belivat and Balmore areas and within the narrow valleys cut by many water courses.</p>	<p>This turbine type could relate to the predominantly simple landform of this gently undulating plateau although susceptibility is increased for areas with more complex smaller landform features. <b>Medium</b></p>	<p>This turbine type could relate to the predominantly simple landform of this gently undulating plateau although susceptibility is increased for areas with more complex smaller landform features. <b>Medium</b></p>
<p><b>Landcover</b> There is very little open moorland in this AU. Denser and more uniform coniferous forestry is present on the higher hill of Carn na Caillich although generally woodland is diverse and naturalistic and includes extensive stands of birch, oak and mixed aged Scots pine.</p>	<p>Susceptibility is increased particularly to multiple turbines of this size as they would diminish the integrity of diverse woodland cover which is a key feature of much of this landscape. <b>High-medium</b></p>	<p>Susceptibility is increased particularly to multiple turbines of this size as they would diminish the integrity of woodland cover which is a key feature of much of this landscape. <b>High-medium</b></p>
<p><b>Built environment</b> This is a sparsely settled landscape. There are no operational wind farms or turbines located in this landscape. Visibility of wind farms located in surrounding landscapes is restricted by extensive woodland although there is potential for cumulative effects to arise with the consented Cairn Duhie wind farm on the Findhorn valley (this is addressed under the criterion of 'Landscape context').</p>	<p>The relatively sparse settlement and very limited visibility of existing wind farm development reduces susceptibility. <b>Low</b></p>	<p>The relatively sparse settlement and very limited visibility of existing wind farm development reduces susceptibility. <b>Low</b></p>
<p><b>Landscape context</b> This landscape forms a relatively low backdrop of extensively forested slopes and rounded hills to the more</p>	<p>This size of turbine would be likely to be visible from the <i>Coastal Farmland</i> and would be particularly prominent from the more open upper slopes of the Findhorn if</p>	<p>This size of turbine would also be likely to be visible from the <i>Coastal Farmland</i> and would be particularly prominent from the more open upper slopes of the</p>



Summary description	Assessment of turbines >150m	Assessment of turbines 100-149.9m
<p>richly patterned and smaller scale hill fringes of the <i>Rolling Farmland and Forest</i> and, more distantly, from the <i>Coastal Farmland</i>. The higher hills lying close to the south-eastern boundary of this AU are visible from open parts of the <i>Narrow Wooded Valley</i> (and <i>Open Upland Glen</i>) of the upper Findhorn valley. The consented Cairn Duhie wind farm located in the <i>Open Rolling Uplands</i> would be visible in close proximity from parts of the Findhorn valley.</p>	<p>located on the higher ground of this AU. Cumulative effects could occur with wind turbines located in this AU with the consented Cairn Duhie wind farm particularly affecting the appreciation of the Findhorn valley. <b>High</b></p>	<p>Findhorn if located on the higher ground of this AU. Cumulative effects could occur with wind turbines located in this AU and the consented Cairn Duhie wind farm particularly affecting the appreciation of the Findhorn valley. <b>High</b></p>
<p><b>Perceptual aspects</b> This landscape has a secretive, hidden quality experienced when travelling on winding narrow roads. The extent of diverse (mixed age and species) woodland in this landscape is an unusual feature.</p>	<p>Susceptibility would be increased to this size of turbine and in relation to lighting given the sparsely settled nature and dark skies of this landscape. Removal of diverse woodland would diminish the integrity and sense of naturalness associated with this key characteristic. <b>High</b></p>	<p>Removal of diverse woodland would diminish the integrity and sense of naturalness associated with this key characteristic. <b>High-medium</b></p>
<p><b>Visual amenity</b> This upland landscape is sparsely settled. Dense forest cover limits views from within the AU. The gently rising slopes of this AU means that it is generally seen as a narrow band of forest in long views from the coastal plain and Moray Firth. The higher hills of this AU are seen across the open upper slopes of the Findhorn and from the A939 (although regenerating forest may screen views from this route in time).</p>	<p>The sparsely settled nature and limited views from within this densely wooded AU reduces susceptibility in terms of close views. Turbines of this size would however be likely to be prominent even in more distant views from surrounding more open landscapes including the coastal plain, the upper slopes of the Findhorn valley and from the A939, increasing susceptibility. Lighting would increase the duration of visual effects. <b>High</b></p>	<p>The sparsely settled nature and limited views from within this AU reduces susceptibility although turbines could still be prominent if located close to the Findhorn valley and/or on higher hills. <b>High-medium</b></p>
<p><b>Landscape value</b> This AU lies close to the <i>Drynachan, Lochindorb and Dava Moors</i> SLA. Key qualities of this SLA include the impression of wildness, open horizons and broad panoramas from the high open moorlands and the intimate scale of the Findhorn valley.</p>	<p>Very large turbines could conflict with the intimate scale of the Findhorn valley if sited nearby. The qualities of wildness and open horizons/broad panoramas associated with the open moorlands within the SLA could be affected by turbines and aviation lighting. <b>Medium</b></p>	<p>Large turbines could have indirect effects on the SLA especially if located close to the Findhorn valley where they could conflict with its intimate scale. The qualities of wildness and openness associated with this SLA could also be affected. <b>Medium</b></p>
<p><b>Sensitivity assessment:</b></p> <ul style="list-style-type: none"> <li>• Turbines &gt;150m: High sensitivity</li> <li>• Turbines 100-150m: High-medium sensitivity</li> </ul>		

## 15 OPEN ROLLING UPLANDS – SENSITIVITY ASSESSMENT

### 15.1 Introduction

The *Open Rolling Uplands* AU is an expansive upland landscape. The LCT this AU is based on extends eastwards into Moray. This AU merges gradually with the *Rolling Uplands* AU which covers the generally higher Monadhliath uplands to the west. The boundaries between this AU and the adjacent *Upland Moorland and Forestry* and *Rolling Farmland and Forest* which lie to the north, are more pronounced due to the dense woodland characteristic of these AUs and the contrasting openness of the *Open Rolling Uplands*. These uplands are divided by the narrow *Upland Valley* of the Findhorn.

#### 15.1.1 Operational/consented wind farms

The operational Tom nan Clach and the consented Cairn Duhie wind farms are wholly located in this AU. The operational Berry Burn, Paul's Hill and Hill of Glaschyle wind farms are located in Moray and clearly visible from this AU.

### 15.2 Summary description and assessment

The *Open Rolling Uplands* form an upland plateau of generally rounded hills and expansive basins. The hills are particularly high and pronounced in the north-west around Carn nan Tri-tighearnan (at the boundary with the *Rolling Uplands*) where they are important in providing a backdrop to the upper Findhorn valley and the settled upland fringes and coastal plain of the study area. Broad basins form at the headwaters of numerous fanned water courses and are interspersed with smoothly rolling hills. A band of craggier hills forms the southern boundary of this AU, abutting the Cairngorms National Park west of the A939. Lochindorb fills a narrow basin hemmed in by hills, its island castle a prominent feature. The large scale, generally simple landform and low vegetation cover of this AU, and particularly the expansive basins of Dava and Lochindorb experienced from the B9007 and A939, instil a sense of huge space. Extensive heather and grass moorland, bog and increasing areas of native woodland influence the naturalness associated with this landscape while the very sparse settlement in the area contributes to a feeling of isolation.

The *Drynachan, Lochindorb and Dava Moors* SLA covers a large part of this AU and the southern part of this AU also borders the Cairngorms National Park. The cultural heritage and recreation/tourism importance of Lochindorb, further increases the value of this landscape.

#### 15.2.1 Potential effects of additional turbines in the context of existing development

Operational wind farms in this AU and in neighbouring Moray already influence landscape character and views in some areas. The consented Cairn Duhie wind farm will greatly increase visibility of wind farm development across this AU if constructed.

Key cumulative landscape issues that could occur with additional wind energy development include:

- Potential sequential cumulative effects on views from the A939 and the B9007 which provide dramatic approaches to the more settled lowlands in the Nairn



area and to Moray and a rare experience of wildness for road users. The Tom nan Clach wind farm is set back from these roads although the consented Cairn Duhie wind farm will be more intrusive.

- Potential sequential cumulative effects when seen from the A95, a key route to Moray and part of the Spey Whisky Trail, in combination with the operational Paul's Hill and consented Paul's Hill II wind farm.
- Sequential and simultaneous visibility of multiple wind farm developments seen from the Dava Way recreational route in combination with the operational Berry Burn and Hill of Glaschyle wind farms.
- Cumulative effects on the character and views from the Findhorn valley, further exacerbating adverse effects associated with the operational Tom nan Clach and consented Cairn Duhie wind farms.
- Cumulative effects on the character and views to and from Lochindorb further exacerbating the adverse effects of the operational Berry Burn and the consented Cairn Duhie wind farms.

#### 15.2.2 Constraints

- The higher and more pronounced hills present in the north-western part of this AU and centred on Carn-nan Tri-Tighearnan, including its long north-eastern slopes, where larger wind turbines would detract from the distinctive open backdrop they provide to the settled lowland landscapes of the study area.
- Effects on views from promoted recreational and tourist routes including the Dava Way, Speyside Way, A95 Spey Whisky Trail and the route to Huntly's Cave within the Cairngorms National Park.
- The landscape setting, character and views to and from Lochindorb and its island castle
- Views from the B9007 and the A939 and effects on the sense of huge space, naturalness and seclusion which are also key qualities of the *Drynachan, Lochindorb and Dava Moors* SLA.
- The rim of small hills on the northern boundary of the Cairngorms National Park which are irregular and rocky and where wind turbines sited on or close-by would detract from their character and from views across the open and expansive moors of this AU.
- The secluded and intimately scaled character of the Findhorn valley which could be further eroded by additional wind farm development visible on containing skylines.

#### 15.2.3 Opportunities

- The gently undulating landform, simple land cover and sparsely settled nature of this landscape which contribute to its expansive scale.

### 15.3 Sensitivity and guidance

While the large scale and generally simple landform of this expansive AU would be less susceptible to wind farm development, these characteristics also contribute to the perception of wildness associated with this landscape and its designation as an SLA. The setting of Lochindorb which is valued for its cultural heritage and for tourism and recreation and the proximity of the secluded intimately scaled Findhorn valley increases susceptibility in parts of this AU.

This landscape has a **High** sensitivity to turbines >149.9m and a **High-medium** sensitivity to turbines 100-149.9m.

#### 15.3.1 *Guidance for new development and extensions to operational wind farms*

- **Turbines over 150m** would be likely to contrast with smaller turbines within existing wind farms if sited close-by. They would also overwhelm the limited vertical scale of the rolling hills which surround Lochindorb and lie on the edge of the Spey valley. Lighting of turbines would also be likely to diminish the perception of wildness associated with this landscape.
- **Turbines up to 149.9m** Some additional turbines up to 149.9m high, including extensions to operational wind farms, could potentially be accommodated in the less pronounced and larger scale rolling hills which lie in the south-western part of this AU (south of the Findhorn valley) where they would have less of an effect on the huge sense of space associated with the expansive basins of Lochindorb and Dava experienced from the B9007 and A939 and on the scale of individual hills. Turbines should be sited to avoid exacerbating intrusion on the Findhorn valley and should be set well away from the B9007.
- Carn nan Tri-tighearnan and its long north-eastern slopes, which lie to the north of the Findhorn valley, should be protected from wind energy development which would detract from the distinctive backdrop this, and associated hills in this area, (these lying at the transition with the adjacent *Rolling Uplands*) provide to the settled lowlands of the study area.
- All wind turbine development should avoid significant adverse effects on views to and from Lochindorb and on the character of its setting. Further diminishment of the small scale and hidden character of the upper Findhorn valley (the *Upland Valley AU*) should also be avoided.
- All wind turbine development should be sited well away from the band of low and diverse rocky hills lying either side of the B9007, which form a well-defined 'rim' on the boundary of the Cairngorms National Park. The band of smoother hills which lie on the southern edge of this AU to the east of the A939 are also important in providing a backdrop to the Spey valley and large wind turbines sited in this area could be prominent when seen from the A95 and recreational routes and may adversely affect some of the special qualities of the Cairngorms National Park.

#### 15.3.2 *Repowering of operational wind farms*

Replacement of the existing turbines within the operational Tom nan Clach wind farm with very large turbines >149.9m would be likely to exacerbate effects on character and views from the upper Findhorn valley unless some turbines were omitted or significantly repositioned. Lighting of taller turbines could affect the qualities of wildness associated with the *Drynachan, Lochindorb and Dava Moors SLA*.



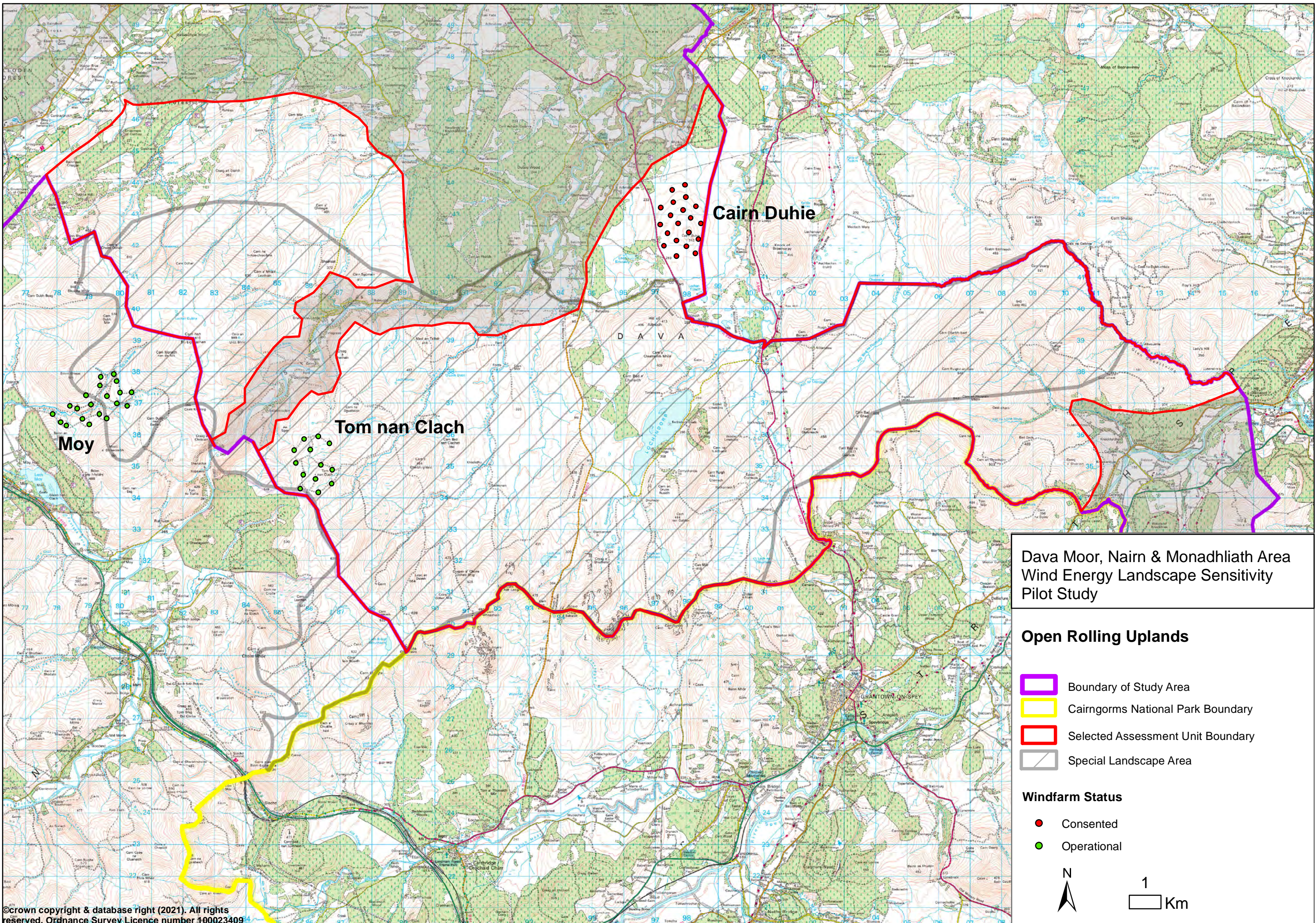
### 15.3.3 *Variations or alternatives to existing consents*

Increases to the size of turbine within the consented Cairn Duhie wind farm would have more significant effects on the character of this AU and on views from the A939 and B9007 and from parts of the Findhorn valley than the consented scheme. This is because this wind farm is sited in a prominent part of this AU in relation to these routes and to the A940 in neighbouring Moray.

### 15.3.4 *Smaller turbines <100m – general guidance for this AU*

There is likely to be little demand for wind turbines <100m high in this very sparsely settled landscape. Single and small groups of turbines <50m would fit better with the reduced scale of the more settled northern fringes of this AU. Turbines of this size could be located at the transition between moorland and farmland and would be more likely to be distinct from the larger operational and consented wind turbines located in this simple and generally large-scale landscape, thus reducing visual clutter. Effects on the character and views from the sensitive Findhorn valley should be minimised.









**Cairn Duhie**

**Tom nan Clach**

**Moy**

**Dava Moor, Nairn & Monadhliath Area  
Wind Energy Landscape Sensitivity  
Pilot Study**

**Open Rolling Uplands**

-  Boundary of Study Area
-  Cairngorms National Park Boundary
-  Selected Assessment Unit Boundary
-  Special Landscape Area

**Windfarm Status**

-  Consented
-  Operational



1  
Km





*The highest hills occur within the north-western part of this AU and are centred on Carn-nan Tri-tighearnan (615m)*



*The Tom nan Clach wind farm (seen above the Findhorn valley) is located on the gently undulating hills which lie on the western edge of this AU*



*The openness of this landscape and the seemingly simple landcover gives a sense of huge space – regenerating and planted woodland will change this perception in some areas*



*The heather-clad southern edge hills of this AU seen from the Spey Valley near Advie.*



*Lochindorb with its distinctive island castle is contained by stand-alone hills which influence its sheltered and secluded character*



*Gently undulating northern hill fringes merging with the more wooded Upland Moorland and Forestry and Rolling Farmland and Forests AUs*

**Open Rolling Uplands – Detailed sensitivity assessment**

Summary description	Assessment of turbines >150m	Assessment of turbines 100-149.9m
<p><b>Scale</b> A generally large-scale upland plateau with rounded hills rising generally to between 400-520m but with some higher hills located north of the upper Findhorn valley around Carn-nan Tri tighearnan (615m). The basins lying at the headwaters of numerous watercourses south of the Findhorn valley are open and broad but not extensive and the more isolated hills around Lochindorb, and on the edge of the Spey valley in Highland, have a limited relief (generally &lt;200m). Scale is further reduced around Lochindorb and on the northern fringes of this AU where settlement, woodlands and enclosed farmland introduce smaller features and at the boundary with the CNP where a band of small irregular rocky hills and narrow valleys are present.</p>	<p>The more expansive higher hills lying on the western and south-eastern parts of this AU have reduced susceptibility to larger turbines although the more individual hills and basins surrounding Lochindorb and lying on the edge of the Spey valley, more settled areas and the irregular rocky hills on the CNP boundary are of increased susceptibility. <b>High-medium</b></p>	<p>The more expansive higher hills lying on the western and south-eastern parts of this AU have reduced susceptibility to larger turbines. Turbines towards 150m would still be likely to overwhelm the scale of the isolated hills surrounding Lochindorb which are of limited relief although susceptibility may be reduced for turbines closer to 100m high. Hills lying on the edge of the Spey valley, more settled areas and the irregular rocky hills on the CNP boundary are of increased susceptibility. <b>Medium</b></p>
<p><b>Landform</b> These uplands form a simple undulating plateau with broad gentle slopes, shallow basins and rounded summits. The higher hills centred on Carn-nan Tri-tighearnan in the north-west of this AU are more pronounced as are the more individual hills around Lochindorb, the band of small rocky hills on the boundary with the CNP and the smoother but well-defined hills which backdrop the CNP and Spey valley in the south-eastern part of this AU.</p>	<p>This turbine type could relate to the predominantly simple landform of this AU although turbines of this size would detract from more pronounced and/or higher hills and areas of more complex landform if sited on or near them. <b>Medium</b></p>	<p>This turbine type could relate to the predominantly simple landform of this AU although turbines of this size would detract from more pronounced and/or higher hills and areas of more complex landform if sited on or near them. <b>Medium</b></p>
<p><b>Landcover</b> This landscape has a predominantly simple land cover of grass/heather moorland but with areas of bog and small pools within broad basins diverse at the micro-scale. Lochindorb is a key feature within this AU. Occasional semi-improved fields and small coniferous woodlands occur within shallow valleys and around Lochindorb and more extensive recently planted and naturally regenerating native woodlands are present.</p>	<p>The generally simple moorland land cover of this AU would be less susceptible although more complex areas of bog, pools and lochs are of increased susceptibility to turbines sited nearby. <b>Medium</b></p>	<p>The generally simple moorland land cover of this AU would be less susceptible although more complex areas of bog, pools and lochs are of increased susceptibility to turbines sited nearby. <b>Medium</b></p>



Summary description	Assessment of turbines >150m	Assessment of turbines 100-149.9m
<p><b>Built environment</b> A very sparsely settled landscape. The A939 and B9007 traverse this AU and a transmission line is aligned on its northern margin. The operational Moy, Tom nan Clach and the consented Cairn Duhie wind farms are located in this AU. The operational Berry Burn and Paul's Hill wind farms, located in Moray, are visible from parts of this AU.</p>	<p>Cumulative effects with the Tom nan Clach and Cairn Duhie wind farms could occur on the Findhorn valley (the <i>Upland Valley</i> and <i>Narrow Wooded Valley</i> AUs) if development was sited so visible on containing skylines. There could also be cumulative sequential and simultaneous effects experienced from the A939/A940, B9007 and additional wind farms could cumulatively affect the setting of Lochindorb in conjunction with Berry burn and Cairn Duhie wind farms. Turbines of this size could contrast noticeably with smaller operational and consented wind turbines. <b>High</b></p>	<p>Cumulative effects with the Tom nan Clach and Cairn Duhie wind farms could occur on the Findhorn valley (the <i>Upland Valley</i> and <i>Narrow Wooded Valley</i> AUs) if development was sited so visible on containing skylines. There could also be cumulative sequential and simultaneous effects experienced from the A939/A940, B9007 and additional wind farms could cumulatively affect the setting of Lochindorb in conjunction with Berry burn and Cairn Duhie wind farms. <b>High-medium</b></p>
<p><b>Landscape context</b> This AU extends eastwards into Moray. Within Moray it is more influenced by wind farm development although pronounced hills lying to the east of the A939 (Knock of Braemoray and Carn Biorach in particular) provide some screening in views from the study area. The higher hills within the north-western part of this AU form a prominent backdrop of open and higher hills to the more richly patterned and smaller scale landscapes lying to the north of the study area. A band of well-defined craggy hills on the southern boundary of this AU provide some screening of the lower lying basins of Dava and Lochindorb from the CNP. The rolling hills on the south-eastern boundary of this AU form a scenic backdrop to the Spey valley in the south-east. The <i>Upland Valley</i> cuts through this AU and the <i>Narrow Wooded Valley</i> lies to the NW. The <i>Rolling Uplands</i> AU gradually merge with this landscape to the west and both these AUs backdrop the <i>Lower Farmed Strath</i> AU.</p>	<p>Very large turbines sited on the pronounced hills which lie on the southern and south-eastern edges of this AU would be likely to significantly affect the backdrop provided to the Spey valley and other parts of the CNP. The Findhorn valley would be highly sensitive to this turbine type, if seen on containing skylines, although the extensiveness of these uplands may provide scope to site turbines to avoid intrusion on this valley. The higher hills (centred on Carn-nan Tri tighearnan) in the north-western part of this AU lie closer to smaller scale settled landscapes in the north of the study area and development in this area (eg the <i>Lower Farmed Strath</i>) and could adversely affect their character and views. Adjacent upland AUs would be less susceptible because of their larger scale. Lighting of larger turbines could contribute to significant effects on adjacent landscapes which are often sparsely settled and feature dark skies. <b>High-medium</b></p>	<p>Large turbines sited on the more pronounced hills which lie on the southern and south-eastern edges of this AU could significantly affect the backdrop provided to the Spey valley and other parts of the CNP. The Findhorn valley would be highly sensitive to this turbine type, if seen on containing skylines, although the extensiveness of these uplands provides scope to site turbines to avoid intrusion on this valley. The higher hills in the north-western part of this AU lie closer to smaller scale settled landscapes in the north of the study area (eg the <i>Lower Farmed Strath</i>) and development in this area could adversely affect their character and views. Adjacent upland AUs would be less susceptible because of their larger scale and sparse settlement. There may be increased scope to site turbines of this size to minimise effects on adjacent landscapes. <b>Medium</b></p>
<p><b>Perceptual aspects</b> A huge sense of space and openness can be experienced in much of this landscape and these open uplands and moorlands provide a scenic contrast with</p>	<p>Turbines of this size would significantly diminish the strong perception of space and openness which is principally associated with the basins and hills around Lochindorb, in the NW of this AU and particularly</p>	<p>While turbines of this size could also diminish the strong perception of space and openness if sited within the open moors lying the core of this AU and the less modified higher uplands in the NW and SE, there may be</p>

Summary description	Assessment of turbines >150m	Assessment of turbines 100-149.9m
<p>the densely wooded landscapes of Nairnshire and Moray. Extensive moorland and bog vegetation and areas of regenerating native woodland increase the sense of naturalness and this landscape appears secluded due to its very sparse settlement. Wind farm development in Moray and on the south-western parts of this AU reduces the sense of wildness.</p>	<p>experienced within the core of this landscape. Turbines &gt;200m would appear to shrink the expansiveness of the interior basins. Lighting of turbines would additionally affect the sense of wildness and appreciation of dark skies. <b>High</b></p>	<p>scope for limited extensions to operational wind farm development which is set well away from the B9007 and A939 where the perception of openness and wildness is more pronounced (and experienced by greater numbers of people). <b>High-medium</b></p>
<p><b>Visual amenity</b> This upland landscape is sparsely settled and while access is generally limited, the B9007 and A939 provide wide panoramas across the moors and hills and to distant mountain ranges beyond the AU. Lochindorb provides a focus for visitors and the Dava Way Trail is used by walkers and cyclists The A940 aligned in Moray, also provides elevated views across part of this landscape. The well-defined hills on the south-eastern boundary of this AU are visible from the Spey Valley. This landscape forms part of the layered landscape seen from the north.</p>	<p>While the sparsely settled nature of this AU reduces susceptibility, turbines of this size could significantly intrude on views from the popular Lochindorb areas, from the B9007 and A939, from more settled landscapes to the north and views to and from the CNP. Lighting of turbines of this size would contribute to this intrusion. <b>High</b></p>	<p>The sparsely settled nature of this landscape reduces susceptibility. Turbines of this size could be located well away from key routes and the more sensitive fringes of this AU to minimise intrusion. Extensions to operational wind farms (but not the more prominent consented Cairn Duhie wind farm) could potentially further minimise the impact. <b>High-medium</b></p>
<p><b>Landscape value</b> The <i>Drynachan, Lochindorb and Dava Moor</i> SLA covers the majority of this AU. Key characteristics include the homogeneity of these moorlands and the sense of spaciousness and qualities of wildness. Prominent scheduled monuments are present at Lochindorb Castle and Aitnoch. Lochindorb and the Dava Way form a focus for visitors within this AU.</p>	<p>The integrity of moorland, sense of spaciousness and qualities of wildness which are key qualities of the SLA could be significantly diminished by turbines of this size. Visible aviation lighting could be likely to diminish the appreciation of dark skies and wildness. <b>High-medium</b></p>	<p>The integrity of moorland, sense of spaciousness and qualities of wildness associated with the SLA could be significantly diminished by turbines of this size. <b>High-medium</b></p>
<p><b>Sensitivity assessment:</b></p> <ul style="list-style-type: none"> <li>• Turbines &gt;150m: High sensitivity</li> <li>• Turbines 100-150m: High-medium sensitivity</li> </ul>		



## 16 OPEN UPLANDS – SENSITIVITY ASSESSMENT

### 16.1 Introduction

The Hills of Cromdale, which largely lie in the Cairngorms National Park, are classified as the *Open Uplands* LCT in the NatureScot Landscape Assessment. The north-western slopes and the ridge north-east of the summit of Carn a Ghillie Chearr lies outside the National Park and within Highland Council area. This AU, which is based on the part of LCT lying in Highland Council, backdrops the Spey valley (the *Broad Farmed Valley* AU).

#### 16.1.1 *Operational/consented wind farms*

Operational wind farms in Moray are visible from the ridge and upper north-western slopes of this AU. These include the Paul's Hill I, Berry Burn and Rothes I and II wind farms. While these wind farms together form a large swathe of development in views to the north and north-east, their distance limits their landscape and visual influence on this AU. The operational Dorenell wind farm, also in Moray, is substantially screened by landform to the south-east in views from the hill summits. The consented Paul's Hill II extension is likely to be more prominent from parts of this AU due to its closer location (12km) and larger turbines.

### 16.2 Summary description and assessment

The *Open Uplands* in this area cover a small part of the relatively compact and narrow hill range of the Hills of Cromdale. These steep-sided and rugged hills form a scenic backdrop to Strath Avon on their south-eastern side and the Spey valley to the north-west. The height of these hills reduces at the north-eastern and south-western ends of the ridge. The high summit of Carn a Ghillie Chearr (710m), the lower summits on the ridge which tapers down to the junction of the Spey valley and Strath Avon, and the steep north-western slopes of these hills lie in Highland area. The summits of these hills are rounded and fairly confined in extent. Steep slopes are cut by numerous small, incised burns contributing to the strongly folded and rugged appearance of these hills. The hills are largely covered with heather moorland and are unsettled with few human artefacts evident apart from overgrown hill tracks and a telecommunication mast on the small outlier hill of Tom a Chat. These hills are relatively little frequented but offer spectacular views to the Cairngorms plateau and the Spey valley from the ridge and principal summits of Carn a Ghillie Chearr and Creagan a' Chaise (this latter hill lying in the Cairngorms National Park).

The Cairngorms National Park and the *Ben Rinnes* SLA and the *Spey Valley* SLAs in Moray border this AU.

#### 16.2.1 *Potential effects of additional turbines in the context of existing development*

Operational wind farms in neighbouring Moray are visible from the summits and upper north-west facing slopes of these hills although the distance and size of operational turbines (100-125m high) reduces their influence. Key cumulative landscape issues that could occur with additional wind energy development sited in this AU include:

- Potential cumulative effects on views from roads and settlement within the Spey valley and from Ben Rinnes, a popular Corbett hill, in Moray.

### 16.2.2 Constraints

- The close proximity of this AU to the Cairngorms National Park where larger turbines would be likely to significantly affect the character and special qualities of Glen Avon and the Cromdale Hills and could also intrude on more elevated views from the north-eastern part of the designated area.
- Views from Ben Rinnes where larger turbines sited on the ridges and upper slopes of this AU would be seen cumulatively with a large extent of other wind farm development located in Moray.
- The steep rugged slopes of these hills and the relatively confined ridge which inhibits scope for large numbers of wind turbines to be accommodated without substantial earth works to accommodate foundations and access tracks.
- The scenic backdrop these open and rugged hills provide to the Spey valley and the focus they provide in views from the B9102 and from footpaths and settlement within the Spey valley.

### 16.2.3 Opportunities

- More gently graded lower hill slopes at the transition with the *Broad Farmed Valley* AU where sensitively sited smaller turbines could be located to minimise effects on character and views to these hills and also effects on the adjacent Cairngorms National Park.

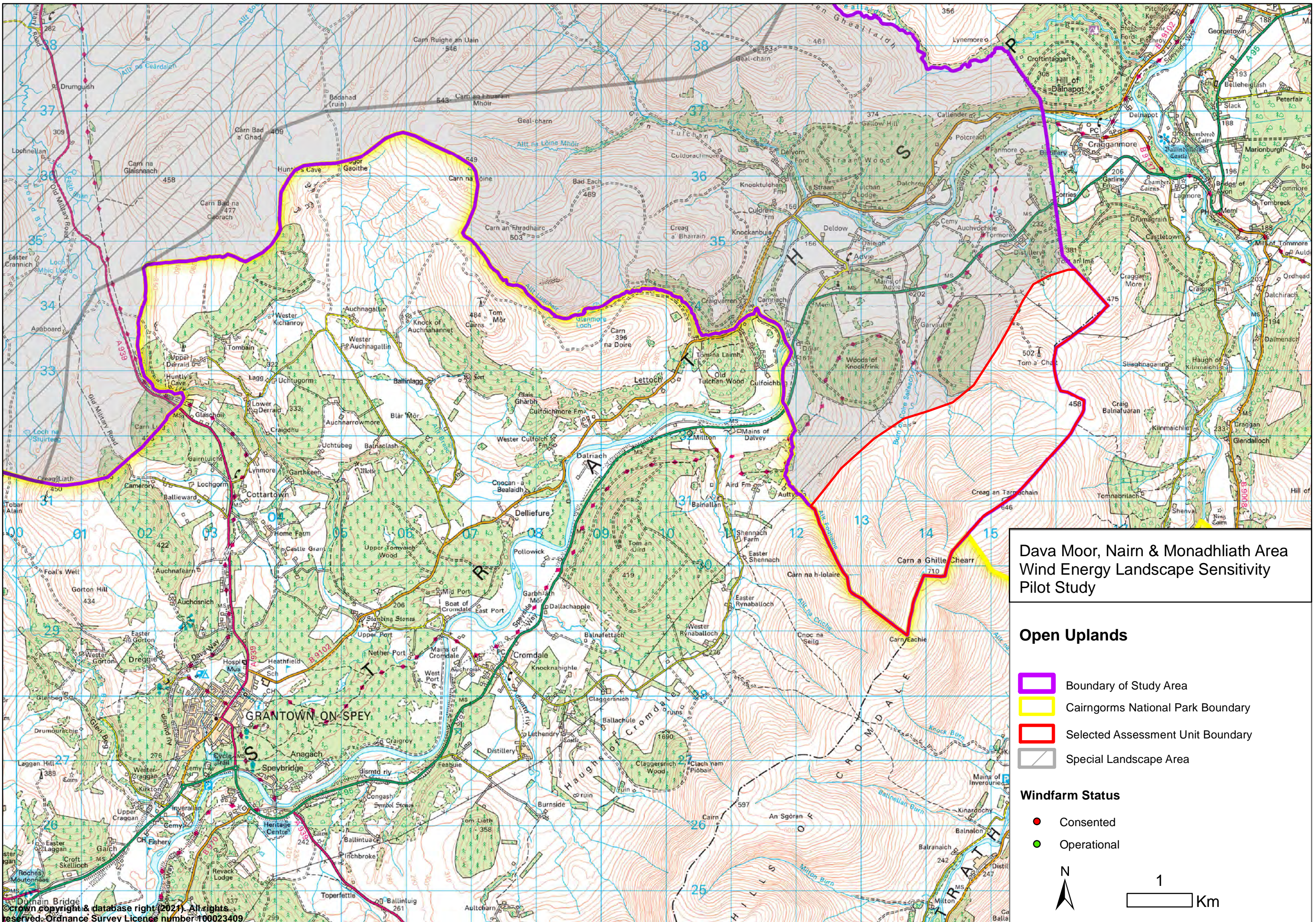
## 16.3 Sensitivity and guidance

The scenic backdrop provided by the rugged open hills of this AU to the Spey valley and their proximity to the Cairngorms National Park and to SLAs in Moray increases sensitivity. This landscape has a **High** sensitivity to turbines >100m which were considered in the detailed assessment.

### 16.3.1 Smaller turbines <100m – general guidance for this AU





There is likely to be little demand for wind turbines <100m high in this very sparsely settled landscape. All turbines sited on the summits and upper slopes and seen on the skyline of these hills would be prominent – they would also introduce human artefacts into a landscape which has a markedly open character. Landscape and visual effects could be minimised by siting single and small groups of turbines <50m on the more gently graded, semi-improved pastures on the lower slopes of these hills which lie at the transition with the *Broad Farmed Valley* AU.







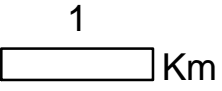
### Dava Moor, Nairn & Monadhliath Area Wind Energy Landscape Sensitivity Pilot Study

#### Open Uplands

-  Boundary of Study Area
-  Cairngorms National Park Boundary
-  Selected Assessment Unit Boundary
-  Special Landscape Area

#### Windfarm Status

-  Consented
-  Operational







*The heather-clad rounded summits of the higher Hills of Cromdale seen from the Spey valley*



*The hills of this AU rise above lower forested hills on the edge of the Spey valley*



*The ridge tapers down to form lower hills at the north-eastern seen here behind Tormore distillery - a transmission line is aligned through a narrow valley*



*The distinct break between the steep heather slopes of the hills and semi-improved pastures on the upper valley sides is reflected in the boundary with the Broad Farmed Valley AU*



**Open Uplands (The Cromdale Hills) – Detailed sensitivity assessment**

Summary description	Assessment of turbines >150m	Assessment of turbines 100-149.9m
<p><b>Scale</b> These hills have a large vertical scale rising to 710m but comprise a relatively narrow range of hills with confined rather than extensive plateau summits. Lower hills at the north-eastern end of the range are less pronounced and form a larger undulating plateau but have a reduced relief when viewed from nearby valleys and glens.</p>	<p>While the large relief of these hills reduces susceptibility, multiple turbines could dominate the limited extent of summit ridges. Although the more subtle rolling landform associated with lower hills at the north-eastern end of the range could better accommodate multiple turbines, their limited relief increases susceptibility with turbines towards 200m and over likely to overwhelm their scale. <b>High-medium</b></p>	<p>The large relief of the higher hills reduces susceptibility, although multiple turbines could dominate the limited extent of summit ridges. The more subtle rolling landform associated with lower hills at the north-eastern end of the range could better accommodate multiple turbines of this size. <b>Medium</b></p>
<p><b>Landform</b> These hills generally have steep rugged slopes with rounded summits tapering to lower and more amorphous hills in the north-east.</p>	<p>The steep slopes and more defined rounded summits are of increased susceptibility although more subtly rolling landform in the north-east would have a reduced susceptibility. <b>High-medium</b></p>	<p>The steep slopes and more defined rounded summits are of increased susceptibility although more subtly rolling landform in the north-east would have a reduced susceptibility. <b>High-medium</b></p>
<p><b>Landcover</b> A predominantly simple land cover of predominantly heather moorland with this managed for grouse.</p>	<p>The generally simple land cover of this character would be less susceptible to development <b>Medium-low</b></p>	<p>The generally simple land cover of this character is less susceptible to development <b>Medium-low</b></p>
<p><b>Built environment</b> There is no settlement in this AU. A 132kV transmission line is aligned through the lower hills near Tormore and a telecommunications mast is located on the small outlier hill of Tom a' Chat. No wind energy developments are located in this AU although there are views of operational and consented wind farms sited in Moray.</p>	<p>The absence of settlement and the distance of operational and consented wind farms in the wider area generally reduces susceptibility (cumulative effects experienced from adjoining landscapes are principally considered in terms of 'Landscape context' below). <b>Medium-low</b></p>	<p>The absence of settlement and the distance of operational and consented wind farms in the wider area generally reduces susceptibility (cumulative effects on adjoining landscapes are principally considered in terms of 'Landscape context' below). <b>Medium-low</b></p>
<p><b>Landscape context</b> This AU extends south-westwards into the Cairngorms National Park. Adjacent uplands in Moray in the Ben Rinnes, Glen Rinnes and Glen Livet area are also defined as the <i>Open Uplands</i>. These adjacent uplands generally have high, well-defined hills and an open and little modified character similar to the Hills of Cromdale – together they form an extensive swathe of little development uplands extending into the Cairngorms National Park. This AU forms a scenic rugged backdrop to the <i>Broad Farmed Valley</i> of the Spey.</p>	<p>Very large turbines sited on these hills would affect the integrity of the Hills of Cromdale range (which does not solely lie in Highland). The presently open rugged backdrop provided to the Spey valley would also be diminished particularly if turbines were sited on the more prominent hills. Lighting of these larger turbines could extend significant effects on adjacent landscapes which are often sparsely settled and feature dark skies (effects on designated landscapes are considered under Landscape Value below). <b>High</b></p>	<p>Large turbines sited on these hills would affect the integrity of the Hills of Cromdale range (which does not solely lie in Highland). The presently open rugged backdrop provided to the Spey valley would also be diminished particularly if turbines were sited on the more prominent hills. <b>High</b></p>

Summary description	Assessment of turbines >150m	Assessment of turbines 100-149.9m
<p><b>Perceptual aspects</b> A distinct sense of naturalness and remoteness is associated with this landscape due to its little modified and unsettled character.</p>	<p>This turbine type would diminish the sense of wildness that can be experienced in these hills. Lighting of turbines would additionally affect the appreciation of dark skies. <b>High</b></p>	<p>This turbine type would diminish the sense of wildness that can be experienced in these hills. <b>High</b></p>
<p><b>Visual amenity</b> This upland landscape is unsettled and relatively few walkers are likely to access the higher hills. These hills are however prominent in views from the B9102 and from settlement and footpaths within the Spey valley, from roads and settlement in Glen Avon and from Ben Rinnes which is very popular with walkers. There are also views of these hills from the north-eastern part of the Cairngorms National Park.</p>	<p>While the sparsely settled nature of this AU reduces susceptibility, turbines could significantly intrude on views from surrounding roads, from more settled landscapes to the north and from within the Cairngorms National Park. Lighting of turbines of this size would contribute to this intrusion. <b>High</b></p>	<p>While the sparsely settled nature of this AU reduces susceptibility, turbines could significantly intrude on views from surrounding roads, from more settled landscapes to the north and within the CNP. <b>High</b></p>
<p><b>Landscape value</b> The Cairngorms National Park (CNP) and the <i>Ben Rinnes</i> and <i>Spey Valley</i> SLAs border this landscape.</p>	<p>The integrity of moorland, sense of spaciousness and wildness which are key qualities of the Ben Rinnes SLA and also the CNP could be significantly diminished by turbines of this size. Visible aviation lighting could be likely to further diminish the appreciation of dark skies appreciated in both the CNP and the Ben Rinnes SLA. <b>High</b></p>	<p>The integrity of moorland, sense of spaciousness and qualities of wildness associated with the Ben Rinnes SLA and CNP could be significantly diminished by turbines of this size. <b>High</b></p>
<p><b>Sensitivity assessment:</b></p> <ul style="list-style-type: none"> <li>• Turbines &gt;150m: High sensitivity</li> <li>• Turbines 100-150m: High sensitivity</li> </ul>		



## 17 ROLLING UPLANDS (THE MONADHLIATH) – SENSITIVITY ASSESSMENT

### 17.1 Introduction

The *Rolling Uplands* AU covers the extensive upland plateaux of the Monadhiath lying between the Cairngorms National Park to the south-east and Strathnairn and the upper Foyers (the *Upper Farmed Strath* AU) to the north-west. Strathdearn extends deep into these uplands in the north-east and is defined as a separate AU, the *Strath in Rolling Uplands*, for the purposes of this study. The *Open Rolling Uplands* AU abuts this landscape to the north-east.

#### 17.1.1 Operational/consented wind farms

There are a number of operational and consented wind farms located in this AU. These include the Moy, Farr, Glen Kyllachy, Dunmaglass, Aberarder, Corriegarh, Dell and Stronelaigh wind farms. These wind farms form five clusters of development in these uplands.

Operational wind farms located in surrounding upland areas are visible from parts of this AU but are generally distant and susceptibility is further reduced because of the limited numbers of visual receptors within this landscape. These wind farms include the Bhlaraidh, Beinneun and Millennium developments lying to the north-west of this AU and the Tom nan Clach wind farm, which lies to the north-east within the *Open Rolling Uplands* AU. While the effect of wind farms in surrounding areas is minimal on character and views from within the *Rolling Uplands* AU, they are seen in conjunction with the five clusters of wind energy development located in this AU from surrounding landscapes which are generally more sensitive and this is addressed in 17.2 below.

### 17.2 Summary description and assessment

The *Rolling Uplands* AU covers an extensive upland plateau with a strong homogeneity of landform and landcover and an expansive scale. Smooth, rounded hills, with summits of similar height, form broad, undulating plateaux, interspersed with lower-lying wet basins and cut by occasional steep-sided straths and narrow glens. The landform is generally simple although higher and more pronounced hills lie on the south-eastern boundary of these uplands with the Cairngorms National Park (CNP). A series of smaller, and more complex, craggy and steep-sided hills abut Strathnairn/the upper Foyers valley on the north-western boundary. Landcover principally comprises grass and heather moorland and areas of bog. Woodland is sparse with some coniferous plantations present on the lower edges of these uplands and close to Strathdearn. Native woodlands are largely associated with the narrow and deeply incised glens which cut into the north-western edge of these uplands near Fort Augustus. The interior of these uplands is uninhabited with settlement and communications, including the A9 and railway, focussed within adjacent Strathdearn in the north-eastern part of this landscape. There are very few public roads although these uplands are accessed by many tracks. Operational wind farms and the Glendoe Hydro scheme are located in these uplands.

The *Monadhiath* Wild Land Area (WLA) covers the southern part of this AU. The Cairngorms National Park abuts the southern boundary of this AU, the *Braeroy*,

*Glenshirra and Creag Meagaidh* WLA borders the south-western boundary and the *Loch Ness and Duntelchaig* SLA lies to the north-west of this landscape.

#### 17.2.1 *Potential effects of additional turbines in the context of existing development*

These uplands accommodate five main clusters of operational and consented wind farms which are widely spaced. The majority of the clusters are associated with lower basins and visual impact tends to be reduced by the degree of screening by higher ground in most (but not all) views from surrounding areas. Operational wind farms lying in the uplands to the north-west of Loch Ness are inter-visible with some of the wind farms located within this AU, seen from parts of the upper Foyers valley and from vantage points, for example from Meall Fuar-mhonaidh on the north side of Loch Ness and from higher hills within the *Glenshirra, Braeroy and Creag Meagaidh* WLA.

Substantial extension of the existing wind farm groups, the construction of new 'stand-alone' wind farms and the use of much larger wind turbines (>149.9m, where a noticeable contrast could arise with operational turbines and where aviation lighting may also be a feature) have potential to result in significant cumulative effects on one or more of the following:

- Views from the Great Glen Way and the hill of Meall Fuar-mhonaidh (which are popular for recreation and offer extensive scenic views over Loch Ness) – extension of existing wind farm groups resulting in substantial infill of the spaces between distinct development clusters could present a more dominant 'wall' of turbines detracting from the landform of the more pronounced hills and glens on the NW edge of this AU. The use of noticeably larger turbines (>149.9m) could result in a confusing visual image on the long skyline of the Monadhliath seen in these elevated views.
- Views from the close-by and popular Munro hills lying on the edge of the Cairngorms National Park and to those in the Creag Meagaidh area where existing development is sufficiently close for differences in turbine size to be perceived and where significant cumulative effects on views and on the sense of wildness (both areas are located in WLAs) could result if substantial expansion of development groups occurred.
- Views from the Corrieyairack Pass, which is popular with cyclists and walkers, and where wind turbines visible on the skyline of hills which contain the track to the north-east could increase visual confusion and negative visual effects with the Beaully-Denny high voltage transmission line and the Melgarve sub-station which already have a strong influence on this route.
- Views from the A9/railway corridor and from settlement in the Strathdearn area – there are few views of wind farms from the A9/railway between Perth and Inverness. Sequential cumulative effects could occur with the Farr, Moy and Tom na Clach wind farms with an intensification of development potentially affecting the approach to Inverness.
- The perception of wildness associated with the *Monadhliath* and *Braeroy, Glenshirra and Creag Meagaidh* WLAs, the special qualities of the Cairngorms National Park and the *Loch Ness and Duntelchaig* SLA. Wind farms are seen from all these valued landscapes but a substantial increase in the scale and/or amount of development could create a more dominant effect.



### 17.2.2 Constraints

- The close proximity of this AU to the Cairngorms National Park where wind energy development sited closer to the boundary (and/or larger turbines) could breach the containment provided by the higher ridge and pronounced summits which form a distinctive backdrop to the Spey valley.
- Views from the Munro hills of Carn Dearg and A'Chailleach which lie in the Cairngorms National Park (the Munro hill of Geal Charn which also lies in the CNP is already significantly affected by the operational Stronelairg wind farm which lies around 3km from its summit)
- Views from the Munro and Corbett summits and ridges lying in the vicinity of Creag Meagaidh where the Stronelairg wind farm is already present in views seen at distances of around 12km.
- The smaller but more pronounced and often craggy hills which lie on the edge of Strathnairn/upper Foyers valley. These hills contribute to the diversity of this settled and farmed strath and also provide some screening of wind energy development located in the simpler interior of these uplands. Turbines sited on, or nearby, these hills would dominate their scale and significantly detract from their distinctive form as well as increase intrusion from roads and settlement within Strathnairn.
- The dramatic glens which cut deeply into the north-western boundary of these uplands and include Glen Tarff and Glen Fechlin – turbines sited close to these glens would detract from their focus in views from vantage points above Loch Ness including from the popular hill of Meall Fuar-mhonaidh.
- The smaller hills which border Strathdearn where large turbines could dominate the scale of this narrow strath and cumulatively affect views from the A9/railway in the Tomatin/Moy area.
- The *Monadhliath* and the *Braeroy, Glenshirra and Creag Meagaidh* WLAs where additional wind energy development could increase the extent of visibility and/or the magnitude of effect on the qualities of wildness – lighting of larger turbines would extend the duration of effects.
- Effects on scenic views from popular vantage points above Loch Ness, for example the hill of Meall Fuar-mhonaidh and from more open sections of the Great Glen Way where the siting, pattern and degree of prominence of wind farms will need careful consideration in order to minimise effects on views and on the key qualities of the *Loch Ness and Duntelchaig* SLA.

### 17.2.3 Opportunities

- Lower-lying basins within the interior of this expansive upland plateau where intrusion on the Cairngorms National Park, WLAs and SLA, from the adjoining smaller scale settled straths and from vantage points above Loch Ness could be minimised.

## 17.3 Sensitivity and guidance

While the extensiveness and simplicity of landform and landcover of much of this AU reduces susceptibility to larger wind turbines, there are constraints relating to the *Monadhliath* WLA which covers part of this landscape and the close proximity of the Cairngorms National Park and the *Braeroy, Glenshirra and Creag Meagaidh* WLA. In addition, the north-western edge of these uplands is of increased sensitivity because of the presence of pronounced smaller scale craggy hills and dramatic glens, the proximity

of the *Upper Farmed Strath* AU and the *Loch Ness and Duntelchaig* SLA and long views from vantage points above Loch Ness.

There would be a **High-medium** sensitivity to turbines >150m and a **Medium** sensitivity to turbines 100-149.9m.

#### 17.3.1 *Guidance for new development and extensions to operational wind farms*

Views into the interior plateaux of this landscape are generally limited to the high summits and ridges of surrounding hills. The popular hills of Meall Fuar-Mhonaidh, Carn Liath (near Creag Meagaidh), Cairn Dearg and A' Chailleach (the latter two hills located in the Monadhliath WLA and CNP) should be used as key design viewpoints during the planning and design of new wind farms with developers requested to provide visualisations at pre-application and scoping stage. Principal design objectives should be to minimise effects on more sensitive landscape and visual receptors by retaining generous spaces between development clusters and avoiding more visually prominent ridges and hill tops. Careful consideration will be necessary of turbine size and aviation lighting.

- **Turbines over 150m** could fit with the scale of this landscape but could contrast with smaller turbines within operational wind farms if sited close-by and seen in key views from surrounding vantage points. Avoidance of higher and more prominent ridges could minimise potential for height differentials to be appreciated. Lighting of turbines would extend and intensify effects on the dark skies which are a key quality of this area with significant effects potentially occurring on the experience associated with the WLAs and on views from the CNP. This sensitivity assessment assumes that visible aviation lighting will be permanently on during hours of darkness and with all turbines likely to be illuminated (see paragraph 2.7.4).
- **Turbines up to 149.9m** additional turbines of this size, including extensions to operational wind farms, could be accommodated in the lower-lying basins where higher ground could provide a degree of screening to turbines, reducing their effect on the CNP, WLAs and on popular vantage points in the surrounding area.
- All wind turbine development should be:
  - Set well back into the interior of these uplands, avoiding intrusion on the smaller and more pronounced hills lying on the north-western boundary of these uplands where they border Strathnairn and the upper Foyers valley.
  - Sited away from the narrow, intimately scaled glens which cut into the north-western edge of these uplands (these include Glen Doe, Glen Fechlin, Glen Brein and Glen Tarff) to avoid dominating containing skylines or detracting from long views to these valleys from vantage points to the north of the Great Glen.
  - Set back from the small hills which contain the settled and smaller scale Strathdearn in order to avoid a dominant effect on nearby skylines and minimise effects on views from the A9/railway in the Moy area including cumulative effects with the operational Moy and Tom na Clach wind farms.



- Extensions to operational wind farms involving a limited number of turbines would be more likely to minimise cumulative effects on more sensitive landscapes within and surrounding this AU. Significant infill of the presently generous spaces between developments should be avoided as this would result in wind turbines having a more dominant effect from surrounding valued landscapes and popular hill summits.
- Access tracks should be carefully designed to avoid intrusion in line with best practice guidance<sup>2</sup>. Partial restoration of access tracks (revegetating edges) and rationalisation of estate tracks within the wider AU should be considered as part of a package of measures by developers/landowners to mitigate the effects of wind farm development and enhance landscape character across the Monadhliath in the long term.
- Additional overhead transmission lines should be avoided particularly in the adjacent *Upper Farmed Strath* AU where a plethora of lines has created a cluttered effect in places.
- It is recommended that the planting of native woodlands, particularly on the more visible edges of these uplands, should be undertaken by wind energy developers/landowners as a condition of consent with the aim of enhancing landscape character in the long term.

### 17.3.2 *Repowering of operational wind farms*

The majority of operational wind farms in this upland landscape are located in visually discreet lower-lying basins. The Dunmaglass wind farm is an exception due to the location of turbines on more elevated ground resulting in increased prominence from the *Monadhliath* WLA and from parts of the CNP. The Stronelairg wind farm lies on the south-western edge of this AU and is therefore closer to popular Munro hills within the CNP and the Creag Meagaidh massif which increases sensitivity. Repowering schemes involving the replacement of existing turbines with larger turbines could be better accommodated where the operational wind farm is more sensitively sited within the interior of these uplands and within lower-lying basins where some screening is provided by surrounding higher ground. Similar design principles, as set out in paragraph 17.3.1 above, apply to repowering schemes. Careful consideration should be given to minimising cumulative effects resulting from different sized turbines and layouts from key views.

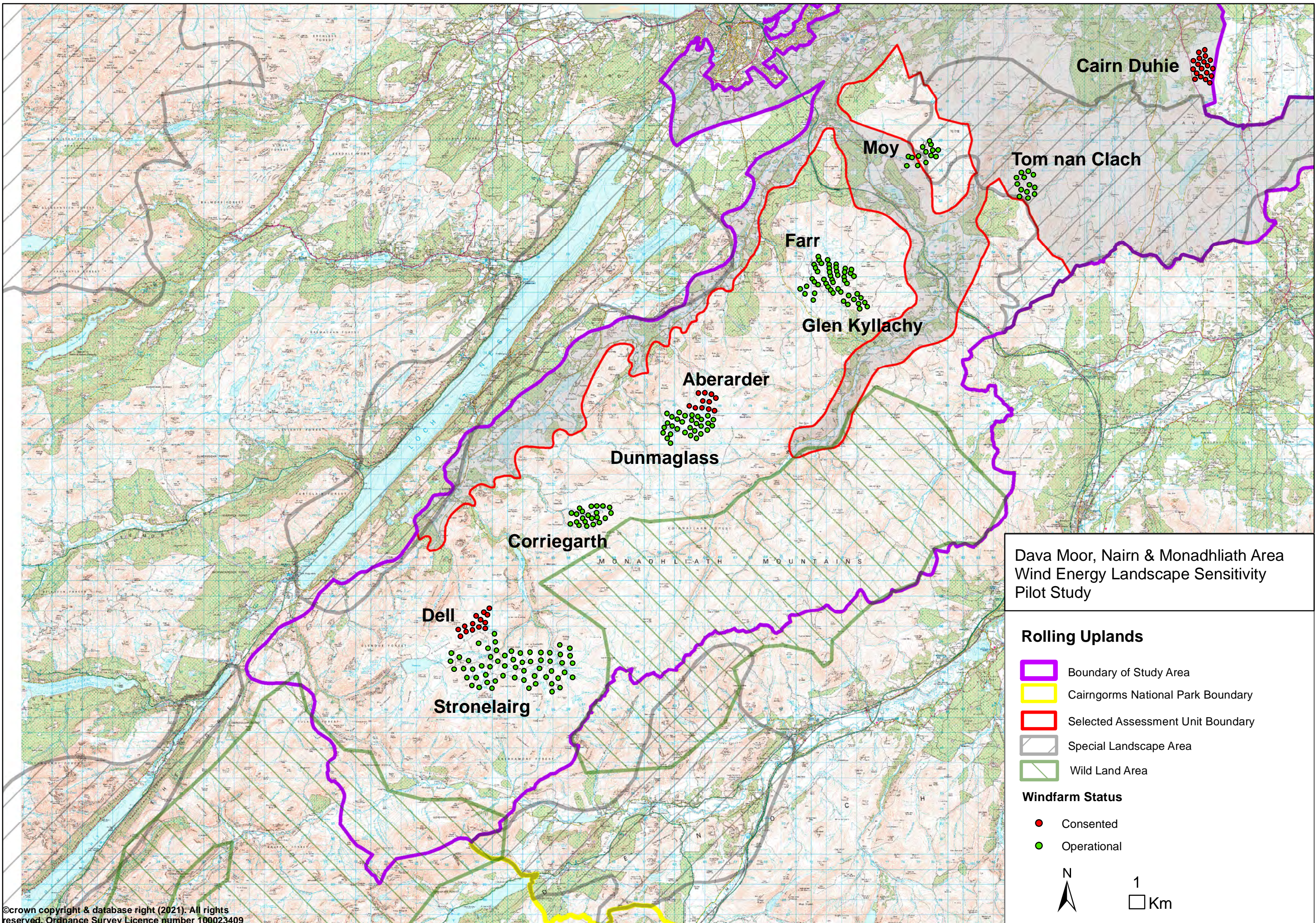
### 17.3.3 *Smaller turbines <100m – general guidance*

There is likely to be little demand for wind turbines <100m high in this very sparsely settled landscape. Some small turbines are present at the transition of these uplands with Strathnairn. There is potential for increased visual confusion to arise because of the contrast of small turbines with larger turbines within operational wind farms and also because of cluttered effect of the many newly constructed transmission lines within Strathnairn.

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<sup>2</sup> Scottish Natural Heritage *Constructed Tracks in the Uplands* (2015)





Dava Moor, Nairn & Monadhliath Area  
Wind Energy Landscape Sensitivity  
Pilot Study

**Rolling Uplands**

- Boundary of Study Area
- Cairngorms National Park Boundary
- Selected Assessment Unit Boundary
- Special Landscape Area
- Wild Land Area

**Windfarm Status**

- Consented
- Operational

N  
↑

1  
□ Km





*The south-western edge of the Monadliath seen from near the Spey valley – the edge hills are located in the Cairngorms National Park*



*The edge of the Monadliath plateau seen from Meall Fuar-Mhonaidh on the NW side of Loch Ness – the Dumnaglass, and Corriegarth wind farms are clearly visible from this hill.*



*The south-western edge of the AU and the Stronelaig wind farm seen from the Creag Meagaidh area.*



*Dunmaglass wind farm seen from the Munro hill of A'Chailleach which is located in the Cairngorms National Park and Monadliath WLA*



*These uplands are extensive and difficult to access – the only public road crosses between Strathdearn and Strathnairn adjacent to the Farr and (under-construction) Glen Kyllachy windfarms*



*Corriegarth wind farm seen from the Suidhe viewpoint on the B862 – more pronounced smaller craggy hills lie on the north-western edge of the Monadliath*

**Rolling Uplands (Monadhliath) – Detailed sensitivity assessment**

Summary description	Assessment of turbines >150m	Assessment of turbines 100-149.9m
<p><b>Scale</b> These uplands have an expansive scale. Individual hills rise to 942m on the border of the CNP although much of this upland plateau generally lies between 600-800m AOD. Lower and more pronounced hills lying on the north-western edge of this AU and the occasional narrow glens which cut through these uplands have a smaller scale.</p>	<p>Susceptibility is reduced due to the predominant expansive scale of this landscape. Smaller hills on the north-western edge and occasional narrow glens would be of increased susceptibility to turbines located close to these features which could dominate their smaller scale. <b>Medium-low</b></p>	<p>Susceptibility is reduced due to the predominant expansive scale of this landscape. Smaller hills on the north-western edge and occasional narrow glens would be of increased susceptibility to turbines located close to these features which could dominate their smaller scale. <b>Medium-low</b></p>
<p><b>Landform</b> These uplands generally comprise smoothly rounded hills interspersed with boggy basins peppered with small lochans. The smaller hills lying on the north-eastern boundary of this AU have more complex craggy tops and ridges and are cut by deeply incised glens.</p>	<p>The predominantly subtly rolling landform of these extensive uplands reduces susceptibility to this size of turbine. The more pronounced and often craggier hills lying on the edge of Strathnairn and deeply incised glens are of increased susceptibility to turbines that would detract from their more complex and often dramatic form. <b>Medium-low</b></p>	<p>The predominantly subtly rolling landform of these extensive uplands reduces susceptibility to this size of turbine. The more pronounced and often craggier hills lying on the edge of Strathnairn and deeply incised glens are of increased susceptibility to turbines that would detract from their more complex and often dramatic form. <b>Medium-low</b></p>
<p><b>Landcover</b> A predominantly simple land cover of grass and heather moorland with extensive wet peaty basins. Some relatively small coniferous plantations are present on the outer edges of these uplands and native woodlands are associated with Glens Tarff, Doe and Buck.</p>	<p>The predominantly simple land cover of this character would be less susceptible to development <b>Medium-low</b></p>	<p>The predominantly simple land cover of this character would be less susceptible to development <b>Medium-low</b></p>
<p><b>Built environment</b> There is no settlement in this AU. A narrow public road traverses the north-eastern end of these uplands and there are many estate tracks. A 400kV transmission line (and the Melgarve substation) is aligned close to the Corriyairack Pass. The Glendoe Hydro Scheme and a number of operational and consented wind energy developments are sited within the core of this extensive upland plateau. There are five clusters of wind farm development in these uplands which are widely spaced and separated by undulating moorland. Built development tends to form nodes with extensive less modified tracts of ground between and as a result it is a</p>	<p>While the presence of existing wind farms and other large-scale infrastructure generally reduces susceptibility substantial additional development could cumulatively change the character of these uplands to a landscape dominated by wind energy development. The extent of open space between the five clusters of wind farm development are important in minimising effects from surrounding more sensitive landscapes (including the CNP, SLA and WLAs) and the proportion of 90-degree views occupied by turbines. The increased size and spacing of this turbine type could quickly diminish the extent of open space and the dominance of wind farm development seen in key views. Turbines of this size</p>	<p>While the presence of existing wind farms and other large-scale infrastructure generally reduces susceptibility substantial additional development could cumulatively change the character of these uplands to a landscape dominated by wind energy development. The extent of open space between the five clusters of wind farm development are important in minimising effects from surrounding more sensitive landscapes (including the CNP, SLA and WLAs) and the proportion of 90-degree views occupied by turbines. Turbines of this size would have greater compatibility with existing turbines. <b>Medium</b></p>



Summary description	Assessment of turbines >150m	Assessment of turbines 100-149.9m
<p>key, but not dominant, characteristic of these uplands. Estate tracks are ubiquitous across these uplands.</p>	<p>would contrast with existing smaller wind turbines particularly if sited close-by. <b>High-Medium</b></p>	
<p><b>Landscape context</b> This AU abuts the CNP where a higher ridge (punctuated by three Munro hills) forms a definitive rim containing views of wind farms located in the lower-lying plateau from lower elevation views in the Spey valley. The more pronounced hills lying on the north-western edge of these uplands form a scenic rugged backdrop to the <i>Upper Farmed Strath</i> and are seen from vantage points above the dramatic trough of Loch Ness, for example, from the hill of Meall Fuar-mhonaidh.</p>	<p>The outer parts of this landscape have the greatest susceptibility in terms of indirect effects of wind energy development on adjacent landscapes. The extensiveness of this AU would generally reduce effects on adjacent landscapes provided turbines towards the lower height band of this type (generally &lt;200m) of this size were located in lower-lying basins in the upland interior. <b>Medium</b></p>	<p>The outer parts of this landscape have the greatest susceptibility in terms of indirect effects of wind energy development on adjacent landscapes. The extensiveness of this AU would generally reduce effects on adjacent landscapes provided turbines of this size were located in lower-lying basins in the upland interior. <b>Medium</b></p>
<p><b>Perceptual aspects</b> A sense of naturalness and remoteness is associated with the less modified parts of this landscape. While the <i>Monadhliath</i> WLA represents the most extensive area of upland with stronger qualities of wildness, a sense of wildness can also be experienced within the more visually contained basins and glens within the interior of this upland plateau where views of wind farms and other infrastructure are precluded.</p>	<p>While susceptibility is reduced close to existing nodes of large-scale infrastructure in these uplands, it increases within and close to the more remote glens where the introduction of new visibility of wind energy development would diminish the sense of seclusion and naturalness experienced. The less modified uplands south of Strathdearn are also of increased susceptibility as, although operational wind farms are already visible, this size of turbine (and particularly those &gt;200m), visible aviation lighting and more extensive bands of development could significantly further diminish the perception of wildness. <b>High-medium</b></p>	<p>Susceptibility is reduced close to existing nodes of large-scale infrastructure in these uplands where the perception of wildness is weakest. Increased susceptibility is associated with the more remote glens where the introduction of new visibility of wind energy development would diminish the sense of seclusion and naturalness experienced. The less modified uplands south of Strathdearn are also of increased susceptibility as, although operational wind farms are already visible, closer and/or more extensive bands of development would further diminish the perception of wildness. <b>Medium</b></p>
<p><b>Visual amenity</b> This upland landscape is not settled and, beyond the Munro hills which lie on the boundary of the CNP and the Corrieyairack Pass, it is not an area which is popular with walkers. Views into the interior of these uplands are restricted due to its extensiveness and also because of the rolling nature of the landform. The outer parts of this upland plateau are generally most visible, principally from the adjacent straths and from the upper Spey valley</p>	<p>The uninhabited nature of these uplands and the general absence of popular walking routes reduces visual susceptibility in terms of views from within this landscape and the likely numbers of receptors that would potentially be affected. Views from surrounding areas are more susceptible to turbines of this size as these could increase intrusion (including the effects of lighting) and result in cumulative effects which could affect visual amenity. Particularly susceptible receptors include</p>	<p>The uninhabited nature of these uplands and the general absence of popular walking routes reduces visual susceptibility in terms of views from within this landscape and the likely numbers of receptors that would potentially be affected. Views from surrounding areas are more susceptible as additional turbines (and particularly turbines located closer to the outer edges of these uplands) would increase the extent of development visible and could also result in cumulative effects which</p>

Summary description	Assessment of turbines >150m	Assessment of turbines 100-149.9m
<p>in the CNP. There are also longer distance views from vantage points above Loch Ness to the NW of this AU, from the high summits and ridges in the Creag Meagaidh area and from parts of the CNP (beyond the Monadhliath Munro hills) including from parts of the Cairngorms Massif, the Drumochter Hills and also from the smaller hills in the Laggan area.</p>	<p>walkers accessing the Munro and Corbett hills lying close to the SE and SW boundaries of this landscape, settlement, roads and footpaths to the NW either side of Loch Ness and views from the A9 corridor/Strathdearn area. Turbines of this size sited closer to the outer parts of this landscape would be likely to increase the extent of significant visual effects.</p> <p><b>High-medium</b></p>	<p>could affect visual amenity. Particularly susceptible views include those from the Munro and Corbett hills lying close to the SE and SW boundaries of this landscape, views from settlement, roads and footpaths NW of these uplands and either side of Loch Ness and views from the A9 corridor/Strathdearn area.</p> <p><b>Medium</b></p>
<p><b>Landscape value</b> The <i>Monadhliath</i> WLA covers the southern part of this AU. The CNP and the <i>Braeroy, Glenshirra and Creag Meagaidh</i> WLA abut this AU and the <i>Loch Ness and Duntelchaig</i> SLA also lies to the north-west. Key qualities of the <i>Monadhliath</i> WLA include the awe-inspiring simplicity and openness and immense scale of the uplands and the strong sense of remoteness and naturalness found in the interior. The <i>Braeroy, Glenshirra and Creag Meagaidh</i> WLA has similar qualities in addition to the distinctive geological features which contribute to the strong sense of naturalness. The descriptions of these WLAs does not take into account the effect of wind farms constructed in this AU since 2014. Relevant special qualities of the CNP are likely to include the strong juxtaposition of contrasting landscapes, principally relating to the backdrop the Monadhliath provide to the Spey valley.</p>	<p>Wind energy development sited within or closer to the <i>Monadhliath</i> WLA would significantly affect key qualities. Turbines of this size located in the south-western part of this AU could also affect the key qualities of the <i>Braeroy, Glenshirra and Creag Meagaidh</i> WLA. Visible aviation lighting would extend these effects. The special qualities and views from the CNP, which overlaps part of the <i>Monadhliath</i> WLA, could also be affected by turbines visible above the present rim of high ground which contains views. Turbines of this size sited close to the NW boundary of this AU could affect dramatic views of Great Glen, diminishing the sense of vast scale and containment, and affect the intimate scale and intricate landscape mosaic found in the Duntelchaig area east of Loch Ness which are key qualities of the SLA. Development sited in the core of these uplands would be likely to have less an effect on designated landscapes with the exception of the <i>Monadhliath</i> WLA.</p> <p><b>High-medium</b></p>	<p>Wind energy development sited within or closer to the <i>Monadhliath</i> WLA would significantly affect key qualities. Turbines of this size located in the south-western part of this AU could also further affect the key qualities of the <i>Braeroy, Glenshirra and Creag Meagaidh</i> WLA especially if new visibility was introduced. The special qualities and views from the CNP, which overlaps part of the <i>Monadhliath</i> WLA, could also be affected by turbines visible above the present rim of high ground which contains views. Turbines of this size sited close to the NW boundary of this AU could affect dramatic views of Great Glen, diminishing the sense of vast scale and containment, and affect the intimate scale and intricate landscape mosaic found in the Duntelchaig area east of Loch Ness which are key qualities of the SLA. Development sited in the core of these uplands would be likely to have less of an effect on designated landscapes with the exception of the <i>Monadhliath</i> WLA.</p> <p><b>Medium</b></p>
<p><b>Sensitivity assessment:</b></p> <ul style="list-style-type: none"> <li>• Turbines &gt;150m: High-medium sensitivity</li> <li>• Turbines 100-150m: Medium sensitivity</li> </ul>		



## 18 SUMMARY AND RECOMMENDATIONS

### 18.1 Introduction

This section of the report summarises the key findings of the sensitivity assessment undertaken for 14 Assessment Units (AUs) within the Dava, Nairn and Monadhliath study area. It addresses the landscape and visual issues associated with wider strategic planning of wind farm and turbine developments and sets out recommendations for a landscape strategy.

### 18.2 Key findings of the sensitivity assessment

Sensitivity to different sizes of wind turbines has been considered with these comprising broad typologies based on height to blade tip. The emphasis of the study is on larger turbines which are more likely to be used in commercial wind farm developments. Figures 4 and 5 show the landscape and visual sensitivity of AUs to larger wind turbines >100m high to blade tip.

In general, the larger the extent and scale of an upland landscape, the less susceptible it is to larger wind turbines. Other factors also come into play including the value associated with some upland landscapes (including their scenic qualities, wildness and importance for recreation), the presence of operational and consented wind farm development and the proximity to smaller scale and/or more sensitive landscapes.

The *Rolling Uplands* (Monadhliath) and the *Open Rolling Uplands* are considered to be the least sensitive AUs, in landscape and visual terms, to larger wind turbines >100m because of their expansive scale and generally simple landform and landcover. However, variations occur in the character and susceptibility of AUs and these, together with the potential effects of large wind turbines on adjoining more sensitive landscapes, and cumulative effects with other operational and consented wind farms, present constraints to development in parts of these uplands. Key landscape and visual constraints are identified in the sensitivity assessments undertaken for each AU and it is recommended that developers are requested to demonstrate how they have addressed these in the siting and design of wind energy proposals, including consideration of potential effects on adjoining AUs.

#### 18.2.1 *Opportunities for repowering of operational wind farms*

The Farr wind farm is the oldest operational wind farm located in the study area (2006) with the majority of other wind farms only operational since 2016-2019. It is therefore unlikely that there would be interest in 'repowering' (usually replacing existing smaller turbines with larger turbines) these schemes in the short-medium term. It is more likely that 'extensions' to these existing developments, comprising larger turbines, will be proposed.

#### 18.2.2 *Sensitivity to wind turbines 150-250m high*

The study considers that new development of turbines >150m (which may comprise stand-alone wind farms or extensions to operational wind farms) within the *Open Rolling Uplands* would have significant effects on the sense of wildness associated with the Dava Moor/Lochindorb area largely due to the visible aviation lighting that is assumed to be required. If meaningful mitigation of lighting effects could be instigated by

developers, sensitivity could reduce. Turbines >150m height are considered too large to accommodate in much of this AU due to the limited relief of isolated hills in the Lochindorb area and effects on views from the A939 and B9007. The simpler and more extensive upland plateau to the west at the transition with the *Rolling Uplands* AU would potentially have a better scale relationship with turbines >150m although other sensitivities come into play including views from the upper Findhorn valley and from the A9 corridor and the scenic backdrop the higher hills centred on Carn nan Tri-tighearnan provide to the coastal lowlands of the study area.

The expansive *Rolling Uplands* of the Monadhliath would be better able to accommodate turbines >150m in terms of scale although key constraints include potential effects of additional (and larger) turbines on the WLAs (within and close-by this AU), on the Cairngorms National Park and the Loch Ness area.

#### 18.2.3 *Sensitivity to turbines 100-149.9m high*

All operational and consented wind turbines within wind farms located in the study area fall within this height category. There are greater opportunities to accommodate turbines of this size in both the *Open Rolling Uplands* and *Rolling Uplands* AUs in terms of scale and compatibility with operational turbines, although similar constraints to those stated above in 18.2.2 for turbines 150-250m high apply with regard to the effects on more sensitive parts of these AUs and also more sensitive landscapes in the surrounding area.

#### 18.2.4 *Sensitivity to smaller turbines below 100m high*

There are very few smaller turbines located in the study area. It is understood that availability of this size of turbine is limited and while in theory refurbished older turbines could come onto the market for reuse, this does not currently appear to be happening.

The coastal plain and straths of the study area have an even dispersal of relatively small farmsteads and other developments and cumulative landscape and visual effects could be significant if even a small number of these were to feature a turbine of 100m height, with multiple turbines in close proximity likely to overwhelm landscape features and affect views. Turbines <25m high would be less visually prominent and fit better with the scale of other landscape features in settled lowland landscapes and minimise cumulative effects.

### **18.3 Strategic landscape issues**

The sensitivity assessment identifies constraints and opportunities within each AU. Although landscape context is considered as one of the key sensitivity criteria, the assessment essentially relates to specific landscapes and any effect on immediately adjacent landscapes in isolation. It is important to therefore also consider the experience and appreciation of the landscape of the study area as a whole and to consider the wider implications of the conclusions of the individual assessments. The following text provides this landscape overview and addresses strategic cumulative landscape and visual effects of wind energy development before setting out a recommended landscape strategy.

As a starting point, we have identified a number of distinctive landscape features which recur across the study area and have highlighted these in the sensitivity assessments



undertaken for each AU. We have focused on landscape features which could potentially be significantly and adversely affected by wind energy development.

#### 18.3.1 *Landscapes with a distinct sense of wildness*

The *Monadliath* Wild Land Area represents the most extensive area exhibiting strong qualities of wildness in the study area. There are no wind farms located in this WLA although a number of developments are clearly visible from it.

Other parts of the study area also trigger a strong perceptual response linked to wildness and other experiential qualities. These include sections of the sparsely settled upper Findhorn valley, the Lochindorb and Dava Moors and the less developed parts of the coast west of Nairn.

The Lochindorb and Dava Moors fall within the *Open Rolling Uplands* AU and are covered by an SLA designation. While these open moorlands do not exhibit the strongest qualities of wildness in the same way as a WLA, they do have a distinct 'sense of place'. This is encapsulated in the SLA citation which recognises the 'boundless sense of space' and 'big skies' and the rarity in Highland of this high tableland which can be appreciated from public roads.

#### 18.3.2 *The coast and wider seascape*

The coast and wider seascape of the Moray Firth is another key landscape feature within the study area. The coast includes extensive stretches of natural coastline and also forms the setting to Fort George and Chanonry Point, which are particularly popular with visitors. The importance of these coastal features are recognised by the *Sutors of Cromarty, Rosemarkie and Fort George* SLA designation. The eastern part of the coast within the study adjoins the *Culbin to Burghead Coast* SLA within Moray recognised for its diverse coastal geomorphology and recreational value. The part of the Culbin coast within Highland has similar qualities to those found within this SLA.

#### 18.3.3 *Extensive and diverse woodlands*

The woodlands found in Nairnshire (and west Moray) are notable for their extensiveness and also for their diverse and naturalistic character. They are an unusual and distinctive feature in the context of the UK's low percentage of woodland cover. Commercial woodlands predominantly comprise Scots pine and these often merge imperceptibly with mixed policy woodlands associated with the deeply incised and dramatic Findhorn valley and the many historic estates. These woodlands form an extensive swathe lying between the open and expansive Dava, Drynahan and Lochindorb Moors to the south and the intensively farmed coastal plain to the north and as such contribute to the rich variety of landscapes encountered when travelling through the study area.

### 18.4 **The existing pattern of wind farm development in the study area**

Large operational and consented wind farm developments are associated with the more expansive upland areas of the *Open Rolling Uplands* and the *Rolling Uplands* AUs. There are no wind farms located in the more settled and intensively farmed lowlands of the study area. Current pressure for wind energy development is focussed on these upland landscapes.

Operational wind farms and larger turbines sited within Moray are visible from the Dava Moor/Lochindorb area. There is also some inter-visibility with wind farms located in the *Rolling Uplands* AU and those located in the uplands to the NW of Loch Ness.

### 18.5 Current trends and issues related to wind farm development

The following trends and issues have been taken into account in considering an appropriate landscape strategy:

- Extensions to operational wind farms which comprise substantially larger turbines and/or are different in their siting and association with a specific landscape feature (for example a bowl landform which provides some visual containment) thus affecting the design integrity of the original development and also resulting in wider effects on surrounding more sensitive landscapes.
- Proposals for increases in turbine sizes of consented wind farms i.e. new applications submitted before any construction of the original consented proposal has been constructed.

To date, there has been no registered interest in the repowering of older operational wind farm developments in the study area.

### 18.6 A recommended landscape strategy

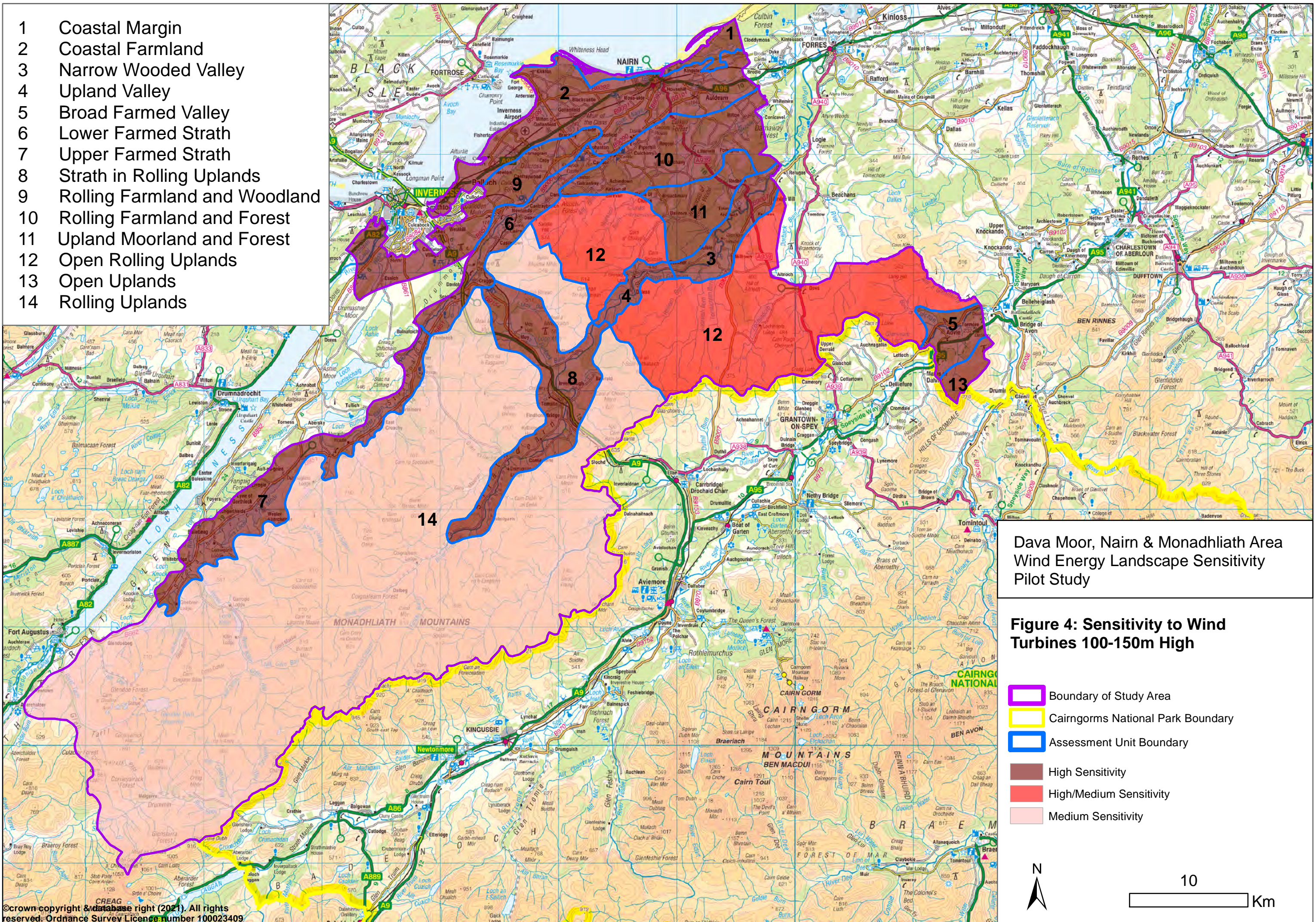
- ***Maintain the distinctive approach to the Nairn area experienced from the A939/B9007*** when travelling north from the Cairngorms National Park. Diverse woodlands, deeply incised intimately scaled valleys, small hills, lochs and wetland basins and expansive open moorland provide a richly scenic landscape appreciated from these routes. Increases in visual intrusion by additional larger turbines located close to these routes would detract from the distinctive scenic experience.
- ***Protect the distinctive qualities of the coast and its associated historic features*** by resisting development of wind turbines where they could intrude on views from roads, settlement and recreational areas and also affect the setting of historic features and the sense of wildness experienced along the most natural and remote stretches of coast.
- ***Protect the distinctive character of Lochindorb and Dava Moors*** resisting development which would dominate the scale of the relatively low relief of the hills which punctuate the broad basins of Lochindorb and Dava, affect the setting of Lochindorb, intrude on views from the A939 and B9007 and diminish the sense of huge space and wildness associated with this landscape.
- ***Protect the integrity of extensive and diverse woodlands*** although many of these woodlands are commercially managed, they are diverse in terms of age and species composition and, together with similar woodland cover in western Moray, make a strong contribution to the scenic qualities of the eastern part of the study area.
- ***Ensure that any further development of larger turbines is clearly associated with less sensitive upland landscapes*** where their greater extent and larger scale can better accommodate, and provide an appropriate setting, to large turbines. Impacts on adjacent more sensitive landscapes should be minimised by setting development well back into the interior of more extensive tracts of upland, considering limitations in the height and numbers of turbines



(including concentrating clusters of development to minimise the horizontal spread of turbines and avoid a more dominant effect) and avoiding more visually prominent sites.

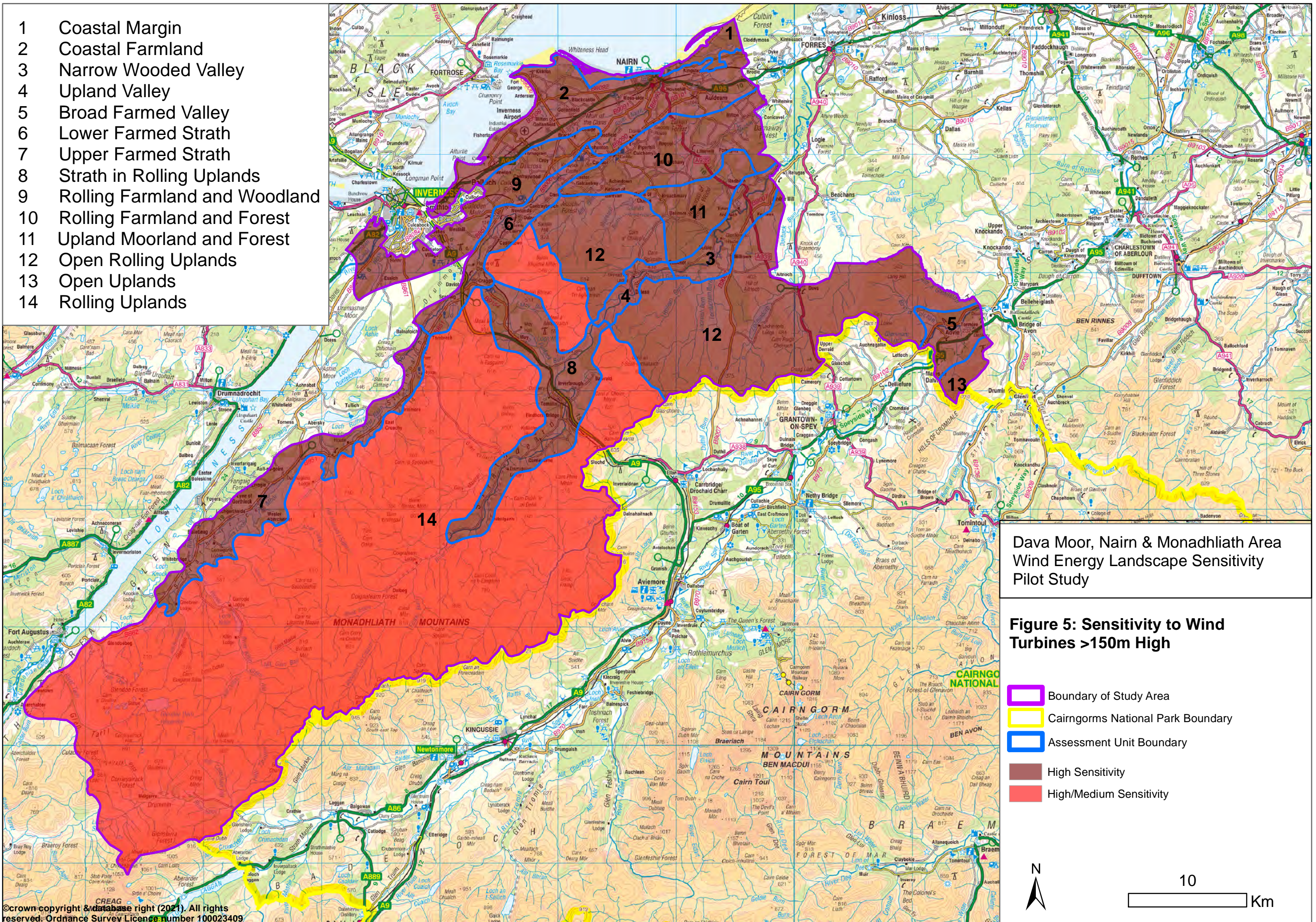


- 1 Coastal Margin
- 2 Coastal Farmland
- 3 Narrow Wooded Valley
- 4 Upland Valley
- 5 Broad Farmed Valley
- 6 Lower Farmed Strath
- 7 Upper Farmed Strath
- 8 Strath in Rolling Uplands
- 9 Rolling Farmland and Woodland
- 10 Rolling Farmland and Forest
- 11 Upland Moorland and Forest
- 12 Open Rolling Uplands
- 13 Open Uplands
- 14 Rolling Uplands





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## APPENDIX A: REFERENCES

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## APPENDIX B: SCOPING EXERCISE TO DETERMINE TURBINE TYPES CONSIDERED IN EACH ASSESSMENT UNIT

This scoping exercise has been undertaken to determine the turbine types considered in detail in the sensitivity assessment for each Assessment Unit. The aim has been to focus the sensitivity assessment on the most likely development scenarios taking into account the type and pattern of existing and current applications for wind energy developments.

Assessment Unit	Initial appraisal of key characteristics	Turbine types considered in the detailed assessment
<i>Coastal Margin</i>	While this coastal landscape is not small in scale due to the 'borrowed' expansiveness of the Moray Firth, the complexity of coastal features, the openness of views and sense of naturalness and seclusion associated with this coast increase susceptibility to larger turbines. Part of this coast lies adjacent to former industrial areas in the <i>Coastal Farmland</i> which may be a focus for wind energy development in future.	Turbines <149.9m
<i>Coastal Farmland</i>	This landscape has a gently undulating to flat landform and is very open in places. While these characteristics can increase landscape scale, the presence of a consistent pattern of dispersed buildings and other small features increase susceptibility to larger turbines which would overwhelm the scale of this landscape. This landscape includes some industrial development which may be a focus for wind energy development in future although the presence of the airport is likely to be a technical constraint to wind energy development in some areas. There may be demand for farm-based smaller turbines in future.	Turbines <149.9m
<i>Narrow Wooded Valley</i>	The small scale and limited extent of this narrow valley would be dominated by larger wind turbines. The integrity of the richly diverse woodland and policies which are a key characteristic of this landscape is also highly susceptible to multiple turbines. There may be technical constraints to accommodating wind turbines in this sheltered valley and the steep terrain would inhibit development of multiple turbines (and commercial wind farm developments) although there may be some limited demand for farm-based smaller turbines in future.	Turbines <100m
<i>Upland Valley</i>	The small scale and limited extent of this narrow valley would be dominated by larger wind turbines. There would also be likely to be technical constraints to accommodating turbines due to the sheltered nature of the valley and the steep terrain. There may be some limited demand for farm-based smaller turbines in future.	Turbines <100m
<i>Broad Farmed Valley</i>	Larger turbines would dominate the scale of this	Turbines <100m



	narrow, settled valley. The steep and predominantly wooded slopes which contain this valley would also be susceptible to larger turbines and particularly multiple turbines of this size. There may also be technical constraints to accommodating commercial scale turbines/wind farms on the sheltered valley floor.	
<i>Lower Farmed Strath</i>	The narrow extent and small scale of the well settled landscape of Strathnairn would be dominated by larger turbines. Steep valley sides and the strongly contained nature of this strath are likely to present technical constraints to commercial scale wind energy development.	Turbines <100m
<i>Upper Farmed Strath</i>	The small-medium scale of the settled landscape of upper Strathnairn and the upper Foyers valley (which includes prominent but low relief rocky hills in this and an adjacent landscape) would be dominated by larger turbines. Susceptibility would also be increased to commercial scale wind energy development in terms of effects on the Loch Ness and Duntelchaig SLA and the contrast that would occur with wind farms located in the Monadhliath.	Turbines <100m
<i>Strath in Rolling Upland</i>	Larger turbines would dominate the narrow upper strath and conflict with the scale of settlement and landcover features in the broader northern part of this strath. Steep side slopes and the sheltered valley floor (particularly in the more contained upper strath) would be likely to present technical constraints to commercial wind turbine developments.	Turbine <100m
<i>Rolling Farmland and Forest</i>	This landscape has a small to medium scale, complex rolling landform in places and low relief increasing susceptibility with regard to scale. It is moderately settled with a number of farms which may increase demand for single and small groups of turbines in future. The diverse woodland cover is an added constraint although broader areas of farmland are also present.	Turbines <149.9m
<i>Rolling Farmland and Woodland</i>	This landscape has a small to medium scale and complex rolling landform in places increasing susceptibility with regard to scale. It is well settled with a number of farms which may increase demand for single and small groups of turbines in future. More diverse woodland cover and policy features are an added constraint although broader areas of farmland and more uniform woodlands are also present.	Turbines <149.9m
<i>Upland Moorland and Forestry</i>	This landscape accommodates a number of operational wind farms where it occurs in Moray although a higher proportion of forest covers the part of this AU in the study area. The landform is generally gently undulating and sparsely settled which increases scale. There is unlikely to be	Turbines >100m (assumed to be up to approximately 250m)

	demand for smaller turbines.	
<i>Open Rolling Uplands</i>	This landscape forms the focus of current interest from wind farm developers. The operational Tom nan Clach and the consented Cairn Duhie wind farms are located in the part of this AU which lies in the study area. The very sparsely settled nature and large scale of much of this landscape reduces susceptibility to larger turbines although these qualities (and others) also contribute to the distinctiveness of this landscape as recognised by the SLA designation.	Turbines >100m (assumed to be up to approximately 250m)
<i>Open Upland</i>	This AU covers a very small part of the Cromdale Hills. There is no current interest in this AU for commercial wind farm development presumably because of the proximity of these uplands to the Cairngorms National Park. There is unlikely to be demand for smaller turbines <100m in these unsettled uplands.	Turbines >100m (assumed to be up to approximately 250m)
<i>Rolling Uplands</i>	There are a number of operational and consented wind farms in this AU and it forms a focus of current interest from developers. The large scale and simple landform of much of this landscape reduces susceptibility to larger turbines although these qualities (and others) also contribute to the sense of wildness that can be experienced in parts of this landscape and which is recognised by the <i>Monadhliath</i> WLA. There is unlikely to be demand for smaller turbines <100m in these unsettled uplands.	Turbines >100m (assumed to be up to approximately 250m)