MORAY WIND ENERGY LANDSCAPE CAPACITY STUDY

Updated and Revised Final Main Report – Post Consultation

May 2017

Carol Anderson Landscape Associates

CONTENTS

1 INTRODUCTION

1.1 Policy context

The Scottish Government is committed to increasing the amount of electricity generated from renewable sources. The current target is to meet the equivalent of 100% of Scotland's electricity requirement from renewable sources by 2020. Most of this capacity is likely to be met from hydro-electric and on-shore wind power, but in due course there is expected to be a wider range of productive renewable technologies, including off-shore wind power as well as biomass, solar, energy from waste and landfill gas and wave and tidal power.

1.1.1 *Scottish Planning Policy 2014*

Scottish Planning Policy 2014 (SPP) requires local 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 stresses the need for the planning system to guide development to appropriate locations and local development plans are required to set out the issues that will be taken into account when considering specific proposals for energy developments. SPP states that planning authorities..." *should identify where there is strategic capacity for wind farms, and areas with greatest potential for wind development, considering cross-boundary constraints and opportunities"* (SPP paragraph 162).

1.1.2 *The role of landscape capacity studies for wind energy development*

Advice from the Scottish Government clarifies that while landscape capacity studies do not form part of spatial frameworks as defined in SPP, they are supportive studies relevant to development management and for planning policy related to natural heritage and the landscape. Landscape capacity studies should establish local landscape sensitivities, identify acceptable levels of landscape change, identify cumulative effects and set objectives and guidance to managing those effects and identify scope for further development.

Scottish Natural Heritage (SNH) provides further guidance on the use of landscape capacity studies in the document *Spatial Planning for Onshore Wind Turbines – natural heritage considerations* (June 2015). This guidance states that landscape capacity studies are a material development management consideration that will underpin supplementary guidance and inform good decision making. These studies can support the requirements of SPP by identifying landscape sensitivities early in the process and capacity for further development, considering cumulative landscape and visual effects. Landscape capacity studies can also provide advice on general design, such as turbine height and layout, and on the scope for change to existing wind farm development, for example, through the replacement of turbines (commonly known as 'repowering').

1.2 Moray Wind Energy Landscape Capacity Study (2012)

Moray Council commissioned a landscape capacity study for wind energy development in 2012. This study provided detailed landscape and visual sensitivity assessment based on the landscape character types set out in the SNH Moray and Nairn 1998 landscape character assessment. The 2012 study considered a range of development typologies principally based on turbine height and produced detailed guidance on the siting of smaller wind turbines. It set out strategic landscape recommendations which identified key features of the Moray landscape which required protection from inappropriate development. This capacity study informed the Spatial Framework set out in the Moray Onshore Wind Energy Supplementary Planning Policy Guidance (2013) and is a material consideration in the evaluation of specific wind energy developments.

1.3 Background to the updated landscape capacity study

The Moray Council proposes to review its Onshore Wind Energy Policy Guidance to ensure the Council has an updated policy framework for determining proposals. To inform this review, the Council required an update of the 2012 Moray Wind Energy Landscape Capacity Study (MWELCS) with the aim of providing supporting information to the Spatial Framework set out in the Moray Local Development Plan. The updated 2017 Moray Wind Energy Landscape Capacity Study forms a technical appendix to the Supplementary Guidance produced by the Council.

Since the publication of the 2012 Moray Wind Energy Landscape Capacity Study a number of wind farms have either been constructed or consented. Interest in single and smaller turbines has not significantly increased, contrary to what was anticipated in 2012. Proposals for extensions to existing wind farm developments and for new developments comprising smaller numbers of large turbines sited on the periphery of upland areas have increased however.

1.4 Study Aims

The aims of the study are to:

- Review and update the 2012 capacity study to provide a detailed landscape and visual sensitivity assessment for wind turbine/wind farm developments based on landscape character areas defined in the soon to be published SNH revised Landscape Character Assessment covering Moray.
- Set out clear spatial principles as to what size of wind energy development would be appropriate, in landscape and visual terms, within the different landscape character areas considered in the study.
- Identify areas which are unsuitable in landscape terms for wind energy development.
- Consider potential cumulative and cross-border landscape and visual impacts, identifying where cumulative thresholds for development have been/are close to being reached. Cumulative impacts on key roads and long distance footpaths are to be considered.
- Identify opportunities for repowering and extensions of existing and consented wind farms and potential for clustering of wind energy proposals.

- Provide clear siting and design guidance for landscape character areas identified as having some potential for development.

1.5 Structure of the report

This report initially sets out the methodology adopted for the study, the landscape character areas and the development typologies assessed in the study. Operational and consented wind farm and turbine developments which form the baseline for the study are also identified.

Landscape and visual sensitivity assessments have been produced for 15 landscape character types/sub-areas within Moray. These consider sensitivity against identified landscape and visual criteria for a range of development typologies principally based on turbine height. Guidance is provided on cumulative issues, opportunities and constraints for development and on siting and design, where scope for development is identified, for each landscape character type/sub-type.

1.6 How to use the study

The study aims to support strategic spatial planning for wind energy developments and to provide guidance on the appraisal of individual wind farm and wind turbine proposals.

The sensitivity assessments have been undertaken on the basis of defined landscape character types/sub-types. Landscape character types have 'fluid' boundaries where a gradual transition can occur between adjacent character types with some similar characteristics. Wind turbines are also tall structures likely to have an influence on adjoining landscape character types. It is therefore recommended that when considering individual proposals, both the landscape character type that the development lies in and immediately adjoining character types are reviewed as wider sensitivities may apply. In some cases landscape character types extend into adjacent authorities and these types also need to be considered.

This study considers the ability of landscape character types to accommodate wind turbines as a landscape characteristic which can be repeatedly and consistently accommodated across each landscape character type. The recommendations and guidance on capacity for each character type reflect the potential of the landscape to accommodate turbines as a landscape characteristic, either as multiple single features or multiple groups within the landscape character type.

In terms of guidance, the study indicates that where a landscape character type is identified as being of ***High*** sensitivity rating overall for any typology, it is the opinion of the consultants that the typology cannot be accommodated in the landscape character type without unacceptable significant adverse landscape and/or visual effects arising across a wide range of key landscape and visual sensitivities.

Landscape character types found to be of ***High-medium*** sensitivity will have a number of significant constraints to wind farm/turbine development. While some characteristics (usually found in limited parts of these landscapes) may relate better to such development, significant adverse landscape/visual effects are likely to occur on other

key characteristics. We consider that there is likely to be either no scope or very limited scope for development in a small part of these character types only.

The study considers the sensitivity of landscape character types to a limited number of pre-determined turbine typologies, principally based on height. We consider that it is not practical to appraise a wide range of turbine typologies in a capacity study as it becomes too complicated in the field assessment but also in clearly presenting findings on sensitivity. Individual applications therefore 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. Where turbines are slightly above the height threshold or proposed within more sensitive landscapes, they should be subject to careful and thorough consideration with the developer being requested to demonstrate how they have dealt with potential effects on the constraints identified in the sensitivity assessment at a more detailed level.

2 STUDY METHODOLOGY

2.1 Introduction

The study considers the sensitivity of key characteristics of different landscapes within Moray to changes that would be brought about by new wind energy development. Although the focus is on landscapes within Moray, landscape and visual sensitivities and potential cumulative issues associated with adjoining authorities are also considered. Moray and adjoining authorities are shown in Figure 1.

The sensitivity assessment assesses landscape and visual aspects only and a range of environmental and other factors also need to be considered in the strategic planning and appraisal of wind energy development proposals.

2.2 Background to landscape capacity

Landscape capacity is described as *'the degree to which a particular landscape character type or area is able to accommodate change without significant effects on its character, or overall change of landscape character type. Capacity is likely to vary according to the type and nature of change being proposed'* [1]

There is currently no formally agreed approach or methodology for assessing the sensitivity or capacity of different landscapes to wind energy development. Scottish Natural Heritage (SNH) Commissioned Report 385 *Landscape Capacity Studies in Scotland – Review and Guide to Good Practice* was issued in 2010 and both the 2012 MWELCS and this updated capacity study accords with the guidance set out in this document. More detailed guidance is also provided by SNH in the document *Siting and Designing Wind Farms in the Landscape* (2014) which includes advice on strategic planning for wind farms, and in the *Siting and Design of Single and Groups of Small Turbines in the Landscape* (2012). A full list of reference material used in the study is set out in Appendix A.

Most landscape capacity studies are based on landscape character units and identify key characteristics of each landscape area or type potentially sensitive to a given development. The particular characteristics defined as key sensitivity criteria may change according to the nature of the development being considered, although the methodological approach between studies is generally similar. Visibility and views may be considered as a separate issue or may form part of the assessment of landscape sensitivity as a criterion together with key landscape characteristics.

Landscape values (which include designated or 'valued' landscapes) may be considered as a separate criterion in the sensitivity assessment although this will depend on the background information available on the reasons for designation and the wishes of the commissioning body and also the preferences of the landscape consultant undertaking the capacity study.

[1] Swanwick, Carys and Land Use Consultants, *Landscape Assessment Guidance for England and Scotland*, 2002, Countryside Agency and Scottish Natural Heritage.

2.3 Definition of terms

The following definitions of terms apply to this study:

Landscape character

Landscape relates not only to the physical attributes of the land but also to the experience of the receptor. Landscape character is made up of the physical characteristics such as landform, land cover and settlement pattern (which exist whether anyone sees them or not) plus a range of experiential and perceptual responses to that landscape.

Landscape sensitivity

Sensitivity relates to landscape character and how vulnerable this is to change. In this study, change relates to wind energy development and any findings on landscape sensitivity are restricted to this. Landscapes may have different sensitivities to other forms of change or development. In this study, sensitivity is assessed by considering the effect of different heights of wind turbine development on the physical, experiential and perceptual characteristics of landscapes. Landscapes that are highly sensitive are at risk of having their key characteristics fundamentally altered by the wind turbine typology under consideration in the assessment.

Landscape capacity

This relates to how far a landscape can accommodate development without unacceptable significant adverse impacts on its character. Landscape character and sensitivity are part of this, but in this study capacity also includes an assessment of visual sensitivity.

2.4 General approach to the study

The approach to the study has been informed by guidance on the potential impacts and landscape sensitivities associated with wind energy development and on the practical application of methodologies used in recent landscape capacity studies we have undertaken. The study has involved the following key tasks:

- Identification of existing and consented wind farm and turbine developments in Moray and within adjoining authorities to inform the baseline for this study.
- Identification of the different wind turbine development typologies to be assessed in the study in collaboration with the Steering Group which comprises representatives of The Moray Council and SNH.
- Definition of the landscape and visual sensitivity criteria to be used in the assessment.
- Field work to re-assess the sensitivity of landscape character areas to the agreed development typologies using identified sensitivity criteria and considering operational and consented wind energy developments.
- Consideration of potential ‘repowering’ of existing wind farms, assessing the potential landscape and visual effects of introducing larger wind turbines to the Moray landscape.

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

2.5 Operational and consented wind farms and turbines

The operational and consented wind farm developments lying in Moray and close to its boundaries set out in Table 1 below, form the baseline for the assessments in this study. These developments are shown in Figure 2.

Proposed wind energy developments are not considered in the assessment and this is in accordance with the approach set out in SNH's guidance on assessing the cumulative impact of onshore wind energy developments.

Table 1: Operational and consented wind farms considered in the study

Windfarm	***Turbines***	***Height to blade tip***	***Landscape character area***
Operational wind farms and turbines > 50m high			
Rothes	28	100m	Upland Moorland and Forestry
Paul's Hill	28	100m	Open Rolling Uplands
Hill of Towie	21	100m	Rolling Forested Hills
Berry Burn	29	104m	Open Rolling Uplands
Rothes II	18	125m	Upland Moorland and Forestry
Myreton, Keith	3	80/89m	Upland Farmland
Balnamoon, Keith	1	70m	Upland Farmland
Netherton of Windyhills	2	92m	Upland Farmland
Clashindarroch	18	110m	(Aberdeenshire)
Kildrummy	8	93m	(Aberdeenshire)
Consented wind farms and turbines >50m high			
Dorenell	59	126m	Open Uplands with Settled Glens
Hunthill, Rothes	3	67m	Upland Moorland and Forestry
Cluny Farm, Forres	1	61m	Rolling Farmland and Forests with Low Hills
Ardoch Farm, Mulben	1	67m	Broad Farmed Valley
Bognie Farm	1	61m	Rolling Farmland and Forests with Valleys
Aultmore	13	110/100m	Broad Forested Hills within Upland Farmland
Hill of Glaschyle	12	99.5m	Upland Moorland and Forestry
Kellas	4	100m	Upland Moorland and Forestry
Meikle Hill	6	126.5m	Upland Moorland and Forestry
Edintore	6	125m	Upland Farmland

Smaller wind turbine developments

There are a number of operational single and small groups of turbines below 50m high in Moray. These are largely located within the *Upland Farmland* (8), *Broad Farmed Valley* (7) and *Coastal Farmland* (4) landscape character types.

2.6 Baseline landscape character

The 1998 Moray and Nairn and Inverness District landscape character assessments were reviewed by SNH in 2014/15. Within the Moray area, this review principally revises detailed boundaries of landscape character types so that they accord more accurately with on the ground landscape features. Some more major amendments have also been made to the areas defined as *Upland Farmland*, *Narrow Wooded Valley*, *Broad Farmed Valley* and *Open Uplands* in the 1998 Moray and Nairn Landscape Assessment. A detailed appraisal of these revisions, and consideration of their validity in relation to the sensitivity assessment undertaken as part of this update to the 2012 Moray Wind Energy Landscape Capacity Study, is set out in Appendix B to this report. The draft revised 2014/15 SNH landscape character classification is shown in Figure 3.

This updated capacity study principally adopts the same definition of landscape character types used in the 2012 capacity study but with some changes made to the treatment of the *Upland Farmland* (8) and *Broad Farmed Valley* (7) landscape character types to accord with the revised 2014/15 SNH characterisation. The landscape character areas considered in the 2017 MWELCS sensitivity assessment are shown in Figure 4.

2.7 Development typologies

2.7.1 *Smaller typologies*

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. We have found during our field assessments (and observations of existing smaller turbines in the landscape) that there is a noticeable 'threshold' at around 30-35m height to blade tip where over this height a turbine will quickly become a dominant feature in many lowland/more settled landscapes.

The focus of this updated study is on 'commercial' wind farm developments and extensions to existing wind farms rather than smaller turbines <50m high. There is little revision to the original 2012 capacity study in terms of the conclusions reached on sensitivity to turbines <50m high apart from the definition of areas where capacity is considered to be close to being reached due to cumulative landscape and visual effects associated with multiple wind turbines.

2.7.2 *Larger typologies*

In terms of larger developments (turbines 50m +) we have principally considered the height of turbine within the sensitivity assessment as this is a critical factor in

determining landscape and visual sensitivity. We have not specifically considered pre-determined numbers of turbines within the typologies assessed as this would make the sensitivity assessment complex and potentially difficult to follow. Some indication is given however of the likely extent of development that may be accommodated where the sensitivity assessment indicates some capacity within the guidance set out for each landscape character area. The assessment therefore is applicable to both single, small groups and larger groups of turbines comprising 'wind farm' developments.

2.7.3 *Development typologies considered in this updated capacity study*

We have considered the following development typologies in the study:

- ***Small turbines up to 35m high***. These turbines will be higher than most domestic buildings, woodlands and trees but may be similar in height to small pylons or relate in scale to lower, but relatively large scale industrial buildings. We have considered single and small groups of up to 3 turbines within this category.
- ***Small-medium turbines 35m to 50m*** Turbines in this category will be a similar size to high voltage transmission line towers and up to 3 times taller than mature trees and woodlands.
- ***Medium turbines 50m to 80m high***
- ***Large turbines 80-130m high*** All operational and consented turbines in Moray fall within this height category.

In addition, the appraisal of repowering potential (set out in section 4 of this report) has considered much larger turbines with theoretical visibility studies and visualisations undertaken for two heights of turbines, 150m and 200m to blade tip. This appraisal focuses on operational and consented wind farm developments (and the landscapes they are sited within) only.

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 small groups of turbines have been considered and the assessment also considers scope for multiple developments located across the character type. The number of turbines that can be accommodated within a wind farm development will be determined by the relative extent of the landscape character type (or less sensitive part of a landscape character type) and potential effects on key landscape and visual constraints outlined in the assessment.

Detailed assessment of sensitivity to turbines <50m 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 typologies where relevant.

2.8 The sensitivity assessment

The study considers the sensitivity of key landscape and visual characteristics of different landscape character areas within Moray to the development typologies outlined above. In terms of assessing the potential effects of turbines on key characteristics,

judgements were made on turbine height first. Numbers of turbines were considered in relation to the scale of key landscape features and any visual sensitivities. The field assessment used a series of computer generated visualisations showing different heights of turbine to inform the judgements made on landscape and visual sensitivities. Where relevant, key sensitivities in relation to landscapes lying outside Moray's boundaries in adjacent authorities are also noted in the assessment.

The study does not consider designated landscapes such as Areas of Great Landscape Value, or other recognised valued landscapes within Moray, in the sensitivity assessment although these will be considered by the Council in the appraisal of individual applications where relevant. This approach has been taken in the study in order to understand and identify landscape capacity for wind energy development irrespective of planning and other landscape designations.

2.8.1 *Landscape and visual sensitivity criteria*

The sensitivity assessment considers the following criteria in assessing the potential effects of wind turbines and associated infrastructure on the landscape character areas:

- Scale and openness
- Landform
- Land cover pattern
- Built environment
- Perceptual qualities
- Landscape context
- Visual amenity
- Cumulative effects

A detailed description of the factors considered within the sensitivity assessment is explained in table 2 below.

Table 2: Sensitivity criteria used in the assessment

Sensitivity criteria	**Factors considered and relevance of criteria to wind turbines**
Scale and openness	Consideration of the scale of the landscape taking into account the degree of relief, amount of topographical containment, degree of openness and enclosure and the extent of land visible. Identification of areas of containment and factors that create enclosure where scale reduces. Identification of features against which the size of a turbine might be easily referenced. Consideration of how the size of the development might impact on the understanding of scale of the landscape. Assessment of how the development would relate to the scale of the landscape including whether they would be likely to dominate or appear compatible in scale in terms of the relative scale of landform, landscape pattern and individual features, including buildings, in the landscape. Consideration of how development would affect

	expansiveness and the sense of distance. In general, the more open the landscape and the larger the scale of the landscape the greater the ability to relate to larger development typologies.
Landform	Consideration of the overall topographical shape and the degree of complexity of landform including identification of any distinct 'landmark' features. Assessment of how development, including ancillary works, would impact on or relate to landform and whether it would intrude or detract if close to distinctive landform features. In general the simpler and more gently graded the landform the better the visual relationship with the simple form of turbines, and more gentle gradients are likely to better accommodate the platforms and roads associated with larger turbines.
Land cover pattern	Consideration of the degree of complexity and diversity of land cover pattern (field enclosure, woodlands, water courses and lochs) and whether pattern is strong or distinctly repeated, displays integrity or where it is fragmented. Assessment of the degree of diversity, and the importance of this in informing the distinctiveness of the landscape character. Assessment of how development could relate to pattern; whether it would disrupt or dominate strong pattern or undermine well balanced diversity, interrupt or fragment integrity of pattern, fit with areas where pattern is more simple or increase visual confusion where pattern is very fragmented. Consideration of potential effects on landmark features, such as hill top copses, designed landscapes and features, water bodies.
Built environment	Consideration of the pattern, density and character of settlement, its relationship to topography or other natural features and its setting, roads and other built structures. Consideration of historic features and sites and their setting. Assessment of how development might impinge on these characteristics; where there may be scope to attain some visual separation to minimise effects on settlement setting and avoid fragmentation of the pattern of built development and its association with topography or other natural features. Where larger scale industrial buildings and built structures such as pylons, masts and existing wind farms are present, the relationship of additional turbine development to these will be considered. Historic and archaeological features which contribute to landscape character are assessed in terms of any potential effects on setting.
Perceptual qualities	Consideration of the degree of modification by human intervention (such as roads, settlement, forestry, masts

	and wind turbines), consideration of how development could affect perceptions of naturalness and the degree of tranquillity experienced. Consideration of the sense of remoteness in terms of ease of access or seclusion (in the sense of the degree of containment that can be experienced rather than purely distance from roads and settlement) and whether and how development would alter these perceptions. Identification of landscapes where the number and distinctiveness of archaeological or historic features can give a strong sense of history or 'timelessness'. Identification of opportunities related to more developed and modified landscapes.
Landscape context	The role of adjacent character types in contributing to the overall character of the type being assessed. This includes consideration of where adjacent types may provide containment, increase or reduce the experience of scale or complexity or combine to provide a notably scenic whole. Assessment of the potential effects of development on adjacent character types and vice versa. This includes an assessment of inter-visibility. Landscape types that are more closely juxtaposed and contrast strongly with surrounding landscapes may be especially sensitive. Landscape types which are large in extent, or which have similar scale or vegetation pattern to neighbouring landscapes may have more scope for larger typologies.
Visual amenity	The extent of likely visibility (including considerations of whether the landscape is well settled and easily accessible, for example, or not) and types of viewpoints. 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, framed views to focal points or glimpse views, or views experienced as part of a sequence or as revealed views creating a sense of arrival into the landscape type. The significance of skylines and visual horizons. Key vistas associated with historic landscapes or other features.
Cumulative effects	Consideration of existing operational and consented wind farms or turbines within the landscape character type and in the surrounding area. Identification of any constraints to further development in relation to cumulative visual or landscape effects. This includes consideration of sequential and simultaneous visual effects, as well as height, siting and design considerations informed by the presence of existing wind turbines.

2.9 Sensitivity levels

A five point scale of 'scoring' has been used in the assessment of each sensitivity criterion. This is also adopted in the overall sensitivity 'scores' accorded to each landscape character area. This is interpreted in the following table relating to overall sensitivity ratings:

Table 3: Explanation of Sensitivity Ratings

Overall Sensitivity rating	**Definition**
Low	The development typology relates well to key landscape characteristics and change is able to be accommodated without unacceptable significant adverse impacts on landscape character or visual amenity.
Medium - low	Some limited sensitivities although there are opportunities to accommodate the development typology in most locations.
Medium	Some key landscape characteristics or aspects of visual amenity are sensitive but there is still some ability to accommodate development in some situations without unacceptable significant changes to landscape character or visual impact; the development typology relates to some aspects of landscape character.
High-medium	A number of key landscape characteristics are vulnerable to change. Development would undermine some important defining aspects of landscape character and/or visual amenity but may be able to be accommodated in very small parts of some landscape character areas.
High	The majority or all of the key landscape characteristics are vulnerable to change. Development would conflict with key aspects of landscape character and visual amenity with widespread and unacceptable significant adverse impacts likely to arise.

We have considered ratings for all landscape and visual sensitivities in the assessment to arrive at overall sensitivity ratings for each typology in each landscape character area. The overall sensitivity level is judged by considering the combined weight of evidence on landscape and visual sensitivity rather than using a numerical scoring system for each sensitivity criterion.

2.10 Cumulative issues and overall capacity assessment

There are two outputs from the assessments in relation to cumulative landscape and visual assessment.

2.10.1 *Cumulative effects*

We have firstly considered cumulative effects in the sensitivity assessments. This is one criterion listed in the detailed sensitivity assessments, and considers the implications of

existing and consented turbines and wind farms within the landscape character area and nearby.

2.10.2 *Potential cumulative issues*

We have also identified potential cumulative landscape and visual issues. These are more speculative potential impacts, and reflect what might happen depending on the number and type of developments which might be introduced into the landscape character type which is the subject of the assessment. These potential issues are listed prior to identifying opportunities and constraints to different development typologies within the sensitivity assessments undertaken for each landscape character type.

Potential landscape and visual cumulative impacts considered include:

- 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 area, rather than a one off feature (this may not necessarily be a negative impact);
- Significant alteration to a defining characteristic of that landscape character – i.e. a characteristic which is recognised as contributing to 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 to multiple existing and consented wind farms or turbines;
- Loss of 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, come together to create a muddled visual distraction from the landscape or key features.

2.11 Overall sensitivity ratings and potential areas for development

A summary of the landscape and visual sensitivity assessment is set out for each landscape character type/area in sections 5 to 20 of this report. Detailed sensitivity assessment tables are contained in Appendix C.

In terms of the overall sensitivity ratings, we advise that there is no scope for development within landscape character types/areas concluded to have a ***High*** overall sensitivity. Within landscape character types/areas found to be of ***High-medium*** sensitivity, we consider that there is either no scope or very limited scope for development in a small part of the character area only. Within these High-medium sensitivity landscapes, it is recommended that developers should be required to

demonstrate how they have dealt with the identified constraints in the siting and design of wind farm and turbine developments.

Where a ***Medium or lower sensitivity*** is identified, there is scope for development to be accommodated with fewer significant impacts on key sensitivities. Medium and lower sensitivity landscapes are not without constraints however and developers should be required to take note of these in the siting and design of proposals.

2.12 Siting and design guidance for smaller wind turbines

Detailed siting and design guidance for smaller wind turbines <50m high to blade tip is set out in Appendix D.

3 INTRODUCTION TO THE SENSITIVITY ASSESSMENT

The assessments which follow consider the sensitivity of landscapes within Moray to different wind energy typologies, based on the height of wind turbines ***taken to blade tip***. The assessment is structured in two parts as follows:

- An appraisal of opportunities for 'very large' wind turbines over 130m height in Moray, focused on less sensitive upland landscape character types concluded to have some scope for turbines 80-130m high in the 2012 Moray Landscape Wind Capacity Study.
- A detailed sensitivity assessment principally considering sensitivity within individual landscape character types/sub-types to four different wind turbines development typologies between 20m and 130m high.

3.1 Appraisal of opportunities for very large wind turbines

In section 4 of this report, the appraisal of repowering potential considers much larger turbines with theoretical visibility studies and visualisations undertaken for two heights of turbines, 150m and 200m to blade tip. This appraisal focuses on operational and consented wind farm developments and the five upland landscape character types/sub-types they are sited within only.

3.2 Sensitivity assessment of individual landscape character types/sub-types

Sections 5-20 of this report set out the sensitivity assessments for individual landscape character types and sub-types. An introduction to each landscape character type/sub-type briefly describes the location of the character type and outlines operational and consented wind energy developments located in the surrounding area (and clearly visible from the landscape character type being assessed). Smaller single and small groups of wind turbines located in the landscape character type are also identified where relevant.

Detailed assessment of sensitivity to turbines <50m high has not been undertaken for sparsely settled upland areas (Landscape Character Types/Areas 8a, 9, 10, 11, 12a and 12b) where demand for these smaller typologies is likely to be very limited. Some general guidance is however given on appropriate locations for these typologies where relevant.

The sensitivity scores outlined in the summary of sensitivity for each landscape character type/sub-type are made on the basis of a five-point scale: High, High-Medium, Medium, Medium-Low and Low. These assessments consider and combine landscape sensitivity and visual sensitivity against a number of criteria including cumulative effects associated with existing and consented wind energy developments. Further detail on the method of assessment is included in Section 2 of this report. Detailed sensitivity assessment tables for each landscape character area are contained in Appendix C in the separate Appendices Report.

Potential cumulative issues and key constraints and opportunities for development are set out for each landscape character type and the sensitivity assessment concludes with recommendations related to the scope of capacity and guidance on siting of wind turbine development. Maps show potential development areas within landscape character types/sub-types concluded to have some scope for the large development typology, turbines over 80m high.

Due to the strategic nature of this study, applications for individual proposals should demonstrate that turbines will not cause significant adverse effect on the sensitivities identified in this assessment. This must be informed by visualisations generated from agreed viewpoints.

The assessment within this study focuses on the landscapes lying within Moray's boundaries but notes key landscape and visual sensitivities within adjacent authorities where relevant.

4 OPPORTUNITIES FOR VERY LARGE TURBINES

4.1 Introduction

This section of the report considers opportunities for accommodating very large turbines, >130m high to blade tip, within Moray. The appraisal focuses on landscape character types/sub-types where some scope for the large typology (turbines 80-130m high) has already been identified in the sensitivity assessment. These comprise the following landscapes:

- *Broad Forested Hills within Upland Farmland* (8a)
- *Rolling Forested Hills* (9)
- *Upland Moorland and Forestry* (10)
- *Open Rolling Uplands* (11)
- *Open Uplands with Settled Glens* (12b)

Proposals for much larger turbines are commonly associated with 'repowering' of existing wind farms and turbines. Repowering involves the replacement of operational wind turbines coming to the end of life with more efficient, and usually larger, turbines. The size of wind turbines within new wind farm developments currently being proposed has also significantly increased. The majority of wind turbines within operational wind farms in Moray are around 100m high whereas some very recent proposals are for turbines up to 150m high.

The potential for very large turbines to be accommodated within Moray has been principally explored through computer-generated visibility mapping and visualisations based on operational and consented wind farms located within the landscape character types/sub-types listed above. Field assessment was undertaken by two landscape architects experienced in the landscape and visual impact assessment of wind energy developments.

4.2 Methodology

A series of Zone of Theoretical Visibility (ZTV) maps have been produced showing visibility of operational and consented turbines within eight wind farms and the increased extent of visibility if these turbines were increased to heights of 150m and 200m to blade tip.

The ZTV maps show the operational wind farms of Rothes I, Rothes II, Paul's Hill, Hill of Towie and Berry Burn and the consented wind farms of Aultmore, Hill of Glaschyle and Dorenell. The ZTV maps have been modelled using existing/consented turbine positions. Repowering of existing wind farms may adopt a different layout and contain fewer turbines than the original although this will depend on whether the original layout has any built-in flexibility to allow for potential repowering and/or extensions. Potential expansion of an existing wind farm site to accommodate more widely spaced larger turbines may additionally contribute to increased visibility and this has not been taken into account in the ZTV maps.

A set of 'photo-wire' computer-generated visualisations were produced from 10 viewpoints across Moray showing existing/consented turbines and turbines 150m and 200m high. The photo-wires have been generated as illustrative tools only to inform discussions in the field and the appraisal of likely landscape and visual effects associated with increasing turbine size. The ZTV maps and visualisations are contained in Appendix E.

4.3 Key findings

Operational wind farms sited within the upland areas of Moray comprise turbines between 100m and 125m high to blade tip. The consented Dorenell wind farm comprises turbines of 126m to blade tip although a revised proposal for a mix of turbines 125m and 150m high to blade tip is currently being considered by the Scottish Government.

The ZTV maps are based on operational and consented wind farms located in Moray and show differences in the extent of visibility if turbines were increased to 150m and 200m to blade tip. The ZTV maps are based on bare-ground data and do not take into account the potential screening effects of woodland. Analysis of the ZTV maps is set out the following table:

Table 4: Analysis of ZTV maps based on operational and consented wind farms

Wind farm	***Existing height***	***Areas of theoretical new visibility associated with 150m and 200m turbines***
Rothes I	100m	New and close visibility in the Knockando area and potential increase of cumulative effects with Berry Burn south of Dallas. New areas of visibility across the Moray coastal plain near Kinloss
Rothes II	125m	Similar to Rothes I above but with additional new areas of visibility in the Findhorn area particularly associated with the increase to 200m high turbines.
Berry Burn	104m	New visibility from the A95 in Ballindalloch area likely and this could additionally result in cumulative effects with the Paul's Hill wind farm which is clearly seen from this route. New visibility also in the Knockando and Forres area and east of Kinloss at distances of <10km. Some increases in potential visibility would occur around Grantown in the Cairngorms National Park.
Hill of Towie	100m	Relatively limited areas of new visibility with these principally occurring to the south of Buckie and north-west of Fochabers.
Dorenell	126m	Relatively minor increases in extent of visibility associated with both 150m and 200m turbines but both height increases may result in new visibility of a few blade tips from the B9009 in Glen Rinnes.
Hill of Glaschyle	99.5m	Fairly small increases in extent with woodland likely to limit close views. Additional visibility in Dallas area which may add to cumulative effects with other operational and consented wind farms. Larger areas of increased visibility would occur at distances >15km.

Aultmore	100/110m	New visibility to east within Aberdeenshire affecting views from B9022. Visibility may increase along parts of the Moray coast in the Findochty and Buckie area. Areas of new visibility shown on the ZTV to the east of Fochabers although woodland is likely to screen views.
Paul's Hill	100m	Quite significant areas of new visibility to the west within 10km although this area is sparsely populated and already affected by the Berry Burn wind farm. The Knock of Braemoray would still screen views of this wind farm from the A940. Some potential new visibility from the Forres area and potential increase in sequential cumulative effects with Berry Burn wind farm from the A95.

Although the differences in ***extent*** of visibility associated with increasing the height of turbines to 150m and 200m high to blade tip appear relatively minor, some areas of new visibility would open up for the Rothes I and II wind farm, which could increase cumulative effects with the Berry Burn wind farm in views from the Knockando area. Any increases in the height of the Berry Burn turbines could result in overlapping visibility with the Paul's Hill wind farm affecting views from the A95. Views from settlement and roads within the Spey Valley could also be affected by greater extents of visibility associated with increasing the height of turbines within the Paul's Hill, Berry Burn and Rothes I and II wind farms.

Increases in the extent of visibility associated with larger turbines could also influence change within more sensitive landscapes in Moray. This would principally be likely to affect the scenic Spey Valley but also the sensitive smaller scale coastal landscapes of north-eastern Moray where new visibility of large turbines would be introduced.

Although the ***extent*** of increased visibility would be likely to be fairly limited, it was found that ***views of the wind farm from the ground*** and ***effects on landscape character*** would significantly change. The visualisations generated show larger turbines in the current positions of operational/consented turbines. This has resulted in the wind farm image in the visualisations sometimes appearing overly cluttered. The analysis assumed that this effect would be resolved through a revised layout and/or fewer turbines within the repowered scheme. The analysis from key viewpoints across Moray is set out in the table below:

Table 5: Viewpoint analysis of increasing size of turbines within operational and consented wind farms

Viewpoint	**Wind farm seen in view**	**Effects of increasing height of turbines**
1: A95, Tormore Distillery	Paul's Hill (6.5km distance from view)	The existing wind farm occupies a relatively confined section of skyline and it sits within a shallow dip between more pronounced hills reducing landscape and visual impact. Increases in the lateral spread of turbines would have a greater impact than increases in height to 150m in views from the Spey Valley

		as this containment would be breached. 200m high turbines however would dominate the scale of Roy's Hill and the more patterned settled valley which forms the foreground to the view and would comprise a much larger focus from the A95, a popular tourist route. 150m high turbines are 'border-line' in terms of triggering additional significant landscape and visual effects although the spacing of turbines would need to be resolved with a reduction in the number of turbines to avoid a 'stacking' effect.
2: A95, Lay-by south-west of Aberlour	Rothes (10km distance from view)	The existing Rothes I and II turbines are barely visible. Both 150m and 200m turbine increases would dominate the scale of the 'landmark' hill of Carn na Cailliche although they would occupy a relatively small part of the view and would not be seen in direct juxtaposition with smaller landscape features given the distance from the viewpoint (this could change in closer views to the wind farm). There are issues with overlapping turbines although this could be resolved with different spacing.
3: B9009, Glen Rinnes	Dorenell (6km distance)	The current consented proposal would not be visible from this road (although it would be visible from the side slopes of the glen). There would be no change if turbines were increased to 150m. One or two blades would be visible if turbines were increased to 200m although this could be designed out.
4: B9009, Dufftown	Hill of Towie (7km distance)	This wind farm is already at the limit in terms of fitting with landscape scale. It is not seen in an extensive upland context with the full extent of turbines from tip to base visible in close proximity to small scale buildings, farmland and woodland within the Fiddich Valley. 150m, and especially 200m, high turbines would dominate the scale of Scaut Hill and smaller scale features on valley sides in this view.
5: B9018 South of Grange Crossroads	Aultmore (4.2km)	The *Broad Forested Hills within Upland Farmland* (8a) within which this consented wind farm is located, is not perceived as being 'upland' in character but rather forms a low and narrow forested backdrop to nearby farmed and settled landscapes. Larger turbines (and especially 200m high turbines) would exacerbate cumulative effects with power lines and existing single/small groups of turbines and overwhelm smaller scale features in the foreground of this view.
6: Minor road near Buckie	Aultmore	There would be a significant difference

	(7.2km)	associated with 150m and especially 200m high turbines overwhelming the scale of small buildings sited on settled and farmed lower slopes and the relatively low relief of the *Broad Forested Hills within Upland Farmland* (8a). Turbines of this size would dominate the scale of the landscape. The regimented grid layout of this consented wind farm would be more obvious due to the greater extent of larger turbines visible above the skyline although this could be resolved through re-design.
7: A96, Easter Bauds Farm	Hill of Towie (>14km distance)	Views to this wind farm are fleeting and distant from the A96. An increase in turbine size would be less of an issue from this more distant view and also because the wind farm is seen in a context of an expansive panorama of coalescing uplands making it appear a relatively minor incidental feature.
8: Elgin Monument	Rothes I and II (12km)	The wind farm is not in the main focus of this expansive view. The 150m turbine increase would be likely to comprise a minor change with the distance from the viewpoint, the panoramic nature of the view and the simple and expansive upland plateau which provides the context to the wind farm, reducing impact. The 200m increase would have much greater intrusion on the skyline and would also result in significant overlap of turbines if using the same spacing.
9: B9010 Crofts of Buinach	Rothes I and II (3.8km)	The operational wind farm already has a significant impact on the landscape character of the Lossie valley and on views. While 200m high turbines would clearly have a more dominant effect, increases to 150m would also significantly exacerbate existing landscape and visual effects in this close view.
10: B9007 near Lochindorb	Berry Burn (>13km)	The operational wind farm is seen distantly from this viewpoint. It also sits relatively low in the landscape and is contained by prominent hills which results in it forming a minor features in the view. Even with increases of turbines to 150m and 200m, this wind farm would not dominate the scale of these hills although visual effects from the Lochindorb area may increase to significant particularly with 200m high turbines.

Our appraisal in the field concluded that the degree of impact or intrusion associated with increased heights of turbine would be principally influenced by the distance of the viewpoint from the wind farm and the context of the view.

The wind farms located in more expansive upland areas such as Rothes I and II, Paul's Hill and Berry Burn, and which are also generally set back from surrounding roads and settlement, were judged to be able to accommodate larger turbines. This is because they are usually not seen close to smaller scale features and their size is therefore less easy to gauge. However, while it was concluded that increases of turbine height to 150m could theoretically be accommodated, increasing turbines to heights of >200m to blade tip in these landscapes could have more unacceptable significant landscape and visual effects on pronounced hills and/or on adjacent settled valleys, for example the Rothes I and II wind farm seen from the Lossie valley in the Dallas/Kellas area.

Smaller upland areas seen in close proximity to more settled landscapes, for example the *Broad Forested Hills within Upland Farmland* (8a) and the *Upland Forested Hills* (9) where the consented Aultmore and the operational Hill of Towie wind farms are located, would be more sensitive to increased heights of turbine with even the 130m high turbine of the large typology considered in the sensitivity assessment to be too large given the limited extent of these landscapes and their proximity to well-settled smaller scale landscapes. Turbines closer to 100m high to blade tip were considered in the sensitivity assessment to be more appropriate for the *Broad Forested Hills within Upland Farmland* (8a) due to the low relief and very limited extent of these upland areas within this character type. In these landscapes, wind farm development is not seen in the context of an extensive upland area but often forms a backdrop to more settled smaller scale landscapes where relative scale can be more readily judged.

4.4 Conclusions

The larger the extent and scale of upland landscape, the more scope there is for larger turbines to be accommodated. The *Upland Moorland and Forestry* (10) and the *Open Rolling Uplands* (which border each other therefore expanding the extent of upland area distant from roads and settlement) offer greatest opportunity for repowering to around 150m high turbines while minimising landscape and visual effects. Operational turbines within these areas are currently 100-125m high to blade tip. The majority of these operational turbines are set within the core of these uplands and it would be important to limit intrusion by locating larger turbines in similar areas set back from sensitive skylines and the outer edges of these uplands.

Following review of visualisations from key viewpoints in the field, it is concluded that turbines towards (and over) 200m high to blade tip would be too large to accommodate given the relatively limited extent of uplands within Moray (and the presence of significant landscape and visual constraints within these upland landscape such as the presence of 'landmark' hills or areas of more complex land form) with significant effects likely to be more widespread and unacceptable on adjacent settled smaller scale landscapes.

Repowering of operational wind farms could potentially offer opportunities to mitigate adverse landscape and visual effects through redesign of turbine spacing/ location and a reduction in the number of turbines. Cumulative landscape and visual effects would need to be carefully considered for both extensions to operational wind farms and for repowering projects to ensure that differences in turbine size, blade rotation speed and

wind farm layout were not obvious and likely to significantly affect views from key viewpoints.

This assessment has been based on ZTV mapping and visualisations prepared from a very limited range of viewpoints. Detailed assessment informed by a more comprehensive range of visualisations would be necessary to fully consider landscape and visual impacts for specific repowering proposals.

5 COASTAL MARGIN (1-3)

5.1 Introduction

The *Coastal Margin* landscape character type combines the *Soft Coastal Shore*, *Hard Coastal Shore* and *Coastal Forest* landscape character types defined in the revised SNH landscape character assessment covering Moray.

5.1.1 *Operational/consented wind farms*

Four operational wind turbines (3 turbines 46.5m high and 1 turbine 31.25m high) are located at the transition of this character type with the *Coastal Farmland* (4), close to Findhorn. These turbines are particularly visible in close proximity from the rocky headlands along the *Coastal Margin*.

Views to operational wind farms located within the uplands of Moray are limited from many parts of the *Coastal Margin* due to the screening provided by landform and extensive forest cover. More open views are possible to the operational Rothes I and II and the Berry Burn wind farms from Findhorn Bay and intermittently from the Lossiemouth area. The operational Hill of Towie wind farm is visible from the Spey Bay area. The consented developments of Hill of Glaschyle and Aultmore will increase the number of wind farms visible from the *Coastal Margin* although the majority of these operational and consented developments are sited at least 15km from the coast which limits visual impact.

5.2 Description and summary of sensitivity

This landscape character area generally comprises a narrow coastal band, widening to the west where it includes Findhorn Bay and the coastal forests of Culbin and Lossie. The coast has a natural, complex and dynamic character in the west with sand bars, curving shingle spits, extensive dune systems, basins and marshy estuaries. A small scale rocky coastal edge of coves and promontories is interspersed east of Burghead with longer even stretches of sandy beach while to the east a narrow raised beach is strongly contained by low sandstone cliffs. Extensive forests back the coast in places and although these largely comprise managed pine, a mosaic of glades, underlying dunes and older plantings support a richly diverse ecology particularly evident within Culbin Forest. This character area features a distinctive pattern of small, historically rich settlements including Findhorn, Cullen, Findochty, Burghead, Kingston and Lossiemouth. There are few buildings between settlements and an absence of roads along much of the coast.

Views are expansive across the Moray Firth and focus on the distant Sutherland hills while views inland are often restricted by dunes and raised beach landforms and forest. The coast is open and exposed and a sense of isolation can be experienced away from settlements and roads. The perceived wildness and scenic diversity of the *Coastal Margin* and its popularity for tourism and recreation present constraints to wind energy development. There would be a ***High*** sensitivity to the large, medium and small-medium typology (turbines >30m). Landscape sensitivity for the small typology (turbines 20-35m) would be ***High-medium***.

5.2.1 *Potential cumulative issues*

Operational wind farm developments sited within the uplands of Moray do not have a significant effect on character or on views from the *Coastal Margin*. Consented wind farm developments are also likely to be sited sufficiently far away to limit intrusion. The four operational wind turbines at Findhorn have a localised effect on coastal character and views.

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

- Multiple wind turbines sited within both the *Coastal Margin* and the *Coastal Farmland* (4) landscape character types 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 other tall structures sited close to the coast which could adversely affect the sense of naturalness and seclusion associated with much of this landscape.
- Sequential visual impacts experienced when travelling on coast roads or coastal paths.

5.2.2 *Constraints*

- The narrowness of the open coastal edge which limits scope for multiple and large typologies to be physically accommodated and would also result in effects on the wider landscape context of the adjacent *Coastal Farmland* (4).
- The small scale of more complex indented rocky coastline and narrow raised beaches contained by low cliffs which would be dominated even by smaller wind turbines.
- The rich diversity of natural coastal features including raised beaches, rocky coves and promontories, extensive dune systems, sand bars and spits, basins and estuaries.
- The relatively unmodified coastal edge, which although well-used for recreation, has a strong sense of naturalness and can seem secluded away from settlement, especially when backed by the coastal forests.
- Distinctive historic settlements and prominently sited towns along the coast and their immediate coastal setting.
- The attraction of the coast for recreation increasing sensitivity to wind turbines which would be seen from beaches, viewpoints within forests, roads and settlements.
- Views from the open hinterland of the *Coastal Farmland* (4) but also from the more distant north-facing settled hill slopes of the *Rolling Farmland and Forest with Valleys* (5a) and the *Coastal Farmland with Rolling Hills* (4a) where larger wind turbines would be particularly prominent and could intrude on views to the Moray Firth.
- The proximity of the landmark hill of the Bin of Cullen and the policies of Cullen House in the east of Moray where wind turbines could detract on the setting of these features.

5.2.3 *Opportunities*

- Broader areas of farmland with a simple landform and land cover pattern at the transition with the *Coastal Farmland* (4) in the western parts of this character type where smaller turbines could be set sufficiently well back from the more sensitive beaches and dunes.

5.3 Guidance for development

There is no scope for further turbines over 35m high to be accommodated in this landscape.

Some very limited scope has been identified for single and small groups of wind turbines under 35m high in the broader parts of this landscape set well back from the coastal edge. Turbines should be sited where they can be clearly associated with existing built development to minimise visual clutter in this highly sensitive coastal landscape. They should not be located in more isolated and unmodified coastal areas with perceived qualities of wildness and should be sited away from more complex small scale or diverse coastal features. Ridge tops, promontories, dunes and cliff edges above raised beach platforms should be avoided and care should be taken to avoid intrusion on the coastal setting of historic settlements. There is only limited scope for multiple developments in this landscape character type.

Detailed siting and design should accord with the guidance set out for smaller wind turbines in Appendix D.

A strong sense of naturalness and seclusion can be experienced on the coast away from settlement and especially when backed by the coastal forests.

Indented rocky coastlines are narrow and often strongly contained by the cliffs of raised beaches.

The setting to the historic settlements which are regularly sited along the Coastal Margin would be sensitive to intrusion by wind turbines.

The well settled nature of this landscape and the attraction of the coast for recreation increases visual sensitivity

6 COASTAL FARMLAND (4)

6.1 Introduction

The *Coastal Farmland* landscape character type forms a low-lying plain extending in a broad band east/west across Moray and backing the *Coastal Margin* (1-3) which lies to the north. A single sub-division of this character type has been defined in the east where the landscape forms smaller scale rolling hill fringes and valleys. This landscape sub-type is called *Coastal Farmland with Rolling Hills and Valleys* (4a).

6.1.1 *Operational/consented wind farms*

Four operational wind turbines (3 turbines 46.5m and 1 turbine 31.25m high) are located within the adjacent *Coastal Margin* (1-3) character type at Findhorn but lying at the transition with this landscape. These turbines are widely visible across the very open western part of the *Coastal Farmland*.

Operational wind farms located in the uplands of Moray are more widely visible from the eastern part of the Coastal Farmland between Elgin and Fochabers and from areas closer to the coast in the east which do not benefit from the screening provided by the wooded ridges of the *Rolling Farmland with Forests and Valleys* (5b). The consented developments of Hill of Glaschyle and Aultmore will increase the number of wind farms visible from the *Coastal Farmland* although to date these developments are associated with less prominent upland plateaux which reduces their impact on views from roads and settlement within this character type.

6.2 Description and summary of sensitivity

This landscape forms an extensive low-lying plain which is gently undulating to flat but also features pockets of more rolling landform and occasional small but prominent ridges and hills. This fertile plain is intensively farmed with large fields of arable crops and some pasture interspersed with small conifer blocks. It is a well-settled landscape which accommodates a number of large settlements and major roads. Views are long distance and tend to focus on the uplands of Moray to the south but with views to the sea often screened by forest or landform from lower-lying areas.

While the broad scale of the landscape and its predominantly simple landform and land cover pattern reduce sensitivity, the larger typologies (turbines >50m high) would dominate both the scale of farms and residential buildings which are dispersed fairly evenly across this landscape but also the larger industrial buildings which are occasional features. They could also exacerbate the fragmented and cluttered nature of infrastructure present in some areas, for example close to Kinloss and Lossiemouth. The more prominent hills and ridges would also be sensitive to large turbines sited on them or close-by.

Sensitivity is ***High-Medium*** to the large and medium typologies considered in the assessment (turbines >50m high). There would be a ***Medium*** sensitivity to the small-

medium typology (turbines 35-50m) and ***Medium-Low*** sensitivity to the small typology (turbines 20-35m).

6.2.1 *Potential cumulative issues*

The four operational wind turbines at Findhorn within the *Coastal Farmland* (1-3) have a localised effect on coastal character and views. A number of operational and consented wind farms are located within the uplands of Moray. They are generally seen at distances of >10km from the *Coastal Farmland* although the consented Aultmore wind farm will lie much closer to the eastern part of this landscape character type.

Key cumulative issues that may arise within the *Coastal Farmland* 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 large wind turbines sited within this more settled landscape.
- Multiple wind turbines (and particularly turbines >50m) which would be inter-visible across more open areas and could be seen from more elevated sections of the A96 and other roads and from the edges of settlements and small hills and ridges, forming dominant features if repeated across the character type.
- Variations in the type and size of single and small groups of small turbines and also cumulative effects with masts and other tall structures.
- Sequential cumulative visual impacts experienced when travelling through this landscape on the A96 and A98 including potential effects associated with operational and consented developments within neighbouring Aberdeenshire.

6.2.2 *Constraints*

- Pockets of more rolling landform and woodlands which create a complex and smaller scale landscape in the Lhanbryde/Urquhart area and small knolly hills against the Lossie on the north-east side of Elgin.
- The prominent small hills and ridges which rise abruptly from the low-lying coastal plain including Binn Hill and Tappoch close to the coast and Cluny Hill close to Forres.
- Extensive wooded policies and designed landscapes of Innes House, Brodie Castle, Gordonstoun and Gordon Castle.
- The well-settled character of this landscape where development could dominate the scale of buildings.
- Areas with a more fragmented character influenced by disparate and often highly visible buildings and infrastructure and where wind turbines could exacerbate clutter.
- The setting of settlements and prominent historical/archaeological features, for example, Old Duffas Castle and Spynie Palace.
- The narrow extent of this landscape east of the Spey where larger turbines would be likely to impact on the more sensitive *Coastal Margin* (1-3) and the smaller scale *Coastal Farmland with Rolling Hills and Valleys* (4a). The landmark hill of the Bin of Cullen would also be sensitive to larger turbines sited nearby.

- The openness of this landscape and its well-settled character which increases visual sensitivity and reduces capacity for multiple developments, particularly larger turbines >50m high.

6.2.3 *Opportunities*

- The simple landform and land cover characteristic of much of this landscape.
- The broad extent of much of this character type which offers opportunities for development to be sited away from adjacent more sensitive landscapes such as the *Coastal Margin* (1-3) and allows space for a limited number of small-medium turbines (35-50m high) forming repeated but widely spaced features thus avoiding a visually dominating effect.

6.3 Guidance for development

No scope has been identified for wind turbines over 50m high in this landscape.

There is scope to accommodate the small-medium typology (turbines 35-50m high). Turbines this size 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, set below ridge lines to benefit from some back-cloth of rising ground which would reduce prominence to some degree. Turbines of this size should not be sited on, or nearby, the landmark hills of Tappoch and Binn Hill in this landscape and Bin of Cullen and Quarry Wood in adjacent character types. Areas of more complex landform and the setting of settlements, key historic/archaeological features and designed landscapes should also be avoided.

There are increased opportunities for the small typology (turbines 20-35m high) to be located in this landscape as multiple turbines could be accommodated with fewer associated cumulative effects. Turbines of this size, if well-sited, would be more likely to form incidental rather than dominant features if repeated across this landscape. These smaller turbines should also be sited well away from the smaller landmark hills, although there may be some limited opportunities to site them on gentler lower slopes of larger ridges and within areas with a more rolling landform as long as more prominent hill tops were avoided. The setting of some settlements, historic/archaeological features and designed landscapes may still be sensitive even to these smaller wind turbines.

Capacity could be quickly reached in this open landscape as inter-visibility between developments (together with the well-settled nature of this character type) increases potential for cumulative effects to arise. The use of wind turbines of different sizes and designs in close proximity should be avoided as this can lead to a discordant appearance, particularly in areas where tall built infrastructure already create a cluttered appearance. There would be greater scope to accommodate multiple wind turbines under 35m high if they were visually associated with farms and larger buildings than introducing a new pattern of taller turbines unrelated to existing buildings which would be likely to form dominant features if constructed in significant numbers. Detailed guidance on the siting of smaller turbines is set out in Appendix D.

Binn Hill forms one of the 'landmark' hills , prominent in views across the low-lying Coastal Farmland

Landform becomes more complex, forming smaller rolling hills in the Lhanbryde area.

Castles, mansion houses and their wider wooded policies form occasional features in this landscape and would be highly sensitive to intrusion by wind turbines

Additional turbines could exacerbate the visual clutter of operational wind turbines, masts and other built infrastructure present in some parts of this landscape.

7 ROLLING COASTAL FARMLAND (4A)

7.1 Introduction

The *Coastal Farmland* landscape character type forms a low-lying plain extending in a broad band east/west across Moray and backing the *Coastal Margin* (1-3) which lies to the north. A single sub-division of this character type has been defined in the east where the landscape forms smaller scale rolling hill fringes and valleys. This landscape sub-type is called *Rolling Coastal Farmland* (4a).

7.1.1 *Operational/consented wind farms*

There are no wind farms or wind turbines located in this landscape. Operational wind farms located in other landscape character types are not readily visible although the consented Aultmore wind farm lies very close to this landscape and is likely to be visible within close range from settlement and roads across much of this area.

7.2 Description and summary of sensitivity

This landscape comprises rolling hill slopes and the valley of the Deskford Burn which fringes the higher and more simply patterned *Broad Forested Hills within Upland Farmland* (8a) landscape character type. This landscape has a varied landform with often interlocking steeper slopes and narrow incised valleys interspersed with occasional flatter areas and broader, more gently graded, slopes. Long belts of broadleaved trees and mixed woodlands characterise the policies of Cairnfield, Cullen and Letterfourie Houses, filling narrow valleys and enriching this landscape. The rolling landform, woodlands and pattern of medium-sized arable fields and pasture create a small to medium scale landscape with houses, farms and settlements introducing small features regularly dispersed across this landscape. The *Broad Forested Hills within Upland Farmland* (8a) form immediate low skyline ridges containing this landscape.

The small to medium scale of these settled rolling hill fringes and valleys, the presence of diverse wooded policies together with the addition of consented wind farm development located on the adjacent *Broad Forested Hills within Upland Farmland* (8a) increases sensitivity to larger turbine typologies in this landscape. Sensitivity is ***High*** to the large and medium typologies considered in the assessment (turbines >50m high). There would be a ***High-medium*** sensitivity to the small-medium typology (turbines 35-50m) and ***Medium*** sensitivity to the small typology (turbines 20-35m).

7.2.1 *Potential cumulative issues*

The consented Aultmore wind farm, located in the adjacent *Broad Forested Hills within Upland Farmland* (8a) will be seen in close proximity across much of this character type. Key cumulative issues that may arise within this landscape are:

- An absence of rationale which could occur between wind farms clearly associated with simple and more expansive upland areas and any similarly large wind turbines sited within this smaller scale landscape.

- Cumulative effects from the B9018 where any larger wind turbines sited in this landscape would be seen in relative close succession and potentially together with operational single and small groups of large turbines and the consented Aultmore wind farm.
- Variations in the type and size of any single or small group of turbines proposed.
- Multiple turbines sited within this character type which could impact on views from the Bin of Cullen and from the *Coastal Farmland* (4) with larger turbines likely to quickly form dominant features.

7.2.2 *Constraints*

- The small scale rolling landform and well-settled to medium scale of these rolling hill fringes and valleys which is reinforced by the presence of woodlands and a regular pattern of dispersed settlement.
- An often complex landform of small interlocking hills, narrow valleys and undulating hill slopes.
- The rich pattern of policy landscape features including belts of fine broadleaved trees and parkland but also the more diverse naturalistic birch dominated woodlands within narrow valleys.
- The foreground this landscape provides to views to the landmark hill of Bin of Cullen from the A98.
- The proximity of this landscape to the part of the *Broad Forested Hills within Upland Farmland* (8a) landscape character type where the consented Aultmore wind farm will be located.

7.2.3 *Opportunities*

- Upper hill slopes which are generally gentler and more open and where the land-cover pattern is less pronounced and settlement sparser in some areas.
- Occasional larger agricultural buildings where the small typology could relate to their scale if sited nearby.

7.3 Guidance for development

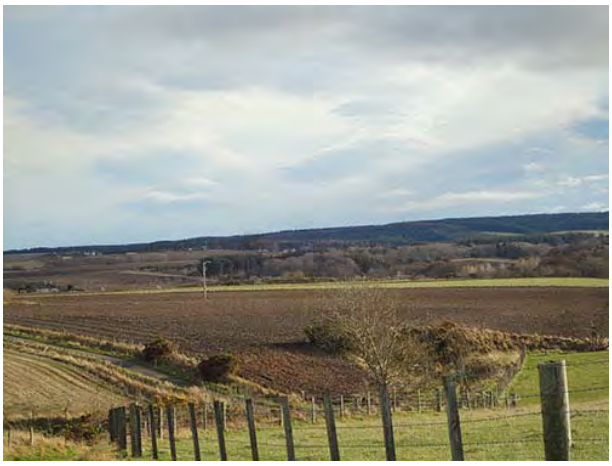
No scope has been identified for wind turbines over 50m high in this landscape.

There is very limited scope to accommodate the small-medium typology (turbines 35-50m high). Opportunities are limited to the more expansive and less well-settled gently graded upper slopes at the transition with the *Broad Forested Hills within Upland Farmland* (8a). Cumulative effects will however need to be carefully reviewed given that the consented Aultmore wind farm will lie in close proximity to this landscape.

There are some increased opportunities for the small typology (turbines 20-35m). Turbines of this size could also be located on more gently graded hill slopes but should be set well back from more diverse policy plantings and the narrow densely wooded valleys which are a distinctive feature of this landscape. Turbines should not be sited on the top of prominent small hill tops with lower slopes providing greater scope to limit visual intrusion. Intrusion on key views to the Bin of Cullen from the Deskford Valley and the adjacent *Coastal Farmland* (4) should also be avoided.

The landscape becomes more open and has a broader scale on upper hill slopes.

Long belts of broadleaved trees separate gently rolling fields.



The 'Broad Forested Hills within Upland Farmland' (8a) form a low, even forested backdrop to this character type.

Mixed woodlands, some of these forming the policies to mansion houses, occupy the narrow valleys on lower hill slopes

8 ROLLING FARMLAND AND FORESTS (5)

8.1 Introduction

The *Rolling Farmland and Forests* (5) landscape character type extends in an east/west band across Moray, forming a very gradual transition between the coastal plain and the uplands. The following two sub-divisions have been defined in this character type due to differences in the context, character and scale of landscapes:

- The *Rolling Farmland and Forests with Valleys* (5a) which occurs between the Rafford Valley and extends east to near Miltonduff, incorporating the Lossie and Pluscarden valleys.

- The *Rolling Farmland and Forests with Low Hills* (5b) which comprises an area of denser woodland and policy landscapes lying either side of the Findhorn valley in the west of Moray.

The eastern part of the *Rolling Farmland and Forests* which lies between the Spey and Lossie valleys and forms a narrow band of small rolling hills fringing the broader *Upland Moorland and Forest* (10) has been retained as Landscape Character Type 5. The sensitivity assessment which follows is for this character type.

8.1.1 *Operational/consented wind farms*

There are no wind farms or wind turbines located in this landscape. The operational wind farm of Rothes I and II is located in the adjacent *Upland Moorland and Forestry* (10) and is visible in relative proximity from more open western parts of this landscape.

8.2 Description and summary of sensitivity

This landscape forms gently rolling hill slopes fringing the higher *Upland Moorland and Forestry* (10) which lies to the south and gradually merges with the flatter and more open *Coastal Farmland* (4) to the north. Pockets of more complex drumlin-like knolls and narrow valleys filled with small water bodies occur in places. Coniferous woodlands and shelterbelts are a strong feature and are interspersed with small pastures and with larger arable fields on more gently undulating ground at the transition with the *Coastal Farmland* (4). This is a relatively well-settled area with many dispersed new houses, farms and small settlements. Distillery buildings are prominent features on the edge of some of these settlements.

The relatively small scale of the settled valleys, pockets of more complex interlocking landform and small water bodies, together with the potential for cumulative impacts to occur with nearby operational wind farm development, increases sensitivity within this landscape. There would be a ***High*** sensitivity to turbines >50m high. Sensitivity would be ***High-medium*** for the small-medium typology (turbines 35-50m) and ***Medium*** for the small typology (20-35m).

8.2.1 *Potential cumulative issues*

The operational Rothes I and II wind farm development is located in the adjacent *Upland Moorland and Forestry* (10) and is seen in relatively close proximity from the western edge of this character type. Key cumulative issues that may arise are likely to include:

- The close inter-visibility between additional turbines located in the western parts of this character type and the operational Rothes I and II wind farm – even small turbines sited in the *Rolling Farmland and Forest* (5) would appear large from close-by roads and settlement and could increase the visual clutter of turbines and transmission line which are prominent in views.
- 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.
- Variations in the type and size of any single or small group of turbines proposed within this landscape.
- Sequential visual impacts experienced when travelling through this landscape, especially if additional wind farm developments were accommodated within the adjacent *Upland Moorland and Forestry* (10) and prominent on containing skylines.

8.2.2 *Constraints*

- The small scale rolling landform and well-settled character of this landscape which increases sensitivity to larger turbines
- More complex knolly landform, intimately scaled valleys with water bodies and prominent small ‘stand-alone’ hills
- Policy landscape features in the Blackhills area
- Potential cumulative effects with the Rothes I and II wind farm development which is seen in close proximity particularly in the western parts of this landscape.
- The landmark hill of Brown Muir which forms a particularly distinctive feature in views from the north across this landscape and the Moray coastal plain.

8.2.3 *Opportunities*

- Broader and more even hill slopes on the fringes of the *Upland Moorland and Forestry* (10) where rising ground could form a backdrop reducing the prominence of small turbines.
- Occasional larger agricultural and distillery buildings where the small typology could relate to their scale and form a cluster of built development if sited nearby.

8.3 Guidance for development

No scope has been identified for wind turbines over 50m high in this landscape.

There may be some very limited scope to accommodate the small-medium typology (turbines 35-50m high). Opportunities are limited to the more expansive and less well-

settled gently graded upper slopes in the east of this character type where significant cumulative effects with the operational Rothes I and II wind farm could be avoided. Turbines of this size could impact on the landmark hill of Brown Muir which forms a prominent backdrop to this character type and is seen extensively across the *Coastal Farmland* (4). Turbines should be sited away from the more pronounced steeper slopes of this hill. Potential cumulative effects with any further wind farm development in the *Upland Moorland and Forestry* (10) should be carefully reviewed.

There are increased opportunities for the small typology (turbines 20-35m) to be sited in this character type. Turbines of this size could also be located on more gently graded hill slopes but, like the small-medium typology, should avoid being located in front of the steeper more prominent slopes of Brown Muir hill. There is scope to relate this size of turbine with larger distillery buildings and within broader farmland at the transition with the *Coastal Farmland* (4). Turbines below 20m high could be more readily accommodated within the farmed and settled areas of this landscape. Detailed guidance on the siting of smaller turbines is contained in Appendix D.

The operational Rothes wind farm is prominent in views from the western part of this character type.

Broad, gently rolling fields on lower hill slopes are interspersed with bands of woodland.

The 'landmark' hill of Brown Muir forms an immediate backdrop to this character type.

Distillery buildings and settlements are sited on lower slopes or sit within small folds and valleys in this landscape

9 ROLLING FARMLAND AND FORESTS WITH VALLEYS (5A)

9.1 Introduction

This landscape is a sub-type of the *Rolling Farmland and Forests (5)* landscape character type which extends in an east/west band across Moray, forming a transition between the coastal plain and the uplands. The *Rolling Farmland and Forests with Valleys* (5a) occurs between the Rafford valley and east to near Miltonduff, incorporating the Lossie and Pluscarden valleys.

9.1.1 *Operational/consented wind farms*

A single operational wind turbine, 61m high to blade tip, is located at Bognie Farm in this landscape character type.

The operational wind farm of Rothes I and II is located in the adjacent *Upland Moorland and Forestry* (10) and is visible in relative proximity from the Lossie valley in the Kellas/Dallas area. This development comprises 46 turbines between 100/125m high. The consented wind farms of Meikle Hill and Kellas (10 turbines 100/126.5m high) are also located within the *Upland Moorland and Forestry* (10) and will increase the extent of turbines seen on the upland skyline in the Lossie valley in the Kellas/Dallas area.

9.2 Description and summary of sensitivity

This landscape has a distinctive landform of pronounced ridges separated by the valleys of the Lossie and Pluscarden. The main ridges containing these valleys feature steep south-facing scarp slopes and long gentle dip slopes to the north. The ridge to the north of Pluscarden is especially prominent in views from the *Coastal Farmland* (4) in the north although the distinctive rhythmic landform of this pair of ridges is appreciated in 'end-on' views from the *Rolling Farmlands and Forest* (5) to the east. A separate smaller wooded ridge at Quarry Wood also extends to the north-east, curving around the edge of Elgin.

The valleys between the main ridges are more visually contained and feature open farmed flat floodplains which contrast with the often heavily wooded valley sides. Settlement is focussed within these valleys with small settlements, large estate houses and dispersed farms and houses often located on lower valley sides. Occasional historic and archaeological features, such as Pluscarden Abbey, form landmarks in this landscape. The Lossie valley is generally more open than the Pluscarden valley and its character is influenced by wind farm development located in the adjacent *Upland Moorland and Forestry* (10).

The relatively small scale of the settled valleys, the prominent backdrop provided by the wooded ridges to surrounding landscapes and the presence of more complex or dramatic features such as steep scarp slopes, increase sensitivity within this landscape. The potential for cumulative impacts to arise with operational and consented wind farm development in the adjacent *Upland Moorland and Forestry* (10) is an additional constraint within the Lossie valley area. There would be a ***High*** sensitivity to turbines

>50m high. Sensitivity would be ***High-medium*** for the small-medium typology (turbines 35-50m) and ***Medium*** for the small typology (20-35m).

9.2.1 *Potential cumulative issues*

The operational Rothes I and II wind farm development is located in the adjacent *Upland Moorland and Forestry* (10) and is seen in close proximity to the Lossie valley in the Kellas/Dallas area (although it is not visible from the more contained Pluscarden valley). Key cumulative issues that may arise are likely to include:

- The close inter-visibility between additional turbines located in the Lossie valley area and the operational Rothes I and II wind farm and consented Meikle Hill and Kellas wind farms. Even small turbines sited in this valley would appear large from nearby roads and settlement and would increase the visual clutter of turbines and the transmission line which are prominent in views.
- 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 ridge tops or upper slopes where they would break the skyline and be seen together the Rothes I and II wind farm and other operational and consented wind farm developments sited in the *Upland Moorland and Forestry* (10) in longer views from the *Coastal Farmland* and *Rolling Farmland and Forest* (5).
- Variations in the type and size of any single or small group of turbines proposed within this landscape.
- Sequential visual impacts experienced when travelling through this landscape.

9.2.2 *Constraints*

- The visual prominence of the ridges and Mulundy Hill – the long northern ridge of Heldon Hill is particularly prominent, seen widely across the *Coastal Farmland* (4) to the north.
- The low relief of the ridges where tall turbines would dominate their scale and also the small scale valleys below.
- Steep wooded scarp slopes of the ridges and smaller scale complex knolls and terraces occurring on the southern edge of the upper Lossie.
- The open farmed floodplain which contrasts with the densely wooded ridges and enhances the scenic diversity of this landscape
- The setting the wooded ridge of Quarry Wood provides to Elgin
- The setting of historic houses such as Kellas and Dallas Lodge and their designed landscapes and the setting of the landmark feature of Pluscarden Abbey.
- The well-settled nature of the valleys within the character type and the recreational use of Heldon and Quarry Woods which increase visual sensitivity.
- Potential cumulative effects with operational and consented wind farm development seen in close proximity to the Lossie valley.

9.2.3 *Opportunities*

- The more gently graded dip slopes of the ridges where rising ground could form a backdrop reducing the prominence of smaller turbines.

9.3 Guidance for development

No scope has been identified for wind turbines over 50m high in this landscape.

Opportunities for the small-medium typology (turbines 35-50m high) are very limited due to the adverse impacts that would be likely to arise on the small scale valleys, on the setting of settlements and historic buildings within the valleys and also potential cumulative effects with operational and consented wind farms in adjacent upland landscapes. Opportunities are limited to the more expansive and less well-settled dip slopes of the ridges. Individual turbines are likely to be easier to accommodate than groups of turbines and care should be taken to avoid intrusion on sensitive skylines by siting turbines so back-dropped by rising ground. Turbines towards the lower height band of this typology would be likely to be less visually prominent.

There is some scope for the small typology (turbines 20-35m) to be sited in this character type. Turbines of this size should also be located on more gently graded dip slopes but could additionally be accommodated on the edges of pastures on valley sides which are often bordered by forest. Turbines should be set back from the open valley floor where they would be visually prominent in long views from roads and settlement but should avoid being set in front of the often dramatic steep scarp slopes of the ridges. Turbines <20m high could be more readily accommodated within the farmed areas of this landscape and would be less visible due to their ability to be screened by local landform and woodland.

All turbines sited in this landscape should avoid significant cumulative effects with operational and consented wind farms sited in the adjacent *Upland Moorland and Forestry* (10) – the Lossie Valley in the Dallas/Kellas area will be particularly sensitive in this respect. They should also be sited to avoid impacting on the setting of settlements and historic built features. Detailed guidance on the siting of smaller turbines is set out in Appendix D.

Occasional narrow valleys have an intimate scale and would be highly sensitive to turbines sited on the edge of upper slopes.

The long, densely wooded ridge of Heldon Hill comprises one of the two prominent ridges which separate the Lossie and Pluscarden valleys.

The upper Lossie Valley, south of Dallas, backed by the 'Upland Moorland and Forestry' (10)

Pluscarden Abbey forms a key focus in views – the steep scarp slopes of the ridge of Heldon Hill form an important part of its landscape setting.

10 ROLLING FARMLAND AND FORESTS WITH LOW HILLS (5B)

10.1 Introduction

This landscape is a sub-type of the *Rolling Farmland and Forests (5)* landscape character type which extends in an east/west band across Moray, forming a transition between the coastal plain and the uplands. The *Rolling Farmland and Forests with Low Hills* (5b) comprises an area of denser woodland and policy landscapes lying either side of the Findhorn valley in the west of Moray.

10.1.1 *Operational/consented wind farms*

A single operational wind turbine, 61m high to blade tip, is located at Cluny Farm in this landscape character type. The operational wind farm of Berry Burn located in the *Open Rolling Upland* (11) and the consented Hill of Glaschyle wind farm located in the *Upland Moorland and Forestry* (10), although lying fairly close-by, are likely to be substantially screened by landform and forestry in views from this landscape character type.

10.2 Description and summary of sensitivity

To the east of the Findhorn valley, this landscape extends across undulating deposits with hummocky terrain rising to form low rounded hills, the highest of which is Romach Hill. The landform is gentler and less rolling to the west of the Findhorn in the Darnaway Forest area although both areas share the key characteristics of extensive diverse forest cover and estate policy influence. Pasture fields appear carved out of the forest, creating a sequence of spaces which provided a well-defined and consistent character.

Settlement is dispersed with small farms and other houses located at the edge of fields and woodland clearings. Designed landscapes are associated with the Altyre estate and the prominent Darnaway Castle, which is surrounded by extensive open parkland and farmland. The heavily forested character of this landscape creates a strong sense of seclusion accentuated by the relative sparseness of settlement and few roads. Views within the area are limited by landform and woodland with only rare open spaces offering long views. Romach Hill is a prominent landmark seen widely from the coastal plain of Moray.

The low relief and small scale of low hills and hummocky terrain, the intricate and consistent pattern of small open spaces set within extensive woodland, the secluded nature of this landscape and the setting it provides to historic buildings and their designed landscapes increase the sensitivity of this landscape. This landscape is also important in providing an immediate backdrop to the scenic Findhorn valley and a visual buffer between the uplands and coastal plain of Moray. There would be a ***High*** sensitivity to turbines >50m high. Sensitivity would be ***High-medium*** for the small-medium typology (turbines 35-50m) and ***Medium*** for the small typology (20-35m).

10.2.1 *Potential cumulative issues*

There is potential for cumulative effects to arise with operational and consented wind farms located in the *Upland Moorland and Forestry* (10) 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.
- Inter-visibility between any wind turbines located on visually prominent hill tops or upper slopes where they would break the skyline seen together with operational and consented wind farms located in the *Upland Moorland and Forestry* (10) and *Open Rolling Uplands* (11) in longer views from settlement and roads to the north.
- Variations in the type and size of any single or small group of turbines proposed within this landscape.
- Sequential visual impacts experienced when travelling through this landscape.

10.2.2 *Constraints*

- The small scale of the landscape which is characterised by a low relief, small landforms and hummocky terrain particularly to the east of the Findhorn valley.
- The tops of the low rounded hills where turbines would form prominent features if sited on them.
- The small scale of fields and clearings within extensive forest cover which reinforce a sense of intimacy 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 widespread visibility and prominence of Romach Hill and its important role in providing a 'visual buffer' between the more extensive plateau of the *Upland Moorland and Forestry* (10) which accommodates a number of operational and consented wind farms and the low-lying and smaller scale landscapes of the *Rolling Farmland and Forest with Low Hills* (5b)
- The deep trough of Romach Loch and its setting.
- The setting of historic houses such as Altyre and Darnaway Castle and their designed landscapes and wider richly diverse wooded policies
- The setting provided by the rolling wooded hills of this landscape to the small scale and scenic Findhorn valley.

10.2.3 *Opportunities*

- The more gently graded lower slopes of Romach Hill which forms a larger scale setting for wind turbines
- The edges of clearings within the extensive forest cover, next to farm buildings in order to create 'clusters' of development
- Larger stretches of moor or open fields, especially where back-dropped by high land or the adjacent *Upland Moorland and Forestry* (10).

10.3 Guidance for development

No scope has been identified for wind turbines over 50m high in this landscape.

There is likely to be limited scope for the small-medium typology (turbines 35-50m) to be located within this character type. Opportunities are restricted to the larger spaces associated with more extensive fields or moorland at the transition with the *Upland Moorland and Forestry* (10) or on the lower fringes of Romach Hill. Individual turbines are likely to be easier to accommodate than groups and care should be taken to avoid cumulative effects with operational and consented wind farms sited within adjacent upland character areas.

There are some opportunities for the small typology (turbines 20-35m) to be located on gently graded slopes and the edges of farmland. Turbines sited in these areas should avoid intruding into the centre of open spaces, on the setting of key features and should not be sited on the summits of low hills (being set down on hill sides to reduce prominence). Well sited turbines <20m high could be sited to reflect the scattered settlement pattern. Detailed guidance on the siting of smaller turbines is set out in Appendix D.

Small pastures appear carved out of the extensive woodland cover

Buildings are arranged around the edge of the fields and contribute to the intimate scale of this spaces

Woodland is under continuous cover management with some small scale fellings which change the pattern of open space and views

Policy woodland and parkland on the Altyre estate

11 NARROW WOODED VALLEYS (6)

11.1 Introduction

The Narrow Wooded Valley landscape character type covers the incised and densely wooded valleys of the River Findhorn and its significant tributary, the Divie Burn. A very gradual transition occurs with the adjacent *Rolling Farmland and Forests with Low Hills* (5b) due to the extensive woodland cover common to both these landscape character types.

11.1.1 *Operational/consented wind farms*

A small single turbine is located close to Logie in this landscape character type. The consented Hill of Glaschyle wind farm located in the *Upland Moorland and Forestry* (10) to the west will be visible from rare pockets of open farmland on the upper slopes of the river valleys.

11.2 Description and summary of sensitivity

The Rivers Findhorn and Divie occupy narrow, incised and dramatically rocky gorges with steep, undulating slopes 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 of open space to enclosed woodland forms a key characteristic of this landscape. This area is managed by several estates and this strongly influences the historic character of built features. Several large houses are set within woodland overlooking dramatic bends in the rivers. Otherwise the area is sparsely settled with farms and cottages largely associated with clearings. There are relatively few roads although the A940, which forms a key approach into Moray, is aligned on the western side of this landscape character type. The river valleys are popular for recreation. Views are restricted by the dense woodland cover although rare areas of farmland often provide long views over the valleys and to the adjacent upland areas of Moray.

The dramatic gorges and their setting, the low relief, the pattern of spaces set in woodland and the historic character of this landscape are the key sensitivities of this character type. Although views within this landscape are limited, rare open spaces and the A940, which provides a scenic ‘gateway’ into Moray from Dava Moor, are also sensitive. There would be a ***High*** sensitivity to turbines >35m high. Sensitivity would be ***High-medium*** for the small typology (20-35m).

11.2.1 *Potential cumulative issues*

There is potential for cumulative landscape and visual effects to arise with operational and consented wind farms located in the *Upland Moorland and Forestry* (10). 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.

- Inter-visibility between any wind turbines located on open farmland and upper slopes of this landscape and operational and consented wind farms sited within the *Upland Moorland and Forestry* (10) and *Open Rolling Uplands* (11) in longer views from settlement and minor roads in open areas of farmland and from the A940, an important scenic route into Moray
- The inconsistent relationship that could arise with other key landscape elements – the *Narrow Wooded Valleys* (6) has a strong integrity which could easily become fragmented by multiple wind turbines.
- Variations in the type and size of any single or small group of turbines proposed within this landscape.
- Sequential visual impacts experienced when travelling through this landscape.

11.2.2 *Constraints*

- The low relief, small landforms and steep-sided gorges which characterise much of this landscape.
- The open spaces, particularly the smaller spaces surrounded by trees where the enclosure reinforces a sense of intimacy and discovery when travelling from space to space.
- The small scale of areas of farmland within extensive forest cover which reinforce a sense of intimacy 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, particularly if they are larger sized turbines and/or sited in the centre of open spaces.
- The setting of historic buildings and wider designed landscape which contribute to the character of these valleys.
- Views from the A940 and the scenic 'gateway' it forms to Moray on arrival from the south over Dava Moor.
- Cumulative effects with operational and consented wind farm developments sited in the adjacent *Upland Moorland and Forestry (10)* and *Open Rolling Uplands* (11).

11.2.3 *Opportunities*

- Gently graded slopes set away from the more complex landforms and setting of the gorges.
- The edges of clearings next to farm buildings where smaller turbines could be sited to create 'clusters' of development thus minimising clutter and cumulative effects.
- Larger areas of open fields, especially when back-dropped by higher land or forestry.

11.3 Guidance for development

No scope has been identified for wind turbines over 35m high in this landscape.

There are some ***very limited*** opportunities for the small typology (turbines 20-35m) to be located on gently graded slopes and the edges of farmland within the *Narrow Wooded Valleys* (6). Individual turbines are likely to be easier to accommodate than groups. Turbines sited in these areas should avoid intruding into the centre of open spaces, on the setting of historic houses and their designed landscapes and on the setting of the river gorges and more complex landform. They should be sited to minimise cumulative effects on views from the A940. Well sited turbines <20m high could be sited so visually associated with buildings to reflect the scattered settlement pattern. Detailed guidance on the siting of smaller turbines is set out in Appendix D.

The narrow wooded gorges are a key characteristic, attracting historic development, such as estate houses and fine bridges

The 'landmark' hill of the Knock of Braemoray, seen from an elevated section of public road between the Findhorn and Divie valleys

Mixed and policy woodland framing rare farmed open spaces

Extensive designed landscapes and wider policy woodlands form the setting to mansion houses and castles associated with these valleys

12 BROAD FARMED VALLEY (7)

12.1 Introduction

The *Broad Farmed Valley* occurs in a single area within Moray where it covers the more enclosed valley of the Spey. This character type merges gradually with the adjacent uplands of the *Upland Moorland and Forestry* (10), *Open Rolling Uplands* (11) and *Open Rolling Uplands with Steep-Sided Slopes* (12a) which form dominant skylines surrounding the Spey Valley.

12.1.1 *Operational/consented wind farms*

Single turbines are located at Archiestown and Ardoch Farm within this landscape character type. A number of operational wind farms are seen on the uplands surrounding the Spey valley. These include the Hill of Towie, Rothes I and II and Paul's Hill wind farms.

12.2 Description and summary of sensitivity

The Spey forms a broad sinuous central river aligned through a narrow incised channel in the south-west but opening out north of Craigellachie to wind across a wider floodplain set between steep-sided and densely forested hills. The course of the Spey is traced by diverse mixed woodlands of birch and pine with policy woodlands associated with a number of estates also located on lower valley sides. Numerous tributary rivers and burns run through narrower valleys to the Spey. Broader undulating valley sides with more gently sloping terraces accommodate mixed farmland and small woodlands. Larger arable fields tend to occur on lower valley sides with smaller pastures and coniferous plantations on upper slopes. The Spey valley is well-settled and features a number of distinctive planned settlements, castles and historic distillery buildings. The hills of Ben Rinnes, Paul's Hill and Ben Aigan form prominent landmark features on the skyline of the uplands which contain the Spey Valley. Operational wind farm development located in adjacent upland landscapes is visible from roads and settlement and this increases sensitivity in relation to potential cumulative effects.

There would be a ***High*** sensitivity to turbines >50m high. Sensitivity would be ***High-medium*** for the small-medium typology (turbines 35-50m high) and ***Medium*** for the small typology (turbines 20-35m high).

12.2.1 *Potential cumulative issues*

There is potential for cumulative effects to arise with operational wind farms located in the *Upland Forested Hills* (9), *Upland Moorland and Forestry* (10) and *Open Rolling Upland* (11). The Rothes I and II wind farm is not widely visible from this character type being generally set back into the core of the *Upland Moorland and Forestry* (10) and partially screened by the hill of Carn na Cailliche. The Hill of Towie and Paul's Hill wind farms are more visually prominent from settlement and main roads within the Spey valley. The partial screening provided by Roy's Hill to the Paul's Hill wind farm, the relatively limited extent of both these developments and their location on lower sections of skyline minimise landscape and visual effects on the Spey valley. 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 were 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 and other roads, including the minor road between Dallas and Knockando.
- 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 small scale and more settled landscape.
- Variations in the type and size of any single or small group of turbines proposed within this landscape.

The protection of the key landmark hills of Roy's Hill, Carn na Cailliche, Ben Aigan and Ben Rinnes, located on the edges of the Moray uplands, will be important to reduce impacts on sensitive skylines and limit the extent and influence of wind farm development visible from the Spey Valley.

12.2.2 *Constraints*

- The scenic juxtaposition of the settled pastoral Spey Valley with the dramatically steep-sided and rugged Ben Rinnes and Paul's Hill.
- More complex landform features including incised sections of valley, rolling lower hill slopes, small areas of floodplain and occasional rocky scarps which contribute to the diversity of the Spey Valley.
- The consistent presence of small scale features such as farms and houses, enclosed fields, field trees and woodlands which provide ready scale references.
- Views of the distinctive landmark hills such as Ben Rinnes, Roy's Hill and Ben Aigan from roads and settlement.
- The setting of historic houses and castles and their designed landscapes, settlements and traditional distilleries.
- 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.

12.2.3 *Opportunities*

- Broader, upper valley sides with a simple and more gently undulating landform lying at the transition with the less dramatic upland areas which could best relate to smaller turbines.

12.3 Guidance for development

No scope has been identified for wind turbines over 50m high in this landscape.

There may be some limited scope for the small-medium typology (turbines 35-50m) to be accommodated but only on more gently undulating valley sides and the terraces that sit above the more enclosed and incised river valleys. Care should be taken to avoid impacting on the more dramatic steep-sided hills and key views to them. Turbines of this size should also be sited within less densely settled areas at the transition with the adjacent uplands although potential cumulative effects with operational wind farms would need to be considered.

There are greater opportunities to site the small typology (turbines 20-35m) in this landscape although the more contained narrow and incised glens and the open floodplains would remain sensitive. Turbines of this size would be better sited on the hill slopes above fields and below more extensive woodlands as this would accord with the pattern of settlement found within upper valley sides and terraces. Detailed guidance on the siting of smaller turbines is set out in Appendix D.

This landscape character type 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 important tourist routes such as 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.

The valley is farmed and well-settled with a regular pattern of small farms, planned settlements and distilleries

The Spey Valley is broader in its upper reaches within Moray with more expansive gently undulating hill slopes merging with the Upland Moorland and Forestry (10).

The 'landmark' hill of Ben Aigan seen across the farmland of the Spey Valley

The Spey is often deeply incised with steep wooded slopes although areas of flat floodplain also occur particularly in its lower reaches around Rothes

13 UPLAND FARMLAND (8)

13.1 Introduction

The *Upland Farmland* occurs in a single area within Moray. This landscape comprises extensive gently undulating farmland centred on the shallow valleys of the Isla and its tributaries as well as sparsely settled, predominantly forested broad plateaux and more pronounced hills. The more extensive areas of settled farmland have been retained as landscape character type 8: *Upland Farmland* with a sub-division defined as 8a: *Broad Forested Hills within Upland Farmland*.

13.1.1 *Operational/consented wind farms*

Operational single turbines at Balnamoon and Myreton Crossroads (70-80m high) and four turbines on the south-west facing slopes of Lurg Hill (89-92m high) are located in relative proximity to each other in this landscape character type. A number of single and small groups of small turbines are located close to Mulben. The Edintore wind farm, which is currently under construction, also lies within this landscape character type.

The operational Hill of Towie wind farm, located in the adjacent *Upland Forested Hills* (9) is clearly visible from this character type. The consented Aultmore wind farm located in the *Broad Forested Hills within Upland Farmland* (8a) will lie close to the *Upland Farmland*.

13.2 Description and summary of sensitivity

The *Upland Farmland* landscape character type encompasses the broad shallow valleys largely lying to the north of the River Isla. This landscape has a simple land cover of open farmland with large fields of pasture predominantly enclosed by post and wire fences. There is an even distribution of farms across this extensive area, accessed by a close network of minor roads. This landscape is edged by the densely forested broad upland plateaux and more pronounced hill tops of the *Broad Forested Hills within the Upland Farmland* (8a) which forms a low dark backdrop to more settled and open farmland. Bin of Cullen, Meikle Balloch and Knock Hill form distinctive 'landmark' features from the *Upland Farmland*. While some key characteristics of this landscape could relate to larger development typologies, the presence of an even dispersal of small farms and houses and the potential for cumulative effects with large turbines sited both in this landscape and adjoining landscapes increases sensitivity.

There would be a ***High*** sensitivity to turbines >50m high. Sensitivity would be ***High-medium*** for the small-medium typology (turbines 35-50m high) and ***Medium-low*** for the small typology (turbines 20-35m high).

13.2.1 *Potential cumulative issues*

The operational single but large turbines sited on Lurg Hill and close to Grange Crossroads are widely visible across most of this landscape character type. Operational and consented wind farms at Hill of Towie and Aultmore have/will have an additional strong influence on views. Key cumulative landscape and visual issues include:

- Multiple single turbines associated with the majority of land holdings across this well-settled landscape would result in significant visual clutter and confusion and would detract from the character of this landscape. Turbines >35m will create this effect more quickly than smaller turbines.
- Large turbines visible on every hill top/forested plateau within the adjacent *Broad Forest Hills within Upland Farmland* (8a) would be likely to have a dominant and overwhelming effect on this character type and have cumulative effects with turbines located in this character type.
- Potential sequential cumulative visual effects on views from the A95 through Moray and into Aberdeenshire where a number of operational wind farms and small groups of tall turbines are sited (the screening provided by ridges and hills on the Aberdeenshire/Moray border limits inter-visibility).
- An absence of rationale which could occur between consented wind farms clearly associated with the simpler, more expansive *Broad Forested Hills and within Upland Farmland* (8a) and the same size of turbines sited in this character type – this occurs already in the Grange Crossroads area.
- Variations in the type and size of any single or small group of turbines proposed within this landscape.

13.2.2 *Constraints*

- The presence of small features such as farms and houses and enclosed fields and woodlands which provided ready scale references.
- Cumulative effects with larger turbines in the adjacent *Broad Forested Hills within Upland Farmland* (8a)
- The openness of this landscape which allows extensive views.
- Views of the distinctive landmark hills in this and adjoining landscapes which include the Bin of Cullen, Meikle Balloch and Knock Hill.
- Potential cumulative landscape and visual effects associated with multiple developments of the large, medium and small-medium typologies where they could exacerbate visual clutter around Keith and in the north-east of this character type where existing large turbines and transmission lines are present.

13.2.3 *Opportunities*

- The simple, gently undulating landform and overall medium scale of this landscape which could best relate to the size of smaller typologies.

13.3 Guidance for development

No scope has been identified for wind turbines over 50m high in this landscape.

There is some limited scope for the small-medium typology (turbines 35-50m) to be accommodated in this character type. Turbines of this size should be located on broad, more gently undulating slopes, avoiding impact on the landmark hills. The potential for cumulative effects to arise with operational wind farms, single turbines and transmission lines is likely to severely restrict opportunities for this typology. The regular distribution of settlement across this landscape also offers a potential constraint given the

significant cumulative effects that could arise if a number of farms/land holdings featured a turbine of this size.

There are increased opportunities to site the small typology (turbines 20-35m) in this landscape in order to minimise potential cumulative effects with operational/consented larger turbines sited in this landscape and the adjacent *Broad Forested Hills within Upland Farmland* (8a). Multiple turbines of this height could also be accommodated more successfully in terms of reducing visual clutter and dominance across this open and well-settled landscape. Turbines should be sited on gentler slopes above fields and on slight ridges and terraces which often occur below woodlands. They should avoid being sited close to operational/consented wind farms and large turbines.

Detailed guidance on the siting of smaller turbines is set out in Appendix D.

Although landform is broad and gently rolling, the presence of a regular pattern of farms, small woodlands and other settlement reduces landscape scale.

Existing tall single and small groups of wind turbines form prominent features within the northern parts of this landscape.

Knock Hill forms a landmark in views from both this landscape and from neighbouring Aberdeenshire.

Smaller wind turbines are generally associated with farms

14 BROAD FORESTED HILLS WITHIN UPLAND FARMLAND (8A)

14.1 Introduction

This landscape forms a sub-type of the *Upland Farmland* (8). It covers predominantly forested broad plateaux and more pronounced hills lying on the edges of the *Upland Farmland* (8).

This assessment considers the sensitivity of larger development typologies (turbines >50m high) in detail, providing summary guidance only for smaller typologies.

14.1.1 *Operational/consented wind farms*

The consented Aultmore wind farm is located in this character type.

Some areas of this landscape lie close to a number of operational large single turbines sited in the adjacent *Upland Farmland* (8) in the vicinity of Lurg Hill and Grange Crossroads within the adjacent *Upland Farmland* (8). The operational wind farm of Edintore is also located in the *Upland Farmland* (8) close to Keith. The operational Hill of Towie wind farm, located in the adjacent *Upland Forested Hills* (9) is clearly visible from this character type.

14.2 Description and summary of sensitivity

This character type comprises the predominantly forested broader hills and upland plateaux which contain the lower and more settled *Upland Farmland* (8) which extends across the Isla Valley and its northern tributaries. Although the majority of these upland areas have a simple landform of gentle slopes, broad indistinct summits and rounded ridges, the more defined conical 'landmark' hills of Binn of Cullen and Meikle Balloch also occur and these are highly sensitive to most scales of wind turbine development. These landscapes are very sparsely settled although they are surrounded by well-settled and farmed lowland landscapes increasing sensitivity in relation to wider landscape context and views. While the landmark hills within this character type are visually prominent, forested plateaux and broad ridges form relatively low and even containing skylines to adjacent character types. Sensitivity is increased where parts of these upland areas form the backdrop to Fochabers, the Gordon Castle designed landscape and the Spey.

There would be a ***High*** sensitivity to the very large typology (turbines >130m), a ***High-medium*** sensitivity to the large typology (turbines 80-130m) and a ***Medium*** sensitivity to the medium typology (turbines 50-80m).

14.2.1 *Smaller turbines*

Similar sensitivities would be associated with smaller typologies (turbines <50m high) within this landscape. The more distinctive landmark hills and lower plateaux, important in providing landmark features and/or the setting to Fochabers, the Spey and Gordon Castle designed landscape, would also be sensitive. Smaller turbines would be likely to have less of an effect on the more settled adjoining *Upland Farmland* (8) although cumulative effects could occur with operational and consented wind farms and turbines.

14.2.2 *Potential cumulative issues*

The consented Aultmore wind farm will be sited on one of the low forested hills of this landscape character type. The operational single but large turbines sited on Lurg Hill and close to Grange Crossroads within the adjacent *Upland Farmland* (8) are widely visible in this part of eastern Moray. The operational Hill of Towie wind farm is also clearly visible on the higher hills of the *Rolling Forested Hills* (9) to the south-west.

Key cumulative landscape and visual issues include:

- Wind farm developments located on the majority of the lower, less distinctive upland plateaux and ridges within this character type which would impact on views from the adjacent *Upland Farmland* (8), potentially creating a dominant 'encircling' effect.
- Close inter-visibility of operational larger turbines sited in the adjacent Upland Farmland (8) with large turbines/wind farm developments located in nearby parts of the *Broad Forested Hills within Upland Farmland* (8a) which could exacerbate visual clutter and domination of turbines in views from the B9018 and from settlement.
- Potential sequential cumulative visual effects on views from major roads including the A96 and the A95 through Moray and into Aberdeenshire where a number of operational wind farms and small groups of tall turbines are sited (the screening provided by ridges and hills on the Aberdeenshire/Moray border limits inter-visibility).
- Cumulative effects from popular walking routes and hill tops including from the Bin of Cullen and Knock Hill where multiple wind farms and large turbines sited in both Moray and Aberdeenshire could be seen in close proximity.

14.2.3 *Constraints*

- The landmark hills of Bin of Cullen and Meikle Balloch which have distinctive conical summits– turbines sited on or close to these hills would detract from their form and the focus they provide in long views across eastern Moray.
- Smaller, but still well-defined, hills such as Lurg Hill which form locally distinctive features.
- The relatively limited extent of the low hills and ridges which increases the potential for landscape and visual effects on adjacent smaller scale and well-settled landscapes such as the *Rolling Coastal Farmland* (4a) and the *Upland Farmland* (8)
- Whiteash Hill which is important in providing the wider setting to Fochabers, the Spey valley and Gordon Castle designed landscape.

14.2.4 *Opportunities*

- The simple, gently undulating landform, often uniform land cover, very sparse settlement and medium to large scale of the lower, less distinctive plateau-like hills of this landscape.

14.3 Guidance for development

No scope has been identified for very large turbines over 130m high to be accommodated in this landscape because of the limited extent of these uplands, the landscape and visual effects likely to occur on adjacent settled and smaller scale landscapes and cumulative effects with existing wind turbines and (if additional new developments) consented wind farms.

There is very limited scope to accommodate the large typology in this landscape. Turbines towards the lower height band of this typology (<100m high) would minimise effects on adjacent settled landscapes. Turbines should be set well back into the interior of the more extensive areas of upland plateau which would allow for adequate separation to occur thus minimising intrusion on more settled areas. Gentle undulations in landform could provide a degree of containment and reduce the perceived scale of large turbines. Potential areas for development of this size are indicated on the map at the front of this assessment.

The medium typology (turbines 50-80m) could be more readily accommodated in this landscape in terms of minimising effects on adjoining more sensitive landscapes. Turbines of this size should also be set back into the core of the more extensive areas of upland plateau. Turbines of this size would however need to be carefully sited to avoid cumulative effects with consented larger turbines sited both in this landscape and the adjoining *Rolling Forested Hills* (9) and the *Upland Farmland* (8).

Both the large and medium typologies should not be sited on or close-by the landmark hills of Bin of Cullen and Meikle Balloch. The summits of more pronounced hills which are locally distinctive should also be avoided. Turbines should also avoid significant intrusion on the designed landscape of Gordon Castle, on the Spey Valley and on the setting of Fochabers. Potential cumulative effects with the consented Aultmore wind farm and wind turbines in the *Upland Farmland* (8) will additionally be a major constraint to additional development in this character type.

There is limited scope for smaller turbines >50m high but these should be sited well away from operational and consented wind farms/large turbines sited in this character type and the adjacent *Upland Farmland* (8) in order to avoid clutter and cumulative effects associated with different turbine sizes, designs and rotation speeds. Turbines of this size sited on the lower slopes of these hills may benefit from the screening provided by rising ground.

This upland landscape backdrops the 'Upland Farmland' (8). Existing and consented wind turbines and wind farm development in the Hill of Lurg area increases potential for significant cumulative effects to arise.

This upland landscape forms generally low and even forested skylines to adjacent more settled landscapes, such as the 'Coastal Farmland with Rolling Hills' (4a).

Occasional 'landmark' hills occur within this landscape and include the Bin of Cullen

Whiteash Hill Wood provides an immediate backdrop to Gordon Castle designed landscape and to Fochabers.

15 ROLLING FORESTED HILLS (9)

15.1 Introduction

The SNH revised Landscape Character Assessment defines a landscape character type, covering the hills and valleys centred on Dufftown, as the *Upland Farmed Valleys and Forested Hills*. This landscape has been sub-divided into two areas for the purposes of the sensitivity assessment; the *Rolling Forested Hills* (9) covering the larger scale, less settled and predominantly forested hills and the *Narrow Farmed Valleys* (13) which covers the valleys of the Fiddich, Dullan Water and upper Isla.

This assessment considers the sensitivity of the upland landscape of the *Rolling Forested Hills* (9) to larger development typologies (turbines >50m high) in detail, providing summary guidance only for smaller typologies.

15.1.1 *Operational/consented wind farms*

The operational Hill of Towie wind farm is located in this character type. A number of smaller single turbines are located on the north-west facing hill slopes of the upland area centred on the Hill of Towie summit (339m). A group of three small turbines are also located in the Mulben area.

15.2 Description and summary of sensitivity

This landscape comprises often prominent, steep-sided rounded hills cut by long, well-defined valleys. Ben Aigan is the most distinctive of these hills with its conical quartzite summit protruding above forested slopes. These hills are broadly patterned with coniferous forestry and grass and heather moorland. Upper hill slopes at the transition with the *Narrow Farmed Valleys* (13) tend to feature small coniferous woodlands and shelterbelts extending into more strongly enclosed pasture. In places, forestry extends down onto lower slopes to entirely fill narrow valleys. Small farms are located high on the upper slopes of these hills, often located next to small tributary valleys and accessed by narrow roads. The core of these hills is unsettled. A winding road provides a pass over the Hill of Towie upland area, aligned close to a wind farm.

The presence of an existing wind farm, together with single turbines on the lower slopes of these hills, increases sensitivity in terms of potential cumulative effects. The setting these hills provide to the adjacent *Narrow Farmed Valleys* (13) is also a key constraint with upper hill slopes, hills and ridges forming immediate skylines and backdrops to these smaller scale and well-settled landscapes being highly sensitive to intrusion by larger turbines. There would be a ***High*** sensitivity to the very large typology (turbines >130m) and a ***High-medium*** sensitivity to the large and medium typologies (turbines >50m).

15.2.1 *Smaller turbines*

Smaller turbines <50m would fit with the scale and generally simple landform of this character type although potential cumulative effects with operational wind farms sited in this character type and the adjacent *Upland Farmland* (8) are likely to be a significant constraint.

15.2.2 *Potential cumulative issues*

The operational Hill of Towie wind farm dominates this relatively compact landscape character type. Smaller wind turbines located on north-west facing hill slopes below the Hill of Towie wind farm, the Edintore wind farm and small groups of smaller turbines in the Mulben area within the adjacent *Upland Farmland* (8) also increase potential for cumulative impacts to arise.

Key cumulative landscape and visual issues include:

- Close inter-visibility of operational single small turbines sited in this character type and the adjacent *Upland Farmland* (8) with large turbines/wind farm developments such as Hill of Towie and Edintore which could exacerbate visual clutter and domination of turbines in views from the A95, B9014, B9103 and settlement.
- Cumulative effects on views from popular walking routes and hill tops including from the Speyside Way, Little Conval and Ben Aigan.
- Extensions to operational wind farms and new developments which could dominate immediate skylines above the *Narrow Farmed Valleys* (13) or potentially lead to a 'corridor' effect either side of these small scale valleys.
- Differences in size, design and rotational speed of small turbines with large turbines with smaller single turbines and groups of turbines in the Mulben area and on farmland north-west of the Hill of Towie wind farm

15.2.3 *Constraints*

- The immediate skylines these rolling hills provide to the adjacent small scale and well-settled *Narrow Farmed Valleys* (9) which would be sensitive to intrusion by wind turbines sited on the outer edges of the hills.
- The setting provided by these hills to historic built features such as castles and houses and their associated designed landscapes and to the planned settlement of Dufftown located in the *Broad Farmed Valley* (7) and the *Narrow Farmed Valleys* (13).
- The Spey Valley, including the settlement of Charlestown of Aberlour, which is backed by the steep wooded hill slopes of this character type.
- The distinctive form of Ben Aigan which forms a highly visible landmark feature widely seen across central and eastern Moray and which is a popular destination for walkers and cyclists.
- The well-defined steep-sided hills of Little Conval, located in the adjacent *Open Uplands with Steep Slopes* (12a), and Scaut Hill which are both important in forming part of the setting to Dufftown.
- Potential cumulative effects with the operational Hill of Towie wind farm and with single small turbines sited in this character type but also with nearby wind energy developments located in the *Upland Farmland* (8).

15.2.4 *Opportunities*

- Small areas of gently undulating hill plateau close to the Hill of Towie wind farm where there may be potential to locate additional large wind turbines to appear

as a small extension to this development whilst minimising effects on adjacent smaller scale valleys.

- Upland areas close to the boundary to Aberdeenshire where there may be scope to locate the medium typology to fit with the scale and character of this more settled area yet avoid close comparison with the 100m high turbines of the operational Hill of Towie wind farm

15.3 Guidance for development

No scope has been identified for very large turbines over 130m high to be accommodated in this landscape because of the limited extent of these uplands and the landscape and visual effects likely to occur on adjacent settled and smaller scale valleys.

There may be some ***very limited*** scope to accommodate the large typology in this landscape. Turbines towards the lower height band of this typology (<100m high) would be more likely to fit with the size of existing turbines within the Hill of Towie wind farm if located nearby and also minimise effects on adjacent smaller scale valleys. Repowering of operational wind farm development may provide opportunities to accommodate larger turbines within this typology provided redesign of turbine layout and/or a reduction in turbine numbers minimised effects on adjacent sensitive valleys. Turbines should be set well back into the core of upland areas, avoiding ridges and hills which form immediate skylines to the adjacent smaller scale settled *Narrow Farmed Valleys* (13) and the *Broad Farmed Valley* (7) of the Spey. Potential areas for development are indicated in the following map.

The medium typology (turbines 50-80m) should only be located where they would not be closely inter-visible with the operational Hill of Towie turbines in order to minimise potential cumulative effects.

Both these typologies should avoid being sited on, or close-by, the landmark hill of Ben Aigan or the smaller, but locally prominent, Little Conval and Scaut Hill. The wooded slopes which form the backdrop to Charlestown of Aberlour and the Spey Valley should also be avoided.

Smaller turbines <50m high should be sited well away from the operational wind farm developments of Hill of Towie and Edintore in order to avoid clutter and cumulative effects associated with different turbine sizes, designs and rotation speeds. There is little remaining scope for additional smaller turbines <50m high on the hill slopes to the north-west of the Hill of Towie wind farm due to the cumulative effects between different designs and sizes of turbines experienced from the A95 and from settlement in this area.

Existing wind farm development is sited within this landscape

These hills form the backdrop to Dufftown and a number of smaller scale settled valleys

The 'landmark' hill of Ben Aigan seen from the Spey Valley – this hill is popular with walkers and cyclists

Lower hill slopes and valleys accommodate small farms

16 UPLAND MOORLAND AND FORESTRY (10)

16.1 Introduction

The *Upland Moorland and Forestry* (10) occurs in a single area within Moray. This character type merges gradually with the *Open Rolling Uplands* (11) to the south-west with the latter forming higher and generally more well-defined hills than the subtly undulating plateau of the *Upland Moorland and Forestry* (10).

This assessment considers the sensitivity of the upland landscape of the *Upland Moorland and Forestry* (10) to larger development typologies (turbines >50m high) in detail, providing summary guidance only for smaller typologies.

16.1.1 *Operational/consented wind farms*

The operational Rothes I and II wind farm is located within the broader eastern part of this upland plateau. The consented Meikle Hill, and Kellas wind farms are sited close to the Rothes I and II wind farm. The consented Hill of Glaschyle wind farm is located close to the western edge of this character type.

The operational Berry Burn and Paul's Hill wind farms are located within the adjacent *Open Rolling Uplands* (11).

16.2 Description and summary of sensitivity

The *Upland Moorland and Forestry* (10) features a gently undulating plateau-like landform with smooth even slopes. This landscape has a simple land cover of extensive coniferous forestry and moorland. It is very sparsely settled and already accommodates a number of wind farm developments. Many of these characteristics present potential opportunities to accommodate further large scale wind turbine development although the more defined and higher hills found on the outer edges of lower-lying basins and interior hills are important in providing an immediate backdrop to smaller scale, settled valleys. This landscape is not notably well-used for recreation and visibility of the interior of this upland plateau is restricted from roads and settlement due to its relative extensiveness and isolation. These uplands do however backdrop the *Coastal Farmlands* (4) in the north of Moray and the while the skyline is generally even, the distinctive hills of Brown Muir and Mill Buie form landmark features in views from the north. Carn na Cailliche and Hunt Hill on the southern edge of these uplands abutting the Spey Valley are less well-defined but important in the containment they provide to operational wind farm development sited within the lower-lying upland core.

There would be a ***High-medium*** sensitivity to the very large typology (turbines >130m) and a ***Medium*** sensitivity to the large and medium typologies (turbines >50m).

16.2.1 *Smaller turbines*

There is unlikely to be a significant demand for smaller typologies (turbines <50m high) within the very sparsely settled uplands of this landscape. Smaller turbines would appear out of scale in relation to the predominantly large scale of these uplands and could also incur cumulative effects with operational and consented wind farms.

16.2.2 *Potential cumulative issues*

A number of operational and consented wind farms already influence character and views in this landscape.

Key cumulative landscape and visual issues include:

- Potential sequential and simultaneous views of multiple developments visible on the long, low skylines of this character type seen in views from the *Coastal Farmland* (4), *Rolling Farmland and Forest* (5) and *Rolling Farmland and Forest with Valleys* (5a).
- The close proximity of the Berry Burn wind farm located in the adjacent *Open Rolling Uplands* (11) to the narrower extent of the *Upland Moorland and Forestry* (10) in the west may result in potential close inter-visibility of developments although extensive woodland cover and isolation from settlement and roads may also limit cumulative effects experienced on the ground.
- Potential effects on views from the A95 and from settlement within the *Broad Farmed Valley* (the Spey Valley) where the Paul's Hill and Hill of Towie wind farms are already visible and where any additional development in this character type could increase impacts – operational wind farms occupy lower and more simple sections of skyline seen from the Spey Valley and are reasonably distant from key views and this reduces their prominence, although this could change if future development proposals were sited closer to the southern edge of the *Upland Moorland and Forestry* (10) and/or featured larger turbines.
- Sequential and simultaneous visibility of multiple wind farm developments sited within this character type and the *Open Rolling Uplands* (11) from the Dava Way. The Berry Burn wind farm is already visible and there will also be close views of the consented Hill of Glaschyle wind farm from this recreational route.
- Cumulative effects on views from the minor road between Knockando and Dallas where operational wind farms are already visible but are relatively well set back. The consented Meikle Hill windfarm will lie very close to the eastern side of this road and any further development seen in close proximity to the west could create a dominant 'corridor' effect.
- Sequential and simultaneous views from the A940 which provides a scenic approach to Moray over Dava Moor. The consented Hill of Glaschyle wind farm will be prominent in views from rare open spaces along this route and additional development on the small wooded hills which lie on the western extent of this character type could result in significant cumulative effects.
- Increases in the extent and prominence of wind farm development seen on skylines above the Lossie Valley in the Dallas/Kellas area. The operational Rothes I and II wind farm is already visible in the east and the consented Meikle Hill and Kellas wind farms will increase visibility of turbines towards the west.

16.2.3 *Constraints*

- The smaller hills and ridges on the outer edges of this upland landscape which form immediate skylines to adjacent small scale valleys, for example Glen Rothes, the Lossie Valley between Kellas and Dallas, the richly diverse upper

Lossie Valley to the south-west of Dallas and the *Narrow Wooded Valley* (6) of the Findhorn/Divie Rivers.

- Views from the A940 which provides a scenic approach to Moray over Dava Moor. The small forested hills which lie on the western edge of this character type would be particularly sensitive to larger turbines sited on ridges which form the immediate skyline to the *Narrow Wooded Valley* (6) and which are prominent in views from this route (see also the potential cumulative effects listed above)
- The more defined steep-sided hills of Brown Muir and Mill Buie which form landmark features in long views from the north, and particularly from the *Coastal Farmland* (4) where they stand out against more even lower ridges which form the backdrop to these views.
- The hill of Carn na Cailliche, which although not as well-defined or prominent as Brown Muir or Mill Buie, plays an important role in containing wind farm development sited in the core of the *Upland Moorland and Forestry* (10) in views from the Spey Valley.
- Views from the minor road between Dallas and Knockando, a scenic route popular with leisure drivers and cyclists. Operational wind farms are already visible from this route but additional developments sited close to the road would cumulatively affect the sense of wildness that can be experienced from this hill pass.
- The need to minimise effects of wind farm development seen on immediate and sensitive skylines above the *Broad Farmed Valley* (7). The well-settled nature of the Spey Valley and its popularity with tourists increases visual sensitivity.

16.2.4 *Opportunities*

- The simple landform and large scale of the interior plateau areas and the sparsely settled nature of this character type which reduces visual sensitivity.

16.3 Guidance for development

Some ***limited*** scope has been identified for very large turbines around 150m high to be accommodated in this more extensive upland landscape. Turbines should be set well back into the core of upland areas, avoiding ridges and hills which form immediate skylines to the adjacent smaller scale settled *Rolling Farmland and Forest with Valleys* (5a), *Narrow Farmed Valleys* (13) and the *Broad Farmed Valley* (7). The small scale and richly diverse upper Lossie Valley to the south-west of Dallas would be particularly sensitive to large turbines sited on the hills which contain this valley. Turbines should not be sited on, or close-by, the landmark hills of Mill Buie, Carn na Cailliche, Hunt Hill and Brown Muir. Adverse effects on views from the minor road between Dallas and Knockando should be minimised by siting turbines well back from the diverse moorland and regenerating native woodland which provides an attractive feature particularly seen to the west of this route. Significant cumulative effects on the Dava Way and on the A95, which is well-used by tourists, should be avoided. Turbines of this size should be sited to minimise cumulative effects with smaller turbines within nearby operational and consented wind farms in key views. There may be opportunities to minimise effects on more sensitive landscape and visual receptors when repowering operational wind farms by redesign of turbine layout and potential reduction in turbine numbers.

There is also some ***limited*** scope to accommodate the large scale development typology in this landscape (turbines 80-130m). The same siting principles apply as set out above for very large turbines. Potential development areas for turbines 80m to around 150m high are indicated on the map at the front of this assessment.

The medium typology (turbines 50-80m) should only be located where turbines of this size would not be closely inter-visible with operational and consented wind farm developments which generally comprise turbines >100m high. The less widely visible western extent of this character type may provide some limited opportunities although turbines should not be sited on the small wooded ridges and hills prominent in rare open views from the A940 and the adjacent *Narrow Wooded Valley* (6).

Some limited opportunities exist for smaller turbines to be sited on lower hill slopes at the transition with the *Broad Farmed Valley* (7) and the *Rolling Farmland and Forest* (5) where they should be set well away from operational wind farms and could be back-dropped by rising ground and visually associated with more settled and farmed hill fringes. There are greater opportunities to site the small typology (turbines <35m high) in these areas due to their better scale relationship to adjacent settled areas and to minimise cumulative effects with larger turbines within operational wind farms.

The 'landmark' hill of Carn na Cailliche is important in visually containing the Rothes wind farm development in views from the Spey Valley

Forestry and heather moorland on lower slopes either side of the minor road between Knockando and Dallas

The Rothes I and II wind farm is seen in close proximity to the Lossie Valley near Dallas and occupies a generally low, even section of skyline between more pronounced hills.

The 'landmark' hill of Brown Muir forms a prominent feature seen extensively across the settled 'Coastal Farmland' (4) of Moray.

17 OPEN ROLLING UPLANDS (11)

17.1 Introduction

The *Open Rolling Uplands* (11) landscape character type occurs in a single area within Moray. It extends into neighbouring Highland to the west covering an extensive swathe of moorland and low hills. This character type merges gradually with the *Upland Moorland and Forestry (10)* to the north and north-east, forming higher and generally more well-defined hills than the subtly undulating plateau of the *Upland Moorland and Forestry* (10).

This assessment considers the sensitivity of the upland landscape of the *Open Rolling Uplands* (11) within Moray to larger development typologies (turbines >50m high) in detail, providing summary guidance only for smaller typologies.

17.1.1 *Operational/consented wind farms*

The operational Berry Burn and Paul's Hill wind farms are located within this character type. The operational Rothes I and II wind farm is located within the adjacent *Upland Moorland and Forestry* (10). The consented Meikle Hill, and Kellas wind farms are sited close to the Rothes I and II wind farm and the consented Hill of Glaschyle wind farm is located close to the western edge of the *Upland Moorland and Forestry* (10).

17.2 Description and summary of sensitivity

The *Open Rolling Uplands* (11) form an upland plateau of rounded hills, some of these are well-defined such as the Knock of Braemoray and Roy's Hill, and the broad low-lying basin of Moidach More. Smaller, more complex knolly hills and lochans occur to the north of Carn Kitty. This landscape has a simple land cover of grass and heather moorland with semi-improved pastures and moss on lower hill slopes and within low-lying basins. It is sparsely settled with small farms associated with the shallow valleys of the River Divie and Dorback Burn on northern and western fringes. Areas of diverse regenerating native woodlands and heather are a feature within these valleys. The operational wind farms of Paul's Hill and Berry Burn are sited within this character type. While the large scale and generally simple landform of this character type reduces sensitivity to larger typologies, the presence of operational wind farms and the limited extent of this landscape limits scope for further development. The more pronounced landmark hills of Knock of Braemoray and Roy's Hill additionally constrain scope for development due to their prominence, but also their importance in visually containing and separating operational wind farm developments. Although this is a very sparsely settled area with only limited views possible into the interior uplands and basins from roads and settlement in the surrounding area, the landmark hills on the fringes of these uplands form key foci in views from well-used roads.

This landscape has a ***High-medium*** sensitivity to the very large typology (turbines >130m) and large typologies (turbines 80-130m). There would be a ***High*** sensitivity to the medium typology (turbines 50-80m) because of the potential close inter-visibility that would occur with larger operational wind turbines and given the landscape and visual constraints applicable to much of the undeveloped area of this character type.

17.2.1 *Smaller turbines*

Smaller turbines would appear out of scale in relation to the predominantly large scale of these uplands and could also incur cumulative effects with operational and consented wind farms if sited in the eastern part of this character type. Demand for smaller typologies is more likely to occur within the more settled western valleys and lower hill slopes on the outer fringes of this character type. Turbines of this size would fit better with the reduced scale of these areas and could be sited to minimise cumulative effects with operational and consented wind farms.

17.2.2 *Potential cumulative issues*

A number of operational wind farms already influence landscape character and views.

Key cumulative landscape and visual issues include:

- Potential effects on views from the A95 and from settlement within the *Broad Farmed Valley* (the Spey Valley) where the Paul's Hill and Hill of Towie wind farms are already visible and where any additional development sited in this character type and also in the *Upland Moorland and Forestry* (10) could increase the extent and prominence of turbines seen on containing skylines.
- Sequential and simultaneous visibility of multiple wind farm developments sited within this character type and the *Upland Moorland and Forestry* (10) from the Dava Way – the Berry Burn wind farm is already visible and there will also be close views of the Hill of Glaschyle wind farm from this recreational route.
- Cumulative effects on views from the minor road between Knockando and Dallas. Operational wind farms are already visible but are mostly well set back from the road. The consented Meikle Hill wind farm located in the *Upland Moorland and Forestry* (10) will lie very close to the eastern side of this road and any further development seen in close proximity to the west could create a dominant 'corridor' effect.
- Sequential and simultaneous views from the A940 which provides a scenic approach to Moray over Dava Moor – the consented Hill of Glaschyle wind farm will be prominent in views from rare open spaces along this route and additional larger turbines sited to the west of this road would be likely to exacerbate this effect.

17.2.3 *Constraints*

- The more defined steeper-sided hills of Knock of Braemoray, which forms a landmark feature in rare open views from the *Narrow Wooded Valley* (6), and Carn Biorach which both form highly visible hills on the more western edge of this character type seen from the A940, a key scenic approach to Moray.
- Roy's Hill, which forms a landmark feature seen from the Spey Valley on the southern edge of this character type and which also provides some visual containment of the operational Paul's Hill wind farm, and the conical peak of Carn Kitty (521m).
- Smaller, more complex knolly hills and lochans to the north of Carn Kitty at the transition with the *Upland Forest and Moorland* (10).

- The smaller scale, sparsely settled and diversely vegetated valleys of the River Divie and the Dorback Burn which are also highly visible from the A939/A940.
- Cumulative effects on views from the Dava Way recreational route between Grantown and Forres and from the Speyside Way.
- The wider landscape setting and character of Lochindorb within adjacent Highland and also views from the B9007 which comprises a scenic route over wild moorland.
- Views from the minor road between Dallas and Knockando, a scenic route popular with motorists and cyclists. Operational wind farms are already visible from this route but additional developments sited close to the road would affect the sense of wildness that can be experienced from this route.
- The need to minimise effects of wind farm development seen on immediate and sensitive skylines above the *Broad Farmed Valley* (7). The well-settled nature of the Spey Valley and its popularity with tourists increases visual sensitivity within this adjacent character type.

17.2.4 *Opportunities*

- The simple landform and large scale of the interior plateau areas and the sparsely settled nature and less visible eastern parts of the character type.

17.3 Guidance for development

Some ***very limited*** scope has been identified for very large turbines around 150m high to be accommodated in this more extensive upland landscape. Turbines should be set well back into the core of upland areas, avoiding being sited on or nearby the landmark hills of Knock of Braemoray, Carn Biorach and Roy's Hill. Development on these landmark hills and other higher hills within this character type would impact on views from key scenic routes into Moray and could also affect views and the setting of Dava Moor and Lochindorb in neighbouring Highland. Turbines should be sited to avoid smaller scale more complex landform and lochans lying to the north of Carn Kitty. Views from the minor road between Dallas and Knockando should be protected with turbines being sited well back from the diverse moorland and regenerating woodland which provides an attractive feature particularly to the west of this route. Significant cumulative effects experienced from the Dava Way and from the minor Kockando to Dallas road should be avoided. Turbines of this size should be sited to minimise cumulative effects with smaller turbines within nearby operational and consented wind farms in key views. Repowering of operational wind farms located within the less sensitive interior of these uplands (and therefore distant from key views from roads and settlement) is likely to provide most scope for accommodating turbines of this size whilst minimising landscape and visual effects.

There is some ***very limited*** scope to accommodate the large scale development typology in this landscape (turbines >80-130m). The same siting principles apply as set out above for very large turbines. Potential development areas for turbines between 80m and 150m are indicated on the following map.

There is no scope for the medium typology (turbines 50-80m) to be accommodated in this landscape due to the presence of significant landscape and visual constraints and the cumulative effects that would be likely to occur with operational wind farms.

Some limited opportunities exist for smaller turbines to be located on lower hill slopes of the Dorback Burn and at the transition with the adjacent *Upland Moorland and Forestry* (10) and the *Broad Farmed Valley* (7) although careful site selection will be necessary to avoid significant cumulative impacts with operational wind farms. There are greater opportunities to site the small typology (turbines <35m high) in these areas due to their better scale relationship to adjacent settled areas and to minimise cumulative effects with larger turbines within operational wind farms.

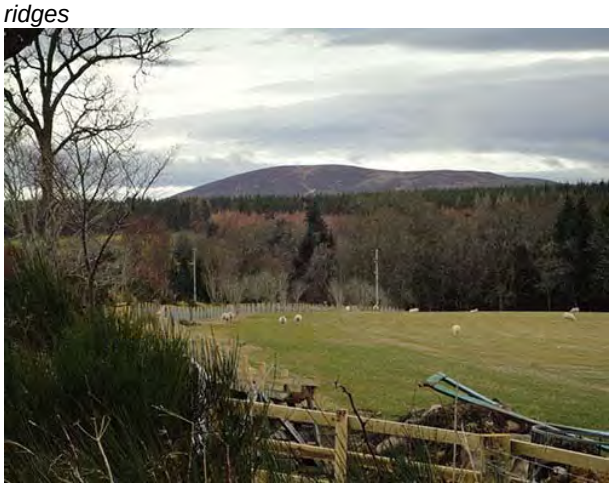
Landform becomes more complex in the north-eastern corner of this landscape where small knolls, deeply incised valleys and lochans feature.

The existing Paul's Hill wind farm is located in this landscape and is partially contained by the 'landmark' Roy's Hill in views from the Spey Valley.

These uplands are characteristically open in comparison with the more forested 'Upland Moorland and Forestry' (10) seen in the backdrop

A low-lying boggy moor forms the watershed of the River Divie and is surrounded by gently undulating upland ridges

Bright green improved pastures stand out amidst moorland and bog vegetation within the sparsely settled valleys of the Divie and Dorback Burn.



The 'landmark' hill of Knock of Braemoray forms a focus in views from the A940 and also screens views of wind farm development sited in the interior of these uplands.

18 OPEN UPLANDS WITH STEEP SLOPES (12A)

18.1 Introduction

The *Open Uplands and Farmed Valleys* (12) landscape character type defined in the revised SNH Landscape Character Assessment occurs in the south-eastern part of Moray close to the boundaries of Aberdeenshire and the Cairngorms National Park. This character type has been sub-divided for the purposes of this capacity study into the *Open Uplands with Steep Slopes* (12a) and the *Open Uplands with Settled Glens* (12b). The more substantial farmed and settled valleys which cut through these uplands are additionally classified in this capacity study as *Narrow Farmed Valleys* (13) with a separate sensitivity assessment undertaken.

This assessment considers the sensitivity of the upland landscape of the *Open Uplands with Steep Slopes* (12a) within Moray to larger development typologies (turbines >50m high) in detail, providing summary guidance only for smaller typologies.

18.1.1 *Operational/consented wind farms*

There are no operational or consented wind farm or turbine developments located in this landscape character type.

The consented Dorenell wind farm is located in the adjacent *Open Uplands with Settled Glens* (12b) on the boundary with this area. The operational wind farms of Rothes I and II, Berry Burn, Hill of Towie and Paul's Hill located in other upland areas within Moray are visible from hill summits and ridges from within this character type within 10-15km distance.

18.2 Description and summary of sensitivity

The *Open Uplands with Steep Slopes* (12a) forms two relatively narrow areas of rolling hills separated by Glen Rinnes. Steep slopes extend up to narrow ridges or more complex summits and provide an often dramatic backdrop and setting to the small scale *Narrow Farmed Valleys* (13) and the *Broad Farmed Valley* (7). The landscape scale of the highest upland area is large but the topographical relief is much lower to the north and where there are more complex landforms and small foothills at the transition within the valleys. This landscape has a relatively simple land cover of moorland and upland grass with some conifer forest and shelter woods along the lower slopes. It is sparsely settled with occasional small farms associated with the narrow glens which extend into the hills. The consented Dorenell wind farm is located in the neighbouring *Open Upland with Settled Glens* (12b).

While the scale of this landscape is generally extensive and this reduces sensitivity to the larger typologies, the steep and often dramatic slopes, ridges and summits of these uplands are important in providing the backdrop and setting to the smaller scale settled valleys of the Spey, Glenlivet and Glen Rinnes. Steep slopes, areas of more complex landform and the consent of a large wind farm on the boundary with an adjacent character type, limits opportunities for additional development. This is a very sparsely settled area but it is highly inter-visible with the surrounding area, and from key summits

and ridges within the character type. Ben Rinnes, Meikle Conval and Little Conval form key foci in views and visual sensitivity is also increased as these hills are popular with walkers.

This landscape has a ***High*** sensitivity to the large and medium typologies (turbines >50m).

18.2.1 *Smaller turbines*

There is unlikely to be significant demand for smaller typologies (turbines <50m) within these sparsely settled uplands. Smaller turbines would appear out of scale in relation to the predominantly large scale of these uplands and could have cumulative effects with large scale consented wind farm developments if seen in close proximity.

Some limited opportunities exist for smaller turbines to be located within sparsely settled glens, across more gentle lower slopes and at the transition with the *Broad Farmed Valley* (7). There are greater opportunities to site the small typology (turbines <35m high) within glens and on lower hill slopes where they could relate better to the scale of small farms, woodlands and farmland. Locating smaller turbines in these low-lying settled areas would also minimise cumulative landscape and visual effects by reducing inter-visibility with larger development typologies sited within the core of the uplands.

18.2.2 *Potential cumulative issues*

The consented Dorenell wind farm lies in the adjacent *Open Uplands with Settled Glens* (12b). This development will extend for nearly 7km along the ridge and hill slopes above Glenfiddich Forest. There will be close elevated views of this wind farm from Ben Rinnes and other popularly accessed hills within this character type.

Key cumulative landscape and visual issues include:

- Views from the top of Ben Rinnes to surrounding high ridges and landmark hills which already feature a number of wind farms to the north. The consented Dorenell wind farm will be seen in much closer proximity than these operational developments.
- The erosion and diminution of the qualities of wildness associated with Moray's landscapes and the sense of seclusion experienced from hill tops and more remote glens – there are few upland areas left in Moray where there are no wind farm developments either built or consented.
- The role played by the undeveloped eastern flank of Glen Rinnes, which currently provides a visual buffer between the consented Dorenell wind farm and the smaller scale *Narrow Farmed Valley* (13) of Glen Rinnes.
- Potential cumulative effects on views from the neighbouring *Broad Farmed Valley* (7) where the Hill of Towie and Paul's Hill wind farms are already visible.
- The setting of Dufftown where the operational wind farm of Hill of Towie is already visible and a small number of turbines of the consented Dorenell wind farm will also be partially visible.

18.2.3 *Constraints*

- The steep slopes and narrow ridgelines of these uplands which contain the *Broad Farmed Valley* (7) of the Spey and the *Narrow Farmed Valley* (13) of Glen Rinnes and also overlook the Braes of Glenlivet to the south - larger typologies would dominate the smaller scale of these adjacent well-settled landscapes.
- The higher hills in the southern part of these uplands, including hills such as Cairn Muldonich, which will play a role in screening views of the consented Dorenell wind farm from Glenlivet.
- The lower relief and more complex landform associated with smaller scale foothills and lower hills to the northern end of this character type and at the transition with the *Broad Farmed Valley* (7) and *Narrow Farmed Valley* (13).
- The rugged profile, more complex landform and the prominent 'stand-alone' setting of Ben Rinnes, Meikle Conval and Little Conval, which together form a group of landmark hills which are highly visible and recognisable features over a wide area.
- The setting of the planned village of Dufftown which is in part formed by these upland areas.
- Views from roads such as the A95, A941 and B9009 – routes which are often used by tourists - and views from Ben Rinnes and other hills popular with walkers.
- The proximity of the Cairngorms National Park and the setting of Glenlivet to the south of this character area.
- Cumulative effects with the consented Dorenell wind farm located in the adjacent *Open Uplands with Settled Glens* (12b).

18.2.4 *Opportunities*

- Lower slopes at the transition with the adjacent *Broad Farmed Valley* (7) and *Narrow Farmed Valley* (13) where smaller typologies (turbines <50m) could potentially be accommodated.

18.3 Guidance for development

There are no opportunities for larger typologies, turbines over 50m high, to be accommodated in this landscape character type due to significant landscape and visual constraints, including cumulative effects with nearby operational and consented wind farms.

There is some limited opportunity to site the small-medium (35-50m) typology in this area. Turbines of this size should be located on lower hill slopes at the transition with the *Broad Farmed Valley* (7) although care would need to be taken to avoid impacting on the setting and views to the landmark hills of Ben Rinnes, Meikle Conval and Little Conval. There are likely to be greater opportunities to accommodate the small typology (turbines, 20-35m) on the transition with the farmed valleys and on the lower slopes of this character type due to their better scale relationship with the farmed lowlands of the glens and valleys.

Ben Rinnes – an easily recognisable 'landmark hill' which is highly visible - the summit is also a popular viewpoint

These steep slopes enclose the valley of Glen Rinnes forming a pronounced edge and also limiting views of the consented Dorenell wind farm to the east.

Steep sided slopes are a key characteristic of this landscape character type – they form enclosure which reduces the scale of the adjacent valleys

Steep-sided passes cut through the mountains, forming narrow, enclosed and small scale glens within the larger scale hill ranges

19 OPEN UPLANDS WITH SETTLED GLENS (12B)

19.1 Introduction

The *Open Uplands and Farmed Valleys* (12) landscape character type defined in the revised SNH Landscape Character Assessment occurs in the south-eastern part of Moray close to the boundaries of Aberdeenshire and the Cairngorms National Park. This character type has been sub-divided for the purposes of this capacity study into the *Open Uplands with Steep Slopes* (12a) and the *Open Uplands with Settled Glens* (12b). The more substantial farmed and settled valleys which cut through these uplands are defined as *Narrow Farmed Valleys* (13) with a separate sensitivity assessment undertaken.

This assessment considers the sensitivity of the upland landscape of the *Open Uplands with Settled Glens* (12b) within Moray to larger development typologies (turbines >50m high) in detail, providing summary guidance only for smaller typologies.

19.1.1 *Operational/consented wind farms*

The consented Dorenell wind farm is located in this landscape character type[2]. The operational wind farms of Rothes I and II, Berry Burn, Hill of Towie and Paul's Hill located in other upland areas within Moray are visible from hill summits and ridges from within this character type within 10-15km distance.

The operational Clashindarroch and Kildrummy wind farms lie close to the Moray boundary in neighbouring Aberdeenshire.

19.2 Description and summary of sensitivity

The *Open Uplands with Settled Glens* (12b) extends across the lower rounded hills which form the eastern boundary of Moray. It includes the elevated shallow bowl of the Cabrach contained by an arc of hills and the sparsely settled upper reaches of the Deveron which flows through a narrow glen. Steeper slopes between Black Water Glen and Glen Fiddich create a transition between this character type and the neighbouring *Open Uplands with Steep Slopes* (12a) which is generally characterised by higher and more pronounced hills.

These uplands lie adjacent to rounded hills with a similar elevation lying to the north-east within Aberdeenshire although these adjacent hills are forested, contrasting with the open moorland cover of the *Open Uplands with Settled Glens* (12b). The smooth gently rolling landform of the Open Uplands with Settled Glens (12b) is accentuated by low grass and heather cover, interspersed by occasional small conifer woodlands above improved pastures on lower slopes. Dispersed farms are situated on the lower slopes of the broad basin of the Cabrach with isolated estate buildings and farms also located

[2] The consented Dorenell wind farm is for 59 turbines, 126m high. An application for 53 turbines, between 125/150m high is currently being considered by the Scottish Government. The sensitivity assessment assumes that this revised application will be approved.

within the narrow glens which cut into the hills. The A941 passes through this area, entering Moray across the dramatic high pass of the Cabrach.

The extensive sweeping scale of this landscape, the generally smooth landform, often with gentle gradients, as well as the overall extent of the uplands and simple land cover all combine to reduce sensitivity to wind farm development. However, the consented Dorenell and operational Clashindarroch and Kildrummy wind farms lie within and close-by this landscape and this increases sensitivity in relation to potential cumulative landscape and visual effects. Scope to accommodate additional larger turbine typologies is further limited by the relatively small extent of remaining undeveloped upland areas (once the consented Dorenell wind farm is constructed) and the closer proximity of these areas to settled and smaller scale areas and roads.

This landscape has a ***High*** sensitivity to the very large typology (turbines >130m) and ***High-medium*** sensitivity to the large and medium typologies (turbines >50m).

19.2.1 *Smaller turbines*

There is unlikely to be significant demand for smaller typologies (turbines <50m) within the sparsely settled uplands of this character type. Smaller turbines would appear out of scale in relation to the predominantly large scale of these uplands and could have cumulative effects with large scale consented and operational wind farm developments if seen in close proximity. Some limited opportunities exist for smaller turbines to be located on gentle lower hill slopes at the transition between the upland ridges and the farmed land where they would minimise cumulative impacts with nearby wind farms and could relate to the scale of small farms, woodlands and farmland.

19.2.2 *Potential cumulative issues*

The consented Dorenell wind farm will occupy a large proportion of the uplands of this landscape. The operational Clashindarroch and Kildrummy wind farms are also located close to the boundary of this landscape character type.

Key cumulative landscape and visual issues include:

- Potential sequential and simultaneous views of multiple developments along the skyline around the 360 degree bowl of the Cabrach seen from the A941.
- Cumulative effects on views from the adjacent smaller scale and settled *Narrow Farmed Valleys* (13), the Deveron valley within neighbouring Aberdeenshire and on the setting of landmark historic features such as Auchindoun Castle.
- Visual confusion and an absence of rationale which could occur between large turbines sited in simple and more expansive upland areas and the same size of turbine also located within the more settled valleys and basins of this landscape.
- Variations in the type and size of single and small groups of small turbines which may be proposed within the landscape character type.

19.2.3 *Constraints*

- The shallow farmed and settled basin of the Cabrach where the scale of the landscape is reduced by a more distinct land cover pattern and by small farms and houses.
- The hills on the outer edges of this character type which backdrop the more sensitive settled and smaller scale landscapes lying to the south-east of the Fiddich and the *Narrow Farmed Valley* (13) of the Deveron Valley.
- The visual prominence and setting of The Buck, a landmark hill and cumulative effects from its summit where the consented Doronell, Clashindarroch and Kildrummy wind farms are/will be visible in relatively close proximity.
- The setting of the historically important Auchindoun Castle which lies close to the southern edge of this character type.
- The 'sense of arrival' associated with panoramic views from elevated sections of the A941 and A920 when crossing into Moray.
- Cumulative effects with the consented Dorenell wind farm which will occupy an extensive part of this character type and with the operational Clashindarroch wind farm in neighbouring Aberdeenshire, principally impacting on views from the A941.
- The proximity of the Cairngorms National Park and the setting of the Ladder Hills and Glen Buchat to the south of this character type.

19.2.4 *Opportunities*

- The simple, gently graded landform and expansive scale of the long undulating ridges and shallow contained bowls to be found within the upland areas of this character type.

19.3 Guidance for development

No scope has been identified for additional very large turbines (turbines >130m) to be accommodated in this landscape due to the limited extent of remaining uplands without operational and consented wind farms and the presence of significant landscape and visual constraints associated with the remaining undeveloped area. **This assessment assumes that the revised 53 turbine Doronell proposal with turbines 125m/150m will be consented.**

There may be some ***very limited*** opportunities for larger typologies (turbines >50m) to be accommodated in this landscape character type. These are more likely to comprise very small extensions to some existing wind farm developments or single/small groups of turbines rather than new wind farms due principally to the cumulative effects that would occur with the Dorenell and Clashindarroch wind farms. The setting of surrounding smaller scale and more settled landscapes (including the scenic Deveron valley and the setting of Auchindoun Castle) is an additional constraint and any further turbines should be sited so as not to significantly intrude on immediate skylines above these areas. Single/small groups of turbines would be likely to be more acceptable if their height was towards the lower height band of the large typology (80m-130m) or within the medium typology (50-80m) range in order to minimise effects on more sensitive valleys. Turbines should also be set well away from the landmark hill of The

Buck and not be located on prominent hill tops close to the A941. Potential search areas for development are indicated on the map at the front of this assessment.

There is some limited opportunity to site smaller typologies (turbines <50m) on lower hill slopes at the transition between the upland ridges and the farmed land, along gentle slopes. There are likely to be greater opportunities to accommodate the small typology (20-35m) as they could be sited closer to the farmed lowlands of the glens and Cabrach basin but also because they would limit cumulative effects with nearby operational and consented wind farms in the upland areas.

The wide bowl of the Cabrach is rimmed by extensive, long gently undulating ridges, but the degree of vertical relief between the farmed bowl and the ridgeline is low. The consented Dorenell wind farm will extend along the upland ridges in this view.

Fields within the lower lying land of the Cabrach extend along the lower, gentle hill slopes. Farms and woodlands are small elements in this landscape.

The Buck, a 'landmark hill', rises to over 700m and is prominently sited on the boundary with Aberdeenshire

More complex landform along the floor of the glen and a higher degree of enclosure, reinforces the smaller scale of the upper Deveron at the transition with the 'Narrow Farmed Valley' (13).

20 NARROW FARMED VALLEYS (13)

20.1 Introduction

The *Narrow Farmed Valleys* (13) cover the valleys of the upper Isla, the lower Fiddich, Glen Rinnes, Glenlivet and the upper Deveron. This landscape character type is not specifically defined in the SNH revised landscape character assessment although the character of these valleys is noted in the descriptions for the broader landscape character types that they lie in.

20.1.1 *Operational/consented wind farms*

There are no operational or consented wind farm or turbine developments located in this landscape character type. The operational wind farm of Hill of Towie, located in the *Rolling Forested Hills* (9) is visible in close proximity from the upper Isla valley. The consented Dorenell wind farm, located in the *Open Uplands with Settled Glens* (12b) will be seen from the south-east facing slopes of Glen Rinnes and from parts of the upper Deveron and the Fiddich.

20.2 Description and summary of sensitivity

These valleys are narrow and have a small to medium scale which is reinforced by their well-settled character. These valleys are strongly contained by steep farmed and wooded slopes with adjacent uplands forming immediate skyline ridges. The Deveron and upper Isla valleys have a particularly diverse land cover with mixed policy woodlands and avenue trees contributing to the richness of well-managed farmland. Coniferous shelterbelts and small native woodlands form a distinct pattern across the undulating pastures of Glen Rinnes and Glenlivet. Although these valleys are not readily visible from adjacent character types due to their visual containment, they are well-settled and contain main roads increasing visual sensitivity.

This landscape has a ***High*** sensitivity to the large and medium typologies (turbines >50m). It has a ***High-medium*** sensitivity to the small-medium typology (turbines 35-50m) and is of ***Medium*** sensitivity to the small typology (turbines 20-35m)

20.2.1 *Potential cumulative issues*

The operational Hill of Towie wind farm and the consented Dorenell wind farm lie in close proximity to some of these valleys. Key cumulative landscape and visual issues include:

- Multiple turbines of even the small typology (turbines 20-35m) could result in significant visual clutter and detraction from the landform and the often rich land cover and settlement pattern characteristic of these valleys, particularly where they are narrow and strongly contained by steep slopes.
- Wind farms located in adjacent upland landscapes (landscape character areas 8a, 12a and 12b) where large turbines could have a dominant effect if sited close to the edge and seen on the immediate skylines which contain these valleys.
- An absence of rationale that would occur between large turbines sited in the less settled, simpler and more expansive adjacent upland landscapes (landscape

character areas 8a, 12a and 12b) and also within these more settled smaller scale valleys which could lead to visual confusion and erode perceived differences in landscape character.

20.2.2 *Constraints*

- The presence of small scale features such as farms and houses, enclosed fields and woodland which provide ready scale references.
- Incised and narrow valley floors and the often more complex rolling landform of side slopes and more pronounced small hills.
- The often rich diversity of land cover which includes policy woodland, a strong pattern of shelterbelts, field and avenue trees, small enclosed fields and occasional pockets of wet land and native woodlands.
- Cumulative effects with larger typologies clearly associated with more expansively scaled adjacent upland areas.
- The setting of the planned village of Dufftown and other settlements and on historic buildings which can form a focus in some of these valleys.
- Views from the public roads which are aligned through these valleys, many of which are well-used by tourists, and from settlement and hill paths.

20.2.3 *Opportunities*

- Broader, more gently sloping upper valley sides and more extensive undulating terraces, usually at the transition with adjacent upland landscapes, where the small typology could be sited and would have greater potential to minimise cumulative effects with wind farms sited in adjacent upland areas.

20.3 Guidance for development

There are no opportunities for larger typologies (turbines >50m) to be accommodated in this landscape character type due to the adverse effects that would occur on the scale of these often narrow, strongly contained and settled valleys and because of the potential for cumulative effects to occur with operational and consented wind farms located in adjoining upland areas.

The small-medium typology (turbines 35-50m) would also appear very large in relation to the scale and often narrow extent of the majority of these valleys. There may however be some ***limited*** scope for turbines towards the lower height band of this typology to be located on upper slopes and terraces within broader valleys although care would be needed to minimise cumulative effects with operational/consented wind farms. There is increased scope to accommodate the small typology (turbines 20-35m) as they would have a better relationship to the scale of these valleys and would have greater potential to reduce cumulative effects with operational/consented wind farms.

All turbines should be sited on more gentle open slopes and terraces, avoiding areas of more complex landform and areas with a more pronounced pattern of trees and policy woodlands. They should avoid being sited on upper slopes close to operational and consented wind farms prominent on immediate containing skylines above these valleys. Detailed guidance on siting smaller turbines is contained in Appendix D.

More open farmland occurs within narrow valley floors and on lower hill slopes. Mixed woodlands pattern valley sides and policy plantings are also present in the upper Isla and Deveron.

Low, rounded and interlocking hills contain these river valleys – settlement often extends high on upper slopes. These small scale valleys are sensitive to large wind turbines sited on prominent containing ridges.

Undulating pastures within Glen Rinnes backed by the rugged scarp of the 'Open Uplands with Steep Slopes' (12a).

The Deveron has a convoluted alignment and this, together with its strong containment by steep slopes, lends it an intimate scale.

21 SUMMARY OF FINDINGS AND RECOMMENDATIONS

21.1 Introduction

This section of the report summarises the key findings of the sensitivity assessment undertaken for landscape character types and sub-types across Moray. It addresses the landscape and visual issues associated with wider strategic planning of wind farm and turbine developments and outlines recommendations for an overall landscape strategy.

21.2 Key findings of the sensitivity assessment

The sensitivity assessment has considered 16 landscape character types and sub-types/areas within Moray, based on the revised SNH Landscape Character Assessment. Sensitivity to different sizes of wind turbines has been considered with these principally based on turbine height to blade tip.

The sensitivity of key landscape and visual characteristics was assessed, together with consideration of the cumulative effects that could arise with other operational and consented wind energy developments. Sensitivity to different development typologies was scored on a five point scale between High and Low against a range of landscape and visual criteria. An overall sensitivity rating for each landscape character type was then reached using professional judgement in considering the weight of evidence in terms of the sensitivities identified in the assessment rather than a numerical scoring system.

The following table sets out the overall findings on sensitivity for very large, large and large-medium typologies within all landscape character types situated in Moray. A detailed assessment of sensitivity to very large turbines (>130m) was undertaken only for five landscape character types (8a, 9, 10, 11 and 12b) identified as having scope to accommodate large turbines (80-130m) in the 2012 Moray Wind Energy Landscape Capacity Study.

Table 6: Overall sensitivity to larger turbines

Very Large typology (>130m high turbines)	
Sensitivity	**Character type**
High	*Broad Forested Hills within Upland Farmland (8a), Rolling Forested Hills (9), Open Uplands with Settled Glens (12b)*
High-medium	*Open Rolling Uplands (11), Upland Moorland and Forestry (10)*
Medium	-
Medium-low	-
Low	-
Large typology (80-130m high turbines)	
High	*Coastal Margin (1-3), Rolling Coastal Farmland (4a), Rolling Farmland and Forests (5), Rolling Farmland and Forests with Valleys (5a), Rolling Farmland and Forests with Low Hills (5b), Narrow Wooded Valley (6), Broad Farmed Valley (7), Upland Farmland (8), Open Uplands with Steep Slopes*

	(12a), Narrow Farmed Valleys (13)
High-medium	*Coastal Farmland (4), Broad Forested Hills within Upland Farmland (8a), Rolling Forested Hills (9), Open Rolling Uplands (11), Open Uplands with Settled Glens (12b)*
Medium	*Upland Moorland and Forestry (10)*
Medium-low	-
Low	
Medium typology (50-80m high turbines)	
High	*Coastal Margin (1-3), Rolling Coastal Farmland (4a), Rolling Farmland and Forests(5), Rolling Farmland and Forests with Valleys (5a), Rolling Farmland and Forests with Low Hills (5b), Narrow Wooded Valley (6), Broad Farmed Valley (7), Upland Farmland (8), Open Rolling Uplands (11), Open Uplands with Steep Slopes (12a), Narrow Farmed Valleys (13)*
High-medium	*Coastal Farmland (4), Rolling Forested Hills (9),Open Uplands with Settled Glens (12b)*
Medium	*Broad Forested Hills within Upland Farmland (8a), Upland Moorland and Forestry (10)*
Medium-low	-
Low	-

The following table 7 sets out overall sensitivity to smaller development typologies. It should be noted that detailed assessment of these smaller typologies has not been undertaken for sparsely settled upland character types (8a, 9, 10, 11, 12a and 12b) where demand for this size of wind turbine is likely to be limited.

Table 7: Overall sensitivity to smaller turbines

Small-medium typology (35m-50m high turbines)	
Sensitivity	**Character type**
High	*Coastal Margin (1-3), Narrow Wooded Valley (6)*
High-medium	*Rolling Coastal Farmland (4a), Rolling Farmland and Forests(5), Rolling Farmland and Forests with Valleys (5a), Rolling Farmland and Forests with Low Hills (5b), Broad Farmed Valley (7), Upland Farmland (8), Narrow Farmed Valleys (13)*
Medium	*Coastal Farmland (4)*
Medium-low	-
Low	-
Small typology (20-35m high turbines)	
High	-
High-medium	*Coastal Margin (1-3), Narrow Wooded Valley (6)*
Medium	*Rolling Coastal Farmland (4a), Rolling Farmland and Forests (5), Rolling Farmland and Forests with Valleys (5a), Rolling Farmland and Forests with Low Hills (5b), Broad Farmed Valley (7), Narrow Farmed Valleys (13)*
Medium-low	*Coastal Farmland (4), Upland Farmland (8)*
Low	-

Wind turbines below 20m high to blade tip relate better to the scale of woodlands, mature trees and buildings in more settled landscapes and there are therefore fewer constraints associated with this typology in general. Detailed guidance on the siting of turbines < 50m high to blade tip is set out in Appendix D.

21.2.1 *How to interpret the sensitivity scores*

Caution is needed in interpreting the combined sensitivity scores set out in the tables above as these represent an average across landscape character types. Considerable variation can occur across these landscapes and the detailed sensitivity assessments set out in tabular form in Appendix C should therefore be read and fully reviewed in terms of specific constraints and opportunities when considering individual development proposals. The sensitivity assessment identifies constraints at a strategic scale and potential developers should demonstrate how they have dealt with potential effects on the constraints identified in the sensitivity assessment when considering the design and siting of specific development proposals.

Where a landscape character area is identified as being of ***High*** sensitivity rating overall for any typology, it is the opinion of the consultants that the typology cannot be accommodated in the landscape character area without unacceptable significant adverse landscape and/or visual effects arising across a wide range of key landscape and visual sensitivities.

Landscape character types/areas found to be of ***High-medium*** sensitivity will have a number of significant constraints to wind farm/turbine development. While some characteristics (usually found in limited parts of these landscapes) may relate better to such development, significant adverse landscape/visual effects are likely to occur on other key characteristics. We consider that there is likely to be either no scope or very limited scope for development in a small part of these character types/areas only.

A landscape judged to be of ***Medium*** sensitivity would have increased opportunities for wind farm/turbine development, although there would still be some landscape and visual constraints. These constraints may include cumulative effects with other operational and consented wind energy developments. ***Medium-low*** sensitivity landscapes would have fewer constraints and therefore present greater scope for accommodating multiple developments. No landscapes with a low sensitivity have been identified in the study.

The findings on landscape and visual sensitivity set out for each landscape character type are based on the present situation with operational and consented wind farms and turbine developments taken into account. As additional wind energy developments are constructed in the future within Moray and neighbouring authorities, sensitivities may change and periodic monitoring of the cumulative landscape and visual situation will therefore be necessary.

21.3 Strategic landscape issues

The sensitivity assessment identifies constraints and opportunities within each character type/area. 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 character types/areas in isolation. It is important to therefore also take into account the experience and appreciation of the landscape of Moray as a whole and to consider the wider implications of the conclusions of the individual landscape character type/area assessments. The following text provides this landscape overview and addresses strategic cumulative landscape and visual effects of wind energy development before setting out a series of key strategic landscape recommendations.

As a starting point, we have identified a number of distinctive landscape features which recur across Moray (these are generally spread across landscape character types/areas) and have highlighted these in the sensitivity assessments for each landscape character type/sub-type in this study. We have focused on landscape features which could potentially be significantly and adversely affected by wind energy development.

21.3.1 *The 'Landmark Hills'*

There are a number of well-defined, steep-sided hills which form prominent 'landmark' features seen across Moray. These are Knock Hill, Bin of Cullen, Meikle Balloch, Ben Rinnes (together with Little Conval and Meikle Conval), The Buck, Ben Aigan, Romach Hill, Mill Buie, Carn Kitty, Roy's Hill, Carn na Cailliche, Brown Muir, the Knock of Braemoray and Carn Biorach but also the smaller hills of Binn Hill, Tappoch and Quarry Wood which stand out within the low-lying *Coastal Farmland* (4) (see Figure 5). The majority of these hills are both highly visible and easily recognisable landmarks with many forming the immediate backdrop to settlements, small scale valleys and the coast. Some of these hills form visual 'buffers' to less prominent upland areas and are important in visually containing operational wind farm development from more settled valleys. These landmark hills are highly sensitive to wind turbine development sited on or near them as this would be visually prominent in views from roads and settlement within adjacent well-settled landscapes and would detract from their distinct form and character. A more detailed description of each of these landmark hills is set out in Appendix F.

21.3.2 *Less developed upland areas*

There are very few upland areas remaining in Moray which do not accommodate wind farm developments (see Figure 2). The uplands centred on Ben Rinnes, within the *Open Uplands with Steep Slopes* (12a) landscape character area, and the western part of the *Open Rolling Uplands* (11), extending into the adjacent Highland Council area at Dava Moor, comprise rare tracts of less developed uplands. SNH's 2014 Relative Wildness Map confirms the stronger wildness qualities of these areas.[3]

[3] It should be noted that the SNH mapping does not take account of the more recently constructed and consented wind farm developments of Berry Burn or Dorenell and therefore while the uplands where these developments are located are shown as exhibiting stronger qualities of wildness, in reality major change has/will occur, further diminishing the extent of less developed landscapes in Moray.

Ben Rinnes and the steep-sided hills surrounding it are well-used by walkers. These hills are also important in providing a backdrop to the Cairngorms National Park. The Dava Moor area contributes to the scenic approach to Moray experienced from the A939/A940 and also abuts the northern boundary of the Cairngorms National Park. Given the extent of wind farm development already occupying much of the upland areas of Moray, it is recommended that these remaining less developed uplands which have a distinct character and some qualities of wildness (together with the 'landmark hills' described in 21.3.1 above) are a rare and valuable resource that should be protected.

21.3.3 *The coast and wider seascape*

The coast and wider seascape of the Moray Firth is another key landscape feature. The coast includes extensive stretches of natural coastline and also features a distinctive pattern of historic fishing settlements. Although influenced in places by MOD development, the *Coastal Margin* (1-3) landscape character type strongly contrasts with other more modified farmed landscapes in Moray and the diversity and scale of intricate coastal landform, the often strong sense of naturalness associated with sections of the coast and the setting of historic settlements were defined as significant constraints to all the main development typologies considered in the assessment. The stronger qualities of wildness associated with the more remote stretches of coast in Moray are recognised in SNH's Relative Wildness Map of June 2014. The coastal forests are also important, featuring an often diverse flora, being well-used for recreation and increasing the containment of the coast and sense of remoteness. It is recommended that the integrity of the coast is preserved by limiting development to small wind turbines and avoiding intrusion from the more sensitive stretches of coastline.

21.3.4 *Extensive forests and dramatic narrow valleys*

The extensive estate forests found in the western part of Moray are well-managed and notable for their diverse and naturalistic character. They are complemented by mixed policy woodlands associated with the deeply incised and dramatic valleys of the Findhorn and Divie. These densely wooded valleys create a distinctive and highly scenic approach to Moray experienced from the A939/A940, strongly contrasting with the open expansiveness of Dava Moor to the south.

21.3.5 *Scenic approaches to Moray*

The A939/A940 provides a scenic approach to Moray from the south-west. Development of larger typologies within parts of the *Open Rolling Uplands* (11), the western fringes of the *Upland Moorland and Forestry* (10), the *Narrow Wooded Valley* (6) and the *Rolling Farmland and Forest with Low Hills* (5b) could significantly affect views from this route and detract from its special character.

There is also a strong sense of arrival into Moray from Aberdeenshire when travelling on the A941 and from the A920 over high passes from the east. This dramatic experience is enhanced by panoramic views which are revealed when cresting the high passes. The view from the A941 over the Cabrach will significantly alter when the consented Dorenell wind farm is constructed, and this has increased sensitivity in terms of cumulative effects on views from this route.

21.4 The existing pattern of wind farm development in Moray

Large operational and consented wind farm developments are largely associated with the more expansive upland areas within Moray. These developments include the Rothes, Paul's Hill, Berry Burn and Dorenell wind farms. The Hill of Towie and Aultmore wind farms (which comprise turbines of a similar height to these other developments) are located within less extensive areas of upland plateau, and this generally increases/will increase the visual impact of these wind farms on adjacent more settled areas.

Single and small groups of operational turbines over 50m high are mainly located within the *Upland Farmland* (8) landscape character type but with very occasional single larger turbines found within the *Rolling Farmland and Forests with Valleys* (5a), the *Rolling Farmland and Forests with Low Hills* (5b) and the *Broad Farmed Valleys* (7) landscape character types/areas. These operational and consented developments contrast with the established pattern of larger turbines associated with larger scale upland landscapes and generally incur more significant impacts on landscape character and on visual amenity because of their location within more settled and smaller scale landscapes.

Smaller operational turbines below 50m high (and most commonly up to 30m high to blade tip) are predominantly sited within the *Upland Farmland* (8), *Rolling Forested Hills* (9) and *Coastal Farmland* (4) landscape character types. Turbines below 30m high generally have limited landscape and visual impacts although they can have cumulative impacts when sited close to larger typologies.

Operational wind farms and larger turbines sited within landscapes adjoining Moray have been considered in the study. Inter-visibility between Moray and Aberdeenshire to the east between Cullen and the A96 is contained to some extent by a series of ridges and hills on the boundary, limiting views of operational wind farm development located in both regions from low level roads, settlement and coasts. Inter-visibility between Moray and Highland is greatest in the west across the open and relatively low-lying Dava Moor area.

21.5 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 for Moray:

- Pressure for wind farms comprising >10 turbines towards the outer edges of upland landscapes (usually where operational wind farms are sited within the upland core) and lying close to more settled and complex lowland landscapes thereby potentially increasing landscape and visual impact.
- Potential demand for extensions to operational or consented wind farms, or new developments close-by operational wind farms,that could encroach on more sensitive landscapes and could also affect the design integrity and landscape setting of the original development.

- Proposals for increases in turbine sizes within consented wind farms and potential effects on landscape scale and visual impacts
- Potential cumulative landscape and visual impacts between operational, consented and proposed larger wind farms but also with single and small groups (<5) of large turbines sited in adjacent more settled landscapes.
- Potential interest in repowering of older operational wind farm developments and possible expansion of wind farm sites to accommodate larger turbines which could increase visibility and landscape impact.

21.6 Scope for larger turbines over 50m high

This study has found that there is very limited scope to accommodate further large scale wind turbine development in Moray in landscape and visual terms. Only one landscape character type has been identified with a medium sensitivity to the large and medium development typologies considered within the study and this is the *Upland Moorland and Forestry* (10).

A number of upland landscape character types/sub-types already feature operational and consented wind farm developments and cumulative impacts will be a major constraint within the *Rolling Forested Hills* (9), *Open Rolling Uplands* (11) and the *Open Uplands with Settled Glens* (12b). The sensitivity assessment concluded that capacity was close to being reached in these landscapes with scope for additional development mainly limited to small extensions of operational/consented wind farms.

21.7 Scope for smaller turbines below 50m high

There has been a reduction in applications for smaller turbines within Moray since 2012 when the previous Moray Wind Energy Landscape Capacity Study was undertaken. The sensitivity assessment in this revised and updated study concluded that the small-medium typology (turbines 35-50m high) could be accommodated in parts of the more settled lowland landscapes. Many of these landscapes have an even dispersal of relatively small farms and other developments and capacity would be quickly reached if even a small number of these were to feature a turbine of this height, with multiple turbines in close proximity likely to overwhelm landscape features. Periodic monitoring of potential cumulative effects arising from smaller turbines may be necessary depending on the number of applications. Consideration should also be given to the detailed design of smaller turbines in order to achieve compatibility where widely varying designs could lead to visual clutter in some more open landscapes.

21.8 Opportunities for very large wind turbines

Very Large wind turbines (>130m high) could be proposed as new developments, extensions to operational wind farms or as repowering schemes for operational or consented wind farms. The study considered sensitivity to very large turbines within five landscape character types in Moray.

The study has concluded that the larger the extent and scale of an upland landscape, the greater the scope for larger turbines to be accommodated. The *Upland Moorland and Forestry* (10) and the *Open Rolling Uplands* (11) (which border each other

therefore expanding the extent of upland area distant from roads and settlement) offer greatest opportunity for repowering existing wind farms using larger turbines around 150m high. Operational turbines within these areas are currently 100-125m high to blade tip. The majority of these operational turbines are set within the core of these uplands and it will be important to limit intrusion by locating larger turbines in similar areas set back from sensitive skylines and the outer edges of these uplands. Opportunities to accommodate **new** developments of very large turbines are likely to be limited as operational wind farms already occupy less sensitive parts of these landscapes. Potential cumulative effects with nearby operational and consented developments, which comprise smaller turbines, would need to be carefully considered. There may be scope to mitigate effects by redesigning repowered wind farms, including relocating and reducing the number of turbines.

Turbines towards and over 200m high to blade tip are considered to be too large to accommodate given the relatively limited extent of uplands within Moray (and the presence of significant landscape and visual constraints within these upland landscapes) with significant effects likely to be more widespread and severe on adjacent settled smaller scale landscapes.

21.9 A recommended landscape strategy

- ***Protect the landmark hills and their setting*** Views of these hills recur across Moray where they form highly visible and easily recognisable landmarks. Many also form visual 'buffers' to less prominent upland areas, or the backdrop to settlements, small scale valleys and the coast. Wind farm development on or near these hills would be visually prominent and would detract from their distinct form and character.
- ***Maintain the distinctive western threshold to Moray experienced from the A940/A939*** where attractive woodlands, deeply incised intimate valleys, landmark hills and moorland provide a richly scenic landscape. Visual intrusion by larger development typologies would detract from the distinctive scenic approach to Moray experienced from this route and would diminish the strong sense of wildness associated with the Dava Moor area.
- ***Maintain the rugged scenery and setting to more dramatic uplands in the Ben Rinnes area*** by directing wind farm development away from these areas and avoiding developments that could impact on the wider landscape setting and appreciation of these landscapes. Cumulative landscape and visual effects of wind farm development in surrounding landscapes will need to be carefully considered in terms of potential effects on the perception of wildness and on views from popularly accessed hills. This upland area forms one of the few remaining landscapes in Moray with stronger qualities of wildness, as indicated in SNH's Relative Wildness Map (2014).
- ***Protect the special qualities of the coast and its associated historic settlements*** by resisting development of turbines >20m high where they could intrude on views from roads, settlement and recreational areas and also affect the setting of historic settlements and the strong sense of wildness experienced along the most natural and remote stretches of coast, as recognised in SNH's Relative Wildness Map (2014).

- ***Ensure that any further development of larger typologies is clearly associated with less sensitive upland landscapes*** where their more extensive scale can better accommodate, and provide an appropriate wider setting, to large developments. Impacts on adjacent more sensitive smaller scale settled landscapes should be minimised by setting development well back into the upland interior and also considering limitations in the height of turbines. This strategy consolidates the established association of larger typologies with a particular landscape character, minimising cumulative impacts that could occur where different sizes and designs of turbines are sited in all landscapes.
- ***Ongoing review of cumulative landscape and visual effects of multiple wind turbine developments*** will be necessary to ascertain when capacity is close to being reached. This will particularly apply to the upland areas where some scope has been identified for larger typologies but also to the settled lowland landscapes where multiple smaller turbines could quickly result in cumulative effects.