

Wind Energy Development in Northern Ireland's Landscapes

Supplementary Planning Guidance to Accompany Planning Policy Statement 18 'Renewable Energy'

August 2010



Research and Development Series 10/01

A report commissioned by the Northern Ireland Environment Agency

**WIND ENERGY DEVELOPMENT IN NORTHERN IRELAND'S
LANDSCAPES:**

**Supplementary Planning Guidance to accompany Planning
Policy Statement 18 'Renewable Energy'**

This report should be cited as follows: Northern Ireland Environment Agency (2010), *Wind Energy Development in Northern Ireland's Landscapes: Supplementary Planning Guidance to accompany Planning Policy Statement 18 'Renewable Energy'*. NIEA Research and Development Series No 10/01, Belfast.

Contractors: Julie Martin Associates in association with Alison Farmer Associates, Minogue & Associates and ERA-Maptec Ltd.

Authors: Principal Author – Julie Martin with contributions by Alison Farmer and Ruth Minogue.

Editors: Joyce McCormick, Mark Hammond, Susanna Allen and Stephen Hamilton.

For further information on this report please contact:
Joyce McCormick or Mark Hammond

Address: Northern Ireland Environment Agency, Department of the Environment Northern Ireland, Klondyke Building, Cromac Avenue, Gasworks Business Park, Lower Ormeau Road, BELFAST, BT7 2JA

Email: mark.hammond@doeni.gov.uk

Telephone: 00 44 (0)28 90569579

Fax: 00 44 (0)28 90569624

Textphone: 00 44 (0)28 90540642

Website address: <http://www.ni-environment.gov.uk/>

This document may be made available in alternative formats, please contact us to discuss your requirements.

Preamble

The Northern Ireland Environment Agency (NIEA) is an agency of the Department of the Environment. The aim of NIEA is to protect, conserve and promote our natural environment and built heritage and to contribute to the protection and improvement of human health for the benefit of present and future generations.

The Department's responsibilities include the protection, conservation and enhancement of the landscape assets of Northern Ireland. In carrying out these responsibilities the Department designates areas of special landscape value, recognises the importance of local variations in landscape character, and advises others on matters relating to landscape conservation and enjoyment.

The Department, through the planning authority, also has responsibilities to plan and manage development in ways which balance the development needs of the region with the protection of the environment. The Department's *Planning Policy Statement 18: Renewable Energy (PPS18)* and the *Best Practice Guidance to Planning Policy Statement 18: Renewable Energy* aim to facilitate the siting of renewable energy generating facilities in appropriate locations within the built and natural environment in order to achieve Northern Ireland's renewable energy targets and to realise the benefits of renewable energy.

To complement PPS18 NIEA commissioned the independent consultancy firm Julie Martin Associates, in association with Alison Farmer Associates, Minogue & Associates and ERA-Maptec Ltd, to prepare landscape guidance for wind energy development for the whole of Northern Ireland based on landscape character variations throughout the region. Landscape Character Areas (LCAs) were previously identified and described in the Northern Ireland Landscape Character Assessment 2000. The resulting draft guidance document was published by the Department for public consultation in February 2008. Taking into account representations made during the public consultation NIEA has revised this guidance and published it to accompany PPS18 and the Best Practice Guidance.

It is important to note the purpose and scope of the guidance which is set out in Section 1. It is intended to provide broad, strategic guidance in relation to the landscape and visual impacts of wind energy development. Every development proposal is unique, and there remains a need for detailed consideration of the landscape and visual impacts of individual applications on a case by case basis, as well as for consideration of other issues referred to in PPS18 and other regional policy. This guidance promotes the protection, management and planning of landscapes as advocated in the European Landscape Convention (2000) and contributes to commitments in the Northern Ireland Sustainable Development Strategy.

Contents

Preamble.....	5
Abbreviations.....	8
1 Wind Energy Development in the Landscape.....	9
1.1 Purpose and Scope of the Guidance.....	9
1.2 Wind Energy Development in Northern Ireland.....	11
1.3 Northern Ireland's Landscapes.....	17
2 Approach and Methodology.....	19
2.1 Introduction to the Approach and Methodology.....	19
2.2 Key Terms and Definitions.....	21
2.3 Sensitivity Assessment.....	21
2.4 Location, Siting, Layout and Design Considerations for each LCA....	25
2.5 Using the Landscape Assessment Sheets.....	26
2.5.1 Key Landscape and Visual Characteristics and Values.....	26
2.5.2 Assessment for Wind Energy Development.....	27
3 Principles.....	28
3.1 Principals Affecting Wind Energy Developments in the Landscape...	28
3.2 Cumulative Wind Energy Impacts.....	38
3.3 Broad Strategic Impacts of Wind Energy Developments in Northern Ireland's Distinctive Landscapes.....	39
3.3.1 The Antrim Plateau.....	39
3.3.2 The North West.....	40
3.3.3 Fermanagh.....	41
3.3.4 Down.....	42
3.3.5 Lough Neagh Basin.....	43
3.3.6 The Mourne and South Armagh.....	44
4 Guidance on Preparing Wind Energy Proposals.....	46
4.1 Introduction.....	46
4.2 Initial Scheme Planning.....	46
4.3 Siting, Layout and Design.....	47
4.4 Assessment of Landscape and Visual Impacts.....	52
4.5 Checklists.....	56
Annex 1. Sources of Further Technical Advice.....	59
Annex 2. Terms and Definitions.....	60
Annex 3. Landscape Assessment Sheets.....	62

Figures

Figure 1: Northern Ireland's Landscape Character Areas.....	12
Figure 2: Mean Wind Speeds at 75m Above Ground Level.....	14
Figure 3: Existing and Proposed Wind Farms October 2007.....	15
Figure 4: Northern Ireland's Areas of Outstanding Natural Beauty.....	19

Tables

Table 1: Principle Landscape, Natural and Cultural Heritage Designations and Recreational Resources Consulted.....	20
Table 2: Criteria for Assessing Landscape Sensitivity to Wind Energy Development.....	22
Table 3: General Principles: Wind Energy Development and Landscape..	28
Table 4: General Principles: Sensitivity, Opportunities and Challenges in Different Landscapes.....	33
Table 5: Key Principles of Good Siting, Layout and Design.....	48
Table 6: Good Practice Requirements for Landscape and Visual Impact Assessment	52
Table 7: Checklist of Presentation Material that Should be Provided.....	56
Table 8: Checklist of Questions.....	58

Photographs

Photo 1: Simple strong horizontal landform accommodates larger turbine groupings.....	31
Photo 2: More complex landform could be 'flattened' by larger turbine groupings.....	31
Photo 3: Turbines seen with electricity pylons may create visual clutter.....	32
Photo 4: Relationship between turbine and farm buildings and trees reduces impact.....	32
Photo 5: Prominence of turbines on scarp can be reduced by setback from edge.....	35
Photo 6: Proximity to scale comparators can increase apparent turbine height...	35
Photo 7: Forestry may provide temporary screening.....	36
Photo 8: Turbines on drumlins should avoid tops and not exceed drumlin height.....	36
Photo 9: Valleys between upland wind farms are best kept free of commercial turbines.....	37
Photo 10: Landmark coastal features and their settings are very sensitive to turbines.....	37
Photo 11: Respect settings of areas designated for their scenic quality.....	50
Photo 12: Ensure that turbines read as a coherent group – this group is too disparate.....	50
Photo 13: Try to avoid creating views of blades that can be distracting.....	51
Photo 14: Steep, highly engineered access tracks should be avoided where possible.....	51

Abbreviations

AOD - Above Ordnance Datum
AoHSV - Areas of High Scenic Value
AONB - Areas of Outstanding Natural Beauty
ASAI - Areas of Significant Archaeological Interest
ASI - Areas of Scientific Interest
ASQ - Areas of Scenic Quality
ASSI - Areas of Special Scientific Interest
DETI -Department of Enterprise Trade and Investment
DOE - Department of Environment
EIA – Environmental Impact Assessment
IUCN - International Union for the Conservation of Nature
LCA - Landscape Character Areas
LVIA - Landscape and Visual Impact Assessment
MNR - Marine Nature Reserve
NIEA - Northern Ireland Environment Agency
NNR - National Nature Reserves
NR - Nature Reserves
PPS - Planning Policy Statement
RAMSAR - Convention for the conservation and wise use of wetlands and their resources
SAC - Special Areas of Conservation
SPA - Special Protection Areas
SPG – Strategic Planning Guidance
UNESCO - United Nations Educational, Scientific, and Cultural Organization
WHS - World Heritage Site
ZTV - Zone of Theoretical Visibility

PPS18 and this SPG have been subjected to an equality impact screening exercise in line with the statutory obligations contained in Section 75 of the Northern Ireland Act 1998. The outcome of this exercise indicates that PPS18 and this SPG are unlikely to have significant adverse implications for equality of opportunity or community relations.

1 Wind Energy Development in the Landscape

1.1 Purpose and Scope of the Guidance

This supplementary planning guidance on wind energy development in Northern Ireland's landscapes accompanies the Department of the Environment's *Planning Policy Statement 18: Renewable Energy* (PPS 18)¹. PPS18 sets out the Department's planning policy for development that generates energy from renewable resources and describes the international and regional context for the evolution of the policy. This guidance shares the aim of PPS18 to facilitate the siting of renewable energy generating facilities in appropriate locations within the built and natural environment in order to achieve Northern Ireland's renewable energy targets and to realise the benefits of renewable energy.

This guidance is based on the sensitivity of Northern Ireland's landscapes to wind energy development and contains an assessment of each of the 130 Landscape Character Areas (LCAs) in Northern Ireland by referencing the characteristics and values associated with each LCA. The 130 LCAs are displayed in Figure 1.

The guidance is intended for use when considering all types and scales of wind energy development except for development which comes within the scope of Permitted Development Rights. The guidance is aimed at wind energy developers and their planning and landscape consultants, other stakeholders, and at those determining planning applications for wind energy development. Utilization of the guidance will assist developers in identifying the locations most suited for wind energy development in landscape and visual terms. The guidance also provides advice on siting, layout and design of wind energy proposals. The guidance will be taken into account by the planning authority as strategic guidance in processing planning applications for wind energy development.

It is important to note that this supplementary planning guidance is intended to provide broad, strategic guidance in relation to the landscape and visual impacts of wind energy development. Every development proposal is unique, and there remains a need for detailed consideration of the landscape and visual impacts of individual applications on a case by case basis, as well as for consideration of other issues referred to in PPS18 and other regional policy.

¹ Planning and Environmental Policy Group (2009) *Planning Policy Statement 18: Renewable Energy*, Department of the Environment.

http://www.planningni.gov.uk/index/policy/policy_publications/planning_statements.htm

This guidance:

- Sets out the background to the Landscape Character Areas and special landscapes of Northern Ireland, and to wind energy development in these landscapes;
- Explains the approach and methodology that was used in this guidance to assess wind energy development in relation to the landscape of each Landscape Character Area;
- Contains general principles and guidance relating to wind energy development in the landscape and associated sensitivities, opportunities and challenges. This includes principles and guidance relating to site selection, siting, layout and design and the assessment of landscape, visual and cumulative impacts;
- Considers cumulative wind energy development in Northern Ireland's distinctive landscapes in October 2007 and highlights landscape issues that need to be carefully considered in the future;
- Provides practical guidance relating to the use of this guidance and the preparation and submission of wind energy proposals.

In relation to the landscape assessment sheets for each of the 130 Landscape Character Areas the guidance:

- Describes the key landscape and visual characteristics of each LCA.
- Describes the LCAs sensitivity to wind energy development, taking into account the different landscape components and attributes that influence sensitivity to wind energy developments;
- Indicates broad areas that would be most suitable, in landscape and visual terms, for wind energy development in relation to the character of the local landscape;
- Indicates some of the landscape challenges and opportunities that should be taken into account when considering the location, siting, layout and design for wind energy development proposals; and
- Indicates potential cumulative impacts and transboundary issues in relation to existing and approved wind energy developments and future proposals.

1.2 Wind Energy Development in Northern Ireland

Wind energy development can usually only occur where wind speeds are sufficiently fast. Figure 2 shows Northern Ireland's wind energy resource in terms of mean wind speeds at 75m above ground level. Further information on the Region's sustainable energy resources can be found in the energy section of the Department of Enterprise, Trade and Investment (DETI) website². This information, while not directly used in the preparation of this guidance, nonetheless indicates the broad distribution of the Region's wind resources and the areas that are most likely to be subject to larger scale wind energy development. It can be seen that the areas of highest wind speed, with the best wind energy resource, are located mainly in upland areas. A degree of landscape impact is therefore unavoidable in some of these landscapes.

The locations of operational and consented wind farms and application sites for development of more than one turbine, at the time of this assessment in October 2007, are shown in Figure 3 and its associated table. Further details and updates of this information can be found on the Planning Service website.³ A concentration of sites, in a few mainly upland LCAs, can be seen from this map, indicating that parts of Northern Ireland were already experiencing an accumulation of wind energy developments and applications. In contrast, single, stand-alone turbine developments (principally in the 15-25m height range) were much more evenly and widely spread across Northern Ireland, occurring in nearly all areas except the higher ground within the uplands.

² <http://www.detini.gov.uk/>

³

http://www.planningni.gov.uk/index/advice/advice_apply/advice_renewable_energy/renewable_wind_farms.htm

Figure 1: Northern Ireland's Landscape Character Areas

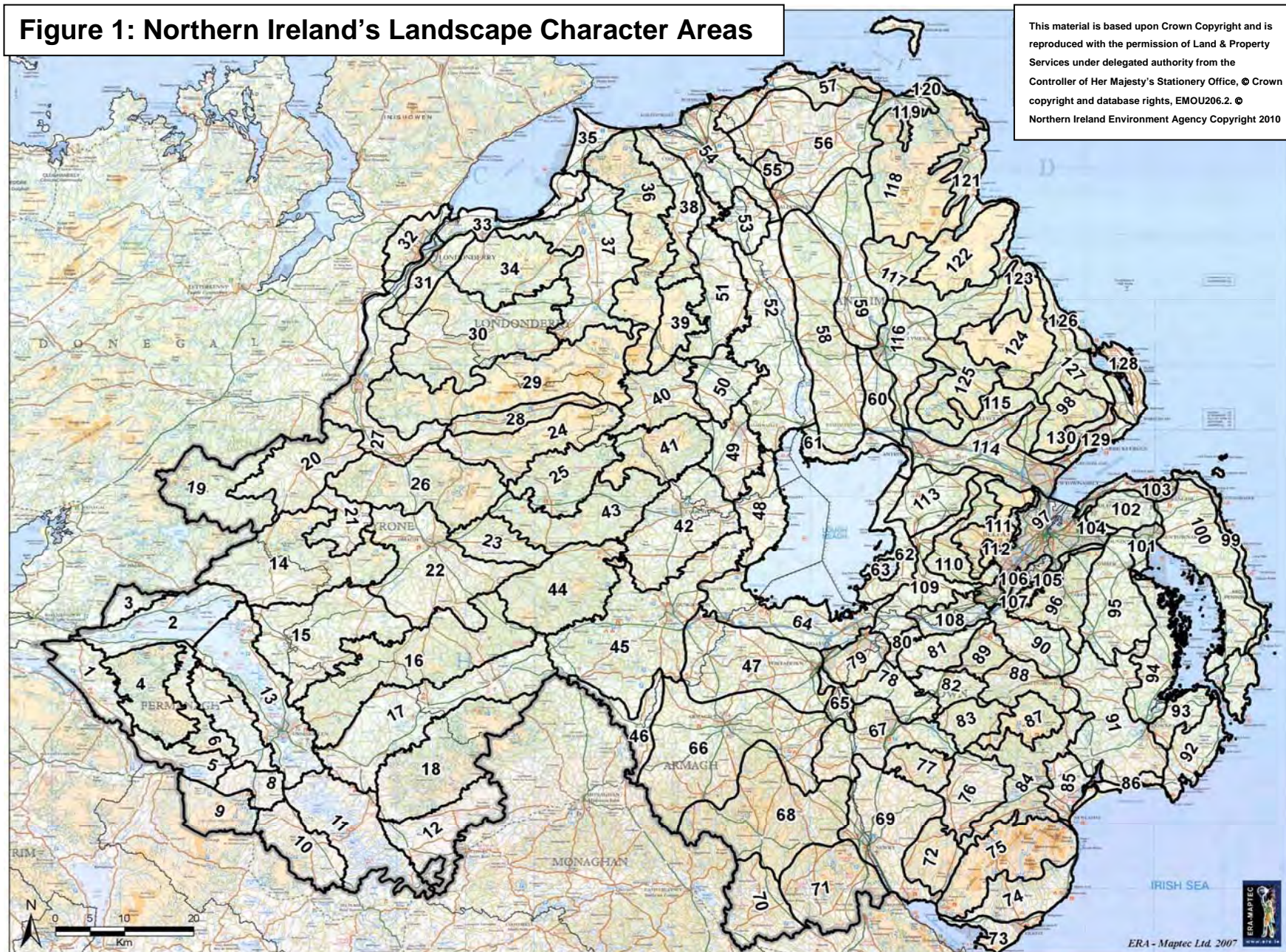


Figure 1: Northern Ireland' Landscape Character Areas

Key to the Landscape Character Areas

- | | | | |
|--|--|-------------------------------------|--|
| 1. The Garrison Lowlands | 33. Lough Foyle Alluvial Plain | 66. Armagh Drumlins | 100. Ards Farmlands and Estates |
| 2. Lower Lough Erne | 34. Loughermore Hills | 67. Armagh/Banbridge Hills | 101. Scrabo |
| 3. Croagh and Garvary River | 35. Magilligan Lowlands | 68. Carrigatuke Hills | 102. Holywood Hills |
| 4. Lough Navar and Ballintempo Uplands | 36. Binevenagh | 69. Newry Basin | 103. Bangor Coastline |
| 5. The Lough Macnean Valley | 37. Roe Basin | 70. Crossmaglen Drumlins and Loughs | 104. Craigantlet Escarpment |
| 6. The Knockmore Scarpland | 38. Eastern Binevenagh Slopes | 71. Ring of Gullion | 105. Castlereagh Slopes |
| 7. The Sillees Valley | 39. Glenshane Slopes | 72. Slieve Roosley | 106. Lagan Parkland |
| 8. The Arney Lowlands | 40. Upper Moyola Valley | 73. Kilkeel Coast | 107. Hummocky Lagan Lowlands |
| 9. Cuilcagh and Marlbank | 41. Slieve Gallion | 74. Kingdom of Mourne | 108. Broad Lagan Valley |
| 10. Slieve Russel, Derrylin and Kinawley | 42. Cookstown Farmlands | 75. Mourne Mountains | 109. Upper Ballinderry Plateau |
| 11. Upper Lough Erne | 43. Carrickmore Hills | 76. Ballyronney Basin | 110. Derrykillultagh |
| 12. Newtownbutler and Rosslea Lowlands | 44. Slievemore | 77. Iveagh Slopes | 111. Divis Summits |
| 13. Enniskillen | 45. Dungannon Drumlins and Hills | 78. North Banbridge Hills | 112. Belfast Basalt Escarpment |
| 14. Lough Bradan | 46. Blackwater Valley | 79. Craigavon Plateau | 113. Expansive Crumlin Farmland |
| 15. Irvinestown Farmland | 47. Loughgall Orchard Belt | 80. Donaghcloney Valley | 114. Three and Six Mile Water Valleys |
| 16. Brougher Mountain | 48. West Lough Neagh Shores | 81. Kilwarlin Plateau | 115. Tardree and Six Mile Water Slopes |
| 17. Clogher Valley Lowlands | 49. Magherafelt Farmland | 82. Dromore Lowlands | 116. Ballymena Farmland |
| 18. Slieve Beagh | 50. Moyola Floodplain | 83. Lower Slieve Croob Foothills | 117. Central Ballymena Glens |
| 19. Killeter Uplands | 51. Garvagh Farmland | 84. Mourne Foothills | 118. Moyle Moorlands and Forest |
| 20. Derg Valley | 52. Lower Bann Valley | 85. Newcastle Valleys | 119. Ballycastle Glens |
| 21. Fairy Water Valley | 53. Lower Bann Floodplain | 86. Tyrella Coastal Dunes | 120. Fair Head |
| 22. Omagh Farmland | 54. Coleraine Farmland | 87. Slieve Croob Summits | 121. Moyle Glens |
| 23. Camowen Valley | 55. Garry Bog | 88. Craggy Dromara Uplands | 122. Garron Plateau |
| 24. South Sperrin | 56. Dervock Farmlands | 89. Hillsborough Slopes | 123. Lame Glens |
| 25. Beaghmore Moors and Marsh | 57. Causeway Coast and Rathlin Island | 90. Ravarnet Valley | 124. Lame Basalt Moorland |
| 26. Bessy Bell and Gortin | 58. Long Mountain Ridge | 91. Quoile Valley Lowlands | 125. Tardree Upland Pastures |
| 27. Foyle Valley | 59. Cullybackey and Clogh Mills Drumlins | 92. Ballyquintin and Lecale Coast | 126. Lame Coast |
| 28. Glenelly Valley | 60. River Main Valley | 93. Portaferry and North Lecale | 127. Lame Ridgeland |
| 29. Sperrin Mountains | 61. North Lough Neagh Shores | 94. Strangford Drumlins and Islands | 128. Island Magee |
| 30. Sperrin Foothills | 62. East Lough Neagh Points | 95. Ballygowan Drumlins | 129. Carrickfergus Shoreline |
| 31. Burngibbagh and Drumahoe | 63. Portmore Lough Fringe | 96. Castlereagh Plateau | 130. Carrickfergus Farmed Escarpment |
| 32. Derry Slopes | 64. Lough Neagh Peatlands | 97. Belfast/Lisburn | |
| | 65. Upper Bann Floodplain | 98. Carrickfergus Upland Pastures | |
| | | 99. Outer Ards Coast | |

Figure 2: Mean Wind Speeds at 75m above ground level.

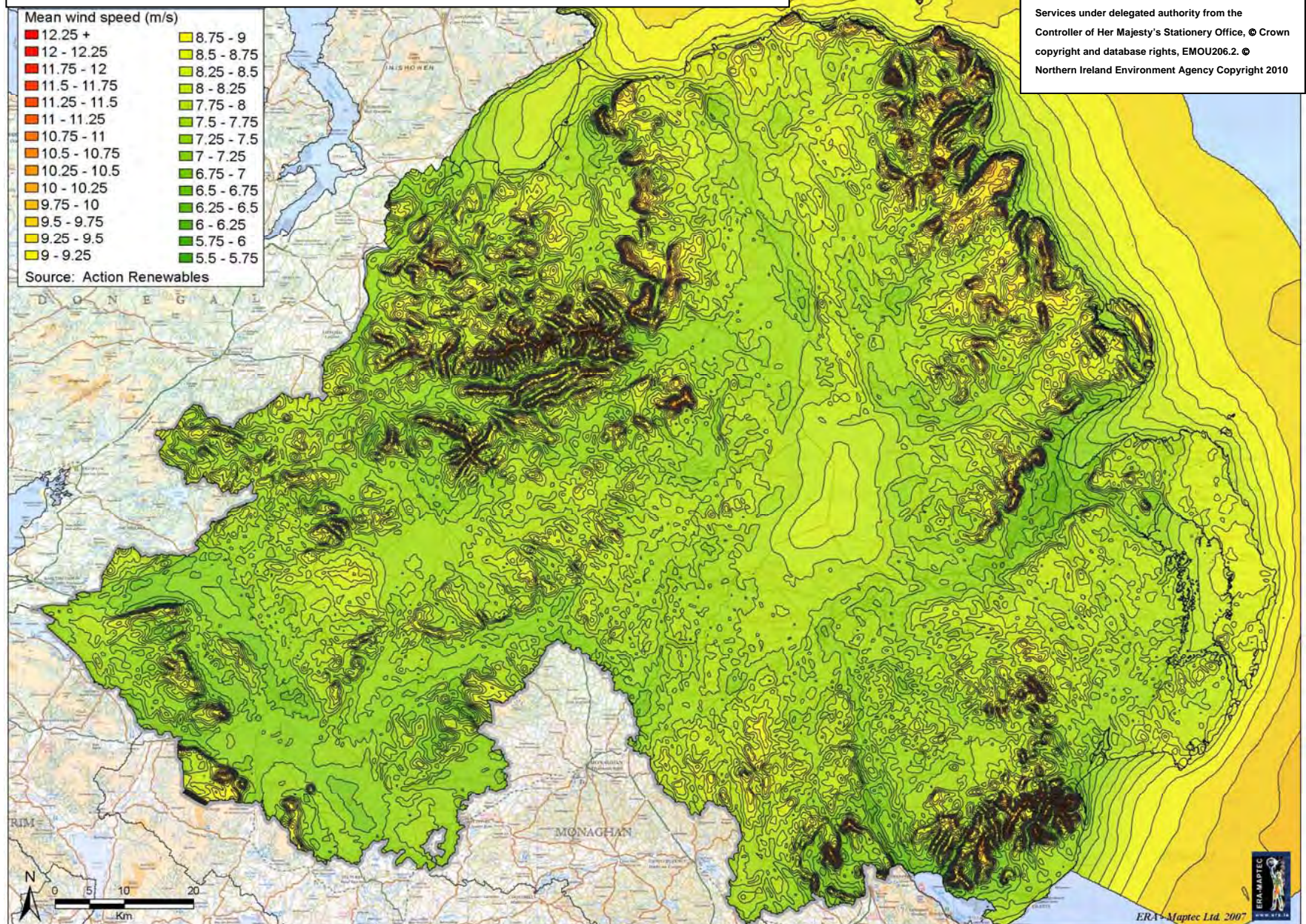


Figure 3: Existing and Proposed Wind Farms October 2007

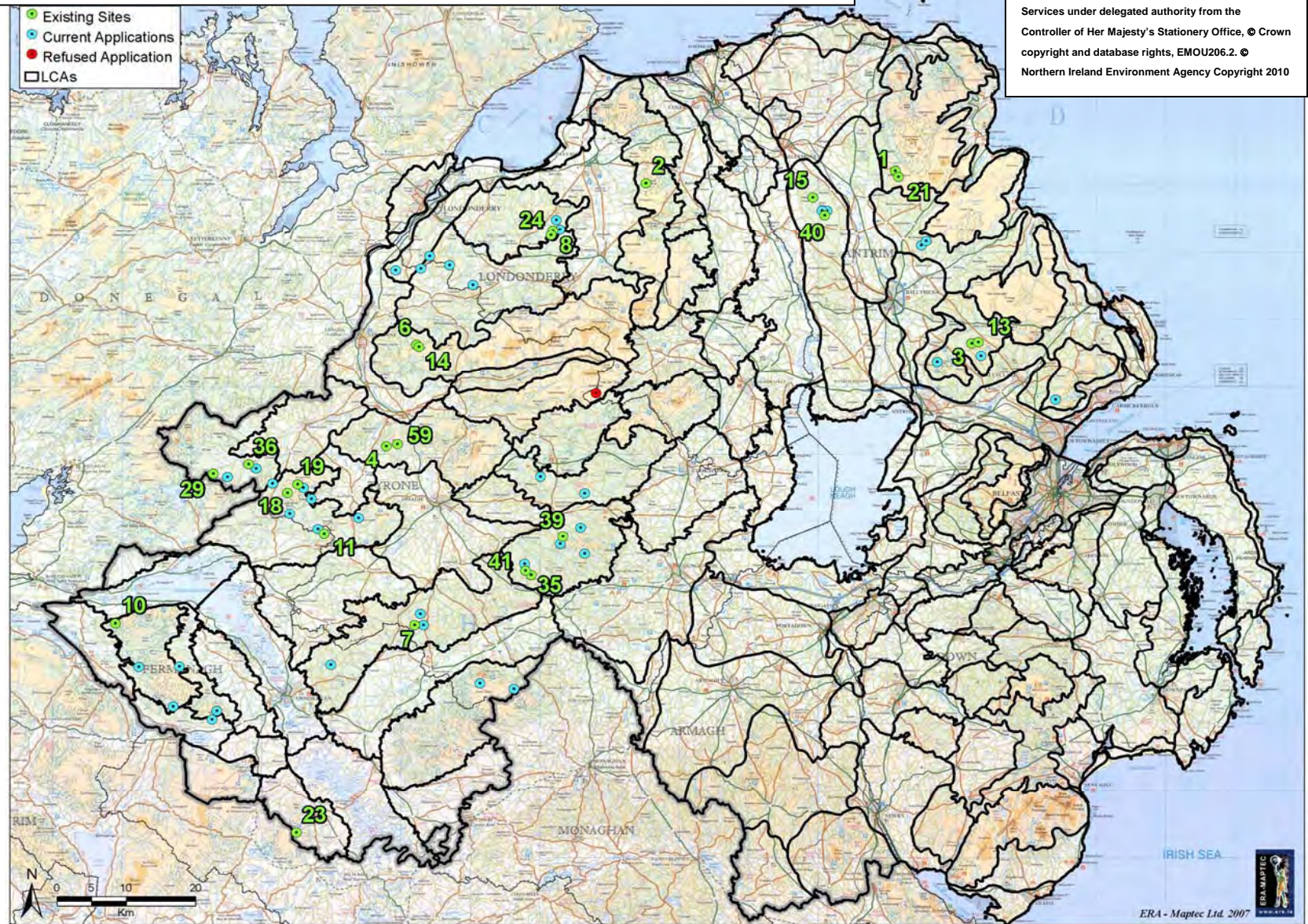


Figure 3: Existing and Proposed Wind Farms October 2007**Key to Existing (Operational or Consented) Wind Farms at October 2007**

Planning Service Ref No	Name	District	No of Turbines	Turbine Height to Blade Tip	Status
1	Corkey	Ballymoney	10	60m	Operational
2	Rigged Hill	Limavady	10	60m	Operational
3	Elliot's Hill	Ballymena	10	65m	Operational
4	Bessy Bell	Strabane/Omagh	10	60m	Operational
6	Owenreagh	Strabane	10	60m	Operational
7	Lendrum's Bridge	Dungannon	20	65m	Operational
8	Altahullion	Limavady	20	82m	Operational
10	Callagheen	Fermanagh	13	83m	Operational
11	Tappaghan	Fermanagh	13	88m	Operational
13	Wolf Bog	Ballymena	5	100m	Consented and under construction
14	Owenreagh 2	Strabane	6	66m	Consented
15	Garves	Ballymoney	5	125m	Consented
18	Bin Mountain	Strabane	6	92m	Operational
19	Lough Hill	Omagh	6	83m	Operational
21	Gruig	Ballymoney	10	100m	Consented
23	Slieve Rushen	Fermanagh	18	125m	Consented and under construction
24	Altahullion 2	Limavady	9	83m	Consented
29	Crighshane	Strabane	14	100m	Consented
35	Slievedivena	Omagh	12	101m	Consented and under construction
36	Churchill	Strabane	8	100m	Consented
39	Crockagarron	Omagh	6	125m	Consented
40	Glenbuck	Ballymoney	1	120m	Consented
41	Slievedivena 2	Omagh	8	101m	Consented
59	Bessy Bell 2	Omagh	6	100m	Consented

Note: Sites and consents that have been replaced or superseded are not shown.

1.3 Northern Ireland's Landscapes

Northern Ireland has a great variety of landscapes, as identified in the *Northern Ireland Landscape Character Assessment 2000*⁴ and as shown in Figure 1. In Northern Ireland 130 different landscape character areas (LCAs) have been defined and this stunning range of landscapes gives Northern Ireland its distinctive and special identity. It is a region of dramatic landscape contrasts and subtle transitions. The inherent diversity of the underlying rocks, landforms and soils has been augmented by centuries of settlement and land management, resulting in an amazing variety of landscape patterns and features within a relatively small area.

The main *Northern Ireland Landscape Character Assessment 2000* report provides a general overview of the Region's landscapes, outlining the special qualities and features which make each part of Northern Ireland's landscape memorable. The 130 LCAs highlight the variations in landscape character across Northern Ireland. More detailed descriptions and maps of these landscapes are provided in NIEA's series of *Landscape Character Assessment Reports*, which cover all of Northern Ireland's 26 Districts⁵; the descriptions are also available on the NIEA website⁶.

Northern Ireland's most spectacular landscapes, the Areas of Outstanding Natural Beauty (AONBs), shown on Figure 4, are well known and highly valued. The Giant's Causeway and Causeway Coast is also a World Heritage Site. Further details of these special landscapes can be found on the NIEA website⁷. In addition, the Northern Ireland Landscape Character Assessment 2000 identified a further tier in the hierarchy of special landscapes, Areas of Scenic Quality. The location of these areas is shown in that report and their boundaries are often included in development plans where they may be designated as Areas of High Scenic Value (AoHSV)⁸. All these landscapes are recognised not only for their special scenic qualities but also for their natural and cultural heritage value. While PPS18 does not differentiate between designated and other landscapes, other development policies may apply to them.

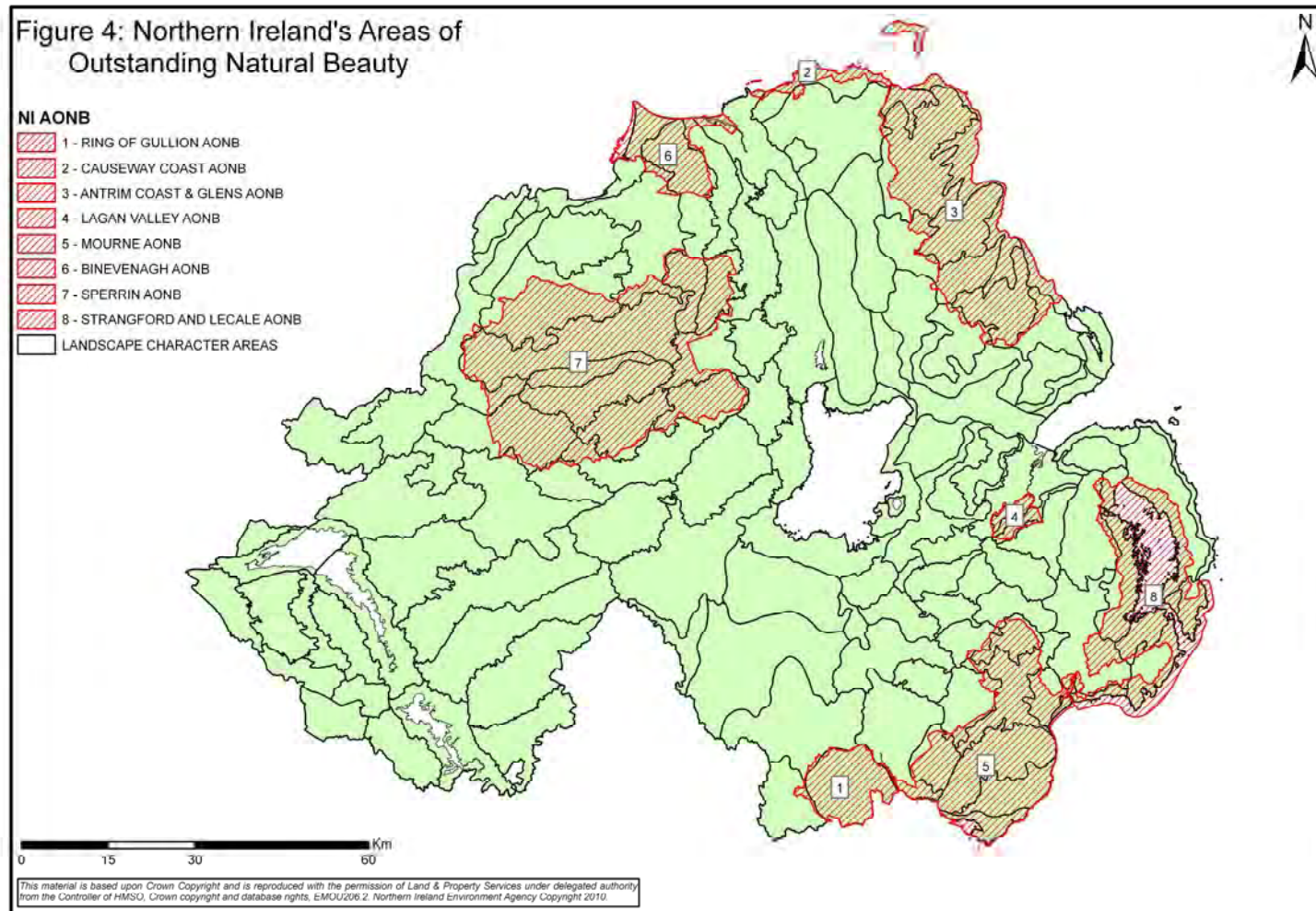
⁴ Environmental Resources Management (2000) *Northern Ireland Landscape Character Assessment 2000*, Corporate Document Services

⁵ Environmental Resources Management (1999) *Northern Ireland Landscape Character Assessment, Environment and Heritage Service Research and Development Series No. 99/1-26*.

⁶ http://www.ni-environment.gov.uk/landscape/country_landscape.htm

⁷ <http://www.ni-environment.gov.uk/landscape/designated-areas-2.htm>

⁸ http://www.planningni.gov.uk/index/policy/dev_plans.htm



2 Approach and Methodology

2.1 Introduction to the Approach and Methodology

This section explains the approach and methodology that was used for assessing wind energy development in relation to the landscapes in Northern Ireland. It covers key terms and definitions; provides details of how the landscape assessment was undertaken; and outlines the main criteria affecting sensitivity.

The approach that has been used is consistent with good practice guidance in landscape character assessment and landscape and visual impact assessment⁹, notably:

- Countryside Agency and Scottish Natural Heritage (2002) *Landscape Character Assessment Guidance for England and Scotland*, Countryside Agency and Scottish Natural Heritage.
- Countryside Agency and Scottish Natural Heritage (2004), *Landscape Character Assessment Guidance Topic Paper 6: Techniques and Criteria for Judging Sensitivity and Capacity*, Countryside Agency and Scottish Natural Heritage.
- Landscape Institute and Institute of Environmental Management and Assessment (2002) *Guidelines for Landscape and Visual Impact Assessment*, 2nd edition, Spon.

The approach took account of good practice in assessing wind energy in relation to landscapes in other parts of the UK and the Republic of Ireland, but it was tailored specifically to Northern Ireland. Undertaken initially as a desk exercise, the landscape assessment was checked and verified in the field prior to completion.

A key source of information was the *Northern Ireland Landscape Character Assessment 2000*¹⁰, the 130 LCAs defined in this report forming the working units for the assessment. The assessment also drew upon the District *Landscape Character Assessment Reports*¹¹; particularly the landscape analysis mapping that is contained in these reports.

⁹ Although prepared mainly for use in England and Scotland, the guidance listed is equally applicable in Northern Ireland, where there is no equivalent existing guidance.

¹⁰ Environmental Resources Management (2000) *Northern Ireland Landscape Character Assessment 2000*, Corporate Document Services.

¹¹ Environmental Resources Management (1999) *Northern Ireland Landscape Character Assessment, Environment and Heritage Service Research and Development Series No. 99/1-26*.

In addition, maps and descriptions of the principal landscape, natural and cultural heritage designations and recreational features across Northern Ireland (see Table 1) were consulted, together with other published information on landscape values where available. Most of this information is available either from the NIEA website¹² or from development plans¹³. Equivalent information was also compiled where possible for areas of the Republic of Ireland within 30km of the border, to inform understanding of the wider landscape context.

Table 1: Principal Landscape, Natural and Cultural Heritage Designations and Recreational Resources Consulted

World Heritage Site (WHS)

Geopark¹⁴

Areas of Outstanding Natural Beauty (AONBs)

Areas of Scenic Quality (ASQs) / Areas of High Scenic Value (AoHSV)

Special Areas of Conservation (SACs) and candidate SACs

Special Protection Areas (SPAs) and potential SPAs

Ramsar Sites

Areas of Special Scientific Interest (ASSI)

Areas of Scientific Interest (ASI)

National Nature Reserves (NNRs)

Nature Reserves (NRs)

Marine Nature Reserve (MNR)

State Care Monuments

Scheduled Monuments

Areas of Significant Archaeological Interest (ASAI)

Register of Historic Parks, Gardens and Demesnes (Registered Parks)

Conservation Areas

Ulster Way

Walks promoted on the Walk Northern Ireland website¹⁵

The outcome of this approach was used as the basis for public consultation in 2008. Following the consultation NIEA reviewed and edited the draft SPG. The final document has been entirely based on the landscape assessment methodology described here. It differs from the draft for consultation in how the recommendations for wind energy development are presented.

¹² <http://www.ni-environment.gov.uk/>

¹³ http://www.planningni.gov.uk/index/policy/dev_plans.htm

¹⁴ In 2001 the Marble Arch Caves and the Cuilcagh Mountain became a member of the European Geopark Network. In 2004 the area became a member of UNESCO's Network of National Geoparks (Global Geopark Network). In 2007 the Geopark was extended to the north west of Cuilcagh Mountain and in 2008 it was extended into County Cavan in the Republic of Ireland. The Geopark is now commonly known as the Marble Arch Caves Global Geopark.

¹⁵ <http://www.walkni.com/>

2.2 Key Terms and Definitions

Landscape sensitivity to wind energy development is the extent to which the inherent character and visual amenity of a landscape are vulnerable to change due to wind energy development. It is primarily a function of **landscape character sensitivity** (ie the degree to which a landscape character area is vulnerable to change which will affect its character); and **visual sensitivity** (ie the degree to which a particular view or visual landscape experience is vulnerable to change).

Landscape value is also relevant in assessing landscape sensitivity and capacity for wind energy development. This term refers to the intrinsic value attached to a landscape, often reflected in designation or recognition, and expressing national or local consensus as to the degree of importance of a landscape.

Additional definitions for terms commonly used in landscape character assessment and landscape and visual impact assessment can be found in Annex 2. In each case the definition is taken from (or closely based upon) the most recent relevant guidance from the sources listed in Section 2.1.

2.3 Sensitivity Assessment

Landscape sensitivity to wind energy development depends on many factors. Each landscape has its own sensitivities, depending on its landform and landcover as well as on a range of other characteristics and values including, for example, enclosure, visibility, condition, scenic and perceptual qualities, natural and cultural heritage features and cultural associations. Importantly, sensitivity depends on landscape character as well as on landscape values.

The first step in the assessment process was to consider the inherent sensitivity of each LCA to wind energy development using the criteria listed in Table 2. The criteria are based on good practice in assessment of landscape sensitivity to wind energy development as referred to in Section 2.1. They have been carefully worded for clarity, ease of interpretation and consistency with published guidance on landscape character assessment and landscape and visual impact assessment.

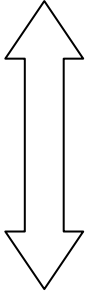
They include criteria based on landscape and visual character as well as others based on valued landscape qualities and features.

Table 2: Criteria for Assessing Landscape Sensitivity to Wind Energy Development

Criterion	Comments
Scale	A large scale landscape, where the turbines may be in proportion with the landscape, is likely to be of lower sensitivity to wind energy development than a small scale landscape, where the turbines may appear to dominate the landscape and where features such as field patterns, individual trees and buildings may be compared with and highlight the size of the turbines.
Landform	Landform that is smooth, regular and convex, or flat and uniform, is likely to be less sensitive to wind energy development than dramatic or rugged landform. This is because the former types of landform tend to be less prominent and less distinctive in character. Convex landform may in addition provide partial screening for turbine structures.
Enclosure	A sense of enclosure provided by topography or vegetation – especially in areas with large scale topography or woodlands – may increase the ability of the landscape to provide screening for the lower parts of turbine structures and for associated access and infrastructure and hence indicate lower landscape sensitivity. However note that woodlands and forestry should be a long term feature if their screening effects are to be relied upon.
Complexity of landcover and features	Simple, uncluttered landscapes with sweeping lines and extensive areas of consistent ground cover are likely to offer greater potential for wind energy development than areas with more complex, irregular or intimate landscape patterns (for example ancient, irregular field systems) which tend to be more sensitive.
Man-made influence	A high degree of man-made influence on the landscape may mean that it is less sensitive to change due to wind energy development. Turbines are likely to be less conspicuous in brownfield or industrial landscapes already affected by built structures such as masts, pylons or chimneys, provided there are no visual conflicts where the structures are seen in close proximity. Commercial forestry may also introduce a temporary man-made influence to upland landscapes that would otherwise seem natural and wild.
Skylines and settings	Landscapes that do not form a distinctive backdrop or context tend to be less sensitive to wind energy development than those with strong visual features and focal points such as hilltop monuments, church spires or designed landscape features, which may form important skylines, landmarks or settings for settlements.
Visibility and views	Landscapes that are visually contained or have limited inward and outward views may be less sensitive to wind energy development than areas with extensive inward and outward views. Extensive

	close or middle range views from scenic routes, well-known vistas or tourist viewpoints may increase a landscape's sensitivity to wind energy development, as may close proximity to settlement.
Landscape quality (condition)	Areas where the condition and integrity of landscape patterns, elements and features are relatively good may be more sensitive to wind energy development than areas where condition is poor. In areas where landscape condition is good the fabric and character of the landscape are likely to be more highly valued and also more vulnerable to change.
Scenic quality	Scenic quality, that is visual appeal due to important views, visual interest and variety, contrasting landscape patterns, or dramatic topography, may increase landscape sensitivity to wind energy development. Land of high scenic quality occurs within designated landscapes (World Heritage Site, proposed National Park, AONBs) but also elsewhere; the approaches to and settings of areas of high scenic quality may also be sensitive.
Wildness and tranquillity	The presence of a relatively wild and/or tranquil character (due to remoteness, freedom from disturbance and factors such as openness and perceived naturalness) tends to make the landscape more sensitive to wind farm development. The introduction of wind turbines may alter perceptions of wildness and tranquillity, introducing movement, sound and light effects and possibly bringing a more industrial character to the affected landscapes.
Natural and cultural heritage features	The presence of natural and cultural heritage features such as interesting and valued habitats, wildlife, archaeological, historical or built features that enhance the landscape experience may increase sensitivity to wind farms, particularly where these features may be directly affected by construction works and/or access tracks; or where or enjoyment of these features may be diminished.
Cultural associations	Specific cultural (ie historical, folklore, literary or artistic) associations relating to the landscape may result in increased sensitivity to wind energy development if the character or perceptions of the landscape concerned are likely to be significantly altered.
Amenity and recreation	Areas offering access to high quality landscapes, memorable places, special experiences and to a range of opportunities for open-air recreation may be more sensitive to wind energy development due to potential effects on accessibility and/or on the quality of the recreational experience that will be obtained.

For each LCA a description of sensitivity against each of the criteria was prepared. The LCA was then given an overall sensitivity level using a five point scale as follows:

High sensitivity	Landscape is very vulnerable to change and would be adversely affected by wind energy development, which would result in a significant change in landscape and visual characteristics and values.
High to medium sensitivity	
Medium sensitivity	
Medium to low sensitivity	
Low sensitivity	Landscape is not vulnerable to change and would not be adversely affected by wind energy development, which would not result in significant change in landscape and visual characteristics and values.

The sensitivity level for each LCA has been assessed by considering the combined weight of evidence on landscape sensitivity (rather than by scoring the LCA against each criterion and averaging the scores). This is because landscape and visual characteristics and values do not readily lend themselves to scoring and criteria may carry different weights in different types of landscape and with different types and scales of development.

It should be noted that within many LCAs there is considerable variation in sensitivity level across the area, reflecting the fact that the LCAs are broad character or identity areas. The overall sensitivity level is therefore the level that prevails over most of the LCA's geographic area. Localised areas of higher or lower sensitivity may also exist and these are generally identified in the sensitivity descriptions within each LCAs Landscape Assessment Sheet.

The overall sensitivity level of a LCA is indicative of the relative overall sensitivity of each LCA. A high sensitivity level does not necessarily mean that there is likely to be no capacity for wind energy development within the LCA and conversely a low sensitivity level does not mean that there are no constraints to development.

2.4 Location, Siting, Layout and Design Considerations for each LCA.

Guidance has been prepared for each LCA, based on the sensitivity assessment and on professional judgement, to indicate where, in the landscapes of each LCA concerned wind energy development might be accommodated best, and also some of the landscape challenges and opportunities that should be taken into account when considering the siting, layout and design of proposals.

The guidance for each LCA considers:

- The key landscape and visual characteristics and values of each LCA.
- The broad locations that would be most suitable, in landscape and visual terms, for wind energy developments in relation to the character of the local landscape;
- The landscape challenges and opportunities that should be taken into account relative to landform, skylines, settings, wild land, natural and cultural heritage features etc, when considering the siting, layout and design for wind energy development proposals in each LCA; and
- Cumulative and transboundary impacts of wind energy development.

The cumulative and transboundary parts of the assessment were informed by a desk- and field-based review of the levels of landscape and visual impact associated with existing (ie operational and consented) wind energy development in October 2007. This indicated which LCAs were already affected by issues of cumulative impact and informed the identification of some LCAs in which cumulative impacts will have to be carefully assessed in the near future.

Wind energy development outside Northern Ireland's land area may also affect Northern Ireland's landscapes. Information on operational, consented and proposed wind energy developments in border counties of the Republic of Ireland at October 2007 was also compiled and informed the landscape assessment in relation to existing and potential cumulative impacts in transboundary areas.

2.5 Using the Landscape Assessment Sheets

The landscape assessment sheets are divided into two main parts: Key Landscape and Visual Characteristics and Values; and Assessment for Wind Energy Development (including Overall Sensitivity; and Location, Siting, Layout and Design Considerations). The text below explains the content of each part and how it is intended to be used.

2.5.1 Key Landscape and Visual Characteristics and Values

The first part of the assessment sheet provides information on the key landscape and visual characteristics and values of the LCA, expressed in terms of the criteria for assessing landscape sensitivity to wind energy development (see Table 2 for a full explanation of each of these criteria). Readers should refer to Table 1 or the Abbreviations for a key to the acronyms used in relation to landscape, natural heritage and cultural heritage designations.

This part of the assessment sheet presents the background information that informed the overall sensitivity assessment. It also highlights issues that need to be considered in site selection, siting, layout and design of wind energy developments and the assessment of landscape and visual impacts.

It provides details of:

- landscape scale and form, including key landform features, which may influence the choice of turbine groupings and turbine heights;
- potential screening by landform or vegetation, which may assist in integrating wind turbines into the landscape;
- location of areas of man-made influence that may suggest some capacity for wind energy development;
- key skylines and settings that are important to landscape character and distinctiveness and may require protection;
- views that should be taken into account in siting and landscape and visual impact assessments;
- areas of high landscape quality, scenic quality, wildness or tranquillity that may be especially sensitive to wind energy development, which could damage these special qualities;
- natural and cultural heritage features that contribute to the character and value of this LCA and may need to be protected and/or receive special attention during the assessment of impacts;
- any known cultural associations which may increase its sensitivity; and
- key amenity and recreational features, such as long distance walking routes, that could be affected by the landscape and visual impacts of wind energy development.

References to value are not intended to imply a presumption against development. Instead the intention is to highlight specific valued characteristics or features that could be adversely affected by wind energy development.

2.5.2 Assessment for Wind Energy Development

Overall Sensitivity

The second part of the Assessment Sheet includes an assessment of the LCA's overall level of sensitivity to wind energy development, as defined in Section 2.3. It summarises the main factors that influence the sensitivity of the landscape and describes any significant spatial variations in sensitivity across the LCA. It also highlights key challenges to wind energy development.

The sensitivity assessment provides the background information and underlying rationale that is used to inform the subsequent Location, Siting, Layout and Design Considerations. The overall sensitivity section may contain information that would assist with the assessment of the landscape and visual impacts of wind energy proposals.

As noted before there is considerable variation in sensitivity level across many LCAs. The overall sensitivity level is therefore the level that prevails over most of the LCA's geographic area. Localised areas of higher or lower sensitivity may also exist and these are generally identified in the sensitivity descriptions.

Location, Siting, Layout and Design Considerations

This part contains written guidance that should be used to help identify appropriate locations and sites for wind energy development in landscape and visual terms and in relation to the character of the local landscape. It should also be used to guide appropriate siting, layout and design of proposed wind energy developments so that they are suitable in landscape and visual terms.

This part also identifies challenges and potential impacts that should be taken into account and addressed in wind energy proposals relating to, for example, landforms, skylines settings, wild land, natural and cultural heritage features.

3 Principles

When the approach and methodology outlined above was applied to Northern Ireland's 130 LCAs, a number of key principles or factors affecting Northern Ireland's landscapes and the associated location, siting, layout and design of wind energy developments emerged. These principles are summarised in the Tables in Section 3.1 and are illustrated in the accompanying photographs.

Account also needs to be taken of potential cumulative impacts both within and beyond LCAs and an approach to this is discussed in Section 3.2. Developing this theme further Section 3.3 examines six broader areas, namely the Antrim Plateau; the North West; Fermanagh; Lough Neagh Basin; the Mourne and South Armagh; and Down, and identifies issues particular to these wider landscapes.

3.1 Principles Affecting Wind Energy Developments in the Landscape

Some of the principles (Table 3) are general ones, relating to spacing between wind energy developments, or about turbine groupings, turbine height, and turbine layout and design in relation to different landscapes. Others relate to particular landscapes (Table 4), reflecting the fact that different types of landscape may have fundamentally different abilities to accommodate wind energy due to their different characteristics, features and values.

Table 3: General Principles: Wind Energy Development and Landscape

Spacing between wind farms

- Satisfactory spacing depends both on landscape character and on the degree of intervisibility.
- Where several wind farms are visible together or sequentially they may affect landscape character and visual amenity at a strategic level.
- Retention of areas of undeveloped landscape is important. For example, where a small lowland wind farm connects larger upland sites visually, wind farm influence on landscape character may become much more significant and dominant.
- Appropriate spacing depends at least partly on landscape patterns and rhythms. Hence on an undulating upland ridge, wind farm spacing may reflect the pattern and frequency of undulations, whereas on a simple rounded upland ridge a cluster of wind farms may give a better landform fit.
- Adequate separation distances between wind farms is important as this helps prevent the landscape becoming dominated by wind farms and reduces intervisibility.
- In areas of appropriate character it might be possible to locate wind farms

closer together if they are seen as a cluster or single coherent group within the landscape.

Turbine groupings

- Landscapes with a simple, strong and mainly horizontal form are more likely to be able to accommodate large turbine groupings successfully (Photo 1).
- In landscapes with more complex and varied landform, large turbine groupings may have an undesirable 'flattening' effect on landscape character (Photo 2).
- Smaller turbine groupings are likely to fit best in small scale and more intricate landscapes.
- Compact clusters of turbines may sometimes be used to create or highlight a focal point within the landscape, adding or reinforcing a vertical emphasis in the landscape, but such an approach needs to be used very selectively.

Turbine height

- In general, it is preferable for turbine height to be proportionate to landform and landcover and landform height will therefore be a relevant factor. This will help to retain topographic distinctions and contrasts between landscapes such as uplands and lowlands.
- Hence elevated upland landscapes with a large scale and simple landform and landcover can more easily accommodate taller turbines than lowland landscapes that have a rolling, varied topography with subtle variations which could be overwhelmed by taller turbines.
- However, extensive, flat, uniform lowland landscapes might be able to accommodate taller turbines than lowland landscapes that have a rolling, varied topography with subtle variations because of the lack of topographic distinctions and because the larger horizontal extent of such landscapes tends to diminish perceived turbine height.

Turbine siting, layout and design

- The settings of distinctive or valued landscape features may be especially sensitive to wind turbines. Such features may include dramatic landform features such as cliffs, natural features such as loughs or wetlands, and cultural features such as settlements and historic parks.
- Inconsistencies in turbine layout, height or design between adjacent wind farms can draw the eye and may cause increased landscape and visual impact.
- Proximity of turbines to existing intrusive structures such as electricity transmission lines may create a sense of visual clutter (Photo 3) where the turbines and other structures are seen together. In other instances proximity to existing man made structures of a tall nature, such as an industrial landscape, can be beneficial.
- Turbine layouts can and should be influenced by landscape patterns, for example by drumlin patterns or field patterns.
- Functional relationships between single turbines and their landscape settings should be reflected in turbine siting. Ideally turbines should be

closely associated with, and in scale with, the farms, settlements or industrial plant that they serve.

- In the case of domestic and community single turbines the relationship to existing topography, tree cover, buildings and settlements and the screening that they may provide is especially important (Photo 4). Siting in open, exposed landscapes, such as distinctive skylines and open valley floors, should generally be avoided because it may gradually and cumulatively give the surrounding countryside a more industrial character, as well as giving rise to visual intrusion.

Further, more detailed advice on the siting, layout and design of wind energy development in relation to the landscape can be found in Section 4.



Photo 1: Simple strong horizontal landform accommodates larger turbine groupings.



Photo 2: More complex landform could be 'flattened' by larger turbine groupings.



Photo 3: Turbines seen with electricity pylons may create visual clutter.



Photo 4: Relationship between turbine and farm buildings and trees reduces impact.

Table 4: General Principles: Sensitivity, Opportunities and Challenges in Different Landscapes

Upland landscapes

- The broader the upland, the greater its capacity for wind energy development is likely to be.
- Uplands with a simple, rounded and generally horizontal form are able to accommodate larger turbine groupings than more dramatic or convoluted upland landforms.
- In areas of more complex upland landform, smaller turbine groupings will generally fit better than large groupings.
- Development that is well set back from upland edges or scarps will be less prominent in the landscape than development close to the upland edge (Photo 5).
- The central part of an upland area will often be least visible from adjoining lowland landscapes. Convex landform in particular may offer some screening and reduce visible turbine heights.
- However, turbine siting on prominent summits should generally be avoided; it is normally better to utilise less prominent side slopes, benches and gentle undulations as sites rather than tops themselves.
- Locations close to distinctive topographic features, field patterns, buildings or other features may have a greater impact on landscape character and bring undesirable scale comparisons (Photo 6).
- The wilder areas of upland, characterised by open heather moor and bog, are usually more sensitive than areas of improved grass or forestry which may have a more tamed character (Photo 7).
- Sites that can utilise existing roads or tracks for access are preferable to sites that require lengthy and often highly visible new access tracks.

Rolling ridge and drumlin landscapes

- Northern Ireland's rolling ridge and drumlin landscapes, tend to suit smaller turbine groupings and turbine heights.
- Where the landscape is rolling or undulating, smaller turbine groups are likely to fit best in the landscape; where the landscape is flatter or more gently sloping, larger turbine groups may sometimes be accommodated.
- Preferably turbine heights should not exceed the average drumlin height (note, height, not elevation AOD) and would ideally be no taller than half the average drumlin height (Photo 8).
- Inter-drumlin hollows are generally not preferable sites for turbines because they often contain sensitive wetlands or loughs, and could easily be visually dominated by turbines.
- Drumlin tops may be very sensitive visually and archaeologically and ideally should be avoided. Mid-slope locations are preferable.

Lowland flat landscapes

- These landscapes, including valleys, floodplains and lowland farmlands, may accommodate larger turbines and turbine groupings than rolling ridge and drumlin landscapes, provided that their character is simple and expansive.

- Capacity may be reduced by the presence of features such as prominent church spires that offer a scale comparison.
- Valley landscapes that are enclosed by uplands with existing wind farm development should generally be kept free of wind turbines, so that the wider landscape does not become dominated by wind energy development (Photo 9).
- Floodplain landscapes, unless very extensive, are likely to have little landscape capacity for wind turbines because openness is an essential part of their character.
- Extensive flat farmlands may be better able to accommodate wind energy development. Here regular rows or lines of turbines may provide the best fit with large, regular field patterns.

Coastal landscapes

- Areas with complex, varied coastal form, for example areas with cliffs, headlands, islands or intricate rocky shorelines, tend to be highly sensitive to wind energy development.
- Areas with a simple, large scale, flat coastal form generally have better capacity for wind energy development, but are relatively rare in Northern Ireland.
- The settings of distinctive, landmark coastal features may be especially sensitive (Photo 10).
- Turbine group size should be appropriate to the scale and character of the coastal landscape. It may be relatively large in simple, flat coastal landscapes, but should be smaller in more complex, varied coastal landscapes.

Urban and industrial landscapes

- These landscapes may have some capacity for wind energy development due to the presence of existing man-made influences.
- For example sites close to power stations, factories, large institutions such as hospitals, business parks and major transport corridors may be well suited for wind turbines in landscape terms.
- Wind turbines should be carefully sited and designed relative to existing structures. Particular attention should be paid to relative heights and proportions.
- Close visual relationships may help to reinforce functional relationships.
- In some cases turbines may be used to create a new focal point or landmark, drawing the eye upwards and away from existing intrusive features.
- However care should be taken to avoid creating visual clutter by placing turbines too close to other complex structures such as pylons or telecommunications masts.



Photo 5: Prominence of turbines on scarp can be reduced by setback from edge.



Photo 6: Proximity to scale comparators can increase apparent turbine height.



Photo 7: Forestry may provide temporary screening.



Photo 8: Turbines on drumlins should avoid tops and not exceed drumlin height.



Photo 9: Valleys between upland wind farms are best kept free of commercial turbines.



Photo 10: Landmark coastal features and their settings are very sensitive to turbines.

3.2 Cumulative Wind Energy Impacts

It is critical to recognise that wind energy development proposals can create significant cumulative impacts as a result of combined effects. Cumulative impacts will become increasingly relevant as the number of existing and consented wind energy developments grows, and in due course may present an increasing landscape constraint to the extent of wind energy development in parts of Northern Ireland.

Wind farm development and applications for development have so far affected a relatively small number of LCAs. While this is beneficial in some respects, concentrating the impacts in localised areas, it also means that issues of cumulative impact will increasingly come to the fore in these areas. In the future it will be important to ensure that wind energy developments do not come to completely dominate the landscape character of these areas.

General issues that particularly merit consideration at a strategic level are whether there are significant cumulative impacts on particular settings, skylines or views, areas of high landscape or scenic quality, areas of wildness or tranquillity, natural and cultural heritage features, cultural associations, and recreational interests such as tourist, scenic or walking routes. These issues should receive consideration when assessing the cumulative impacts of specific schemes.

The experience of the consultancy firms who carried out initial work associated with this guidance suggest that separation distances ranging from 6km (for smaller sites in landscapes with some enclosure) to 12km (for larger sites in open exposed landscapes) are desirable to prevent the landscape becoming dominated by wind farms and to reduce intervisibility. Conversely, their experience suggest that if some wind farm developments are located less than 3-5km apart (to the outermost turbines of each site), they may be seen as a cluster or single coherent group.

The Department considers that judgements on cumulative impacts must be made on a case-by-case basis taking account of the specific character of the landscape and the siting, layout and intervisibility of the proposed wind energy development with other wind energy developments in the same LCA, in neighbouring LCAs, in the Republic of Ireland and offshore.

The Scottish Natural Heritage document, *Guidance: Cumulative Effect of Wind Farms (2005)*, contains further useful guidance in relation to the assessment of cumulative impacts.

3.3 Broad Strategic Impacts of Wind Energy Developments in Northern Ireland's Distinctive Landscapes

It is important to bear in mind the broader, strategic impacts of wind energy development on Northern Ireland's landscapes as wind energy development expands.

The *Northern Ireland Landscape Character Assessment 2000* main report describes six broad 'distinctive landscapes' in Northern Ireland, namely the Antrim Plateau; the North West; Fermanagh; Lough Neagh Basin; the Mourne and South Armagh; and Down. This section provides an overview of these wider landscapes and identifies issues particular to each in respect of wind energy. It is intended to give an indication of the main cumulative landscape issues and hence to inform assessments of cumulative impacts. Only the first three of these distinctive landscapes had existing wind farms and applications for large scale wind energy development by the time of this landscape assessment in October 2007. The issues highlighted will need to be reconsidered in the context of new development.

3.3.1 The Antrim Plateau

The massive, high tabular basalt Antrim Plateau has, over the years, eroded to form a variety of upland landscapes interspersed with river valleys, bogs and deep plunging glens. The rugged outline of the plateau forms the backbone of County Antrim. The steeper slopes of Tardree Mountain, Big Collin and Douglas Top form a consistent and striking backdrop to the M2, and mark the southern edge of the high plateau. The eastern fringes of the plateau are marked by a bold escarpment, which forms a series of striking headlands with precipitous cliffs along the coastal road. The headlands shelter a sequence of stunning, hidden small sandy bays which are the entrances to the deep U shaped 'Glens of Antrim'. Between the glens, the undulating surface of the high plateau is a wilderness of blanket bog, humped-backed ridges and isolated peaks. The landform of the plateau becomes progressively shallower to the west where gentle sweeping slopes allow the volcanic plug of Slemish Mountain to stand out as a landmark and where the Glenwhirry and Braid Rivers flow through broad valleys. The northern fringes of the plateau contain a sequence of spectacular coastal features such as rocky sea cliffs, wide sweeping beaches and the Giants Causeway.

The Six Mile Water flows within a wide verdant, gently undulating valley and divides the Antrim Plateau to the north from the outlier Belfast and Carrickfergus Hills to the south. The basalt cliffs of the Belfast Hills overlook Belfast and are a striking landmark, while inland these hills have an open windswept landscape. To the east the seaward cliffs of Islandmagee form dramatic coastal scenery.

Issues that need careful consideration in the Antrim Plateau

- Appropriate separation distances and cluster sizes to ensure that wind energy developments do not become overbearing or dominant in the landscape;
- Cumulative impacts caused by simultaneous, successive or sequential views of more than one wind energy development.
- Compatibility of small and larger newer turbines;
- Impacts where seen in conjunction with electricity transmission lines;
- Impacts on skylines along the bold western edge of the Antrim Plateau and the escarpment above Belfast Lough;
- Impacts on the sensitive, lower-lying valley landscapes around the plateau edges;
- Impacts on the settings of settlements including Newtownabbey, Ballyclare, Antrim and Ballymena;
- Impacts on long distance views from the south and west and on transport corridors and tourist routes, especially approaches to the Antrim Coast and Glens;
- Impacts on the wild character of the moorlands to the north and east within the Antrim Coast and Glens.

3.3.2 The North West

Counties Londonderry and Tyrone are dominated by Binevenagh and the massive mountainous summits of the Sperrins, which form distinctive backdrops for views throughout the North West.

The Sperrins contain a wilderness of expansive, open moorland through which flows the contrasting and picturesque linear glens of the Glenelly, Owenkillew, Ballinderry and Owenreagh Rivers.

To the north are a sequence of sheltered sandy bays and the broad windswept bay of Lough Foyle which is back dropped by the rugged Donegal uplands. The dramatic cliffs of Binevenagh tower above the polderland behind Magilligan Strand. Binevenagh also forms a striking landmark overlooking the Roe Basin. To the east Slieve Gallion looms over the lowlands of the Lough Neagh basin and forms a prominent landmark, whilst to the west the Sperrins extend to the outlying twin peaks of Bessy Bell and Mary Gray which contribute to a gateway landscape at the confluence of many different character areas. Immediately to the south of the Sperrins is the Creggan Plateau which is a windswept upland where shallow ridges of sand and gravel are separated by extensive areas of blanket bog. Further south the broad basin centred on the town of Omagh provides lowland strewn with drumlins and extensive patches of raised bog.

Issues that need careful consideration in the North West

- Separation distances and thresholds of wind energy development on specific ridge lines such as those in the Killeter Uplands, Lough Bradan and Slievemore LCAs;
- Impacts on skylines along the Foyle, Strule and Clogher valleys and north of Lough Erne;
- Impacts on the wild character of some landscapes, eg the Killeter Uplands LCA;
- Impacts on transport corridors and important tourist routes, especially the A6, A5, A505 and A4;
- Impacts on the landscape character, scenic value and setting of the Sperrins of any wind energy development in the Sperrin Foothills LCA and Carrickmore Hills LCA.
- Visual impacts on the Erne Lakelands to the south;
- Cumulative impacts with transboundary development in County Donegal (and potentially also County Monaghan).

3.3.3 Fermanagh

Fermanagh is famous for its lakelands. The shoreline landscapes are always enclosed by the distant horizon of hills, mountains and cliffs and at close quarters by drumlins and woodlands. Lower Lough Erne is a broad crescent of open water which stretches from the steep, rocky scarps of Magho to the maze of low wooded islands clustered close to Enniskillen. In contrast Upper Lough Erne is a wonderful landscape of interlocking loughs and drumlins, with twisting channels winding there way in-between. Enniskillen is perched on a series of drumlin islands at a key bridging point between Upper and Lower Lough Erne.

In west Fermanagh the skyline is dominated by Belmore Mountain and the dramatic limestone escarpment which wraps around the densely wooded Ballintempo uplands rising to a sheer cliff at Knockmore. Further west the ridged lowlands of the Garrison area extend to the secluded Lough Melvin. The south west corner of Fermanagh is dominated by the summit of Cuilcagh. At the foot of Cuilcagh the broad flat valley of the Arney River contrasts with the dramatic uplands. Between Culicagh and Ballintempo uplands are Lower and Upper Lough Macnean and their confined dramatic limestone scarp cliffs.

In the east the river valleys of the Finn/Lacky, Tempo, Colebrooke, Ballinamallard and Glendurragh flow through drumlin corridors to the Upper and Lower Lough Erne. The broad valleys of these rivers separate the prominent ridges of the Carnrock and Cooneen Hills in the south and the ridges of Brougher Mountain further north. The east also contains lowland pastures of intensely verdant character and the broad Clogher Valley lowlands form a principle communication link.

Issues that need careful consideration in Fermanagh

- Impacts on landscape character and skylines around Lower and Upper Lough Erne;
- Impacts on specific landscape and recreational features including the Cliffs of Magho, Loughs Macnean Upper and Lower, Cuilcagh and Knockmore Cliff, the Fermanagh waterways, scenic and walking routes, and tourism gateways from the Republic of Ireland;
- Impacts on the wild character of Fermanagh's upland landscapes;
- Acceptability of wind farm development that may affect the landscape and visual character and values associated with the Marble Arch Caves Global GeoPark;
- Cumulative impacts associated with transboundary development in Counties Donegal, Leitrim and Cavan, and the skylines and karst landscapes of Sligo.

3.3.4 Down

The central core of Down is dominated by the rugged uplands of Slieve Croob which is surrounded on most sides by marginal farmland. Roads traversing this area often provide long views across foothills to the Mourne and over the surrounding drumlin lowlands and deep valleys.

Down is also known for its drumlins which extend across vast areas of farmland from Banbridge to Newtownards, creating a relatively enclosed landscape with a domestic scale and diverse intricate pattern. However the landscape is not always completely enclosed; there are longer views along river floodplains, from higher land such as Holywood and Lecale Hills. The drumlins provide a scenic landscape setting for Northern Ireland's largest sea lough.

Strangford Lough is a unique enclosed area with a diverse shoreline. Along the western shores drumlins continue out into Strangford Lough forming a landscape of oval islands and winding inlets which are a focus for some stunning shoreline views. In contrast the eastern shorelines are relatively smooth. The north contains sweeping areas of inter-tidal mud flats and to the south are the rocky Lecale Hills and meandering Quoile estuary which provide a dramatic landscape setting. Along the shoreline are many wooded parklands and estates which contribute much to the distinctive character and scenic qualities of the Lough.

To the south of Strangford Lough is the rugged, open landscape and hills of the Lecale region. The coastal landscape of Lecale has a windswept and remote character. The historic town of Downpatrick and much of this area is rich in the heritage of St Patrick.

Issues that may need careful consideration in Down in the future

- Acceptability of wind farm development that may effect the beauty and wealth of natural and built heritage resources of Strangford Lough and its environs;
- Visual impact on the distinctively low drumlin topography with its infinite variety of long established characteristics/patterns;
- Respect for the rarity of natural view points and the growing tourist industry associated with Strangford Lough and Lecale.
- Impacts on views to and from the setting of valued local landscape features such as church spires and historic parks, monuments and buildings;
- Cumulative impacts of development in the generally open landscapes;
- Impacts on the long intricate coastline and multitude of islands, all important for long distant views and for their nature conservation interest.
- Impact on the setting of historic towns such as Downpatrick and Killyleagh.

3.3.5 Lough Neagh Basin

Lough Neagh is a vast, lonely sheet of water. From the shoreline the lough resembles an inland sea and there are long expansive views. The lough margins are a maze of wet meadows, reedbeds, woodlands and scrub, with pastures and settlements on higher ground. The principle rivers flowing into and out from Lough Neagh have each created their own distinctive setting. Many of the rivers flow within broad valleys with extensive floodplains such as the Upper and Lower Bann or through drumlin landscapes such as the Blackwater.

To the west of Lough Neagh occur extensive drumlin lowlands which vary considerably in character. The farmland in this area has a diverse and lively character. The Moyola Valley has a special secretive character and is overlooked by the peak of Slieve Gallion. The eastern shores of Lough Neagh have a more open character and in places there are long views across a completely flat landscape. Long Mountain to the east of the Lower Bann valley forms a distinctive feature in the wider landscape.

The Clogher valley in south Tyrone has its own special character. It is a detailed intricate landscape rich in minor landscape features and idyllic views. It has drumlins and ridges, valley floors, historic designated landscapes, and a wooded escarpment to the north-west which provides a distinctive skyline. The River Blackwater winds its way through the area towards Lough Neagh.

Issues that may need careful consideration in the Lough Neagh Basin in the future

- Acceptability of wind energy development which would detract from the vast lonely scale of Lough Neagh and its core lowland saucer shaped setting within Northern Ireland;
- The visual and cumulative impact of development in the open landscapes of the Lough Neagh Basin landscape together with the exposed summits and slopes in fringe areas such as Long Mountain and the Sperrins;
- Impact on the intriguing range of local river corridors, lakes and wetlands landscapes, (each with their own distinctive setting) which cumulatively emphasise the scale of the landscape and its core 'inland sea' setting;
- Local features and variations in landscape character, such as the Clogher Valley, in formulating or considering the location, siting, scale, design of development proposals and potential visual and cumulative impacts;
- Entrance features to Landscape Character Areas and settlements;
- Giving recognition to the special landscape character of the Lough Neagh and Lough Beg Ramsar Site, including Peatlands Country Park;
- Impact on the setting of the many small settlements and features of archaeological and historic interest including the former canal and rail corridors.

3.3.6 The Mournes and South Armagh

The Mournes and the Ring of Gullion dominate the landscape to the south of the Lough Neagh Basin and provide a stunning backdrop to views from miles around. The extensive foothills leading to these steep summits form rugged upland landscapes with a broad scale. There is then a gradual transition to surrounding drumlin farmland.

The Slieve Roosky complex lies to the west of the principle Mournes chain and the rolling uplands of the Carrigatuke Hills extend north-west from the Ring of Gullion towards the rolling well wooded farmland of central Armagh. The rugged ring of volcanic dyke hills associated with the dominant Slieve Gullion volcanic plug encircle neat pastures of farmland and form the Ring of Gullion which is at the gateway north from the relatively flat plains and bogs of central Ireland. The landscapes on the outer fringe of the ring have a relatively remote isolated character.

The distinctive stone wall landscape to the south of the Mournes is known as the 'Kingdom of Mourne'. The steep mountain slopes provide a dramatic backdrop to this striking and unified farmland which descends to the coast. The Mourne coastline has a particularly diverse range of coastal features. To the east are the Tyrella and Murlough sand dunes, the long sandy beaches and the mudflats of Inner Drumlin Bay. To the west the scenic deep waters of Carlingford Lough reflect the surrounding forested slopes. The steep sided valley of the Newry River provides a sheltered entrance to the port of Newry.

Issues that may need careful consideration in The Mournes and South Armagh in the future

- Acceptability of wind energy development that may affect the scenic quality and recreational importance of the Mournes and the Ring of Gullion landscapes;
- Impact on the strong/bold topographical features unique to the Mournes and the Ring of Gullion;
- Impact on habitats of nature conservation value, in particular where they emphasise the beauty, character, height, diversity, rarity and conservation interest of slopes;
- Impact on the diversity of Landscape Character Areas and their distinctive identity and sense of place;
- The visual impact of wind energy development in the exposed open upland and lowland landscapes;
- The impact of related infrastructure such as roads and power lines;
- Impact on exposed shorelines;
- Impact on the distinctive cultural heritage features particular to local landscapes throughout the area;
- Views from and around Carlingford Lough;
- Entrance points to the Mourne and Ring of Gullion landscapes and to Northern Ireland;
- Impact on the setting of Armagh City, Newry City and settlements within the local area.

4. Guidance on Preparing Wind Energy Proposals

4.1 Introduction

This section explains how to use the contents of the SPG and provides further guidance for preparing wind energy proposals. Suggested sources of further technical advice can be found in Annex 1.

4.2 Initial Scheme Planning

At the initial feasibility and scheme planning stage, the focus of developers' effort is on site selection and identifying an appropriate type and scale of wind energy development. Ideally this should include consideration and rigorous assessment of a number of different scheme alternatives. Good site selection and scheme definition are the most effective ways of addressing issues of potential landscape and visual impact and ultimately ensuring that a proposal is likely to be acceptable in landscape and visual terms.

In light of the importance of landscape and visual impacts and the need for detailed consideration of siting layout and design, it is recommended that developers involve a suitably qualified and experienced landscape architect who has landscape assessment expertise from the outset. Initial scheme planning and siting, layout and design should be informed and influenced by an ongoing process of landscape and visual impact assessment (see Section 4.4) in order to prepare proposals which are more likely to be acceptable in landscape and visual terms.

For each possible development area or site, the relevant landscape assessment sheet(s) (see Annex 3) should be consulted as a first step, with a view to understanding the broad pattern of landscape sensitivities, opportunities and challenges within the affected LCA(s). This should help identify some general locations where there may be capacity for wind energy development and may offer principles for its placement within the landscape. It should also provide guidance to help identify those areas where wind energy development is less likely to be acceptable in landscape and visual terms.

This broad assessment will need to be followed by more detailed specific site analysis as each potential development site is unique. Local variations in landscape character or value can be very significant and notable landscape and visual issues will need to be identified and addressed. More detailed work required could include:

- analysis of landscape and visual characteristics and values for the area concerned, drawing on the *Northern Ireland Landscape Character Assessment*, the landscape, natural and cultural heritage designations and recreational resources values as detailed in Section 2.1, and information on relevant local and development plan designations and policy;
- review of the assessment sheets for any neighbouring LCAs that may also be affected by the wind energy development;
- identification of other sites (including transboundary sites in the Republic of Ireland) that may give rise to cumulative impacts¹⁶;
- consideration of relevant issues of cumulative landscape sensitivity (see Sections 3.2, 3.3 and Table 3);
- preliminary field survey of landscape and visual character and context;
- preliminary visibility mapping (see Section 4.4) and appraisal of potential impacts on key views.

By the end of this process, developers should have a clear understanding of which site(s) offer the best prospect in landscape terms of obtaining planning consent for the type(s) of development that are most desirable, and most likely to be acceptable, providing any notable landscape and visual issues can be addressed. The choice of site and development type should respect the specific sensitivity and challenges of the landscapes concerned and should have adequately taken into account the general landscape principles set out in Tables 3 and 4.

4.3 Siting, Layout and Design

Having selected a preferred development location, careful and thorough work on detailed siting, layout and design should be undertaken. This process ideally should be an iterative one and offers significant further opportunities to prevent or mitigate adverse landscape and visual impacts. The location, siting, layout and design considerations within the LCA landscape assessment sheets contain information that will assist with the preparation of appropriate proposals. This section of the landscape assessment also identifies challenges that should be adequately addressed and taken into account during the preparation of wind energy proposals.

The key principles of good siting, layout and design are summarised in Table 5 below.

¹⁶ These should include operational, consented and application sites. See the Planning Service website http://www.planningni.gov.uk/index/advice/advice_apply/advice_renewable_energy/renewable_wind_farms.htm

In the case of transboundary development see the Irish Wind Energy Association website <http://www.iwea.com/index.cfm/page/windfarmsinireland> and contact the county council(s) concerned

Table 5: Key Principles of Good Siting, Layout and Design

Siting

- Sites should relate well to the broad grain of the topography and should not distract from or obscure important character distinctions such as upland-lowland transitions.
- Siting should respect landscape settings and skylines, particularly settings to distinctive landform features, settlements, historic landmarks and areas designated for their scenic quality. (Photo 11)
- Prominent and highly visible skylines, for example at the edge of upland areas, should generally be avoided.
- Significant impacts on key views from important viewpoints and popular tourist and scenic routes should be avoided or carefully considered.
- Optimise separation of wind farm sites from settlements to reduce impacts on the amenity of residents.
- Identify and avoid impacts on areas of wild character and on features of natural or cultural heritage interest that contribute to landscape character and landscape value, including important habitats and earth science features; vulnerable bird habitats and species; areas of significant archaeological interest; and historic monuments, designed landscapes, conservation areas, listed buildings and their settings.

Layout

- Investigate alternative layouts from an early stage to find the optimum response to character as seen from key viewpoints. This is especially important where there are several wind energy developments in the same area.
- Through careful layout and arrangement of turbines, ensure that turbines read as a coherent group (Photo 12) in main views.
- Minimise significant turbine overlaps, which may catch the eye.
- Layouts that reflect existing landscape patterns, such as regular field patterns or linear transport corridors, may allow the positive sculptural qualities of turbines to be seen to good effect.
- Maximise the benefits of existing screening by topography or woodland through careful placement of turbines and adjustment of turbine base heights. However do not rely on woodland or forestry screening if felling is likely during the lifespan of the project.
- Adequate separation from walking, riding and other recreational routes is important to prevent adverse impacts on the landscape experience, amenity and safety of recreational landscape users.
- When setting turbines back from the upland edge, try to avoid creating views of blades that are highly distracting (Photo 13).

Design

- The scale of development, in terms of lateral extent and height, should be in proportion with, but not overwhelm, key landscape elements such as valleys, ridges, hills and woodlands.

- Aim to create a simple image that respects the hierarchy of elements in the landscape and does not compete with, or create clutter when seen together with other man-made landscape elements.
- In urban or industrial contexts, developments should respond to the scale of the built form and sit comfortably alongside large buildings or structures, providing a balanced composition that enhances any existing focal point.
- Consistent turbine height, layout and design are critical for sites that lie close to one another, particularly those within a cluster (ie within 3-5km to the outermost turbines).
- A range of colour options for turbines are available. Consideration could be given to the background against which the turbines will usually be seen. Pale colours suit most sites in elevated locations where turbines will mainly be seen against the sky. Darker colours may be appropriate where turbines will be seen against a landscape background.

Infrastructure

- Road access for long loads (eg blades up to 45m long) may necessitate road widening, creation of wide bell-mouth entrances and removal of features such as stone bridges, walls, gateposts, hedges and trees, thus affecting the fabric and character of the landscape.
- Minimise infrastructure impacts by good design and appropriate mitigation eg replacement planting. Avoid measures that would urbanise the character of rural lanes eg kerbing and fencing.
- Impacts of on-site access tracks (typically 5-6m wide) may be reduced by use of existing farm or forestry tracks. The length of new on-site access track should be minimised through efficient track layout, and tracks should be surfaced in a way that blends in with the surroundings. Where possible tracks should be re-vegetated (in full or in part) following construction.
- Access track impacts will be heightened on steep slopes (Photo 14), where they may require zig-zag routes, cut and fill and drainage channels, and on wet marshy ground where they may require extensive foundations. Use of highly engineered solutions should be minimised as they may scar the landscape. Tracks should follow the contours provided this does not entail excessive length.
- Where possible, transformers could be housed within the turbine tower to reduce their visual impacts, and on-site cables could be buried underground.
- Substation and control buildings should be carefully sited and should generally avoid high, exposed locations where they may be incongruous and provide a scale comparison with turbines.
- Use of local building materials and styles will help integrate such structures into the landscape. Hard surfacing, fencing and lighting around substations should be minimised.



Photo 11: Respect settings of areas designated for their scenic quality.



Photo 12: Ensure that turbines read as a coherent group – this group is too disparate.



Photo 13: Try to avoid creating views of blades that can be distracting.



Photo 14: Steep, highly engineered access tracks should be avoided where possible.

4.4 Assessment of Landscape and Visual Impacts

For most wind energy developments, submission of an Environmental Impact Assessment (EIA) will be required. For smaller developments that do not require a full EIA the planning authority will often still require information describing environmental impacts and how they have been addressed. An assessment of landscape and visual impact will normally be a central part of the EIA for wind energy developments; key good practice requirements for landscape and visual impact assessment (LVIA) are summarised in Table 6. Definitions of LVIA terms can be found in Annex 2. Further advice on LVIA can be found in Landscape Institute and Institute of Environmental Management and Assessment (2002) *Guidelines for Landscape and Visual Impact Assessment*, 2nd edition, Spon.

Table 6: Good Practice Requirements for Landscape and Visual Impact Assessment (LVIA)

Description of alternatives

- Describe the alternative sites considered and their landscape constraints and opportunities.
- Indicate why the final choice of site was made and why it was considered suitable in terms of potential landscape and visual impacts.
- Drawing on the design statement, describe the alternative conceptual design options considered, giving the reasons for choosing turbine numbers, height and the particular site, layout and design.
- Explain why the preferred solution represents the optimum landscape fit.
- Computer-generated wireline images may be helpful in illustrating this section of the EIA.

Project description

- Describe the project at each phase in its life cycle in sufficient detail to allow the assessment of landscape and visual effects.
- Include the location and dimensions or extent of all plant and structures, and describe the nature, scale and duration of project activities during construction, operation, and decommissioning.
- Construction phase information should include site access and haulage routes and construction details; turning circles and visibility splays; removal and protection of existing features; any cut and fill and drainage requirements; borrow pits and disposal areas; temporary lay down areas and crane hard standings; construction compound and materials storage; turbine foundations; temporary anemometer masts; site cable runs; and site reinstatement.
- Operational phase information should include details of number and type of turbines (including form, materials, colour etc); operational wind speeds and blade rotation speed; transformers; substation and control building; signage, lighting and fencing; landscape mitigation measures such as

- planting; grid connection; servicing and land management arrangements.
- Decommissioning phase information should include arrangements for removal of turbines and ancillary structures; proposals for restoration; and future land management.

Baseline assessment – landscape resources

- Agree with the planning authority the size of the study area. For turbines of medium or large commercial height we would generally recommend a radius of 20-30km around the site depending on the proposed height of turbines.
- Compile mapping and descriptions of the existing landscape within the study area, examining the broad landscape context (15-30km), landscape setting (5-15km), local landscape setting (2-5km) and immediate landscape setting (up to 2km). Use the LCAs as a framework for writeup.
- Cover landscape character, landscape values and landscape sensitivity throughout the study area (including transboundary areas), drawing on the relevant landscape character assessment reports, information on special landscape values (such as descriptions of landscape, natural and cultural heritage designations); and the LCA landscape assessment sheets.
- Describe how landscape character affects the sensitivity to wind energy development of the landscapes within the study area and define their level of sensitivity.
- In relation to valued landscape characteristics and features, explain the reasons why the characteristic or feature is important and its level of importance (ie national, regional, local).
- Describe the landscape of the site itself, including landform, landcover, features of natural and cultural heritage interest and access. Include details of the landscape fabric ie vegetation, trees, hedges and other boundary features and their condition.
- Confirm and expand this information through field survey.

Baseline assessment – visual resources

- Prepare mapping to show the area over which wind turbines may be seen (commonly referred to as the zone of theoretical visibility (ZTV) or by some as the zone of visual influence).
- Review the ZTV and consider the site's contribution to visual amenity within the distance bands indicated above. Consider in the field the degree to which trees and vegetation may reduce or contain visibility.
- Use the ZTV and field work to help identify viewpoints to be covered in the assessment through the preparation of wireline images and photomontages. These viewpoints should be discussed and agreed with the planning authority and other stakeholders at the scoping stage.
- The number of viewpoints required will vary but 15-25 viewpoints may be necessary for wind farms, particularly in areas of high landscape sensitivity.
- Include views referred to in the LCA landscape assessment sheets, eg views from settlements; transport corridors; tourist and walking routes; specific receptors such as historic parks; and also locations where

cumulative impacts will occur with other wind energy developments.

- Give priority to views from distances of less than 5km but also include some middle and longer range views.
- A range of receptors (viewer groups) could be classified in terms of their sensitivity. In general, those engaged in tourism and recreation eg walkers may have higher amenity expectations and be more sensitive, while groups such as passing motorists and local workers have lower amenity expectations and are less sensitive.

Description of impacts

- This section should systematically identify and describe the likely effects of the proposal; indicate the mitigation measures developed; estimate the magnitude of the changes that will occur; and consider whether they will be beneficial or adverse. It should cover impacts at construction, operational and decommissioning phases. Transboundary impacts on areas of the Republic of Ireland should be included.
- Impacts should be separately assessed under headings of landscape fabric, landscape character, landscape values and visual amenity and for each of the distance bands described above.
- For **landscape fabric**, the scale of impacts such as physical damage or loss and proposed mitigation should be given wherever possible.
- For **landscape character**, the assessment should briefly describe the changes that will occur to the character of each of the LCAs where wind turbines are visible, considering how the wind energy development will affect perceptions of character (eg landscape scale, patterns, focal points, skylines and settings etc) and how widespread and prominent the changes will be.
- For **landscape values**, the assessment should describe any changes in landscape quality, scenic quality, wildness, tranquillity, natural and cultural heritage features, cultural associations and amenity and recreation that will occur due to the development (given its distance and visibility).
- For **visual amenity**, the extent of visibility should be described by reference to ZTV mapping. Changes in views from the selected viewpoints should be assessed by reference to the wireline images and photomontages. Commentary and assessment should also be provided on impacts on residential properties; impacts on views from Registered Parks and Conservation Areas within 5km; and impacts on views from the principal routes in the area (including the main road routes, tourist routes and walking routes where appropriate).

Cumulative impacts

- Cumulative impacts with any other operational, consented or application stage sites should also be assessed (recognising that there are varying degrees of certainty associated with these different types of site).
- Prepare cumulative ZTV(s) around the proposed development (the planning authority would generally recommend using a radius of at least 30km but may request that this be extended in some cases, for example where a highly sensitive landscape lies midway between two wind farm

sites).

- Analyse the pattern of combined effects and identify key viewpoints within areas of overlap between the ZTVs of different developments, including some short and middle range views. Prepare cumulative wireline images for each of these viewpoints.
- Assess cumulative impacts under the same headings as site-specific impacts. Pay particular attention to issues such as:
 - the combined effect of different site accesses on the landscape fabric of a single hillside or valley;
 - how developments relate to one other and to the underlying landscape in terms of scale and capacity;
 - the extent to which the setting of valued landscapes or features may be eroded by cumulative impacts;
 - the combined visual effects of more than one wind energy development on particular tourist routes or long distance walks when seen together or sequentially.
- In assessing the magnitude of cumulative impacts it may be helpful to consider the extent of overlap between the ZTVs of different developments, and extent to which the proposed development extends the horizontal field of view occupied by wind turbines.

Assessment of impact significance

- Finally the **significance** of impacts should be assessed by reference to the **sensitivity** of the landscape or viewer and the **magnitude** of the change that is expected to occur. Significance can be classified, for example on five or seven levels from negligible to major. Good practice is to do this by means of a matrix that sets out the combinations of sensitivity and magnitude that give rise to specific significance levels.
- The assessment of significance should be informed by the LCA landscape assessment sheet for the LCAs concerned, and should focus on the potentially significant impacts of the project, that is those that will affect decision-making.

In addition to text covering all the topics listed above, appropriate, high quality illustrations will greatly assist the assessment process and help people to understand the assessment findings. The preparation of appropriate maps, ZTVs, wireline images and photomontages is a complex and specialist process and expert input will be required. The use of Digital Terrain Models may assist with these complex and specialist processes. The project landscape architect should be able to advise on the selection of a suitable specialist and supervise the preparation of the illustrations.

4.5 Checklists

The planning authority will expect LVIAs for commercial wind energy developments to adequately meet the good practice requirements that are summarised in Table 6. Developers should also submit presentation material (including maps and other illustrations) as set out in Table 7.

Table 7: Checklist of Presentation Material That Should be Provided

Conceptual design options

Any computer-generated wireline images that were utilised during consideration of conceptual design options. Images accompanied by map(s) to show the turbine layouts that are illustrated and the viewpoint location, viewing direction, included field of view and appropriate viewing distance for the wirelines.

Site layout

Site layout plan showing position of turbines, access and internal tracks, compounds, substation and all ancillary elements in the context of the physical landscape fabric, including contours, type and condition of landcover, boundaries and trees, existing access points, utilities and important environmental features. Scale 1:25,000 or greater.

Turbines and other elements

Scaled elevations showing technical detail of turbines, transformers, substation and ancillary elements, with key dimensions. Typical photographs of turbines proposed.

Landscape character

Map showing site location and LCAs within the study area on a colour 1:50,000 OS base (this may be reduced as long as it is legible). LCAs and landscape types in the Republic of Ireland should also be shown where these lie within the study area. Map should indicate concentric distance bands from the outer turbines of the site including those distance bands used in writeup (ie 2, 5, 15 and 30km). Viewpoint locations should also be shown.

Landscape designations and values

Map showing site location and location of valued landscape features within the study area on a 1: 50,000 OS base (as before), including all the designations and features listed in Table 1 of this guidance (and equivalents in the Republic of Ireland). Concentric distance bands as above. Viewpoint locations.

Zones of theoretical visibility

Maps of theoretical visibility to hub height and to blade tip height on a 1:50,000 OS base (as before), with transparent colouring to indicate the number of hubs or blade tips that may be visible at a given point. Maps

should cover the whole study area with enlargements at 1:25,000 or 1:50,000 to show visibility up to 5km in more detail. Concentric distance bands as above. Viewpoint locations.

Visualisations

Computer-generated wireline images and (where possible) colour photomontages for the selected viewpoint locations. These should be based on photographs taken with a 50mm lens on a 35mm film format (or digital equivalent), reproduced at a size that, when seen at a normal reading distance of around 50cm, will appear similar to what would be seen in the field. The horizontal field of view should be similar to that of the human eye (around 50 degrees). Each visualisation should be accompanied by a photograph of the view as existing and by details of distance to nearest turbine, viewpoint grid reference and height AOD, viewing direction, included field of view and appropriate viewing distance.

Cumulative impacts

Location map (with individual turbine locations) for all operational, consented and application sites for commercial wind energy development (recommended within 30km, or wider area if required by the planning authority) in Northern Ireland and the Republic of Ireland. Presented on a 1:50,000 OS base (as before) with concentric distance bands. Overlain by transparent ZTVs of different sites in different colours, so that areas of cumulative visibility can be seen. Location of cumulative viewpoints. 180 or 360 degree computer-generated wireline images for these viewpoints, annotated with site name, status (operational, consented, application), and distance to nearest turbine.

As indicated earlier, this Supplementary Planning Guidance on wind energy development in Northern Ireland's landscapes will be taken into account by the planning authority in determining planning applications for wind energy development. It will inform judgements on the impacts and acceptability of proposed developments in landscape and visual terms and on the adequacy of the LVIA provided.

When considering potential applications at the scoping stage, before submitting applications and when reviewing applications for wind energy development it is worth considering the following checklist questions.

Table 8: Checklist of Questions

- Does the location of the development take account of the sensitivity of the landscape indicated in the landscape assessment?
- Is the proposed development proportionate to the landscape character of the area?
- Does the application accord with the principles set out in Tables 3, 4 and 5?
- Does it demonstrate understanding of and respect for landscape character (not only in the LCA that is most directly affected, but also in the wider area)?
- Does it respect the visual amenity of the LCA and the wider surrounding landscape?
- Has proper account been taken, in siting, layout and design, of the key landscape characteristics and values and the specific sensitivities of the landscapes concerned?
- Have all significant impacts been identified or are there omissions? If so, is further information required on these potential impacts?
- Are there any significant residual impacts on landscape fabric, landscape character, landscape values or visual amenity that may mean the proposal is unacceptable?
- If so, could these be reduced to an acceptable level by design changes such as a reduction in the number or height of turbines, changes to turbine layout, alternative site access arrangements or off-site screening?
- Are there significant cumulative impacts on landscape fabric, landscape character, landscape values or visual amenity that may mean the proposal is unacceptable? If so, could these be reduced to an acceptable level by siting, layout or design changes?
- Does the LVIA provided accord with the good practice requirements in Table 6 and has adequate presentation material as indicated in Table 7 been supplied?

Annex 1. Sources of Further Technical Advice

Countryside Agency and Scottish Natural Heritage (2002) *Landscape Character Assessment Guidance for England and Scotland*, Countryside Agency and Scottish Natural Heritage.

<http://www.landscapecharacter.org.uk/node/26>

Countryside Agency and Scottish Natural Heritage (2004), *Landscape Character Assessment Guidance Topic Paper 6: Techniques and Criteria for Judging Sensitivity and Capacity*, Countryside Agency and Scottish Natural Heritage. <http://www.landscapecharacter.org.uk/node/26>

Department for the Environment (Northern Ireland) (2009) *Best Practice Guidance to Planning Policy Statement 18: Renewable Energy* http://www.planningni.gov.uk/index/policy/policy_publications/planning_statements/planning_policy_statement_18_renewable_energy-4.htm

Department for the Environment (Northern Ireland) (2009) *Planning Policy Statement 1: Renewable Energy* http://www.planningni.gov.uk/index/policy/policy_publications/planning_statements/planning_policy_statement_18_renewable_energy-4.htm

Landscape Institute and Institute of Environmental Management and Assessment (2002) *Guidelines for Landscape and Visual Impact Assessment*, 2nd edition, Spon.

http://www.iema.net/shop/product_info.php?cPath=27_26&products_id=57

Scottish Natural Heritage (2001) *Guidelines on the Environmental Impacts of Windfarms and Small Scale Hydroelectric Schemes*, Scottish Natural Heritage.

<http://www.snh.org.uk/pubs/results.asp?q=windfarms&selfservice=0&c=-1&isbn=&o=title>

Scottish Natural Heritage (2005) *Guidance: Cumulative Effect of Wind Farms*, Scottish Natural Heritage.

<http://www.snh.org.uk/pdfs/strategy/Cumulativeeffectsonwindfarms.pdf>

Scottish Natural Heritage (2006) *Visual Representation of Windfarms: Good Practice Guidance*, Scottish Natural Heritage.

<http://www.snh.org.uk/pdfs/publications/heritagemanagement/Visual%20Representation%20of%20windfarms%20-%20excerpt.pdf>

University of Newcastle (2002) *Visual Assessment of Windfarms: Best Practice*, Scottish Natural Heritage.

http://www.snh.org.uk/pdfs/publications/commissioned_reports/f01aa303a.pdf

Annex 2: Terms and Definitions

General terms relating to landscape and visual resources

Landscape fabric – Physical landscape elements and features, such as landform, landcover, boundary features, trees and woodland, that make up the landscape we see, and that may be affected for example by recontouring, land use changes, or damage to vegetation in the course of development.

Landscape character – The distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape and how this is perceived by people. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement. It creates the particular sense of place of different areas of the landscape.

Landscape quality (or condition) – A term based on judgements about the physical state of the landscape, and about its intactness, from visual, functional and ecological perspectives. It also reflects the state of repair of individual features and elements which make up the character in any one place.

Landscape value – The intrinsic value that is attached to a landscape, often reflected in designation or recognition. It expresses national or local consensus as to the (degree of) importance of a landscape, for reasons including landscape quality, scenic (or visual) quality, wildness and tranquillity, natural and cultural heritage interests, cultural associations and recreational opportunities.

Amenity – The benefits afforded to people by a particular area in terms of what is seen and experienced. Amenity includes not just visual amenity and views but also the experience of landscape in its widest sense. Different groups of people such as walkers, residents and motorists may have different amenity expectations.

Terms used in landscape and visual impact assessment

Landscape impacts – Changes in the physical landscape which give rise to changes in its character and how it is experienced, and may in turn affect the value attached to a landscape. Landscape impacts may be beneficial (for example where a characteristic feature is restored) or adverse (for example where a characteristic feature is damaged or lost).

Visual impacts – Changes in the appearance or perceptions of a particular area or view as a result of development or other change. Visual impacts can be beneficial (for example where a new view is opened up) or adverse (for example where an existing view is affected by the addition of an intrusive feature).

Landscape sensitivity – A term based on the inherent sensitivity to change of a landscape in both landscape character and visual terms (as a result of its type of character, visibility etc). In Environmental Impact Assessment the term sensitivity may also be used to encompass the value placed upon the landscape.

Visual sensitivity – The sensitivity of visual receptors (viewers and views) to changes in the appearance of the landscape. Sensitivity depends on the location and context of the viewpoint, the expectations and occupation or activity of the viewer, and the importance or value of the view.

Landscape capacity – A term used to indicate – generally for the purposes of planning policy or guidance – the extent to which a landscape can accommodate specific types of change or development without significant adverse impacts on its landscape character, visual amenity or landscape value.

Magnitude – A combination of the scale, extent and duration of an effect. The nature and degree of change to the landscape resource, the scale of the change in view resulting from the loss or addition of features, the degree of contrast or integration of new features in the landscape, the angle and distance of view, the extent of the area over which the changes would be visible, and the duration of the effects are all relevant considerations.

Impact significance – A term that is not absolute and can only be defined in relation to each development and its location. The two principal criteria determining significance are the sensitivity of the landscape or viewer and the magnitude of the effect.

Annex 3

Landscape Assessment Sheets

LCA 1 Garrison Lowlands

Location: County Fermanagh. Located in West Fermanagh, bounded by Lough Melvin to the south and River Erne to north.

Key Landscape and Visual Characteristics and Values

Scale

Mainly low lying LCA, with rounded ridges and many small scale landscape features. The highest hill is Scribbagh at 153m AOD.

Landform

Long, rounded glacial ridges extend into County Donegal, interspersed with valleys and bogs, commonly draining into Lough Melvin or eventually reaching the coast. The ridges become shallower and the valleys wider towards the west of the LCA. In the east, the land rises merging with the sandstone uplands around Lough Navar and Ballintempo Uplands. The north shores of Lough Melvin are low-lying and exposed; low ridges project into the lough forming points and islands.

Enclosure

Generally enclosed – due to both undulating landform and vegetation, which includes scattered forestry plantations and overgrown hedges enclosing grassland and rough grazing.

Complexity of landcover and features

A relatively complex landscape, supporting a patchwork of small fields, interspersed with river valleys, small lakes and extensive wet meadows and bog. Reed beds and shoreline woodland around Lough Melvin. Sandstone boulders on surface of some ridges. Ladder fields on south shore of Lough Melvin on the pronounced slopes of Sheenun ridge are distinctive, as are the low-lying, exposed shingle beaches on the north shore of Lough Melvin.

Man-made influence

Influences apparent through turbary and forestry, although the impact of forestry plantations has been moderate thus far.

Skylines and settings

The village of Garrison enjoys a distinctive and picturesque landscape setting at the head of Lough Melvin. Ridges also project into the lough forming points and islands that are distinctive features.

Visibility and views

The steep hills of Sligo and Leitrim can be seen south across Lough Melvin; their distinctive ladder field patterns dominate views. There are views southwest across the lough from the B52 above Garrison and from Garrison itself; and from the lough eastwards to the Fermanagh uplands. The Glen River and Waterfalls also provide key views, and are located towards the eastern boundary of this LCA.

Landscape quality (condition)

Declining farming activity and rough grazing contribute to localised landscape quality issues. The shorelines of Lough Melvin, with shingle beaches, shoreline vegetation and views to the ladder fields of Sheenun, are in good condition.

Scenic quality

Whole LCA has been identified as an ASQ; it is also adjacent to the highly scenic Fermanagh karst landscape. Lough Melvin is also designated as Area of Outstanding Natural Beauty and Area of High Visual Amenity in the Leitrim County Development Plan.

Wildness and tranquillity

Remote and isolated character in parts, due primarily to declining agricultural activity.

Natural and cultural heritage features

Active karstic cave system in the Dartry Limestone at Ground Bridge. Significant ecological resources comprising wetlands, hay meadows, bog and occasional woodland and hedgebanks, reflected in numerous ASSIs. Lough Melvin is an SAC and internationally important for its rare fish species. Numerous raths, commonly sited in prominent positions along low ridges and in valleys.

Cultural associations

Folklore associated with the area's prehistoric sites.

Amenity and recreation

Outdoor pursuits, fishing and water sports are found at Lough Melvin. Cycle route traverses the LCA. Garrison is a gateway into Northern Ireland from County Leitrim and is the main recreational centre supporting a year round campsite and a number of guesthouses.

Assessment for Wind Energy Development

Overall sensitivity

This landscape is relatively small scale and contains a range of landscape features. Its remote character and distinctive field patterns and enclosures also lend a relatively high degree of sensitivity. Views across, and from Lough Melvin, are an important landscape consideration.

Towards the eastern part of this LCA, the presence of higher, rolling ridge land might lead to locally reduced landscape sensitivity. However, the area around Lough Melvin, including land near the settlement of Garrison, is very sensitive to wind energy development, as are the Glen River and Waterfalls areas.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The glacial ridges within this LCA may afford some screening for turbine development away from the principal roads and scenic views. Mid slope locations and locations associated with existing conifer plantations might also offer suitable sites. It is recommended that any wind energy development should reflect the scale of nearby landform and landcover features.

Care should be taken to avoid adverse impacts on the shorelines and setting of Lough Melvin as these areas are very visually sensitive. The landscape interests of recreational resources should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA. The nearest existing wind farm was at Callagheen, around 2km east of the LCA in the Lough Navar and Ballintempo Uplands (LCA 4). Further development in LCA 4 or in the adjoining counties of Leitrim and Donegal (where there were a number of wind farm applications) could impact on the character of this area, affecting views from Lough Melvin and leading to cumulative impacts. Proximity to the existing Callagheen site might help to minimise cumulative impacts provided that the turbines were not visible from Lower Lough Erne to the north).

LCA 2 Lower Lough Erne

Location: County Fermanagh. Northern part of Lough Erne.

Key Landscape and Visual Characteristics and Values

Scale

This LCA contains extensive open waters, offshore islands and the distinctive Cliffs of Magho. The open lough contrasts with the narrow strips of adjacent loughside farmland and woodland, which have an intimate, small scale character. Derrin Mountain, on the northern edge of the LCA, rises to 171m AOD.

Landform

The Cliffs of Magho consist of a large, north-facing limestone escarpment overlooking Lower Lough Erne, a deep glacial trough. Further north the low streamlined ridges, bays and promontories of Boa Island and Castle Caldwell are less pronounced.

Enclosure

Centred on the lough, this landscape is largely open and visually exposed. However, the small loughside fields are commonly enclosed by hedgerows and woods, contributing a localised sense of enclosure.

Complexity of landcover and features

Landcover is principally agriculture and forestry. There is marginal farmland to the west, with improved grassland on drumlins and wet meadows and bogs further east. Semi-natural woodland is found on the lough shores. There are only narrow strips of farmland adjoining the lake in this LCA. Wooded islands are attractive features.

Man-made influence

Main loughside roads have a scattering of tourism development. Highly visible forestry spills over the Cliffs of Magho from Lough Navar.

Skylines and settings

The Cliffs of Magho present a distinctive and defining skyline in this LCA. The estate village of Belleek lies in an attractive historic setting. Landmarks within this LCA include Rosscor viaduct, Castle Caldwell forest and Belleek itself. The settings of old estates such as Ely Lodge, close to the lough shore, also contribute to the character of this LCA.

Visibility and views

As much of the shoreline is wooded, views to Lower Lough Erne are intermittent. However, extensive views across the lake are afforded from the many lakeside jetties and slipways and from the Cliffs of Magho, which in turn dominate southward views across the lough. Long views east are afforded from Rosscor Viaduct and across the lough at the causeway near Bingham's Rock. Water-borne recreational views are also important in this LCA.

Landscape quality (condition)

The landscape is generally in good condition, with semi-natural habitats usually untouched by development. This area has a relatively robust landscape structure.

Scenic quality

It is a highly scenic landscape with the interaction between lake and land being a defining characteristic. The Cliffs of Magho contribute greatly to the high scenic quality of this LCA.

Wildness and tranquillity

This LCA remains tranquil despite recreational pressures. The lough fringe is highly significant for flora and fauna and this contributes to a wild character.

Natural and cultural heritage features

This LCA has a very varied range of natural heritage interests, from mixed ashwoods to important bird populations. Lower Lough Erne is only one of two sites in Northern Ireland to support the fish species Pollan. There are various ASSI designations, notably for limestone areas including the Cliffs of Magho and Magheramenagh. The islands and lough shores are rich in monuments and ecclesiastical sites, including raths, crannogs, ruined castles, and numerous listed buildings and estates such as Castle Caldwell (Registered Park).

Cultural associations

Folklore associated with the many historic and archaeological sites.

Amenity and recreation

Wide variety of tourism and recreational facilities for cruising, fishing and watersports. Castle Caldwell Forest Park and Nature Reserve. Ulster Way. Western end of the lough is part of the Marble Arch Caves Global Geopark.

Assessment for Wind Energy Development

Overall sensitivity

This landscape is characterised by extensive open water, but also contains a wealth of small scale, complex landscape features. This unusual combination of characteristics makes it highly sensitive to wind energy development. Additionally this LCA is unspoilt and tranquil over most of its area, and has many highly valued natural, cultural and recreational features.

Key constraints are the highly exposed character and long views which the area affords. The distinctive skyline of the Cliffs of Magho along with the shores around the lough are especially sensitive to wind energy development

Overall Sensitivity – High

Location, siting, layout and design considerations

This LCA has a character and special qualities which could easily be affected by inappropriate wind energy development. Areas where hedgerows or woodlands provide enclosure and screening would provide the most suitable areas for turbine development. It is recommended that turbines are in scale with buildings and vegetation.

Care should be taken to avoid adverse impacts on the extremely sensitive skylines, settings, views and key landscape and visual characteristics and values that were outlined in this section.

At the time of assessment there were no operational or consented wind farms in this LCA. The nearest existing wind farm was at Callagheen, which lies just to the south of the LCA boundary in the Lough Navar and Ballintempo Uplands LCA and is visible from this LCA. Further development at that site, in the Croagh and Garvary River LCA to the north, or in southern County Donegal, could significantly damage the character of this LCA and affect the setting of Lower Lough Erne. Cumulative impacts will therefore have to be carefully assessed.

LCA 3 Croagh and Garvary River

Location: County Fermanagh. This LCA lies to the north of Lower Lough Erne.

Key Landscape and Visual Characteristics and Values

Scale

Extensive moorland, forestry and marginal agriculture create a relatively open landscape, with a more intimate character on the lower slopes and in the river valleys which have hedgerows and small fields. The LCA attains heights of only 150m AOD.

Landform

This LCA, on the edge of the Pettigoe Plateau, has a concave landform overall. Underlain by ancient metamorphic rocks, it has a rough and rugged appearance, despite its relatively low elevation. The plateau has many small loughs and rocky knolls, the rounded summits of Croagh and Mallybreen Hill rising above. The two main rivers, the Garvary and Woodford Rivers, cut through small rounded glacial hills and terraces.

Enclosure

A sense of enclosure is provided on the lower slopes and river valleys due to hedgerows and small field patterns. On the more remote, elevated areas, the landscape has a more open character.

Complexity of landcover and features

Marginal farming on the lower slopes and valleys, with a dense pattern of hedgerows and small fields contributing to a relatively complex landscape. Forestry covers a large part of Derrin Mountain, and blanket bog covers much of the remaining landscape.

Man-made influence

Open unspoilt character with little development, but influence is evident through turbary and coniferous plantations on Derrin Mountain and small sand and gravel pits at Lough Scolban.

Skylines and settings

Rusheen Hill is a landmark within this LCA. The rounded summits of Croagh and Mallybreen Hill rise above the plateau but are subdued by the conical peak of Breesy Hill, in County Donegal. The settings of the loughs and river valleys are also of some importance.

Visibility and views

The slopes afford views south to Lower Lough Erne and the Cliffs of Magho. Views across the unenclosed blanket bog and towards the river valleys and lakes are also locally important.

Landscape quality (condition)

The plateau landscape has a remote and isolated character. Forestry, concentrated in the eastern part of the LCA, is the principal force for change. The extensive moorland and blanket bog are largely intact and contribute to landscape character.

Scenic quality

This LCA is of high scenic quality especially the highly scenic Fermanagh lakelands, which includes the area around Lough Scolban. Part of the LCA forms part of the Derrin Mountain ASQ.

Wildness and tranquillity

The remote areas of this LCA have a wild isolated character. The lower slopes support more agricultural activity but retain a tranquil character.

Natural and cultural heritage features

International earth science interest associated with extensive subterranean drainage systems as well as a variety of surface karst phenomena. Pettigoe Plateau is the only extensive area of lowland western blanket bog in Northern Ireland and supports ASSI, SAC and Ramsar nature conservation designations. Pettido SPA supports breeding golden plover. With the exception of crannogs, few other known archaeological sites.

Cultural associations

The area is sparsely settled and there might be folklore associations with the extant crannogs.

Amenity and recreation

The Ulster Way traverses this LCA, climbing between Black Hill and Meenatully Hill. Fishing at Lough Scolban and cycling. Eastern part of the LCA is part of a Marble Arch Caves Global Geopark.

Assessment for Wind Energy Development

Overall sensitivity

This LCA is largely open in character and concave in landform and has little or no screening in views from Lower Lough Erne. It is characterised by many small loughs and knolls. In addition to its strong wild character the LCA has important nature conservation assets.

Wind energy development could potentially dominate the landscape of this LCA and could be highly visible over a wide area.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA is visually exposed and has a wild character. The forested landscape of the eastern part of the LCA is the area that might offer the best capacity for some form of wind energy development. The enclosed landscapes of the lower slopes might offer better scope for other turbine development compared with the remote and open upper plateau areas where development could be highly prominent. It is recommended that any wind energy development reflects the visual exposure and wild character of this LCA.

Particular care should be taken to avoid adverse impacts on views from Lower Lough Erne or the Cliffs of Magho. Care should be taken to ensure that developments respect the remote and upper plateau areas and the skylines, settings and views as outlined in this section.

At the time of assessment there were no operational or consented wind farms in this LCA. The nearest existing wind farm was at Callagheen, visible around 5km to the south. Any further development close to that site could damage the character of this LCA and affect the setting of Lower Lough Erne. Transboundary issues might arise if there was any wind farm development in adjoining areas of County Donegal such as around Bressy Hill or Bradlieve Mountain to the west. Cumulative impacts will therefore have to be carefully assessed.

LCA 4 Lough Navar and Ballintempo Uplands

Location: County Fermanagh, bounded by Cliffs of Magho to the north and Ora More to the south.

Key Landscape and Visual Characteristics and Values

Scale

These exposed uplands comprise a large scale mosaic of open moorland, bog and forestry plantation. The land rises from 150m to around 350m AOD in the centre and south-east of the LCA.

Landform

This LCA has been carved out of a broken and undulating sandstone plateau. Different geological processes have created lough basins, rock ridges and the distinctive rock pinnacles of Big Dog and Little Dog. There are steep limestone escarpments to the north, east and south. The land slopes more gently to the west.

Enclosure.

This is a predominantly open landscape with more enclosure on the lower land due to the presence of forestry plantations.

Complexity of landcover and features

Extensive bog covers much of the area, although this has been widely afforested in the past thirty years. Turbary plots, rocky outcrops, loughs and hilltops provide landscape interest and contrast with the extensive plantations.

Man-made influence

Influence is evident through turbary, afforestation and existing wind energy development at Callagheen in the north-west. Forestry is planted in regular blocks of uniform age and tends to mask the underlying terrain and landscape features.

Skylines and settings

The distinctive summits of Big and Little Dog are key landmarks, as is the prominent ridge above Conagher Forest. Correl Glen is a spectacular glen on the Sillees River. At the LCA fringes, the limestone escarpment provides interesting ridges and skylines.

Visibility and views

Panoramic views from the edges of the LCA across the surrounding loughs and lowlands are a key characteristic.

Landscape quality (condition)

Landscape features are obscured by forestry in some areas; other areas show signs of farm abandonment and boundary neglect.

Scenic quality

Scenic quality is often high, particularly in open areas and where the terrain is broken by rocky outcrops, knolls, native trees and areas of marsh and fen. The LCA lies within the highly scenic Fermanagh karst landscape.

Wildness and tranquillity

This LCA has a particular appeal due to its wild character, especially in unafforested areas; remoteness is a key characteristic.

Natural and cultural heritage features

Important surface and subsurface karst systems. Exposed limestone at Lough Formal is of significant geological interest. Complex topography has led to an intricate pattern of heaths, bogs and acid grasslands, including several SACs. Glennasheever ASSI is a large area of intact oceanic blanket bog, whilst Correl Glen NR supports diverse lichen flora. Blanket bogs are important for overwintering and breeding birds including waders. Concentration of Neolithic megaliths, standing stones, passageways and court tombs, often in prominent positions with long views, such as at Killy Beg and Big Dog. Sweathouses.

Cultural associations

There is folklore associated with Lough Navar and the concentration of Neolithic sites.

Amenity and recreation

The Ulster Way traverses this LCA providing excellent forest walks at Big Dog and Lough Navar. There is also walking at Correl Glen; and the Forest Service provides recreational facilities such as viewing and picnic areas. Much of the LCA is part of Marble Arch Caves Global Geopark.

Assessment for Wind Energy Development

Overall sensitivity

The open areas within this LCA and its exposed tops, escarpments and edges are highly sensitive to change. This is particularly so where there are distinctive features such as rocky outcrops, loughs and hilltop knolls; and where any wind energy development would be visible from Lower Lough Erne and from the Sillees valley or Upper or Lower Lough Macnean. The wild and remote character of the LCA and its range of natural and cultural heritage interests also heighten its sensitivity.

The presence of extensive afforestation, locally reduces the landscape's sensitivity to wind energy development.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The afforested areas offer best scope to accommodate and access wind energy development, whilst the open moorland landscapes are highly sensitive to such developments as it is easy to significantly affect their wild character. Similarly the northern, southern and eastern fringes of this LCA, commonly marked by steep escarpments, are highly sensitive due to their high visual prominence; however the gentler western slopes might have better capacity. It is recommended that wind energy development reflects the scale of landscape features in this LCA.

Care should be taken to ensure there are no significant visual impacts on the settings of, or long views to and from, Lower Lough Erne and Upper Lough Macnean. Particular care should also be taken to avoid adverse impacts on the landscape settings of distinctive natural and cultural features and recreational resources such as the Ulster Way.

At the time of assessment there was one large operational wind farm in the northern part of this LCA (Callagheen, 13 turbines of 83m) and further applications were in the pipeline. There could also be transboundary impacts arising from wind farm applications in County Leitrim to the west. Significant separation between wind farms would be recommended to maintain the characteristic views and wild character associated with this LCA. Cumulative impacts will therefore have to be carefully assessed.

LCA 5 Lough Macnean Valley

Location: County Fermanagh. South West Fermanagh, bordering County Leitrim.

Key Landscape and Visual Characteristics and Values

Scale

This LCA has two narrow loughs of contrasting characters. It is a medium scale landscape in which the open loughs contrast with the valley sides. The highest land is slopes of Belmore, which reach a height of 398m AOD.

Landform

Upper and Lower Lough Macnean were formed as glaciers excavated deep basins, creating impressive steep valley sides and rocky scarps, notably at Hanging Rock. To the east the valley opens out into the flat Arney valley and to the north-west it connects with the Garrison lowlands. To the south of Lower Lough Macnean is the limestone escarpment of Marlbank.

Enclosure

The varied landscape pattern and dense vegetation in the lowland areas provide a sense of enclosure, as do the surrounding steep valley sides.

Complexity of landcover and features

Variety of landscape features: loughs and shorelines, limestone cliffs, woodlands and limestone grassland. The larger Upper Lough Macnean has a shoreline broken by wooded promontories and sheltered bays with fringing vegetation. Lower Lough Macnean has a more agricultural shoreline, with open wet meadows contrasting with occasional thick woodlands. Ladder field patterns on upper slopes.

Man-made influence

Influence is evident through quarrying at Kiltyfelan and settlement on lower slopes and at Belcoo. Some ribbon development.

Skylines and settings

Limestone outcrops along the slopes of Belmore Mountain form a craggy escarpment and an outstanding landscape setting to Lower Lough Macnean. The village of Belcoo enjoys a distinctive setting, located at the causeway between Upper and Lower Loughs Macnean. Nearby Aughrim Hill is also a distinctive landscape and Drumelly Rocks form a landmark.

Visibility and views

Views of the lough shores from the valley bottom, and also from Cuilcagh and Marlbank to the south are often intermittent due to vegetation, but views to the surrounding hills are possible from the valley bottom and lough shores and also from Cuilcagh and Marlbank to the south. From the loughs themselves, extensively used for recreation, there are clear views to the valley sides.

Landscape quality (condition)

Landscape condition is generally good although locally affected by agricultural intensification and replacement of walls and banks by wire fencing.

Scenic quality

The steep valley sides adjoining the loughs create a highly scenic landscape. The LCA lies within the highly scenic Fermanagh karst landscape.

Wildness and tranquillity

The upper slopes of the valley have a stronger wild character than the more active and

modified valley floors and loughside agricultural areas.

Natural and cultural heritage features

Significant limestone and karst landscape features around Belmore. White-clawed crayfish in Upper Lough Macnean. Islands in the loughs are also important for breeding waders. Habitats include upland mixed ashwood, upland oakwood and wet woodland around the lough shores. Lurgan River Wood ASSI supports hazel and ash woodland; also many NRs. Some significant archaeological sites, with evidence of Mesolithic settlement at Cushrush Island. Gardenhill Estate has small scale parkland.

Cultural associations

Reflecting the long settlement history, there are numerous folk stories associated with the archaeological sites. The LCA lies within the ancient kingdom of Breifne.

Amenity and recreation

LCA is a key gateway into Northern Ireland from Counties Cavan and Leitrim, giving access to tourist attractions such as Marble Arch Caves and Florencecourt as well as to Enniskillen and other parts of Fermanagh. Part of the area is in the Marble Arch Caves Global Geopark. Ulster Way traverses the LCA; Gortahole Outdoor Pursuits area; swimming, boating and fishing on the lakes; cycling opportunities.

Assessment for Wind Energy Development

Overall sensitivity

This landscape forms the setting for two attractive loughs. The narrow valley is flanked to the north and south by steep, prominent valley sides and characterised by a great variety and complexity of distinctive landscape features.

Notwithstanding the degree of enclosure provided by woodland and the steep valley sides that define the LCA, wind energy development could be highly visible from the loughs and lough shores and also from Cuilcagh and Marlbank to the south. The effect of such development has the potential to overwhelm and dominate the valley landscapes, and could adversely affect their distinctive skylines, settings and views.

Overall Sensitivity - High

Location, siting, layout and design considerations

The valley sides have a prominent and visually exposed character, with their dramatic limestone crags and wide views from across the loughs. Development on the lough shores or the more remote valley sides and escarpments could be highly prominent. The enclosed landscapes of the lower slopes might offer the most suitable location for turbine development. It is recommended that particular care be taken to ensure that turbines are in scale with buildings and vegetation.

Care should be taken to avoid adverse impacts on the highly sensitive skylines, settings (including those of natural and cultural heritage and recreational features), and views outlined in this section.

At the time of assessment there were no operational or consented wind farms in this LCA although there were several applications in this general locality, within or close to the LCA. The nearest operational or consented wind farms, were at Callagheen to the north-west and Slieve Rushen to the south-east, which are both more than 10km away and have little or no effect within this LCA. Transboundary issues might arise, however, if there was any wind farm development in adjoining areas of Counties Leitrim or Cavan.

LCA 6 The Knockmore Scarpland

Location: County Fermanagh. West of Enniskillen and Sillees valley.

Key Landscape and Visual Characteristics and Values

Scale

A dramatic landscape dominated by the escarpment. Large scale uplands contrast with more intimate enclosed lowland agricultural areas. Highest point is summit of Belmore at 398m AOD.

Landform

A karst landscape of scarps, extensive cliff faces, gorges, caves, limestone pavements, woodlands and loughs. The rugged karst relief has been emphasised by glacial action and larger rivers cut through the rock to form waterfalls, spectacular gorges and caves. A number of loughs lie along the scarp edge.

Enclosure

Enclosure is provided on lower slopes by woodland, hedgerows and earthbanks. Coniferous plantations around Belmore lend some screening, whilst escarpments are open and dominate skylines

Complexity of landcover and features

At Knockmore 100m cliffs descend into scarp woodland, whilst Belmore has a broader landscape pattern with coniferous plantations on its middle slopes. The glen landscapes include a variety of small loughs, fields, scrub woodland and scattered houses. On lower slopes, there are wet meadows.

Man-made influence

Overt man-made influences are generally limited, except for the extensive conifer plantations at the south end of the escarpment.

Skylines and settings

The Knockmore Scarpland limestone escarpment dominates the skylines in west Fermanagh. The northern and eastern edges of Belmore, the main east-facing escarpment of the LCA, and two smaller scarps above Kilgarrow are all prominent ridgelines. Belmore is a key feature in views from Cuilcagh and Marbank to the south.

Visibility and views

There are panoramic views over the adjoining lowlands from all the open scarp slopes and key views eastwards from the tertiary road that runs north-south beneath the escarpment, providing access to the area's wealth of landscape features.

Landscape quality (condition)

The landscape is generally in good condition and is characterised by attractive pristine natural features. Grazing pressure affects woodland regeneration in parts. Some areas are affected by farm abandonment and field boundary neglect.

Scenic quality

This is a highly scenic landscape within the highly scenic Fermanagh karst landscape. It has a particular wealth and diversity of landscape features.

Wildness and tranquillity

The cliffs and escarpments create a dramatic and wild character, in contrast with the more settled lower agricultural areas.

Natural and cultural heritage features

Significant geological interest, including limestone formations and limestone pavement and the only example of a joint controlled maze cave in Northern Ireland. Rough grazing, small improved fields and hay meadows contribute rich ecological interest. Important limestone woodlands (West Fermanagh Scarplands ASSI and SAC); oak woodland over sandstone in the northern part of the LCA; further designations at Largalinny ASSI and SAC. Blanket bog around Belmore has overwintering and breeding birds including waders. Significant concentration of Bronze Age and Neolithic archaeological monuments and sites representing most of Fermanagh's past, including subsistence farming from the nineteenth century.

Cultural associations

Long settlement history and dramatic scenery contribute to a strong sense of history, tradition and folklore.

Amenity and recreation

The Ulster Way traverses the south west part of this LCA. Caving and potholing are becoming increasingly important. Southern part of the LCA is part of Marble Arch Caves Global Geopark.

Assessment for Wind Energy Development

Overall sensitivity

The prominence of the escarpment skyline across much of Fermanagh makes this LCA extremely sensitive in both landscape and visual terms. Its rugged and highly varied landform, wealth of scenic, natural and cultural heritage interest, and generally unspoilt, pristine landscape quality further heighten its sensitivity.

Locally, in the simpler and larger scale forested landscapes north-west of Belmore Mountain, the landscape might be somewhat less sensitive, particularly where visibility is contained by landform and forestry plantation.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA is a visually prominent LCA. The area that might have most capacity for some form of wind energy development is the area north-west of Belmore Mountain, which is more rounded and partially enclosed by landform and forestry, with forest tracks potentially providing access. Consideration could be given to siting turbines away from any distinctive landform features that would lend an inappropriate sense of scale.

Care should be taken to avoid adverse impacts on scarp landscapes and the lower slopes which are clothed in semi-natural woodland as these are extremely sensitive to wind energy developments. Care should be taken to avoid any adverse impacts on skylines, settings and key views described in this section and on views from Cuilcagh and Marlbank to the south.

At the time of assessment there were no operational or consented wind farm developments within or near this LCA although there were several applications in this general locality, within or close to the LCA. Significant separation from any wind farms in adjoining LCAs would be important. Transboundary impacts are unlikely.

LCA 7 The Sillees Valley

Location: County Fermanagh. South of Lower Lough Erne.

Key Landscape and Visual Characteristics and Values

Scale

A distinct and well defined lowland area with drumlins. Cullen Hill at 194m AOD is the highest point in this LCA, but the height of individual drumlins is much less than this.

Landform

The lowland contains steep-sided drumlins which rise higher towards the north-west of the LCA. A limestone ridge separates this LCA from Lough Erne, rising to nearly 200m at Cullen Hill. The dramatic cliffs and foothills of the Knockmore Scarpland bound the western part of the LCA.

Enclosure

A strong sense of enclosure is provided by the drumlin hills, reinforced by small fields, hedgerows and trees and by the enclosing skylines to east and west.

Complexity of landcover and features

This LCA has a complex pattern of small fields, hedges, loughs, woods and forestry plantations. The Sillees river winds between the hills through Carran and Ross Loughs to Upper Lough Erne, and the drainage pattern is intricate. These loughs, situated below the limestone escarpment, are significant landscape features. Contrasts occur between improved farming with larger drained fields, and low intensity farming with rough grazing and hay meadows.

Man-made influence

Intrusive man-made influences are generally limited but include new roadside development, turbary and forestry plantations, the latter generally well-integrated with the landscape.

Skylines and settings

The Knockmore Scarpland (including Belmore Mountain) provides distinctive skylines in this LCA; as does the limestone ridge that encloses the valley to the east.

Visibility and views

Gaps between drumlins afford occasional views to lowlands. Ross Lough and Monea Castle are landmarks within this LCA. Key views from Thompsons Bridge west to the Knockmore escarpment; and from the escarpment east across most of the LCA.

Landscape quality (condition)

The landscape is generally in good condition. The rolling patchwork of bushy hedgerows and hedgerow trees provides a robust framework.

Scenic quality

Proximity to the Knockmore escarpment contributes to the scenic quality and sense of place of this LCA. The far northern part of this LCA around Derrygonnelly lies within the highly scenic Fermanagh karst landscape.

Wildness and tranquillity

This low-lying river valley does not have particular wild qualities, but is highly tranquil.

Natural and cultural heritage features

In the south of the LCA, important glaciofluvial deposits associated with subglacial and proglacial processes during the final deglaciation have been identified. Improved grassland predominates, but some unimproved alkaline grasslands support diversity of herbs and grasses, and fens occur near some loughs, notably at Ross Lough NR. Early Christian settlements are well represented. Plantation castle at Monea, under state care. Castletown Manor is a Registered Park. Many vernacular buildings.

Cultural associations

Long settlement contributes to a strong sense of history and folklore.

Amenity and recreation

Visitor facilities at Monea Castle. Fishing at Arney River, local services and accommodation.

Assessment for Wind Energy Development

Overall sensitivity

Although most of this LCA's landscape is relatively broad, open and exposed to view, the undulating landform and overgrown hedgerows provide a sense of enclosure and potential screening for wind energy development, at least in parts.

Significant constraints, however, are the drumlin landform, which could easily be overwhelmed and 'flattened' by inappropriately scaled wind energy development; the relatively settled character of the landscape, which allows little space for wind farms; and proximity to the outstanding and distinctive landscapes of the Knockmore Scarpland, which directly overlooks this LCA.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

This LCA has a robust landscape pattern with topography and vegetation providing some screening. The most appropriate areas for wind energy development would be within the drumlin belt or forests, although the forests are generally limited in size and a temporary feature. Drumlin skylines are particularly sensitive and care would have to be taken when assessing the number of turbines that could be accommodated in the local landscape. Consideration could be given to siting turbines on drumlin slopes rather than drumlin tops. It is recommended that any wind energy development relates to field patterns on drumlin slopes and reflect the relatively small scale features of the landscape.

Care should be taken to avoid adverse impacts on the limestone ridge to the east of the LCA as development there could impact significantly on the characteristic and sensitive skyline. Care should also be taken to avoid adverse impacts on the western edge of the area, which forms the setting to the extremely sensitive Knockmore Scarpland.

At the time of assessment there were no operational or consented wind farms within or near this LCA, although there were several applications on land to the west. If consented, these could affect the landscape of the Sillees Valley LCA and cumulative impacts could become an issue. Adequate separation and limited intervisibility will be important.

LCA 8 The Arney Lowlands

Location: County Fermanagh. South Fermanagh, bordering Cuilcagh and Marlbank LCA.

Key Landscape and Visual Characteristics and Values

Scale

A broad river valley floor distinguished by wide flat spaces between low hills, generally around 50-60m AOD.

Landform

The valley is characterised by wide flat lowlands enclosed by low hills. The wide valley floor is actually a broad glacial trough through which the River Arney meanders. The drumlins of the Sillees Valley lie to the north, the wetlands of Lough Erne to the east and the Lough Macnean Valley to the west and north.

Enclosure

This is predominantly an open landscape, though overgrown hedgerows create the impression of a wooded countryside

Complexity of landcover and features

Much of this lowland has damp peaty soils and is farmed or covered with scrub woodland and raised bogs. The shallow hills form islands of small rushy fields and hay meadows are surrounded by thick overgrown hedgerows. Each hill accommodates a dispersed group of small farmhouses linked by straight roads which are often raised above the level of the surrounding wetland.

Man-made influence

Scattered roadside development and turbary are the principal influences.

Skylines and settings

Skylines of adjacent areas are most distinctive, particularly those associated with the Cuilcagh and Marlbank LCA to the south-west and the Knockmore Scarpland LCA to the north-west. The Florencecourt Estate (National Trust) also adjoins the LCA to the south.

Visibility and views

Long views are afforded across this lowlying LCA, particularly from surrounding elevated areas and the low hills of this LCA. The adjoining LCA of Cuilcagh and Marlbank has views across this LCA, as does Belmore Mountain to the north-west.

Landscape quality (condition)

Overall, the landscape is in reasonable condition.

Scenic quality

The scenic quality of this LCA is not particularly high; the exceptions to this are the views to the adjoining LCAs.

Wildness and tranquillity

This low-lying river valley does not have particular wildness, although it is generally tranquil.

Natural and cultural heritage features

This landscape contains gravel and sand eskers such as at Killykeeghan. Tattenamona Bog ASSI is among the best remaining examples of a lowland raised bog within the drumlin belt of Northern Ireland; Other raised bog areas and an agricultural mosaic of hay meadows, grassland and rushy grass provides an important habitat for birds. Archaeological sites are confined to raths on elevated land.

Cultural associations

Historically, this LCA has fulfilled an important role as a communications route between the wetlands and the uplands and as a through route to Sligo.

Amenity and recreation

Limited access for fishing, local services in villages. Florencecourt and Marble Arch Caves, just outside the LCA, are important recreational attractions.

Assessment for Wind Energy Development

Overall sensitivity

This is a broad landscape, interrupted by low hills, hedgerows, scrub woodland and raised bogs that provide a degree of variety, enclosure and screening.

Its sensitivities relate primarily to the landform of low hills, which could easily be overwhelmed and 'flattened' by inappropriately scaled wind energy development; the relatively settled character of the landscape, which allows little space for wind energy developments; and proximity to the outstanding and distinctive landscapes of Cuilcagh and Marlbank, which directly overlook this LCA.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

This LCA has subtle variations in landform, the presence of small scale landscape features, and the role as a setting for Cuilcagh, Marlbank and Belmore. The most appropriate areas for wind energy development would be within the low undulating hills and drumlins rather than the flatter open bogs and wetlands. It is recommended that turbines should be very carefully sited and scaled relative to drumlins, topography, buildings and vegetation. Consideration could be given to siting turbines on hills slopes rather than hill tops.

Particular care should be taken to avoid significant impacts on key views to and from Florencecourt, Cuilcagh and Marlbank to the south and west and on views from Belmore to the north-west. Skylines and settings should be respected.

At the time of assessment there were no operational or consented wind farms within or near this LCA, although there were several applications on land to the north-west. If consented, these might affect the landscape of the Arney Lowlands LCA and cumulative impacts could become an issue.

LCA 9 Cuilcagh and Marlbank

Location: County Fermanagh. South Fermanagh adjoining Counties Leitrim and Cavan.

Key Landscape and Visual Characteristics and Values

Scale

A largely open karst landscape, rising to 665m at Cuilcagh Mountain.

Landform

This LCA contains the only true mountain in the area, Cuilcagh Mountain. There are also cliffs, escarpments, dry valleys, limestone pavements and gorges, with prominent rounded hills known as 'reef knolls' rising above the land surface. Impermeable flagstones and shales form the long broken slopes of Cuilcagh Mountain.

Enclosure

Generally open landscape but hedgerows on lower slopes and stone walls in limestone areas provide some enclosure around small and ancient fields.

Complexity of landcover and features

There is a rich variety of vegetation, with montane grassland and blanket bog on the grits and fine species-rich dry grassland on the limestone. Hazel scrub grows in irregular patches on steeper limestone slopes but there is a more luxuriant woodland cover at sink-holes. The peat uplands and extensive areas of blanket bog have been cut mechanically.

Man-made influence

Generally very limited apart from agricultural activity, mechanical extraction of peat, conifer plantations and tourist activities.

Skylines and settings

Distinctive ridgelines associated with limestone escarpments, above Marble Arch in the north around Cloghany and Gortalughany in the east. Florencecourt Estate (National Trust) is an important part of the setting of the LCA.

Visibility and views

Key views are south from close to Marble Arch caves towards Cuilcagh summit; north from Benaughlin; and east from Gortalughany. There are impressive views from most of the elevated land.

Landscape quality (condition)

This predominantly natural landscape is in good condition.

Scenic quality

This LCA has outstanding scenic quality and is situated within the highly scenic Fermanagh karst landscape.

Wildness and tranquillity

There is a wild and tranquil character particularly within the upland and summit area around Cuilcagh Mountain.

Natural and cultural heritage features

Huge number of earth science, ecological and cultural heritage features, including Cuilcagh Mountain ASSI and Ramsar site; mature ashwoods at Marble Arch and Hanging Rock (Hanging Rock and Rossaa Forest NR, Marble Arch NR); diverse herbs and grasses on limestone soils at Killykeeghan and Crossmurrin NR; prehistoric field boundaries; Neolithic and Bronze Age burial sites including cairns; farm sites from Early Christian period; Florencecourt House and Estate (Registered Park).

Cultural associations

Numerous associations owing to long human activity within this area.

Amenity and recreation

Ulster Way traverses this LCA and there is a wide range of mountain walks and scenic drives. It is an established tourism and recreational area with facilities at Marble Arch and Florencecourt Estate and Forest park. Marble Arch and Cuilcagh Mountain Park are within the Marble Arch Caves Global Geopark.

Assessment for Wind Energy Development

Overall sensitivity

Although the large scale and relatively simple, rounded landform of Cuilcagh Mountain summit is in theory well-suited to wind energy development, the dramatic scenery and natural and cultural heritage features associated with this landscape are of outstanding national and international importance. Their unspoilt character is highly sensitive to wind energy development. In addition, the position of the upland is such that any development, particularly near the upland edges, could be so very widely visible from the valleys and lowlands to the north, east and south that it could impact on the landscape character and value of a wide area of west Fermanagh.

Furthermore, as most of the upland has no vehicular access, its important upland landscapes and habitats are highly vulnerable to the impacts of new access track creation.

Overall Sensitivity – High

Location, siting, layout and design considerations

This LCA has an open, natural character, wide visibility and outstanding scenic value with inherent sensitivity. The LCA also has natural and cultural heritage value and has a role as an important area for tourism and recreation. The area with best scope for some form of appropriately scaled turbine development would be on the margins of the LCA where there is significant woodland cover.

Care should be taken to avoid adverse impacts on the distinctive and extremely sensitive upland ridges, upland edges, exposed lower slopes and on key landscape and visual characteristics and values that were outlined in this section.

At the time of assessment there were no operational or consented wind farms within this LCA. The closest lay around 8km south-east at Slieve Rushen (replacement wind farm, 18 turbines). Potential wind farm developments around Belmore to the north might also be visible from this LCA; and there could be transboundary issues if development took place in County Cavan to the south. These existing and potential impacts indicate that cumulative and transboundary issues will need to be a consideration.

LCA 10 Slieve Russel, Derrylin and Kinawley

Location: County Fermanagh. South Fermanagh adjoining County Cavan.

Key Landscape and Visual Characteristics and Values

Scale

This LCA has contrasting characters between the open upland areas with small glens, and the more enclosed lowlands with drumlins. The highest point is Eden More at 325m AOD but the summit of Slieve Russel in adjacent County Cavan dominates, at 403m AOD.

Landform

The area is dominated by Slieve Russel, a flat-topped, isolated block of limestone, sandstone and shales. Small valleys dissect the mountain and run down to complex glacial deposits on the lower slopes. The Owengarr River separates the principal summits of Eden More and Molly Mountain. The area also includes the drumlin lowlands and lowland bog to the east and the glacial trough occupied by the Cladagh River

Enclosure

The upland landscapes are generally open apart from gappy hedgerows, while the lower drumlin areas are more enclosed by topography and hedgerows.

Complexity of landcover and features

The summit has blanket bog, affected by turbary and erosion. The lower slopes have a more complex landscape dominated by rough grazing, with ladder farms creating a striking feature of hillsides. Lower slopes and lowlands to east and north support a mosaic of small fields, with varying degrees of agricultural intensity from improved pasture to hay meadows, with bogs in between.

Man-made influence

Extensive quarrying of limestone and sand and gravel pits. Existing wind energy development. Telecommunications masts. Turbary.

Skylines and settings

Prominent ridges located around the summits of Slieve Russel and Molly Mountain are also important, but are relatively distant, landmarks when seen from land around Upper Lough Erne.

Visibility and views

Long views are afforded towards Upper Lough Erne from uplands and across lowlands. Key views from Molly Mountain north-east across lowlands.

Landscape quality (condition)

Quite poor condition owing to discordant land uses within a visually prominent area. Limestone quarries, gravel pits and processing give parts of the area an industrial, degraded character.

Scenic quality

This LCA does not have a high scenic quality and has no scenic designations.

Wildness and tranquillity

Any previous sense of wildness or tranquillity within this LCA has been eroded by existing development and industrial activity.

Natural and cultural heritage features

The Derrylin sediments form the most extensive and thickest glaciofluvial complex in south-west Northern Ireland. Monineea Bog ASSI and SAC is of international significance with its intact dome, structural features and flora; Cladagh River ASSI is significant for rare priority species of aquatic flora and fauna. Neolithic stone monuments are the oldest known archaeological sites. There are also a number of raths on drumlins and sweathouses occur in Sheetrin townland.

Cultural associations

Folklore associated with archaeological sites.

Amenity and recreation

Ulster Way traverses this LCA and there is a scenic route with viewpoints on Molly Mountain. Local services at Derrylin.

Assessment for Wind Energy Development

Overall sensitivity

The relatively simple, open upland areas of this LCA are well-suited in scale and landform to wind energy development. Extensive man-made influences also lend a degraded, industrial character in parts and have damaged the LCA's landscape and scenic quality and wildness. These factors, coupled with the relatively limited extent of natural and cultural heritage interests, and the fact that Slieve Russel is relatively distant in views from the Fermanagh Lakeland landscapes, mean that most of the LCA is of medium sensitivity.

Local landscape sensitivity is raised by the presence of particular landmark features or views, notably around Molly Mountain and along the Ulster Way in the northern part of the LCA.

Overall Sensitivity-Medium

Location, siting, layout and design considerations

Parts of the upland area of this LCA, such as the Slieve Russel summit, have a large scale and simple form which is well suited to wind energy development. Degraded areas such as land affected by mineral extraction, where intrusive influences already detract from landscape character, quality and value, may offer the best opportunities for wind energy development.

Care should be taken to avoid adverse impacts on key viewpoints on the route of the Ulster Way or on or near the summit of Molly Mountain, which is a local and particularly sensitive landmark.

At the time of assessment one new (replacement) wind farm, Slieve Rushen, was under construction close to the top of Slieve Russel. This large wind farm of 18 turbines 125m high and its associated tarmac access roads could have moderate impacts on surrounding areas; further applications are also expected in this LCA. There may be potential to enlarge this site. There were no other operational or consented wind farms within 30km in Northern Ireland. The nearest applications were near Belmore more than 20km to the north-west. However, there are existing cumulative and transboundary issues associated with a wind farm on the south side of Slieve Russel in County Cavan.

LCA 11 Upper Lough Erne

Location: County Fermanagh. South Fermanagh, adjoining County Cavan.

Key Landscape and Visual Characteristics and Values

Scale

A small scale landscape of land and water. The highest point is Knockninny Hill at 194m AOD but the drumlin tops surrounding the lough generally rise to only around 50-60m AOD.

Landform

Rolling low drumlins and flooded hollows linked by streams and the River Erne. The landscape is dominated by water as the River Erne widens and narrows around varying sized islands.

Enclosure

Drumlins, wooded shorelines and hedgerows enclosing small fields create an enclosed character.

Complexity of landcover and features

A mosaic of small pastures on drumlins, with woodland and wetland areas around the Upper Lough Erne. Wooded estates are landscape features. A complex and intimate landscape. Small settlements are scattered throughout the area along disorientating narrow twisting roads and on the higher ground of drumlin tops and sides. There are traditional small farms and cottages throughout.

Man-made influence

There are few intrusive man-made influences apart from a limestone quarry near Knockninny Hill.

Skylines and settings

The village of Lisnaskea enjoys a distinctive landscape setting enclosed by steep slopes. The only prominent landmark in this vast and intricate network of wetlands is the hill of Knockninny.

Visibility and views

Views vary from enclosed inlets to wider reaches of open water which are scattered with islands. From the roads, there are occasional views across open water to wooded islands. Key views are from bridges, jetties, Crom Castle and Trasna Island. The top of Knockninny affords good views across the lough.

Landscape quality (condition)

The landscape elements and features of this LCA are generally in good condition.

Scenic quality

This LCA has a high scenic quality and is part of the highly scenic Erne lakeland landscape.

Wildness and tranquillity

The wooded loughshore vegetation enhances the wildness character of this LCA and the lough itself contributes to a sense of tranquillity. A quiet, rural LCA.

Natural and cultural heritage features

Most of the lough is designated as ASSI, SPA and Ramsar. The SPA supports whooper swans. Woodland is significant in this LCA, with the ancient woodland at Crom Castle (Crom ASSI) of particular importance. Early Christian monuments and sites are notable, and the grand buildings of large wooded and parkland estates such as Crom Castle contribute to landscape character. Registered Parks at Crom Castle (National Trust) and Belle Isle. Part of Lisnaskea is a Conservation Area.

Cultural associations

Folklore associated with lough and long settlement history

Amenity and Recreation

The Ulster Way and a number of cycle routes traverse this LCA. The lough is popular for boating and angling, connecting to the Erne-Shannon Canal at its southern end. Crom Castle Estate is open to the public.

Assessment for Wind Energy Development

Overall sensitivity

Although enclosure is provided by woodland and drumlin topography, this is a small scale, complex, intimate landscape that is highly sensitive to wind energy development. Inappropriately scaled turbines could be out of scale with the drumlin and island landform and sensitivity is further heightened by the strong wild, natural character within which turbines would seem out of place.

In addition, this LCA is a highly valued landscape and its recreational resource makes an important contribution to tourism in Fermanagh. Its habitats, bird life and wealth of archaeology are also very vulnerable to change.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has a rural and intimate character whose valued landscape could easily be dominated by inappropriate wind energy development. Consideration could be given to siting turbines in areas where hedgerows or woodlands could provide screening and help integrate the turbines with the surrounding landscape. It is recommended that turbines reflect the scale of landscape features in this LCA.

Care should be taken to avoid adverse impacts on the highly sensitive shorelines, islands and skylines. Care should also be taken to avoid adverse impacts on views to and from key landmark features such as Knockninny Hill. Natural and cultural landscape features should be respected.

In October 2007 there were no wind farm developments or applications within this LCA. The nearest operational or consented site was the large Slieve Rushen wind farm under construction 6km south-west of this LCA, affecting its wider setting. Cumulative impacts on this setting should be assessed for any wind energy development at Slieve Beagh to the north-east. Transboundary impacts from wind energy development in County Cavan to the south are also possible.

LCA 12 Newtownbutler and Rosslea Lowlands

Location: County Fermanagh, south of Slieve Beagh.

Key Landscape and Visual Characteristics and Values

Scale

Landscape scale varies across this LCA, reflecting variations in land management and drainage. Although this is broad lowland, of relatively widely spaced drumlins, the vegetation and field patterns lend a small scale to the landscape in parts. Most of the area is low lying at around 60m AOD but on the fringes of Slieve Beagh there is higher ground, up to around 120m AOD.

Landform

Widely spaced drumlins with occasional small loughs bounded by rivers. The drumlins become higher and more closely spaced north of the B36. At the foot of the Carnrock Hills, there is a pronounced valley and chain of small loughs. Drumlins determine drainage and settlement, and the River Finn has an extensive flood plain.

Enclosure

Open views in all directions are bounded by low drumlin hills, giving a strong sense of enclosure and unity to the landscape. Individual trees, parkland and tall unmanaged hedges give a well wooded character.

Complexity of landcover and features

Mix of intensive pasture and rushy fields showing declining agricultural activity. Unmodified rivers such as the River Finn and small loughs with fringing reed swamps and wet meadows are key landscape features. A wooded character due to trees, parkland and unmanaged hedges with small semi-natural woodlands on some drumlin slopes.

Man-made influence

Intrusive man-made influences are generally limited, except for some quarrying and commercial forestry.

Skylines and settings

The church spire of Newtownbutler forms a landmark within this LCA, whilst in the east the village of Rosslea and the nearby estate of Rosslea Manor enjoy a distinctive landscape setting creating a degree of enclosure unusual in a Fermanagh village. The ridgeline of the southern slopes of Slieve Beagh is prominent from the lowland when not concealed by drumlins.

Visibility and views

Open views in all directions, except when visibility is contained by drumlins. Views into the area from Carnrock (Slieve Beagh LCA) to the north.

Landscape quality (condition)

This is a unified and rural landscape in good condition although there is evidence of declining farming activity.

Scenic quality

The scenic quality of this undulating landscape is quite good. Locally it is enhanced by the many small lakes and estates with woodland and remnants of parkland.

Wildness and tranquillity

This LCA has a strongly tranquil rural character with pasture and wet meadows. It does not have a strong wildness character.

Natural and cultural heritage features

Good examples of Carboniferous geological sites. Upper Lough Erne SPA supports whooper swans. There is a nature reserve at Cornagague Wood and many of the isolated loughs are designated ASSIs. Early Christian settlements, raths and crannogs are concentrated in the north of this LCA. Many nineteenth century farmhouses and remnants of plantation estates are a feature. Registered Park at Rosslea Manor.

Cultural associations

Folklore associated with archaeology and a long history as a communications route between upland and lakeland areas.

Amenity and Recreation

The Ulster Way traverses the western part of this LCA. Cycling routes. Public access to Rosslea Manor.

Assessment for Wind Energy Development

Overall sensitivity

Much of this landscape is small scale with drumlins, strong field patterns, and individual trees and parkland, although there are also areas of simpler and broader scale landscape, particularly on the northern fringes of the LCA, near Slieve Beagh.

The relatively small size of the drumlins and settled character of the landscape are the key constraints to wind energy development; in addition, the area is overlooked from the hills to the north. Hence the landscape would be highly sensitive to wind energy development and to inappropriately scaled turbines, both of which could dominate and detract from its intricate patterns. However it might be less sensitive in parts to well-sited and appropriately scaled wind energy development.

Overall Sensitivity -High to medium

Location, siting, layout and design considerations

The higher ground in the north of the LCA is the area most likely to be able to accommodate turbine development. Consideration could be given to siting turbines on drumlin sides rather than tops. It is recommended that turbine development reflects the scale of the underlying drumlin topography.

Care should be taken to avoid adverse impacts on the highly sensitive open inter-drumlin hollows, drumlin tops, wetlands, lough shores, parklands and distinctive landscape settings around Newtownbutler and Rosslea. Care should be taken to ensure that turbine development does not overwhelm the underlying drumlin topography.

At the time of assessment there were no wind farm developments or applications within this LCA, although there were several applications around Slieve Beagh some 10km to the north, in both Counties Fermanagh and Monaghan. This could present issues of cumulative and transboundary impact in future.

LCA 13 Enniskillen

Location: County Fermanagh. The southern part of Lower Lough Erne.

Key Landscape and Visual Characteristics and Values

Scale

The open nature of the lake contrasts with the enclosure afforded by drumlins and vegetation. Away from the lake this is predominantly a small scale landscape. The highest areas in this LCA are the drumlin hills around Enniskillen such as White Hill (105m AOD).

Landform

This LCA includes the southern end of Lower Lough Erne, the town of Enniskillen and the winding rivers and wetlands in the northern part of Upper Lough Erne. High drumlins and wet inter-drumlin hollows dominate this landscape, enclosing the southern part of Lower Lough Erne.

Enclosure

Occasional views across the lough are afforded by gaps in vegetation. Otherwise generally an enclosed landscape due to drumlin topography and vegetation.

Complexity of landcover and features

A complex landscape of open water, wooded islands, vegetated shorelines and grassy drumlins enclosed by hedgerows. Large wooded estate landscapes are another feature in this LCA as are the turloughs of Fardrum and Roosky.

Man-made influence

Some unsympathetic ribbon development close to the lough shore detracts from its landscape setting. New ridge-top development in the town is also prominent and there are pockets of degraded landscapes, for instance at the airport.

Skylines and settings

Enniskillen has an exceptional landscape setting at the main crossing point along the Erne River Corridor. The Erne splits and winds around the steep drumlins which provide defensible hill-top sites for the historic town. Enniskillen has many prominent landmarks, including castles and churches. Estates such as Castle Coole and Ely Lodge also enjoy distinctive landscape settings.

Visibility and views

Occasional open views across expanses of water and along reed beds and carr woodland on lough fringes such as at White Island. Views into the LCA from higher ground to east and west.

Landscape quality (condition)

This landscape is in good condition and the small scale pattern creates a robust landscape. Hedgerows, hedgerow trees and the woodlands and parklands of estate landscapes are sometimes not well managed and might be overgrown and gappy.

Scenic quality

Scenic quality is generally quite high and this LCA lies within the highly scenic Fermanagh lakeland landscapes. The interaction between the lough, shoreline and drumlins contributes to the scenic quality.

Wildness and tranquillity

The area around the lough enjoys a wild and tranquil character in parts though recreational activities can also contribute to a more active character. Away from the lough there is no strong sense of wildness or tranquillity.

Natural and cultural heritage features

Fardrum and Roosky are rare examples of turloughs. Castle Archdale Islands NR comprises undisturbed mixed deciduous woodland on glacial drift in the Lower Lough Erne basin. High proportion of archaeological features and sites with particularly high number of Early Christian sites such as Devenish Island (ASSI). Registered Parks at Castle Archdale, Fort Hill, Castle Coole and Lisgoole Abbey. Conservation Area at Enniskillen.

Cultural associations

Folklore associated with the area's prehistoric sites. Artistic associations.

Amenity and recreation

Enniskillen and Kesh provide recreational and amenity services. Scenic waterways in this LCA are important for cruisers and rowing. There are walks around Ely Lodge and in other Forest Parks and estates. Country Park at Castle Archdale, which is part of Marble Arch Caves Global Geopark.

Assessment for Wind Energy Development

Overall sensitivity

This scenic landscape supports a complex range of small scale features including estates, associated woodlands, hedgerows and many archaeological sites. The lough shore and adjacent lands would be very sensitive to wind energy development whilst several of the drumlins form important settings to settlements, most notably around Enniskillen. The landscape scale reduces the scope for wind energy development and although enclosed at low level, the area is overlooked from higher ground.

In addition, this LCA serves as a crucial link between Lower and Upper Lough Erne and fulfils important recreational and amenity functions. Overall it is therefore of high sensitivity to wind energy development.

Overall Sensitivity – High

Location, siting, layout and design considerations

This LCA has small scale landscape characteristics and drumlin landforms. Consideration could be given to siting any turbine development well back from the lough edge and to utilise screening by hedgerows and topography. It is recommended that any turbine development reflects the small scale of the drumlin landform.

Particular care should be taken to avoid adverse impacts on the lough shore, distinctive drumlin landscapes around settlements such as Enniskillen and estate woodlands, as these features are particularly sensitive to turbine development. The character of their settings should be respected as should historically important skyline features.

At the time of assessment there were no existing or consented wind farms within this LCA, the closest being Tappaghan, Lendrum's Bridge and Slieve Rushen, all more than 20km away to the north, north-east and south respectively. However, there were applications for wind energy development much closer to the LCA, within the uplands to both east and west, and these could give rise to issues of cumulative impact if consented. Transboundary issues are unlikely.

LCA 14 Lough Bradan

Location: Counties Fermanagh and Tyrone.

Key Landscape and Visual Characteristics and Values

Scale

The large scale upland areas contrast with smaller scale drumlins and valleys in low-lying areas. North-east, the land rises to the massive rounded summits of Bolaght Mountain (345m AOD), Tappaghan Mountain (333m AOD) and Pollnalaght (268m AOD).

Landform

This LCA is characterised by valleys and steep drumlins on the lowlands, with a transition to an undulating sandstone plateau. The plateau is slightly elevated and fingers of this more resistant rock extend out into the drumlin lowlands. The uplands present their steepest face to the north, where they ring the Fairy Water valley presenting a broken ridgeline that is craggy in parts.

Enclosure

Hedgerows and undulating topography create an enclosed character on the lower areas; the uplands are more open in character and mainly comprise grass moorland. However there is also extensive afforestation in parts of the LCA, notably in the west and north.

Complexity of landcover and features

A sparsely settled landscape with a mixture of moorland, rough grazing, coniferous forestry, cutover bog, improved pastures, wet rushy land in between drumlins, and small estates. Upland areas, with extensive grass moor or forestry present simpler landscape patterns than lowland areas.

Man-made influence

Influence apparent through forestry, peat extraction, agriculture, masts, existing wind farms, quarrying activities and settlements.

Skylines and settings

The western and southern slopes of Tappaghan and Pollnalaght form distinctive skylines within this LCA. To the north, where the hills ring the Fairy Water valley, they present a series of steep, prominent ridges and skylines. The village of Ederney enjoys an attractive drumlin setting.

Visibility and views

Key views are principally from the upland areas and include panoramic views east and north-east towards Bessy Bell and the Sperrins and west to Sligo and Donegal. Long views are also afforded across the upland areas, although afforestation masks some landscape features. The lower areas are more enclosed.

Landscape quality (condition)

This landscape is in varied condition. Afforestation and peat cutting have affected large areas, and quarry scars also detract from landscape quality. However, the open moorland, enclosed drumlins and river valleys are quite robust and in good condition.

Scenic quality

Scenic quality varies within this LCA but the open upland areas are attractive and the lower, farmed drumlin areas contribute to scenic quality.

Wildness and tranquillity

Where not affected by extensive afforestation or extraction of peat, the uplands of this LCA tend to retain a wild, remote character that contributes to a sense of tranquillity.

Natural and cultural heritage features

Quarrying at Straduff exposed Upper Carboniferous rocks of the Drumlish Formation and this formation is unique in the British Isles (Straduff ASSI). Meenadoan NR, blanket bog. Other extensive bog areas in this LCA. The area retains its historic townland boundary patterns and numerous archaeological features including a well-preserved stone circle at Drumskinny.

Cultural associations

Folklore associated with archaeology.

Amenity and recreation

The Ulster Way traverses the north-western edge of this LCA. In addition, there is access to Lough Bradan Forest (Forest Service).

Assessment for Wind Energy Development

Overall sensitivity

The broad, convex, rounded summits of the upland areas within this LCA are relatively well-suited to wind energy development. Sensitivity is further reduced, over wide areas, by the presence of extensive commercial forestry and other man-made influences.

The undulating topography of the surrounding drumlins – while more sensitive in itself to wind energy development – tends to contain views to the upland areas where larger scale wind energy development is more likely to occur; although the northern edge of the plateau tends to be more open to long distance views. There are relatively few areas designated for their natural and cultural heritage interest. However areas of heather moorland and bog would be highly sensitive to wind farm development, especially to the impacts of access track construction, as would river valleys such as the Glendurragh and Kesh valleys. Overall, therefore, landscape sensitivity to wind energy development is medium.

Overall Sensitivity - Medium

Location, siting, layout and design considerations

The best locations for wind energy development are towards the tops of the broader, convex summits, where the rounded landform and – in the north and west – forestry provide partial screening. Existing forest access tracks could potentially be utilised for wind energy development. Consideration could be given to siting turbines in open, upland areas away from distinctive features such as crags that may highlight turbine size. In this LCA wind energy development must be careful siting to avoid overwhelming the landscape.

Care should be taken to avoid adverse impacts on the particularly sensitive northern edge of the plateau, as this edge is prominent and widely visible from the Derg valley (the slopes and scarp north of Lough Bradan Forest are particularly sensitive in this respect). Care should also be taken to avoid adverse impacts on river valleys such as the Glendurragh and Kesh valleys as they are highly sensitive to wind energy development. Care should be taken to avoid potential landslides on steep slopes.

At the time of assessment there were three operational wind farms in this LCA (Tappaghan, 13 turbines 88m high; Lough Hill, 6 turbines 83m high; and Bin Mountain, 6 turbines 92m high) and a further five application sites; hence cumulative impact is already an issue, affecting both the setting of Lower Lough Erne to the south and the Derg valley to the north. Ideally the strategy should be to seek to create distinct areas of wind energy development, clearly separated by areas of undeveloped landscape. Significant separation distances between clusters may be required to prevent the main ridgelines becoming dominated by turbines. Significant separation from wind farms in the Killeter Uplands LCA to the west is also desirable. There are also potential transboundary impacts in the west where the LCA borders County Donegal.

LCA 15 Irvinestown Farmland

Location: County Fermanagh. North-east of the county. Lower Lough Erne lies to the west.

Key Landscape and Visual Characteristics and Values

Scale

This LCA is a broad area of lowland farmland. The highest areas are in the north of the LCA but generally heights do not exceed around 140m AOD.

Landform

These are rolling drumlin lowlands with deep hollows and linear valleys. The landform is generally aligned along a NW-SE axis.

To the north of Irvinestown, ice movement has exposed harder limestone crags and eroded small lough basins, for example at Parkhill and Maghera. The Ballinamallard River and tributaries drain through inter-drumlin hollows in a complex pattern and forms a local landscape feature.

Enclosure

The combination of landform, trees and hedgerows provides a relatively high degree of enclosure.

Complexity of landcover and features

Most agricultural land is under pasture and silage production. On higher ground, rushy grass is enclosed in small fields. Prominent hilltop farms. A wooded character is created by extensive hedgerows and the mature woodland of estates. Birch and willow scrub on cut-over bogs contrast with the managed grassland.

Man-made influence

Several small disused quarries on limestone rocks in the north. Transmission line along the south-eastern edge of the LCA.

Skylines and settings

Ridge-tops and rounded summits form local skylines such as Crockraver; the settings of Irvinestown close to Necarne Estate is distinctive; Ballinamallard also enjoys a distinctive landscape setting. Outside the LCA the top of Tappaghan is visible to the north and Brougher Mountain to the south.

Visibility and views

There are long views across the lowland area from higher ground but within the drumlins views are shorter and intermittent, enclosed by drumlin skylines.

Landscape quality (condition)

Landscape condition is generally reasonable, with a strong landscape structure. Some landscape elements such as hedgerows are in poorer condition locally, especially in the less prosperous farming areas.

Scenic quality

This LCA is moderately scenic and has a strongly rural character over most of its area.

Wildness and tranquillity

The LCA is highly tranquil but not wild.

Natural and cultural heritage features

Tonaghbeg ASSI is a large intact lowland raised bog. This LCA also supports rare lake types. Evidence of the early seventeenth century plantation can be seen around Irvinestown which is laid out formally around a square, and there are several attractive large houses within small estates which are of historical interest. Earlier sites include a Neolithic passage grave at Kiltierney. Necarne Castle Registered Park.

Cultural associations

Folklore associated with archaeology.

Amenity and recreation

Necarne Castle and Forest. Otherwise limited formal facilities but fishing on Ballinamallard River.

Assessment for Wind Energy Development

Overall sensitivity

This broad LCA is sensitive to wind energy development in respect of its generally small scale, complex, landform and landscape features; its relatively high landscape and scenic quality; and its deeply rural, unspoilt character. The river corridors and their associated wetlands and loughs are especially vulnerable to the impact of wind energy development.

However, the LCA also offers a high degree of enclosure and potential screening and has relatively few distinctive skylines, settings, views, or major natural or cultural heritage interests. Its sensitivity is classed as high to medium, reflecting its vulnerability to extensive or inappropriately scaled wind energy development. It is less sensitive to appropriately scaled wind energy development, particularly on the higher ground in the north of the LCA.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The ridge along the northern edge of the LCA would be the best area for accommodating wind energy development. Consideration could be given to siting turbines in mid-slope locations. It is recommended that wind energy developments reflect the LCAs landform and landscape features.

Care should be taken to avoid adverse impacts on the particularly sensitive river corridors and their associated wetlands and loughs, key skylines and settings (including drumlin skylines) as described in this section. Care should also be taken to avoid adverse impacts on the drumlin lowlands that cover most of the LCA.

At the time of assessment there were no operational or consented wind farms within this LCA although there are wind farms in adjoining LCAs – Tappaghan around 3km to the north in Lough Bradan LCA and Lendrum's Bridge around 4km to the south in Brougher Mountain LCA. Adequate separation from wind farms in adjacent LCAs is therefore an issue. It is recommended that new wind energy developments should not visually link these other developments and be well-separated. At present the drumlin lowlands that cover most of the LCA help to maintain separation between wind energy developments in adjoining upland LCAs.

LCA 16 Brougher Mountain

Location: Counties Fermanagh and Tyrone, on north side of Clogher Valley Lowlands

Key Landscape and Visual Characteristics and Values

Scale

Upland area rising to 250-300m AOD. Extensive blanket bog and wide horizons on higher ground but also smaller scale landscapes of enclosed pasture on middle and lower slopes.

Landform

Sandstone ridge trending south-west to north-east, dissected by short, steep glens. Prominent escarpment on south-east, overlooking Clogher valley. Distinctive rounded summits rising from plateau at its southern end and along escarpment crest; stepped profile at Brougher Mountain. Lower slopes and valleys have convoluted landform with drumlins and glacial moraines.

Enclosure

Generally open and exposed on upper slopes around Brougher Mountain and Lendrum's Bridge, but with some extensive blocks of conifers. Stands of mixed woodland on the steep escarpment. Lower slopes enclosed by sandstone walls, earth banks and hedges, with scattered trees and woodland on steeper valley sides.

Complexity of landcover and features

Blanket peat covers hill tops with extensive turf cuttings in some areas. Plateau surface, particularly in the south, is pitted with small loughs. On the slopes there is a sharp contrast between the fields of improved grassland in the glens and the rough grassland, heath and bog of the hills.

Man-made influence

There are a number of small sand and gravel pits. Radio masts are prominent on some skylines. Wind farm at Lendrum's Bridge.

Skylines and settings

Numerous prominent and distinctive ridge and skyline features, including escarpments to south-east and north-west and individual tops of Cloghtogle Mountain, Topped Mountain, Largy, Ballyreagh, Killyculla, Derrin, Brougher Mountain, Screggagh and Crocknatumogue.

Visibility and views

Hill tops are visible from the A4 Belfast to Enniskillen road over a wide area of east Fermanagh and the Clogher Valley and from land around Irvinestown and Omagh to the west and north. They form part of the wider settings of settlements including Enniskillen, Lisbellaw, Tempo, Fintona and Ballinamallard in adjoining LCAs.

Fine outward views from Topped Mountain, Brougher Mountain and area south of Fintona towards Clogher Valley Lowlands LCA.

Landscape quality (condition)

Character of the area has been eroded in parts by neglect of traditional stone buildings and walls, boundary removal and piecemeal new housing. Peat cutting and drainage for agriculture or forestry have damaged blanket bog. Some land reclamation and agricultural intensification.

Scenic quality

The south-western end of the LCA lies within the highly scenic Erne lakeland landscape, and the escarpment north of Augher and Clogher is part of the Clogher Valley Area of Scenic

Quality. Elsewhere there are localised areas of high scenic quality where the distinctive hill tops give rise to a strong sense of place and long outward views.

Wildness and tranquillity

Higher ground around Brougher Mountain and Lendrum's Bridge is relatively wild and LCA as a whole is remote and tranquil.

Natural and cultural heritage features

Remnant wood pasture and intact blanket bog as well as small loughs of some nature conservation interest. Megalithic sites around Topped Mountain (ASAI) and on the slopes of Ballyreagh and Brougher Mountain. Concentrations of raths at lower altitudes eg above Tempo. Registered Park at Aughentaine.

Cultural associations

Not known.

Amenity and recreation

Access to summit cairn on Topped Mountain. Part of Knockmany Forest and the Carleton Trail north of Clogher lie within the LCA.

Assessment for Wind Energy Development

Overall sensitivity

The sensitivity of this broad upland area is higher than might be expected due to the presence of complex and distinctive landform features, particularly at the southern end of the ridge and along the escarpment above the Clogher valley. The many notable ridge and skyline features also form part of the setting of settlements and are visible from the A4.

The LCA is classed as being of high to medium sensitivity, reflecting the many distinctive, small scale landscape features and the proximity of the Clogher Valley ASQ and the Erne Lakeland landscape which are highly sensitive to skyline impacts. The landscape might be less sensitive away from distinctive hill tops, escarpment edges and skylines, particularly where there are large forestry plantations.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The central plateau is the most suitable part of the ridge in which to accommodate wind energy development, which ideally would take the form of a single, compact, coherent cluster (inappropriate use of scale and more dispersed wind energy development could detract from the strong horizontal form of this upland area). Consistent site layouts and designs are desirable. Consideration could be given to siting turbines away from the plateau edges and any distinctive landform features. Care should be taken to ensure that any new access tracks are not unacceptably intrusive.

Particular care should be taken to avoid adverse impacts on: the distinctive ridge and skyline features (listed in this section); the settings of nearby settlements Enniskillen, Lisbellaw, Tempo, Fintona and Ballinamallard; the scenic quality of the Erne Lakelands and Clogher Valley; and natural and cultural heritage and recreational landscape features.

At the time of assessment there was one operational wind farm in this LCA, at Lendrum's Bridge (20 turbines of 65m), with further applications close by that might give rise to cumulative impacts.

LCA 17 Clogher Valley Lowlands

Location: Counties Fermanagh and Tyrone, between Maguiresbridge and Ballygawley

Key Landscape and Visual Characteristics and Values

Scale

Lowland corridor with small rounded hills and long ridges. Enclosed to the north-west by Brougher Mountain and to the south-east by Slieve Beagh. Intimate, small scale, undulating and well-wooded landscapes. Land rarely rises above 100m AOD.

Landform

Small rounded hills and long ridges, comprising boulder clay drumlins of varying sizes and long winding eskers of sand and gravel, with occasional solid rock outcrops. Flatter land between hills and ridges.

Enclosure

Fairly dense vegetation cover, with hedgerows, woods and tree belts providing a strong sense of enclosure. Fields are relatively large and are bounded by hedges which are often overgrown with tall, mature trees.

Complexity of landcover and features

A highly complex and varied landscape with many intimate, small scale features including streams, rivers, meadows, mills, bridges, pockets of bog, small loughs, birch and willow scrub, traditional buildings, small country houses, parkland and numerous raths and crannogs. Landscape especially complex in the area around Clogher and Augher.

Man-made influence

Few intrusive man-made influences except for localised ribbon development and sand and gravel and limestone quarrying.

Skylines and settings

The adjacent uplands of Brougher Mountain and Slieve Beagh, although outside the LCA, contribute to its character; conversely views of the LCA provide an important setting for the upland landscapes. At a local level the drumlins and long ridges create many small scale skyline features, often framing small loughs or wetlands below. Settlements of Brookeborough, Tempo, Fivemiletown, Clogher, Augher and Ballygawley also have distinctive landscape settings, typically comprising parkland or other historic features such as hilltop raths.

Visibility and views

There are a number of key views and landmarks such as church towers, often associated with areas of higher ground and designed landscapes. Older houses and farms tend to be sited on top or sides of drumlins and ridges, commanding views.

Landscape quality (condition)

The landscape is in good condition, with intact field boundaries and a high degree of unity and enclosure.

Scenic quality

Small area around Lisbellaw in the south-west lies in the highly scenic Erne lakeland landscape. Two ASQs: a small one at Colebrooke Estate and a much larger one covering the whole area around Clogher and Augher (Clogher Valley ASQ).

Wildness and tranquillity

Not a wild landscape but one with a very strong sense of tranquillity and time-depth.

Natural and cultural heritage features

Fine example of an undisturbed fluvio-glacial landscape. Important estate woodlands eg at Colebrooke and Tempo Manor, some ancient in origin. Lowland bog, fen, river and rare lake habitats, often ASSIs. Peregrine falcons. Numerous raths, tree rings, crannogs, listed buildings, and small country houses. Marked concentration of Registered Parks, especially in the eastern part of the LCA.

Cultural associations

Rich history and traditions associated with historic and designed landscapes.

Amenity and recreation

Part of Knockmany Forest and almost all of the Carleton Trail north of Clogher lie within the LCA.

Assessment for Wind Energy Development

Overall sensitivity

The LCA has a strong sense of place and has many highly valued landscape features. Its rich historic landscape heritage and intricate landscape patterns are very sensitive to change. The relatively small scale of the drumlin and esker landform and the fact that the area is overlooked in views from the adjacent uplands further heighten its sensitivity.

However strong enclosure by trees and hedgerows might reduce its sensitivity to appropriately scaled wind energy developments, if they are very carefully sited.

Overall Sensitivity -High

Location, siting, layout and design considerations

This LCA has a small scale and has many highly valued features. It is recommended that any turbines be integrated into and reflect the scale of the existing pattern of small hills, ridges and mature vegetation.

Care should be taken to avoid adverse impacts on the highly sensitive drumlin skylines and flat open bog areas. Care should also be taken to avoid adverse impacts on the settings of settlements, loughs, historic features such as raths and estate landscapes.

At the time of assessment there were no operational or consented wind farms in this LCA and the nearest existing wind farm was at Lendrum's Bridge in LCA 16: Brougher Mountain, around 7km to the north of Fivemiletown.

LCA 18 Slieve Beagh

Location: Counties Fermanagh and Tyrone, on south side of Clogher Valley Lowlands

Key Landscape and Visual Characteristics and Values

Scale

Extensive area of rolling sandstone uplands, rising to massive rounded summit of Slieve Beagh (380m AOD) in the north. A large scale landscape with some smaller features.

Landform

Generally rounded. Northern edge of the uplands has a broken surface, with flat-topped hills and rounded ridges separated by deep valleys and punctuated by small rounded loughs. Southern edge forms a prominent escarpment with a long line of hills and summits, steep slopes and incised glens.

Enclosure

Mainly open and exposed on the summits but middle slopes are widely afforested, with forestry covering around 40% of the LCA and lending shelter and enclosure over a substantial area.

Complexity of landcover and features

Hill farms, often abandoned, on lower slopes. Ladder field patterns in some areas, notably southern escarpment slopes. Widespread afforestation on middle slopes, often in broken, fragmented patterns. Blanket bog on upper slopes, subject to peat cutting in some areas.

Man-made influence

A legacy of forestry and peat cutting has had a strong influence on many of the LCA's landscapes, detracting from their natural character. Localised impacts from limestone quarrying and radio masts.

Skylines and settings

Prominent ridges to north and west of Slieve Beagh summit, widely visible from the Clogher and Colebrooke valleys; also all along the south side of the uplands. The LCA forms part of the immediate landscape backdrop and setting to the settlements of Brookeborough and Lisnaskea which lie just outside the LCA.

Visibility and views

Panoramic views over adjacent lowlands to both north and south, for example at Carnrock. Views to Slieve Beagh from the A4 Enniskillen to Belfast road, the small Colebrooke Estate ASQ near Fivemiletown, and from the Clogher Valley ASQ near Augher and Clogher. Views to and from Upper Lough Erne in the south of the LCA.

Landscape quality (condition)

The abandonment of farming, piecemeal afforestation and peat cutting have affected landscape quality eg due to rush encroachment, dereliction of buildings and field boundaries and loss or fragmentation of moorland and blanket bog.

Scenic quality

The scenic quality of the area itself is not particularly high, given the issues of landscape condition outlined above. Clogher Valley ASQ is located immediately to the north of Slieve Beagh.

Wildness and tranquillity

Sense of wildness in summit area of Slieve Beagh, reduced in some areas by nearby afforestation and peat cutting.

Natural and cultural heritage features

LCA contains one of the largest areas of intact upland blanket bog in Northern Ireland and is of international significance because of its size, intact nature and wetland features (Slieve Beagh ASSI, SAC, SPA and Ramsar site). There are breeding hen harriers in the SPA. Prehistoric monuments occur around the edges of the LCA, with raths on prominent sites.

Cultural associations

Not known.

Amenity and recreation

Slieve Beagh is crossed by both the Ulster Way and the Sliabh Beagh Way (connecting to the Carleton Trail). Viewpoint at Carnrock. Loughs important for fishing.

Assessment for Wind Energy Development

Overall sensitivity

The strong structural form of Slieve Beagh is in theory well-suited to wind energy development. The generally large scale, rounded landform of the hill tops provides some screening in areas away from the edges and scarps, as does the presence of forestry plantations. The man-made influence of forestry also tends to reduce sensitivity; and most inward views are relatively distant.

However, this is tempered by the LCA's wide visibility and by the presence of important, intact blanket bog habitats. The wildness and integrity of these habitats are vulnerable to access and infrastructure impacts (less so in areas already affected by forestry). Some of the lower slopes and the western part of the ridge might be somewhat less sensitive but impacts on the Clogher Valley ASQ could also be significant.

Overall Sensitivity- High to medium

Location, siting, layout and design considerations

The scale of the landscape is such that wind energy development is well suited to parts of this LCA. The western part of the LCA may have greater landscape capacity for wind farm development than the area around Slieve Beagh summit. Consideration could be given to siting wind energy developments within or close to areas of forestry plantation, taking advantage of existing forestry access tracks.

Great care needs to be taken to avoid adverse impacts on distinctive landform features such as the internal upland valleys; the settings of loughs; the skylines above the Clogher and Colebrooke valleys; the settings of Brookeborough and Lisnaskea; views from the A4 and Upper Lough Erne; the landscape experience of those using the Ulster Way and Sliabh Beagh Way; and the landscape interests of natural and cultural heritage features.

At the time of assessment there were no operational or consented wind farms within or near this LCA, although there were two application sites below Slieve Beagh summit and another just across the border in County Monaghan. Hence there is potential for both cumulative and transboundary impacts in future. Ideally wind energy developments would have significant separation distances.

LCA 19 Killeter Uplands

Location: County Tyrone. West Tyrone, adjoining County Donegal.

Key Landscape and Visual Characteristics and Values

Scale

An open exposed upland landscape, with the highest elevation at Meenbog Hill, 271m AOD.

Landform

These uplands, the westward continuation of the main ridgeline in the Lough Bradan LCA, have a broad, rounded landform, which seems diminished in scale by the extensive conifer plantations. Small ridges run north-south from the main ridge, giving it an undulating profile. The area includes the upper reaches of the Mourne Beg River and the Derg, which flow within broad, shallow valleys.

Enclosure

The open uplands contrast with the more enclosed, sheltered valleys. The widespread forestry plantations also provide enclosure, especially in the western part of the LCA.

Complexity of landcover and features

This LCA is characterised by a relatively homogeneous, large-scale mosaic of open moorland and conifer plantations on upland summits. The valleys support a mosaic of woodland, pasture and marsh, enclosed frequently by stone walls.

Man-made influence

The most obvious human influences are from peat cutting and conifer plantations. Many of the older plantations have hard, angular edges, which can be a distracting visual influence.

Skylines and settings

The ridges of these uplands form distinctive, broken skylines, often capped with forestry. They include the main east-west ridge centred on Meenrora Hill (enclosing Lough Derg to the south in County Donegal), and the more northerly top of Meenbog Hill.

Visibility and views

Large areas of the Killeter Uplands and many of the valleys are not visible from public roads or settlements. On the uplands there are quite long views across the open landscape despite the forestry. The main route along the Derg valley has views to all the surrounding uplands.

Landscape quality (condition)

On the higher land to the west, field boundaries are in poor condition, with broken stone walls, earthbanks and gappy, remnant hedgerows, and many farm buildings are derelict.

Scenic quality

The scenic quality is quite high, largely due to the remote and open character of this LCA, although coniferous plantations detract from this quality.

Wildness and tranquillity

A remote and often wild landscape with little settlement.

Natural and cultural heritage features

Essan Burn and Mullyfamore ASSI is a large area of blanket bog in the Essan Valley. Killeter NR, also blanket bog. The River Derg system is an SAC and is important for salmon. Limited archaeology but a cashel is present at Rabble Hill.

Cultural associations

This LCA adjoins (and forms part of the setting of) the important pilgrimage site of Lough Derg in County Donegal to the south, which has links with monastic sites and early travel in the wider region, including Upper and Lower Lough Erne.

Amenity and recreation

Walking within Killeter Forest. The nearby Lough Derg historic and pilgrimage site is much visited by tourists.

Assessment for Wind Energy Development

Overall sensitivity

The generally large scale and simple, homogenous character of this LCA, combined with the presence of rounded hills and extensive afforestation, indicate reduced landscape sensitivity to wind energy development. In visual terms sensitivity is also relatively low, as much of the area is isolated, inaccessible and not visible from public roads or settlements. In addition, there are relatively few scenic, natural or cultural heritage interests.

The south-western part of the LCA contains craggier landform of somewhat higher sensitivity as the rugged hill profiles in this area lend a sense of scale and form part of the scenic setting of Lough Derg in County Donegal. Open upland areas are also more sensitive than forested areas, as they retain the strongest sense of wildness.

Overall Sensitivity - Medium

Location, siting, layout and design considerations

The broken, undulating character of the main ridgeline suggests that inappropriate wind energy development could dominate and flatten the landscape. The more rounded, broader hills in the north and west may be best able to accommodate wind energy development, and minor ridgelines may afford some topographic screening. The south-western part of the LCA contains rockier and craggier tops that are more sensitive, although the lower ridges may also provide suitable locations. Siting within or close to forestry plantations may be beneficial, reducing impacts on the area's wild character. Existing forest tracks might prove useful to access wind energy development.

Care should be taken to avoid adverse impacts on important skylines at the head of the Derg valley and to the south above Lough Derg. Care should also be taken to avoid detrimental impacts on River Valleys and the wild character of intact moorland and bogs.

At the time of assessment there were two consented wind farm sites within this LCA (Crighshane, 14 turbines 100m high; and Churchill, 8 turbines 100m high) as well as a further three application sites; hence there are issues of cumulative impact already, affecting the setting of Lower Lough Erne to the south and the Derg valley to the north. There are also potential transboundary impacts in the west where the LCA borders County Donegal near Lough Derg and there are three existing wind farms (and further applications) within a distance of around 10km of this LCA. The recommended strategy in this LCA would be to create distinct areas of wind energy development, clearly separated by areas of undeveloped landscape. It is recommended that within each area a consistent site layout and design be utilised. Adequate separation distances between wind energy developments or clusters will be a very important issue to help conserve its wild character. Similar separation from wind farms in the Lough Bradan LCA to the east is also desirable.

LCA 20 Derg Valley

Location: County Tyrone. West Tyrone, adjoining County Donegal.

Key Landscape and Visual Characteristics and Values

Scale

A broad valley enclosed by rounded hills. The highest areas are to the north of Castlederg but rarely exceed 150m as at Whisker Hill.

Landform

The broad valley is enclosed by an undulating landscape of rounded hills, many of which are capped with open moorland. The summits to the north of Castlederg have a particularly exposed character and are separated by extensive areas of blanket bog and marginal farmland. Former ice movement and the River Derg have carved a relatively broad valley corridor. There are many shallow tributary valleys and the landform is gently undulating, although the river floodplain is almost flat.

Enclosure

Generally broad and open due to intensive farming on sand and gravel soils; the summits to the north of the LCA also have an open, exposed character. Locally hedgerows and undulating topography create a sense of enclosure.

Complexity of landcover and features

The broad valley floor contains large fields, frequently with drainage ditches and hedgerows. Smaller fields exist on the higher land. The Derg River is not embanked so peaty marshes and wet woodlands occur. North of Castlederg there are extensive areas of blanket bog and more marginal farmland. Stone bridges and exposed northern summits provide local landscape features.

Man-made influence

There are relatively few overt influences within the LCA itself although there are views to existing wind farms to south and east.

Skylines and settings

The hills provide important skylines, particularly the exposed hills north of Castlederg. Castlederg itself enjoys an attractive and distinctive setting, surrounded by hills and sited at the crossing point at the centre of the Derg Valley. There are a number of distinctive outlier hills within the valley such as Muckle Hill and Mullanabreen Hill.

Visibility and views

The broad valley affords long views but the undulating hills enclosing the valley create much shorter, occasional views.

Landscape quality (condition)

This landscape is in moderate condition, though stone walls and hedgerows are frequently not maintained which affects landscape quality and pattern.

Scenic quality

Parts of this LCA enjoy good scenic quality, such as the river valleys, and the northern hills.

Wildness and tranquillity

Due to the long settlement history of the LCA there is no strong wildness character. The exception to this is the exposed northern hills that retain a remote character. However most of the area is highly tranquil.

Natural and cultural heritage features

The northern side of Derg River contains a linear belt of kettled topography and hummocks. Moneygal Bog SAC and ASSI is the only extensive intact lowland raised bog in this LCA.

The diverse land uses including arable land provides a variety of habitats for birds. Standing stones and raths are evidence of long settlement history. The stone mill buildings at Ardstraw are distinctive riverside features.

Cultural associations

Castlederg has associations with Davy Crockett.

Amenity and recreation

Few formal opportunities although Castlederg provides local services, riverside walks, the remnants of a former castle and a tourist office.

Assessment for Wind Energy Development

Overall sensitivity

This LCA is generally broad in form and enclosed by rounded hills. There are relatively few important views or natural, cultural or recreational interests. These factors suggest reduced sensitivity to wind energy development. However the relatively low elevation of the hills and the fact that some of them have a distinctive form and provide local landmarks, as well as the unspoilt, tranquil character of the area as a whole, tend to increase sensitivity.

The areas that are least sensitive to wind energy development are likely to be the flatter summits on the edges of the LCA; the more prominent outlier hills would be highly sensitive. The height of the hills is likely to be a key constraint on turbine size, as many turbines would be out of scale with these low hills.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The river valleys and distinctive outlier hills are the most sensitive parts of this LCA for wind energy development. The flatter, undulating hills north and south of Castlederg may have better capacity but nonetheless care will be needed to avoid adverse impacts on locally important skylines, especially to the north. It is recommended that wind energy development reflects the relatively low elevation of the hills in this LCA and the presence of small scale landscape features.

Care should be taken to avoid adverse impacts on the highly sensitive broad and open character of the central section of the valley, as development here could visually link the wind energy sites in the adjoining LCAs, creating a landscape dominated by wind farms. Skylines should be respected.

At the time of assessment there were no operational or consented wind farm developments within this LCA. However the three adjacent LCAs all contained operational and consented wind farms as well as further application sites. Hence cumulative impacts on this largely low-lying LCA are likely to become an issue in the future. Potentially there could also be transboundary issues as the LCA adjoins County Donegal north of Castlederg. It is recommended that wind energy developments be well-separated.

LCA 21 Fairy Water Valley

Location: County Tyrone. West Tyrone, west of Omagh.

Key Landscape and Visual Characteristics and Values

Scale

Generally low-lying and small scale, rising to around 160m AOD on the edges of the surrounding uplands.

Landform

The Fairy Water flows eastwards from the foot of Bolaght Mountain in West Tyrone to meet the Strule near Omagh. The Fairy Water Valley includes the broad, marshy valley of the Fairy Water and the undulating branching valley of the Drumquin River to the south. The landform is generally hummocky and irregular.

Enclosure

Hedgerows provide some sense of enclosure, as do the more undulating upland landscapes to the south, but there is limited screening. Valley and upland margins support hedgerow trees, copses and more extensive woodlands.

Complexity of landcover and features

Mosaic of poorly drained areas of peaty marsh and woodland. To the south, there is a small irregular patchwork of pastures, enclosed by hedgerows and stone walls. Wetlands contain small loughs, raised bog and marsh. Small coniferous plantations are located in the south-west.

Man-made influence

Existing wind farms to the west and south, outside the LCA, have a strong influence on the character of this area in parts.

Skylines and settings

Drumquin is located in an attractive river valley setting, with drumlins. The surrounding hills of Pollnalaght and Dunnaree Hill also provide distinctive ridgelines for this LCA.

Visibility and views

There are views from Drumquin across to the adjacent uplands such as Dunnaree Hill. Long views are afforded across the flat river valley, though the drumlin landscape at the south is more enclosed visually.

Landscape quality (condition)

The Fairy Water Valley, an inaccessible waterlogged landscape showing signs of farm abandonment and lack of management. The Drumquin Valley is an attractive and deeply rural landscape.

Scenic quality

The scenic quality in this LCA is not especially high, the exception being the Drumquin Valley.

Wildness and tranquillity

This is a remote and often inaccessible landscape. The Drumquin valley in particular is remote and hidden due to enclosure by surrounding summits.

Natural and cultural heritage features

Earth science interest associated with hummocky moraine and outwash. This wet floodplain is important for marshes and bogs such as the complex called Fairy Water Bogs comprising several intact raised bogs (Fairy Water Bogs ASSI, SAC and Ramsar site). Occasional archaeological sites such as the rath at Bridge Hill.

Cultural associations

None known.

Amenity and recreation

The Ulster Way traverses this LCA, otherwise few amenity or recreational sites.

Assessment for Wind Energy Development

Overall sensitivity

This LCA, with its open character, its many small scale landscape features, and its sense of remoteness, is relatively sensitive to wind energy development, notwithstanding the sometimes degraded landscape quality and relatively few recreational interests. It provides a strong sense of contrast with surrounding upland and lowland areas, and is vulnerable to the introduction of tall structures.

There might be limited areas of lower sensitivity in the undulating foothills to the south and south-west where small coniferous plantations also provide enclosure, but open floodplain areas would be very sensitive to wind energy development, which could be widely visible.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

Wind energy development could easily overwhelm the small scale intimate landscape of this LCA. The more undulating foothills of the south and south-west of this LCA are least sensitive to turbine development, particularly where woodland plantations offer screening. It is recommended that turbine development be carefully integrated with and reflects the scale of landform and vegetation.

Care should be taken to avoid adverse impacts on the very sensitive broad, low river floodplain, the settings of the many small loughs, and the attractive setting of Drumquin and the Drumquin river valley.

At the time of assessment there were no operational or consented wind farm developments within this LCA. However there were in total five existing or consented wind farms and a similar number of application sites within around 1-5km of this LCA. Hence cumulative impacts are an issue of growing importance and are a key consideration for wind energy development in this LCA.

LCA 22 Omagh Farmland

Location: County Tyrone, south of Bessy Bell.

Key Landscape and Visual Characteristics and Values

Scale

Lowland, small scale landscape dominated by drumlins and a complex drainage system. The southern drumlins rarely rise above 120m AOD for example at Feenan, and are commonly much lower. To the north, the foothills of the Sperrins rise to approximately 150m AOD within the LCA.

Landform

The landform in the north, close to the Sperrins and Pollnalaght, is relatively broad, whilst the south is dominated by densely packed drumlins, creating a deeply undulating terrain. There is a complex drainage system of small streams and loughs with floodplains and marsh. The Camowen River drains the north, whilst the Drumragh, Ballynahatt and Quiggery rivers drain the south. South of Omagh, the drumlins become the dominant landform influence.

Enclosure

The extensive drumlins, complex drainage and vegetation create a dynamic and secretive landscape with a strong sense of enclosure.

Complexity of landcover and features

Landcover is principally pasture with a complex, small-scale field pattern, forming an even, geometric patchwork that often travels right over the drumlins; becoming irregular in shape on the flatter land in between. This gives each drumlin an individual identity, particularly if associated with a distinctive feature such as copse. There are dense hedgerows and small deciduous woodlands, with wet inter-drumlin hollows supporting marsh and peat.

Man-made influence

Electricity transmission lines run north-south west of Omagh. Omagh is a major settlement whose influence also affects the surrounding countryside, particularly along the main transport corridors.

Skylines and settings

Local skylines and ridges are often prominent. The river corridor and parkland outside Omagh provide an attractive setting, as does the drumlin setting of Seskinore Forest and Fintona in the south. There are prominent mountain slopes to the north on the edge of Mullaghcarn in the Sperrins. The sandstone ridges to the east of Fintona and the uplands of West Tyrone form distant backdrops.

Visibility and views

There are few long views and the consistent size and shape of the drumlins can be disorientating.

Landscape quality (condition)

This LCA is in good condition, although wet inter-drumlin gley soils show signs of rush infestation.

Scenic quality

The scenic quality is quite high owing to the distinctive drumlins and river valleys. The Sperrin AONB adjoins the LCA to the north-east.

Wildness and tranquillity

Although an active agricultural landscape, the river corridors retain a tranquil character.

Natural and cultural heritage features

Sites of earth science interest include the Ballygawley delta complex, of importance in understanding the glacial history of Northern Ireland. Tully Bog and Cranny Bogs (both of which are ASSI and SAC) are among the best examples of inter-drumlin raised bogs in Northern Ireland. There are a number of raths, early Christian settlement at Cappagh, and occasional estates such as Mountjoy and Edenfel (Registered Park). Conservation Area at Omagh.

Cultural associations

Omagh town has links with O'Neill and the Plantation of Ulster.

Amenity and recreation

Historic trail around Omagh town; fishing at Lough Muck and cycling routes. Access to walking in Sperrins AONB.

Assessment for Wind Energy Development

Overall sensitivity

The sensitivity of this LCA is locally reduced by the high degree of enclosure afforded by landform and vegetation, particularly within the drumlin areas to the south. However this is offset by high landscape complexity, a strongly settled character, and the strong sense of place and distinctive skylines provided by many drumlins.

The river corridors and their associated wetlands are highly sensitive to wind energy development which could interrupt their more open character and potentially affect bog and fenland habitats. The southern slopes of the Sperrins are also highly sensitive due to their widespread visibility.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The undulating terrain of the southern part of this LCA, close to the foothills of Brougher Mountain and Slievemore, may have better capacity for turbine development than other areas. Mid slope locations may be best. It is recommended that turbines reflect the scale of landform and landscape features such as small scale field patterns. It is recommended that attempts be made to minimise visual clutter in the local skylines formed by the drumlins.

Care should be taken to avoid adverse impacts on river valleys, loughs and locally important skylines and ridges associated with the drumlins. Open and exposed slopes should be respected.

At the time of assessment there were no operational or consented wind farm developments within this LCA; the closest were at Bessy Bell around 3km north of the LCA and at Lendrum's Bridge and Slievedivena, both around 5km south of the LCA. Cumulative impacts should be a consideration.

LCA 23 Camowen Valley

Location: County Tyrone, south of the Sperrins.

Key Landscape and Visual Characteristics and Values

Scale

Lowland, small scale landscape with glacial moraines and complex drainage system. The uplands to the north and east frame this area and the land gently rises on these margins of the LCA, reaching around 150m AOD on the lower foothills of the Sperrins.

Landform

A broad, shallow valley composed of deposited glacial moraine that has produced an undulating landform. Whilst much of the valley is underlain by sandstone, there are small outcrops of granite and rounded glacial moraine forming minor ridges. Winding rivers and streams produce a complex drainage system.

Enclosure

The landscape resembles a complex maze, and has a disorientating, enclosed character. A sense of containment is further provided by the higher land to the north and east.

Complexity of landcover and features

The landscape pattern varies but generally comprises a patchy large-scale mosaic of peaty marsh, conifer plantations and pasture. Shallow slopes on the ridges of moraine contain extensive conifer plantations. Birch and willow scrub, marsh and bog occur in low-lying areas; and small pastures with scrubby hedgerows on more elevated land

Man-made influence

Small scale forestry, cutover bog, mineral extraction and scattered settlement. Conifer plantations have straight, angular shapes on shallow slopes.

Skylines and settings

The crinkly silhouettes of the granite outcrops of Crocknashinnagh are a local landmark. The Sperrin top of Mullaghcarn encloses the LCA to the north.

Visibility and views

This undulating landscape generally does not afford long views although there are southerly views from Crocknashinnagh and other areas of higher ground in the north and east.

Landscape quality (condition)

Large parts of marshy areas are neglected unfarmed, and combined with unmanaged hedgerows this creates a scruffy character. The margins of this LCA tend to be better drained and in better landscape condition.

Scenic quality

Scenic quality of this LCA is not particularly high but it adjoins and forms part of the setting of the Sperrin AONB to the north.

Wildness and tranquillity

This LCA has a relatively wild character, linked to the extensive areas of wetland, marsh and abandoned farmland.

Natural and cultural heritage features

Seefin Esker in the south of this LCA is of earth science interest. Deroran Bog ASSI and SAC is one of the largest remaining lowland raised bogs in Northern Ireland. The Camowen River has river water crowfoot and is also a salmon river. Cultural heritage features include a concentration of raths close to the Camowen river.

Cultural associations

None known.

Amenity and recreation

Local services at Drumnakilly. Brown trout and salmon fishing in Camowen River.

Assessment for Wind Energy Development

Overall sensitivity

The undulating topography provided by the glacial moraines and widespread man-made influences in this LCA suggest lower sensitivity to wind energy development, but this is counterbalanced by the presence of complex and often small scale field patterns and drainage systems. In addition, certain ridges and rocky outcrops such as those at Crocknashinnagh would be highly sensitive to development.

The elevated, afforested eastern margins of this LCA might offer somewhat lower sensitivity to appropriately scaled wind energy development but would still be highly sensitive to any development of inappropriate scale.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The east of the area, close to Slievemore, is the area with best capacity to accommodate some form of wind energy development. It is recommended that any wind energy development reflects the existing small scale field patterns and landscape features of this LCA. Consideration could be given to utilising mid slope locations as they may be the most appropriate.

Care should be taken to avoid adverse impacts on the highly sensitive skylines, locally distinctive eskers and craggy ridges and the broad river valley with associated archaeological sites. Care should also be taken to ensure that turbines do not dominate this relatively complex landscape.

At the time of assessment there were no operational or consented wind farm developments within this LCA. The closest was at Crockagarron and Slievedivena, 3 and 6km south-east of the LCA. The adjacent LCAs of Carrickmore Hills and Slievemore also had a number of wind farm application sites. Hence cumulative impacts might become an issue in future. It is recommended that developments are well separated from each other and from wind energy developments in adjoining LCAs.

LCA 24 South Sperrin

Location: Counties Tyrone and Londonderry, Sperrins south of Glenelly Valley

Key Landscape and Visual Characteristics and Values

Scale

Large scale, broad, rounded ridges rising to over 550m AOD and forming a backdrop to more intimate valley landscapes of Owenkillew and Owenreagh Rivers.

Landform

Simple upland landform, with deep, branching gullies. Narrow floodplains below, often subdivided by irregular mounds of glacial till.

Enclosure

Open mountain skylines tightly enclosing valley landscapes.. Stone walls and hedgerows on lower slopes, following historic townland boundaries and emphasising undulating landform. Valleys in the southern and eastern part of LCA have a more open form. Upper valley reaches are characterised by conifer plantations with bold, dark shapes.

Complexity of landcover and features

Marginal farmland with scrub, rushes and moorland vegetation on upper slopes. Patches of peaty marsh in low-lying areas between ridges of moraine and valley sides. River valleys have narrow lanes with stone bridges at river crossings and a diverse pattern of hedgerow trees, small copses and woodlands.

Man-made influence

Few intrusive influences except for forestry in the upper valley reaches, which disrupts some skylines eg that of Carnanelly.

Skylines and settings

Upland edges enclose and form prominent skylines above the river valleys, especially in the northern half of the LCA. Some of the upland edges such as Carnanelly have distinctive rocky crests that lend a sense of scale. On its south side the LCA provides the landscape setting for Beaghmore Moors and Marsh LCA, including its important archaeological landscapes.

Visibility and views

Many views from valleys to surrounding ridgelines. Central Sperrins Way offers hillwalkers a series of outstanding views into the Owenkillew and Glenelly valleys, north to the main Sperrin ridge and east to Slieve Gallion.

Landscape quality (condition)

In the lower river valleys the historic field pattern is intact and stone walls are often striking landscape features. In the upper river valleys, farm buildings are often derelict, and rushy and unmanaged pastures are enclosed by scrub, broken walls, earth banks and gappy remnant hedgerows.

Scenic quality

Area lies within the boundaries of the Sperrin AONB and is generally of very high scenic quality.

Wildness and tranquillity

Strong sense of tranquillity throughout due to the area's remoteness and inaccessibility. Wild character on ridge tops and in upper valley reaches, although this character is affected by forestry in some areas.

Natural and cultural heritage features

Many features of earth science interest, including Barnes Gap (glacial meltwater channel) and important sand and gravel complexes. Some of the finest rivers and river valley woodlands in Northern Ireland, designated as ASSIs. Prominent raths and standing stones that are important landscape features and rich archaeology. Beltrim Castle landscaped demesne (Registered Park) near Gortin.

Cultural associations

Not known.

Amenity and recreation

Central Sperrins Way waymarked route. Sperrin Heritage Centre in Glenelly Valley just to the north of the LCA. Local picnic sites.

Assessment for Wind Energy Development

Overall sensitivity

While the large scale and relatively simple landform and landcover of this LCA are in theory suited to wind energy development, most of the area of this LCA has an unspoilt character and many valued characteristics and features that make it highly sensitive to change. The dramatic, enclosed lower valley reaches are especially sensitive; wind energy development on the slopes or tops above could potentially have an overwhelming landscape impact.

Further east, where the valleys have a more open form and where there is extensive forestry, the character of the landscape appears better suited to wind energy development. However this is outweighed by the very wide visibility of this part of the South Sperrins. In views from the south particularly, Mullaghturk and Carnanelly appear as focal points, and the landscape is very sensitive to wind energy development.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has a sensitive landscape setting and wide visibility. Ideally turbines should be associated with and reflect the scale of groups of buildings and trees or forestry plantation.

Care should be taken to avoid adverse impacts on the extremely sensitive skylines and the open, exposed and largely uninhabited landscapes of the upper slopes. Care should also be taken to avoid adverse effects on the character and setting of features of natural and cultural heritage landscape interest (as noted in this section), on the area's sense of wildness, and on views from the South Sperrins Way.

At the time of assessment there were no operational or consented wind farms in or near this LCA and there were no issues of cumulative impact.

LCA 25 Beaghmore Moors and Marsh

Location: Counties Tyrone and Londonderry, south and east of South Sperrin

Key Landscape and Visual Characteristics and Values

Scale

Rolling plateau of wide shallow valleys and broad, rounded ridges rising to over 250m AOD, with smaller scale landscape features.

Landform

Extensive glacial deposits form irregular ridges and mounds throughout the area. Slopes typically have shallower, smooth profiles, although some quarrying of outcrops forms irregular skylines.

Enclosure

Generally open, exposed character. Exposed moorland on some ridge tops; elsewhere pastures enclosed by low stone walls, stunted hedgerows or wire fences; open peaty marsh on shallow valley floors. Extensive conifer plantations on lower slopes in some parts of the LCA, notably in the south (Creggan) and east (Davagh).

Complexity of landcover and features

Expansive, relatively homogeneous landscape, fragmented in some areas by conifer shelterbelts and forestry. Scattered farmsteads on higher ground, connected by generally straight, embanked roads with stone bridges across watercourses.

Man-made influence

Sand and gravel quarries, particularly on the southern edge of the area. Forestry, including many newly planted areas of forest.

Skylines and settings

Skylines mainly lie in the adjoining LCAs of Bessy Bell and Gortin (LCA 26) to the west, South Sperrin (LCA 24) to the north and Slieve Gallion (LCA 41) to the east. The LCA also provides the immediate setting for Beaghmore Stone Circle and its important archaeological landscapes.

Visibility and views

At a broad scale the landform is concave, which means that there is generally wide visibility, over long distances, to and from all the surrounding uplands. From within the LCA there are some fine, long views to the hills, notably to Mullaghcarra to the west, Evishbrack to the east and Mullaghturk to the north.

Landscape quality (condition)

Locally landscape quality is affected by sand and gravel quarrying. The effects of farm abandonment are also evident in the form of derelict buildings, neglected field boundaries and pastures and other relict farmland landscape features – although this also contributes to the area's wild character.

Scenic quality

This has a distinctive character and many important landscape values. Much of the area is within Sperrin AONB.

Wildness and tranquillity

Wide, open, windswept landscape with a strong wilderness character, reinforced by a sense that human occupation was once much more widespread than it is today (see below).

Natural and cultural heritage features

Various areas of national earth science and nature conservation importance, including volcanic outcrops at Cashel Rock; Black Bog, one of the largest raised bog sites in Northern Ireland; and the upper reaches of the Owenkillew River with its rare freshwater fauna. Prominent and well-known historic monuments including Beaghmore stone circle, Ougham Stone, Cloghacara Standing Stone and several other outstanding concentrations of scheduled monuments, mainly dating from the Bronze Age and often revealed by peat cutting. Most of the eastern third of the LCA lies within the Beaghmore ASAI.

Cultural associations

Music and folklore associated with the area's wealth of prehistoric sites.

Amenity and recreation

An Creagán visitor centre and parts of Creggandevsky Archaeological Trail. Davagh Forest picnic site. Popular cycling area.

Assessment for Wind Energy Development

Overall sensitivity

The large scale, relatively uniform landform, simple uncluttered character and lack of prominent skylines within this landscape tend to reduce its sensitivity to wind energy development. However it is widely visible, particularly from adjoining upland areas, and has a great wealth of features of natural and cultural heritage interest and also a strong wild character.

There might be localised areas within this LCA where these qualities are absent and sensitivity is lower, for example in the context of sand and gravel quarrying or extensive forestry.

Overall Sensitivity – High

Location, siting, layout and design considerations

This LCA has high visual sensitivity, wild character and important heritage interests. Areas already influenced by sand and gravel extraction or forestry, for example in the south-eastern part of the LCA, may be better able to accommodate turbines than other areas. It is recommended that turbines be closely associated with and reflect the scale of buildings and shelterbelts.

Care should be taken to avoid adverse impacts on the extremely sensitive open and exposed slopes. Particular care should be taken to avoid adverse impacts on views to and from the Sperrin tops that enclose the LCA on the west, east and north. Care should also be taken to avoid adverse impacts on the fabric, character or setting of features of natural and cultural heritage landscape interest (noted in this section). It is especially important to protect the wild landscape character associated with many of these features.

At the time of assessment there were no operational or consented wind farms in or near this LCA and no issues of cumulative impact.

LCA 26 Bessy Bell and Gortin

Location: Counties Tyrone and Londonderry, south-western section of Sperrins.

Key Landscape and Visual Characteristics and Values

Scale

High mountain summits and ridges rising to 542m AOD at Mullaghcarn, with lower summits and ridges to the west.

Landform

Dramatic mountainous landform, with distinct, sharp ridges and rocky summits. A long ridge extends north-west from the main mountain block, providing a sequence of lower summits, including Mary Gray, whose twin peak of Bessy Bell lies west of the deeply incised Strule valley and has a more rounded form.

Enclosure

Summits are generally open and unenclosed. Central slopes of the LCA, encircling Cappagh Burn, are forested (Gortin Glen Forest Park). Lower slopes are enclosed by hedgerows and relatively dense tree cover, with numerous hedgerow trees, small copses and wooded valleys.

Complexity of landcover and features

Diverse landscape pattern, with transition from steep wooded river banks to farmland to open moor in short distances. Mountain slopes are littered with grey scree and burns flow in deep gullies. Lower slopes of Mullaghcarn have striking pattern of stone walls and earth banks following historic townland boundaries.

Man-made influence

Existing wind farm on south-western slopes of Bessy Bell. Forestry plantations at Gortin Glen and west of Bessy Bell. Busy road corridor of A5 Omagh to Derry road. Prominent, locally intrusive industry and mineral extraction at Newtownstewart.

Skylines and settings

Notable ridges and skylines around the edges of all the main upland areas and along the terrace east of the River Strule. Southern flanks of Slieveard, south of Mullaghcarn, are particularly prominent and form part of the wider setting of Omagh. Northern flanks of Bessy Bell provide landscape setting for town of Newtownstewart.

Visibility and views

Many long scenic views from mountain slopes and along Strule valley. Stunning views of the main upland area from all the surrounding land but particularly from the south and west. Bessy Bell is a key landmark in long distance views along the Strule valley and from the west.

Landscape quality (condition)

Landscape as a whole is in good condition.

Scenic quality

This is a highly scenic landscape that is very popular and accessible for recreation. The majority of the LCA lies within the boundaries of the Sperrin AONB, which extends as far west as the eastern flanks of Bessy Bell. Bessy Bell and the Baronscourt estate to the west form an ASQ.

Wildness and tranquillity

The upland tops, especially on the east where they are not afforested, have a strong wild character.

Natural and cultural heritage features

Important earth science features include the steep-sided lacustrine mound at Gortin Gap and the massive moraine near Newtownstewart on which Harry Avery's Castle is sited. Relatively large areas of upland heath, for example at Boorin Wood NR. Some notable estate woodland and remnant semi-natural woodland, including areas of ASSI. Heritage parkland at Baronscourt, west of Bessy Bell (Registered Park).

Cultural associations

Baronscourt is Ireland's only surviving ducal seat and one of the grandest houses and demesnes in the country.

Amenity and recreation

Notable series of countryside attractions, including Gortin Glen Forest Park, the Ulster History Park and the Ulster-American Folk Park, offer opportunities to understand and appreciate the area's landscapes, habitats and history. Gortin Loop and Robber's Table Walk. Part of the Ulster Way crosses the area south of Bessy Bell.

Assessment for Wind Energy Development

Overall sensitivity

The majority of this landscape is highly sensitive to wind energy development, notwithstanding the presence of existing and consented wind farms. This is an iconic and widely visible Sperrin landscape, whose summits and steep upper slopes are particularly sensitive to the introduction of any new structures. Sensitivity is further increased by the LCA's popularity for outdoor recreation.

There are very localised areas of somewhat lower sensitivity to wind energy development on the south- western fringes of the LCA, near Bessy Bell.

Overall Sensitivity - High

Location, siting, layout and design considerations

The south-western hill shoulder of Bessy Bell may be the most suitable area for wind energy development. However, it is recommended that design and layouts are consistent between any adjacent sites and should ideally read as a cluster.

Care should be taken to avoid adverse impacts on skylines, views from the Strule valley, A5, Gortin Glen Forest Park and Mullaghcarra and on the setting of the Heritage Park at Baronscourt.

At the time of assessment there was one existing wind farm at Bessy Bell (10 turbines of 60m on the south-western hill shoulder) and a further consented wind farm (6 turbines of 100m on the south-eastern hill shoulder). These give rise to issues of cumulative impact, both locally and over a wider area to the west, where there are two existing wind farms around 15km away in Lough Bradan LCA (LCA 14).

LCA 27 Foyle Valley

Location: Counties Tyrone and Londonderry. Foyle, Mourne, Strule and Owenkillew valleys running from Derry south and east to Newtownstewart and Plumbridge.

Key Landscape and Visual Characteristics and Values

Scale

Broad, rolling valley on the western slopes of the Sperrins. Generally low-lying but enclosed by hill tops of up to around 300m AOD in parts.

Landform

A very diverse landform. Character of the valley changes from an open sheet of water within flat agricultural floodplain north of Ballymagorry, to an incised wooded channel enclosed by river terraces and steep, irregular mounds of moraine between Strabane and Newtownstewart.

Enclosure

Generally open character in north where the river is set within arable fields and pastures; more enclosed to the south where the landscape is incised, well hedged and wooded along watercourses and tributary valleys.

Complexity of landcover and features

A complex and varied landscape. Farmland has strong geometric field pattern, which continues onto the slopes of the adjacent higher land. Edges of the Sperrin foothills and Sperrin mountains to the east have scenic, steep, wooded incised valleys.

Man-made influence

Major towns of Derry and Strabane and smaller settlements of Artigarvan, Sion Mills and Newtownstewart extend urban and industrial influences over parts of the area. Busy A5 Derry to Omagh with prominent bypasses at Strabane and Newtownstewart. Electricity transmission line along eastern edge of valley. Localised sand and gravel extraction.

Skylines and settings

There is a sequence of distinctive skyline features and settings along the valley, including prominent enclosing slopes and ridgelines (mainly just outside the LCA) at Derry and the top of Knockavoe above Strabane. Bessy Bell and Mary Gray (outside the LCA) form part of the wider landscape setting of Newtownstewart. Also many smaller skyline features reflecting topographic variations.

Visibility and views

Important views both to and from the Sperrins. Valley has a key visual role as the western setting for the Sperrin AONB and a major communications and tourist route. Stunning views of the River Foyle from slopes of Knockavoe.

Landscape quality (condition)

Condition of field patterns, hedges and walls is relatively good. Mineral extraction affects landscape quality in parts.

Scenic quality

Scenic quality is generally high. The LCA includes land within the Sperrin AONB east of Newtownstewart and north-east of Strabane as well as parts of ASQs at Knockavoe (Sperrin Foothills) and Bessy Bell.

Wildness and tranquillity

There is no strong sense of wildness within the LCA although much of the area is tranquil countryside closely adjoining wilder areas.

Natural and cultural heritage features

River Foyle is an SAC. Owenkillew River and Owenkillew and Glenelly Woods are part of more extensive ASSIs that extend eastwards into the heart of the Sperrins. Other smaller river, moss and woodland ASSIs. Newtown Stewart Castle. Conservation Area at Sion Mills and Registered Parks at Molenan House near Derry, Holy Hill House near Artigarvan and Moyle House near Newtown Stewart.

Cultural associations

Not known.

Amenity and recreation

Key gateway to the County Donegal, Derry and the central Glenelly valley of the Sperrins.

Assessment for Wind Energy Development

Overall sensitivity

The alluvial plain and steep valley sides on the western margins of the Sperrin Foothills and Sperrin Mountains are very sensitive to change, not only because of their complex and varied character, but because they form a backdrop to views along the valley. They are a key part of the landscape setting of the mountains as well as the towns of Strabane and Newtown Stewart.

The western edge of the valley south of Strabane (where this lies in Northern Ireland) has less landscape and visual constraints to wind energy development.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

This LCA has relatively high sensitivity. The western edge of the valley south of Strabane would be the most suitable location for some form of wind energy development. It is recommended that wind energy developments reflect the complexity and sensitivity of the landscape setting and the relatively small landform scale.

Within this LCA care should be taken to avoid adverse impacts on the settings of Derry, Strabane and Newtown Stewart. Care should also be taken to avoid detrimental visual impacts on the Sperrins and the A5 tourist route. The settings of important natural and cultural heritage features (eg Sion Mills Conservation Area) should be respected as should important skylines and settings within the valley.

At the time of assessment there were no operational or consented wind farms within this LCA. However one operational and one consented site (total 16 turbines) could be found at Owenreagh in the Sperrin Mountains (LCA 29) around 8km east of Strabane. Other operational and consented sites (total 16 turbines) were at Bessy Bell, around 16km south of Strabane. In addition, there were three consented wind farms 10 to 18km west of Strabane in County Donegal. Hence there are growing cumulative and transboundary impacts that require consideration.

LCA 28 Glenelly Valley

Location: County Tyrone. East-west valley in central north Sperrin, east of Plumbridge.

Key Landscape and Visual Characteristics and Values

Scale

Long linear mountain valley to the south of Sawel Mountain, following one of the principal fault lines in the Sperrins. Hidden, secretive, narrow valley landscape that contrasts with expansive, windswept moorland above. Enclosed by steep ridges rising to around 400m AOD, with further higher summits beyond, outside the LCA.

Landform

Valley sides are undulating and field boundaries emphasise the undulations. River meanders across a complex floodplain of alluvium and glacial moraine. Channel has carved deeply into these soft deposits creating steep, irregular mounds and pockets of peaty marsh on the valley floor.

Enclosure

Valley is tightly enclosed topographically. At lower levels, there is also enclosure by woodlands, stone walls, hedgerows and a few, mainly small, conifer plantations.

Complexity of landcover and features

The pastures, woodland and copses form a varied, diverse patchwork with small, oddly-shaped fields and larger woodlands on steeper slopes. Poor quality grassland with wet flushes, gullies, patches of rushes and scrub. Earthbanks, hedgerows and stone walls form an interconnected network, with walls increasingly common on upper slopes, often following ancient townland boundaries. Other common elements include clachans, churches, stone bridges and traditional stone farmsteads.

Man-made influence

Few prominent or intrusive man-made influences except for small conifer plantations which are prominent, distracting and out of scale with the surrounding landscape pattern.

Skylines and settings

Very prominent skylines (small north-south ridges and tops) dominate the valley visually to both north and south. Wealth of archaeological sites can be seen on the valley slopes.

Visibility and views

Views from minor roads to the north and south are strongly focused on the meandering river, floodplain and valley sides. The ridge tops above, just outside the LCA, offer commanding views into the scenic valley landscapes eg from the Central Sperrins Way to the south.

Landscape quality (condition)

Most of the farmland and field boundaries are in good condition, although the quality of the upper pastures is generally poorer than near the valley floor. Some abandoned farmland on the fringes of the moorland.

Scenic quality

The Glenelly valley, which lies at the heart of the Sperrin AONB, is highly scenic and is often regarded as one of the most idyllic in Northern Ireland. Stunning mountain setting.

Wildness and tranquillity

This is a highly tranquil, remote and 'hidden' landscape with a timeless character. Although not wild in itself, except towards the valley head, there is a strong sense of wildness in views to the Sperrin tops above, especially those to the north.

Natural and cultural heritage features

Considerable earth science interest (Glenelly river valley deglacial complex and Barnes Gap glacial meltwater channel). Remnant blanket bog. The Glenelly River is of good water quality, with salmon and trout. Many important and distinctive historic landscape features, including the historic townland boundaries, traditional buildings, and hillside raths and standing stones, which lend a strong historic character to the valley's landscapes.

Cultural associations

Area has a rich sense of history and culture associated with the many signs of early human habitation.

Amenity and recreation

Central Sperrins Way runs along and above the valley bottom and crosses the ridge to the south. Sperrin Heritage Centre. Goles Forest to the east.

Assessment for Wind Energy Development

Overall sensitivity

The inherent scale, form and complexity to the intimate valley landscapes of this LCA, which are in addition very strongly influenced visually by the skylines above, make Glenelly Valley highly sensitive to wind energy development. Any wind energy development on the slopes or skylines would be extremely intrusive. In addition, the landscape is sensitive because it is highly valued for its scenic beauty, historic field patterns and significant archaeological sites.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has very high landscape and visual sensitivity. It is recommended that any turbine development be closely associated with and reflects the scale of farm buildings and sheltering woodland.

Care would have to be taken to avoid adverse impacts on the extremely sensitive open, exposed slopes and ridgelines and on the key landscapes and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in this LCA. The nearest existing wind farm was at Owenreagh (total 16 turbines) 8km north-west of Plumbridge which is visible from some areas of higher ground around Plumbridge.

LCA 29 Sperrin Mountains

Location: Counties Tyrone and Londonderry. High Sperrin tops.

Key Landscape and Visual Characteristics and Values

Scale

Broad, rounded ridges with rocky outcrops leading to steep summits averaging 500m in height and rising to 678m AOD at Sawel Mountain. Smaller scale, with enclosures, on lower slopes.

Landform

Mountains form an east-west spine across the North West and have a dramatic appearance. The ridges have a broad, rounded profile leading to summits with a rocky, pointed profile. Glacial deposits sometimes from mounds and terraces along the lower slopes, softening and confusing the natural break of slope. Deep, branching gullies and open, fast-flowing streams.

Enclosure

Generally open and exposed. Some areas of conifer plantation and some broadleaved woodland within lower valleys. Earth banks and hedgerows at lower elevations.

Complexity of landcover and features

Summits have extensive areas of bog with heather and rushes, punctuated by small, rounded loughs. The steep slopes leading to the summits are carpeted with close-cropped moorland grasses. The lower valley slopes retain the historic field pattern, with hedgerows, earth banks and stone walls enclosing a diverse patchwork of fields and woodlands. Stone walls on upper slopes often follow historic townland boundaries.

Man-made influence

Localised man-made influences including wind turbines at Owenreagh Hill; conifer plantations, which in some areas (notably in the east and at Banagher Forest) form dark, geometric blocks on the slopes; and a number of hard rock quarries.

Skylines and settings

Many prominent ridgelines. In the east the skyline is generally lower and more broken; here the main skyline features include Knockavoe and Owenreagh Hill plus other smaller individual tops. To the west the ridge broadens and increases in height. Mountains also form part of the wider setting for the towns of Strabane, Dungiven and Draperstown, which lie just outside the LCA.

Visibility and views

Exceptionally fine mountain and valley views characterise the LCA and are a key attraction to tourists and walkers. The mountains are an iconic feature in views west and south from the A6 Belfast to Derry road; and are also an important element of views east from the A5 Derry to Omagh road near Strabane.

Landscape quality (condition)

In some areas with poor soils, the field pattern on the lower slopes has become derelict and obscured by rushes and scrub.

Scenic quality

This stunning mountain landscape of very high scenic quality and forms the heart of the Sperrin AONB. Land at Knockavoe has been identified as part of the Sperrin Foothills ASQ.

Wildness and tranquillity

Much of this landscape is extremely wild, remote and inaccessible, particularly towards the eastern end of the ridge. Wildness is more strongly represented in the Sperrin Mountains than in any other area of Northern Ireland except the Mourne.

Natural and cultural heritage features

Many earth science sites, such as the glacial meltwater channel at Butterlope Glen. Extensive blanket bog, a habitat of national importance. Rare montane plant communities on the highest slopes of Sawel Mountain. Upland oakwood at Banagher Glen forms the largest intact block of semi-natural woodland in Northern Ireland. Concentration of prehistoric sites and monuments along Banagher Glen, an important early communication route. Registered Park at Learmount Castle.

Cultural associations

Traditional farming customs, buildings and land uses have survived particularly well. Association with President Wilson, whose ancestral home lies to the east of Strabane.

Amenity and recreation

Hill tops provide fantastic scope for mountain walking, yet are within easy reach of contrasting valley landscapes that have a wealth of historical and cultural interest. Learmount Castle and Banagher Glen and Forest are particular attractions.

Assessment for Wind Energy Development

Overall sensitivity

This LCA lies at the heart of the Sperrins. The scale and landform of at least parts of the area are in theory well-suited to wind energy development. However, this is generally outweighed by the sheer visual prominence of the Sperrin Mountains over a wide area of Northern Ireland. This is an iconic landscape of immense appeal for tourism and recreation; its core landscapes are highly sensitive to any wind energy development. In addition, it has a strong wild character and many natural and cultural features that are highly vulnerable to the introduction of wind turbines and associated access tracks and infrastructure.

Hence the majority of this landscape is highly sensitive to wind energy development, notwithstanding the presence of existing and consented wind farms.

Overall Sensitivity - High

Location, siting, layout and design considerations

Owenreagh, in the west of this LCA, is the specific area in this LCA that is most suited to wind energy development. Consideration could be given to siting turbines on hill flanks where they might be seen against a backdrop of land.

Care should be taken to avoid adverse impacts on skylines, views and the visual amenity, recreational value and wild character of this LCA. Open exposed slopes and ridgelines should be respected as should natural and cultural heritage landscape interests. Care should be taken to ensure that wind energy developments do not dominate and flatten this topographically complex landscape.

At the time of assessment there was one existing wind farm at Owenreagh Hill and further consented turbines (16 turbines in all, 60-66m high). Other operational and consented sites in adjacent LCAs were at Bessy Bell (total 16 turbines) 15km to the south; and there are three consented wind farms within 18 to 25km to the west in County Donegal. Hence there are growing cumulative/transboundary impacts in this LCA.

LCA 30 Sperrin Foothills

Location: County Londonderry, northern flanks of Sperrin Mountains

Key Landscape and Visual Characteristics and Values

Scale

Rounded foothills around 300m high along the northern edge of the Sperrin Mountains, plus the larger and more irregular upland area of Slievekirk (370m AOD) to the north, separated by small, intimate valley landscapes with small scale field patterns extending high up the hillsides.

Landform

Varied landform, typically of rounded, dome-shaped hills and steep, winding, deeply dissected valley systems and waterfalls of the Burn Dennet and Faughan River. Some of the hills, such as Slievekirk, have steeper, patterned sides. Glacial moraine often forms a complex, steeply undulating landform on valley sides.

Enclosure

Contrast between open hill tops and wooded, hedged valley landscapes close below. Strong geometric pattern of fields and hedgerows sweeps up over the summits of the smaller hills. Broadleaved woodland on the steepest slopes. Fairly dense tree cover with numerous hedgerow trees and copses in the valleys.

Complexity of landcover and features

Diverse landscape pattern with steep, wooded valley sides, neat rolling farmland, and brown moorland summits, all closely juxtaposed. Loughs and areas of peaty marsh, such as Lough Ash, are occasionally found in poorly drained hollows. Numerous small settlements with a traditional character.

Man-made influence

Sand and gravel quarrying on edges of some river valleys.

Skylines and settings

Dramatic, cliffed skylines all around the edge of Slievekirk. Settings of Learmount Castle and settlements of Dunnamanagh, framed by the Burn Dennet River and Creaghan Hill, and Claudy, overlooking the Faughan valley, are especially sensitive.

Visibility and views

Outstanding views. LCA forms the foreground to iconic views of the Sperrin Mountains (LCA 29) from the B74 at Claudy and from the A6 Belfast to Derry Road to the north. Slievekirk is also a very prominent, attractive feature, seen at close range in views from the A6 just outside Derry. Within the LCA, there are frequent close views from one side of the valley to another.

Landscape quality (condition)

Localised impacts from hedgerow removal and built development.

Scenic quality

Much of this LCA is of outstanding scenic quality and is included in the Sperrin AONB; central part of LCA also lies within the Sperrin Foothills ASQ. Scenic quality of valleys of Burn Dennet near Dunnamanagh, Bonds Glen below Slievekirk, and River Faughan near Claudy is particularly high.

Wildness and tranquillity

Not a wild landscape but one with a very strong sense of tranquillity, linked to the hidden, intimate character of the valleys. Less tranquil on the northern edge of the LCA, where it is more open and influenced by built development and busy roads.

Natural and cultural heritage features

Extensive fluvio-glacial sands and gravels of scientific interest. Many sites of national conservation importance eg Silverbrook Wood, Corbylin Wood, Bonds Glen and Ervey Wood ASSIs. Rivers of international importance for Atlantic salmon. Numerous sites of historic interest, including chambered graves, raths, churches and castles, often on river terraces eg in Faughan valley. Romantic ruined landmarks of Dunnamanagh and Altinaghree Castles; Registered Parks at Learmount Castle and at Ardmore and The Oaks north of Slievekirk.

Cultural associations

Rich cultural history and associations.

Amenity and recreation

Ervey Wood and Ness Wood Country Parks on northern edge of the LCA near Slievekirk. Learmount Castle and Banagher Glen, on the boundary with the Sperrin Mountains (LCA 29) are key recreational attractions and gateways to the Sperrin Mountains.

Assessment for Wind Energy Development

Overall sensitivity

Theoretically the simple, convex forms of some of the hills in this LCA are suited to wind energy development, and the widespread tree cover could provide screening. However the relatively small size of the hills, the intimate character of the adjoining valleys, the small scale field patterns on the hill slopes, and the many sudden, short range views tend to increase landscape sensitivity to wind energy development.

A further constraint is the fact that the LCA forms a foreground to some of the most important views of the Sperrins: hence any wind energy development on this northern fringe of the Sperrins could have widespread and significant impacts on landscape character and visual amenity. The north-eastern and north-western fringes of the LCA might be of slightly lower sensitivity.

Overall Sensitivity – High

Location, siting, layout and design considerations

This LCA has a diverse, often intimate character and intrinsically high scenic quality. The areas most suitable for some form of wind energy development are on the north-eastern fringes of the LCA (north of the A6) and on outlying hills north-west of Slievekirk. It is recommended that wind energy developments reflect the fact that turbines may be seen in very close juxtaposition with small scale field patterns and landscape features.

Care should be taken to avoid adverse impacts on the highly sensitive prominent ridgelines such as those around Slievekirk or in views to the Sperrin Mountains (notably from the B74 and A6) as development in these locations could dominate the landscape. Care should also be taken to avoid adverse impacts on the setting of Learmount Castle, Dunnamanagh and Claudy and visual impacts on the Sperrins and the A5 tourist route. The settings of important natural and cultural heritage features should be respected.

At the time of assessment there were no operational or consented wind farms within this LCA but there were several outstanding applications. The nearest operational or consented wind farms were at Owenreagh (total 16 turbines) and at Altahullion (total 24 turbines) on the south-west and north-east fringes of the LCA respectively, around 25km apart. If any further wind energy developments were to be proposed in the area between these sites the issue of cumulative impacts would be a significant consideration. It is recommended that wind energy developments are visually well separated from each other and from existing development in adjoining LCAs.

LCA 31 Burngibbagh and Drumahoe

Location: County Derry. West Derry close to the River Foyle.

Key Landscape and Visual Characteristics and Values

Scale

A relatively flat river valley enclosed by high ridges with a small scale pattern of fields and hedges. The land rises to the east adjoining the Sperrin Foothills. Gortmonly Hill, 218m AOD, is the highest point in this LCA.

Landform

The valley has a strong, narrow, linear form and is aligned along north-east to south-west, following a similar geological fault line to that of the River Foyle. The valley floor is relatively flat and well-defined and the enclosing ridges have a broad, rounded landform with open summits. The Faughan River enters the Burngibbagh and Drumahoe valley system at its central point and then turns abruptly north to follow the natural fault-line

Enclosure

In the north there is a more open character due to the broader valley floor and larger field systems; while the south has more hedgerows, smaller fields and has a more enclosed character. The hedgerows form a strong geometric pattern that clothes the valley sides to a considerable height.

Complexity of landcover and features

Pasture is the main land use and fields are enclosed by a neat network of hedgerows, with a transition to stone walls on some upper slopes. The northern part of the valley, containing the Faughan River, has larger fields and a relatively wide, unenclosed valley floor. The southern part supports smaller field systems with hedgerows, increasing in density towards the valley floor. Estates are small, but their associated woods are locally significant.

Man-made influence

There are a number of quarry sites, several transmission lines running the length of the valley (although these are well aligned and not unduly intrusive), and urban development associated with the outskirts of Londonderry.

Skylines and settings

The ridgetops are very distinctive in this LCA, especially to the west, where they form the wider setting of Derry and the Foyle. Ridges around Curryfree Hill in the east are important skylines.

Visibility and views

Longer views are afforded in the northern valley whilst the southern part is narrower and more enclosed, providing only occasional views. From higher ground there are outstanding views across the Foyle to County Donegal. The western part of the LCA is very visible from the A2 Strabane to Derry road and the A6 from Belfast to Derry crosses the centre of the LCA.

Landscape quality (condition)

The Faughan River valley, to the north, has a somewhat degraded landscape character, with evidence of hedgerow loss and sand and gravel extraction in the Gorticross area. The landscape of the southern part of the valley is in good condition.

Scenic quality

The contrast between moor-capped summits and green pastures contributes to scenic quality. The more intact southern part of the LCA has higher scenic quality.

Wildness and tranquillity

The southern Burngibbagh section of the valley is relatively undeveloped and has a secluded, tranquil, rural character.

Natural and cultural heritage features

The Faughan Valley is of high scientific interest due to the presence of extensive glaciolacustrine and glaciofluvial deposits consisting of deltas, moraines, eskers and outwash plains. The farmland has created habitats for several bird species. The River Faughan is important for Atlantic salmon. Standing stones and raths are scattered along elevated slopes of the valley sides. Small wooded estates are also present at Ashbrook and Ardmore (Registered Parks).

Cultural associations

Not known.

Amenity and recreation

Area provides recreational open space for Londonderry; otherwise recreational opportunities are not well developed.

Assessment for Wind Energy Development

Overall sensitivity

This LCA is generally very sensitive to wind energy development due to its strong form and field patterns extending high up the valley sides, its wide visibility, particularly from the south and west, and its proximity to the city of Derry. Its open summits and ridges are distinctive and characteristic landscape features; development on these summits could interrupt and diminish these characteristic skylines.

The northern part is more degraded with pylons and former mineral workings so is somewhat less sensitive in that respect, although also more heavily settled. The southern part retains a remote, unspoilt intact character that would be highly sensitive to wind energy development.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The northern part of this LCA, which has more rounded landform and a more degraded character, is more suitable for wind energy development than other locations in this LCA. Consideration could be given to setting turbines well back from the steep valley sides to reduce their prominence and to help contain visibility. It is recommended that wind energy development reflects the limited height of the hills and the importance of this area as part of the approaches to and setting of the Foyle estuary and Derry.

Care should be taken to avoid adverse impacts on the more dramatic and scenic southern part of this LCA. Open skylines should be respected.

At the time of assessment there was a wind farm application in this LCA, as well as others in nearby parts of the Sperrin Foothills LCA, creating potential for cumulative impacts on the intimate landscapes of the south of the LCA, especially since existing and consented wind farm sites at Owenreagh lie less than 10km away to the south. There might also be transboundary issues if wind farm development occurs west of the Foyle in County Donegal.

LCA 32 Derry Slopes

Location: County Londonderry. West Londonderry sharing a border with Donegal

Key Landscape and Visual Characteristics and Values

Scale

A relatively open broad landscape dominated by city of Derry; Minkey Hill at 210m AOD is one of the highest areas.

Landform

The landscape is composed of smooth rounded hill tops with undulating lower slopes, steep slopes down to the River Foyle and a broad, shallow valley leading to the west.

Enclosure

Broad shallow valley form and urban waterfront present a mainly open character. In more rural areas there is some enclosure by hedgerows and riparian vegetation.

Complexity of landcover and features

Broad geometric patchwork of fields disrupted by extensive built development; Relatively open farmland on slopes of Minkey Hill; smaller fields, with hedgerows and narrow roads to north of Skeoge valley. Bands of broadleaf woodland on the banks of the Foyle. City of Londonderry/Derry dominates the landscape; areas of managed public open space are juxtaposed with relatively neglected fields on the urban fringe.

Man-made influence

Man-made influence is very strong, with LCA dominated by city of Londonderry and associated urban, industrial and port activities. Telecommunications masts at Holywell Hill and Minkey Hill.

Skylines and settings

The historic city has a dramatic, elevated site, with massive defensive walls and a strong, distinctive character. The lands adjoining the river north of the city also form an attractive wooded valley with shoreline. The ridges around Minkey Hill form important skylines and these western slopes drop fairly steeply towards the River Foyle, creating a distinctive landscape setting. The ridges of Elagh More also form important skylines.

Visibility and views

The eastern slopes of Minkey Hill and the river corridor are prominent in views to the city from the east bank of the River Foyle. River views from the banks of the Foyle are important in this LCA.

Landscape quality (condition)

The landscape of the urban fringe is relatively degraded, with much evidence of hedgerow removal and a general neglect of land management. The river banks and slopes of Minkey Hill are the most scenic though telecommunications on the summits detract from the quality of the views.

Scenic quality

The river banks are the most scenic part of this LCA, as well as the rounded summits of the hills. Otherwise this LCA is not highly scenic.

Wildness and tranquillity

There is no strong sense of wildness or tranquillity

Natural and cultural heritage features

Earth science interest is concentrated around Lough Foyle which demonstrates contemporary coastal processes. Lough Foyle is a SPA and supports whooper swans, brent geese, bar tailed godwit, Berwick swans and golden plover. Estate woodlands are an important natural heritage feature, and the River Foyle is an important fishery. Considerable number of Registered Parks and houses such as Thornhill; Doherty's Tower on Elagh More is a state care monument. Londonderry Conservation Area.

Cultural associations

Numerous associations with the historic city of Derry.

Amenity and recreation

LCA is an important gateway to Northern Ireland from County Donegal and the historic city of Derry is an important tourism centre.

Assessment for Wind Energy Development

Overall sensitivity

This LCA's gateway role and proximity to the historic city of Derry and the Foyle increases its sensitivity to wind energy development, which could be highly visible. These western slopes frame the city and provide a scenic landscape setting. The River Foyle waterside and the area's many small historic parks and estates are also highly sensitive.

However, the undulating slopes and urban fringe areas, particularly where already affected by man-made influences, might be somewhat less sensitive to development that is carefully sited and appropriate in scale.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The undulating lower slopes in the southern part of this LCA are least sensitive to wind energy development. Consideration could be given to siting on mid-slope locations, particularly where topography could offer some screening. Care should be taken in relation to access roads which could be highly visible from across the river. Developed areas such as urban fringe industrial estates may also offer some opportunities for turbine development. It is recommended that any wind energy development reflects the scale of the relatively small surrounding hills and existing built features that lend a sense of scale in this LCA.

Care should be taken to avoid adverse impacts on the highly sensitive historic setting of Derry, its surrounding steep slopes and skylines, the River Foyle and its adjacent lands, and estates and estate woodlands. Although Holywell and Minkey Hills have a number of telecommunications masts, care should be taken to avoid adverse impacts on these hills as they are on a prominent skyline. Care should be taken to ensure that wind energy developments do not dominate or intrude unacceptably on the sensitive settings in this LCA.

At the time of assessment there were no operational or consented wind farms within this LCA. Transboundary issues might arise as this LCA shares a border with County Donegal.

LCA 33 Lough Foyle Alluvial Plain

Location: County Derry. North west of Londonderry, adjoining Lough Foyle.

Key Landscape and Visual Characteristics and Values

Scale

Generally open, low-lying alluvial plain with highest area no more than 30 to 40m AOD.

Landform

Flat, alluvial plain backed by a low bench of more resistant rocks. Parts of coastal plain are reclaimed land, drained by straight channels and enclosed by coastal embankments. Inland the ground rises gently to the Loughermore Hills.

Enclosure

Generally the area has an open character in landform terms, particularly when overlooked from higher ground. However the western part of the area, on the northern outskirts of Derry, is more wooded, particularly along the A2.

Complexity of landcover and features

A patchwork of large arable fields on coastal reclaimed land north of Eglinton and towards mouth of River Roe. These are enclosed by straight drainage ditches with rare hedgerows and trees. Inland, there are smaller pastures enclosed by low hedgerows. Gorse is the dominant hedgerow species. Most mature trees are associated with shelterbelts around farms. A few blocks of broadleaved woodland.

Man-made influence

Extensive and often intrusive urban and large scale industrial development north of Derry, including airport, power station, power line and other intrusive structures.

Skylines and settings

Ridges associated with adjacent LCAs such as lower slopes of Gortnessy Hill in Loughermore Hills LCA create local skylines. Eglinton enjoys an attractive setting, bounded by the wooded Muff Glen to the south. The LCA forms a very important part of the wider setting of Lough Foyle, Magilligan Strand and Binevenagh.

Visibility and views

This is quite an open landscape and long views are common, particularly north across Lough Foyle to Inishowen in County Donegal and east to Binevenagh. Most views are from the A2 Derry to Coleraine road.

Landscape quality (condition)

The condition of the landscape varies, depending on the extent to which it has been developed or drained and improved as farmland. Reclaimed land is often intensively farmed and subject to hedgerow removal whilst poorer land retains a more natural character.

Scenic quality

The scenic quality of this LCA is not particularly strong, although the views towards and across to Lough Foyle are outstanding.

Wildness and tranquillity

The area to the west of Limavady retains a relatively wild and tranquil character.

Natural and cultural heritage features

The deltaic deposits associated with this alluvial plain are of earth science interest. Despite reclamation, there remain extensive mudflats and some small areas of coastal saltmarsh, notably at the Roe Estuary NR. Lough Foyle is internationally important for birds. The Lough Foyle SPA (also the Lough Foyle Ramsar site) supports whooper swans, brent geese, bar tailed godwit and numerous other waterfowl in internationally important numbers and is also internationally important for Atlantic salmon. There are relatively few archaeological sites but the church at Eglinton is a scheduled monument.

Cultural associations

Not known.

Amenity and recreation

Walks around Ballykeely bank and forest, outdoor education centre at Carromena.

Assessment for Wind Energy Development

Overall sensitivity

This LCA is of varied sensitivity to wind energy development. In the west the strongly industrial character with many large industrial structures suggests lower than average levels of sensitivity, especially given the presence of existing screening woodland along the A2.

Further east, however, the low-lying, open farmland and coastal land is very sensitive, not least as any wind energy development could intrude upon iconic views to Binevenagh headland. Moreover, the ecological resources of this area are very significant with extensive mud flats and internationally important waterfowl present on Lough Foyle.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The part of the LCA with most potential for some form of wind energy development is the industrial area north of Derry at the western end of the LCA, given careful attention to siting, scale and form relative to existing structures. The very open, exposed and low-lying coastal plain might also be able to accommodate some turbine development if it is very carefully sited and scaled in association with buildings and trees. Wind energy development would be less appropriate at the eastern side of this LCA.

Care should be taken to avoid significant impacts on views to Binevenagh.

At the time of assessment there were no operational or consented wind farms in this LCA. The nearest existing or consented wind farm sites were around 9km to the south in the Loughmore Hills LCA and are unlikely to be intervisible with any wind farm development in this LCA. However, there were a number of existing and proposed wind farm sites 8-10km to the north in County Donegal and these could give rise to cumulative, transboundary impacts. Seaward impacts may be a relevant issue in the future.

LCA 34 Loughermore Hills

Location: County Londonderry. Upland area in north-west of the county.

Key Landscape and Visual Characteristics and Values

Scale

Large scale upland massif averaging 280m and rising to almost 400m AOD at Loughermore. Bounded to the west and south by the Rivers Faughan, Foreglen and Roe.

Landform

Broad ridges with rounded summits and wide, relatively shallow valleys and gently undulating slopes. Many ridges have extensive conifer plantations that might appear to flatten or diminish the scale of the landform. Lower in the west where smaller outlying hills such as Slieve Buck and the Highland Hills are separate and distinct from the main upland area.

Enclosure

Mixture of open moor and conifer plantations on high ground, particularly in the east, creating dark, enclosed areas. Field enclosures (walls, earth banks and hedgerows) at lower levels.

Complexity of landcover and features

Relatively homogenous landscape with a simple, large-scale pattern of open moorland, bog and conifer plantations at Loughermore Forest on the upper slopes and summits. In the valleys, patches of scrubby woodland and marsh in a more finely-grained landscape mosaic. A more farmed landscape in the west.

Man-made influence

Several electricity transmission lines run along the north of the hills and also across the hills to the south. Widespread evidence of peat cutting and extensive afforestation, mainly in geometric blocks which form hard, angular lines across the rounded hill slopes.

Skylines and settings

Lower margins of the hills are prominent and visually sensitive.

Visibility and views

This LCA is prominent in views of the LCA from the A6 to the south and Glenshane Pass to the east but views from the A2 and settlement of Eglinton to the north are largely contained by the convex landform. From the settlements of Dungiven and Limavady to the east the hills present a broad, low profile. North side of the upland overlooks, and is visible from, Lough Foyle.

Landscape quality (condition)

Pastures of margins of moor might have broken stone walls and earth banks and gappy hedgerows. Widespread peat cutting.

Scenic quality

Generally not high although some of the valley landscapes of the Burntollet and Muff in the west of the area are very attractive. The area around Ness Wood lies within the Sperrin Foothills ASQ.

Wildness and tranquillity

Remote and empty with few roads and virtually no settlements, particularly on summits. Exposed, windswept character on open moorland, although interrupted by presence of conifer plantations.

Natural and cultural heritage features

Tracts of deciduous woodland in the gullies and steeper valleys on the margin of the hills, including Ness Wood ASSI. Rivers important for salmon and trout. Many prehistoric monuments on the hill slopes, including standing stones, chambered graves, raths and cairns, especially around Slieve Buck and Ness Wood (Ballygroll prehistoric complex). Registered Park at Templemoyle House in the north-west.

Cultural associations

Not known.

Amenity and recreation

Ness Wood Country Park and waterfall, Ballygroll prehistoric complex, and Muff Glen are popular with visitors. Forest walks within Loughermore Forest.

Assessment for Wind Energy Development

Overall sensitivity

Much of this landscape is of low sensitivity and well-suited to wind energy development, having large scale, rounded, convex summits; simple, relatively homogeneous landcover; extensive upland forestry; and other man-made influences.

The broad, central massif of the eastern part of the LCA, centred on Loughermore, is of lowest sensitivity to wind energy development. The lower margins of the upland, and some of the land further west which has a more distinctive landform, are of medium sensitivity. This is because these areas are more widely visible, and have a wider range of natural, cultural and amenity interests.

Overall Sensitivity - Medium to low

Location, siting, layout and design considerations

The large scale and horizontal form of this LCA indicates that parts of this LCA are well suited to wind energy development. The landscapes around Loughermore in the eastern part of the LCA are the most suited area to wind energy development. The creation of a large compact cluster of turbines, (possibly through expansion of the existing Altahullion wind farm), is likely to be the most successful solution in landscape and visual terms for this LCA, and would help minimise cumulative impacts on surrounding areas. Consistent site layouts and turbine sizes and designs would be desirable within the cluster. It is recommended that attempts be made to minimise visual clutter where turbines would be seen in the context of electricity transmission lines. Consideration could be given to utilising forestry plantations for screening and access tracks.

However, open views to Loughermore summit itself from the north-east should be respected. The lower margins of the upland and land to the west, particularly the more prominent outlier hills, are less suited to wind energy development. The north side of the upland area might also be more sensitive because of views from Lough Foyle. Care needs to be taken to avoid adverse impacts on skylines, particularly near the A6 and on the natural, cultural and recreational landscape interests in this LCA.

At the time of assessment this LCA already had an operational and consented wind farm development at Altahullion (24 turbines in total, 82-83m high). There were other applications nearby and another existing wind farm at Rigged Hill (10 turbines) around 15km to the north-east. Hence there is potential for cumulative impacts. There is also some potential for transboundary impacts due to several existing and proposed wind farms on the south-eastern edge of Inishowen in County Donegal. Adequate separation distances will be an issue. Ideally any additional wind energy development in this LCA would lie outside the zone of visual influence of these developments.

LCA 35 Magilligan Lowland

Location: County Londonderry. On north coast of the county at the mouth of Lough Foyle.

Key Landscape and Visual Characteristics and Values

Scale

Flat alluvial plain just above sea level, overlooked and dominated by the Binevenagh cliffs.

Landform

Lowland originates from deposits of alluvium and blown sand which accumulated forming a large, flat triangle of land in the lee of the long sandspit leading to Magilligan Point. Cliffs of Binevenagh form backdrop. Rugged sand dunes south of Benone Beach are in strong contrast to the flat, smooth land to the south.

Enclosure

Open, with large fields, occasional isolated hedgerows and groups of trees; some small shelterbelts near farm buildings. Smaller enclosed pastures at the foot of the basalt escarpment.

Complexity of landcover and features

Homogeneous landscape of rectangular fields subdivided by a grid of drainage ditches. Predominantly white farm buildings are focal points in this rather uniform landscape. Farm tracks on low embankments connect at right angles to the main road. Long strands at Magilligan and Benone, the latter backed by dunes.

Man-made influence

Geometric pattern gives landscape an artificial, engineered character. Principal settlements form linear development along main roads. Localised visual intrusion from the prison, caravan park and new housing at Bellarena, although these are relatively small features within the wider landscape.

Skylines and settings

Dramatic cliffs of Binevenagh are a striking backdrop and are the dominant landscape feature. Mountains of Inishowen in County Donegal are visible as a distant horizon to the west of Lough Foyle.

Visibility and views

The landscape is the focal point in views from the cliffs above, which also offer magnificent panoramas across Lough Foyle to Donegal. From the A2 to the west and from Lough Foyle (Inishowen ferry), it provides the foreground to Binevenagh. Its open character is crucial to this role.

Landscape quality (condition)

Some hedgerows are unmanaged and in poor condition; some farm buildings derelict or underused.

Scenic quality

Magilligan Strand is one of the longest, most inaccessible and unspoilt beaches in Europe. The area provides the setting for Binevenagh, one of the finest scenic features in Northern Ireland. The dune systems that back Benone are also of very high scenic interest; and the distinctive rectilinear landscapes give valuable insights into the underlying physical landscape. The whole LCA lies within the Binevenagh AONB.

Wildness and tranquillity

Strong sense of wildness, particularly at Magilligan Point and Strand, with their commanding views of Lough Foyle and Inishowen Head.

Natural and cultural heritage features

Magilligan Strand is one of the largest beach and dune systems and the most studied post-glacial land form in Europe. The intertidal sand and mudflats are of national (and international) nature conservation importance, part of an outstanding coastal wetland complex. The Lough Foyle SPA (also the Lough Foyle Ramsar site) supports whooper swans, brent geese, bar tailed godwit and numerous other waterfowl in internationally important numbers and is also internationally important for Atlantic salmon. LCA is bounded on the south by the Roe Estuary NR and by the fine seventeenth century demesne of Bellarena (Registered Park). Historic Martello tower at Magilligan Point.

Cultural associations

Important defensive landscape and special example of nineteenth century enclosures and reclamation.

Amenity and recreation

Strands are outstanding recreational assets. New ferry link to Inishowen is a key visitor attraction.

Assessment for Wind Energy Development

Overall sensitivity

This LCA's key role in views to and from the landmark feature of Binevenagh. Its open character, and great wealth of scenic, natural, cultural and recreational interests make it highly sensitive to any wind energy development. Any wind energy development might be difficult to accommodate in this LCA.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has proximity to the cliffs of Binevenagh and is open and exposed in character. It is recommended that any turbine development be closely associated with and reflects the scale of farm buildings and sheltering trees.

Care would be required to avoid adverse impacts on the extremely sensitive key landscape and visual characteristics and values described in this section.

At the time of assessment there were no operational or consented wind farms in this LCA; the nearest ones are at Rigged Hill (10 turbines) around 12km to the south-east and at Altahullion (24 turbines in total) around 16 km to the south. Neither is widely visible from this LCA, and there are no issues of cumulative impact at present. More visible were two existing transboundary wind farms (and further proposals) across Lough Foyle in County Donegal, around 20km away. These wind farms cumulatively might subtly alter the western landscape setting of this LCA. There may be seaward issues to consider in the future.

LCA 36 Binevenagh

Location: County Londonderry. Upland running north-south from Lough Foyle to near Glenshane Pass.

Key Landscape and Visual Characteristics and Values

Scale

Dramatic west-facing cliff-like escarpment averaging 400m and rising to 550m AOD in the south where it meets the Sperrin Mountains. Backed by expansive moorland plateau landscape.

Landform

Escarpment of Binevenagh is a dominant feature of the landscape to the east of the Roe Basin. A sequence of steep summits form striking landmarks with distinctive slope profiles including near-vertical, craggy rock faces and landslips (as at Binevenagh itself). To the east of the escarpment is a gently rolling plateau surface.

Enclosure

Open, exposed upland moors with few native trees or field boundaries. Extensive conifer plantations subdivide and enclose areas of moorland, particularly in the northern part of the LCA. Eastwards there is a gradual decrease in height and a transition from moorland to farmland and enclosed fields.

Complexity of landcover and features

Large scale mosaic of upland moor and extensive conifer plantations. Textured pattern of moorland grass, heather, rushes, stunted scrub and rocky outcrops. Ancient townland boundaries.

Man-made influence

Wind farm at Rigg Hill. Conifer plantations with hard, geometric edges. A6 at Glenshane Pass. Prominent hard rock quarries at Donald's Hill and near Glenshane.

Skylines and settings

Prominent west-facing skylines, notably at Binevenagh, Keady Mountain, Donald's Hill and Benbradagh. These are a key part of the wider landscape settings of Limavady and Dungiven in the Roe Basin (LCA 37). East-facing skylines tend to be less prominent. The southern end of the LCA, at Mullaghmore, is prominent above Moneyneany and Draperstown (LCA40). To the north, Binevenagh forms distinctive settings to Magilligan Strand, Mussenden Temple and the Bann estuary (outside the LCA).

Visibility and views

A highly visible landscape, with clear views from settlements mentioned above, from A6 Belfast to Derry road, from A2 Derry to Coleraine road and from throughout the Roe Basin as well as from the east. Outstanding, almost aerial, panoramas from the top of Binevenagh, embracing Lough Foyle and the whole north coast.

Landscape quality (condition)

Landscape is generally in good condition although there are a number of man-made influences as described above.

Scenic quality

Much of the LCA is of very high scenic quality with stunning views. The northern part of the escarpment forms the Binevenagh AONB, which includes both Magilligan and the Bann estuary (the latter also an ASQ), key parts of Binevenagh's setting. South of Benbradagh the LCA falls within the Sperrin AONB.

Wildness and tranquillity

Wild unstructured landscape character in areas of open moor. More regimented areas of dark conifer plantation tend to reduce the sense of wildness in parts.

Natural and cultural heritage features

Many features of biodiversity importance including arctic-alpine communities and cliff-face woodlands at Binevenagh and extensive intact upland raised bog on plateau top, eg Altikeeragh ASSI in north and Carn/Glenshane Pass ASSI in south. Numerous vernacular buildings and archaeological monuments (raths and standing stones).

Cultural associations

Binevenagh has an important place in folklore and legend.

Amenity and recreation

Ulster Way runs almost the full length of the LCA. Numerous mountain and forest walks, picnic sites and viewpoints.

Assessment for Wind Energy Development

Overall sensitivity

Much of this landscape is of extreme sensitivity due to its iconic, landmark character and very wide visibility.

However lower and less prominent sections of the escarpment, and areas where there is extensive forestry, might be somewhat less sensitive to wind energy development.

Overall Sensitivity -High to medium

Location, siting, layout and design considerations

The relatively large scale and strong horizontal form of the escarpment means that certain locations in this LCA may be well suited to wind energy developments. The lower central section of the LCA may be better suited to wind energy development in landscape and visual terms than other areas. Siting in association with forestry may be beneficial.

Care should be used to avoid adverse impacts on the extremely sensitive northern or southern ends of the escarpment. Particular care should be taken to avoid adverse impacts on the distinctive skylines of Binevenagh, Keady Mountain, Donald's Hill and Benbradagh and on the settings of natural and cultural heritage features and recreational resources.

At the time of assessment there was one operational wind farm in this LCA, at Rigged Hill (10 turbines of 60m). In addition there were operational and consented wind farms at Altahullion (total 24 turbines) around 15km south-west of Rigged Hill. Further wind energy development (unless closely associated with existing sites) could give rise to issues of cumulative impact. Transboundary wind farms in County Donegal are 30km or more away and unlikely to give rise to major landscape issues here. There may be seaward issues to consider in future.

LCA 37 Roe Basin

Location: County Londonderry. Valley landscape around Dungiven and Limavady.

Key Landscape and Visual Characteristics and Values

Scale

Broad basin form, but primarily a small scale, settled and farmed landscape, with rolling landform, hedges, trees and farms. Generally low-lying but ground rises to around 150m AOD around the edges of the area.

Landform

Broad, saucer-shaped basin of the River Roe to the west of the basalt escarpment and north of the Sperrins. Dominated by the striking silhouette of the basalt cliffs in particular. Alluvial floodplain of River Roe and lower slopes of the uplands are fringed with rounded ridges of glacial moraine.

Enclosure

A rolling landscape that rises and becomes more visible at its eastern, southern and western edges. Regular, geometric patchwork of fields enclosed by hedgerows. Few large woodlands, although copses, small broadleaved woodlands and numerous hedgerow trees provide a sheltered character, particularly on lower ground.

Complexity of landcover and features

Scale of landscape pattern varies from smaller scrubby pastures on the edges of the basin to larger arable fields on the glacial ridges alongside the river. Beech trees are important landscape features towards the centre of the basin. Heathy patches of birch, gorse and bracken throughout the valley. Villages have a clustered form and there are numerous scattered white-washed farms.

Man-made influence

Areas around large settlements such as Dungiven and along the A2 show pressure for built development. Locally new roads and bypasses disrupt landscape pattern. Sand and gravel quarries are associated with glacial moraine around the margins of the valley.

Skylines and settings

LCA is strongly influenced by prominent west-facing skylines of basalt escarpment, notably at Binevenagh, Keady Mountain, Donald's Hill and Benbradagh and by Sperrin Mountain tops south of Dungiven. Important internal skyline south of Limavady where land rises to over 100m. Setting of Limavady includes deep wooded section of River Roe while Dungiven is surrounded by attractive glens that also form the setting to the Sperrin AONB.

Visibility and views

Basin as a whole is overlooked from all the surrounding uplands. Area around Dungiven has spectacular views of the mountains and attractive river valleys all around. Higher ground in the centre of the basin, south of Limavady, provides views northwards to Binevenagh and Lough Foyle.

Landscape quality (condition)

Pleasant farmed landscape that is generally in good condition with strong and intact hedgerows, parkland and demesne plantings. Low-lying poorly drained and upland fringe landscapes might be unkempt with gappy hedgerows and derelict farm buildings.

Scenic quality

Part of the Curly valley south of Binevenagh lies within the Binevenagh AONB. No areas identified as ASQs although the area around Dungiven is particularly scenic, reflecting its proximity to the Sperrin Mountains and Benbradagh.

Wildness and tranquillity

Not a wild landscape but a generally tranquil, farmed landscape.

Natural and cultural heritage features

Few important nature conservation sites except for River Roe (SAC). Southern edges of the LCA are relatively rich in early settlement sites and historic features. Registered Parks at Ardnargle, Drenagh, Roe Valley Park, Pellipar and Knockan and Ash Park make an important contribution to landscape character.

Cultural associations

Not known.

Amenity and recreation

Roe Valley Country Park with historic incised river gorge. Banagher Glen and Forest.

Assessment for Wind Energy Development

Overall sensitivity

This LCA is of a broad scale overall and a sense of enclosure is afforded by hedges, hedgerow trees and woodland. However, it has relatively small and complex landform and landcover features; and its western and southern edges are more exposed and provide the setting for the basalt escarpment landscapes of Binevenagh LCA and for the Sperrin Mountains.

Any inappropriate wind energy development could affect views to and from adjoining upland areas and, importantly, could interrupt the broad sweep of the basin landform. Limited areas around the periphery of this character area, away from the principal views, might be of somewhat lower sensitivity to appropriately scaled wind energy development.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

Fringe landscapes west of Dungiven and south-west of Limavady are the areas in which turbines are most likely to be suitable compared with other locations. Consideration could be given to siting turbines on lower slopes, preferably against a hillside backdrop. It is recommended that turbine development reflects the low-lying landforms of this LCA.

Care should be taken to avoid adverse impacts on the extremely sensitive and prominent skylines or settings of Binevenagh and the Sperrins. Care should also be taken to avoid adverse impacts on the other skylines, settings or views described in this section.

At the time of assessment there were no operational or consented wind farms in this LCA although there were wind farms close by at Rigg Hill (10 turbines) just to the east and Altahullion (total 24 turbines) to the west. These already affect the character of the central part of the LCA and any wind energy development that would visually link these sites could be very disruptive to the landscape of the Roe Basin. Transboundary wind farms in County Donegal lie around 15km away from the north-west edge of the LCA and intervisibility with these sites should be avoided. Separation distances from each other and from existing development in adjoining LCAs should be a key consideration.

LCA 38 Eastern Binevenagh Slopes

Location: County Londonderry, eastern slopes of Binevenagh, between the north coast at Castlerock and Garvagh.

Key Landscape and Visual Characteristics and Values

Scale

Medium scale landscape of low rolling plateau between around 100 and 150m AOD.

Landform

Sloping basalt plateau to the east of Binevenagh, drained by numerous branching streams in narrow, well-defined valleys and steep gullies. Plateau surface is rolling with a series of broad ridges aligned north-west to south-east. These have an irregular, slightly crumpled surface.

Enclosure

In general few woodlands except those associated with the historic estate of Downhill and Garvagh Forest. Hedgerow trees and small copses give a relatively well-treed character in parts and there are tracts of scrubby woodland on steeper valley slopes. Fields have geometric, angular shapes and are enclosed by a mixture of stone walls, fencing and gappy hedgerows.

Complexity of landcover and features

Numerous tracks and roads form straight, angular patterns. Roads generally follow ridge tops or run directly across the contours, emphasising the alignment of the terrain. Most of the area is relatively poor farmland and rough pastures with scattered farmsteads. Small coniferous plantations. Reservoir at Ballystrone.

Man-made influence

Few overt man-made features although development pressures are evident in some areas.

Skylines and settings

Binevenagh LCA, just to the west, forms long low skyline. Skyline is not uniform but punctuated by small tops such as Sconce Hill to the north, and broken by a number of communications routes. North-south ridges form internal skylines as at Ballystrone Hill. Settings of Garvagh, Castlerock and the historic estate of Downhill nearby.

Visibility and views

Area is widely visible in long distance views from the east, including A2 and other east-west communications routes. Clear views from the Bann estuary, Portstewart and high ground around Coleraine.

Landscape quality (condition)

Landscape is generally in poor condition, with incomplete field boundaries and areas of derelict buildings and pastures. Small copses and hedgerow trees are sometimes poorly structured.

Scenic quality

Not particularly high, the exception being at the northern end of the LCA, around Downhill, which lies within the Binevenagh AONB and has a stunning coastal setting.

Wildness and tranquillity

Localised sense of wildness on higher ground, especially near Binevenagh.

Natural and cultural heritage features

Woodland ASSI at Errigal Glen. Many monuments and archaeological sites (cairns, raths and standing stones) suggest ancient settlement. Registered Park at Downhill.

Cultural associations

Downhill has associations with the Bishop of Derry.

Amenity and recreation

Downhill is in National Trust ownership. Walks at Downhill Forest, Garvagh Forest and Errigal Glen.

Assessment for Wind Energy Development

Overall sensitivity

This landscape is less obviously sensitive than the western slopes of Binevenagh, but nonetheless there are significant landscape and visual constraints to wind energy development. These include the coastal setting in the north, the distinctive landform of ridges and small knolls (which raises issues of scale), and the fact that the landscape is open to views from the east.

Although these impacts could be reduced to some extent by careful siting, they are likely to remain a key constraint to wind energy development. The southern part of the LCA is least sensitive

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

This LCA is scenic and contains open and prominent locations at the northern end. The lower southern section of the LCA may be better suited to accommodate some form of wind energy development in landscape and visual terms. It is recommended that site layout fits with the long, low form of the hill. It is recommended that wind energy development reflect the scale of surrounding landform features of this LCA, which are often relatively small and distinctive.

Care should be taken to avoid adverse impacts on the distinctive profiles of hilltop knolls and on natural, cultural and recreational landscape interests. Care should also be taken to avoid adverse impacts on skylines especially in key views such as those from east-west communications routes.

At the time of assessment there were no operational or consented wind farms in this LCA. The nearest wind farm, at Rigged Hill, was visible from parts of this LCA and it is recommended that any new wind farm should be well-separated from that site. There were also two consented wind farms at Long Mountain, around 15km to the east, hence cumulative impacts might occur in future. There may be seaward issues to consider in the future.

LCA 39 Glenshane Slopes

Location: County Londonderry. East facing slopes north and south of Glenshane Pass.

Key Landscape and Visual Characteristics and Values

Scale

High summit of Carntogher (464m AOD) which towers over the Glenshane Pass. Broad, rounded ridges with sweeping slopes and rocky outcrops, leading to steep, pointed summits.

Landform

Relatively small upland area on the eastern fringes of the Sperrins. Landform similar to that of the Sperrins to the west, with knife-like ridges and pointed summits which are more sharply defined than those of the basalt plateau. Summits are surrounded by steep ridges and steep slopes. Deep branching gullies on upland edges.

Enclosure

A largely open moorland landscape, carpeted with close-cropped moorland grasses and extensive bog. Prominent townland boundaries are visible as earth banks and stone walls and form a striking landscape pattern on some slopes. Extensive conifer plantation of Glenshane Forest fringes Upper Roe valley on the south-western edge of the area.

Complexity of landcover and features

Simple open landscape composition on the tops. Eastern slopes have a more diverse landscape pattern, with a transition to the undulating pastures of the drumlin lowlands near Maghera. Striking ladder field patterns on south-east slopes eg at Crockor.

Man-made influence

Generally limited in this open, wild landscape. No prominent buildings or infrastructure except for the A6.

Skylines and settings

Area is a key element in the dramatic approach to and route through the Sperrins and North West along the A6. The upland edges are important skyline features.

Visibility and views

Long distance views to this area from around Lough Neagh. Closer views from Garvagh to the north and Maghera to the west. From the tops themselves there are outstanding views to Donegal and Lough Foyle, Sawel and the high Sperrins, Slieve Gallion, the Antrim Hills and even the Mourne.

Landscape quality (condition)

Generally in good condition, although the transitional landscapes of the eastern and north-eastern slopes have broken field patterns and abandoned farms and cottages that lend an air of decline.

Scenic quality

Very high – dramatic moorland landscape of sweeping slopes and summits. Almost all of the LCA lies in the Sperrin AONB.

Wildness and tranquillity

Extensive area with a strong wild character on the tops, which are inaccessible by road, with gradual transition to more settled pastoral landscapes to the east.

Natural and cultural heritage features

Wealth of nature conservation interest, notably extensive areas of intact blanket bog of European importance (at Carn/Glenshane ASSI) and smaller areas of upland heath. Strong concentrations of archaeological sites at Crockmore, east of Carntogher, and in the north-east corner of the LCA, representing ancient landscapes that have been relatively untouched by change.

Cultural associations

Area is rich in mythology and archaeological heritage.

Amenity and recreation

Glenshane Forest. Carntogher Way and History Trail. Drumbane Trail.

Assessment for Wind Energy Development

Overall sensitivity

While the rounded ridges of this LCA are, in principle, suited to wind energy development, the very high prominence and visibility of the LCA at a Northern Ireland-wide level is a key constraint. In addition, this is a pristine mountain landscape to which many special landscape values – including a strong sense of wildness – are attached.

This landscape is highly sensitive to wind energy development. Even its north-eastern fringes, where landscape condition is in decline, are highly sensitive due to the presence of important archaeological landscapes.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA is a very exposed landscape with very high landscape and visual sensitivity. It is recommended that any turbine development be closely associated with and reflects the scale of farmsteads.

Care would be required to avoid adverse impacts on the extremely sensitive open, exposed slopes and ridgelines and on the key landscape and visual characteristics and values described in this section.

At the time of assessment there were no operational or consented wind farms within this LCA. The nearest operational or consented site was at Rigged Hill, around 10km to the north and Long Mountain, around 16km to the north-east. These might have some impact on the landscape setting of the LCA and cumulative impacts will have to be carefully considered.

LCA 40 Upper Moyola Valley

Location: County Londonderry. Centred on Draperstown and enclosed by Sperrin Mountains to north and Slieve Gallion to south.

Key Landscape and Visual Characteristics and Values

Scale

Broad basin of the Moyola River, containing small scale, intimate, well-settled farmland landscapes and rising to around 250-300m AOD on parts of its western and southern fringes.

Landform

Valley is deeply undulating, with steep, rounded slopes dissected by numerous small branching streams, becoming steeper and smaller in scale towards the centre of the valley.

Enclosure

Surrounding mountains provide a strong sense of enclosure. Upper slopes are relatively open but lower slopes have numerous hedgerow trees, small copses and some avenue features. Dense tree cover creates enclosure and tends to mask the variations in landform. The river is almost hidden from view. Some small conifer plantations such as Derrynoyd Wood.

Complexity of landcover and features

Small pastures and many small broadleaved woodlands forming an irregular patchwork. Larger fields enclosed by walls around the outer margins of the valley; regular ladder fields extending up onto the hills above. Often a striking division between the farmland and the moorland above. Straight roads along the margins of the valley; narrow twisting, banked lanes elsewhere. Traditional farms and houses, bridges and fords.

Man-made influence

Little overt man-made influence. Some pressure for built development. Electricity transmission line cuts across the valley south-west of Draperstown.

Skylines and settings

Most skylines lie on the edges of or outside the LCA and belong to the Sperrin Mountains and Slieve Gallion. No prominent internal skylines.

Visibility and views

Glimpsed views into the valley bottom from roads around valley margins and from lanes rising up the valley sides. Many high level views into and across the area from surrounding hills.

Landscape quality (condition)

Most hedgerows and farmland landscape features are in good condition. Farmland on the edges of the moors is of poorer quality, with gappy hedgerows and weed and scrub encroachment.

Scenic quality

Moderately high scenic quality overall, due unspoilt character, variety of landscape feature and attractive upland setting. Upper slopes are of high scenic quality and included in the Sperrin AONB.

Wildness and tranquillity

Strongly tranquil character away from main roads and some sense of wildness on the upland edges.

Natural and cultural heritage features

Standing stones, cairns, graves and raths on the upper hillsides. Conservation Area at Draperstown.

Cultural associations

Not known.

Amenity and recreation

Area forms part of several important approaches to the Sperrins near Draperstown (roads leading to Banagher Forest, Glenelly and Lough Fea). Derrynoyd Forest and the Rural College.

Assessment for Wind Energy Development

Overall sensitivity

This LCA is characterised by its strongly enclosed, treed character and limited internal views which tend to reduce its sensitivity. This is however offset by the fact that there are many high-level views into the LCA.

This landscape is sensitive to inappropriately scaled wind energy development. The least sensitive part of the LCA is the southern edge of the valley, on the lower slopes of Slieve Gallion.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

Fringe landscapes on the southern edge of the valley are the areas in this LCA that have the best capacity for some form of wind energy development. Consideration could be given to siting turbines on mid slopes against a hillside backdrop. It is recommended that wind energy developments reflect the small scale of landform features. It is also recommended that attempts be made to minimise visual clutter where turbines would be seen in close proximity with electricity transmission lines.

Particular care should be taken to avoid adverse impacts on the setting of or approaches to the Sperrins. The degree of exposure of landscapes of the valley edges should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA. The nearest consented wind farm was at Long Mountain, more than 20km to the north-east. Separation distance from any development in adjoining LCAs should be a consideration, notably Slieve Gallion LCA to the south.

LCA 41 Slieve Gallion

Location: Counties Londonderry and Tyrone. Eastern edge of the Sperrins between Cookstown and Draperstown.

Key Landscape and Visual Characteristics and Values

Scale

Large scale upland area rising to 528m AOD. Steep, flat-topped summit of a former volcanic plug.

Landform

Prominent summits on the eastern fringe of the Sperrins. Distinctive profile with steep-sided, flatter summit than the surrounding mountains and an uneven slope profile. Northern slopes are shallower and more undulating than those on the south. Resistant band of limestone outcrops at the foot of the hill and is dissected by streams in deep, narrow valleys. Upland plateau with blanket bog around Lough Fea; lower outlier hills to south-west.

Enclosure

Slieve Gallion is largely open and untreed at high levels. Increasing hedge and tree cover on lower slopes, particularly to the south, where there are many copses and hedgerow trees, creating a secluded, soft, sheltered character. Shores around Lough Fea are wooded and further west on the outlier hills there are extensive areas of conifer forest, including part of Davagh Forest.

Complexity of landcover and features

Lower slopes have a diverse landscape pattern with an irregular patchwork of fields punctuated by small blocks of woodland. Many of the narrow glens are densely wooded. Some small conifer plantations on the ridges south of the summit. Fields become smaller on steeper slopes and on the valley floor and are mainly enclosed by hedgerows. No large settlements but scattered farms and houses connected by narrow, twisting lanes.

Man-made influence

Single tall mast on the summit of Slieve Gallion. Extensive sand and gravel quarrying of glacial moraine on the north-western side of Slieve Gallion summit, the upland plateau fringes of Lough Fea and in the western outlier hills. Blocky form of conifer woodlands is prominent in parts.

Skylines and settings

Prominent gateway feature for the Sperrins. Hill slopes, particularly those facing south and east, are extremely sensitive and part of the wider landscape setting of Cookstown and Magherafelt. Western outliers, although smaller scale, are also notable skyline features. Bright blue kettle hole lake of Lough Fea provides a visual focus.

Visibility and views

Outstanding 360° views of most of Sperrins and Lough Neagh basin. Focal point in views towards Sperrins from south and east.

Landscape quality (condition)

Landscape quality is generally good, particularly on the southern and eastern slopes, but deteriorates in the western part of the LCA where quarrying and to a lesser extent forestry are intrusive and have damaged the landscape fabric.

Scenic quality

Most of the LCA lies within the Sperrin AONB. The attractive and verdant slope and valley

landscapes and southern and eastern flanks of Slieve Gallion are also an ASQ.

Wildness and tranquillity

The summit of Slieve Gallion has a relatively strong wild character, although this has been affected by the mast and quarrying. The plateau area north of Lough Fea has a very strong wild character with extensive heather moor and bog.

Natural and cultural heritage features

Numerous sites of earth science interest including Slieve Gallion and Lough Fea deglacial complex. Upland raised bog and blanket bog ASSIs at Teal Lough. Remnant semi-natural valley-side woodlands. Wealth of archaeological sites on the plateau area (including part of Beaghmore ASAI). Registered Park at Lissan.

Cultural associations

Not known.

Amenity and recreation

Forest trail from Inishcarn Forest to summit. Viewpoints and picnic sites near Lough Fea. Scenic route north of Slieve Gallion.

Assessment for Wind Energy Development

Overall sensitivity

Slieve Gallion is an LCA of varied sensitivity, reflecting its varied character. The summits and steep southern and eastern slopes are highly sensitive to wind energy development as they are exposed to long views and provide a visual focus over a very wide area. Land around Lough Fea, which links the area to South Sperrin (LCA 24) is also highly sensitive. The south-western outlier hills, although adversely affected by sand and gravel extraction and forestry, are visually prominent thus increasing the sensitivity of this area to wind energy development.

The north-western slopes of Slieve Gallion, with their more rounded topography and lower visual prominence, are somewhat less sensitive, particularly where they are already affected by commercial sand and gravel extraction.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

Most of this LCA has visual prominence and a role as an important landmark. The area of this LCA with the best potential capacity for wind energy development is the western slopes of Slieve Gallion, where the landscape is affected by widespread sand and gravel extraction. Consideration could be given to setting any development in this area well back from the steeper, more prominent slopes along the northern edge of the massif to optimise topographic screening.

Care should be taken to avoid adverse impacts on views westwards across the plateau area around Lough Fea towards South Sperrin LCA and on views of Slieve Gallion from the south and east. Care should also be taken to avoid adverse impacts on natural and cultural landscape features.

At the time of assessment there were no operational or consented wind farms in this LCA. The nearest such wind farms were at Crockagarron around 20km to the south-west and at Rigg Hill and Long Mountain, around 30km to the north and north-west respectively. Separation distances from any development in adjoining LCAs, notably the Moyola Valley LCA to the south, should be a consideration.

LCA 42 Cookstown Farmlands

Location: County Tyrone, west of Lough Neagh

Key Landscape and Visual Characteristics and Values

Scale

A relatively small scale, low-lying drumlin landscape, with land rising to just over 100m AOD towards the west near the Carrickmore Hills and Slieve Gallion.

Landform

This is a drumlin landscape; relatively shallow in the Cookstown area, but becoming steeper and more pronounced on the higher land to the west and north west. Towards the east, the landform flattens towards the floodplains of the Ballymully, Ballinderry and Killymoon Rivers.

Enclosure

Quite an enclosed landscape owing to small-scale topography, field size and hedgerows. The floodplains of the east are shallower and less enclosed.

Complexity of landcover and features

A diverse patchwork of pasture and some arable land, with hedgerows and farm buildings. The wooded parkland landscapes and high stone boundary walls of the Killymoon, Loughry and Drum Manor estates are important local landscape features. The Killymoon River is particularly attractive, with woodlands and small-scale riverside pastures along the immediate river corridor.

Man-made influence

Some intrusive development near Cookstown and along main roads and some sand and gravel extraction.

Skylines and settings

The designed wooded landscapes encircling Cookstown to the south and east contribute to a distinctive setting for the town. Killymoon River is particularly attractive with riparian vegetation and woodlands. Elsewhere, adjacent uplands such as Slieve Gallion and Slievemore provide distant skylines. Local skylines are provided by drumlins.

Visibility and views

This is an inward looking landscape with the drumlins permitting occasional outward views only. The floodplains are more open in character but similarly do not provide long views.

Landscape quality (condition)

The landscape is in relatively good condition, although there is evidence of hedgerow removal in areas where more intensive agricultural operations are undertaken.

Scenic quality

The interaction between drumlins, agricultural activity, floodplains and adjacent uplands contributes to a moderate scenic quality in this LCA. The Sperrin AONB adjoins the LCA to the north-west.

Wildness and tranquillity

River corridors and estates contribute to a sense of tranquillity.

Natural and cultural heritage features

The south of the LCA is part of the Moneymore deglacial complex. Upper Ballinderry River (ASSI and SAC) supports important aquatic species such as freshwater pearl mussel. Rathes, chambered graves, holy wells and estates testify to a long settlement history. Ardboe High Cross near Cookstown is one of the best examples of ninth century high crosses in Northern Ireland. Several Registered Parks including Drum Manor and Killymoon Castle and Loughry near Cookstown.

Cultural associations

Rich association with myths and legends.

Amenity and recreation

Drum Manor Forest Park has a number of walks; Tullaghoge Fort; and Cookstown provides local services.

Assessment for Wind Energy Development

Overall sensitivity

For much of this landscape views are inward looking and short, interrupted by topography and vegetation. These factors reduce the sensitivity of the landscape to wind energy development. However the variations in topography over short distances and the small scale of the drumlins mean that this landscape could easily be overwhelmed by poorly sited wind energy development.

The drumlins and higher lands to the west and north offer the best areas for wind energy development due to their undulating topography, but the scale of turbines in relation to the drumlins will nonetheless be a key constraint. The most sensitive parts of the landscape are the river corridors and their associated trees and woodlands, the historic designed landscapes and the river floodplains.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

This LCA has small scale landscapes. The drumlins in the south-west, towards Slievemore, offer the best opportunities for turbines, although care would still be needed to avoid dominating the drumlin landscape. It is recommended that turbines be integrated into and reflect the scale of the existing pattern of drumlin hills and mature vegetation.

Care should be taken to avoid adverse impacts on the the highly sensitive southern setting of Slieve Gallion, drumlin summits and skylines and characteristically flat open river floodplains. Care should also be taken to avoid adverse impacts on the settings of settlements, historic features such as raths, and estate landscapes.

At the time of assessment there were no operational or consented wind farms in this LCA but two consented sites were located in the adjacent uplands of Slievemore LCA and there were further application sites in both Slievemore and Carrickmore Hills LCAs. Wind energy development in the south-west of the LCA might therefore give rise to cumulative impacts in the future.

LCA 43 Carrickmore Hills

Location: County Tyrone. South of Sperrins, midway between Cookstown and Omagh.

Key Landscape and Visual Characteristics and Values

Scale

A broad, generally open upland fringe landscape, but one that includes a range of smaller scale landscape features such as small loughs, areas of moss and carr woodland. Rises to around 300m AOD at Cregganconroe.

Landform

Underlain by igneous rocks which form an elevated plateau. Steep, prominent rocky granite summits with a crinkled ridge-top profile and undulating landform in areas of glacial moraine. More rolling character on lower slopes to the south.

Enclosure

Generally open and exposed, particularly on upper slopes. Sparse tree cover except for scrubby woodlands on margins of marshy ground. Some localised enclosure by landform and hedgerows.

Complexity of landcover and features

Irregular rocky outcrops. Complex series of glacio-fluvial features. Varied and unpredictable pattern of loughs, marsh, rushy pastures, gorse hedgerows, granite boulders and earth banks. Raised bog and numerous rounded loughs, particularly in the area to the west known as the Murrins.

Man-made influence

Extensive sand and gravel quarrying, particularly in the northern and eastern part of the LCA. Also issues of traffic, housing and industrial development around Dunnamore in the north-east.

Skylines and settings

Area forms skyline north of villages of Carrickmore and Pomeroy and contributes to the setting of these two settlements. To the north, the granite outcrops at Cregganconroe form locally distinctive landscape features when seen from the A505, as do the western outlier hills of Slieve Gallion.

Visibility and views

To the west the LCA is closely framed by summit of Mullaghcarn, providing a strong visual connection to the Sperrin high tops. There are long outward views to the south.

Landscape quality (condition)

Poor marginal farmland has a rough character and is in relatively poor condition. Many field boundaries incomplete.

Scenic quality

Part of the LCA is located on the edge of the Sperrin AONB. Within the remainder of the LCA the areas with highest scenic quality are the western part of the LCA (the Murrins) with small scenic loughs and views to Mullaghcarn; and the north eastern fringe, which abuts Slieve Gallion.

Wildness and tranquillity

The area has a wild and remote character in parts but this is tempered by man-made influences as outlined above and by landscape quality issues.

Natural and cultural heritage features

Important glaciofluvial complexes. Lough Doo ASSI. An outstanding wealth and concentration of prehistoric, particularly Bronze Age, sites.

Cultural associations

Music and folklore associated with the area's wealth of prehistoric sites.

Amenity and recreation

An Creagán visitor centre lies on the northern edge of the LCA. Creggandevsky Archaeological Trail is publicised as a medium distance walking route within the LCA. Drum Manor Forest Park on eastern edge of the LCA is a Registered Park and has woodland walks. Wellbrook Beetling Mill (National Trust) also lies on the east.

Assessment for Wind Energy Development

Overall sensitivity

This landscape, although large scale overall, includes many smaller scale, complex landscape features. Its character could easily be overwhelmed by inappropriately scaled or poorly sited wind turbines. Locally, the relatively strong man-made influence, generally convex skyline and mixed landscape quality, reduce landscape sensitivity somewhat, particularly in the north-east.

However there are also areas of very high landscape sensitivity close to the rocky summits, glacial features and concentrations of prehistoric sites, where the area has a strong wild character. The area to the west, the Murrins, is also more sensitive due to its proximity to Mullaghcarra.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

This LCA has an open, exposed and largely uninhabited landscape on the upper slopes. The middle or lower southern slopes of the LCA, and areas in the eastern part of the LCA (where the landscape is already affected by gravel extraction and industrial development) may be better able to accommodate wind energy development than other areas. It is recommended that wind energy development reflects the relatively small scale of nearby landform and landcover features.

Particular care should be taken to avoid adverse impacts on the distinctive skyline of Cregganconroe, on views to and from the Sperrins at Mullaghcarra, Evishbrack, Beltonanean Mountain and Slieve Gallion and on the area around the Murrins which is sensitive due to its high scenic quality. Care should also be taken to avoid adverse effects on the character and setting of glaciofluvial features, loughs and prehistoric sites and on key recreational landscape interests.

At the time of assessment there were no operational or consented wind farms in this LCA and the nearest existing wind farm was at Crockagarron, around 7km to the south in Slievemore LCA. There were no issues of cumulative impact at this time.

LCA 44 Slievemore

Location: County Tyrone. Upland area between Pomeroy and Garvaghy.

Key Landscape and Visual Characteristics and Values

Scale

Broad, rounded, convex sandstone ridge up to around 300m AOD.

Landform

Sandstone ridge extending from Pomeroy, on the southern edge of the Creggan Plateau, south-west to Garvaghy (beyond which point the ridge becomes part of LCA 16, Brougher Mountain). Highest summits of Slievemore (314m) and Cappagh Mountain (280m) have a rounded shape, while the glens and lower slopes have a more complex, lumpy form resulting from glacial deposition.

Enclosure

Broad ridge tops are a generally open, large scale mosaic of extensive heather moorland and conifer plantations. Tree cover increases on lower slopes, with numerous hedgerows and hedgerow trees.

Complexity of landcover and features

The landscape has a diverse pattern, relating closely to the varied topography. There are strong contrasts in scale, colour and character between the landscape of the ridge tops and that of the undulating pastures and marshy hollows on the fringes of the moorland. Dense network of narrow lanes links scattered farms and villages, with a few straight roads across the ridge top.

Man-made influence

Peat cutting has had a significant influence on many parts of the moorland. Conifers form prominent geometric blocks. Some communications masts on higher ground.

Skylines and settings

Steep escarpment on the south-west of the ridge around Slievemore and Slievedivena. Clear ridge line on the south-east.

Visibility and views

Long outward views from the ridgetop summits over the surrounding lowlands. Although settled, this landscape is relatively remote and empty. The larger settlements surrounding the area (Pomeroy, Ballygawley, Beragh, Sixmilecross and Carrickmore) are in general fairly distant from higher ground, which is partially screened by the convex landform, although Pomeroy has views southwards along the crest of the ridge.

Landscape quality (condition)

Marginal upland landscape where farmland features such as field boundaries are often neglected. Peat cutting, forestry and sand and gravel extraction have also affected landscape quality.

Scenic quality

Scenic quality is unexceptional on the whole. There is no AONB or ASQ designations within this LCA..

Wildness and tranquillity

Some sense of wildness on the summits, reduced by the presence of peat cutting, forestry and sand and gravel extraction.

Natural and cultural heritage features

Extensive blanket bog, but most has been cut over. Some small broadleaved and wet woodlands of interest, notably at Pomeroy Forest and Glenmore Wood ASSI. Archaeological sites such as raths and standing stones, mainly along the north-western edge of the ridge. Registered Park at Pomeroy House.

Cultural associations

Not known.

Amenity and recreation

Few formal opportunities.

Assessment for Wind Energy Development

Overall sensitivity

Much of this landscape is of relatively low landscape and visual sensitivity and hence is well-suited to wind energy development. The broad, convex shape of the ridge; its strongly horizontal form in long views; the presence of localised enclosure by forestry and of various man-made influences; and the limited visibility and prominence of the hill tops all tend to reduce sensitivity.

Sensitivity is generally lowest away from the edges of the ridge, which tend to be more visible. It is higher in areas with distinctive small summits or 'crocks'.

Overall Sensitivity - Medium to low

Location, siting, layout and design considerations

Parts of this LCA are of a scale well suited to wind energy development. Areas away from the edges of the ridge, where the landform is rounded rather than angular, are the most suitable areas for wind energy development. Significant groups of turbines might fit best within this large scale landscape, given the strongly horizontal landscape form. It is recommended that any turbine clusters be well-separated to ensure that the landscape of the LCA is not wholly dominated by wind energy developments. It is also recommended that consistent site layouts and turbine sizes and designs be used within clusters. The utilisation of tree or woodland screening and the use of existing forest tracks for access would be beneficial.

Care should be taken to avoid adverse impacts on areas of sensitive smaller scale topographic interest, such as the small summits or 'crocks' north of Altmore Forest. Care needs to be taken to avoid adverse impacts on views from surrounding settlements and from the A4 and A5 to the south of the LCA.

At the time of assessment the nearest operational wind farm was around 15km outside the LCA at Lendrum's Bridge in Brougher Mountain, LCA 16. There were consented wind farms in this LCA at Slievedivena (20 turbines of 101m) and Crockagarron (6 turbines of 125m); and a number of applications for other sites lie along the ridge. Hence cumulative impacts and appropriate separation distances are key issues.

LCA 45 Dungannon Drumlins and Hills

Location: County Tyrone. Area south-west of Lough Neagh.

Key Landscape and Visual Characteristics and Values

Scale

This is a drumlin landscape, but with an unusually large scale landform. Certain hills such as Branny Hill in the south-west rise to 197m AOD.

Landform

The drumlins form steep, rounded hills, some of which are linked together to form groups of hills with distinctive, rounded summits. The principal hill groups are in the south-west, where two small uplands and in the north-east of the LCA near Stewartstown.

Enclosure

The landscape has an enclosed character, and the steep slopes and scenic loughs add a note of drama. Narrow winding lanes form a dense network. Farms and settlements are sited in sheltered locations on lower slopes of drumlins, often associated with avenues and parkland trees. The areas of higher ground have a somewhat more open and sometimes heathy character, although still farmed. There are small coniferous plantations and pockets of broadleaved wood throughout.

Complexity of landcover and features

The area has diverse landscape patterns and features. Fields are predominantly pasture and are of irregular shapes and sizes, becoming smaller and more angular on steep slopes. Rounded loughs fringed by patches of marsh and alder or willow scrub are a feature of low-lying areas between drumlins; many are overlooked by houses whose gardens might be a significant influence. In some areas arable fields are interspersed with pastures.

Man-made influence

Much of the area is unspoilt by overt human influence. However there are isolated features such as masts and small quarries plus an electricity transmission line in the north of the area. Outskirts of Dungannon have been affected by intrusive industrial, commercial and housing development.

Skylines and settings

Lough shores, drumlins and estates contribute to an attractive setting for several towns and villages including Ballygawley, Aughnacloy and parts of Dungannon. The higher hills such as Aghnahoe Hill, Ivy Hill, Branny Hill and Burnt Hill reach an elevation above the surrounding drumlins, providing local skylines.

Visibility and views

The higher ground in the south-west offers outward views and is in turn widely visible from the A5 Armagh to Omagh road and also from the A4 Belfast to Enniskillen road.

Landscape quality (condition)

This is generally a well maintained landscape in good condition. In the north there is some evidence of amalgamation of fields with removal of older boundaries.

Scenic quality

The scenic quality of this area is quite high with a secretive and ancient character, the steep hills providing more dramatic scenic quality and contrasting with the loughs. Much of the southern part of the LCA lies within the Clogher Valley ASQ.

Wildness and tranquillity

The largely sheltered and pastoral character of this LCA contributes a relatively high tranquillity.

Natural and cultural heritage features

Several sites of earth science interest. The Ballygawley Water and the River Blackwater have white clawed crayfish. Many raths throughout the LCA. Registered Parks at Drumcaine House and Stewart Hall in the north and at Parkanaur, Martray House and Manor House Benburb further south. Conservation Area at Northland in Dungannon.

Cultural associations

Folklore associated with archaeology. US President Grant's ancestral home.

Amenity and recreation

Parkanaur and Drumcaine both now Forest Parks. Ulster Way traverses southern part of LCA. Lakeside picnic sites. US President Grant home.

Assessment for Wind Energy Development

Overall sensitivity

This is a relatively intimate, enclosed landscape. Although, over much of the LCA, views are short due to enclosure by drumlins, the landscape is quite heavily settled. The loughs and areas with shallow landform are especially sensitive and often overlooked or used for recreation. The higher drumlin areas might be somewhat less sensitive but development is still constrained by the relatively small landform scale and the high degree of landscape complexity.

The higher, more open hills in the south-west, which theoretically might be less constrained in scale terms, are particularly scenic and widely visible from popular tourist routes.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

This LCA has a small scale intimate landscape character. The higher hills towards the north and south of the LCA may be better able to accommodate some appropriately scaled form of wind energy development than elsewhere. It is recommended that care be taken to integrate turbines into the existing pattern of drumlin hills and mature vegetation.

Care should be used to avoid adverse impacts on key skylines and hill or drumlin summits. Care should be taken to avoid adverse impacts on the Clogher Valley, on settings of the small scenic loughs, settlements, historic features such as raths and estate landscapes and on views from the A4 and A5.

At the time of assessment there were no operational or consented wind farms in this LCA and the nearest such site was at Slievedivena around 5km west of the LCA. Wind farm development here may have some impacts on the Dungannon Drumlins and Hills, and the need to maintain adequate landscape separation will be a key consideration. In addition, there were other application sites in Slievemore LCA to the west, Slieve Beagh LCA to the south-west, and County Monaghan to the south that might affect this LCA in future. Cumulative impacts will therefore be an important consideration.

LCA 46 Blackwater Valley

Location: Counties Tyrone and Armagh. Lies in south Tyrone adjoining County Monaghan.

Key Landscape and Visual Characteristics and Values

Scale

A flat river valley enclosed by scattered drumlins creating a small scale landscape. Generally low-lying (30-40m AOD), the highest land being around 90m AOD.

Landform

The Blackwater Valley contains the flat marshy floodplain of the tortuous Blackwater River, which flows from the Clogher Valley into Lough Neagh. Scattered drumlins form islands on the floodplain.

Enclosure

Drumlins, often wooded, enclose the valley and hedge-banked lanes allow limited views, creating a secluded and secret landscape.

Complexity of landcover and features

The river is fringed with wet semi-improved and improved pasture and marsh. Fields are divided by overgrown hedgerows and mature trees giving the area a well wooded character. Numerous small streams flow between scattered drumlins and an abandoned canal, with numerous bridges along the length of the valley. Historic wooded designed landscapes; large estate houses with parkland and lakes enjoy an attractive riverside setting.

Man-made influence

There are few intrusive man-made influences in this unspoilt rural landscape.

Skylines and settings

Caledon village enjoys an attractive drumlin setting to the north and the church spire is a local landmark. Middleton with its castle is also situated in attractive wooded drumlin setting.

Visibility and views

Inaccessible, with few settlements; winding banked lanes offer occasional views.

Landscape quality (condition)

The landscape is in good condition with excellent examples of wetland and parkland which have both ecological and historical value.

Scenic quality

This is a rural, peaceful, undisturbed and unspoilt valley with outstanding scenic qualities. The LCA is designated as the Blackwater Valley ASQ.

Wildness and tranquillity

Rural, peaceful and unspoilt landscape is highly tranquil.

Natural and cultural heritage features

Crilly House quarry is of earth science interest containing numerous fossils. There are several small patches of fen in the LCA, usually around small lakes as at Tullybrick Lough ASSI. Estate woodland is also ecologically significant. Numerous raths and crannogs. Registered Parks at Aughnacloy, Caledon and Tynan Abbey, Caledon are among the finest designed landscapes in Northern Ireland, with stone walls, follies and acres of mature woodland. Historic plantation village at Caledon is also a Conservation Area.

Cultural associations

Caledon, home of the Earls of Caledon, has many historic associations eg with architect John Nash, picturesque landscape designer WS Gilpin, and Pheelim O'Neill.

Amenity and recreation

The Ulster Way and cycling routes traverse this LCA.

Assessment for Wind Energy Development

Overall sensitivity

Although the scattered drumlins might afford some screening, this small LCA is highly sensitive to wind energy development due to its secluded, secret and unspoilt character. The small scale of the landscape, both in terms of elevation and features, and the presence of particularly fine historic estates and designed landscapes, further heighten the area's sensitivity.

The LCA is of outstanding scenic quality and the Ulster Way passes through it. These factors further increase its sensitivity.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has a low-lying character, small scale and high sensitivity. It is recommended that any turbine development be closely associated with and reflects the scale of farmsteads and sheltering woodland.

Care would be required to avoid adverse impacts on the extremely sensitive drumlin tops and key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in this LCA. The nearest such wind farm was at Slievedivena, 12km or more to the north-west. The LCA shares a long border with County Monaghan, so there might be transboundary issues in future.

LCA 47 Loughall Orchard Belt

Location: Counties Tyrone and Armagh, south of Lough Neagh.

Key Landscape and Visual Characteristics and Values

Scale

This is a varied landscape, with a mixture of landscape scales and patterns. The drumlins are generally low, rarely exceeding 80m AOD.

Landform

The area is characterised by low rolling drumlins. The ground falls away gently towards Lough Neagh to the north, the Blackwater valley to the west and the Bann valley to the east. The LCA is crossed by numerous small river valleys and streams, tributaries of the Rivers Blackwater and Bann; these have flat open floodplains. The underlying geology is a mixture of sedimentary and contemporaneous igneous rocks and gives rise to rich brown earths.

Enclosure

Generally enclosed by drumlin and hedgerows. Blocks of attractive, well kept orchards are located on the steeper sheltered drumlin slopes. There are many old gnarled trees as well as some newly planted orchards and nurseries. There are numerous wooded designed estates and parklands.

Complexity of landcover and features

The upper slopes are a mixture of pasture and arable fields, enclosed by hedgerows and some hedgerow trees. The very shallow northern slopes near Portadown tend to be poorly drained, with extensive areas of moss. Regenerating alder, birch and willow are found on the moss; and previous peat extraction has left a typical pattern of rectangular working sites linked by access tracks. Locally, attractive loughs, hilltop copses, mature trees and neat clipped hedges are landscape features.

Man-made influence

The landscape pattern over much of the area to the east is influenced by the linear corridors of the M1, the A4 and by the River Bann. Two lines of pylons run east-west across the LCA and the urban fringe of Portadown is under pressure from residential and infrastructure developments.

Skylines and settings

Loughall enjoys an attractive setting associated with the manor house estate and Lough Gill. Low hills provide local skylines. Churches with spires are common in this LCA, creating local landmarks.

Visibility and views

Long views to Lough Neagh and Portadown area from hill-tops. In some areas there are pleasant long views across mixed farmland to farmsteads, churches and woods, but elsewhere, views are more contained by narrow tree-lined roads or regenerating scrub.

Landscape quality (condition)

The landscape condition is relatively good, with a well maintained hedgerow structure.

Scenic quality

This is a well-maintained and diverse landscape. The characteristic orchards, parklands, wetlands and traditional buildings contribute to a relatively high scenic quality although there are no scenic designations as such.

Wildness and tranquillity

This LCA does not have a strong wildness character. It has an active, agricultural landscape which is not particularly tranquil sense.

Natural and cultural heritage features

Carganamuck Quarry is of earth science interest with exposures of limestones and shales and a number of fossils. Selshion Bog ASSI. Demesne woodland (lowland woodland pasture and parkland) includes that at The Argory. The Argory and Address House (both National Trust), Manor House Loughall and Summer Island are Registered Parks. Loughgall, the largest estate, has associated historic features such as crannogs and raths. Conservation Areas at Moy and Loughall.

Cultural associations

Associations with archaeology and estates.

Amenity and recreation

Ulster Way and part of Newry Canal way. Public access to The Argory and Address House.

Assessment for Wind Energy Development

Overall sensitivity

The majority of the area has a rolling landform and good tree cover and in that sense is not particularly sensitive to change. However the complex, varied landscape patterns, with mixed farmland and horticulture, including extensive orchards on sheltered drumlin slopes, are unusual and heighten the LCA's sensitivity. Orchard landscapes in particular are increasingly rare, this being the only example in Northern Ireland.

The key constraint, however, is the small landform scale. This means that wind energy developments could easily dominate and 'flatten' the landscape. The more open land on lower slopes adjacent to the floodplains of the Blackwater and Bann and their tributaries is very sensitive to wind energy development of all types and scales.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The most appropriate locations for turbines are sites sheltered by drumlins and woodland and which are associated with buildings or settlement. Siting in mid-slope locations may provide the best landscape fit. It is recommended that turbines reflect the scale of this complex landscape. It is recommended that attempts should be made to minimise turbines being viewed in conjunction with overhead power lines.

Particular care should be taken to avoid any adverse impacts on distinctive settings and designed landscapes (as described in this section). Care should be taken to avoid adverse impacts on small scale but distinctive landform variations, landmarks such as churches, and the complexity of the area's landscape patterns.

At the time of assessment there were no operational or consented wind farms within or near this LCA. Cumulative impacts might be a consideration in the future.

LCA 48 West Lough Neagh Shores

Location: Counties Tyrone and Londonderry. This LCA is located on the western shores of Lough Neagh.

Key Landscape and Visual Characteristics and Values

Scale

A low-lying landscape with extensive flat pastures and drumlins rising to no more than around 50m AOD.

Landform

The landscape is low-lying, particularly in its eastern half, with a transition from shallow drumlins on the edges of the floodplains, to extensive flat farmland on the fringes of Lough Neagh. Many small streams drain east to the lough.

Enclosure

Enclosure varies but is generally high. There are dense hedges, numerous hedgerow trees, and the mature hedgerow oaks are a special, distinctive feature of the area. There are large wet woodlands of willow, alder and birch on more extensive low-lying land. Enclosure is also provided by embankments close to river channels.

Complexity of landcover and features

Extensive flat pastures surrounded by regular patterns of drainage ditches and a well-connected network of straight hedgerows. Farms and individual houses are concentrated on shallow drumlins, which often form prominent wooded 'islands' and lend greater complexity to the landscape.

Man-made influence

Disused airfield. Some intrusive industry. Intrusive housing and linear development, for example around Moortown. Derelict buildings and abandoned farms.

Skylines and settings

Ballyronan, a wooded estate on the lough shore, has an attractive setting. Ardboe Cross, also on the lough shore, is a landmark in this LCA.

Visibility and views

Views across the flat landscape are often contained by trees and woodland, particularly in the northern half of the LCA. Views towards the lough from the B161 for example at Tamnavalley, on somewhat higher ground inland of the lough shore. Expansive views along the shoreline in parts.

Landscape quality (condition).

Most farmland is in good condition, but wetter areas are more extensively managed with evidence of rush and scrub.

Scenic quality

This LCA has relatively high scenic quality in parts. The immediate lough fringe is part of the Lough Neagh Fringe ASQ.

Wildness and tranquillity

Close to the lough shore there might be some sense of wildness, reflecting the vast expanse of the lough.

Natural and cultural heritage features

Glaciofluvial sands and gravels associated with the deglaciation of the region and the wasting of the Lough Neagh ice sheet. The whole of Lough Neagh is designated as ASSI, Ramsar and is an SPA due to bird populations including breeding terns and great crested grebes and numerous wildfowl and waders. Cultural heritage features include scattered raths, Ardboe Church and Salters Castle.

Cultural associations

Mythology associated with Lough Neagh.

Amenity and recreation

Walks around Ballyronan Wood. Gort Moss Walk. Cycle routes. Small marinas and slipways on the lough shore.

Assessment for Wind Energy Development

Overall sensitivity

The extensive areas of flat topography, high degree of tree and woodland enclosure, and presence of significant man-made influences (notably the disused airfield), suggest that at least parts of this landscape might have relatively low sensitivity to wind energy development. The area is isolated and not widely visible or prominent within the wider landscape because it is so low-lying.

Set against this, the LCA is valued for its scenic, natural and cultural interests and also fulfils an important recreational role. The most sensitive parts of the landscape are the drumlin hills, the higher ground and the lough shores; the least sensitive are the extensive flat pastures away from the lough shores, the former airfield site and areas around existing industrial structures.

Overall Sensitivity - Medium

Location, siting, layout and design considerations

Given the strongly horizontal form of the landscape, parts of this LCA might be well suited to wind energy development. The former airfield site and other areas of degraded landscape away from the lough shore but well-contained by trees and woodland may have the best capacity for some form of wind energy development. Turbine layouts that relate well to the underlying field patterns may be most successful. It is recommended that wind energy development be in scale with and be effectively assimilated within this flat but relatively wooded landscape.

Care should be taken to avoid interruptions to views to the lough from the higher ground in the western part of the LCA. Care should also be taken to avoid adverse impacts on natural, cultural and recreational landscape interests. The lough shore should be respected.

At the time of assessment there were no existing or consented wind farms within or close to this LCA. The nearest such site was the consented wind farm at Crockagarron around 30km to the south-west.

LCA 49 Magherafelt Farmland

Location: County Londonderry. Northwest of Lough Neagh.

Key Landscape and Visual Characteristics and Values

Scale

This is a relatively elevated area adjacent to the West Lough Neagh Shores, reaching heights of 120m AOD at Gortagilly Hill. However it is a farmed landscape with some small scale landscape features.

Landform

Narrow valleys contrast with open, windswept farmland. The drumlin landform is generally not as well-defined as in the surrounding lowlands, but individual small drumlins are important landscape features which are often up-standing from the farmland plateau. The higher ground is separated from the Sperrins to the west by a north-south river valley.

Enclosure

The plateau and drumlins are quite open, in contrast to the more sheltered and enclosed valleys. Narrow river valleys have ribbons of woodland and tall riverbank trees. On higher land, stands of mature trees are present. Hedgerow network is quite sparse with straight roads sometimes unenclosed.

Complexity of landcover and features

The large farmsteads, and their associated stands of mature trees, are prominent landscape features. Woodland is scarce, largely confined to incised streams on the western border and to the Spring Hill estate

Man-made influence

Landscape is affected by recent development around Magherafelt. Electricity transmission line runs north-west to south-east across the area.

Skylines and settings

The western ridges of Magherafelt create an attractive setting for the town; likewise the steep slopes of Spring Hill provide enclosure and a backdrop to views around Moneymore. Individual drumlins and ridgetops such as provide local skylines and are a feature of this LCA. Killowen Hill, south of Magherafelt, is a notable example.

Visibility and views

The summits of Mullaghboy Hill, to the west of Magherafelt; and Spring Hill, overlooking Moneymore, are the highest points of a broken ridge line which provides long views over the deep river valley to the west. There are long views to and from Slieve Gallion to the west, notably from the A31 between Moneymore and Magherafelt.

Landscape quality (condition).

Landscape condition is variable, with the field pattern in some areas being disrupted by loss of hedgerows.

Scenic quality

The scenic quality of this LCA is not particularly high but the views west towards Slieve Gallion are important scenically.

Wildness and tranquillity

This area has no special sense of wildness or tranquillity; it is crossed by several major roads.

Natural and cultural heritage features

Money more complex is of earth science interest, recording the final ice-margins in the Lough Neagh lowlands during the deglacial period. Damp grasslands are important sites for breeding waders. A small number of raths, and Springhill, a seventeenth century plantation house and Registered Park managed by the National Trust. Conservation Area at Money more.

Cultural associations

Associations with the Plantation.

Amenity and recreation

Springhill has a costume museum and trails. Money more and Maghera provide local services.

Assessment for Wind Energy Development

Overall sensitivity

The diversity of landform and enclosure in this LCA contribute to varying sensitivity. The most sensitive landscapes are those that are small in scale such as narrow river corridors, small drumlins and local ridgetops. Open views to Slieve Gallion and to settlements also heighten sensitivity locally.

The plateau is somewhat less sensitive and topographically is separated from the Sperrin edge, which tends to reduce its sensitivity. However, wind energy development might be widely visible as there is little screening offered by either hedgerows or topography.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

To the west of the LCA (ie away from the Sperrins) mid slope locations on the eastern side of more elevated land may offer the best capacity for some form of appropriately scaled wind energy development.

Care should be taken to avoid adverse impacts on the settings or views outlined in this section, notably on the setting of Slieve Gallion and on the very sensitive settings of Magherafelt, Money more and Springhill. Distinctive local skylines should be respected.

At the time of assessment there were no operational or consented wind farms within or near this LCA, with the nearest lying around 30km away.

LCA 50 Moyola Floodplain

Location: County Londonderry. South of Maghera.

Key Landscape and Visual Characteristics and Values

Scale

Flat, extensive, open and medium scale floodplain landscape with small scale low drumlins to the east which rise to approximately 60m AOD.

Landform

Shallow landscape bowl comprising the flat floodplain of Moyola River extending into gently shelving and shallow valley slopes and drumlins in the east. River meanders through this landscape joined by a number of tributaries.

Enclosure

Enclosure is mixed – belts of woodland, isolated trees and drumlin topography create a strong sense of enclosure in places and there are more open views across parts of the floodplain.

Complexity of landcover and features

Grassy embankments along the Moyola River, some steep, and small rectangular fen pastures drained by straight ditches on the floodplain and associated with hedgerows. Areas of dense scrubby fen carr. Stone hump-backed bridges are local features.

Man-made influence

Landscape in the east is settled with dispersed farmsteads and clustered estate villages eg Gulladuff and Knockcloghrim. The valley floor has little settlement and the town of Maghera is located to the north on the margins of the floodplain. Roads are straight and often on embankments. Major roads eg A42 radiate from Maghera and there are occasional small conifer plantations.

Skylines and settings

Most skylines lie outside the LCA and belong to the Sperrin Mountains and Slieve Gallion. No prominent internal skylines. The open valley floor meadows form an important setting to the town of Maghera. Village church towers form local landmarks.

Visibility and views

Views across the open valley floodplain and glimpsed views between drumlins from roads and lanes. High level views particularly towards the Sperrin Mountains and across the area from drumlin tops.

Landscape quality (condition)

Strong contrast in landscape condition – some floodplain pastures are in good condition; others are partly derelict or undermanaged. Hedgerow and ditch condition also varies.

Scenic quality

Scenic quality is unremarkable and there are no landscape designations within this LCA.

Wildness and tranquillity

Floodplain has a remote character as a result of its openness and lack of access. Elsewhere the landscape is deeply tranquil and rural away from the transport corridor of the A42.

Natural and cultural heritage features

Wet woodlands and areas of lowland moss are of ecological value. Ballynahone Bog is a NNR, ASSI, SAC and Ramsar. Curran Bog is an ASSI, and SAC. There are a number of scheduled archaeological sites, which are mainly in the drumlin areas.

Cultural associations

Not known.

Amenity and recreation

Valley floor and riverside locations are important and valued for walks and picnic sites.

Assessment for Wind Energy Development

Overall sensitivity

The open floodplain landscape in this LCA has a simple topography and strong horizontal emphasis which makes it in theory suitable for some wind energy development. However this area is highly valued for nature conservation and sensitive in this respect. Further east the rounded, gently undulating terrain and small scale of the drumlins (which are approximately 40m in height at most) along with the settled character of this landscape (including built landmarks) are key constraints to wind energy development. The role of this landscape in forming a setting to local settlements also increases its sensitivity in parts.

Nevertheless this area is not of high scenic value and the pattern of the landscape is in places fragmented, giving some scope for appropriately scaled wind energy development if carefully sited.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The north-eastern parts of the LCA (where the locally treed character of the area might assist in screening some views) may be better able to accommodate wind energy development than other areas. It is recommended that any turbine development should reflect the small scale of landform features and sensitivity of church tower landmarks.

Particular care should be taken to avoid adverse impacts on the setting of, or approaches to, the Sperrins. Prominent hilltops, the setting of existing built landmarks and natural heritage interests should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA. The nearest consented wind farms was at Long Mountain, more than 20km to the north-east.

LCA 51 Garvagh Farmland

Location: County Londonderry. Intermediate land lying between Sperrin Hills to the west and Lower Bann valley to the east.

Key Landscape and Visual Characteristics and Values

Scale

Low lying drumlin hills and small scale landscape pattern. Ground rises to 139m AOD in the south-west only.

Landform

Undulating terrain comprising rounded drumlins with smooth elliptical forms and a north-west to south-east axis between which are inter-drumlin hollows. Through wider gaps in the drumlins flow the rivers Agivey and Grillagh. Most drumlins are no higher than 50-70m AOD.

Enclosure

Enclosed character as a result of hedgerow pattern, drumlin topography, many small copses, numerous hedgerow trees and woodlands. Woodland blocks are most prevalent to the east of Garvagh.

Complexity of landcover and features

Predominately pasture (some wet and rush infested, adding texture to the landscape) along with wetland areas in the inter-drumlin hollows. Pattern of field enclosure and woodlands, copses and trees emphasise the drumlin landform.

Man-made influence

Dispersed pattern of farms linked by minor lanes. Modern bungalows and associated urbanising influences throughout the area.

Skylines and settings

Rounded drumlin tops form local skylines. This landscape provides an important part of the setting to the Sperrin AONB, the hills forming a skyline to the west. This LCA also forms a setting to the towns of Maghera and Garvagh. The church at Aghadowey forms an important landmark.

Visibility and views

Views are generally short and inward-looking although there are occasional elevated views from drumlin tops on local roads towards the rising land of the Sperrin Mountains to the west and Long Mountain Ridge to the east.

Landscape quality (condition)

Farmland on the drumlins is in good condition, particularly where drumlins are smaller although many hedgerows are not maintained and there are occasional patches of uncultivated land. Some loss of quality due to dispersed development and loss of field boundaries particularly in the north-east.

Scenic quality

This landscape is not designated but abuts the Sperrin AONB in the west and south.

Wildness and tranquillity

In places away from the major roads this landscape has a deeply tranquil quality.

Natural and cultural heritage features

Occasional archaeological sites, with the highest concentration occurring in the south with a number in State Care. Ampertaine House is a Registered Park.

Cultural associations

Not known.

Amenity and recreation

Cycling is popular in this area.

Assessment for Wind Energy Development

Overall sensitivity

The rounded gently undulating terrain and small scale of the drumlins (which are approximately 40m in height at most), along with the settled character of this landscape, make much of the area highly sensitive to wind energy development. Areas of archaeological or historic value and the role of this landscape as a setting to local towns are key constraints. This area is not of high scenic value and the pattern of the landscape is in places fragmented.

Away from the rising land close to the Sperrin Mountains and in the more wooded areas east of Garvagh where the topography is more gently rolling, the landscape is less sensitive to wind energy development if carefully sited.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The northern part of this LCA and particularly east of Garvagh (where the topography is less distinct, cultural heritage sites are fewer and where blocks of woodland might assist in screening some views), may be better able to accommodate wind energy development than other areas. It is recommended that wind energy development relates well to field enclosure patterns and reflects the scale of settlement and landscape features and drumlins.

Particular care should be taken to avoid adverse impacts on areas with distinctive views to the Sperrins. Care should also be taken to avoid adverse impacts on cultural heritage landscape interests, registered park land and local landmarks. Drumlin summits should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA and the nearest existing wind farm was at Rigged Hill, around 7km to the west. There were also consented wind farm sites to the east in LCA 58 (Garves and Glenbuck), around 10km away. These sites might give rise to some cumulative impacts in future. Adequate separation from any wind farms in adjacent LCAs will be important

LCA 52 Lower Bann Valley

Location: Counties Londonderry and Antrim. Valley landscape between lowland drumlins to the west and Long Mountain Ridge to the east.

Key Landscape and Visual Characteristics and Values

Scale

Broad expansive valley of large to medium scale, particularly on open floodplain. Low elevation at approximately 50m AOD.

Landform

Gentle, relatively flat landform comprising floodplain of Lower Bann River with isolated drumlin hills towards the outer fringes of the valley.

Enclosure

Open character particularly around Lough Beg. Elsewhere conifer plantations near Portglenone, areas of wet woodland, mixed woodland belts as well as hedgerow trees give rise to a generally enclosed character overall.

Complexity of landcover and features

Diverse landscape pattern including open floodplain pastures divided by straight drainage ditches with areas of poor drainage, wet woodlands and bog. In places rivers are flanked by raised embankments. On margins of area there is a strong hedgerow network with many mature hedgerow trees.

Man-made influence

Extensive ribbon development along straight roads and on lower drumlin slopes and some nucleated villages. Some industrial development, a new bridge and transmission lines near Toome.

Skylines and settings

Wide skylines are formed by higher land to the west and east. The churches on Church Island, Lough Beg, and in the historic towns act as local landmark features. This LCA forms an important river setting to the towns of Kilrea, Castledawson and Bellaghy and to Lough Beg and Lough Neagh.

Visibility and views

Openness affords some longer range views (including views from boat traffic on the River Bann) across this landscape as well as views to higher land to the west including the Sperrin Mountains and Slieve Gallion, and to the east where Long Mountain Ridge forms the skyline.

Landscape quality (condition)

Local areas have a degraded character as a result of loss of field boundaries.

Scenic quality

The Lower Bann valley floor and farmland margins to Lough Beg are an ASQ.

Wildness and tranquillity

Secluded character over much of the area. The fringes of Lough Beg are particularly remote and tranquil.

Natural and cultural heritage features

High concentration of earth science and nature conservation sites, many of which are designated ASSIs including Lough Neagh, Lough Beg, Tully Hill, Wolf Island Bog, Dead Island Bog, Ballymacombs More and Toome. The western slopes of Lough Beg are also a NNR. Lough Beg and Lough Neagh are also SPAs and are important for breeding terns and great crested grebes and numerous wildfowl and waders. There is a high concentration of Registered Parks in this LCA including Moyola Park, Ballyscullion House, Moore Lodge and Portglenone House. There are a few archaeological sites, some of which are in State Care.

Cultural associations

Eel fishery at Toome Bridge.

Amenity and recreation

Portglenone Forest Park and cycling. Boating on River Bann.

Assessment for Wind Energy Development

Overall sensitivity

While the relatively simple and flat topography found in this area in theory makes it suited to wind energy development, this LCA has a wealth of nature conservation interest and designed parkland landscapes as well as areas of high scenic quality associated with Lough Beg and Lough Neagh. These qualities act as key constraints to wind energy development. The river valley floodplain of the Lower Bann and tributary river valleys are also particularly sensitive to wind energy development because of their openness and small scale drumlin landscape features.

The landscape is somewhat less sensitive where the topography is relatively simple; vegetation provides localised enclosure and potential screening; and there are fewer sensitive cultural or natural heritage sites.

Overall Sensitivity - High

Location, siting, layout and design considerations

The middle western part of this LCA (where the topography is relatively simple) is the area most likely to be able to accommodate some form of wind energy development. It is recommended that wind turbines relate well to field enclosure patterns and reflect the scale of the drumlins and other landscape features.

Care should be taken to avoid adverse impacts on the particularly sensitive, rounded small scale drumlins and small scale tributary valleys. Care should be taken to avoid adverse effects on church landmarks and on natural and cultural heritage landscape interests.

Drumlin summits should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA and the nearest consented wind farms were at Garves Mountain Farm and Glenbuck in LCA 58: Long Mountain Ridge (around 5km away). These might give rise to some cumulative impacts in future.

LCA 53 Lower Bann Floodplain

Location: Counties Londonderry and Antrim. Between Aghadowey in west to Ballymoney in east.

Key Landscape and Visual Characteristics and Values

Scale

Mixed – some areas of extensive open floodplain pastures and other areas of smaller field pattern and enclosure. Elevation rising to 50m AOD.

Landform

Flat floodplain extending into undulating landform on outer margins, across which flow the wide channel of the Lower River Bann and numerous tributaries.

Enclosure

Extensive blocks of wet woodland on margins of rivers and some woods (including blocks of conifers) on higher land at margins (eg Brickhill Bridge) giving rise to moderately enclosed landscape.

Complexity of landcover and features

Varied sized pastures. On floodplain these are divided by straight drainage ditches.

Man-made influence

Dispersed settlement pattern. Disused airfield. Large farms with prominent buildings and straight roads on embankments across the floodplain.

Skylines and settings

Church at Aghadowey and rath on the floodplain near Ballynacree House are local landmark features. This is a landscape of gentle topography. Prominent skylines tend to be formed by higher land beyond this LCA eg Binevenagh hills and Long Mountain Ridge.

Visibility and views

There are some medium distance views from the slightly raised land overlooking the floodplain.

Landscape quality (condition)

Varied – there is evidence of hedgerow removal in areas with good quality farmland. Low-lying pastures are often in poor condition (infested with rushes). Disused airfield has a degraded character.

Scenic quality

Although of some scenic interest, there are no landscape designations in this LCA.

Wildness and tranquillity

This landscape has a tranquil character away from main roads and the disused airfield but is not wild.

Natural and cultural heritage features

Occasional raths on the valley floor form important archaeological sites (scheduled or in state care). This landscape has a high concentration of Registered Parks including Moore Fort, Lizard Manor and Bovagh House.

Cultural associations

Not known.

Amenity and recreation

Walks, parking and picnic locations along the River Bann and some camping sites.

Assessment for Wind Energy Development

Overall sensitivity

While the relatively simple and flat topography found in this floodplain landscape in theory makes it suited to wind energy development, the often open nature of the floodplain makes it visually sensitive. The river floodplain also contains a number of landscape features and affords a high degree of tranquillity which is sensitive to change. The small geographical extent of this LCA is also a key constraint.

In areas where the landscape condition is mixed and landscape patterns are less strong such as in the south-west of the LCA and around the disused airport, the landscape is somewhat less sensitive.

Overall Sensitivity - High

Location, siting, layout and design considerations

The landscapes in the south-western parts of this LCA (where the condition of the landscape is mixed, there are fewer sensitive natural and cultural heritage sites, and localised woodland blocks might provide some screening), may be better able to accommodate some form of wind energy development than other areas. It is recommended that turbine layouts relate well to the pattern of ditches and woodlands and reflect the scale of landscape and settlement features.

Particular care should be taken to avoid adverse impacts on areas which form an important setting to settlements or Registered Parks. The open floodplain adjacent to the River Bann and natural and cultural heritage landscape interests should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA and the nearest consented wind farms were at Garves Mountain Farm and Glenbuck in LCA 58: Long Mountain Ridge (approximately 6km away). These might give rise to some cumulative impacts in future.

LCA 54 Coleraine Farmland

Location: Counties Londonderry and Antrim. Comprises farmland along the north coast and stretching inland along the River Bann.

Key Landscape and Visual Characteristics and Values

Scale

Large-medium scale on open ridgetops; sand dunes and coastal areas with areas of more intimate small scale landscape in lower lying areas and coastal farmland fringe.

Landform

Series of broad ridges (rising to approximately 90m) and valleys aligned north south with occasional rocky outcrops. River Bann flows in a narrow wooded valley widening to an estuary at the coast. The coastline is dramatic and rocky with indented broken cliffs comprising distinctive peninsulas, sand dunes and expansive sandy beaches.

Enclosure

Ridges are open and windswept, interspersed with areas of more secluded farmland eg south of Portrush. Enclosure is created by topography and bushy hedgerows. Somerset Forest (mixed woodland) creates localised enclosure.

Complexity of landcover and features

Complex landcover. Mixture of coastal habitats, estuary; inland - incised wooded river valley and intervening farmland.

Man-made influence

Larger settlements including Coleraine, Portrush, Portstewart and Castlerock and the outskirts of Ballymoney to the south exert an influence over surrounding landscapes. Caravan parks and housing developments sometimes prominent on skylines.

Skylines and settings

The coastal landscapes, River Bann estuary and inland ridges form important settings to the towns of Castlerock, Portstewart, Portrush and Coleraine and part of the wider landscape setting of the Giant's Causeway and Causeway Coast WHS. Similarly the wooded Bann valley and its tributary valleys form an important setting to Coleraine. Local landmarks include churches and historic sites eg Ballyreagh Castle.

Visibility and views

Long sweeping views to the Causeway Coast from the lowlands east of Coleraine and to the hills of Binevenagh to the west. Distinctive and memorable coastal views out to the Skerries Islands and along coastline. Elevated views from inland ridges out to sea and over coastal towns.

Landscape quality (condition)

Moderate condition – some loss of field boundaries.

Scenic quality

Scenic quality is high, particularly within the eastern coastal areas of this LCA which are included within the Causeway Coast AONB; and the north-western part of the LCA which lies within Binevenagh AONB.

Wildness and tranquillity

Rugged coastal sand dunes have a striking wild character.

Natural and cultural heritage features

Sand dune landscapes at the mouth of the Bann. SAC and ASSI . Nature Reserves also exist along the Bann Estuary and at Portrush. These designations recognize the particular importance of the Bann Estuary and the coast for birds and other wildlife interests. Areas of particular importance include the Bann Estuary, Portrush West Strand, Rathmore Head and The Skerries. Some sites are managed by the National Trust. Registered Parks at Cromore, Guy Wilson Daffodil Garden, Knockarna House, Leslie Hill and O'Harabrook.

Cultural associations

Not known.

Amenity and recreation

Golf courses along the coast (Portrush is of international importance). Caravan parks. Waymarked walks from the coast along the estuary to Coleraine; and walks at Christie Park and Somerset Forest, along the River Bann, and through woodlands. Coastal areas are important for watersports. Horse riding on beaches and rural lanes. Portrush has a role as one of Northern Ireland's premier seaside resorts.

Assessment for Wind Energy Development

Overall sensitivity

The farmland in this LCA is vulnerable to wind energy development due to its generally open character and elevation. The wooded river valley of the Bann is also highly sensitive to wind energy development as a result of the scale of the landscape features and the area's recreational value. Similarly the complex indented form of the coastline and open character of the Bann estuary, along with their subtle characteristics and strong sense of wildness, are particularly sensitive. These characteristics are key constraints in this LCA.

Land to the south-west of the LCA away from the estuary comprises broader ridges where there are fewer cultural and natural heritage sites. Here the landscape is somewhat less sensitive.

Overall Sensitivity - High

Location, siting, layout and design considerations

The southern-western parts of this LCA (where there are fewer sensitive natural and cultural heritage sites, less recreational activity and where localised woodland might provide some screening) may be better able to accommodate some form of wind energy development than other areas. It is recommended that wind energy development reflects the scale of landscape and settlement features.

Particular care should be taken to avoid adverse impacts on the extremely sensitive Binevenagh and Causeway Coast landscapes, other estuary and coastal landscapes and on areas which form an important setting to settlements or the River Bann valley. Important skyline locations, rocky outcrops and natural and cultural heritage landscape interests should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA and the nearest existing wind farm was at Rigged Hill in LCA 36, approximately 12km away. There may be seaward issues in the future.

LCA 55 Garry Bog

Location: County Antrim. West of Bush River north of Ballymoney.

Key Landscape and Visual Characteristics and Values

Scale

Open broad, large scale landscape forming a very small LCA. Low elevation at approximately 35m AOD.

Landform

Flat expansive floodplain landscape.

Enclosure

Open exposed character with occasional shrubs and trees and some blocks of coniferous woodland which provide localised enclosure and structure.

Complexity of landcover and features

Matrix of farmland, carr, raised bog and coniferous forestry. Pastures are divided by straight wet ditches and post and wire fencing.

Man-made influence

Coniferous plantations (eg Garry Wood) and geometric pattern of drainage ditches. Few houses and farms located along roadsides.

Skylines and settings

Vertical structures such as telegraph poles are prominent against the skyline.

Visibility and views

Open landscape with long flat views to surrounding rolling farmland and hills beyond.

Landscape quality (condition)

Raised bog of Garry Carr is in good condition. However the flat surrounding farmland has a degraded feel in parts as a result of post and wire fencing which is in a poor state of repair.

Scenic quality

There are no landscape designations associated with this LCA.

Wildness and tranquillity

Rural, remote, relatively wild character as a result of little settlement and general open pastoral characteristics.

Natural and cultural heritage features

Garry Bog is a lowland raised bog and is designated as ASSI, NNR, SAC and Ramsar site.

Cultural associations

Not known.

Amenity and recreation

Garry Bog is an area of tourism and recreational value for walking and exploring.

Assessment for Wind Energy Development

Overall sensitivity

The open, broad and expansive character of this small LCA, and its relatively simple topography, make it in theory suited to wind energy development. However the nature conservation interest of much of the area is high; and it provides an oasis of wild, tranquil character within an area of intensive farming. In addition, wind energy development in the south of the area could be highly visible, particularly from Ballymoney.

However, the coniferous plantations found to the north-east of this LCA have a blocky character, limit views and could help accommodate appropriately scaled wind energy development. Sensitivity here might be lower, although the area concerned is very small.

Overall Sensitivity - High

Location, siting, layout and design considerations

Areas already influenced by forestry in the north-eastern part of the LCA may be better able to accommodate turbines than land elsewhere. It is recommended that turbines reflect the sensitive landscape setting of this LCA and the relatively low elevation of surrounding farmland and hills.

Care should be taken to avoid adverse impacts on the highly sensitive wild and tranquil landscape character associated with this area and on key landscape and visual characteristics and values described in this section. Open, exposed farmland should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA or in adjacent LCAs.

LCA 56 Dervock Farmlands

Location: County Antrim. Area north of Ballymoney extending towards Ballycastle and Coleraine.

Key Landscape and Visual Characteristics and Values

Scale

Medium to large scale derived from gentle topography and field enclosure pattern. Land rises to approximately 120m AOD.

Landform

Open, rolling but often flattish farmland crossed by shallow valleys of River Bush. This landscape has a strong horizontal emphasis.

Enclosure

Mature hedgerow trees coupled with areas of broadleaved and conifer woodland create moderate enclosure. Trees become progressively more windswept towards the coast and the landscape more open and exposed. More sheltered, intimate landscapes occur along the River Bush valley; pockets of fen and in woodland areas.

Complexity of landcover and features

Mixed land uses dominated by pastures and some arable forming a patchwork of fields separated by clipped hedges and fences. Large area of coniferous woodland. Inland there are small flat areas of raised bog.

Man-made influence

Commercial forestry. Scattered small settlements (including Bushmills) and individual properties along minor lanes with traditional farms associated with large new barns. Some prominent new farm buildings sit uncomfortably in the landscape.

Skylines and settings

This landscape forms an important inland setting to the Causeway Coast and Antrim Coast and Glens AONBs and the Giant's Causeway and Causeway Coast WHS. It is also an important setting to the historic towns of Bushmills and Dervock. Occasional church towers stand out as local landmarks.

Visibility and views

Open rolling countryside permits long views particularly from elevated ridges and routes to and from the WHS.

Landscape quality (condition)

Farmland is in generally good condition. Hedges are well clipped with occasional replacement to post and wire.

Scenic quality

The land surrounding and including the historic town of Bushmills forms part of the Causeway Coast AONB. The north-eastern fringes of this LCA also fall within the Antrim Coast and Glens AONB.

Wildness and tranquillity

Wild character becomes progressively stronger towards the coast on more elevated ridges of farmland. Elsewhere the landscape has a strong rural tranquillity.

Natural and cultural heritage features

Clontyfinnan is designated an ASI. High concentration of Registered Parks along the River Bush and its environs including Gardenvale, Ballyhibistock House, Benwarden House, Ballylough House and Dunarave. Scattering of archaeological sites many of which are scheduled with a concentration occurring in the Ballymoney area. Conservation Areas at Bushmills and Ballymoney.

Cultural associations

Bushmills is associated with important Irish whisky distillery.

Amenity and recreation

Bushmills is a major tourist centre serving the Causeway Coast AONB. Waymarked walking route connecting coast road with Ballycastle. Important tourist routes (A2 and A44) pass through this landscape.

Assessment for Wind Energy Development

Overall sensitivity

The variety of enclosure and land use in this landscape reduces its sensitivity to wind energy development. However the often open long distance rural views and presence of areas with a smaller scale intimate character, such as the river valleys and pockets of fen, make parts of this landscape sensitive to development. The northern fringes of this LCA (particularly north of the B17) are especially sensitive to wind energy development as a result of their visual prominence and importance in providing a rural unspoilt backdrop to the Giant's Causeway and Causeway Coast World Heritage Site.

The more central areas where there are larger blocks of commercial forestry and where the land dips away to the south are likely to be less sensitive. The southern fringes where the land rises towards Connollys Hill might also be less sensitive, although the fact that the landscape forms part of the setting to adjacent LCAs in this area is likely to be a constraint.

Overall Sensitivity - Medium

Location, siting, layout and design considerations

The northern edge of this LCA, is a sensitive part of the setting of the WHS. The central and southern parts of this LCA (where the land dips away from the coast, and where there are blocks of woodland), may be better able to accommodate wind energy development than other areas. It is recommended that turbine layouts relate well to the pattern of field enclosures and blocks of woodland and reflects the scale of the landscape features and patterns.

Care should be taken to avoid adverse impacts on the particularly sensitive prominent skylines and viewpoints and on the special qualities of the Causeway Coast, including the WHS, or the Antrim Coast and Glens. Care should also be taken to avoid adverse effects on areas which form an important setting to settlements or Registered Parks.

At the time of assessment there were no operational or consented wind farms in this LCA and the nearest existing wind farm site was at Corkey (approximately 8km away to the south-east). Other consented wind farms were at Garves Mountain Farm and Glenbuck in LCA 58: Long Mountain Ridge (approximately 6.5km away). These might give rise to some cumulative impacts in future. Careful consideration will need to be given to separation distances between wind farm sites in this and adjoining LCAs.

LCA 57 Causeway Coast and Rathlin Island

Location: County Antrim. North coast between Portrush and Ballycastle.

Key Landscape and Visual Characteristics and Values

Scale

Medium scale rural landscape rising to 207m AOD.

Landform

High plateau coastal landscape with rocky knolls and vertical or stepped rugged cliffs. Coastal features include stacks and needles and the island of Rathlin.

Enclosure

Exposed and open windswept landscape.

Complexity of landcover and features

Rough and semi-improved pastures divided by low (often gorse) hedges, stone walls and post and wire fencing. Occasional hedgerow trees are windswept. Rocky knolls are characteristic.

Man-made influence

Some modern bungalows, derelict cottages and farmsteads (some of which have been developed as holiday cottages). Occasional disused quarries.

Skylines and settings

Ruined castles on headlands and cliff tops form striking landmarks. This landscape forms an important setting to the coastal towns of Portrush, Portballintrae and Ballycastle.

Visibility and views

Long views from elevated areas along the coast and inland. Large farms, barns and holiday cottages might be visually prominent, as are wires and poles where they occur on skylines.

Landscape quality (condition)

Coastal margins have a pristine condition. Inland fringes have suffered from some development but otherwise remain in good condition overall.

Scenic quality

High scenic quality derived from dramatic basalt cliffs, sandy bays, coastal scenery and rich wildlife and archaeological features. The majority of this LCA falls within the Causeway Coast AONB. Rathlin Island forms part of the Antrim Coast and Glens AONB.

Wildness and tranquillity

Wild and open character as a result of its exposure to sea weathering, strong prevailing winds and lack of tree cover or topographic shelter.

Natural and cultural heritage features

Unique formation of the Giant's Causeway and Causeway Coast – Northern Ireland's only World Heritage Site. Particularly high concentration of natural heritage sites associated with valued habitats (including sand dunes) or exceptional geology eg Craigahulliar, White Park Bay, Carrickarade, White Rocks, Giant's Causeway and Dunseverick, Runkerry, Sheep Island and North Antrim Coast. The latter two are also designated SPA and SAC respectively. Rathlin Island also has a wealth of ASSI, ASI, SPA and SAC designations and a NR reflecting its importance in terms of nature conservation and bird habitats. Birds within this LCA include breeding auks, gulls, fulmars, peregrine and cormorant. Rich in

archaeology including ruined castles eg. Dunluce Castle and Dunseverick Castle; and raths and cairns associated with Lannimore Hill, many of which are scheduled.

Cultural associations

Associated with the myth and legend of Finn Macool. Area also associated with the Girona (part of the Spanish Armada) which was shipwrecked off the Causeway Coast.

Amenity and recreation

Beaches are valued for outdoor recreation including horse riding. Giant's Causeway is Northern Ireland's premier tourist attraction. There are various coastal walks (including the Causeway Coastal Way). Watersports are also popular, including surfing. The Carrick-a-rade bridge is also a key tourist destination. The coast road is a scenic route and has a number of parking places with spectacular coastal views.

Assessment for Wind Energy Development

Overall sensitivity

The Causeway Coast and Rathlin Island LCA is highly sensitive to wind energy development. This is due to the open nature of this landscape, its elevation, and the opportunity for wide ranging views; these factors act as key constraints. It is also because this landscape is of exceptional coastal beauty and is a key tourist destination within Northern Ireland. Its international importance has been recognised in WHS designation.

The inland parts of this landscape, in the main form an important backdrop to the designated landscape. This landscape is also highly valued for its archaeological sites and range of other natural and cultural heritage landscape features.

Overall Sensitivity – High

Location, siting, layout and design considerations

This LCA has high landscape and visual sensitivity. It is recommended that any turbine development be closely associated with and reflects the scale of farmsteads and sheltering woodland.

Care should be taken to avoid adverse impacts on the extremely sensitive, visually prominent and open, exposed slopes and ridgelines and on the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in this LCA or adjacent LCAs and the nearest existing wind farms was at Corkey in LCA 118 (over 22km away). There may be seaward issues to consider in future, especially from elevated coastal viewpoints.

LCA 58 Long Mountain Ridge

Location: County Antrim. Ridge extending from Ballymoney to Randalstown in the south.

Key Landscape and Visual Characteristics and Values

Scale

Diverse scales – medium to large scale on broad, rounded ridge rising to 210m AOD, and smaller scale on side slopes. Ridge elevation is greatest in the north and becomes progressively shallow towards the south.

Landform

Distinct rounded ridge shaped by glaciation and orientated north-south with complex and undulating side slopes. Strong horizontal form when viewed from east and west.

Enclosure

Open and exposed on ridge crest; more treed (hedgerow trees, avenues of beech and wooded estates) on side slopes. Woodland in the south is less common.

Complexity of landcover and features

Predominately pastoral farmland (rough and improved pastures) with some arable defined by strong hedge enclosure pattern with hedgerow trees. Patches of moorland, scrub and blanket bog occur on exposed ridge top especially towards the north. Craggy outcrops occur at the heads of streams.

Man-made influence

Settlements (eg Rasharkin and Dunloy) and houses are frequent and dispersed on ridge crest and side slopes and include some intrusive development. Occasional conifer plantations eg Craigs Wood. Complex network of telegraph poles. Existing telecommunications masts stand out on the skyline.

Skylines and settings

This landscape forms an important skyline feature when viewed from lower-lying landscapes adjacent as the main area of elevated land between the Sperrins and Antrim Coast and Glens. The southern slopes of the ridge form a northern setting to Lough Neagh. Church spires at Moneyglass and Ahoghill are key landmarks.

Visibility and views

Distant elevated views into lowlands, river valleys and across to other ridges and hills eg to Antrim Plateau to the east and the Sperrins to the west. Views constantly change through this landscape as a result of complex valley-side topography and vegetation.

Landscape quality (condition)

The moorland areas on the crest of the ridge are fragmented and under-managed but otherwise the condition of this landscape is fair to good.

Scenic quality

There are no landscape designations in this LCA.

Wildness and tranquillity

The more open crest and moorland scrub areas have a sense of relative wildness and remoteness. Elsewhere the rural and treed character of the landscape gives rise to a high degree of tranquillity.

Natural and cultural heritage features

Ballymacaldragh is an ASSI. Concentration of archaeological sites and features in state care or scheduled. Small wooded estates on lower slopes overlooking the River Main valley. Glebe House is a Registered Park.

Cultural associations

Not known.

Amenity and recreation

Long distance walking route from Portglenone towards Lough Beg.

Assessment for Wind Energy Development

Overall sensitivity

The gentle convex shape of the ridge and its relative simplicity of character tend to reduce this landscape's sensitivity to wind energy development; and although the area is visible over a wide area, close range views are generally filtered by existing vegetation. In addition, this LCA is not of exceptional landscape or scenic quality. This means that, overall, landscape sensitivity is medium.

However, the side slopes and southern sections of the ridge are of a lower elevation and have a more complex topography as well as smaller scale field patterns which increase sensitivity. The southern sections of the ridge also form a setting to Lough Neagh. In addition landscape features such as craggy outcrops at the heads of streams, archaeological sites, estate landscapes and dispersed pattern of settlement are key constraints in some areas.

Overall Sensitivity - Medium

Location, siting, layout and design considerations

Parts of this LCA have a strongly horizontal form which is well suited to wind energy development. The central and northern crest of this LCA may be better able to accommodate wind energy development than other areas. It is recommended that turbine layouts relate well to the pattern of field enclosures and blocks of woodland, and reflect the relative scale of the landform, field patterns and landscape features.

Care should be taken to avoid adverse effects on archaeological sites and their settings and other key landscape features as noted in this section.

At the time of assessment there were no operational wind farms in this LCA, however there were two consented wind farms in LCA 58: Long Mountain Ridge at Garves Mountain Farm and Glenbuck (5 and 1 turbines of 125m and 120m respectively) and further application sites in close proximity to Glenbuck, where they might read as a cluster with it. Other existing and consented wind farm sites occur to the east in LCA 118 (Corkey and Gruig, approximately 9km away). Hence there are growing issues of cumulative impact. Ideally wind energy development in this LCA would read as a cluster. Careful consideration will need to be given to cumulative impacts and separation distances from sites in other nearby LCAs.

LCA 59 Cullybackey and Clogh Mills Drumlins

Location: County Antrim. East of Long Mountain Ridge extending south to Ballymena.

Key Landscape and Visual Characteristics and Values

Scale

Medium (in north-east) to small scale as a result of relatively low-lying topography, rising to 168m AOD, river valley and field enclosure pattern.

Landform

Variety of landform including steep-sided ridges, generally trending north-south, and small hills, troughs and hollows between the distinctive rounded drumlins on River Main valley floor. River Clogh meanders through the drumlins.

Enclosure

Relatively high tree cover and undulating topography give rise to a sheltered and enclosed landscape.

Complexity of landcover and features

Pastures divided by hedgerows and stone walls. Wet rush infested pastures in hollows between drumlins. Areas of localised peat cutting. Historic sites such as mottes and stone bridges are characteristic features.

Man-made influence

Main transport corridor for the A26. Abandoned gravel pits exist on the main esker ridge and quarrying is more prevalent around Ballymena. Ballymena area is affected by housing pressure and road improvements

Skylines and settings

The River Main Valley and Glarryford esker form an important setting to the town of Cullybackey. Historic mottes located on prominent hill tops form notable landmarks eg Dundermot Motte, as does the prominent church spire of Cullybackey.

Visibility and views

This is a predominately inward-looking landscape as a result of vegetation and topography although there are some longer views to higher land adjacent eg to the Long Mountain Ridge to the west and hills of the Antrim Plateau to the east.

Landscape quality (condition)

Improves to the north-east away from Ballymena. Hedgerow neglect has lead to overgrown, gappy or leggy hedgerows in places.

Scenic quality

The Clogh River valley is of scenic interest.

Wildness and tranquillity

This landscape is deeply rural in areas away from Ballymena and the A26 transport corridor; it has a high degree of tranquillity but it is not remote or relatively wild.

Natural and cultural heritage features

The west of the LCA includes most of the Glarryford esker outwash complex, where the ridge and mound topography adds interest to the low-lying, frequently bog-dominated, valley of the River Main. Many of the low lying wetland landscapes including Caldanagh Bog, Dunloy Bog and Frosses Bog are ASSIs. Concentration of archaeological remains including raths and mottes which are scheduled sites. Lissanoure Castle is set within wooded historic parkland towards the northern end of the LCA and is a Registered Park, along with Craigdun and Hillmount further south.

Cultural associations

Not known.

Amenity and recreation

A26 is the main tourist route connecting Belfast with the North Antrim coast.

Assessment for Wind Energy Development

Overall sensitivity

For much of this landscape views are inward-looking and short, interrupted by topography and vegetation. This reduces the sensitivity of this landscape to wind energy development. However the variation in topography over short distances and the small scale of the drumlins (which are often just 20m height) and the complex landform mean that this landscape could easily be overwhelmed by poorly sited or inappropriately scaled wind energy development, especially since there is already wind energy development in adjoining LCAs to east and west. Local landscape sensitivity is high due to the quality of the landscape along the river valleys and the value of local landscape features such as wetland sites and cultural heritage features.

Towards the northern part of this LCA, on the more elevated ridges, the scale of the landscape is larger and there are fewer sensitive cultural and natural heritage sites. In addition the influence of development and the A26 corridor in the area north of Ballymena makes this area somewhat less sensitive.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

This LCA has a relatively low and varied landform. The ridge towards the north of this LCA (away from the river valleys and where the landscape has a larger scale), and the area along the A26 corridor in the southern part of the LCA may be better able to accommodate turbines than other areas. It is recommended that turbine layouts relate well to the north-south trend of the landform, rivers and main communication routes.

Care should be taken to avoid adverse impacts on prominent and sensitive skylines. Care should be taken to avoid adverse impacts on geomorphological sites, bog landscapes, archaeological sites and their settings, Registered Parkland and other key landscape features as noted in this section. The tops of drumlins should be respected.

At the time of assessment there were no operational wind farms in this LCA. There were however two consented wind farms at Garves Mountain Farm and Glenbuck in LCA 58 (about 3km to the west of the LCA) and other existing and consented wind farm sites to the east in LCA 118 (Corkey and Gruig, about 3km to the east of the LCA). Caution should be used if there are proposals to link these sites visually as this could give rise to significant cumulative impacts. Cumulative impacts should be a consideration.

LCA 60 River Main Valley

Location: County Antrim. River Main Valley between Randalstown in the south and Ballymena in the north.

Key Landscape and Visual Characteristics and Values

Scale

Medium to large scale and almost flat.

Landform

Almost uniformly flat valley floor landscape (at approximately 40m AOD) comprising expansive floodplain of the River Main. Contrasts with more elevated ridges to the east and west.

Enclosure

Well wooded, especially in the south, due to hedgerow trees, and which form an important landscape structure.

Complexity of landcover and features

Pastoral farmland with a strong hedgerow pattern. Small fragmented patches of moss and wetland in the south.

Man-made influence

Large farm buildings are prominent. There are occasional isolated commercial developments. Pylons cross the central part of this LCA and stand out on the skyline in this flat landscape. Extensive areas of peat cutting. Motorway and railway routes influence the landscape, particularly in the south.

Skylines and settings

The northern part of this LCA forms an important part of the riverside setting to Ballymena.

Visibility and views

Occasional open, expansive views across the floodplain and glimpsed views to higher land which frames this LCA.

Landscape quality (condition)

Landscape degradation through peat cutting and development of infrastructure and commercial development along major roads.

Scenic quality

Local areas have scenic but there are no scenic designations within the LCA.

Wildness and tranquillity

Areas of past peat cutting, remnant moss and areas of regenerative birch combined with pylons give this landscape a desolate feel that does not express a strong wilderness or tranquillity.

Natural and cultural heritage features

In the south of the area are areas of peat, wetland and birch woodland which are of ecological value. Galgorm Castle in the north of the LCA is a Registered Park and there are a number of scheduled monuments within the area. Gracehill and Randalstown are both historic towns with Conservation Areas.

Cultural associations

Not known.

Amenity and recreation

Riverside walks along the Braid River in the north near Ballymena.

Assessment for Wind Energy Development

Overall sensitivity

The relatively flat and uniform topography of this landscape suggest that there might be some scope for wind energy development. However, the northern part of the LCA is highly sensitive for its riverside landscape, settings to Ballymena and cultural heritage sites, and recreational opportunities. In these areas the small scale of landscape is also a key constraint.

The central and southern parts of this LCA are more wooded and somewhat less sensitive to wind energy development.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The southern part of this LCA, particularly where the landscape is affected by other man-made influences and where woodlands help integrate turbines into the landscape, may be better able to accommodate some form of wind energy development than other areas. It is recommended that turbines reflect the scale of the landscape patterns and features and that layouts relate well to the pattern of field enclosures.

Open prominent sites should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA. The closest such sites were at Elliots Hill and Wolf Bog (approximately 10-11km to the east); there were further applications in that area and in the area north of Broughshane, also around 10km away, to the north-east. Care will need to be taken to avoid any significant cumulative impacts within this LCA and careful consideration will need to be given to separation distances from sites in adjacent LCAs.

LCA 61 North Lough Neagh Shores

Location: County Antrim. Northern shores of Lough Neagh.

Key Landscape and Visual Characteristics and Values

Scale

A belt of mostly flat land approximately two to three km wide, fringing the northern shores of Lough Neagh and rarely reaching heights above 40m AOD. Small scale landscape features, particularly along the lough shore.

Landform

The lough banks are carved into troughs and hummocks with incised streams but landform is predominantly flat. The shoreline is composed of meandering line of bays, inlets and headlands, with numerous tiny islands particularly to the west where the area merges into the lower slopes of Long Mountain Ridge; to the east the land rises more steeply from the lough shore.

Enclosure

Densely wooded shoreline to south-east where broadleaved woodland runs almost continuously over 6km from Portlee to Farris Bay and Randalstown Forest; more open, reed fringed edge to west with expansive lough views.

Complexity of landcover and features

Complex lough shore of bays and headlands. Diverse, irregular pattern of landcover, including marsh, moss, pasture, rough grassland and reed beds at lough edge, backed by extensive flat pasturelands with large open fields, gappy hedges and straight drainage ditches. A border of reed beds is quite characteristic along much of the shoreline, giving a soft and distinct edge. In other marshy areas, patchy rushes and low-growing alders create pockets of semi-natural habitat. A diverse landscape close to the shore, the farmed interior is simpler in character.

Man-made influence

Few intrusive influences apart from some large farms, loughside houses, bungalows and M22 motorway south of Randalstown.

Skylines and settings

This low-lying area does not provide many skylines except for the expansive lough skyline. The eastern fringe of Antrim town enjoys an attractive setting composed of estate, parkland and river elements.

Visibility and views

Villages such as Churchtown, Knockaphort and Dostree have open aspects overlooking the expanse of the lough. Lough views are perhaps the most distinguishing characteristic of this landscape

Landscape quality (condition)

Most of this landscape is grazed intensively and its flat relief has encouraged large field sizes and drainage works. Hedgerows are generally in poor condition.

Scenic quality

Much of this LCA has relatively high scenic quality and is included in the Lough Neagh Shores ASQ.

Wildness and tranquillity

The farmed interior does not have a wild character but is strongly rural; the fringed lough shores, inlets, bays and headlands have a tranquil character.

Natural and cultural heritage features

Excellent examples of wet woodland around the shore, but especially east of the River Main where the woodland belt is wider. Examples can be seen at Rea's Wood and Farr's Bay SAC and Randalstown Forest NRs. The whole of Lough Neagh is designated as Ramsar, ASSI and SPA due to bird populations. The lough supports breeding terns and great crested grebes and numerous over wintering wildfowl and waders. Shane's Castle and Antrim Castle, on the outskirts of Antrim, are Registered Parks.

Cultural associations

Folklore associated with the area's prehistoric sites.

Amenity and recreation

Randalstown Forest and forest walks; public park at Antrim Castle. Watersports, bird watching, fishing and walking around the lough. Several small marinas.

Assessment for Wind Energy Development

Overall sensitivity

The flat landform, large scale pastures and degree of woodland enclosure within this LCA suggest some scope for wind energy development. However this narrow band of land along the lough shores – with their complex form and many small scale landscape features, expansive views and wide range of valued natural, cultural and recreational features – is unspoilt and highly sensitive in most respects. Wind energy development could easily be out of scale with the landscape and be very intrusive.

However, the more enclosed landscapes of the eastern part of the LCA might be less sensitive to appropriately scaled wind energy development, because of their enclosed character and separation from the lough edge by woodland.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

This LCA has an unspoilt character and expansive views. Areas away from the lough shore but well-contained by trees and woodland may have the best capacity for some form of wind energy development. It is recommended that turbines reflect the scale of the landscape features.

Care should be taken to avoid adverse impacts on highly sensitive views to and from the lough and on the settings of historic parkland. Landscape interests associated with natural and cultural heritage features and recreational resources should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA, with the nearest being at Elliotts Hill and Wolf Bog around 12km to the north-east. Currently cumulative impact is not a significant issue but due to the wide landscape setting of this LCA issues could rapidly develop.

LCA 62 East Lough Neagh Points

Location: County Antrim. Eastern shores of Lough Neagh.

Key Landscape and Visual Characteristics and Values

Scale

Flat farmland landscape on the fringes of Lough Neagh, rising to around 40m AOD on margins of the basalt plateau. Scale of landscape varies from relatively large scale near the lough shore to smaller scale inland.

Landform

There is a strong contrast between the flat clay landscape on the fringes of Lough Neagh and the rolling margins of the basalt plateau to the east. The coastal form is relatively simple in the north; more complex in the south.

Enclosure

The fringes of the lough are fairly open with long views; this contrasts with the more enclosed rolling farmland in the east.

Complexity of landcover and features

Near the lough is a completely flat landscape, with prominent large farmsteads on small 'islands'. Many farms are associated with stands of mature trees. Linear shelterbelts subdivide the farmland and mature hedgerow oaks and willows line the roads in this flat clay landscape. The large arable fields are drained by straight ditches and enclosed by gappy hedgerows. By contrast, the rolling farmland to the east is mostly small in scale, with overgrown hedgerows and numerous small-holdings. There is a linear pattern of settlement, with some derelict farm buildings and tiny cottages along the ridgetop roads.

Man-made influence

Prominent linear development along ridgetop roads. Sand and gravel extraction on the lough shore has led to erosion of the character of narrow roads by heavy lorries. Private airfield west of Crumlin.

Skylines and settings

Skylines are not a feature of this LCA although the ridge tops inland form local skylines.

Visibility and views

Long views from lough shore such as at Ardmore Point. However much of the lough shore is relatively inaccessible, especially in the northern half of the LCA, hence seldom viewed.

Landscape quality (condition)

The condition of the landscape deteriorates in the southern half of the LCA and in some lough shore areas due to hedgerow removal. The larger scale farmland close to the lough is generally in better condition than the rolling farmland to the east.

Scenic quality

Although landscape condition is variable in this LCA, shoreline areas fall within the Lough Neagh Shores ASQ.

Wildness and tranquillity

The lough shore supports a relatively tranquil quality but not an especially wild character except in the area close to Portmore Lough in the south.

Natural and cultural heritage features

The fringes of Lough Neagh are renowned for their wildlife and habitat value. Extensive areas are designated as ASSI for fen, marsh and moss habitats which support many rare examples of flora and fauna. The entire fringe of Lough Neagh is also designated as a SPA and supports breeding terns and great crested grebes and numerous over wintering wildfowl and waders. There are numerous raths and a round tower on Ram's Island (Registered Park).

Cultural associations

Folklore associated with the area's prehistoric sites.

Amenity and recreation

Watersports, birdwatching, fishing, cycling and walking at various sites around the Lough. The southern part of the LCA, around Bartin's Bay is most visited.

Assessment for Wind Energy Development

Overall sensitivity

The shores of the lough are very sensitive, as are the ridge tops inland, with their smaller scale landscape patterns. Along the lough shore, the area's considerable ecological and historic resources and its recreational role are key constraints. The southern part of the area is most sensitive due to its more complex shoreline and accessibility.

However there might be some areas of lower sensitivity, especially in the flat clay farmland landscapes in the northern part of the LCA, away from the lough's edge. These are relatively large scale landscapes with limited access and visibility; the surrounding trees and shelterbelts might offer opportunities to integrate appropriately scaled wind energy development into the landscape.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

This LCA has a strongly horizontal form. The northern half of the LCA, inland of the lough shore, where visibility is well-contained by trees and woodland, may have the best capacity for wind energy development. Turbine layouts that relate well to the underlying field patterns may be most successful. It is recommended that turbine development reflects the scale of and is effectively assimilated within this flat but relatively wooded landscape.

Care should be taken to avoid adverse impacts to the lough shore and to views to the distinctive shoreline points, bays and islands. Interruption to views to the lough from the higher ground in the eastern part of the LCA should be minimised.

At the time of assessment there were no operational or consented wind farms in this LCA, with the nearest being at Elliots Hill and Wolf Bog around 15km to the north-east.

LCA 63 Portmore Lough Fringe

Location: County Antrim. Small area to east of Lough Neagh.

Key Landscape and Visual Characteristics and Values

Scale

Fenland landscape, rising no higher than around 40m AOD, with many small scale landscape features.

Landform

This low-lying, flat area is underlain by Lough Neagh clay and becomes increasingly waterlogged towards the margins of the lough.

Enclosure

A relatively enclosed, inaccessible landscape. The larger pastures on higher land towards the edges of the Lough Neagh Shores are enclosed by overgrown hedgerows. On the margins of Portmore Lough the fields become progressively overgrown by regenerating scrub and fen carr.

Complexity of landcover and features

There are geometric field patterns and numerous drainage channels; and many of the straight, narrow roads are raised on embankments and bordered by ditches. Pasture and fen become waterlogged towards lough margin, which is clothed in scrub and inaccessible. The traditional settlement pattern is of tiny houses and small farmsteads at the end of narrow, straight tracks.

Man-made influence

Is evident only through drainage, pasture, scattered and sparse settlement.

Skylines and settings

The ancient moated churchyard to the west of the village of Lower Ballinderry has a special, remote character; it is on an island virtually surrounded by fen carr.

Visibility and views

There are few views to or from Portmore Lough, as it is screened by dense fen carr.

Landscape quality (condition)

This is a relatively remote area, characterised by marginal, partially waterlogged farmland and fen. The land has always been of poor condition, but the area is important for its habitat interest.

Scenic quality

The fenland landscape is of high scenic quality and fall within the Portmore Lough and Derrymore Point ASQ.

Wildness and tranquillity

The landscape retains a rather wild, remote character.

Natural and cultural heritage features

SAC at Montiaghs Moss. Portmore Lough ASSI is a eutrophic lough with extensive marginal fen and reed vegetation. It is part of the Lough Neagh and Lough Beg SPA which has internationally important numbers of breeding terns and great crested grebes and numerous overwintering wildfowl and waders. The south-western shore is also an RSPB Reserve; wintering wildfowl visit the damp pasture fields and in summer, curlew and lapwing breed here. Moated churchyard at Ballinderry and Registered Park (former deerpark) at Portmore.

Cultural associations

Not known.

Amenity and recreation

This remote area is not well developed for recreation and amenity.

Assessment for Wind Energy Development

Overall sensitivity

This is a small scale, low-lying LCA encircling Portmore Lough. It has many small scale landscape features, a remote and inaccessible character, and significant ecological resources.

It would be highly sensitive to wind energy development which could easily overwhelm the small scale landscape patterns and potentially threaten the area's wildlife interests.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has small scale, wild character, and high ecological resources.

Care should be taken to avoid adverse impacts on the extremely sensitive wild character of this sparsely settled landscape and on the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in this LCA, with the nearest being at Elliots Hill and Wolf Bog more than 25km to the north-east.

LCA 64 Lough Neagh Peatlands

Location: Counties Tyrone and Armagh. Southern shores of Lough Neagh.

Key Landscape and Visual Characteristics and Values

Scale

A low-lying marshy landscape on the southern part of Lough Neagh. Small drumlins reach heights of 20 to 30m AOD.

Landform

Small protruding drumlins set within a low-lying wet and marshy landscape. Drumlins are more pronounced in south-west towards Dungannon. Lough Guillion is the largest of several small loughs and the Rivers Bann and Blackwater drain this LCA, their floodplains having a flat, fenland character.

Enclosure

Enclosure is more pronounced in pasture areas with hedgerows and drumlins in south-west while floodplain and peatland areas towards the lough are generally much more open.

Complexity of landcover and features

Intricate shore line. Extensive varied patchwork of pasture, plantations, regenerating bog, lough shore and small settlements. Distinct changes of level marking former peat extraction. Old canal, river channels and drainage have strong visual influence as does the traditional road pattern laid out for peat working. South west has more pronounced drumlins with pastures of medium size enclosed by hedgerows. Larger pastures are found on the farmland adjacent to the River Bann. There are some small orchards and areas of horticulture (mostly strawberries) on the old peat beds.

Man-made influence

Prominent influences include M1 motorway, embanked roads, former peat extraction, horticulture and extensive urban, industrial and commercial development around Lurgan and Craigavon.

Skylines and settings

Church spires are locally prominent in the low-lying landscape.

Visibility and views

Access to and views from the water's edge is relatively rare but important where located eg near Maghery and at Oxford Island. Near Charleston, there are unusually long views south-east along the River Bann. Long views are afforded from the higher land in the south. Extensive views from the M1 particularly where it crosses river floodplains.

Landscape quality (condition)

Generally good away from urban areas and transport corridors. Hedgerows are often neglected and some fields suffer from invasion by gorse and bramble, with areas of regenerating scrub.

Scenic quality

This is a varied landscape with superb indented shoreline landscapes and a valuable sense of isolation and tranquillity. The wetland and shoreline landscapes on the edge of Lough Neagh are highly valued for their scenic quality and the areas close to the lough lie within the Lough Neagh Shores ASQ.

Wildness and tranquillity

The shores in particular are highly valued for their isolation and tranquillity; while some of the fen areas have a strong wild character.

Natural and cultural heritage features

Earth science interest at Coalisland Brick Pit which contains a fine exposure of Coal Measures of Westphalian age. Very good ecological resources evidenced by Lough Neagh's designation as an ASSI, SAC and Ramsar site. Most of the LCA is within the Ramsar Site and part of it is within Lough Neagh SPA). The lough and lough shores and wetlands support breeding terns and great crested grebes and numerous over wintering wildfowl and waders. The woodland at Annagarriff NR in Peatlands Park appears to have survived as a hunting preserve for over 200 years. The main intact bog is Peatlands Park SAC and ASSI and Mullenakill NR. Inland, the River Blackwater and a number of loughs provide further wildlife interests. Coney Island (National Trust) and Raughlan on the lough shore and Fairview House further south are Registered Parks. Industrial heritage related to lough shore and Portadown port.

Cultural associations

Mythology associated with Lough Neagh.

Amenity and recreation

Wetlands Way and the Ulster Way traverse this LCA; County Park at Peatlands Park. Lough Neagh Discovery Centre, jetties, fishing on the lough; birdwatching at Oxford Island. Cycle routes.

Assessment for Wind Energy Development

Overall sensitivity

This LCA is a distinctive landscape of high sensitivity due to its generally open yet often small scale, intricate landscape character and its huge diversity of both natural and cultural landscape features. It is also highly valued in scenic terms, and includes some of the most important recreational areas around Lough Neagh. The open flat floodplain areas, lough shore, wetlands and estates would be highly sensitive to any wind energy development, which could be widely visible from the M1 and embanked roads. The more defined drumlin belt in the south-west might offer some topographic screening but great care would be needed to avoid interrupting the long views towards the River Blackwater from this area.

The only area of significantly lower sensitivity is on the south side of the motorway between Lurgan and Craigavon where the landscape has been significantly affected by intrusive urban, industrial and commercial development.

Overall Sensitivity - High

Location, siting, layout and design considerations

Inappropriate turbine development in this LCA could easily detract from the area's landscape character and values. The principal area that best might accommodate some appropriately scaled form of wind energy development is the land south of the M1 on the northern fringes of Lurgan and Craigavon. Carefully scaled, designed and sited wind energy development in this area could form a new landmark feature. Given careful siting, association with existing structures, and use of hedgerow screening, the more defined drumlin belt in the south-west may also provide locations for some form of wind energy development.

Care should be taken to avoid adverse impacts on highly sensitive floodplain sites and features such as church spires. The lough shore should be respected. Care should be taken to avoid any significant impacts on views to or from the lough shore. Landscape interests associated with natural and cultural heritage features and recreational resources should be respected.

At the time of assessment there were no operational or consented wind farms in or near this LCA, however cumulative impacts may have to be considered.

LCA 65 Upper Bann Floodplain

Location: Counties Armagh and Down. Bann floodplain south of Portadown.

Key Landscape and Visual Characteristics and Values

Scale.

A small LCA defined by the immediate valley of the Upper Bann south of Portadown. Most land lies below around 40m AOD. Its unenclosed character of the area gives it a moderate scale.

Landform

This LCA follows the course of the Upper Bann River and the Newry Canal and consists of well defined, broad river terraces, with floodplain areas close to Portadown.

Enclosure

There LCA has an open character generally.

Complexity of landcover and features

The area includes the extensive areas of moss on the river floodplain at Terryhoogan Moss, Park Bog and Brackagh Bog with well-defined, broad river terraces containing large pastures above Dynes Bridge. The river floodplain is the most attractive landscape feature and is an important focus for views and recreation. The River Bann has been contained by flood embankments (often 6m high) and many smaller banks and straight drainage ditches run laterally across adjacent pastures. There is some riparian wood and scrub present along river banks.

Man-made influence

At Portadown, built development is a dominant local influence and the Belfast-Dublin railway also runs through the LCA. Many large agricultural and factory buildings on lower floodplain Electricity transmission line across the valley.

Skylines and settings

The river flats, pastures and mosses south of Portadown contribute to its landscape setting; skylines are not a feature of this open LCA. Portadown port at northern end of LCA.

Visibility and views

Important views of the river around Portadown; long views across the floodplain within the LCA are also a feature.

Landscape quality (condition)

The condition of the River Bann floodplain landscape is good, with the exception of the area immediately to the south of Portadown.

Scenic quality

The river valley itself is in good condition and has some scenic quality.

Wildness and tranquillity

There is no particularly strong wild or tranquil character to this LCA although the river Bann itself with riparian woodland has a tranquil character in places.

Natural and cultural heritage features

Wet woodlands cover much of the former peat bog, as for example at Terryhoogan Moss and at Brackagh NR where there is dense alder and willow carr woodlands. There are scattered occasional raths and Moyallen and Woodbank on the eastern margins of this LCA are historic parks.

Cultural associations

Not known.

Amenity and recreation

Newry Canal Way traverses this LCA and the river is an important focus for recreation especially around Portadown. Cycling opportunities.

Assessment for Wind Energy Development

Overall sensitivity

The character of this LCA is defined by the River Bann and its floodplains. Its open character, river views and recreational and educational value lend a generally high sensitivity, increased by the presence of some important and sensitive habitats.

The river terraces are the key landscape element. They do not easily lend themselves to wind energy development, which could dominate the floodplain landscapes and be widely visible.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has an open character of river valley and floodplains in which it is difficult to accommodate wind energy development. The edges of the LCA would be the most likely areas for some form of turbine development. It is recommended that any turbine development be associated with and reflects the scale of groups of buildings and trees.

Care should be taken to avoid adverse impacts on the highly sensitive key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in or near this LCA, however care should be taken to avoid cumulative effects in the future.

LCA 66 Armagh Drumlins

Location: County Armagh. Area centred on city of Armagh.

Key Landscape and Visual Characteristics and Values

Scale.

Relatively small scale landscape due to field enclosures and topography. Highest land is in the south as the land rises towards Carrigatuke Hills, reaching 222m AOD near Derrynoose in the south-west.

Landform

The Armagh Drumlins is an extensive area of rolling north-south orientated drumlins, overlooked by the Carrigatuke Hills to the south. To the north the ground falls away towards the Loughgall Orchard Belt and the fringes of Lough Neagh, the drumlins becoming more pronounced in this area.

Enclosure

The open character and views that occur on higher ground in the west and south contrast with the more enclosed and intimate hill and drumlin landscapes further north.

Complexity of landcover and features

The area is drained by numerous small winding streams, tributaries of the Callan River. Occasional loughs and sedgy mosses occupy the hollows between drumlins. Land use is dominated by improved pastures with overgrown hedgerows and tree belts. Mature hedgerow ash trees are common. There are a number of wooded historic estates with stone walls and stands of mature trees eg at Mullaghbane. There are numerous scattered dwellings and farms, connected by a network of winding, hedged roads. Large farm barns and ruined stone dwellings are common.

Man-made influence

New development on ridges especially close to Armagh is highly visible and detracts somewhat from the landscape setting of the city.

Skylines and settings

The most sensitive areas of this landscape are the settings of the numerous important archaeological sites. These are concentrated to the south and west of Armagh and include Navan Fort. Local skylines and drumlin summits are also relatively sensitive, for example north of Keady, particularly when they are the sites of ancient raths. Settlements such as Armagh, Keady and Richhill all enjoy distinctive settings, commonly associated with estates.

Visibility and views

The city of Armagh, with its tall spires, is a focus for local roads and views, particularly from higher ground to the south.

Landscape quality (condition)

Farmland landscapes throughout this LCA are generally in good condition.

Scenic quality

This LCA is of some scenic quality, but has no scenic designations.

Wildness and tranquillity

This LCA does not have an especially strong wild character, although it is highly tranquil in parts.

Natural and cultural heritage features

Rare area of dry grassland at Annacramph Meadows ASSI north of Armagh (due to a limestone outcrop); also a number of small inter-drumlin lough ASSIs. Navan Fort (ASAI), of national significance; numerous estates with associated demesnes and houses including a number of important Registered Parks particularly in the north; churches and cathedral of Armagh; Conservation Areas at Armagh and Richhill.

Cultural associations

Armagh has numerous cultural associations and is an important diocesan centre.

Amenity and recreation

Gosford Park has amenity facilities; Castle Dillon has a bird sanctuary; numerous historic sites.

Assessment for Wind Energy Development

Overall sensitivity

This is a large LCA with a strong drumlin topography, particularly in the north, and a generally robust landscape pattern that should in theory contribute to a lower sensitivity. However, the scope for wind energy development is strongly constrained by the relatively small scale and pronounced form of most individual drumlins, and the many important skylines and settings across the LCA. Archaeological settings on drumlin skylines are especially sensitive.

Mid slope locations in the south-west, close to the Carrigatuke Hills might be somewhat less sensitive.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The foothills of Carrigatuke Hills in the south-west of the LCA may offer the best capacity for some form of wind energy development. Consideration could be given to siting turbines on the middle or lower slopes of drumlins rather than on drumlin tops. Care should be taken to ensure that turbine development does not dominate the generally small scale, complex landscape patterns or individual hills or drumlins within this LCA (possibly by using careful spacing).

Particular care should be taken to avoid adverse impacts on important archaeological and historic landscapes as described in this section. Hill tops and notable landscape features should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA, or in adjacent LCAs however cumulative impacts and separation distances may be a consideration in the future. Transboundary impacts might become an issue in future as this LCA borders County Monaghan.

LCA 67 Armagh/Banbridge Hills

Location: Counties Down and Armagh. Hills to east and west of Banbridge.

Key Landscape and Visual Characteristics and Values

Scale.

A generally broad scale landscape with some variations. Highest ground rises to around 150m AOD.

Landform

The landscape is characterised by broad, rolling and generally convex hills, ridges and shallow valleys. Most slopes have a relatively smooth profile but there are rocky outcrops on the slopes leading up to the summit of Knockiveagh to the south-east.

Enclosure

Relatively open landscape, with long views from local ridges. Many buildings are associated with shelter stands of mixed broadleaved trees but there are typically few hedgerow trees.

Complexity of landcover and features

The shallow valleys support flat pastures with drainage ditches, bog and wet woodland. Arable land is generally concentrated on the broad, upper slopes of ridges. To the south, the fields become larger and more open in character as the landform flattens out at the base of the slopes; here there is extensive sheep grazing and stud farming. Small loughs such as Lough Shark are attractive features locally. There are many groups of residential dwellings (which are often stone built) scattered along rural roads in this LCA.

Man-made influence

Substantial farmsteads and outbuildings are often prominent on the upper slopes. Transmission line runs north-south through the western part of the LCA. Some intrusive development around Banbridge.

Skylines and settings

Castle grounds, river settings and local ridges to the south of Gilford create an attractive setting for the town; field patterns to the west of Loughbrickland are distinctive.

Visibility and views

Long views from local ridges.

Landscape quality (condition)

In general, the landscape is in good condition, particularly on the upper slopes, but there are patches of gorse and brambles in the poorly-drained areas towards the valley floor. Hedgerow loss is evident as a result of intensification and field enlargement.

Scenic quality

Landscape is generally attractive but not of special scenic quality.

Wildness and tranquillity

There is no a particularly strong wildness to this landscape although it is tranquil in parts.

Natural and cultural heritage features

Area supports lowland woodland, pasture and parkland with beech and oak common. Lough Shark ASI is important for wintering wildfowl and rare passage species. Many large estates and Registered Parks such as Scarva House, particularly along the Newry Canal corridor. Industrial heritage such as mills.

Cultural associations

None known.

Amenity and recreation

Newry Canal Way and Ulster Way. Lough Shark is popular for coarse fishing with perch, pike, rudd and bream present. Loughbrickland historic trail and woodland; Scarva visitor centre, services at Banbridge; access to several historic sites.

Assessment for Wind Energy Development

Overall sensitivity

The broad scale landform and landcover patterns of much of this LCA are of relatively low sensitivity to wind energy development. The landscape's convex form and undulations could offer some topographic screening; and although there are features of natural and cultural heritage interest, these are relatively infrequent on the higher land which is intensively farmed and often sparsely settled. The settings of settlements, historic features and loughs are, however, more sensitive.

The high ground in the west of the LCA and in the area west of Banbridge is of lowest landscape sensitivity, provided care is taken to protect the settings of raths and other monuments, which occur on some hill tops.

Overall Sensitivity - Medium

Location, siting, layout and design considerations

This LCA contains hills of broad form. The higher hills in the west and centre of the LCA may have the best capacity for some form of wind energy development. Consideration could be given to carefully siting any development within the hilltop undulations, avoiding the higher ground which is not only more visible but might be capped by raths or other historic features. It is recommended that wind energy development reflects the scale of the relatively low hills that are found in this LCA. It is recommended that attempts should be made to minimise the siting of turbines where they will be seen in close proximity to electricity transmission lines.

Care should be taken to avoid detrimental impacts on the landscape settings of the principal settlements, river valleys and loughs. Hill tops and notable landscape features should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA, or in adjacent LCAs.

LCA 68 Carrigatuke Hills

Location: County Armagh. Hills lying between city of Armagh and Ring of Gullion to the south-east.

Key Landscape and Visual Characteristics and Values

Scale

A large scale landscape of smooth rolling green hills and deep wooded valleys. The summit of Carrigatuke is 365m AOD.

Landform

The higher hills form a broad continuous upland area with few valleys. The rounded summits are separated by a plateau. The lower hills are more rolling with streams and loughs (particularly in the west) draining the valleys in between. They have a strong north-south orientation.

Enclosure

A generally open landscape, particularly on the uplands. The lower slopes are more enclosed due to hedgerows and valley landform.

Complexity of landcover and features

The higher hills contain blanket bog and grass and heather moorland. Large conifer plantations create a series of straight edged blocks on the highest hills, where they stand out clearly against open moorland. On the lower rolling hills there are small woodlands, mature trees and tree belts, giving a well-treed character. Wooded streams and loughs are attractive features of the valleys which drain from the hills. These include the valleys of the Carnagh estate, Glen Anne and Ballymoye.

Man-made influence

Man-made influence is evident in major quarries in the northern part of the LCA and extensive, hard-edged conifer plantations. Telecommunications mast on the top of Carrigatuke.

Skylines and settings

The uplands form several skylines in this LCA, particularly defining the setting of Newtownhamilton to the south and east. Other prominent ridges are around the edges of Carrigatuke, Black Hill and Blackrock.

Visibility and views

There are extensive views from the hilltops, particularly Carrigatuke, over the surrounding lowlands. However, Carrigatuke summits are distant in views from the settlements of Armagh and Keady to the north.

Landscape quality (condition)

The landscape condition is generally fair to good with a reasonable hedgerow structure. However, landscape quality and diversity have been adversely affected by afforestation in some areas.

Scenic quality

The scenic quality of this LCA is relatively good, the remote uplands plateau contrasting with the enclosed, intimate wooded valleys below. The southern margin of the LCA includes a small part of the Ring of Gullion AONB.

Wildness and tranquillity

The higher hills have a wild exposed character where not affected by forestry.

Natural and cultural heritage features

Straghans Lough, Crossbane Lough and Drumcarn ASSIs to the west are designated for their habitat diversity. Archaeological features are associated with some of the hilltops. Ballymoyer House Estate is operated by the National Trust and is a Registered Park, as is Drumbanagher to the north-east.

Cultural associations

Folklore associated with archaeology.

Amenity and recreation

Ballymoyer House with woodland walks, open to the public, viewing from Carrigatuke summit, Carnagh Country House.

Assessment for Wind Energy Development

Overall sensitivity

The large scale of the uplands within this LCA, combined with rolling slopes and the presence of coniferous forestry, tend to reduce this LCA's sensitivity to wind energy development. Conservation and recreational interests are not as extensive as in many other LCAs. Parallel north-south ridges create areas of reduced close range visibility (although the upland tops are a part of many long range views over a wider area). The lower and more prominent slopes to the north and east of the area are more sensitive in this respect as they lie closer to Armagh and Newry than the central and southern sections of the hills. In addition, the south-east of the LCA is particularly sensitive because of its proximity to the Ring of Gullion.

Overall, though, this is a landscape of only moderate sensitivity to wind energy development. The central section of the hills, away from the more prominent edge landscapes, is least sensitive.

Overall Sensitivity - Medium

Location, siting, layout and design considerations

The large scale landscape of this LCA, the extent of the upland area and the fact that there are relatively few short-range views means that parts of this LCA are well suited to the accommodation of wind energy development. The central section of the hills, around Carrigatuke summit, offers the best scope for wind energy development, which should ideally be set back from the edges of the upland area. The extensive conifer plantations around the summit may be beneficial in terms of temporary screening and access. In addition screening opportunities provided by the north-south ridges could be considered. It is recommended that wind energy development be in a coherent cluster (of consistent height and design) or be well separated, as long views are a feature of this LCA. Access tracks should respect open moorland areas.

Care should be used to avoid adverse visual impacts and impacts on the highly sensitive landscape settings of the parts of the uplands that lie closest to Armagh, Keady, Newry and the Ring of Gullion. Care should also be taken to avoid adverse impacts on the settings of the area's small loughs, archaeological sites and Registered Parks.

At the time of assessment there were no operational or consented wind farms within or near this LCA. Transboundary and cumulative issues could arise in future if there was wind energy development in nearby areas of County Monaghan.

LCA 69 Newry Basin

Location: Counties Down and Armagh. Area around Newry draining into Carlingford Lough.

Key Landscape and Visual Characteristics and Values

Scale.

The Newry Basin is a large scale rolling drumlin landscape situated between the Ring of Gullion and the Mourne Mountains. The ground rises gently to just over 100m AOD around the edges of the area.

Landform

At a broad scale, the landform is concave. The area is drained by tributaries of the Newry River which flow in attractive river valleys. To the south-east, the drumlins are replaced by broader ridges separated by narrow, flat-bottomed valleys with ribbon loughs and bogs such as Derryleckagh Lake. South of Newry, the Newry River flows in a dramatic, steep-sided narrow valley.

Enclosure

The landscape seems open and exposed on ridgetops and enclosed and sheltered within the valleys.

Complexity of landcover and features

The Newry Basin is a very diverse area, with a rich heritage of historic landscapes and archaeological sites. The rolling fields have a neat and artificially green appearance, although pastures become increasingly marginal with rocky knolls, bracken and gorse hedgerows towards the foothills of the Mourne Mountains. Elsewhere, well-trimmed low hedges and tree belts separate fields, creating an intact and unified landscape pattern. Small woodlands, such as Derryleckagh Wood, are often found on valley sides.

Man-made influence

Pylons, quarries, major transport corridors and insensitive development detract from the landscape in parts, especially around and south-east of Newry.

Skylines and settings

The Newry River valley south and east of the city is dramatic and steep, creating a distinctive landscape setting for the city. Narrow Water Castle is an important historic landmark at the entrance to the Newry River.

Visibility and views

There are occasional panoramic views of the Mourne Mountains from the tops of the drumlins. In turn the LCA is widely visible from the surrounding hills within the Ring of Gullion and the Mournes and from the A1, A26 and A27.

Landscape quality (condition)

The landscape is generally in good condition, especially in the drumlin farmland landscape to the north. It becomes slightly more degraded on the fringes of Newry.

Scenic quality

The western edge of the LCA lies within the Ring of Gullion AONB, whereas the south-eastern margin overlaps and incorporates part of the Mourne AONB. Landscapes around Newry are generally less scenic despite the town's dramatic landscape setting.

Wildness and tranquillity

The ridge tops and upper slopes retain a relatively wild character.

Natural and cultural heritage features

Overwintering brent geese and breeding terns are present in Carlingford Lough on the southern edge of the LCA (ASSI, Ramsar, SPA). Derryleckagh ASSI (and SAC) is a large example of wet inter-drumlin fen. Rathes are scattered throughout, whilst there is a concentration of cashels and standing stones on eastern Mourne foothills. Registered Parks include Narrow Water Castle and Green Park. Conservation Areas at Bessbrook and Newry.

Cultural associations

Folklore associated with Carlingford Lough and adjacent uplands of Slieve Gullion and Mourne Mountains.

Amenity and recreation

Ulster Way traverses this LCA. Access to Mourne and Slieve Guillion walking areas. Newry acts as key gateway to Northern Ireland from the Republic of Ireland.

Assessment for Wind Energy Development

Overall sensitivity

This diverse landscape contains a number of elements that are sensitive to wind energy development including attractive river valleys, loughs and marshes, and many archaeological sites (raths, mottes, standing stones) around the fringes of the area. The drumlin landscapes and the narrow ridges and valleys around Derryleckagh may not be of a scale to accommodate significant wind energy development. South of Newry the LCA is sandwiched between Slieve Guillion and the Mourne Mountains that overlook the LCA. This too heightens its landscape and visual sensitivity.

The least sensitive parts of the LCA are the broad drumlin ridges to the north-east, the area around the Burren (which is already affected by large scale development); and the river's edge and industrial landscapes just south of Newry town centre. However, inappropriately sized wind energy development would be out of scale with the landscape and would be highly intrusive.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

This LCA has relatively high landscape and visual sensitivity. The north-eastern part of the LCA, with its larger scale drumlins, the area around the Burren, and the industrial area south of Newry may have the best capacity to accommodate some form of turbine development. Consideration could be given to siting turbines on drumlin side-slopes rather than tops and to taking advantage of screening afforded by low north-south ridges and tree groups. Closer to Newry, visual relationships with existing structures will be the key influence on turbine siting.

In all cases, care should be taken to avoid significant impacts on views to and from the Mournes and the Ring of Gullion. Care should be taken to avoid adverse impacts on the landscape settings of river valleys, estates, bogs, loughs and archaeological sites such as hilltop raths.

At the time of assessment there were no operational or consented wind farms within or near this LCA. Transboundary and cumulative issues could arise in future if there was wind energy development in nearby areas of County Louth.

LCA 70 Crossmaglen Drumlins and Loughs

Location: County Armagh. South-western corner of the county.

Key Landscape and Visual Characteristics and Values

Scale

This lowland landscape on the southern border of County Armagh is contained to the north and east by the uplands of the Carrigatuke Hills and the Ring of Gullion. The land rises to around 150-200m AOD around the edge of the LCA but is generally much lower.

Landform

This is a structured landscape of rolling green drumlins and some elevated hills. It has a concave form overall. Rivers, including the Creggan River, pass inconspicuously between drumlins, with some areas of flat floodplain.

Enclosure

Higher ground has a regular, hedged field pattern and its drumlins provide enclosure. Broad, open areas of wetland and bog in inter-drumlin hollows and floodplains.

Complexity of landcover and features

A diverse well structured landscape with regular field patterns containing pasture enclosed by hedgerows; small loughs, bog and scrub occupy poorer land in between. Some lough shores are wooded and many are inaccessible as they are fringed with extensive areas of moss. Rivers and streams are crossed by attractive stone bridges. Roller-coaster roads wind across the drumlins making orientation difficult. The principal settlement is Crossmaglen, at the junction of several rural roads. Archaeological features, such as the Drumhill standing stone, are important.

Man-made influence

Quarrying and electricity transmission lines are the principal man-made influences.

Skylines and settings

The Ring of Gullion creates a strong backdrop, with hilltop towers overlooking the drumlins. The stream corridor and Glen Lough house to the north, and moss and scrub to the south, create an attractive setting for the village of Crossmaglen.

Visibility and views

This LCA is inward-looking with short views afforded due to topography. The Ring of Gullion forms a backdrop and there are views to and from the neighbouring uplands.

Landscape quality (condition)

The hedgerow pattern remains intact on the drumlins but there are some areas of degraded farmland, with derelict and abandoned fields and stone cottages. The principal pressure for change is neglect.

Scenic quality

Inter-drumlin wetlands and loughs are of locally high scenic quality. The backdrop of the Ring of Gullion AONB adds to scenic quality.

Wildness and tranquillity

Isolation of the area by the uplands has given it a remote and deeply rural character.

Natural and cultural heritage features

Lowland pastures managed at low intensity are relatively rare in Northern Ireland, especially in the east, but there are several examples in this LCA, including Tullyard ASSI. Archaeological features, such as the Drumhill standing stone, are important and The Dorsey is an ASAI.

Cultural associations

None known.

Amenity and recreation

A29 is a gateway to Northern Ireland from Dundalk. Local services and recreational facilities at Crossmaglen.

Assessment for Wind Energy Development

Overall sensitivity

The rolling topography and robust field structure might offer some screening but the role of the area as a gateway and as part of the setting of the nearby Ring of Gullion, and its strongly rural and relatively unspoilt character tend to increase its sensitivity. It has a particular wealth of archaeological sites, further raising its sensitivity. The inter-drumlin wetlands and loughs are also very sensitive and are of both ecological and scenic importance.

The higher ground in the centre of the LCA, away from the Ring of Gullion, is less sensitive than other areas. However, the small scale of both the landform and landscape features strongly influences the appropriate height of wind energy development.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The higher ground towards the centre of the LCA may have greater capacity than other areas to accommodate some form of wind energy development. Turbines could take advantage of topographic screening by avoiding hill and drumlin tops. Care should be taken to ensure that turbines do not overwhelm the pattern of drumlins. It is recommended that wind energy development reflects the scale and complexity of the surrounding landscape.

Particular care should be taken to avoid any significant impacts on key views to and from the Ring of Gullion, which provides a dramatic backdrop to this LCA. Care should be taken to avoid adverse impacts on the landscape interests associated with inter-drumlin wetlands, loughs and archaeological sites (in particular the Dorsey ASAI).

At the time of assessment there were no operational or consented wind farms within or near this LCA. Transboundary and cumulative issues could arise in future if there was wind energy development in nearby areas of County Monaghan or County Louth.

LCA 71 Ring of Gullion

Location: County Armagh. On southern boarder of Northern Ireland south-west of Newry.

Key Landscape and Visual Characteristics and Values

Scale

Open moorland with exposed expansive character on hilltops, which rise to over 500m AOD. Small scale pastures and ladder farms on lower slopes and intervening lower lying land.

Landform

Ring of volcanic hills and central volcanic plug – Slieve Gullion (576m AOD) enclosing a lower-lying circular, concave basin. Hills have a 'knobbly', craggy and uneven skyline profile and many rocky outcrops.

Enclosure

Exposed on upper slopes and hills away from coniferous plantations; more intimate and enclosed on lower slopes and basins as a result of trees and gorse hedgerows.

Complexity of landcover and features

Within lower-lying basin there are river valleys and extensive areas of bog. Upland grass, heather, moorland and coniferous plantations dominate the hilltops with pasture on lower slopes divided by stone walls and gorse hedgerows. Dispersed pattern of farmsteads on lower slopes.

Man-made influence

Extensive commercial forestry on hillsides and radio masts and hilltop towers on the skyline. New housing of pebble-dash bungalows often some distance from roads.

Skylines and settings

Slieve Gullion as the highest hill in this LCA forms a distinctive skyline feature from the surrounding basin and ring of hills. In addition each of the hills due to their isolated nature also has a distinctive skyline profile and encloses the LCA forming a setting to Slieve Gullion. The eastern slopes of Camlough Mountain also provide an important setting to Newry.

Visibility and views

This is an inward-looking landscape, the outer hills enclosing views from lower lying areas. However from the hill tops there are views across the Carlingford River and Lough to the Mourne Mountains and north-west to the Carrigatuke Hills.

Landscape quality (condition)

Mixed. Some areas remain unaffected by development while other areas have undergone change eg near Meigh. Many of the traditional stone buildings are derelict. Walls are often in poor condition and some pastures infested with scrub and rushes.

Scenic quality

Special visual character resulting from its unique physical structure and the farming of the land through thousands of years of occupation, which have given rise to a distinctive enclosure and settlement pattern. LCA designated as Ring of Gullion AONB.

Wildness and tranquillity

Remote, isolated and open in places. Narrow lanes and derelict farmsteads and stone walls enhance sense of remoteness and isolation. However the sense of tranquillity is undermined in places by masts or towers on hilltops and commercial forestry operations.

Natural and cultural heritage features

This LCA is of outstanding geological significance and value forming one of the best ring-dyke systems in the British Isles. Slieve Gullion is designated ASSI and SAC for its geological importance. High concentration of archaeological and historic features eg cairns, castles and cashels many of which are scheduled or are in State Care. Areas of nature conservation value include extensive areas of heathland (ASSI) and wetlands and basin fens many of which are designated ASSI or ASI. This LCA also contains three Registered Parks (Hawthorne Hill, Killeavy Castle and Forkhill House).

Cultural associations

Rich association with myths and legends.

Amenity and recreation

LCA is a gateway feature when approaching Northern Ireland from Dundalk and Dublin. Slieve Gullion Forest Park. Viewpoints and picnic sites eg Ballymacdermot Mountain. National cycle route passes through this area between Carnlough and Slieve Gullion. Archaeological and historical interest.

Assessment for Wind Energy Development

Overall sensitivity

This landscape has a very high sensitivity to wind energy development primarily because of its topography but also due to its dispersed settlement pattern, small scale pastoral basin features and high concentration of cultural and natural assets.

Slieve Gullion, as the central and highest hill within this LCA is highly sensitive to wind energy development and any turbines could dominate the entire LCA. Elsewhere, although the ring of hills is often cloaked in commercial forestry that might have some screening potential, the hills often have an uneven or 'knobbly' skyline profile making it difficult to place wind turbines comfortably. Moreover, development on any one top would compromise the integrity of the 'ring' as a whole. The concentration of heritage, nature conservation and geological interest associated with these hills only heightens their overall sensitivity.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has a highly sensitive landscape with many internal views. How any proposed turbine development blends into the landscape should be a key consideration.

Care should be taken to avoid adverse impacts on the extremely sensitive, open, exposed hills or upper slopes and on the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in this LCA or in adjacent LCAs. The nearest existing wind farm site was near Dundalk, around 9km away. Cumulative and transboundary issues could arise if wind energy development were to occur closer by in County Louth eg at Carlingford Mountain. Cumulative impacts could also easily arise if there was a proliferation of individual turbines within this LCA. Due to the proximity of Carlingford Lough there may be seaward issues to consider in future.

LCA 72 Slieve Roosley

Location: County Down. East of Newry and west of the Mourne Mountains.

Key Landscape and Visual Characteristics and Values

Scale

A group of large scale upland ridges (to 364m AOD) dissected by generous deep valleys or glens, particularly to the south, with lower lying foot slopes and outlier hills.

Landform

Elevated convex but often narrow ridges with a jagged skyline profile and steeply sloping valley sides and footslopes. Convex gently rounded outlier hills.

Enclosure

Open and exposed on moorland ridges with limited areas of conifer plantation to the east. Within valleys topography provides enclosure reinforced by enclosure pattern and occasional hedgerow trees.

Complexity of landcover and features

Valley sides comprise wet and improved pasture enclosures while upland areas become progressively unimproved, forming extensive areas of textured heather moorland, bracken, gorse, rush and cotton grass. Dispersed farmsteads, cottages and isolated properties within the valleys.

Man-made influence

Absence of overt influences on upper ridges and slopes except for commercial forestry to the east. Some urbanising influences to the north west around Mayobridge; quarrying and landfill at Gruggandoo.

Skylines and settings

Distinctive jagged profile ridges and upland areas. Important setting to Mourne Mountains and Carlingford Lough. Important setting to settlement of Mayobridge.

Visibility and views

Extensive outward views from elevated areas and outer slopes. Particularly long, open panoramic views across the hilltops to the dramatic horizon of the Mourne Mountains, Carlingford Lough and Carlingford Mountain, notably from the northern and south-eastern parts of this LCA.

Landscape quality (condition)

Core area is in good condition but lower footslopes have a degraded appearance – poor condition of stone walls and rush infested pastures. Some urbanising influences (modern property development) in glens and on outlier hills towards Mayobridge.

Scenic quality

High scenic quality in core of area derived from visually attractive juxtaposition of open exposed ridgetops, enclosed valleys and textured land cover and enclosure patterns. Area forms part of Mourne AONB.

Wildness and tranquillity

Exposed, remote upland ridges and sheltered valleys have a high degree of tranquillity and relative wildness derived from absence of overt man-made structures and openness of the landscape and low population density.

Natural and cultural heritage features

Area is rich in historic and archaeological sites (scheduled monuments in the west of the area) eg raths, standing stones, graves and earthworks and historic townland boundaries and Registered Park at The Lodge (Kilbroney).

Cultural associations

This area has inspired artists and writers as a result of its inherent scenic quality. The enclosure pattern is also nationally significant in relation to the Irish potato famine.

Amenity and recreation

The Ulster Way passes through this LCA as does the Rostrevor Cycle Route. The area is also popular for para-gliding, hang gliding (Ballywally Mountain), as well as fell running and shooting.

Assessment for Wind Energy Development

Overall sensitivity

This landscape, although mainly elevated and large scale includes intimate valley and footslope landscapes – a combination which gives rise to high scenic quality. Although the vertical scale of the landscape reduces sensitivity, the narrowness of the upland ridges, their wild character, and their wide visibility (from the valleys and surrounding landscapes) make them highly sensitive to wind energy development.

Lower lying foothills to the west and north which are of mixed landscape quality are somewhat less sensitive although their smaller landscape pattern, notable concentration of archaeological sites, and function as a setting to the Mourne are key constraints.

Overall Sensitivity - High

Location, siting, layout and design considerations

The outlier hills to the west of this LCA, particularly to the south and north of Mayobridge (away from main ridgelines and cultural heritage features) may be better able to accommodate wind energy development than other areas. It is recommended that wind energy development reflects the relatively small-scale outlier hill landform, landscape features and settlement.

Particular care should be taken to avoid adverse impacts on the distinctive skyline profile of the upland ridges and on views to and from the Mourne, Carlingford Lough and Carlingford Mountain. Care should also be taken to avoid adverse effects on the character and setting of archaeological sites or key recreational resources (see previous information). The open, exposed and largely uninhabited upper slopes and ridges should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA or in adjacent LCAs. The nearest existing wind farm site was near Dundalk, around 18km away. Transboundary issues could arise if wind energy development were to occur closer by in County Louth eg at Carlingford Mountain. Due to the proximity of Carlingford Lough there may be seaward issues to consider in future.

LCA 73 Kilkeel Coast

Location: County Down. South of Mourne Mountains adjacent to Carlingford Lough and the Irish Sea.

Key Landscape and Visual Characteristics and Values

Scale

An open, flat landscape (less than 30m AOD) on coastal margins with small scale enclosed settled farmland, some wooded estates and incised river corridors inland.

Landform

Gently undulating, coastal lowland dissected by narrow rocky burn valleys. Land flattens out towards the sandy coastline.

Enclosure

Hedgerows and occasional hedgerow trees along with some wooded estates and wooded incised valleys locally provide some enclosure in this relatively flat landscape.

Complexity of landcover and features

Mainly pastoral landscape of unimproved and semi-improved grassland divided by hedgebanks, stone walls and hedges. Extensive areas of open salt marsh at Mill Bay.

Man-made influence

Housing development associated with Kilkeel and ribbon development along the A2. Caravan parks on coastal headlands particularly Cranfield and north east of Kilkeel. Areas of sand and gravel extraction along the coastal margins between Kilkeel and Cranfield.

Skylines and settings

Much of this area forms an important foreground to the Mourne Mountains and Carlingford Lough.

Visibility and views

Open, extensive views across Carlingford Lough and to the Kingdom of Mourne and Mourne Mountains, particularly from the open, flat coastal areas in the south-west. Local vegetation and field enclosure might limit outward views but views are notable from locally raised land eg moraines. There are limited views inland from the coastal margins.

Landscape quality (condition)

High quality landscape particularly towards Greencastle, the mud flats around Mill Bay and inland around the incised river corridors. Elsewhere the condition of the landscape is mixed, influenced by ribbon development, caravan parks, signage and sand and gravel extraction.

Scenic quality

Extensive views across open water of Carlingford Lough and to surrounding mountain scenery. Coastal mudflats and rocky skerries at the mouth of the lough gives rise to an outstanding composition of elements. Area lies within the Mourne AONB.

Wildness and tranquillity

Peaceful landscape of water, salty air, muddy estuary sides and at other times an exposed elemental landscape. Wooded burn valleys have a verdant and secretive quality.

Natural and cultural heritage features

Significant glaciofluvial features including moraine and raised beaches along the coastline (ASIs). Internationally important habitats (mudflats and saltmarshes) at Mill Bay (Ramsar,

SPA, ASSI) and bird populations including breeding terns and overwintering brent geese. Cultural heritage features include Green Castle at Mill Bay (historic monument), Registered Park at Ballyedmond, and numerous archaeological sites many being scheduled monuments.

Cultural associations

Scenic quality of this landscape and its immediate setting has inspired many artists.

Amenity and recreation

Significant area for coastal watersports including sailing, windsurfing, waterskiing, sea angling and jet skiing. Valuable area for birdwatching and access to natural coastal habitats (walking and cycling – Cranfield to Greencastle and Mill Bay footpath and Cranfield to Greencastle Circular Cycle Route). Clay pigeon shooting (Cranfield), motocross and pitch and putt golf.

Assessment for Wind Energy Development

Overall sensitivity

The influences of development and ability of vegetation and enclosure pattern to screen views locally reduce the sensitivity of this landscape. Nevertheless much of the LCA forms an important setting and foreground to views of the Mourne Mountains and Carlingford Lough and Mountain. This is particularly true of the open coastal areas around Carlingford Lough, where the scale and grandeur of these views, and the tranquil and relative wildness of these coastal landscapes, could easily be overwhelmed by poorly sited wind energy development. Further inland local landscape features such as incised burn valleys, glacial moraines and cultural heritage sites are also of very high sensitivity.

Towards the south-east coast the influence of development and limited inland views tend to reduce landscape sensitivity, although this is offset by the high concentration of settlement and recreational activities in this part of the LCA.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The south-east coastal area of this LCA may be able to accommodate some form of wind energy development. Consideration could be given to siting any development where it might be viewed as separate and distant from the Mourne Mountains and away from notable landscape features and settlements. It is recommended that wind energy development reflects the relatively small scale landscape and settlement features and that intrusion in the many long views be minimised.

Particular care should be taken to avoid adverse impacts on the open and unspoilt coastal mudflats and distinctive views to the surrounding Mourne and Carlingford mountains. Care should also be taken to avoid adverse impacts on the character and setting of archaeological sites, geological features, or key recreational resources. The open, exposed uninhabited coastal areas and geomorphological and cultural sites should be respected.

In 2007 there were no operational or consented wind farms in this LCA or in adjacent LCAs. Transboundary issues could arise if wind energy development were to occur in County Louth eg at Carlingford Mountain. Due to the proximity of Carlingford Lough and the south Down coast there may be seaward issues to consider in future.

LCA 74 Kingdom of Mourne

Location: County Down. Foothill slopes of Mourne Mountains between upland areas and the Irish Sea.

Key Landscape and Visual Characteristics and Values

Scale

Open but settled landscape divided by a small-medium distinctive field pattern defined by glacial boulders. Elevation less than 200m AOD.

Landform

Gently shelving plain extending from the foot of the Mourne Mountains to the sea. Dissected by numerous rocky streams and glacial moraines giving rise to areas of gentle undulations. Occasional knolls of higher land.

Enclosure

Generally open landscape with few trees. Some areas of greater vegetation cover, limited to valleys, coniferous plantations on higher knolls, and parkland areas.

Complexity of landcover and features

Mixed farming land use with patches of gorse scrub and rushy pastures in places.

Man-made influence

Scattered distribution of farms and housing development across the area and particularly along the coast. Telecommunications masts on hills and many telegraph poles along roadlines.

Skylines and settings

Spectacular views to the Mourne Mountains and to the sometimes dramatic rocky coastline. This landscape forms an important and unique setting to the Mourne Mountains.

Visibility and views

Views to and from southern summits of Mourne Mountains and Carlingford Mountain to the south. The higher land surrounding this landscape and its general openness mean that the stone wall enclosure pattern is a defining feature of this landscape. Development is often highly visible and might draw the eye.

Landscape quality (condition)

Distinctive and intact field boundary and road network pattern. Majority of stone walls are in good condition. Recent housing development across the area visually disrupts this pattern in places. Some clearance of scrub and rough ground for agriculture. Quality of the landscape reflected in inclusion within Mourne AONB.

Scenic quality

Striking, unique and culturally significant pattern of small fields, combined with backdrop views to the mountains and views out to sea, gives rise to an area of high scenic quality. This is reflected in the area's inclusion within the Mourne AONB.

Wildness and tranquillity

Limited sense of remoteness except on northern fringes. Tranquillity is patchy due to the dispersed nature of settlement and intensity of farming activity.

Natural and cultural heritage features

Geomorphological interest along the coast (ASSI). Archaeological sites. Registered Park at Mourne Park.

Cultural associations

Attracts many artists (past and present). Enclosure pattern reflects an important phase in Irish history.

Amenity and recreation

Area provides access and parking to the Mourne Mountains beyond. Important tourist sites include Silent Valley, open access forests (eg Crocknafeola Wood) and Mourne Park heritage garden. Coastal areas offer opportunities for water sports. Cycle routes exist throughout the area.

Assessment for Wind Energy Development

Overall sensitivity

This landscape forms an important setting to the Mourne Mountains. It is a generally open landscape with distinctive patterns of small-medium field enclosures which are visible both from within this landscape and from surrounding higher land. This pattern is highly sensitive to physical and visual disruption particularly by development which is comparatively large and out of scale.

Woodland cover in and around knolls of higher land to the west of the area reduces landscape sensitivity although a number of the knolls currently have existing telecommunication masts and these areas still form an important setting to the Mourne Mountains.

Overall Sensitivity – High

Location, siting, layout and design considerations

This is a sensitive LCA with a dispersed pattern of settlement and highly visible landscape which is vulnerable to significant impacts. It is recommended that any wind energy development be closely associated with and reflect the scale of farmsteads and sheltering woodland

Care should be taken to avoid adverse impacts on the extremely sensitive, visually prominent and open, exposed upper slopes, on shorelines and on the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in this LCA, or in adjacent LCAs. Transboundary issues could arise if commercial wind energy development were to occur in nearby County Louth eg at Carlingford Mountain. Cumulative impacts could also easily arise if there was a proliferation of individual turbines within this LCA. Due to the proximity of Carlingford Lough and the south Down coast there may be seaward issues to consider in future.

LCA 75 Mourne Mountains

Location: County Down. Mountainous area stretching between Rostrevor and Newcastle.

Key Landscape and Visual Characteristics and Values

Scale

Open and expansive upland landscape comprising a series of mountain peaks (rising to 853m AOD at Slieve Donard) dissected by rocky streams and rivers in steep combs and glens.

Landform

Dramatic mountain peaks forming distinctive pyramidal jagged peaks with sculptured tors or more gently rounded smooth rolling mountains. Smooth slopes occasionally give way to vertical rock outcrops and scree slopes. Steep sided hanging valleys and glens lie between mountain peaks.

Enclosure

Predominately this is an open exposed landscape. Upper slopes are unenclosed except for the Mourne Wall, while lower slopes are enclosed by stone walls creating medium scale fields.

Complexity of landcover and features

A general uniformity to landcover including extensive areas of rough grassland and heathland, areas of peatland and blanket bog and isolated commercial forestry and broadleaved woodland. There are rock faces and scree slopes in places. Dispersed farmsteads occur on lower slopes.

Man-made influence

Little evidence of man-made elements on high peaks with the exception of the Mourne Wall, Silent Valley Reservoir and telephone masts on Slieve Martin. Commercial forestry and reservoir development have exerted influence on some valleys but tend to add visual variety.

Skylines and settings

Distinctive mountain skyline profiles seen from considerable distance give this area a strong identity. The profile of the mountains forms a striking backdrop to views from the surrounding landscape throughout south-eastern Northern Ireland.

Visibility and views

Spectacular, exhilarating and panoramic long distance views afforded from this LCA both inland and out to sea.

Landscape quality (condition)

High quality landscape as a result of intact landcover, traditional grazing rights and an enclosure pattern which is in good condition. There are some derelict farm properties in places.

Scenic quality

High scenic quality derived from compactness of area, simplicity of landform and striking diversity of individual profiles of mountain peaks. Area is designated as an AONB.

Wildness and tranquillity

Strong sense of relative wildness and remoteness away from honey pot sites and major recreation routes. High scenic quality and lack of overt man-made features strengthens these qualities.

Natural and cultural heritage features

Many important habitats including Eastern Mourne SAC and many geological and physiographic features including the largest outcrop of Tertiary granites in the British Isles (ASI, ASSI and SAC designations). Ancient woodland at Rostrevor (NR and SAC). Peregrine falcons. Mourne Wall and historic grazing rights and smuggling trade routes.

Cultural associations

Mourne Wall which encloses the mountain peaks and is associated with the supply of water to Belfast. Many artists and writers have been inspired by this landscape and its dramatic scenery.

Amenity and recreation

Important area for hillwalking and orienteering. Ulster Way traverses through this LCA. Other recreation activity includes horse riding in Rostrevor Forest, rock-climbing and hang gliding from crags, off road cycling, as well as water skiing, sailing, canoeing and kayaking on the River Glen.

Assessment for Wind Energy Development

Overall sensitivity

This landscape, although large scale overall, includes many areas of complex features eg rocky crags and tors or areas of nature conservation value. The collection of distinctive mountain summits, widespread visibility and memorable skyline profiles make them highly sensitive to wind energy development. Smooth rounded summits are often located in close proximity to other more sensitive summits or notable landscape features such as steep cliffs, rocky crags or important views.

The intactness of this landscape and its high scenic quality mean that it is vulnerable to wind energy development, which would fragment the area and alter the unfettered skyline.

Overall Sensitivity - High

Location, siting, layout and design considerations

This is a highly sensitive LCA which is vulnerable to significant impacts on the landscape. It is recommended that any wind energy development be closely associated with and reflect the scale of farmsteads and sheltering woodland.

Care should be taken to avoid adverse impacts on the extremely sensitive visually prominent and open, exposed upper slopes, ridges or rocky crags and on the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in this LCA, or in adjacent LCAs. Transboundary issues could arise if commercial wind energy development were to occur in nearby County Louth eg at Carlingford Mountain. Due to the proximity of Carlingford Lough and the south Down coast there may be seaward issues to consider in future.

LCA 76 Ballyroney Basin

Location: County Down. North of Hilltown between the Mourne Foothills to the east and Iveagh Slopes to the north-west.

Key Landscape and Visual Characteristics and Values

Scale

Flat lowland basin containing repetitive pattern of small scale rounded hills or drumlins rising to 113m AOD.

Landform

Lowland basin of drumlins creating a gently hummocky landscape interspersed with inter-drumlin watery hollows and the course of the Rivers Bann and Drumadonnell.

Enclosure

Hedgerow enclosure pattern and occasional hedgerow trees combined with topography and wet woodlands in low lying hollows give rise to an enclosed and intimate landscape.

Complexity of landcover and features

Patchwork of land cover closely relating to topography: farmed improved pastoral fields enclosed by gappy hedgerows and occasional hedgerow trees on the drumlins and rushy pastures, birch woodland and moss areas and small loughs in poorly drained hollows. This is a settled landscape with a dispersed pattern of farmsteads and properties located along roads on the higher land provided by the drumlins.

Man-made influence

Development along roads has an urbanising influence in places.

Skylines and settings

Town of Rathfriland sits in a strikingly prominent location on top of a drumlin and its church spire acts as significant landmark.

Visibility and views

Views are typically short and inward looking – interrupted by drumlins and dense pockets of gorse and birch. However this landscape also affords some important views to the Mourne Mountains to the south and to Slieve Croob in the north and the Iveagh Slopes in the west.

Landscape quality (condition)

The quality of this landscape is mixed – in some areas landscape features such as hedgerows are gappy and copses lack management.

Scenic quality

Some scenic quality due to combination of 'classic' drumlin hills which highlight field boundary patterns and contrasting low lying wetland areas. The southern parts of this LCA are included in the Mourne AONB, reflecting their association with adjacent hills.

Wildness and tranquillity

The inaccessibility of this landscape and unspoilt nature of many areas eg river courses give it a high degree of tranquillity and remoteness away from road corridors.

Natural and cultural heritage features

Extensive area of lowland peatland at Lacken Bog (ASSI). Many archaeological sites designated as historic monuments eg raths and a couple of monuments in State Care eg Goward Dolmen. Registered Garden at Ballyward.

Cultural associations

Not known.

Amenity and recreation

Core recreational activities focus on the settlements and River Bann and include Cabra Towers Outdoors Centre at Rathfriland, games fishing and canoeing on the Upper River Bann.

Assessment for Wind Energy Development

Overall sensitivity

For much of this landscape views are inward looking and short, interrupted by topography and vegetation. However to the south there are regular views out of this landscape to the Mourne Mountains. The variation in topography over short distances and the small scale of the drumlins (which are often only approximately 40m in height and small in geographical extent), mean that this landscape could easily be overwhelmed by poorly sited wind energy development. The quality and condition of the landscape, its role as a setting to the Mourne Mountains (particularly south of the A25) and the small scale of the drumlins are key constraints in this LCA. Similarly local landscape features such as cultural heritage features, wetland sites and loughs and areas important for recreation eg the River Bann are of very high sensitivity.

Towards the north of this LCA there are fewer sensitive sites and the landscape is less significant in forming a setting to the Mourne Mountains which makes this area relatively less sensitive.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The northern part of this LCA (away from the Mourne Mountains) may be better able to accommodate wind energy development than other areas. It is recommended that wind energy development should reflect the relatively small scale landscape and settlement features and drumlins. Care should be taken to prevent overcrowding turbines on individual drumlin hills and to seek balanced patterns of development where a site might extend onto a number of adjacent drumlin hills.

Particular care should be taken to avoid adverse impacts on areas with distinctive views to the surrounding mountains and foothills of the Mournes, on the character and setting of Rathfriland and on prominent drumlin summits. The landscape interests of natural or cultural heritage or recreational resources should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA, or in adjacent LCAs. Separation distances may however be an issue in the future.

LCA 77 Iveagh Slopes

Location: County Down. Low hills south of Banbridge and northwest of Rathfriland.

Key Landscape and Visual Characteristics and Values

Scale

Relatively open, upland, medium scale landscape of exposed hill summits around 200m AOD (with a general south-west to north-east orientation) and enclosed undulating plateau marginal pastures.

Landform

Undulating upland plateau and more elevated hills rising to 230m AOD on Knockiveagh with a scattering of rocky outcrops on upper slopes.

Enclosure

Distinctive hedgerow patterns radiating out from shallow depressions or running in a linear elongated pattern parallel with contours with occasional hedgerow trees. Narrow lanes are tree lined with glimpsed views out.

Complexity of landcover and features

Patchwork of marginal pastures and shallow depressions of bog with areas of gorse which add texture and areas of arable cultivation. Sparsely settled with a scattered distribution of isolated properties and farms located at the end of long straight lanes and occasional villages at road intersections.

Man-made influence

Generally few intrusive man-made influences.

Skylines and settings

Knockiveagh is the most distinctive skyline of the collection of hills that make up this LCA and forms a prominent ridge particularly when viewed from the south as a result of its elevation above surrounding areas and its rocky outcrops. Other landmarks include standing stones near Ballynafoy.

Visibility and views

Open nature of this landscape and elevation of hilltops affords long views over adjacent lower lying landscapes to the Mourne Mountains to the south, Sperrins to the north-west and short-range views to Slieve Croob to the north-east.

Landscape quality (condition)

Generally high quality landscape with attractive stone buildings and unspoilt farmland. The plateau areas are often poorly drained and have a lower quality farmland than the upper slopes where the fields and hedgerows are in good order.

Scenic quality

This landscape is not overtly scenic and is not part of a designated landscape. Nevertheless areas of scenic quality occur where there is an attractive composition of upland slopes and low lying raised bogs associated with a distinctive pattern of hedgerows.

Wildness and tranquillity

Remote and unspoilt qualities combined with upland character give this area a degree of relative wildness and tranquillity.

Natural and cultural heritage features

Low in diversity of habitats and species although small remnant patches of fen are characteristic. Scattering of historic monuments particularly on hill tops comprising cairns and raths, a number of which are scheduled.

Cultural associations

Not known.

Amenity and recreation

Tourist viewpoint on Knockiveagh with long distant views to the Mourne and Slieve Roosley. Waymarked route on southern slopes of Imdel.

Assessment for Wind Energy Development

Overall sensitivity

The elevated nature and visual prominence of this LCA relative to other surrounding low-lying landscapes, and the distinctive ridge of Knockiveagh, make this landscape sensitive to poorly sited wind energy development. Cultural heritage features and their settings are also sensitive particularly those sites that form local landmarks.

However the medium scale, open and elevated nature of the central plateau, and its clear visual separation from the landscapes of the Mourne and Slieve Croob reduce the sensitivity overall.

Overall Sensitivity - Medium

Location, siting, layout and design considerations

The slightly lower lying and less distinctive plateau areas in the centre of this LCA (which faces away from the Mourne Mountains and Slieve Croob) may be better able to accommodate wind energy development than other areas. If more than one cluster of turbines is proposed it is recommended that they have a consistent height and design. Consideration could be given to siting turbines on mid slopes away from skyline craggy summits and ridge tops.

Particular care should be taken to avoid adverse impacts on areas with memorable long distance views to the Mourne and Sperrins eg Knockiveagh summit. Care should be taken to avoid adverse effects on the character and setting of geological features, archaeological sites or key recreational resources (see previous information). Visually prominent and open, exposed upper slopes should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA or in adjacent LCAs.

LCA 78 North Banbridge Hills

Location: County Down. North of Banbridge.

Key Landscape and Visual Characteristics and Values

Scale

The landscape as a whole has a medium scale due to its combination of smooth, rounded hills, ridges and drumlins and medium scale field patterns. The ground rises to just over 100m AOD in the south-east.

Landform

This is an area of smooth, rounded hills, and ridges, interspersed with drumlins. The hills are separated by narrow, winding valleys or wider lowlands. The steep valley of the River Bann forms the southern boundary of the area.

Enclosure

Drumlins and hedgerows create a generally enclosed landscape. There are numerous hedgerow trees and small mixed woodlands scattered throughout the area and these too lend enclosure. Arable farming areas tend to be more open.

Complexity of landcover and features

The landscape pattern is diverse, with a mixture of pasture and arable farming, with patches of marsh and wet meadows dissected by drainage ditches. The long grass, rushes, and scrub in these areas provide a visual contrast to the smooth pastures on the upper slopes. Most drumlins and hills are divided evenly into fields by dense hedgerows which produce a striking pattern of field boundaries.

Man-made influence

Dispersed settlement along ridge top routes. A1 and town of Banbridge exert an influence on the landscape of the south-eastern part of the LCA. Agricultural service and industrial buildings along the principal routes. Quarries in the south-east. Communications masts and two transmission lines crossing the LCA from east to west.

Skylines and settings

The broad drumlins and river valley create an attractive setting for the town of Banbridge. The chimneys and buildings of historic mills provide a sequence of landmarks along the River Bann valley.

Visibility and views

The viewpoints are constantly shifting in this undulating drumlin landscape, consequently long views are occasional rather than frequent.

Landscape quality (condition)

The condition of the landscape varies; most hedgerows are intact, but the majority are also under-managed and mature hedgerow trees are in decline.

Scenic quality

This valley is an attractive and characterful landscape feature, with clustered stone villages, historic churches and stands of mature trees.

Wildness and tranquillity

There is no strong wildness or tranquillity associated with this LCA.

Natural and cultural heritage features

Fen is widespread and most individual sites are small; however, in some parts, the drumlins are widely spaced and the fens more extensive, as for example at Clare Bog, which also has developing wet woodland. Elmfield and Straw Hill are Registered Parks. Mills associated with the linen industry are also a feature.

Cultural associations

None known.

Amenity and recreation

Huntley Wood Walk along River Bann.

Assessment for Wind Energy Development

Overall sensitivity

This area is similar in sensitivity to wind energy development to the Armagh/Banbridge Hills to the south. The relatively broad, rounded form of the hills and drumlins, combined with dense hedgerow cover, tend to decrease sensitivity to wind energy development, and there are few long views within this landscape, which can at times be disorientating. The landscape is already affected by intrusive development in parts; and although there are features of natural and cultural heritage interest, these are relatively infrequent on the higher land which is intensively farmed and often sparsely settled. The settings of settlements, wetlands and cultural heritage sites are, however, more sensitive, notably within the Bann valley.

The high ground in the east and south-east of the LCA is generally least sensitive.

Overall Sensitivity - Medium

Location, siting, layout and design considerations

The higher hills in the east and south-east of the LCA may have the best capacity for wind energy development, particularly in areas where the landscape is already affected by development such as quarrying. Consideration could be given to carefully siting turbines within the hilltop undulations. It is recommended that wind energy development reflects the scale of the relatively low hills that are found in this LCA. It is recommended that attempts be made to minimise the siting of turbines where they will be seen in close proximity to electricity transmission lines.

Particular care should be taken to avoid adverse impacts on hilltops and landmark features of natural or cultural heritage interest, particularly close to the River Bann where mill buildings form landmarks. Open wetland areas and drumlin skylines should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA, or in adjacent LCAs.

LCA 79 Craigavon Plateau

Location: Counties Armagh and Down. South-east of Lough Neagh.

Key Landscape and Visual Characteristics and Values

Scale.

Rural parts of this landscape are characterised by a relatively small-scale pattern of fields on a low plateau generally less than 60m AOD but rising to 102m AOD at Shane's Hill.

Landform

The plateau has a gently rolling or undulating landform, with steeper slopes on the margins of the valley of the Upper Bann to the south of the Donaghcloney valley to the north-east. Small, winding, steep-sided valleys are attractive features on the southern edges of the plateau.

Enclosure

Enclosure varies; steeper slopes and valleys offer more enclosure whilst the plateau is more open in character.

Complexity of landcover and features

Land uses include pasture, horse grazing, horticulture (including some orchards) and small blocks of mixed woodland. There is a more unified agricultural landscape pattern on the slopes overlooking the Donaghcloney Valley, where land quality is relatively high. Significant pockets of rural landscape remain with stone walls, bridges, and some thatched cottages.

Man-made influence

Urban areas of Lurgan, Craigavon and Waringstown strongly influence character. The continuity of the landscape pattern is broken by the A26 and B3 roads and by extensive, scattered residential and roadside development in some areas. Transmission lines run across the plateau.

Skylines and settings

Estate planting associated with Waringstown contributes to its landscape setting. River flats and pasture form the eastern landscape setting of Portadown.

Visibility and views

Church spires are often local landmarks; long views are not a particular feature.

Landscape quality (condition)

The quality and condition of the landscape is mixed due to urban and urban fringe pressures. There are pockets of good quality farmland on the plateau but also areas of neglect, particularly towards the River Bann valley. The character of many settlements, such as Bleary and Waringstown, is dominated by extensive new housing estates and scattered peripheral development

Scenic quality

Generally low due to proximity to urban areas, existing man-made structures and relatively poor landscape condition.

Wildness and tranquillity

Substantial pockets of relatively tranquil and rural lands remain outside the urban areas and their fringes.

Natural and cultural heritage features

Semi-natural and less improved grassland is located mainly between Lurgan and Portadown and occurs as undeveloped land and planned open space in Craigavon, often associated with planted trees and shrubs. Occasional raths. Waringstown House, Brownlow House (Lurgan Park) and Eden Villa are Registered Parks. Conservation Area at Lurgan.

Cultural associations

None known.

Amenity and recreation

Millennium route 9, a cycling route around Craigavon, Lurgan Castle with woodland demesne. Recreational facilities associated with urban centres.

Assessment for Wind Energy Development

Overall sensitivity

The small scale landscape patterns and densely settled character of this LCA tend to increase its sensitivity. Any significant wind energy development could be both out of scale with the landscape and highly visible. The steeper slopes and more rural areas on the margins of the River Bann and the Donaghcloney valley are the most sensitive and visible parts of the landscape; but parts of the plateau are also sensitive due to visual clutter and lack of a clear structure.

Sensitivity is reduced, however, by the presence of widespread existing man-made influences; it is lowest in areas of derelict or brownfield land and along heavily developed transport corridors.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

Suitable sites for some form of wind energy development are most likely to be found in areas of derelict or brownfield land, in developed areas such as industrial estates and transport corridors, and in open farmland. It is recommended that any turbines should fit well in terms of siting, scale and design with existing built structures.

Care should be taken to minimise visual impacts from dwellings and public open spaces. Care should be taken to avoid adverse impacts on sensitive landscape features such as river corridors, particularly in the southern part of the LCA.

At the time of assessment there were no operational or consented wind farms within this LCA or in neighbouring LCAs.

LCA 80 Donaghcloney Valley

Location: County Down. East of Lurgan.

Key Landscape and Visual Characteristics and Values

Scale

A subtle lowland valley with a small scale field patterns on the margins, and larger open scale meadows on the valley floor. Highest land is around 40m AOD.

Landform

This is a small, shallow, flat-bottomed valley which lies between the Upper Ballinderry Plateau to the north and the Kilwarlin Plateau to the south. The River Lagan drains this LCA.

Enclosure

The outer margins are more enclosed by trees and hedges than the floodplain meadows.

Complexity of landcover and features

The River Lagan occupies a small channel but its visual presence is emphasised by stream-side willows and the historic remnants of water mills near the head of the valley. The principal settlement of Magheralin has a clustered form. It is surrounded by open arable farmland, with some prominent lines of mature trees.

Man-made influence

The roads are generally straight and ribbon development, which is often associated with conifer shelterbelts, is particularly evident along the B9. There are a number of large agri-industrial buildings within the valley and many are built from prominent, reflective materials.

Skylines and settings

The valley centre (floor) has an open landscape character but Magheralin village to the south has an attractive parkland setting. The valley also forms part of the setting for Moira at its northern end.

Visibility and views

The River Lagan meanders tightly at the entrance to the broader Lagan valley to the north east and is a prominent focus in views. There are also views across open meadows within the river valley.

Landscape quality (condition)

The field pattern towards the head of the valley is beginning to break down and the general condition of the hedgerows is 'gappy'.

Scenic quality

The river channel and associated riparian vegetation, combined with former mills lend some localised scenic quality.

Wildness and tranquillity

There is not a particularly wild or tranquil LCA.

Natural and cultural heritage features

Much landcover is improved grassland with little associated biodiversity. Hedgerows are probably most important habitat in this LCA. Cultural heritage features include Pretty Mary's Fort near Moira.

Cultural associations

Historic association with battle in 637 between King of Ulster and High King of Ireland.

Amenity and recreation

Very limited, local services at Moira.

Assessment for Wind Energy Development

Overall sensitivity

This very small LCA has little space for wind energy development, which could easily be out of scale and out of place in the open floodplain landscape. The area is also closely overlooked by the settlements of Magheralin and Moira. It is highly sensitive overall.

The centre of the valley is most prominent and open and therefore particularly sensitive to any wind energy development.

Overall Sensitivity - High

Location, siting, layout and design considerations

This is a small scale lowland valley LCA. The margins of the LCA are more enclosed in character and may offer the best opportunity for some form of turbine development.

Care should be taken to avoid adverse impacts on the extremely sensitive open flat valley floor and the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms within this LCA or in neighbouring LCAs.

LCA 81 Kilwarlin Plateau

Location: County Down. North of Dromore.

Key Landscape and Visual Characteristics and Values

Scale.

Broad plateau between 100 and 150m AOD with medium scale field patterns.

Landform

The escarpment slopes of the Kilwarlin Plateau overlook the Lagan Valley and extend from Hillsborough to Moira. The plateau is an extension of the Hillsborough ridge and dips gradually to the west from 146m at Fort Hill to 122m AOD at Red Hill. It has a broad, undulating surface, with rounded summits echoing the drumlin form. It has a relatively flat as opposed to convex form overall.

Enclosure

This is a relatively open landscape apart from some enclosure by mature hedgerows and hedgerow trees. The farmland is subdivided into medium-sized fields by neat hedgerows. There are numerous mature hedgerow trees – principally oak, ash and sycamore – scattered throughout the landscape.

Complexity of landcover and features

The hedgerows on more elevated land contain gorse and have a clumpy character, but in general, the landscape pattern is very consistent, with few irregularities. Traditional farms are often sited on low ridges and are sheltered by stands of mature trees, some containing Scots pine. These, and the short avenues of mature oak trees along sections of the roads and farm tracks, are striking features in the local landscape. The principal routes run along the ridgetop and at the foot of the escarpment; they link a branching network of narrow roads.

Man-made influence

There are numerous scattered farmsteads and houses but relatively little ribbon or other intrusive development. The area generally has rural unspoilt character.

Skylines and settings

The broad ridge top creates a distinctive skyline overlooking the Broad Lagan Valley. The southern edge of the LCA forms part of the setting of Dromore.

Visibility and views

There are long views to and from the Lagan valley (including the M1 motorway) and the Upper Ballinderry Plateau to the north.

Landscape quality (condition)

Most field boundaries are in relatively good condition. There is, however, some evidence of hedgerow removal and neglect.

Scenic quality

There are local areas of scenic quality within this consistent and well maintained landscape although the area as a whole is not designated for its scenic quality.

Wildness and tranquillity

There is a tranquil, unspoilt character to this LCA but it is not wild.

Natural and cultural heritage features

Glacio-fluvial deposits that occur along the north-eastern margin of the LCA and are part of the Lagan Valley deglacial complex. There are some small areas of demesne woodland, comprising both broadleaved and coniferous woodland, found for example at Eglantine House and Islanderry House. There are occasional raths and forts and Kilwarlin Moravian Church is a Registered Park. Generally a low density of special features.

Cultural associations

None known.

Amenity and recreation

Very limited amenity and recreation within this LCA.

Assessment for Wind Energy Development

Overall sensitivity

The undulating landform, rounded summits and relatively large, regular field patterns tend to decrease sensitivity to wind energy development within this LCA; there are also relatively few highly valued natural, cultural or recreational features. Set against this, the landscape is generally unspoilt, rural and tranquil.

However areas of lower sensitivity are confined to the plateau top. The side slopes, particularly to the north, are more prominent and visually sensitive.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

Given its broad form and long horizontal profile parts of this LCA might be well suited to accommodate some form of wind energy development. The interior of the plateau might offer the best capacity for wind energy development, utilising the rounded slopes and ridges as screening. Mid slope locations would be the most appropriate.

The northern escarpment is very sensitive and particular care should be taken to avoid unacceptable visual impacts on views from the Lagan valley or on the landscape interests of natural and cultural heritage features. Notable landscape features and drumlin tops should be respected.

At the time of assessment there were no operational or consented wind farms within this LCA or in neighbouring LCAs. If more than one site is proposed in this LCA it is recommended that they be well separated.

LCA 82 Dromore Lowlands

Location: County Down. South of Dromore and north-west of Slieve Croob Foothills.

Key Landscape and Visual Characteristics and Values

Scale

Very small scale and isolated landscape of drumlins and lowland bog generally below 100m but rising to around 150m AOD in the south.

Landform

Small rounded drumlins surrounded by flat bottomed marshy inter-drumlin hollows through which the River Lagan and its tributaries flow on the northern edge of the LCA. Some areas of lowland bog and scrub are extensive eg Big Bog.

Enclosure

Scattered hedgerow trees within field pattern, areas of scrub in low-lying areas and trees associated with farmsteads. Collectively this vegetation gives rise to an enclosed often intimate character.

Complexity of landcover and features

Mixed land use reflecting variations in drainage and topography and including rough and improved pastures, areas of arable, small woodland copses and wetland bog, fen and scrub woodland. Dispersed patterns of small holdings and dwellings on local roads and small clusters of houses at junctions located on the higher land afforded by the drumlins.

Man-made influence

Pylons pass through this landscape south of Dromore.

Skylines and settings

Where the River Lagan passes through Dromore it creates a distinctive landscape setting to the town. Otherwise this landscape does not contain prominent skylines.

Visibility and views

The undulating topography of this landscape combined with the relatively dense tree cover means that views are often short and inward-looking. Occasionally there are contrasting longer views to and from the higher land of Slieve Croob Summits and the Mourne Mountains beyond.

Landscape quality (condition)

Good on higher land with a transition to scrub and moss in low-lying areas.

Scenic quality

This landscape is not renowned for its scenic quality but contrasts in texture between smooth pastures on low hills and scrubby areas of bog and fen create areas of localised scenic interest.

Wildness and tranquillity

Areas of lowland bog and scrub have a remoteness and tranquillity, in part due to their inaccessibility and lack of human habitation or intervention.

Natural and cultural heritage features

Wetland south of Big Bog. Rough grassland. Notable concentration of archaeological sites in this LCA particularly raths and forts, many of which are scheduled. Registered Park at Gill Hall. Conservation Area as Dromore.

Cultural associations

Not known.

Amenity and recreation

Localised bridleways close to Dromore including Gourleys Loanin.

Assessment for Wind Energy Development

Overall sensitivity

The subtle undulating topography, relatively dense dispersed settlement pattern and longer views to the Slieve Croob summits and Mourne Mountains are key constraints in this LCA. Small scale features and field patterns mean that there are many scale comparators in this landscape and this, combined with a high concentration of archaeological sites and natural heritage sites, increases the sensitivity of the LCA to wind energy development.

Although hedgerow trees help to screen and contain views to some degree, the scale of the drumlins in this landscape is relatively small and they could be easily overwhelmed by innappropriately scaled vertical structures. Localised low-lying flatter areas of landscape (excluding wetlands) might be less sensitive.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The south-western more open parts of this LCA may be better able to accommodate wind energy development than other areas. It is recommended that wind energy development reflects the relatively small scale drumlins and landscape and settlement features. It is recommended that attempts be made to minimise turbines being seen in the context of existing pylon development.

Particular care should be taken to avoid adverse impacts on areas with distinctive views to the surrounding mountains and foothills. Particular care should be taken to avoid adverse impacts on the character and setting of archaeological or parkland sites, Dromore, Big Bog and the River Lagan corridor. Drumlin summits should be respected. If the south-western more open parts of this LCA are being considered care should be taken to avoid unacceptable impacts on distinctive drumlin landforms or drumlin tops.

At the time of assessment there were no operational or consented wind farms in this LCA or in adjacent LCAs.

LCA 83 Lower Slieve Croob Foothills

Location: County Down. West of Slieve Croob Summits.

Key Landscape and Visual Characteristics and Values

Scale

Broad scale, simple, smooth often open rolling ridges (reaching approximately 200m AOD) with smaller scale manicured valley landscapes divided by a strong field enclosure pattern.

Landform

Area of high ground with a distinctive pattern of rolling ridges and incised glens with a strong south-west to north-east alignment.

Enclosure

Generally open landscape with localised areas of enclosure derived from beech shelterbelts and clumps and occasional hedgerow trees.

Complexity of landcover and features

Improved pasture is the predominant land use with some areas of arable divided by a strong geometric field pattern which is an important and prominent feature of the landscape as are stands of beech trees. Large farms associated with outbuildings are generally well integrated into the landscape and associated with tree clumps.

Man-made influence

Few man-made elements as a result of low population and no main roads (although there is a dense pattern of minor lanes).

Skylines and settings

This landscape forms a foreground to views of the Mourne Mountains and a setting to the Slieve Croob Summits. The church tower at Finnis forms an important local landmark.

Visibility and views

Attractive views across glens and into adjacent landscapes and particularly eastwards towards the Slieve Croob Summits from the B7 and south to the Mourne Mountains, which in turn overlook this landscape.

Landscape quality (condition)

Good condition overall, with well maintained farm buildings and intact field boundaries, although occasional hedgerows and hedgerow trees have been lost to post and wire fencing.

Scenic quality

Derived from the strong field pattern, deeply rural character and undulating topography. The southern fringes are included in the Mourne AONB.

Wildness and tranquillity

This is a deeply pastoral landscape and the glens have a particularly strong tranquillity.

Natural and cultural heritage features

Nature conservation designations relate to scattered peatland and fen sites. Some archaeological sites, eg raths, are often located on ridge tops and most are scheduled.

Cultural associations

Not known.

Amenity and recreation

Pony trekking centre and opportunities for walking along the rural lanes.

Assessment for Wind Energy Development

Overall sensitivity

The broad scale and smooth profile of the ridges and valleys in this LCA make them arguably suited to wind farm development. However, this is a generally open landscape with wide visibility within the LCA and to landscape beyond, most notably within the Mourne AONB. This increases the sensitivity of the area. The dispersed pattern of farmsteads mean that there are likely to be few locations where scale comparisons cannot be made, further heightening overall sensitivity.

Areas furthest away from the AONB and away from individual farmsteads are less sensitive and might be able to accommodate some wind energy development.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The north-western ridges of this LCA may be better able to accommodate wind energy development than other areas. If clusters of turbines are to be proposed it is recommended that they have a consistent height and design. It is recommended that wind energy development reflects the scale of the ridges and landscape and settlement features and that turbine layout relates well to the strong geometric pattern of field enclosures.

Particular care should be taken to avoid adverse impacts on areas with distinctive views to the surrounding Slieve Croob Summits and on the character and setting of archaeological sites. Ridge summits should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA or in adjacent LCAs.

LCA 84 Mourne Foothills

Location: County Down. Land between the Slieve Croob Summits (to the north) and Mourne Mountains (to the south).

Key Landscape and Visual Characteristics and Values

Scale

The scale of this landscape varies between medium to small depending on the topography, vegetation and enclosure pattern. The land rises to 272m AOD.

Landform

Topographically diverse, undulating foothills forming rugged scenery including distinctive craggy hill summits with rocky outcrops and river valleys. These foothills wrap around the base of the Slieve Croob Summits and Mourne Mountains and connect to the sea south of Newcastle.

Enclosure

Enclosure is provided by topography and vegetation and varies within the area, being most keenly felt in areas of conifer plantation and in historic estates and parklands.

Complexity of landcover and features

Predominantly pastoral landscape with a strong geometric field pattern defined by stone walls and hedges. Stands of beech trees are characteristic along with patches of gorse and wind-sculpted pines. Pastoral land use and vegetation give rise to a varied texture and colourful landscape. There are notable areas of conifer plantation.

Man-made influence

Area contains the town of Castlewellan and northern parts of Newcastle valleys. Some areas of visually intrusive housing. Conifer plantations and reservoirs add interest and quarries (working and disused) are common particularly in the north-east.

Skylines and settings

This elevated landscape forms an important setting to surrounding lower-lying landscapes and a foreground to the Mourne Mountains, Slieve Roosley and Slieve Croob Summits. It also provides much of the landscape setting to Castlewellan and Newcastle.

Visibility and views

Elevated points, eg White Hill, give dramatic and memorable views over the surrounding lowland landscapes of the Newcastle Valleys and the Quoile Valley Lowlands and towards the Mourne Mountains.

Landscape quality (condition)

This landscape is in particularly good condition – stone walls are in a good state of repair and most stone cottages are occupied.

Scenic quality

Visually pleasing and balanced pattern derived from varied topography and strong land use patterns. Area forms part of the Mourne AONB.

Wildness and tranquillity

The wild and rugged terrain of parts of this landscape contrasts with areas of a more tamed and settled character. Overall the area has a strong tranquillity outside of the main settlements.

Natural and cultural heritage features

Nature conservation sites include Castlewellan Lake (ASSI) and Bohill Wood NR in the north-east of the LCA. High concentration of archaeological sites including cashels, souterrains and dolmens – a number are scheduled or in State Care. Extensive mixed woodlands and Registered Park landscape at Castlewellan (including the National Arboretum), Tollymore Forest Park and Donard Wood. Conservation Area at Castlewellan.

Cultural associations

Views to the Mourne Mountains from this landscape have inspired artists.

Amenity and recreation

This LCA provides a wide variety of recreational provision including extensive areas of public access in Castlewellan and Tollymore Forest Parks. Area contains many viewpoints and picnic sites and a series of waymarked walks including the Ulster Way. Recreation pursuits include fell running and orienteering, cycling, mountain biking, horse riding, rock climbing.

Assessment for Wind Energy Development

Overall sensitivity

The majority of this landscape is highly sensitive to wind energy development. It is a varied and rugged landscape of high scenic quality which performs an important role in providing an outstanding setting to other more elevated landscapes adjacent. Sensitivity is further increased by the LCA's popularity for outdoor recreation.

There are localised areas of somewhat lower sensitivity to wind energy development on the north-eastern fringes of the LCA where, in transition to lower-lying landscapes, there are fewer outdoor recreation activities or landscape features of conservation value, and the landscape has been altered by quarrying and conifer plantations.

Overall Sensitivity - High

Location, siting, layout and design considerations

The north-eastern part of this sensitive LCA might be the best suited area to accommodate some form of wind energy development. Existing woodland might assist in screening views. It is recommended that wind energy development reflects the scale of the landform and landscape and settlement features and that turbine layout relates well to the strong geometric pattern of field enclosures.

Particular care should be taken to avoid adverse impacts on areas with distinctive views to the surrounding Slieve Croob Summits and on the settings of natural or cultural heritage features. Hill summits and rocky knolls should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA or in adjacent LCAs.

LCA 85 Newcastle Valleys

Location: County Down. North of Newcastle and west of Dundrum.

Key Landscape and Visual Characteristics and Values

Scale

Long but narrow, smooth and relatively open rolling ridges (rising to approximately 110m AOD) and small scale intimate valleys.

Landform

Relatively low-lying rolling ridges and parallel linear river valleys aligned north-west to south-east. Near the coast there are a number of distinctive rounded knolls.

Enclosure

This is a generally open landscape with limited tree cover. Enclosure is afforded mainly by the rolling ridges.

Complexity of landcover and features

Pastoral landscape with a diverse landscape pattern of medium sized fields defined by gorse hedgerows and broken stone walls. Stands of trees and shelter belts are a feature, particularly along rivers and on small rounded knolls. Patches of fen, willow carr and damp grassland occur in low lying areas. Dispersed settlement pattern and dense network of lanes. Traditional vernacular dwellings and small nucleated historic villages eg Maghera.

Man-made influence

Proliferation of modern bungalow housing and commercial development on the outskirts of Newcastle are locally intrusive.

Skylines and settings

Ridges form significant skylines and are prominent within this LCA. Central and southern parts of this area form an important foreground to short range views of the Mourne Mountains. This landscape also forms an important setting to Dundrum.

Visibility and views

The open ridges provide spectacular and memorable views to the Mourne Mountains, Murlough Bay and more distant views to the Slieve Croob Summits.

Landscape quality (condition)

Fairly good condition although locally broken stone walls, gappy hedgerows and intensive housing have tended to undermined quality.

Scenic quality

Derived from the repetitive pattern of open ridges and contrasting sheltered valleys and lower lying areas. The majority of this LCA (with the exception of land to the north-east) is within the Mourne AONB.

Wildness and tranquillity

High degree of tranquillity particularly in the sheltered river valleys and in the north of this LCA.

Natural and cultural heritage features

Significant raised beach deposits (Murlough SAC/ASSI) extend into this LCA. Nature conservation interest relates to species rich and damp grasslands (Ballybannan ASSI) as well as river courses and woodland copses. Dundrum Inner Bay adjacent to this LCA supports numerous wildfowl and waders. Numerous archaeological sites many of which are scheduled or are in state care. Registered Park at Church Hill.

Cultural associations

Historic associations between Maghera round tower and church and Slieve Donard which was supposedly named after the Saint.

Amenity and recreation

Section of Ulster Way. Important area for walking, cycling and horse riding along the rural lanes and promoted footpaths. Recreation activity is focused south of the A25 although there are opportunities for fishing at Ballylough.

Assessment for Wind Energy Development

Overall sensitivity

The open ridges and tranquil valleys of this LCA on the margins of the Mourne Mountains are very sensitive to change, not only because of their complex, varied character and high concentration of archaeological sites but because they form a foreground to views of the mountains and form part of the Mourne AONB. They also form a setting to the towns of Newcastle, Castlewellan and Dundrum.

The north-eastern part of the LCA shows less obvious landscape and visual constraints to wind energy development but remains sensitive for reasons of its scale and tranquillity.

Overall Sensitivity - High

Location, siting, layout and design considerations

The north-eastern part of this LCA is the most likely area that might be able to accommodate some form of wind energy development. It is recommended that wind energy development reflects the scale of the landform and landscape and settlement features and that turbine layout relates well to the pattern of field enclosures and residential properties. Visual impacts on adjoining landscapes should be a consideration.

Particular care should be taken to avoid adverse impacts on areas with distinctive views to the Slieve Croob Summits. Open ridge tops or rounded knolls, the historic character of Dundrum and its setting, and the landscape interests of natural and cultural heritage features should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA or in adjacent LCAs. Due to the proximity of the south Down coast there may be seaward issues to consider in future.

LCA 86 Tyrella Coastal Dunes

Location: County Down. Coastal landscape around Dundrum Bay.

Key Landscape and Visual Characteristics and Values

Scale

Relatively flat, open and expansive with a strong horizontal emphasis. Generally below 40m AOD.

Landform

Long sweeping sandy beach and bay, hummocky sand dunes and low-lying gently undulating farmland.

Enclosure

Windswept and exposed with little or no tree cover.

Complexity of landcover and features

Sandy beach, marram grass and heathland covered sand dunes and inland farmland of pastures and arable give a textured and varied landscape pattern and colours.

Man-made influence

Traditional white-finished rural dwellings and town houses in villages and Dundrum coastal town. MOD site and conifer plantations at Ballykinler

Skylines and settings

Mourne Mountains form a distinctive skyline in views to the south-west and dunes form a simple and horizontal skyline from the beach. This landscape is an important setting to Dundrum, Newcastle and the Mourne Mountains.

Visibility and views

Dramatic views to Mourne Mountains and along the curve of the bay. View inland to undulating farmland from sand dunes.

Landscape quality (condition)

Generally high with extensive areas of unspoilt and intact sand dune, mudflat and farmland. Areas closer to Newcastle have been affected by development including caravan parks and loss of field boundaries.

Scenic quality

Derived from combination of high landscape quality, open water and backdrop of the Mourne Mountains. This landscape falls partly within the Mourne AONB and partly within the Strangford and Lecale AONB.

Wildness and tranquillity

The windswept nature and evident natural processes give this LCA a wild and remote character.

Natural and cultural heritage features

Important area for beach processes and evidence of raised beach deposits. Nature conservation value relates to the heathland, sand dunes and mudflats (Murlough ASSI and NNR and SAC). Largest areas of dunes in Northern Ireland and of rarity value. Dundrum Inner Bay is important for wildfowl and waders. Registered Parks at Tyrella House and Mount Panther.

Cultural associations

Views of the Mourne Mountains and Dundrum Bay have inspired many artists.

Amenity and recreation

This area is highly important for outdoor recreation. Lecale Way footpath passes through this landscape as well as the Dundrum Bay Path, and there are marketed horse riding trials. Wildfowling, angling, and water sports are also important. Area contains Royal County Down golf course and numerous caravan sites along the coast.

Assessment for Wind Energy Development

Overall sensitivity

The Tyrella Coastal Dunes are highly sensitive to wind energy development of all types and scales. This is due primarily to their open and exposed character, inherent scenic quality and role as a setting to the Mourne Mountains. The openness and wild character of the area mean that any development is likely to interrupt important skylines and would be extremely intrusive, extending an industrial influence into landscapes which are currently pristine and natural. The value of the area for outdoor recreation further increases its sensitivity.

Any wind energy needs to be approached with great caution in this LCA.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has very high landscape and visual sensitivity and a role as a setting to the Mourne Mountains. These landscapes are vulnerable to significant impacts. It is recommended that any turbine development be closely associated with existing development and tree groups. It is recommended that attempts be made to minimise visual clutter where turbines are seen in relation to overhead telegraph wires.

Care should be taken to avoid adverse impacts on the highly sensitive historic character of Dundrum, on open sites or on areas where there are important views along the coast or across the sand dunes.

At the time of assessment there were no operational or consented wind farms in this LCA. Due to the proximity of Carlingford Lough and the south Down coast there may be seaward issues to consider in future.

LCA 87 Slieve Croob Summits

Location: County Down. North of the Mourne Mountains and Foothills.

Key Landscape and Visual Characteristics and Values

Scale

Open exposed upland landscape (rising to 534m AOD) with expansive views.

Landform

Rolling rounded hills and summits with rocky outcrops and screes giving rise to a mainly rough and rugged landscape.

Enclosure

Generally open with occasional stunted or windswept trees and some areas of enclosure by conifer plantations eg Drumkeeragh Forest.

Complexity of landcover and features

Rugged and textured character comprising unimproved, wet and semi-improved pastures, patches of heather and blanket bog, rocky outcrops and screes and some areas of conifer plantation. Strong stone wall enclosure pattern in the east, hedgerows elsewhere. Isolated stone dwellings (many derelict) and farmsteads and a low density of narrow lanes.

Man-made influence

Rural landscape with few overt man-made features except for some conifer plantations and telecommunications masts on summits of Slieve Croob.

Skylines and settings

Prominent rugged summits and ridgelines visible from miles around, particularly those formed by the Slieve Croob and Slievenisky complex, but also the summits of Legananny Mountain and Slievegarran.

Visibility and views

Panoramic views over the surrounding area and to and from the Mourne Mountains and Dundrum Bay to the south. Views to Strangford and Lecale AONB from Slieve Croob.

Landscape quality (condition)

Relatively good condition with a largely intact pattern of dispersed farmsteads, lanes and pastoral fields and, at higher elevations, areas of more open rougher ground.

Scenic quality

Subtle scenic quality relating to attractive patterns and balance of enclosed pasture fields and rough craggy hills on the most elevated land. Much of the area falls within the Mourne AONB.

Wildness and tranquillity

Strong wild qualities derived from textured vegetation, rocky outcrops, elevation and exposure. Occasional derelict dwellings contribute to a sense of desolation and tranquillity.

Natural and cultural heritage features

Nature conservation interest relates to peatland on the main summits, mosaic of habitats at Black Lough (ASSI). Important archaeological sites eg cashels, raths, dolmens and standing stones many of which are scheduled or in state care.

Cultural associations

Not known.

Amenity and recreation

This landscape is an important recreation gateway to the Mourne Mountains and views to the Mourne Mountains in this landscape are a key part of the area's recreation experience. Area is important to visitors for hiking (Slieve Croob circular walk and other waymarked ways), forest walks, orienteering, horse riding and cycling (Sustrans Cycle Route 2). Hang gliding and paragliding are also popular here. There are a number of popular car parks and viewpoints eg Windy Gap and Cratlieve.

Assessment for Wind Energy Development

Overall sensitivity

In theory the rounded convex profile of the summits in this LCA make it suitable for wind energy development. However the openness of this landscape and subsequent high visibility, coupled with its scenic quality and often rugged, craggy and wild character, increase its sensitivity. Of particular sensitivity is the area's role in providing a gateway to the Mourne Mountains AONB and providing some of the most spectacular mid-distance views to this iconic upland. Wind energy development in this landscape could therefore have widespread and significant impacts on landscape character and visual amenity.

These sensitivities lessen somewhat in the north-east of this LCA where the lower-lying hills are less sensitive visually, and of lesser scenic quality. In this area the presence of conifer plantations might also assist in screening some views. However the small geographical extent of this area is a key constraint.

Overall Sensitivity - High

Location, siting, layout and design considerations

The lower slopes on the north-eastern fringe of this LCA, away from the higher ridgelines where views to the wider landscape are less significant and where conifer plantations may assist in screening some views, may be better able to accommodate some form of wind energy development than other areas. It is recommended that turbine development reflects the scale of landform and landscape and settlement features and that turbine layout relates well to the pattern of field enclosures and residential properties. Attempts should be made to minimise turbines being seen in relation to existing transmission masts.

Care should be taken to avoid adverse impacts on the extremely sensitive prominent ridgelines such as Slieve Croob and Slievegarran as turbines in these areas could dominate the landscape. The landscape interests of natural and cultural heritage features should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA or in adjacent LCAs. Due to the proximity of the coast there may be seaward issues to consider in future.

LCA 88 Craggy Dromara Uplands

Location: County Down. North of Slieve Croob Summits and south-west of Ballynahinch.

Key Landscape and Visual Characteristics and Values

Scale

Gentle terraces of land rising up to 193m AOD on the edge of Slieve Croob Summits to the south. Gently rounded drumlins in lower areas to the east and north and areas of lowland basin.

Landform

Rolling elevated terraces and plateau with scattered rocky outcrops to the south. Distinctive rounded or conical drumlins in the east; less distinctive rounded rolling drumlins in the north.

Enclosure

Enclosure particularly in lower-lying areas to the north and east (around Montalto House) as a result of hedgerow and parkland trees (mature oaks), stands of Scots pine and topography, giving rise to an intimate character. More exposed on elevated areas to the south and wetland basin surrounding Lough Aghery.

Complexity of landcover and features

Marginal pastoral landscape on elevated terraces and drumlins accompanied by wasteland, patches of gorse and rock outcrops. Marshy land in inter-drumlin hollows. Numerous small loughs provide variety in texture and colour. Pastures are enclosed by low stone walls and hedgerows.

Man-made influence

Dispersed pattern of derelict farmsteads and modern bungalow development that is sometimes visually prominent along principal roads eg the B2.

Skylines and settings

Archaeological sites might form important landmark features eg dolmen north-west of Dromara. The slopes south of the B2 form an important skyline when viewed from the north and north-east. The wooded parkland of Monalto House provides an important setting to the south of Ballynahinch. The prominent conical drumlins in the east of this LCA also contribute to the settings of Ballynahinch and Spa.

Visibility and views

The lowland valley to the east of Ballykeel and the fringes of Lough Aghery are prominent in views across the area. There are notable views northwards from the B2.

Landscape quality (condition)

Loss of hedgerows due to farming activity and lack of management of stone walls mean that the condition of this landscape is mixed.

Scenic quality

The central southern corner of this LCA is included in the Mourne AONB.

Wildness and tranquillity

Rugged relatively wild character derived from elevation, textured land uses and untamed character.

Natural and cultural heritage features

The loughs form an important habitat for whooper swans. Historic mill buildings at Woodford and archaeological sites eg rath west of Dromara are valued cultural features, as are other archaeological sites many of which are scheduled. Monalto House on the outskirts of Ballynahinch is a Registered Park.

Cultural associations

Not known.

Amenity and recreation

Begny Lake is valued for its fishing and angling.

Assessment for Wind Energy Development

Overall sensitivity

The sensitivity of this landscape relates to its predominantly settled character and small scale, its often rugged form and the range of different landscape features such as loughs and archaeological sites. This landscape also forms a foreground to views of the Mourne AONB and particularly Slieve Croob summits. Significant wind energy development on the conical drumlin hills found to the east of this LCA may not be appropriate simply because the scale of the drumlins is not sufficiently large to accommodate it. In addition, particular drumlins have an unusual and distinctive form and provide an important setting to adjacent settlements. Development in the low-lying basin around Lough Aghery or on the elevated ridges to the south may also be inappropriate because of the openness of these areas and their visual prominence from elsewhere within the LCA and indeed from Strangford Lough AONB.

Away from ridgetops and on lower lying, less distinctive drumlin landscapes to the north the landscape is somewhat less sensitive but turbine height is strongly constrained by the size of the drumlin landform.

Overall Sensitivity - High

Location, siting, layout and design considerations

The central area of this LCA away from ridgetops might offer the best scope for some form of wind energy development. Here hedgerow trees might provide some screening. It is recommended that wind energy development reflects the relatively small scale of landform and landscape and settlement features of this LCA and the role it plays as part of the setting of the Mournes to the south.

Care should be taken to avoid adverse impacts on highly sensitive prominent ridges. Particular care should be taken to avoid adverse impacts on key views to the Mournes to the south as well as the settings of landscape features such as loughs or archaeological sites. Prominent drumlins and skylines should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA or in adjacent LCAs.

LCA 89 Hillsborough Slopes

Location: County Down. South of Lisburn and north of the B2.

Key Landscape and Visual Characteristics and Values

Scale

Medium scale, broad rounded ridges rising to 170m in the centre of this LCA but becoming smaller scale at the edges.

Landform

Rounded ridges and hills which are gently rolling and progressively influenced by drumlin forms (egg-shaped and rounded summits) at the fringes of the LCA. Central ridges have an east-west alignment.

Enclosure

Windswept farmland on ridge tops. More enclosed on lower slopes due to scattered hedgerow trees and coniferous woodland at Hillsborough Castle Estate and Forest.

Complexity of landcover and features

Mixed farmland landscape divided by a varied patchwork of fields and hedgerows – medium scale enclosures on the open slopes and smaller paddocks on lower-lying land and adjacent to settlements. Small farmsteads scattered throughout the area. Historic town of Hillsborough.

Man-made influence

Some roads have linear urban development along them. Pylons pass through this landscape over the highest ridge. There is an area of landfill in the southern part of the LCA.

Skylines and settings

Church spires of Hillsborough are a key landmark, and the lower slopes below the town are important to its setting. The higher ridges in the LCA form the setting to the Registered Park of Hillsborough Castle; while Cannon Hill (drumlin) contributes to the setting of Dromore.

Visibility and views

Long views from ridge tops, particularly to the north but also south towards Slieve Croob.

Landscape quality (condition)

Good condition although agricultural intensification of the ridge-tops has led to field boundary loss and hedges are gappy or replaced with post and wire. Some paddocks show signs of neglect.

Scenic quality

This landscape has no special scenic qualities but its archaeological and historic interest, partly associated with Hillsborough and Dromore, is of particular conservation value..

Wildness and tranquillity

The windswept character of the upper ridges and their openness give rise to a sense of relative wildness, reduced by the settled character of the area and presence of pylons.

Natural and cultural heritage features

There are a few archaeological sites including raths and chambered graves some of which are scheduled. Hillsborough Castle is a Registered Park and its wooded character and stone wall dominate the higher ridges in this landscape. Hillsborough is an important historic town and Conservation Area. Dromore to the west is also a Conservation Area.

Cultural associations

Not known.

Amenity and recreation

Hillsborough town is an important tourist destination as is Hillsborough Forest. Hillsborough Forest Lake Walk.

Assessment for Wind Energy Development

Overall sensitivity

While the rounded gently rolling ridges of this landscape are in theory suited to wind energy development, the visual prominence of these ridge tops and small scale of the drumlins on the fringes, along with the overall settled character of this LCA, make much of the area very sensitive to change. Parts of this LCA contain important designed landscapes while other areas perform an important role as a setting to landmarks or settlements and this further heightens sensitivity. From the elevated areas of this LCA there are significant views to the Mourne Mountains and Slieve Croob. Nevertheless this area is not of high scenic value and the pattern of the landscape is in places fragmented.

Away from the ridge tops and main settlements the landscape is slightly less sensitive to change and there might be some scope for appropriately scaled wind energy development in these areas if carefully sited.

Overall Sensitivity - High

Location, siting, layout and design considerations

The lower slopes on the southern side of the central ridges may be better able to accommodate some form of wind energy development than other areas. It is recommended that wind energy development reflects the relatively small scale of landform and landscape and settlement features of this LCA, the role it plays as part of the setting of the Mournes to the south and also the historic character of Hillsborough. It is recommended that turbine layouts relate well to the pattern of field enclosures and residential properties. Attempts should be made to minimise impacts where turbines might be seen in the context of pylons.

Care should be used to avoid adverse impacts on the sensitive central most elevated and prominent ridges as turbines in these areas could be widely visible and could dominate the landscape. Care should be taken to avoid adverse impacts on the setting of natural and cultural heritage sites or landmarks. Prominent drumlins and skylines should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA or in adjacent LCAs.

LCA 90 Ravarnet Valley

Location: County Down. River valley between Lisburn and Ballynahinch.

Key Landscape and Visual Characteristics and Values

Scale

Broad lowland river valley landscape containing small drumlins which create areas with a distinctly smaller scale. Drumlins rise to 148m in the south-east at Magheraknock Fort.

Landform

Drumlins have amorphous, irregular and elongated form with shallow slopes. Inter-drumlin hollows have marsh, small loughs and undulating floodplain, through which runs the meandering course of the River Ravarnet.

Enclosure

Localised enclosure created by drumlin topography, scattered hedgerow trees, woodland associated with Larchfield Estate, and regenerating areas of willow and birch in lowland bog areas. Otherwise this landscape is mainly open particularly on the floodplain.

Complexity of landcover and features

Large pastures and small paddocks on the valley floor with smaller patchwork of mixed farmland on drumlins. Loughs occur on parts of the valley floor, notably north of Magheraknock. Dispersed pattern of traditional farmsteads on mid-slopes of drumlins often associated with mature trees.

Man-made influence

Quarrying on more elevated land towards Ballynahinch. Pylons pass through the north-western part of the LCA.

Skylines and settings

The rounded form of the drumlins and scattered hedgerow trees form significant skylines in this landscape and have an important visual presence. They form the settings to the loughs, to the villages of Annahilt and Ravarnet and also the northern setting of Ballynahinch. The motte and bailey to the east of Ravarnet is a notable landmark.

Visibility and views

The longest views are gained from the most elevated drumlins, particularly to the south-east where there are attractive views northwards across the floodplain or from the open floodplain itself. There are also views to Slieve Croob to the south. Otherwise views are generally short-range and inward-looking.

Landscape quality (condition)

Moderately good condition although many hedgerows are neglected and gappy and there are occasional pockets of derelict land.

Scenic quality

An area of largely unspoilt tranquil countryside. The loughs on the floodplain north of Magheraknock have a notable scenic quality and have been identified as the Magheraknock Loughs ASQ.

Wildness and tranquillity

The broader floodplains express the greatest sense of remote and tranquil character.

Natural and cultural heritage features

Valley floor is of local wildlife importance, providing a wildlife corridor linkage to the River Lagan. Numerous archaeological and historic sites, most of which are scheduled or are in state care, including raths, forts and mottes eg Magheraknock Fort. Larchfield is a Registered Park.

Cultural associations

Not known.

Amenity and recreation

Fishing and horse riding are popular.

Assessment for Wind Energy Development

Overall sensitivity

The open nature of this valley landscape is visually sensitive to wind energy development which could have a serious impact on character and visual amenity, particularly in the ASQ landscape north of Magheraknock. Development on the drumlins may not be appropriate simply because of their small scale and their importance in forming local skylines.

In the south-east of this LCA, north of Ballynahinch, where existing quarrying activity has influenced the character of the landscape, the landscape might be less sensitive.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

This LCA has a valley setting and relatively small scale landscape and settlement features. The locations in which some form of wind energy development is most likely to be accommodated are the south-eastern fringes of the LCA in the area already affected by quarrying. Attempts should be made to minimise turbines being seen in association with pylons.

Care should be used to avoid adverse impacts on sites near highly sensitive key views, on prominent drumlins and ridgetops, on important skylines and around Magheraknock Loughs. Care should be taken to avoid adverse effects on the settings of the intimate valley floor loughs, wetlands and archaeological features.

At the time of assessment there were no operational or consented wind farms in this LCA or in adjacent LCAs.

LCA 91 Quoile Valley Lowlands

Location: County Down. West of Downpatrick.

Key Landscape and Visual Characteristics and Values

Scale

Small scale landscape of drumlin hills rising to approximately 60-70m AOD but many being smaller.

Landform

Pronounced, often steep, rounded drumlins (some with a distinctive egg-shaped form) divided by marshy hollows, loughs and bogs and the course of the Rivers Ballynahinch, Annacloy and Blackstaff. The landscape has a complex topography which becomes progressively shallower towards the south and higher to the north.

Enclosure

Relatively enclosed and intimate landscape as a result of topography and the woodland which surrounds some loughs. Avenues of beech trees, stands of pine and estate woodland also provide enclosure.

Complexity of landcover and features

Pastoral landscape with a prominent field pattern emphasised by stone walls, hedges and topography. Open water and succession of vegetation types give a textured quality to low lying areas. Areas of parkland and estate give a well wooded and tamed character in parts. Large farmhouses, traditional stone dwellings, and small settlements.

Man-made influence

Some intrusive modern housing dispersed throughout LCA. Pylons pass through LCA to the east of Ballynahinch.

Skylines and settings

Drumlins create a distinctive setting to many clustered settlements including Ballynahinch, Downpatrick, and Drumaness. Rathes, standing stones, mottes and churches are often located on the tops of drumlins and create important skyline features. The land surrounding Inner Dundrum Bay is important in defining a setting to this inland expanse of water.

Visibility and views

Although generally inward-looking there are some significant views to the south-west towards the Mourne Mountains and Slieve Croob, which overlook this LCA.

Landscape quality (condition)

Stone walls and hedgerows are in good condition along with rural buildings, with only a few cottages in a derelict state.

Scenic quality

The eastern side of this LCA around Downpatrick, the land surrounding Inner Dundrum Bay, and the southern fringes of this LCA, are all valued for their scenic quality and form part of the Mourne and Strangford and Lecale AONBs.

Wildness and tranquillity

This is a tranquil rural landscape but it does not have strong relative wildness.

Natural and cultural heritage features

Inter-drumlin hollows and wetlands are important for their fenland flora eg Woodgrange, Ballykilbeg, Corbally, Ballygallum Ponds and Hollymount ASSIs. Ballykilbeg and Lecale Fens are also SACs. Dundrum Inner Bay is also important for waders and wildfowl. This LCA has a high concentration of archaeological sites which are scheduled or in state care and the land west of Downpatrick is an ASAI. Registered Parks occur at Rademon, Crossgar House, Seaford House, Mount Panther and Ballydugan House. Conservation Area a Downpatrick.

Cultural associations

Ancient landscape strongly associated with local folklore, myth and legends.

Amenity and recreation

Lecale Way runs along the coast.

Assessment for Wind Energy Development

Overall sensitivity

The extent, intact character and cohesiveness of this drumlin landscape make it sensitive to wind energy development. The small scale of the drumlins, their often distinctive profiles and the high concentration of natural and cultural landscape features found here further heighten the area's overall sensitivity. Those areas which are designated as AONB might be especially sensitive.

Although this is often a mainly inward-looking landscape, with a relatively high tree cover that theoretically could screen wind energy development to some degree, the scale of the landscape features and subtle, small scale of the topography mean that this landscape is highly sensitive to wind energy development.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has complex topography, small scale and a concentration of natural and cultural landscape features. The fringes of Inner Dundrum Bay are particularly sensitive visually. It is recommended that any turbine development be closely associated with and reflect the scale of existing buildings and tree groups.

Care should be used to avoid adverse impacts on highly sensitive drumlin tops or prominent skyline positions. Care should also be taken to avoid adverse impacts on the settings of the area's key settlements, its many wetland habitats, archaeological sites and Registered Parks.

At the time of assessment there were no operational or consented wind farms in or near this LCA. Due to the proximity of the south Down coast there may be seaward issues to consider in future. Although the mouth of Carlingford Lough is at least 30-40km away there may be seaward issues to consider from higher ground to the south. Other issues may arise relative to the proximity of the LCA to Strangford Lough.

LCA 92 Ballyquintin and Lecale Coast

Location: County Down. Coastal landscape stretching from the southern tip of the Ards peninsula to St John's Point.

Key Landscape and Visual Characteristics and Values

Scale

Expansive and broad with a strong horizontal emphasis. Elevation rises to approximately 50m AOD.

Landform

Gently undulating coastal farmland with low drumlins and open inter-drumlin hollows. Rocky coastline with distinctive headlands and bays.

Enclosure

Open, exposed and windswept with sheltered coves along the coast.

Complexity of landcover and features

Predominately sheep grazing on pastoral farmland with patches of gorse and scrub which add texture. Fields divided by stone walls and complex pattern of fen and wet inter-drumlin hollows. Small settlements and town of Ardglass and a scattered distribution of individual dwellings, often of traditional vernacular character.

Man-made influence

Few intrusive influences apart from disused airfield at Ringawaddy.

Skylines and settings

Forts, castles and windmills are often sited on hilltops and form highly visible landmarks eg the church on St John's Point. The headlands form an important setting to the fishing town of Ardglass.

Visibility and views

Uninhibited views of the sea and spectacular views of the Mourne Mountains to the south particularly from St John's Point.

Landscape quality (condition)

Relatively unspoilt with many intact traditional features. Some loss of field boundaries in places.

Scenic quality

Much of this LCA (the margins of Strangford Lough and the coast) falls within the Strangford and Lecale AONB.

Wildness and tranquillity

Deeply rural character and high degree of tranquillity. The open windswept character gives rise to a degree of relative wildness, particularly along the coast.

Natural and cultural heritage features

Outer Ards SPA supports breeding manx shearwaters, terns and overwintering brent geese. Strangford Lough SPA supports breeding terns, overwintering brent geese and numerous wildfowl and waders. This landscape has significant nature conservation value. Numerous ASSI sites associated with coastal, wetland and fen habitats including Ballycan, Killough Bay and Strand Lough, Tieveshully, Killard and Ballyquintin Point. The latter two are also NRs along with Cloghy Rocks and Granagh Bay. Killough Bay is a Ramsar site and SPA which supports overwintering brent geese.. Numerous archaeological remains many of which are scheduled or in state care including standing stone, castles, chambered graves, crosses and churches. Rich seafaring, fishing and industrial heritage. Conservation Areas at Killough and Ardglass.

Cultural associations

Not known.

Amenity and recreation

This area is valued for its recreation associated with nature conservation sites, bird watching and water sports. Lecale Way and a number of other beach and coastal walks at Killard, Ballyquintin Farm and Kearney.

Assessment for Wind Energy Development

Overall sensitivity

The open, low lying and relatively gentle topography of this area in theory makes it suitable for wind energy development particularly in areas of brownfield land such as Ringawaddy airfield.

However a significant proportion of this landscape is valued for its scenic quality and the openness of the area, wide-ranging views and high concentration of natural and cultural sites of interest – many along the coast itself – make it highly sensitive. Those areas outside of the AONB provide an important setting to the areas of designated landscape. Any wind energy development has the potential to interrupt important skylines and could be extremely intrusive. Sensitivity is further increased by the LCA's popularity for outdoor recreation.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has very high landscape and visual sensitivity. It is recommended that any turbine development be closely associated with and reflect the scale of existing development and tree groups. It is recommended that attempts be made to minimise visual clutter where turbines would be seen in relation to overhead telegraph wires.

Care should be used to avoid adverse impacts on extremely sensitive open sites or areas where there are important views along the coast or across the sand dunes. Care should also be taken to avoid adverse impacts on the historic character of Killough or Ardglass.

At the time of assessment there were no operational or consented wind farms in or near this LCA. Due to the proximity of the south Down coast there may be seaward issues to consider in future. Although the mouth of Carlingford Lough is at least 30km away there may be seaward issues to consider from low elevations.

LCA 93 Portaferry and North Lecale

Location: County Down. Land adjoining the southern edge of Strangford Lough and Portaferry on the Ards peninsula.

Key Landscape and Visual Characteristics and Values

Scale

Complex, small scale landscape comprising the North Lecale Hills which rise to just over 100m AOD, and drumlin landscapes on the edge of Strangford Lough.

Landform

Sharp undulating ridge. Highest points are Castlemahon Mountain and Slieve Patrick. Undulating drumlin foothills and islands below.

Enclosure

The hills are prominent in long and medium distance views. Within the LCA itself an enclosed character often prevails as views are contained by gorse scrub and woodland. Robust field pattern with stone walls and gorse hedgerows.

Complexity of landcover and features

The area supports grazing and well-structured farmland. Estate and shoreline parkland are an important influence in the landscape, contributing stone walls, deciduous woodland and fine buildings.

Man-made influence

Intrusive influences are generally limited.

Skylines and settings

The hills form a prominent skyline all along their length, with Patrick's shrine as a central landmark. They also create the setting for Downpatrick at one end and for both Strangford and Portaferry at the other. They bridge and create a gateway at the mouth of Strangford Lough – a unique landscape feature.

Visibility and views

The hills are highly visible from surrounding lowlands and from Strangford Lough and are therefore very sensitive. They also afford stunning views across the Lough.

Landscape quality (condition)

The landscape is in extremely good condition: stone walls are continuous, woodlands are well managed and traditional buildings are still in use.

Scenic quality

Scenic quality in this LCA is exceptionally high, recognised through inclusion of much of the area in Strangford and Lecale AONB.

Wildness and tranquillity

This is a highly tranquil but not a wild landscape.

Natural and cultural heritage features

The entire coastline of this LCA lies within Strangford Lough, Northern Ireland's first MNR, and features areas of rare saltmarsh and a wealth of wildlife interest. Overwintering brent geese, breeding terns and numerous other wildfowl and waders are supported by Strangford Lough, which is of international conservation importance and is designated as a SPA, SAC, ASSI, and NNR. Numerous historic and archaeological

features including tower houses, castles and other ancient monuments. Castleward and Myra Castle are Registered Parks; Conservation Areas at Portaferry and Strangford.

Cultural associations

Wealth of cultural associations including important association with St Patrick.

Amenity and recreation

Outstanding recreational assets including the nearby lough, islands and ferry; harbours and quays at Portaferry and Strangford; Castleward (National Trust); woodland walks through National Trust land on both sides of The Narrows. Coastal walks are part of Lecale Way long distance walking route.

Assessment for Wind Energy Development

Overall sensitivity

This landscape is of exceptionally high sensitivity to wind energy development due to its small scale and complexity, prominent skylines and important settings, and high visibility. There is a very strong concentration of valued landscape characteristics and features, reflected in the area's AONB designation. Many of these features are vulnerable to damage or intrusion as a result of wind energy development.

The LCA is less sensitive to very small scale wind energy development.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has small scale, complexity and many valued features. Areas of lower ground south of the ridge might offer suitable locations for some form of wind energy development, although it is recommended that any turbine development be closely associated with and reflect the scale of existing development and tree groups.

Care should be taken to avoid adverse impacts on the extremely sensitive ridges, the lough edge, skylines and settings and on the key landscape and visual characteristics and values that were described in this section.

In 2007 there were no operational or consented wind farms within or near this LCA.

LCA 94 Strangford Drumlins and Islands

Location: County Down. Western shores and hinterland of Strangford Lough.

Key Landscape and Visual Characteristics and Values

Scale

Small scale intimate landscape of drumlins and loughs, islands and inlets on the western shores of Strangford Lough. Land seldom rises higher than 50m AOD.

Landform

Landform is dominated by drumlins. Influence of glacial action has produced a complex, convoluted coastline with rocky islets and drowned drumlins rising out of the water as small rounded islands. Inland there is also a dense pattern of drumlins.

Enclosure

Drumlin farmland with a robust network of stone walls predominates. The hollows between the drumlins contain marshy pasture or attractive small loughs, which often have well-wooded margins. The many small wooded estates also contribute a wooded character.

Complexity of landcover and features

Highly complex and varied. On the shores of the lough there are many small settlements and local quays with vernacular whitewashed dwellings overlooking isolated islands and tranquil inlets, and the lough edges are grazed by sheep. Inland is a farmed landscape with white farmhouses and red outbuildings. Numerous small roads wind around and through the drumlins. Stands of beech and pine, often with stone walls, are distinctive.

Man-made influence

Few overt man-made influences except for the main A22 which cuts across the drumlin landform and has some associated development.

Skylines and settings

Many distinctive local skylines formed by individual drumlins. The settings of the numerous inter-drumlin loughs are also sensitive. The northern part of the landscape setting of Downpatrick and the local setting of Killyleagh lie within this LCA.

Visibility and views

A very contained landscape visually with few long or open views except from drumlin tops and at the water's edge, which offers many sweeping views to islands and inlets.

Landscape quality (condition)

Landscape condition is extremely good with well-maintained stone walls, restored castles, churches and traditional buildings.

Scenic quality

A highly scenic and unspoilt landscape, with a particularly attractive interplay of land and water. Most of the eastern part of the LCA lies within Strangford and Lecale AONB.

Wildness and tranquillity

Tranquillity and isolation are key characteristics of this landscape and are especially strongly represented near the water's edge.

Natural and cultural heritage features

Strangford Lough and its intertidal mudflats are recognised as ASSI, SPA, SAC, Ramsar site and MNR. Overwintering brent geese, breeding terns and numerous other wildfowl and waders are supported by Strangford Lough, Characteristic inter-drumlin loughs, fens and bogs, some of which are ASSIs. Islands were favoured sites for churches, castles and chambered graves; restored monastic site on Mahee Island. Numerous Registered Parks, particularly in the southern part of the LCA. Killyleagh Conservation Area.

Cultural associations

Many historical and cultural associations.

Amenity and recreation

Outstanding opportunities for quiet, water-based recreation and nature study, as well as visits to the many historic sites. Castle Espie (Wildfowl and Wetland Trust) lies at the northern end of the LCA.

Assessment for Wind Energy Development

Overall sensitivity

This landscape is of very high sensitivity to wind energy development, as it could easily be out of scale with the much smaller drumlin landform and would adversely affect the LCA's intimate, tranquil character.

It is inherently less sensitive to appropriately scaled wind energy development because of the high degree of enclosure afforded by landform and woodland, especially inland of the lough shore and AONB. However the many valued landscape characteristics and features remain vulnerable to damage or intrusion as a result of any poorly sited or inappropriately scaled turbines.

Overall Sensitivity -High

Location, siting, layout and design considerations

This LCA has a small scale intimate character and a range of valued landscape characteristics and features. These include the the much valued distinctive islands and contorted edges of Strangford Lough. It is recommended that any turbine development be associated with and reflect the scale of groups of buildings or trees.

Care should be used to avoid adverse impacts on the islands and shores of Strangford Lough and on the extremely sensitive prominent drumlin skylines. Care should also be taken to avoid adverse impacts on the settings of inter-drumlin loughs and on the landscape interests of natural and cultural heritage features.

At the time of assessment there were no operational or consented wind farms within or near this LCA.

LCA 95 Ballygowan Drumlins

Location: County Down. Area south of Comber.

Key Landscape and Visual Characteristics and Values

Scale

Smooth rolling drumlin landform overlain on ancient Silurian rocks. Elevation up to around 100m AOD.

Landform

Ground falls gradually towards Strangford Lough and, in more low-lying areas, the drumlins exhibit a relatively waterlogged character.

Enclosure

Open, rolling farmland landscape of large pasture and arable fields divided by low, trimmed hedgerows or wire fences. Loughs and damp woodland are found within lowland hollows between drumlins. Streams and rivers wind between drumlins towards Strangford Lough.

Complexity of landcover and features

Generally simple, repetitive landscape patterns. However, the Enler valley in the north of the LCA has a particularly subtle, intimate landscape in which scenic, lush valley slopes contrast with the wetlands and meadows of the valley floor.

Man-made influence

Large and complex farmhouses and outbuildings. Settlements of Comber, Ballygowan and Saintfield, linked by fast, straight main roads with some ribbon development.

Skylines and settings

The smooth, rolling drumlin landforms create a dynamic landscape pattern and the eye is constantly drawn to landmarks, such as prominent houses and hilltop features as well as to drumlin skylines. Drumlins help form distinctive settings to settlements.

Visibility and views

Overlooked by Scrabo to the north. Otherwise fairly contained visually, with few long views, although there are some views from drumlin tops. Many short range residential views due to dense scatter of settlement.

Landscape quality (condition)

Landscape is degraded in places due to hedgerow and tree loss. Housing with a diverse mixture of building styles.

Scenic quality

Not of high scenic quality except locally in the Enler valley and in some inter-drumlin hollows, such as around the lough just outside Ballygowan.

Wildness and tranquillity

No strong sense of either wildness or tranquillity.

Natural and cultural heritage features

Some inter-drumlin wetlands of conservation interest eg Aughnadarragh Lough ASSI. Locally rich in historic and archaeological sites, for example north of Saintfield where there is a cluster of raths. Registered Parks at Saintfield House and Rowallane Gardens (National Trust). Saintfield Conservation Area.

Cultural associations

Not known

Amenity and recreation

Few features of more than local interest, apart from Rowallane Gardens.

Assessment for Wind Energy Development

Overall sensitivity

The scale, openness and settled character of this landscape are the key constraints to wind energy development. The northern part of the LCA is also sensitive visually because of its proximity to Scrabo.

Most turbines, unless of appropriate scale and very carefully sited, could be out of scale with the drumlin landform and very few sites would offer adequate separation distances to dwellings, although there might be a few isolated areas of lower sensitivity on larger drumlins and away from dwellings. Scope for wind turbines is also constrained by the generally open character of the landscape

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

In this LCA there are a few isolated areas, eg on larger drumlins and away from dwellings, that may be most capable of accommodating some form of appropriately scaled wind energy development. There may be opportunities to integrate turbine development with landform and tree cover.

Care should be used to avoid adverse impacts on highly sensitive prominent drumlin skylines. Care should also be taken to avoid adverse impacts on landmark features such as churches or raths, settings to settlements, loughs or Registered Parks, and views from Scrabo Hill and to and from Strangford Lough.

At the time of assessment there were no operational or consented wind farms in or near this LCA. Given the relatively low level of tree cover in this LCA, cumulative impacts and separation distances between turbines might become an issue.

LCA 96 Castlereagh Plateau

Location: County Down. Area above the Castlereagh slopes, centred on Carryduff.

Key Landscape and Visual Characteristics and Values

Scale

Compact, undulating terrain rising to around 180m AOD and extending over wide areas. Perceived scale of landscape varies with elevation: small scale to medium scale in low-lying, treed areas and larger scale in raised areas with outward views.

Landform

LCA is underlain by Silurian sedimentary rocks but has been strongly influenced by glaciation which has created a rolling landform of small hummocks and narrow valleys.

Enclosure

Small fields separated by hedges which rise and fall across the landscape, emphasising contours. Hedges, although often unmanaged and gappy, provide a strong structure, occasionally enhanced by hedgerow trees and copses, together giving sense of a well-wooded landscape, especially in hollows and valleys.

Complexity of landcover and features

Occasional areas of scrubby wet woodland and marsh break up the uniformity of the pastures.

Man-made influence

Well-settled due to proximity to Belfast. Edges of towns and villages might be ill-defined and intrusive. Modern houses and bungalows, often conspicuously sited. Urban fringe influences such as golf course. Prominent transmission lines running both north-south and east-west. Small quarries in parts.

Skylines and settings

Principal skyline is that of the Castlereagh Slopes (LCA 105) to the north.

Visibility and views

From high ground, views of sea to east and south-east and to mountainous skyline of Slieve Croob to south-west. Along northern edges of the area, occasional views over Belfast and Belfast Lough.

Landscape quality (condition)

Generally good, but landscape is increasingly affected by hedgerow neglect and suburban influences such as inappropriate planting.

Scenic quality

Generally not of special scenic quality. However the south-western edge of the area abuts the Lagan Valley AONB and the Castlereagh Slopes to the north are ASQ. Locally enhanced by fine long distance views.

Wildness and tranquillity

Relatively tranquil, with many small, quiet, winding lanes.

Natural and cultural heritage features

Few features of note.

Cultural associations

Not known.

Amenity and recreation

Few features of note although the Ulster Way through the LCA links Lagan Valley Regional Park and AONB to the North Down Coastal Path via the Craigantlet Hills.

Assessment for Wind Energy Development

Overall sensitivity

In terms of scale, landform, enclosure and man-made influence, this landscape shows considerable internal variation. The higher ground, away from the escarpment and from the intimate valley landscapes, is least sensitive to wind energy development.

Key constraints to wind energy development are the presence of small scale landscape features (such as distinct, undulating hill tops and hedgerow trees), and views towards Strangford and Slieve Croob, as well as the settled character of the landscape.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

This LCA has undulating form and a settled character. Consideration could be given to siting turbines in areas where the landscape scale is relatively large and topography or tree cover affords some screening. It is recommended that wind energy development reflects the scale of landform and landscape and settlement features and that disruption to small scale field patterns or wetland landscapes be minimised.

Care should be used to avoid any adverse impacts on the settlement of Carryduff and the sensitive escarpment edge with its views over Belfast Lough. Care should be taken to minimise any impacts on views from Strangford Lough and Slieve Croob (for example by siting turbines on lower ground around the edges of hills and ridges rather than on hill crests).

At the time of assessment there were no operational or consented wind farms in or near this LCA. Due to its high level views, seaward issues may be a consideration in the future due to the proximity of the Ards Peninsula.

LCA 97 Belfast/ Lisburn

Location: Counties Antrim and Down. Metropolitan area.

Key Landscape and Visual Characteristics and Values

Scale

Topographically a large scale basin landscape defined by steep ridges around the edges, within which are set complex, small scale urban and suburban landscape features and intimate valley landscapes along the river corridors. Generally low-lying but rising to more than 150m AOD on margins, especially to the west.

Landform

Lowland basin of the River Lagan. Steep escarpments and ridges surround the LCA: the Belfast Basalt Escarpment (LCA 112) to the north and west; the Castlereagh Slopes (LCA105) to the south and the Craigantlet Escarpment (LCA 012) to the east. West and south of Lisburn the valley sides are lower.

Enclosure

Both Belfast and Lisburn are mostly contained within the broad Lagan valley and are heavily built up. The slopes above are (outside the LCA) generally open and unenclosed.

Complexity of landcover and features

A highly complex urban landscape. Main industrial areas are concentrated along the banks of the Lagan and the docks are prominent at the head of Belfast Lough. Large red-brick industrial buildings. Residential areas mainly characterised by dense red brick terraces near the city centre; lower densities in outer suburbs.

Man-made influence

Man-made influence is strong across the LCA. Landscape setting of city is increasingly marred by housing and infrastructure development. Industrial sites and quarries.

Skylines and settings

The surrounding hills and escarpments provide a series of landmarks, notably the craggy outline of Cave Hill and Stormont Estate, frequently visible on the eastern edge of the city. The River Lagan and Lagan valley, with extensive open space, also provide an important setting for the city.

Visibility and views

Densely settled and much viewed landscape. Long views over urban areas and Belfast Lough from the surrounding escarpments and upland landscapes. Views along the Lagan valley to the city centre, focused on docks and new Laganside development. More industrial views across the lough.

Landscape quality (condition)

An urban environment with considerable derelict land and ongoing regeneration. Marginal farmland is often in poor condition, reflecting steep slopes or poor drainage..

Scenic quality

Urban area is ringed by ASQs of Belfast Basalt Escarpment, Castlereagh Slopes and Craigantlet Escarpment. Adjacent Lagan valley parkland landscapes to the south, in LCA 106, are also of scenic quality and are part of Lagan Valley AONB.

Wildness and tranquillity

No special wildness. Localised areas of tranquillity, particularly within river corridors.

Natural and cultural heritage features

Belfast Lough ASSI, SPA and Ramsar site supports great crested grebe and redshank. Many Registered Parks and Conservation Areas.

Cultural associations

Diverse and numerous.

Amenity and recreation

Lagan Valley Regional Park with extensive public open space and designed landscapes (mainly outside but adjacent to the LCA). Laganside walkways and towpath. Smaller river corridor parks such as the Connswater, Lagmore and Colin Glen linear parks, providing a valuable link between the urban areas and their landscape setting. Many formal parks such as Ormeau Park, Botanic Gardens, Victoria Park and Lisburn's Wallace Park. Belfast Castle.

Assessment for Wind Energy Development

Overall sensitivity

The high degree of man-made influence and the mixed landscape quality of this LCA tend to lower its landscape sensitivity to wind energy development. Conversely the basin landform creates visually prominent skylines and edges, which are highly sensitive.

Lower sensitivity to wind energy development is therefore mainly concentrated in brownfield or industrial areas such as those around the city's docklands. It is important to note, however, that such areas might also be subject to other significant constraints such as proximity to Belfast City Airport and ornithological interests associated with Belfast Lough.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

This LCA has a highly urban landscape which means there is a lack of space for any significant wind energy development. The most suitable areas for some form of wind energy development are on flat land affected by existing urban or industrial development, where a strong visual and design relationship to existing built structures is possible. Reclaimed industrial land on the northern and southern shores of Belfast Lough might offer the best opportunities. Well designed and sited wind energy development in such areas could form new landmark features, but care should be taken to avoid any visual conflicts with existing structures (such as dockyard cranes) where seen in close proximity. It is recommended that turbine development reflects the heights of existing structures.

Care should be taken to avoid adverse impacts on the highly sensitive skylines and settings named in this section. Any wind energy development should respect the character, setting and views from ASQs, Registered Parks and Conservation Areas. The open and exposed slopes that surround the city should also be respected as should the landscape interests of natural and cultural heritage features and recreational resources.

At the time of assessment there were no operational or consented wind farms in this LCA although separation distances may be an issue in the future.

LCA 98 Carrickfergus Upland Pastures

Location: County Antrim. Upland area between Larne and Carrickfergus.

Key Landscape and Visual Characteristics and Values

Scale

Medium to large scale landscape of undulating plateau around 250 to 300m AOD. Smaller scale landscape features on enclosed lower slopes.

Landform

Undulating plateau topped by low ridges and shallow valleys. Steep basalt escarpment on south-eastern edge. Western and northern plateau edges more gently sloping and rounded.

Enclosure

Small, regular fields enclosed by gappy hedges, earth banks and stone walls, often neglected. Small hedgerow trees and shelterbelts with a wind-blown profile. Large scale pattern of plantation forests and exposed pasture with scrub, heather and rushy bog on the higher ground, creating dramatic contrasts in colour and scale.

Complexity of landcover and features

A number of loughs and water supply reservoirs, mainly set within forest and hence having limited visual influence. Area is sparsely settled. Traditional stone farm buildings sheltered by trees.

Man-made influence

Transmission lines from Kilroot and Ballylumford Power Stations extend up from the coast and run along the western and northern edges of the area, as well as across the top of Slimero Hill. These and a telecommunications mast exert a strong man-made influence on the area's skylines, particularly in the north.

Skylines and settings

This is the southernmost of a series of moorland summits stretching all along the Antrim Coast. It is prominent in views from the A8 Belfast to Larne road and in views across Belfast Lough from Bangor and the Holywood Hills. The northern edge of the area adjoins and frames the attractive valley landscape of Glenoe and the southern edge provides a distinctive setting to Newtownabbey. The monument at Knockagh is a very prominent landmark.

Visibility and views

Views within the area are often restricted by the enclosure of landform and forest, but longer views north to Larne and the Glens of Antrim and south to the Belfast Hills and Belfast Lough are possible from the edges of the area.

Landscape quality (condition)

Condition of farmland is mixed. Forestry generally fits fairly well with landform. Some intrusive new housing.

Scenic quality

Scenic quality is mixed, due to the presence of intrusive man-made influences. However the southern edge of the area is part of the Carrickfergus Escarpment ASQ.

Wildness and tranquillity

A relatively remote landscape with some sense of wildness, particularly in comparison with nearby built up areas to the south.

Natural and cultural heritage features

Scattering of archaeological sites.

Cultural associations

Not known.

Amenity and recreation

Monument and caves above cliffs at Knockagh on the southern edge of the area, above Greenisland. Section of the Ulster Way. Otherwise few formal opportunities, although the area is probably used to some extent for recreation by nearby urban populations.

Assessment for Wind Energy Development

Overall sensitivity

This landscape has characteristics that suggest suitability, in parts, for wind energy development, while other parts of the LCA would be highly sensitive and much less suitable.

The north-western and northern parts of the area are least sensitive as they lie away from the escarpment edge and Belfast Lough, are partly enclosed by forestry, and are already affected by intrusive influences. The southern and eastern parts of the LCA are much more sensitive, due primarily to their extreme visual prominence. The monument at Knockagh is a particular landmark whose setting is highly sensitive.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The western and northern slopes of the LCA may be better able to accommodate wind energy development than other areas. Consideration could be given to siting any turbines in the lee of the forested areas and summits, to contain visibility from the south and Belfast/Newtownabbey by avoiding sites on the highest ground and to site turbines away from distinctive landform features such as the small ridges that occur on the summits. Attempts should be made to minimise visual conflicts with existing structures, notably electricity transmission lines.

Particular care should be taken to avoid any significant impacts on views from Belfast Lough or from the Bangor and Holywood Hills. Care should also be taken to avoid any undue intrusion on the skylines to the north, notably in the vicinity of Glenoe, for example by backclothing turbines against higher ground. Open ridges should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA; the nearest existing wind farm was at Elliots Hill, around 12km to the north. Due to the proximity of the Antrim coast there may be seaward issues to consider.

LCA 99 Outer Ards Coast

Location: County Down. Eastern edge of the Ards peninsula between Groomsport and Cloghy.

Key Landscape and Visual Characteristics and Values

Scale

Open windswept gently sloping shoreline, generally under 20m AOD. Many small scale landscape features and landmarks.

Landform

Long narrow strip of gently sloping coastal land with an exposed rocky coastline that extends into the sea as small off-shore rocky islands.

Enclosure

Character of the coastal edge landscape alternates between open, exposed pastures and wooded areas, the latter usually associated with estates.

Complexity of landcover and features

Simple, repetitive landscape patterns. Estate landscape features such as stone walls, towers and large houses (some now hotels) often form the settings to more recent settlement. Stands of pine and beech. Traditional settlements with a clustered form. Colourful harbours form focal points.

Man-made influence

Extensive linear development along the A2 coastal road and around some settlements. Many static caravan sites, often prominent and exposed.

Skylines and settings

Historic features and stands of pine and beech stand out as landmarks and distinctive silhouettes against the pale sky and expansive seascapes.

Visibility and views

Panoramic coastal views along the rocky coastal edge and out to sea to small islands and skerries.

Landscape quality (condition)

Managed estates contribute a strong and well-maintained character, but landscape quality has been adversely affected in parts by development that is poorly sited and designed.

Scenic quality

Scenic quality is not particularly high, reflecting the degree of man-made influence. Area adjoins the Strangford and Lecale AONB at its southern end.

Wildness and tranquillity

Although well-settled, many parts of the LCA have a relatively wild character, reflecting the LCA's exposure to the sea and to the elements.

Natural and cultural heritage features

Intertidal foreshores provide a wide range of earth science features, habitats and wildlife. ASSIs all along the coastline (Outer Ards SPA, also of international importance), the Copeland Islands and Ballymacormick Point. The area supports breeding manx shearwaters, terns and overwintering brent geese. Churches, mottes, standing stones, raths and castles, often striking landmarks. Registered Parks at Ballywalter Park, Portavo House and Glenganagh. Conservation Area at Donaghadee.

Cultural associations

Ballywalter Park has a long history and many cultural associations.

Amenity and recreation

Harbours are attractive and popular amenities. Many parking places, picnic areas, small beaches and opportunities to observe coastal wildlife. Ballywalter Park open to the public.

Assessment for Wind Energy Development

Overall sensitivity

Long tracts of open coastal landscape are sensitive to built development which would alter the LCA's wild and exposed character. Despite its open, horizontal form, this landscape is far from featureless. Wind energy development could easily dominate and overwhelm its small scale landscape features and landmarks, which would also accentuate turbine size.

Due to the low-lying landform, wind turbines could have a very extensive visual envelope and hence could also affect landscapes to the west, around Strangford Lough, which are even more sensitive than the coast itself.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has inherently high landscape and visual sensitivity and close proximity to Strangford Lough, which is highly sensitive. It is recommended that any turbine development be located in sections of the coast with significant tree cover and be associated with and reflect the scale of groups of buildings or trees.

Care should be taken to avoid adverse impacts on the highly sensitive key landscape and visual characteristics and values that were described in this section. The landscape interests of natural and cultural heritage features and recreational resources should be respected.

At the time of assessment there were no operational or consented wind farms within this LCA. Due to the proximity of the Irish Sea and the Ards peninsula and the panoramic sea views that are the setting of this LCA, seaward issues might be a consideration.

LCA 100 Ards Farmland and Estates

Location: County Down. Ards peninsula except for its eastern, Irish Sea coast and southern tip.

Key Landscape and Visual Characteristics and Values

Scale

Small scale undulating landscape rising to no more than 40m AOD.

Landform

Smooth, gently undulating landform with shallow but distinct drumlins and waterlogged inter-drumlin hollows. Slightly higher, drier land, sometimes with a heathy character, along the central spine.

Enclosure

Drumlins provide some sense of enclosure in inland areas and there is a good hedgerow network. However there are relatively few hedgerow trees and hence the farmed landscape often has an open and visually exposed character. On the lough edge, large wooded estates such as Mount Stewart and Rosemount have an important influence on the landscape, providing a sheltered woodland backdrop along parts of the lough. They are sometimes visible right across the peninsula.

Complexity of landcover and features

Network of small roads and lanes connects scattered farmsteads and houses. Roads across the peninsula are relatively straight but coastal road is sinuous and marked by rocky headlands eg at Kirkcubbin.. Scattered areas of heathland have clumps of gorse and prominent stands of Scots pine, often seen in silhouette. Archaeological and historic features are often prominent in the landscape. Area is also known for its windmills, eg at Ballycopeland, which are unique in Northern Ireland.

Man-made influence

Principal influences are variety of building styles and presence of large complexes of farm buildings.

Skylines and settings

Few prominent ridgelines but local skylines might be marked by specific landscape features as above. Mount Stewart and Greyabbey estates are distinctive parts of the eastern setting of Strangford Lough; while parkland also creates a distinctive setting to Carrowdore Castle in the north of the LCA.

Visibility and views

LCA is overlooked from western side of Strangford Lough and from Scrabo and other areas of high ground at Holywood Hills and Castlereagh Plateau. A20 passes close to the water's edge, allowing attractive views to a rural loughside landscape with wooded estates.

Landscape quality (condition)

Landscape is generally in good condition, although some field boundaries have been lost through neglect. Recent build development sometimes detracts from character, particularly in the more open parts of the farmland and where it is out of scale with the characteristic small clustered settlements.

Scenic quality

Scenic quality is high; the lough and shoreline areas fall within Strangford and Lecale AONB.

Wildness and tranquillity

This is not a wild but a highly tranquil waterside landscape.

Natural and cultural heritage features

Strangford Lough's intertidal mudflats are internationally recognised for their earth science and conservation interest. Strangford Lough is a MNR, SAC, SPA, ASSI and NNR which supports overwintering brent geese, breeding terns and numerous other wildfowl and waders. Other habitats of note include inter-drumlin carr woodlands. There is a variety of monuments, including castles, churches, abbeys, mottes and raths. Registered Parks at Carrowdore Castle, Mount Stewart (National Trust), Greyabbey and elsewhere.

Cultural associations

Numerous associations, reflecting the wealth of historic interest attached to this landscape.

Amenity and recreation

Many sites of recreational interest, particularly in coastal areas, including Mount Stewart gardens (National Trust), abbey ruins at Greyabbey, picnic and birdwatching sites, and slipways for sailing.

Assessment for Wind Energy Development

Overall sensitivity

This landscape has a small scale, undulating landform with relatively little enclosure; it is very exposed visually. Unlike the traditional windmills found in this LCA, wind energy development could easily be out of scale with and could wholly dominate the landscape; it could also be very intrusive visually, towering above the many prominent, small scale landscape features.

In addition, coastal areas of the LCA are very highly valued both scenically and in terms of natural and cultural heritage interest. These special qualities, which are also an important resource for tourism and recreation, are very vulnerable to change as a result of wind energy development, which could particularly affect the area's ornithological interest and the settings of its historic estates.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has a small scale, exposed and highly valued landscape which is vulnerable to inappropriately scaled development which could dominate landscape character and be very intrusive visually. The broader northern part of the LCA may have greater capacity for some form of turbine development than other areas. It is recommended that any turbine development be located in sections of the coast with significant tree cover and be associated with and reflect the scale of groups of buildings or trees.

Care should be taken to avoid adverse impacts on highly sensitive distinctive drumlin and heathy skylines, on the edges of Strangford Lough and on the key landscape and visual characteristics and values that were described in this section. The landscape interests of natural and cultural heritage features and recreational resources should be respected.

At the time of assessment there were no operational or consented wind farms within this LCA or nearby. Due to the proximity of the Irish Sea and the Ards peninsula seaward issues may be a consideration especially within the central spine of the LCA.

LCA 101 Scrabo

Location: County Down. Land around and south of Newtownards.

Key Landscape and Visual Characteristics and Values

Scale

Relatively large scale low-lying landscape dominated by a single landmark feature, Scrabo Hill, 163m AOD.

Landform

Flat, open farmland at the head of Strangford Lough, including the town of Newtownards and the meandering tranquil landscape of the Comber estuary. Scrabo Hill, with its distinctive steep rocky profile, rises dramatically out of the sandstone plain, its prominence reinforced by the tower marking the highest point.

Enclosure

This landscape has a relatively open character and large scale pattern, with large farms scattered evenly across the patchwork of arable fields. The fields on the lower slopes of Scrabo Hill are particularly prominent, although Killynether Wood, high on the south-western slopes of the hill, creates a more secluded landscape character in this area. A relative lack of trees or hedgerows adds to the open, expansive character.

Complexity of landcover and features

Strong contrast between Scrabo Hill and the surrounding flat, open landscapes.

Man-made influence

Town of Newtownards spreads across the head of Strangford Lough. Several large scale developments on the outskirts, including industry and a small airfield. Some prominent groups of farm buildings. Disused sandstone quarries at Scrabo Hill.

Skylines and settings

Scrabo Hill and the slopes that provide its landscape setting are highly sensitive to change. LCA also includes the Comber Estuary, which forms part of the wider setting of Scrabo Hill and the town of Comber (outside the LCA).

Visibility and views

Scrabo Hill is a key landmark in views for miles around and provides breathtaking 360 degree views; those along Strangford Lough are especially stunning. Remaining undeveloped flat foreground to Scrabo Hill is visually significant in these long distance views.

Landscape quality (condition)

Farmland generally has good field boundaries although hedgerow loss threatens patterns in some areas. Commercial and industrial uses on the outskirts of Newtownards have caused degradation in this area.

Scenic quality

High at Scrabo Hill itself. Scrabo Hill and the coastline to the south fall within the Strangford and Lecale AONB.

Wildness and tranquillity

Not particularly marked. However many views have a sense of grandeur.

Natural and cultural heritage features

Volcanic landform of Scrabo Hill ASSI is of earth science interest eg South Quarry reveals dolerite sills and a massive dyke. ASSI also includes fine beech woodlands at Killynether and hazel wood beyond on the flank of the hill. Overwintering brent geese, breeding terns and numerous other wildfowl and waders are supported by Strangford Lough, which is of international conservation importance and designated as a SPA, SAC, ASSI, NNR and MNR. Scrabo Hill is archaeologically rich, containing a prehistoric hill fort with adjacent enclosures and hut-circles and there is range of other monuments in the surrounding area.

Cultural associations

Scrabo Hill is seen as an emblem for the Ards area. Scrabo stone, once quarried at Scrabo Hill, was used in many fine public buildings.

Amenity and recreation

Scrabo Country Park including Scrabo Tower, Killynether Wood and the quarries are open to the public for informal recreation.

Assessment for Wind Energy Development

Overall sensitivity

The scope for wind energy development in this LCA is severely constrained by the iconic, landmark character of Scrabo Hill and its role as key element and focal point at the head of the lough in many views from around Strangford Lough.

Although part of the setting of the hill has been damaged by urban and industrial development, the landscape remains highly sensitive to the introduction of new built elements, particularly vertical ones that would stand out clearly in the flat open landscape and compete for attention with Scrabo Hill.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA contains an iconic landmark and has a special role in relation to Strangford Lough. It is also open in character and is visually sensitive. Turbines may best be sited in association with existing industrial or commercial features of similar scale or with groups of buildings or trees.

Care should be taken to avoid adverse impacts on the highly sensitive open landscapes between Scrabo Hill and Strangford Lough and the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms within this LCA or nearby. Due to the proximity of the Irish Sea and the Ards peninsula seaward issues may be a consideration especially for areas close to Scrabo Hill.

LCA 102 Hollywood Hills

Location: County Down. Hills between Belfast Lough and head of Strangford Lough.

Key Landscape and Visual Characteristics and Values

Scale

Medium to large scale upland landscape rising to over 200m AOD, with windswept summits and steep, wooded escarpment slopes.

Landform

Area of undulating upland hills and plateau ringed by Belfast, Bangor, Newtownards and Dundonald. Plateau reaches a high point at Cairngaver, dropping steeply towards the south-west and more gently to the north-east. Small incised river valleys around the edges of the upland area.

Enclosure

Landscape of undulating pastures, conifer plantations, deciduous shelterbelts and estate woodlands, creating a well-wooded character and sense of enclosure, except on the highest summits.

Complexity of landcover and features

Conifer plantations and gorse scrub on summits. Numerous large reservoirs add an extra visual and recreational element to the landscape.

Man-made influence

Sandstone quarries and large upland reservoirs. Scattered housing along networks of small roads, generally not prominent. Electricity transmission lines cross the eastern part of the LCA.

Skylines and settings

South-western edge of the area forms edge of skyline above Stormont estate; north-eastern edge helps frame Belfast Lough. Striking gorse-covered ridge line at Whitespots, north of Newtownabbey.

Visibility and views

Exposed summits are very visible from surrounding landscapes (including those to the north, across Belfast Lough) and at the same time offer outstanding views from their edges over Belfast Lough and southwards to Scrabo and Strangford.

Landscape quality (condition)

Hedgerow and woodland network is generally in good condition. Estates and recreational areas have a managed character.

Scenic quality

Relatively unspoilt and scenic with fine views. The Craigantlet Escarpment ASQ lies just to the south-west of this LCA.

Wildness and tranquillity

Exposed, wild character on windswept summits. Relatively undeveloped, tranquil, rural character elsewhere, resulting from undulating landform and tree and hedgerow cover which create a screen between this LCA and nearby urban areas.

Natural and cultural heritage features

Upland mixed ash woodlands (Craigantlet Woods ASSI). Whitespots geological ASSI (mineralogy unique in Northern Ireland). Concentration of monuments at Whitespots (ASAI). Registered parks at Clondeboye (described as one of Ulster's most extensive examples of Victorian parkland planting) and Cultra Manor.

Cultural associations

Range of cultural associations relating to designed and archaeological landscapes.

Amenity and recreation

Proximity to surrounding settlements makes the LCA an important recreational resource. Specific recreational assets include a section of the Ulster Way, the Ulster Folk Museum, Whitespots Country Park, the Somme Heritage Centre and a number of golf courses. Forest walks at Cairn Wood.

Assessment for Wind Energy Development

Overall sensitivity

Convex, undulating landform and an extensive woodland network tend to reduce the landscape and visual sensitivity of this LCA to wind energy development. However, this is offset by its key skyline role in the settings of Belfast Lough, Stormont and Newtownabbey; by its many conservation interests; and by its importance for recreation.

While most of the landscape is of high sensitivity there might be localised areas of somewhat lower sensitivity in the central part of the LCA, for example where the landscape is already affected by forestry and quarrying.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

This LCA has an important skyline role. Land in the central part of the LCA near Cairn Wood where landscape character has already been affected by forestry and quarrying might offer the best capacity for some form of wind energy development. It is recommended that turbine development reflects the relatively low elevation of the Holywood Hills.

Particular care should be taken to avoid significant impacts on the distinctive skylines and settings above Belfast Lough, Stormont and Newtownards and on open, windswept upper slopes. Care should be taken to avoid adverse impacts on key views to and from Scrabo and Strangford Lough and on the landscape interests and settings of natural, cultural and recreational features.

At the time of assessment there were no operational or consented wind farms in or near this LCA. Due to the proximity of the Ards peninsula seaward issues may be a consideration, especially due to the high level views associated with this LCA.

LCA 103 Bangor Coastline

Location: County Down coastline between Holywood and Bangor.

Key Landscape and Visual Characteristics and Values

Scale

Small scale, intimate, undulating shoreline topography gently rising inland to around 70m AOD.

Landform

Linear coastal strip with gently undulating topography. Land rises inland to the edge of the Holywood Hills LCA, from which a series of narrow, wooded valleys wind down the slopes towards the lough shore.

Enclosure

Patchwork of pasture, mature deciduous woodland and dense urban development. Presence of many large estates has created a landscape of large fields, stone walls and woodland.

Complexity of landcover and features

A very varied landscape with strong estate and recreational influences. Wild rocky shoreline with gorse scrub and stands of Scots pine. Estates with mixed woodlands overlooking the sea; large country houses and hotels set in ornamental grounds.

Man-made influence

Urban development and infrastructure, including the A2 and railway line from Belfast to Bangor. Industrial areas on the south-western outskirts of Holywood.

Skylines and settings

Sequence of landmarks glimpses in views along the coastal roads. Wooded slopes frame Belfast Lough and are in turn enclosed by the Holywood Hills above.

Visibility and views

The LCA is prominent in views south from the north shore of the Belfast Lough and in approaches to Belfast by sea and by air to Belfast City Airport. Within the LCA views are generally short due to the well-wooded character of the coast, but the exposed coastline has an open rocky edge and provides opportunities for long panoramas across the lough, for example at Cultra, Grey Point and Helen's Bay.

Landscape quality (condition)

Generally good in both urban and rural contexts, with active countryside management. The many large houses, hotels and estates generally have well-maintained grounds, parkland and estate woodlands.

Scenic quality

No scenic designations as such. However, scenic valleys, woodlands, open shores and beaches provide the context for extensive urban development and are backed by ASQ land at Craigantlet, in LCA 104.

Wildness and tranquillity

Pockets with a relatively wild and tranquil character are much valued given the generally urban context.

Natural and cultural heritage features

Belfast Lough SPA and Ramsar site supports great crested grebe and redshank. Outer Ards SPA supports breeding manx shearwaters, terns, overwintering waders and brent geese. Outer Belfast Lough ASSI. Several Registered Parks, notably Crawfordsburn House and Bangor Castle. Archaeological sites and Conservation Area at Holywood.

Cultural associations

Wide range of different cultural associations related to estate landscapes, transport and wartime coastal defences.

Amenity and recreation

Many footpaths, parking places and picnic sites. North Down Coastal Path. Ulster Transport Museum at Cultra. Crawfordsburn Country Park and Grey Point. Sailing at Bangor. Beaches at Helen's Bay and Ballyholme. Golf courses.

Assessment for Wind Energy Development

Overall sensitivity

This LCA is of high sensitivity to wind energy development which could easily be out of keeping with and detract from its small scale, complex and highly valued landscapes.

The only area of slightly lower sensitivity is the industrial area south-west of Holywood, where industrial and other man-made influences are strong.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has space constraints and high landscape and visual sensitivity. Industrial land on the south-western edge of the LCA is the most suitable area in which to accommodate some form of turbine development, possibly as a landmark feature.

Care should be taken to avoid any adverse impacts on views along the lough shore and views from the north across Belfast Lough. Exposed shoreline landscapes should be respected.

At the time of assessment there were no operational or consented wind farms in or near this LCA. At present there are no seaward issues but these may arise in the future.

LCA 104 Craigantlet Escarpment

Location: County Down. Steep ridge east of Belfast between Dundonald and Holywood.

Key Landscape and Visual Characteristics and Values

Scale

Small LCA comprising medium scale escarpment slopes rising to around 150m AOD, with many small scale features.

Landform

Steep, prominent ridge containing the eastern urban edge of Belfast. Forms the western edge of the Holywood Hills. Encloses and shelters the urban edge of east Belfast which pushes up against the ridge. Deep wooded glens incise the slopes, particularly east of Stormont.

Enclosure

Green pastures extend along the ridge, divided by hedgerows and shelterbelts. Dense network of woodlands and avenues gives the landscape a robust structure, especially around Stormont.

Complexity of landcover and features

Parliament Buildings at Stormont stand out as a major landmark, situated high up on the ridge. The rural/urban interface is strong and well-defined.

Man-made influence

Some encroachment of development from the edges of Belfast. Prominent radio masts on the ridge top.

Skylines and settings

Prominence of the escarpment and proximity to Belfast make it a key part of Belfast's landscape setting, with the Parliament Buildings as a focal point in many views.

Visibility and views

Clear views to the ridge from the surrounding lowlands and adjacent escarpments, including an important view across Belfast Lough from the M2 at Newtownabbey. Any development on the ridge is highly visible.

Landscape quality (condition)

Landscape is in good condition, with a well structured woodland and hedgerow network.

Scenic quality

Scenic quality is high, reflecting the strong landscape structure, fine views and role of the landscape as a setting for Stormont. Area has been identified as Craigantlet Hills ASQ.

Wildness and tranquillity

Not particularly high given urban fringe location.

Natural and cultural heritage features

Valley woods of upland mixed ash on the southern flank of the Craigantlet Hills represent the largest area of semi-natural woodland remaining in north Down and are an ASSI. Stormont Castle and Parliament Buildings is a Registered Park.

Cultural associations

Stormont Castle and Parliament Buildings have many important historical associations.

Amenity and recreation

Area provides an important informal recreational resource for nearby urban populations. Public access and walks in parts of Stormont estate.

Assessment for Wind Energy Development

Overall sensitivity

Like other escarpment landscapes around Belfast, this small LCA is highly sensitive to wind energy development due to its intrinsic character, small scale features and visually prominent location on the edge of the urban area

A key constraint is its role as the setting to Stormont Castle and Parliament Buildings, which are of national importance. It is also a very important part of the wider setting of the city.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA is in a highly prominent location, and has high landscape and visual sensitivity. It is recommended that any turbine development be closely associated with and reflects the scale of groups of buildings and trees.

Care should be taken to avoid adverse impacts on the highly sensitive skylines and views, on the character of parkland within the Stormont estate and on the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in or near this LCA.

LCA 105 Castlereagh Slopes

Location: County Down, extending from south-eastern outskirts of Lisburn to south of Dundonald.

Key Landscape and Visual Characteristics and Values

Scale

Medium scale landscape of escarpment slopes rising to 130-170m AOD, with many small scale landscape features.

Landform

Steep slopes on the north-west margins of the Castlereagh Plateau. Prominent ridge with a smooth, undulating, rolling landform and a steep gradient. Deeply incised by steep glens.

Enclosure

Broad slopes of the ridge are divided into a patchwork of undulating pastures and hedgerows. Deep glens are generally well-wooded with fingers of broadleaved woodland extending up the hillsides. Roads within glens are bordered with lines of mature specimen trees.

Complexity of landcover and features

Steep, narrow, winding roads traverse the slopes linking the ridge top with the edges of Belfast. Farms and farm buildings on the escarpment mid slopes. Remnant landscapes of the many historic estates and country houses of the Lagan Valley, particularly at the south-western end of the escarpment where avenues and lines of mature beech trees and clumps of parkland trees are important landscape features.

Man-made influence

Overhead power lines cut across the ridge. Radio masts on parts of the ridge top. Urban expansion and road building on the north-west edge of the LCA and some linear development along local roads.

Skylines and settings

Entire ridge forms a prominent skyline and backdrop to the south and east sides of Belfast and the historic designed landscapes of the Lagan Valley.

Visibility and views

Elevated views over the Lagan Valley and the urban areas below. Views north to Belfast Lough and Stormont Castle and Parliament Buildings. Ridge itself is visible from much of Belfast and Lisburn and hence is extremely sensitive visually.

Landscape quality (condition)

Farmland and hedgerows in reasonably good condition but with pockets of dereliction. Historic parkland landscapes are generally in poor condition and have lost their visual integrity as estates have been broken up and put to commercial and institutional uses.

Scenic quality

Scenic quality is relatively high, reflecting the strategic location of the ridge and the fine views it affords. South-western part of the LCA lies within the Lagan Valley AONB and most of the remainder is Castlereagh Slopes ASQ.

Wildness and tranquillity

Not particularly marked due to proximity to busy urban areas and roads.

Natural and cultural heritage features

Some woodlands and parklands of nature conservation interest. Peregrine falcons. Raths. Registered Parks at Belvedere and Purdysburn House.

Cultural associations

Not known.

Amenity and recreation

Area provides an important informal recreational resource for nearby urban populations eg walks at Cregagh Glen.

Assessment for Wind Energy Development

Overall sensitivity

This landscape is highly sensitive to wind energy development due to its intrinsic character – which includes many small scale features. It is visually exposed and has a prominent location on the edge of the urban area.

It is a key part of Belfast's landscape setting and is highly valued, notwithstanding the presence of some existing man-made influences and issues of landscape management.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has high landscape and visual sensitivity. It is recommended that any turbine development be closely associated with and reflects the scale of groups of buildings and trees.

Care should be taken to avoid adverse impacts on the highly sensitive skylines and views, the distinctive character of its remnant parkland and estate landscapes and on the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in or near this LCA.

LCA 106 Lagan Parkland

Location: Counties Antrim and Down. South of Belfast on the edge of the urban area.

Key Landscape and Visual Characteristics and Values

Scale

Small scale landscape centred on the deep, narrow valley of the River Lagan south of Belfast. Generally low-lying, under 50m AOD.

Landform

Undulating steep slopes of the narrow river valley. Flatter land on the upper fringes of the river valley including, rolling landscape of estate farmlands to the south.

Enclosure

An amenity parkland landscape set within the historic designed landscapes of a series of eighteenth and nineteenth century estates. Valley slopes are well-wooded, with dense hedgerows and mature trees. Winding linear woodlands follow the local streams, particularly close to the foot of the Castlereagh slopes. More open landscape of golf courses, public open spaces and playing fields dominates flatter land.

Complexity of landcover and features

Variety of formal designed landscapes, commercial forests and natural habitats. Important stands of mature beech and oak. River corridor is characterised by its early industrial heritage reflected in surviving mill buildings, disused canal and numerous minor artefacts along the canal towpath.

Man-made influence

Urban edges enclose the area. Some impacts from incremental housing and infrastructure development. Transmission lines in southern part of LCA and some ridgetop communications masts. Golf courses and playing fields have a suburbanising influence.

Skylines and settings

LCA is strongly influenced by Castlereagh Slopes (LCA 105) which forms its south-eastern skyline and setting. LCA as a whole is an invaluable part of the southern setting of the city of Belfast. Immediate valley slopes are particularly vulnerable to change visually.

Visibility and views

Locally fine views from the valley to surrounding hills and into the valley floor.

Landscape quality (condition)

Much of the area is under active management, eg by the National Trust, as amenity parkland. Recreation pressures and vandalism evident in parts. Farmland landscape to the south is in relatively good condition although there is a need for woodland management.

Scenic quality

High scenic quality. Part of Lagan Valley AONB and Lagan Valley Regional Park.

Wildness and tranquillity

The riverbank scenery, meadows, woods and the pleasant pastoral land of the Lagan valley make this a peaceful haven. Linked series of wooded spaces within the deep river valley seems remote from its immediate urban surroundings.

Natural and cultural heritage features

Includes a great diversity of grassland, woodland and wetland habitats of conservation interest – notable species include red squirrels. Rich cultural heritage, associated not only with impressive monuments such as the Giant's Ring (ASAI), early Christian raths and mottes on the riverbank at Belvoir and Edenderry, and remnants of fine estates, but also important industrial archaeology related to linen production and the old Lagan Canal and its towpath. Registered Parks at Belvoir, Malone House (Barnett Demesne), Wilmont (Sir Thomas and Lady Dixon Park) and Ballydrain (Malone Golf Club)

Cultural associations

Many associations related to both the area's demesnes and industrial heritage.

Amenity and recreation

Easy access to countryside for a large urban population. Many parks including Belvoir Forest Park, Barnett Demesne, Sir Thomas and Lady Dixon Park. Lagan towpath. National Trust land at Minnowburn Beeches.

Assessment for Wind Energy Development

Overall sensitivity

This small LCA is inherently highly sensitive to wind energy development due to the landscape's small scale and complexity.

Sensitivity is heightened by its role as the southern setting for the city, and the fact that it is a highly valued scenic, heritage and recreational asset for the adjacent urban areas.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has high landscape sensitivity. It is recommended that any turbine development be closely associated with and reflects the scale of groups of buildings and trees.

Care should be taken to avoid adverse impacts on the highly sensitive heritage and recreational landscape features and the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in or near this LCA.

LCA 107 Hummocky Lagan Lowlands

Location: County Down. Small LCA east of Lisburn and the M1.

Key Landscape and Visual Characteristics and Values

Scale

Very small LCA with small scale, hummocky, lowland landscape. Generally low-lying, under 50m AOD.

Landform

Hummocky landscape covered by deep layers of glacial sands and gravels that have been dissected by winding minor streams and shaped into a variety of irregular landforms.

Enclosure

Fairly open character, with some localised enclosure by landform and trees. Patchwork of small pasture fields divided by overgrown hedgerows. Areas of waterlogged land and extensive patches of scrub.

Complexity of landcover and features

Mixture of pasture, recreational areas, remnants of historic estates and private grounds. Diverse range of land uses and landscape patterns, with small settlements and farmsteads scattered along narrow roads.

Man-made influence

Transmission lines cross the LCA. Some large industrial and institutional buildings are visible on the urban fringe. M1 on western edge of LCA.

Skylines and settings

Area forms an important part of the southern setting of Belfast and the eastern setting of Lisburn, linking the Lagan Valley Parkland LCA with the prominent ridgeline and higher ground of the Castlereagh Slopes LCA.

Visibility and views

Views from higher ground within the LCA towards the Lagan valley and the city. Views from the Castlereagh Slopes LCA across this LCA.

Landscape quality (condition)

In some areas, especially towards the south and west of the LCA, the field pattern has been eroded to leave only remnant hedgerows and odd clumps of trees. Some derelict farm buildings.

Scenic quality

Pockets of attractive, prosperous farmland although also some evidence of degradation associated with proximity to urban fringe. Land lies within the Lagan Valley AONB and next to the Castlereagh Slopes ASQ.

Wildness and tranquillity

No strong sense of wildness but locally tranquill.

Natural and cultural heritage features

Some woodland, parkland and wetland habitats of local interest.

Cultural associations

Not known.

Amenity and recreation

Limited opportunities.

Assessment for Wind Energy Development

Overall sensitivity

This very small LCA is inherently highly sensitive to wind energy development due to the landscape's small scale, irregular landform, complexity of landcover, and role as part of the southern setting of Belfast and the eastern setting of Lisburn, within the Lagan Valley AONB.

Areas of open character are likely to be particularly sensitive.

Overall Sensitivity - High

Location, siting, layout and design considerations

This very small LCA has high landscape sensitivity with irregular landform, generally open character and presence of transmission lines. It is recommended that any turbine development be closely associated with and reflects the scale of farmsteads.

Care should be taken to avoid adverse impacts on the particularly sensitive open character and on key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in or near this LCA.

LCA 108 Broad Lagan Valley

Location: Counties Antrim and Down. Lagan Valley between Lisburn and Moira.

Key Landscape and Visual Characteristics and Values

Scale

Medium scale, broad, almost flat valley of elevation less than 40m AOD, with mainly large arable fields.

Landform

River Lagan flows in a winding, narrow channel across a very broad, flat valley to the west of Lisburn. The river is relatively inconspicuous.

Enclosure

Fairly large arable fields predominate, but there are also pockets of smaller pastures and paddocks, particularly around settlements. Fields are enclosed by hedgerows, those close to the river having a scrubby character. There are numerous hedgerow trees, mainly ash and oak but also beech, particularly towards the edges of the valley.

Complexity of landcover and features

Valley is well-settled, with linear villages and farmsteads along a dense, branching network of narrow lanes which follow minor ridges. Some larger houses and farms have shelterbelts and avenues of mature beech trees.

Man-made influence

Smooth lines of the A3, M1 and main Belfast-Dublin railway are superimposed on the historic landscape pattern. Housing, industrial sites and former Maze prison site (proposed for redevelopment) on the outskirts of Lisburn.

Skylines and settings

Narrow corridor of River Lagan provides a setting for views to Lisburn from the west. Area south of the M1 is relatively sensitive to change, forming part of the broader setting of the shallow escarpment slope of the Kilwarlin Plateau LCA. Western and north-western part of valley is also overlooked from vantage points on the higher land at Moira and Maghaberry.

Visibility and views

There are views into this landscape from the Kilwarlin Plateau to the south and Maghaberry to the north-west, as above.

Landscape quality (condition)

Arable fields on the fringes of Lisburn are much enlarged and have few remaining hedgerows but elsewhere field boundaries are in better condition.

Scenic quality

Not exceptionally high. No landscape designations within or near to the LCA.

Wildness and tranquillity

Not exceptionally high. Influence of transport corridors.

Natural and cultural heritage features

Small areas of wet woodland. Damp grasslands along the River Lagan support wader populations.

Cultural associations

Not known.

Amenity and recreation

Few features of note.

Assessment for Wind Energy Development

Overall sensitivity

Most of this landscape is not intrinsically of high sensitivity to wind energy development, given its medium scale, flat, uniform topography, the presence in some areas of existing man-made influences, and the absence of notable natural and cultural heritage interests. However the relatively limited extent of the valley landscape means that inappropriate wind energy development would be out of scale with the valley landscape and would intrude not only on the valley itself but also on adjoining landscapes.

The southern and western edges of the LCA, where it is overlooked by higher ground, are more sensitive to wind energy development than other areas. Conversely, land on the outskirts of Lisburn might be somewhat less sensitive due to existing man-made influences and landscape quality issues.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

Those parts of the LCA that are dominated by large arable fields (especially where field boundaries are in poor condition) or have existing man-made influences, for example brownfield land on the outskirts of Lisburn, may be better suited to some form of wind energy development than other areas. It is recommended that any wind energy development reflects the small extent of this LCA and its low-lying landform character with proximity to areas of higher ground.

Care should be taken to avoid adverse impacts on the approaches to Belfast when seen in the context of the particularly sensitive Belfast Hills. Care should be taken to avoid undue intrusion on the skylines, settings and views outlined in this section. Views from the M1 and the mainline railway should also be carefully considered.

At the time of assessment there were no operational or consented wind farms in or near this LCA.

LCA 109 Upper Ballinderry Plateau

Location: Counties Armagh, Down and Antrim. A linear area extending from the outskirts of Lurgan to near Templepatrick.

Key Landscape and Visual Characteristics and Values

Scale

Undulating farmed landscape rising to around 100m in the south and 150m AOD in the north. Medium scale in terms of topography but with many smaller scale landscape features.

Landform

A rolling farmland landscape on the southern and western fringes of Derrykillultagh, which in turn fringes the Belfast Hills LCA. Steep escarpments on the southern margin of the plateau overlooking the Lagan, Friars Glen and Donaghcloney valleys.

Enclosure

Views are generally short or contained by avenue, roadside or hedgerow planting. There are numerous hedgerow trees and a consistent patchwork, geometric pattern of medium to large fields and smaller paddocks on settlement edges. Fields tend to be larger in the south, near Lurgan. Some valley-side woodlands, eg Friars Glen.

Complexity of landcover and features

A relatively prosperous farmland landscape with fairly large farms and many estates. Settlements are nucleated, often with grand avenues and stands of beech trees and prominent church spires.

Man-made influence

Large scale developments such as a prison, poultry farms and factories affect some areas, particularly in the south eg north of Maghaberry. M1 motorway and Belfast-Dublin railway in the area near Lurgan.

Skylines and settings

The southern escarpments and the ridges north-east of Ballinderry around White Mountain form skylines. Settings of the ridgetop settlement and castle of Moira, and of the smaller settlements of Ballinderry and Glenavy, are important in landscape terms.

Visibility and views

Glimpsed views of large farmsteads and country houses are important local landmarks. Few longer views except from the southern escarpments. Landscape is seen rising above Lough Neagh in some distant views from the west.

Landscape quality (condition)

Farmland is generally in good condition, particularly where in estate ownership.

Scenic quality

Pleasant rural landscape but with few special scenic qualities.

Wildness and tranquillity

Not wild but relatively isolated and tranquil over most of its area.

Natural and cultural heritage features

Some demesne woodland, wet woodland and meadow habitats of interest eg Ballynanaghten ASSI. A scattering of historic monuments. Moira Castle Registered Park and Moira Conservation Area.

Cultural associations

Not known.

Amenity and recreation

No particular interests of note except for towpath walks at Broad Water, Moira, where old canal corridor to Lough Neagh is of local nature conservation and historic interest.

Assessment for Wind Energy Development

Overall sensitivity

This landscape is of medium scale with relatively few important settings or views and a pattern of large farms, estates and nucleated settlements. Although its condition is generally good, it is not of special scenic quality and has few significant natural or cultural features. All these factors tend to reduce its sensitivity to wind energy development. However the presence of small scale designed landscape features tends to heighten sensitivity, as does the settled character of the landscape.

The southern escarpments and ridges are the most sensitive parts of this landscape; sensitivity might be somewhat lower away from these areas.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

Those parts of the LCA affected by existing large scale developments are the best suited areas to accommodate some form of wind energy development. Consideration could be given to siting turbines away from small scale, designed landscape features that might accentuate their scale.

Care should be taken to avoid unacceptable impacts on the skylines, settings and views outlined in this section or on views from the M1, the mainline railway and Lough Neagh. Open ridges should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA; the nearest existing wind farm was at Elliots Hill, around 14km to the north. Adequate separation distances from any commercial wind energy development in adjoining LCAs (particularly LCA 110 Derrykillultagh and LCA 113 Expansive Crumlin Farmland) will be important.

LCA 110 Derrykillultagh

Location: County Antrim. Area ringing western edge of Belfast Hills.

Key Landscape and Visual Characteristics and Values

Scale

Medium scale, rolling, elevated farmland rising to around 250m AOD on the western edge of the Belfast Hills (which in turn rise to 478m AOD at Divis). Some small scale features, particularly in more settled parts of the LCA to the west and south.

Landform

Rounded hills and generally shallow slopes with some gullies. Southern boundary of the LCA is marked by a steeper escarpment slope. Many slopes divided by straight, narrow glens. Plateau descends gently to the west.

Enclosure

Open moorland character on the highest ground in the northern part of the LCA. Elsewhere, small marginal fields and paddocks on the valley sides with a disconnected pattern of gorse and holly hedges. Lines and stands of mature trees associated with older farmsteads. Gradual transition to a landscape of larger fields, hedgerow trees and more prosperous farmland on the lower, western plateau margins.

Complexity of landcover and features

Farmland landscape often has a relatively untidy character with patches of gorse and scrub. Shallow valleys contain areas of marsh and rushes. Small white-rendered farms and smallholdings with scattered barns are sited on mid-slopes or local ridges and connected to roads by straight tracks. Network of straight roads follows the ridges.

Man-made influence

Generally limited apart from some modern bungalows and linear development. Several water supply reservoirs, the largest of which is Stoneyford, west of White Mountain. Electricity transmission lines.

Skylines and settings

Southern slopes form part of the wider northern landscape setting of Lisburn and include attractive small scale landscape features such as the deep wooded valley at Lagmore and the small valley by Duncan's Park.

Visibility and views

Outstanding views over Belfast from the lower slopes of White Mountain, and views back to this area from Lisburn. Long views of the western parts of the area from roads between Antrim/ Crumlin and Belfast/ Lisburn, the area forming the lower foreground slopes of the Belfast Hills. Landscape is also seen rising above Lough Neagh in some distant views from the west.

Landscape quality (condition)

Parts of the LCA have many derelict buildings and patches of waste ground, particularly on the higher ground to the east where farmland is of poorer quality. Evidence of hedgerow removal affecting field patterns.

Scenic quality

Not particularly high except in localised areas such as the slopes and wooded valleys north of Lisburn.

Wildness and tranquillity

A relatively wild landscape on higher ground, particularly to the north, which is also more sparsely settled.

Natural and cultural heritage features

Some important grassland habitats eg ASSI at Leathemstown. NR at Belshaw's Quarry. Scattering of ancient monuments, principally raths, across the LCA.

Cultural associations

Not known.

Amenity and recreation

Few formal recreational opportunities, but area provides some informal countryside access, particularly for residents of Lisburn.

Assessment for Wind Energy Development

Overall sensitivity

This medium scale, rolling, elevated landscape is in theory suited to wind energy development, at least in some areas, due to its rounded landform, marginal character, sparse settlement, relatively low visual prominence and limited scenic and heritage value.

These qualities prevail particularly in the northern parts of the LCA, which is visually in the lee of the Belfast Hills when viewed from Belfast and Lisburn. Its southern half is generally much more sensitive in terms of both scale and visibility.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The northern parts of the LCA, where landscape scale is larger and where topography affords some screening in views from Belfast and Lisburn, may be best suited area in this LCA for wind energy development. Wind energy developments in the southern edge of the LCA would be less in keeping with landscape character and more widely visible than northern parts of the LCA. Consideration could be given to siting turbines away from any small scale landform and landcover features that might accentuate their scale. It is recommended that attempts be made to minimise visual clutter if turbines are sited where they will be seen in close proximity to electricity transmission lines.

Care should be taken to avoid adverse landscape impacts upon the sensitive southern edge of the LCA. Care should be taken to avoid adverse impacts on views of the Belfast Hills from the south, south-east and east (notably from the escarpments at Castlereagh and Craigtantlet) as inappropriate development would affect the wider setting of Belfast city. Care should also be taken to avoid intrusion on the skylines, settings and views outlined in this section.

At the time of assessment there were no operational or consented wind farms in this LCA; the nearest existing wind farm was at Elliotts Hill, around 13km to the north. Adequate separation distances from any commercial wind energy development within this LCA and in nearby LCAs 109 Upper Ballinderry Plateau and 113 Expansive Crumlin Farmland will be important.

LCA 111 Divis Summits

Location: County Antrim. High summits of the Belfast Hills.

Key Landscape and Visual Characteristics and Values

Scale

A large scale landscape of broad rounded summits rising to 478m AOD at Divis.

Landform

The principal summits of Black Mountains, Squires Hill and Cave Hill reach around 400m, while Divis is higher. The summits generally have gentle slopes, with some gullies and abrupt steep slopes in places. Along the edge of the basalt plateau above Belfast there are much steeper slopes.

Enclosure

A relatively open landscape with extensive areas of windswept, often waterlogged, moss and rough farmland on the plateau top. Valley slopes have a more farmed character, with straight, overgrown hedgerows and belts of mature trees. Farmsteads are often sheltered by trees and reached by straight tracks, sometimes embanked.

Complexity of landcover and features

Landscape has a rather irregular, patchy pattern, with areas of scrub and wasteland, often associated with abandoned mineral workings, derelict farmsteads and areas of waterlogged or unfarmed land.

Man-made influence

Hard rock quarrying was once widespread across this LCA. Radio masts are situated on the highest summits and are prominent in views from surrounding areas. Transmission lines cross the ridge between Divis and Cave Hill.

Skylines and settings

Divis Summits form a dramatic and widely visible backdrop to the city of Belfast and are one of Northern Ireland's most important landmarks. The south, west and north facing ridges around the edges of the hills, although less dramatic in shape, also form prominent skylines seen over wide areas.

Visibility and views

The breathtaking views from the summits stretch across and beyond the city itself. The Mourne Mountains, Strangford and Belfast Loughs, the Castlereagh and Holywood Hills and the Sperrins are all visible.

Landscape quality (condition)

Landscape often in poor condition, particularly in areas with a history of mineral extraction. Evidence of hedgerow removal. Much abandoned farmland and widespread fly-tipping. However, marked improvements in recent years, particularly with the acquisition and management of land at Divis and Black Mountain by the National Trust.

Scenic quality

The eastern slopes of the area have been identified as part of the Belfast Basalt Escarpment ASQ reflecting their unique character and the spectacular views that they afford.

Wildness and tranquillity

The area has a strong sense of wildness in areas where there are no major intrusive influences. This wild character is of particular importance because of its rarity and accessibility to urban populations.

Natural and cultural heritage features

Species-rich grassland ASSIs at Leathemstown and Slievenacloy, the latter an Ulster Wildlife Trust reserve. National Trust land at Divis is of considerable biodiversity significance. Important archaeological remains including megalithic tombs, Bronze Age burial cairns, hut sites and walled enclosures at Divis and Cave Hill.

Cultural associations

Many important historical and cultural associations.

Amenity and recreation

Public access to National Trust land at Divis and Black Mountain. Section of the Ulster Way. Variety of walks and trails on Divis, Black Mountain and to the south at the Stoneyford River and Slievenacloy. Walks from Belfast Castle to the viewpoint on Cave Hill.

Assessment for Wind Energy Development

Overall sensitivity

The Belfast Hills, of which this LCA forms the highest point, is intrinsically the most sensitive of all the upland and escarpment landscapes around Belfast because of their iconic character. Each individual summit is a landmark in its own right and together the summits have a strong influence on the settings of almost all parts of the city as well as Lisburn, Newtownabbey and Belfast Lough.

Wind energy development on these summits would not only fundamentally alter their landscape character but would also be very widely visible indeed. The scenic, natural, cultural and recreational values associated with this LCA further heighten its sensitivity

Overall Sensitivity – High

Location, siting, layout and design considerations

This LCA is in a highly prominent location and has high landscape and visual sensitivity. It is recommended that any turbine development be closely associated with and reflects the scale of groups of buildings and trees.

Care should be taken to avoid adverse impacts on the extremely sensitive skylines and views, on its natural, cultural and recreational landscape interests and on the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in this LCA and the nearest existing wind farm was at Elliots Hill, around 15km to the north.

LCA 112 Belfast Basalt Escarpment

Location: County Antrim. Slopes and cliffs below the Divis Summits north-west of Belfast.

Key Landscape and Visual Characteristics and Values

Scale

Large scale cliffs with a stepped profile towering above the northern and western edge of Belfast. Land up to around 250m AOD lies within the LCA. Small scale patchwork of improved pasture with scrub encroachment.

Landform

Edge of the Antrim plateau, well-defined by a steep scarp slope towering above the city of Belfast. Black basalt cliffs and outcrops with a distinctive, sheer profile, broken by a series of steep, wooded glens. Thin band of contrasting chalk below.

Enclosure

A fairly open landscape except within the glens which include, in the west, the steep wooded landscapes of Colin Glen Forest Park; and in the north the designed landscape of Belfast Castle.

Complexity of landcover and features

The lower escarpment slopes are a mixture of hummocky open pasture, gappy hedgerows, and stands of deciduous trees on steeper slopes. Extensive areas of regenerating scrub and gorse. Narrow roads providing steep links between the ridgetop road and Belfast, winding up the basalt edge.

Man-made influence

Prominent, abandoned quarries and associated fly tipping affect landscape character and quality. Electricity transmission lines along the contour in the central section of the LCA.

Skylines and settings

Open, highly prominent skyline all along the escarpment edge.

Visibility and views

The basalt edge, like Divis Summits, provides opportunities for panoramic views over the city of Belfast and south to Strangford Lough and the Mourne.

Landscape quality (condition)

Somewhat degraded when seen at close quarters due to neglect and loss of field boundaries, dereliction and fly tipping but some restoration and enhancement by the Belfast Hills Partnership and others in progress.

Scenic quality

Despite localised issues of intrusion and landscape quality, the open, landmark character, distinctive profile and stunning views from the escarpment have justified the area's inclusion in the Belfast Basalt Escarpment ASQ.

Wildness and tranquillity

Rugged, brutal character in dramatic contrast to the dense urban areas below. Strong sense of wildness in exposed areas, particularly where there are no notable intrusive influences.

Natural and cultural heritage features

Species-rich grassland ASSI at Slievenacloy, an Ulster Wildlife Trust reserve. Important archaeological remains eg McArt's Fort on Cave Hill. Registered Parks at Belfast Castle and Bellevue.

Cultural associations

Many important historical and cultural associations.

Amenity and recreation

Walks around Slievenacloy. Colin Glen Forest Park. Section of the Ulster Way. Belfast Castle, Cave Hill Country Park and Belfast City Zoo. Walks from Belfast Castle to the viewpoint on Cave Hill.

Assessment for Wind Energy Development

Overall sensitivity

This prominent edge is part of Belfast Hills, intrinsically the most sensitive of all the upland and escarpment landscapes around Belfast due to their iconic character. The escarpment, with its distinctive profile, has a strong influence on the setting of Belfast and Belfast Lough, despite localised issues of intrusion and poor landscape quality.

Wind energy development could not only be difficult in practical terms, but could fundamentally alter the character of the escarpment and be visible over a very wide area. The scenic, natural, cultural and recreational values associated with the LCA further heighten its sensitivity.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA is in a highly prominent location and has high landscape and visual sensitivity. It is recommended that any turbine development be closely associated with and reflects the scale of groups of buildings and trees.

Care should be taken to avoid adverse impacts on the particularly sensitive skylines and views, its natural, cultural and recreational landscape interests and on the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in this LCA.

LCA 113 Expansive Crumlin Farmland

Location: County Antrim. Land south of Antrim around Belfast International Airport and Crumlin.

Key Landscape and Visual Characteristics and Values

Scale

Expansive farmland sloping gently towards Crumlin and Lough Neagh. Highest ground, in the east, is around 150m AOD.

Landform

Relatively flat areas underlain by Upper Basalt formation. Land slopes gently from the lower slopes of the Belfast Hills to the fringes of Lough Neagh in the west. Drained by Clady Water and the Dunmore and Crumlin Rivers but the valleys of these rivers are generally inconspicuous in the landscape.

Enclosure

An extensive network of overgrown hedges, hedgerow trees and shelterbelts gives the area a well treed character in parts but overall it appears flat and relatively open. Pastures are large and simple in shape. Town of Crumlin is divided by the steep wooded valley of the Crumlin River.

Complexity of landcover and features

Ordered, simple landscape pattern. Scattered farms and small villages form the main settlements. Farms are relatively large and well-spaced, typically sited at the ends of straight tracks some distance from the road. More recent housing tends to be sited alongside the road.

Man-made influence

Airfields occupy the flattest land at Nutt's Corner (former civil airfield, now disused) and Aldergrove (Belfast International Airport). Many straight roads cutting across the landscape.

Skylines and settings

No prominent skylines although the Belfast Hills form a gentle backdrop to the area, and the LCA forms part of the wider setting of Lough Neagh. Crumlin Glen provides an attractive setting to the compact town of Crumlin.

Visibility and views

Occasional views north to the Six Mile Water valley and Antrim Plateau from the northern part of the LCA. Otherwise few notable views either into or out of the area, although for many visitors to Northern Ireland arriving at Belfast International Airport, this landscape will be their entry point.

Landscape quality (condition)

The agricultural landscape is in reasonable condition although hedgerow trees are over mature and hedgerows in need of management. Disused airfield affects scale and structure of the landscape.

Scenic quality

No special scenic quality except in localised pockets such as Crumlin Glen.

Wildness and tranquillity

Neither wild nor tranquil given proximity to airport.

Natural and cultural heritage features

Broad scatter of monuments including standing stones, raths and churches. Registered Park at Glendarragh (Crumlin Glen).

Cultural associations

Not known.

Amenity and recreation

Crumlin Glen and Woodland Park is the only formal recreational opportunity.

Assessment for Wind Energy Development

Overall sensitivity

This landscape is of large to medium scale. Its simple, open, horizontal composition and the presence of existing man-made influences tend to reduce its sensitivity to wind energy development, as do its relatively sparse settlement, lack of important settings or views, and lack of significant natural or cultural features.

Sensitivity is lowest on the southern fringes of the LCA where the former airfield has led to landscape degradation and where turbines would be backclothed against the western slopes of the Belfast Hills.

Overall Sensitivity - Medium

Location, siting, layout and design considerations

Due to its relatively large scale, simple horizontal composition and lack of other notable landscape sensitivities, parts of this LCA may be suited to wind energy development. The southern part of the LCA, where the former airfield has led to landscape degradation and where any turbines would be backclothed against the western slopes of the Belfast Hills, is the area most likely to be suited to wind energy development. Consideration could be given to siting turbines away from any small scale landform and landcover features that might accentuate their scale.

Care should be taken to avoid any adverse impacts on the settings of Lough Neagh and Crumlin. Special attention should be paid to the potential visual impact on residents of Crumlin and visitors arriving in Northern Ireland via Belfast International Airport.

At the time of assessment there were no operational or consented wind farms in this LCA, and the nearest existing wind farm was at Elliots Hill, around 13km to the north. Adequate separation distances from wind energy development in nearby LCAs 109 Upper Ballinderry Plateau and 110 Derrykillultagh would be important.

LCA 114 Three and Six Mile Water Valleys

Location: County Antrim. Corridor between Newtownabbey and Antrim.

Key Landscape and Visual Characteristics and Values

Scale

Mixed scales – large scale rolling pastoral landscape rising to 231m AOD on Carnmoney Hill, with more intimate valley floor field pattern near Newtownabbey.

Landform

Gently rolling ridges within broad lowland valleys. Some hills are more prominent than others and might have a rugged character.

Enclosure

Valley floor has a secluded character due to a high concentration of trees, while skylines and ridgelines are open. There are few woodland blocks in this LCA.

Complexity of landcover and features

Large pastures divided by overgrown hedgerows. Densely settled with large farms and key settlements including Antrim, Templepatrick, Doagh, Ballyclare and Newtownabbey.

Man-made influence

Urban fringe influences and characteristics lead to a landscape that often lacks visual cohesion. Significant transport corridor containing M2, A6 and A57 as well as railway line and pylons. Widespread large scale industrial development scattered throughout the valleys and especially on outskirts of Newtownabbey and Antrim. Occasional areas of quarrying and landfill.

Skylines and settings

Carnmoney Hill is a prominent outlier of the Belfast basalt escarpment which forms a landmark for Newtownabbey. This LCA provides an important gateway and approach to Belfast (from the north-west and from Belfast International Airport and the port of Larne); and the eastern part of the LCA forms the setting to the historic settlements of Ballyclare and Doagh. The Registered Parks and estate landscape which are scattered through this area also form important settings to adjacent settlements.

Visibility and views

Long views south-east from the M2 along the Three Mile Water valley to the town of Newtownabbey and to Belfast Lough. Also long views from narrow roads lining settlements on the lower valley slopes. The LCA is overlooked from the surrounding higher slopes of the Antrim Plateau.

Landscape quality (condition)

Generally low due to incomplete hedgerow network and decline in mature trees. Valley floor between Antrim and Templepatrick has richer character and higher quality, and contains some intact glaciofluvial features. Some estates and areas have a more wooded and managed appearance where there are estates.

Scenic quality

Much of this area has no special scenic quality but Carnmoney Hill has been identified as an ASQ.

Wildness and tranquillity

This landscape is not wild but there are pockets of tranquillity in the valley landscapes away from major transport infrastructure and development.

Natural and cultural heritage features

Intact glaciofluvial topography (part of the Six Mile Water complex) in the river valleys. There is only one ASSI in this LCA at Ballypalady, designated for its palaeo-environmental value. Great crested grebe and redshank occur in vicinity of Belfast Lough SPA. Scattering of archaeological sites. Registered Parks are significant in this landscape and include The Steeple, Greenmount, Loughmore, Castlepton and Holystone House. Merville Garden Village and Antrim town centre are Conservation Areas.

Cultural associations

Not known.

Amenity and recreation

Riverside walks at Antrim.

Assessment for Wind Energy Development

Overall sensitivity

Although the often degraded quality of this landscape makes it less sensitive to wind energy development, the extent of the long views across the area, the area's role as a gateway to Belfast, and the fact that it is overlooked by adjacent higher land all increase its sensitivity.

In addition, the general lack of visual coherence makes it difficult to identify areas for wind energy development in this landscape without creating further visual confusion. There are many scale comparators in this landscape and turbines could dwarf existing built structures which are widespread.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The eastern half of the LCA, particularly close to the M2 corridor, may be better able to accommodate wind energy development than land further west. It is recommended that wind energy development reflects the scale of the landform and landscape features of this LCA. It is recommended that attempts be made to minimise visual clutter where turbines and pylons might be seen close together.

Particular care should be taken to avoid adverse impacts on areas with valuable long distance views, especially views to Belfast Lough. Care should be taken to avoid adverse impacts on key skylines and settings (notably that of Carnmoney Hill) and natural and cultural landscape interests.

At the time of assessment there were no operational or consented wind farms in this LCA, but there is an existing wind farm at Elliotts Hill and a consented one at Wolf Bog (both around 10km away to the north); additional wind energy development has been applied for in the same area (Tardree Upland Pastures LCA 125) and to the east (Carrickfergus Farmed Escarpment, LCA 130). It will be important to assess potential cumulative impacts if wind energy development is proposed in this LCA.

LCA 115 Tardree and Six Mile Water Slopes

Location: County Antrim. Between the high ground of Tardree Upland Pastures and Three and Six Mile Water Valleys.

Key Landscape and Visual Characteristics and Values

Scale

Narrow band of land between around 100m and 250m AOD flanking higher hills. Mixed pattern of fields and woodlands of different scales.

Landform

Undulating uneven topography. This area forms the intermediate slopes between the Tardree Uplands and lower-lying river valleys. It wraps around the higher ridges and hills and comprises hummocky pastures with hillocks and rocky outcrops. The western limb of the LCA, which runs down to the River Main, is characterised by a series of approximately north-south oriented drumlins.

Enclosure

Upper slopes in the west are most open and exposed. Elsewhere hedgerow trees provide a more sheltered character. Highest concentration of woodland occurs in the east.

Complexity of landcover and features

Pastoral landscape with irregular field pattern. Hedgerow trees are common and occasional reservoirs and rocky outcrops add visual interest. Numerous small villages, farms and farm holdings scattered throughout the area connected by a dense network of lanes.

Man-made influence

Electricity pylons are prevalent in this landscape. Occasional reservoirs.

Skylines and settings

These slopes of the Antrim hills are the setting to the lower-lying landscape of the Three and Six Mile Water valleys (including the settlements of Ballyclare and Doagh) and form important skyline ridges. This is especially the case for Donegore Hill, an outlier that protrudes into the valleys.

Visibility and views

Extensive views to the south (particularly from the network of lanes) across lower-lying landscapes and to the Belfast Hills to the south.

Landscape quality (condition)

Degraded in parts by leggy hedgerows and rush infested pastures.

Scenic quality

The north central part of this LCA includes a very limited area of the Antrim Coast and Glens AONB.

Wildness and tranquillity

The upper open slopes of this LCA have an increasingly remote and relatively wild character. Elsewhere the landscape is rural and tranquil.

Natural and cultural heritage features

Scattering of archaeological sites eg Donegore Hill and Wiley's Fort, reflecting long history of settlement on these accessible slopes – many are scheduled. Drumnadarragh House is a Registered Park.

Cultural associations

Not known.

Amenity and recreation

Ulster Way long distance path passes through the north-east of the LCA.

Assessment for Wind Energy Development

Overall sensitivity

This is a visually prominent landscape, the upper slopes of the LCA forming important skyline ridges, particularly when viewed from adjacent lower-lying areas. The outlier hill of Donegore is especially sensitive. The dispersed settlement pattern, dense lane network, scattering of archaeological sites, varied topography and landscape features eg loughs and rocky outcrops increase the sensitivity of this landscape to wind energy development.

This LCA forms a narrow band of land flanking higher hills. It is not broad in scale and could be overwhelmed by inappropriate wind energy development. Land away from ridgelines and key views might be somewhat less sensitive.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has high visual sensitivity and small scale landscape patterns and features. Land away from prominent ridgelines and outliers such as Donegore Hill are the areas most likely to be able to accommodate some form of wind energy development. It is recommended that wind energy development relates well to field and lane patterns. It is recommended that attempts be made to minimise visual clutter where turbines might be seen in conjunction with transmission lines, which are widespread.

Care should be taken to avoid adverse impacts on the setting of archaeological sites, and on skylines and long distance views, particularly from nearby settlements and from the Ulster Way.

At the time of assessment there were no operational or consented wind farms in this LCA, but there was an existing wind farm at Elliots Hill and a consented one at Wolf Bog (both within 3km to the north); additional wind energy development has been applied for in the same area (Tardree Upland Pastures LCA 125). Visual relationships with any wind farms in LCA 125 should be a key consideration for wind energy development in this LCA.

LCA 116 Ballymena Farmland

Location: County Antrim. East of River Main corridor, north of Antrim.

Key Landscape and Visual Characteristics and Values

Scale

Wide open valley forming broad and extensive landscape, rising to around 200m AOD on the fringes of the LCA.

Landform

Rolling farmland within an undulating valley rising towards the fringes of the Larne basalt moorland to the east. The Braid River and Kells Water extend from the surrounding hills through this landscape forming distinctive valleys and joining the River Main valley to the west. Drumlins are particularly striking to the north of Ballymena, but less pronounced to the east.

Enclosure

Moderately enclosed as a result of strong hedgerow network, although tree cover is sparse and there are just occasional deciduous woods. The landscape is more exposed on upper slopes to the east.

Complexity of landcover and features

Patchwork of farmland. Shelterbelts, stands of mature trees and beech avenues are distinctive local features. Large houses and farms scattered across area.

Man-made influence

Includes the significant settlement of Ballymena and towns of Broughshane and Kells. M2 transport corridor and industry east of Ballymena, and some areas of ribbon development along minor roads. Pylons traverse the middle and southern parts of this LCA. Quarrying eg east of Ballymena on lower slopes of Black Top.

Skylines and settings

The rising hills of the Larne basalt moorland and Slemish Mountain to the east form an attractive setting to this LCA and its settlements. The Braid River valley forms an important landscape setting to the settlements of Broughshane and Ballymena; while the Kells Water forms a setting to the historic town of Kells.

Visibility and views

Views within the valley are often contained by hedgerow network and tree cover but there are more open, longer views from upper slopes.

Landscape quality (condition)

Well maintained productive farmland landscape. Hedgerow network is intact and creates a strong landscape pattern.

Scenic quality

A small area on the north-eastern fringe of this LCA falls within the Antrim Coast and Glens AONB.

Wildness and tranquillity

Relative wildness is only experienced on upper slopes. The river valleys, away from transport corridors, have some intimacy and tranquillity.

Natural and cultural heritage features

Occasional scheduled sites concentrated around Ballymena and Hamillstown. People's Park Ballymena and Random Cottage are Registered Parks.

Cultural associations

Not known.

Amenity and recreation

A number of outdoor trails and walks particularly in the Ballymena area.

Assessment for Wind Energy Development

Overall sensitivity

The moderately enclosed character of this landscape with its hedgerow trees and shelterbelts helps to reduce its sensitivity to wind energy development. However the upper slopes of this LCA are visually prominent from lower-lying areas in this LCA and land further west. These slopes are also important in forming a setting to the settlements, and any development here could affect much of the LCA. To the south, the river valley of the Kells Water is especially sensitive due to its small intimate character and landscape features.

Areas away from settlements, key ridgelines and existing pylons might be less sensitive, as might the principal transport corridors and industrial areas on the edge of Ballymena.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

This LCA has high visual sensitivity and proximity to settlements. Land on the lower hill slopes to the east, away from settlements and their settings (eg below Black Top) may have some capacity for some form of wind energy development. There might also be opportunities for wind energy development on brownfield or industrial land near to the M2 transport corridor east of Ballymena, if carefully sited relative to existing man-made structures. It is recommended that wind energy development relates well to field and lane patterns. It is also recommended that attempts be made to minimise the siting of turbines where they will be seen in close proximity to electricity transmission lines and cause visual clutter.

Care should be taken to avoid adverse impacts on highly sensitive prominent ridgelines and the settings to settlements. Care should be taken to avoid adverse impacts on the setting of cultural heritage sites.

At the time of assessment there were no operational or consented wind farms in this LCA, but there was an existing wind farm at Elliots Hill and a consented one at Wolf Bog (both around 5km to the south-east); additional wind energy development has been applied for in the same area (Tardree Upland Pastures LCA 125) and to the north-east (Central Ballymena Glens, LCA 117). Cumulative impacts and separation distances with any wind energy development in these two LCAs and within this LCA should be a key consideration for wind energy development in this locality.

LCA 117 Central Ballymena Glens

Location: County Antrim. Glens radiating out from Ballymena up to the Garron Plateau above.

Key Landscape and Visual Characteristics and Values

Scale

Broad, expansive glens fringed by slopes rising to 349m AOD at Slieve Rush in the north.

Landform

Broad glens containing subtle mounds and knolls and framed by gently undulating ridges which extend onto the Garron Plateau. Slopes vary; they might be convex or concave in profile. The glens narrow towards the uplands. There are some distinctive landforms and outlier hills such as Carncoagh and Elginny Hill.

Enclosure

Tree cover and small woods give an overall sense of enclosure. More open and exposed on upper slopes and ridges.

Complexity of landcover and features

Rocky burns and deciduous woodlands become more pronounced in the upper glens. Mature beeches and stands of Scots pine are features throughout the area.

Man-made influence

A42 and A43 penetrate along the glens. Isolated dispersed traditional farmsteads on lower slopes and small nucleated settlements eg Buckna and Martinstown.

Skylines and settings

Church at Carrowcowan Bridge is a local landmark. Distinctive landforms and hills act as landmarks. The glen landscape forms an important setting for the landmark feature of Slemish Mountain to the south (just outside the LCA).

Visibility and views

From the upper slopes and distinct hills such as Carncoagh Hill and Elginny Hill there are extensive views westwards across lower-lying landscapes and as far as the Sperrins; there are also views across the Garron Plateau and into the Antrim Coast and Glens AONB to both north and south. Hill slopes of this LCA frame views from the A42 and A43 which are major tourist routes and gateways to the Antrim glens.

Landscape quality (condition)

Extremely good – intact field boundaries, preserved traditional farmsteads and good tree age structure.

Scenic quality

A significant proportion of the LCA lies within the Antrim Coast and Glens AONB (south-eastern half and north-eastern fringes). Visual amenity is enhanced by distinctive landforms such as Skerry Rock or Cragnamaddy.

Wildness and tranquillity

On exposed upper slopes and prominent ridges there is a high degree of relative wildness and the glens themselves are deeply rural, remote and tranquil.

Natural and cultural heritage features

Antrim Hills SPA supports hen harrier and merlin. This LCA contains a number of ASSIs including Rathsherry, Cleggan Valley and Glen Burn, all designated for their nature conservation value. Scattered archaeological sites and Registered Park at Cleggan Lodge.

Cultural associations

Not known.

Amenity and recreation

Key gateway to the Antrim Coast and Glens AONB. The upland ridges and more sheltered glens are valued for hill walking, horse riding and cycling.

Assessment for Wind Energy Development

Overall sensitivity

These glens are extremely sensitive to wind energy development due to their distinctive character, relative wildness and tranquillity, high scenic quality and key role in views from surrounding ridges and major tourist routes. The south-eastern half of this LCA (Braid valley) also forms part of the Antrim Coast and Glens AONB and is an important setting to Slemish. Elsewhere the distinctive knolls and outliers on the valley sides are sensitive in both character and visual terms and are valued for their scenic and perceptual qualities. In the lower-lying valley landscapes there are many small scale features. Development here could be out of scale with the landscape and might appear to 'flatten' the landform and reduce the sense of contrast with surrounding upland areas.

The prominent upper slopes on the western edges of the LCA are most sensitive because of their very wide visibility. There might be some localised areas of lower sensitivity on the less prominent middle slopes.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has high visual prominence and many small scale landscape features. Mid slope locations with simple, rounded landform are the areas that are most suited to accommodate some form of wind energy development. It is recommended that wind energy development reflects and relates well to local topography, especially to ensure that development does not dominate adjacent valley landscapes and flatten the often subtle, varied landform of this LCA.

Throughout the LCA care should be taken to avoid adverse impacts on extremely sensitive, prominent, distinctive rocky knolls and outliers, particularly on the eastern edges of the LCA. Care should be taken to avoid adverse impacts on perceptual landscape qualities such as wildness and tranquillity or on the setting of the Antrim hills, coast and glens. Care should also be taken to avoid adverse impacts on the settings of cultural heritage sites or settlements and on the setting of Slemish, in the south, which is particularly sensitive.

At the time of assessment there were no operational or consented wind farms in this LCA, although applications have been received for wind energy developments. The closest operational and consented sites were Corkey and Gruig, around 2km to the north of this LCA in Moyle Moorlands and Forest, LCA 118. Careful consideration will need to be given to landscape and visual relationships and separation distances between any wind energy developments in adjacent LCAs.

LCA 118 Moyle Moorlands and Forests

Location: County Antrim. Uplands south of Ballycastle.

Key Landscape and Visual Characteristics and Values

Scale

Large scale, sweeping, open, expansive rounded upland rising to approximately 550m AOD and forming a backdrop to more intimate glens.

Landform

Smooth, sweeping landform often with steep sided distinctive forms and clear tops such as Knocklayd and Slieveanorra, as well as areas of rocky cliffs and plateau. The area is dissected by small rocky burns and in the north by the headwaters of the Glenshesk and Carey Rivers.

Enclosure

Generally open except in areas of coniferous forestry, which are extensive in the central part of the LCA. Small broadleaved woodlands on lower, more sheltered slopes.

Complexity of landcover and features

Rough unimproved grassland and heather without field boundaries. Large areas of blanket bog, some of which have been cut over for peat. Extensive conifer plantations on the hill slopes. Pastures on the fringes of the uplands with some gorse banks and stone walls. Settlement is confined to lower moorland edges and more sheltered valleys. Abandoned dwellings and farms on higher land.

Man-made influence

Coniferous plantations often with harsh straight edges. Radio masts and wind turbines on some summits and disused quarry at Knocklayd. Several public roads.

Skylines and settings

Landscape is an important setting to the steep-sided coastal glens (Glenshesk, Glendun, Glennaan and Glenballyemon) that penetrate the area, and is also a setting to lower-lying landscapes to the west. The hills on the outer edges of the LCA form prominent skylines for miles around.

Visibility and views

Roads offer long open views over the moorland, to the sea and into adjacent glens. The western edge of the LCA is highly visible from lower-lying land to the west and the coastal fringes of the LCA are highly visible from many coastal viewpoints and the sea.

Landscape quality (condition)

Excellent although some loss of quality where there has been coniferous planting and peat cutting.

Scenic quality

Most of LCA is within the Antrim Coast and Glens AONB.

Wildness and tranquillity

Unforested parts of this LCA have a high degree of relative wildness as a result of their open, windswept upland character, extensive semi-natural vegetation and lack of overt man-made features. More sheltered areas and edges of moorland are deeply rural and tranquil.

Natural and cultural heritage features

This LCA also contains important geological sites including Tievebulliagh, Loughaveema and Carey Valley (ASIs). The majority of the LCA falls within the Antrim Hills SPA which supports breeding hen harrier and merlin. Breen Forest and Slieveanorra are both NRs. Many archaeological features (scheduled) from chambered graves to standing stones, often associated with moorland summits.

Cultural associations

Not known.

Amenity and recreation

Popular for outdoor recreation. Ulster Way passes through LCA along coast and Moyle Way crosses central uplands. Milibern scenic hillwalking route and the forest areas are promoted for parking, walking, picnicking and camping.

Assessment for Wind Energy Development

Overall sensitivity

The scale and landform of at least parts of this LCA are in theory well-suited to wind energy development in landscape and visual terms. The principal tops and summits often have a distinctive form, wide visibility and a strong wild character; they are highly sensitive to wind energy development. However, the plateau landscapes of the central part of the LCA are less sensitive due to their simple, often convex landform (which lends some topographic screening) and the uniformity of their landcover.

These areas might have lower landscape and visual sensitivity to wind energy development, provided other natural and cultural heritage constraints can be satisfactorily addressed. Locations within or close to forestry plantations might be least sensitive. In these areas the landscape and wildlife habitats have already been modified by forestry, and existing access tracks might also provide wind farm access without the significant landscape and habitat damage that could occur elsewhere. In addition, a forest or woodland setting might help integrate and reduce the visibility of turbines and associated infrastructure.

Overall Sensitivity -High to medium

Location, siting, layout and design considerations

Parts of the large scale and horizontal form of the upland plateaus within this LCA are well suited to wind energy development, in particular the central plateau areas, away from distinctive summits and rocky cliffs, and where commercial forestry reduces landscape and visual sensitivity and facilitates access. Consideration could be given to setting wind energy development well back from the steep upland and plateau edges to help contain its visibility.

Particular care needs to be taken to avoid significant impacts on key views from either the lowland landscapes to the west or from adjacent glens to the north, east and south and on the wild character of the area. The landscape interests of natural and cultural features and recreational resources should be respected.

At the time of assessment there was one operational wind farm in this LCA (Corkey, 10 turbines of 60m) and a further consented site (Gruig, 10 turbines of 100m) which together will form a cluster. Careful consideration will need to be given to cumulative impacts and separation distances from existing developments. Inappropriate development on the central plateau of this LCA could introduce cumulative impacts and undermine the integrity of the landscape. Due to the proximity of the Antrim coast seaward issues may be a consideration especially in parts of the landscape from which there are high level views.

LCA 119 Ballycastle Glens

Location: County Antrim. East of Causeway Coast on the north Antrim coast around Ballycastle.

Key Landscape and Visual Characteristics and Values

Scale

Large scale dramatic landscape in upper glens (rising to 130m AOD) becoming smaller scale and more enclosed in valley bottoms and lower lying areas.

Landform

Steep sided glens (Glentaisie and Glenshesk) with undulating sides and rocky rivers in the valley bottoms. Upper reaches of glens are narrow and contained by smooth rounded hills of higher moorland eg Knocklayd. The Carey River is set in more open lowland landscape with distinctive terraces.

Enclosure

Valleys are enclosed by topography and have a well vegetated character due to riverside trees and woods. Forestry plantations occur on some valley sides.

Complexity of landcover and features

Rough and improved pastures bounded by hedgerows including gorse and thorn, creating a variety of colours and textures. Wetland areas of sedge and alder along watercourses. Dispersed pattern of farmsteads along valley sides. Attractive coastal town of Ballycastle.

Man-made influence

Forestry plantations on some valley sides. Some new farm buildings which are visually prominent.

Skylines and settings

The western half of this landscape, in association with the distinctive upland topography of Knocklayd, forms an exceptional and scenic setting to Ballycastle and the north coast including Fair Head.

Visibility and views

Long views available down the glens to and from the coastal town of Ballycastle and the sea. There are also spectacular elevated views from the rural glen side lanes across Ballyvoy to Fair Head and out to sea.

Landscape quality (condition)

Dry stone walls on upper slopes are in a poor state of repair. Some forestry plantations have abrupt straight edges and felling activity has created some localised degradation.

Scenic quality

The whole of this LCA is highly scenic and the majority is included within the Antrim Coast and Glens AONB.

Wildness and tranquillity

The sheltered valleys and particularly their upper reaches have a strong sense of remoteness and relative wildness and tranquillity.

Natural and cultural heritage features

Antrim Hills SPA supports merlin and hen harrier. Tow River Wood is an ASSI and the Carey River an ASI for its geological significance. Many historic sites including mottes, crosses, raths and standing stones which are scheduled or in state care. There are two Registered Parks in this LCA namely Magherintemple and Clare Park. Conservation Area at Ballycastle.

Cultural associations

Not known.

Amenity and recreation

Ulster Way and Moyle Way long distance paths extend into this LCA from Ballycastle. Ballycastle is an important tourist centre and acts as a gateway to the Antrim Coast and Glens AONB (including Rathlin Island) and The Causeway Coast AONB. Ballycastle Bay is popular for watersports. The whole area is highly valued for its scenic routes, viewpoints, hill walking, horse riding and cycling.

Assessment for Wind Energy Development

Overall sensitivity

This landscape is highly sensitive due to the strong contrast that it affords with the uplands above and the sea below and the often small scale of its field patterns and landscape features. There is little flat land on which turbines could be accommodated and the hill slopes are visually highly exposed. The more open areas near the coast often have steep slopes, long views, attractive wooded river corridors; and the low-lying areas are also overlooked by glen-side viewpoints. In addition, the LCA is highly valued for its scenic quality, recreation and role as a setting to Ballycastle.

Collectively these landscape and visual characteristics and values make this landscape very sensitive to wind energy development.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has high landscape and visual sensitivity. It is recommended that any turbine development be closely associated with and reflects the scale of farmsteads and sheltering woodland.

Care should be taken to avoid adverse impacts on the extremely sensitive, open, exposed slopes and shorelines and on the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in this LCA. The nearest wind farms were at Corkey and Gruig, approximately 15km away to the south but they are not visible from within the LCA. Due to the proximity of the Antrim coast seaward issues may be a consideration in the future.

LCA 120 Fair Head

Location: County Antrim. Coastal strip between Antrim plateau and the sea.

Key Landscape and Visual Characteristics and Values

Scale

Narrow coastal strip with dramatic vertical cliffs rising to approximately 230m AOD.

Landform

Steep slopes and dramatic, often precipitous cliffs, on the northern edge of the Antrim plateau. Coastline comprises distinctive and exposed headlands (eg Fair Head) and more sheltered bays (eg Loughham). The steep slopes are dissected by short rocky streams forming minor incised valleys.

Enclosure

Landscape of contrasting enclosure and exposure. Few trees, and those that exist are windswept. Below the cliffs are some sheltered woods.

Complexity of landcover and features

Small scale rough pastures and moorland on the steep coastal edge separated by degraded stone walls. Small loughs are attractive features.

Man-made influence

Few overt man-made influences. Coastal road winds precariously along parts of the cliff edge linking dispersed pattern of cottages and farms, but coast at Fair Head is accessible only on foot.

Skylines and settings

Coastal headlands (Fair Head and Torr Head) form important and highly visible landmarks. Fair Head is particularly visible from the Causeway Coast AONB to the west and forms an important setting to Ballycastle. The steep slopes which back this coastal strip form the landward skyline and overhang the area, emphasising the narrowness of this LCA.

Visibility and views

Many dramatic and outstanding views to and from the sea and views along the cliff line throughout this LCA.

Landscape quality (condition)

This coastal fringe is in pristine condition with its attractive combination of cliffs of varying rock strata, native woods, pastures, headlands and bays. Some degradation of pastures, stone walls and derelict cottages in places.

Scenic quality

The whole of this area is included within the Antrim Coast and Glens AONB.

Wildness and tranquillity

This is an exceptionally wild landscape as a result of its elevation, dramatic scenery, exposure to the elements and the sea and inaccessibility. More sheltered locations below the cliffs and in the bays are deeply tranquil.

Natural and cultural heritage features

Fair Head is a feature of outstanding geological importance. There are a number of ASSI designations including Ballycastle Coalfields and Torr Head. The south-eastern fringe of this LCA also falls within the Antrim Hills SPA which supports breeding hen harrier and merlin. Concentrated number of chambered graves associated with Fair Head and dispersed pattern of other historic sites.

Cultural associations

Rich cultural associations with Fair Head.

Amenity and recreation

Ulster Way long distance path passes through the south eastern part of this LCA. The coastal road is one of the most spectacular scenic routes in Northern Ireland and has numerous parking bays offering spectacular views. This landscape is highly valued for outdoor recreation including hill walking and water sports.

Assessment for Wind Energy Development

Overall sensitivity

The landscape and visual sensitivity of this LCA is extremely high because this is a landmark landscape, visible across much of the north coast, and also widely visible from the sea. It provides an important setting for some of Northern Ireland's most important tourism and recreational assets. The unspoilt, pristine condition and high scenic quality of this landscape, with its dramatic and memorable views and rich natural and cultural heritage interests, increase its sensitivity still further. There are no areas of lower sensitivity.

In addition, the narrowness, steepness and inaccessibility of much of this coastal landscape would make wind energy development difficult.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA is an exposed, sensitive landmark landscape with high landscape and visual sensitivity and physical constraints. It is recommended that any turbine development be closely associated with and reflects the scale of farmsteads and sheltering woodland.

Care should be taken to avoid adverse impacts on the extremely sensitive open, exposed slopes and shorelines and on the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in this LCA; the nearest wind farms were at Corkey and Gruig, approximately 10km away to the south-west but they were not visible from within the LCA. Due to the proximity of the Antrim coast seaward issues may be a consideration in the future.

LCA 121 Moyle Glens

Location: County Antrim. Coastal glens on north-east edge of the Antrim plateau between upland moors and Irish Sea.

Key Landscape and Visual Characteristics and Values

Scale

Dramatic, broad glacial valleys extend into the Antrim plateau, rising to 315m AOD in their upper reaches. Cross Slieve forms an upland outlier at 205m AOD between Cushendun and Cushendall.

Landform

Distinctive flat-topped ridges such as Lurigethan and Tievebullagh loom over this landscape although they lie just outside the LCA. The southern glens have broad sweeping U-shaped valley profiles, whereas the glens in the north have a more V-shaped profile with undulating sides. The valleys contain rocky mountain streams that fall to the sea as waterfalls or become meandering as they reach the flat floodplains near the coast. Dispersed pattern of stone cottages and historic fishing villages of Cushendun and Cushendall cluster in coastal bays.

Enclosure

Prominent hedgerows and trees, and areas of ancient broadleaved woodland give this LCA a sheltered wooded appearance on lower slopes, becoming more exposed on upper slopes.

Complexity of landcover and features

Pastoral landscape divided by hedges and stone walls with high concentration of trees and woodlands.

Man-made influence

Roads follow the contours of the valley sides. Flat valley floors and steep upper slopes typically lack development although campsites, car parks and other tourist related infrastructure affect some coastal locations.

Skylines and settings

Distinctive knolls (eg Cross Slieve and Tieverah) in this LCA and upland summits of the Antrim plateau above form important skylines and distinctive landmarks. The valleys sides of the Glendun River form an important setting to the settlement of Cushendun; lower slopes of Lurigethan frame Cushendall. Historic features and coastal geological features are also landmarks eg Red Arch and Castle.

Visibility and views

Long coastal views are afforded throughout this LCA. There are also spectacular views from the coast and sea inland to a wild moorland backdrop.

Landscape quality (condition)

Excellent condition overall. Some small plantations on the upper slopes and some degradation of stone walls in places. Caravan parks on coast can be visually intrusive.

Scenic quality

High as a result of distinctive valleys and coastal views. All of this LCA is included in the Antrim Coast and Glens AONB.

Wildness and tranquillity

Steep upper slopes have a wild and remote character.

Natural and cultural heritage features

The Glendun and Glenballyemon Rivers are both proposed SPAs. Glenariff is designated an ASSI and the upper slopes of this areas form part of the Antrim Hills SPA which supports breeding hen harrier and merlin. Historic land tenure pattern preserved in stone wall enclosures reflecting early ladder farms. There are many archaeological sites, a large number of which are in state care and some scheduled. Conservation Areas at Cushendall and Cushendun.

Cultural associations

Rich history and folklore associated with the glens.

Amenity and recreation

Important area for tourism. Ulster Way passes through the LCA. Settlements of Cushendall and Cushendun are local centres and gateways to the Glens providing holiday accommodation. There are many parking areas along the coast and the coast road is a valued scenic route. The glens are valued for their outdoor recreation including hill walking, horse riding and cycling. The coast and sheltered bays are popular for water sports.

Assessment for Wind Energy Development

Overall sensitivity

This landscape is of very high sensitivity for a whole host of reasons. This is one of the most popular and highly valued scenic landscapes in Northern Ireland, its key attraction lying in the extreme contrast between the adjoining uplands and dramatic coastal glens. The landscape of the glens includes many small scale features and its landform is a significant constraint to most wind energy development as it is either very steep, or flat and tightly contained. There is a great diversity of landscape features, often highly valued for their earth science, nature conservation or historic interest, and the small traditional settlements are visual focal points within each valley.

Wind energy development could be prominent, intrusive and wholly inappropriate to the traditional rural character of these landscapes.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has a highly distinctive and valued landscape setting and exceptionally high landscape and visual sensitivity. It is recommended that any turbine development be closely associated with and reflects the scale of farmsteads and sheltering woodland.

Care should be taken to avoid adverse impacts on the extremely sensitive open exposed slopes, shorelines and the setting of cultural heritage and on the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in this LCA; the nearest such wind farms were at Corkey and Gruig, approximately 8km away to the west but they are not visible from within the LCA. Due to the proximity of the Antrim coast seaward issues may be a consideration in the future.

LCA 122 Garron Plateau

Location: County Antrim. Upland plateau north-east of Ballymena to Garron Point on coast.

Key Landscape and Visual Characteristics and Values

Scale

Large scale, open, expansive upland plateau rising to around 438m AOD at Mid Hill although many summits are over 400m AOD eg Carncormick and Soarns Hill.

Landform

Upland plateau with uneven relief due to rocky outcrops, steep descents and deeply incised stream valleys. The uneven landform harbours many upland loughs and reservoirs. The edges of the plateau have a distinctive stepped profile or form rounded knolls and end in dramatic cliffs at the coast.

Enclosure

Largely open and exposed landscape with little native tree cover. Coniferous woodland creates localised enclosure.

Complexity of landcover and features

Predominately sheep grazing, lower slopes enclosed by stone walls and occasional beech trees or Scots Pine. Peat bogs on more elevated areas comprising a matrix of heather and moorland grasses, rushes and areas of peat cutting. Coniferous woodland at Glenariff Forest Park and Cleggan Forest.

Man-made influence

Very limited, as do not penetrate beyond edge of plateau. Some commercial forestry and small reservoirs in the south-west.

Skylines and settings

Lurigethan, with its promontory fort, is a distinctive coastal landmark. The edges of the plateau form simple, open skylines when viewed from surrounding areas and are important in providing a setting to adjacent glens, coastal fringes and inland lowlands.

Visibility and views

Long views to and from the edges of the plateau over the surrounding landscapes and the sea. Views into the LCA from around Glenariff Forest Park to the north.

Landscape quality (condition)

Excellent condition overall.

Scenic quality

The whole of this area of very high scenic quality and is included in the Antrim Coast and Glens AONB. Locally, however, scenic quality has been affected by blanket afforestation.

Wildness and tranquillity

Upland areas have a strong sense of relative wildness remaining largely undisturbed by human activity.

Natural and cultural heritage features

This landscape contains valuable peatland habitats designated as the Garron Plateau ASSI, SAC and Ramsar site and is the most extensive area of intact upland blanket bog in Northern Ireland. The majority of the LCA falls within the Antrim Hills SPA which supports breeding hen harriers and merlin. There are also ASSI designations at Blackburn (valued

for its extensive, active limestone cave system) and Gortnagory (valued for its grassland and rare orchids). Scattered archaeological sites associated with the plateau fringes.

Cultural associations

Not known.

Amenity and recreation

Glenariff Forest Park is a popular outdoor recreation area and there are a number of walking routes in this locality.

Assessment for Wind Energy Development

Overall sensitivity

This LCA has a large scale, simple expansive landform and landcover that in theory make at least parts of the area suitable for wind energy development. However, the stepped landforms and rounded knolls around the plateau edges form prominent open skylines that are highly visually sensitive and are the setting for the coastal glens of Glenariff and Glencloy to the east. Parts of the LCA are overlooked from slopes and summits to the north around Glenariff Forest Park, and this too heightens sensitivity. The area around Glenariff Forest Park is highly valued for recreation, while the northern reaches of the LCA, as it extends towards the coast, becomes increasingly complex with distinctive upland loughs and rocky outcrops. These factors, together with the area's scenic quality and outstanding intact peatland habitats result in high sensitivity over most of the LCA.

Areas of lesser sensitivity occur in the south-west, for example in areas of simple terrain within or close to the extensive coniferous plantation of Cleggan Forest, where recreational access is limited. Here the forestry might help contain visibility and use of existing forestry access tracks could reduce infrastructure impacts on fragile moorland landscapes and habitats.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

Parts of the large scale and horizontal form of the upland plateau within this LCA are well suited to wind energy development, in particular the plateau areas adjacent to or within the Cleggan Forest, where commercial forestry reduces landscape and visual sensitivity and may facilitate vehicular access. Consideration could be given to the clustering of wind energy development (of consistent layout height and design) as more than one area of wind energy development in this LCA could undermine and fragment the character of this open expansive moorland plateau. Consideration could also be given to setting wind energy development well back from the steep upland and plateau edges to help contain its visibility.

Care needs to be taken to avoid adverse impacts on key views, particularly views from the coastal glens and the sea to the east, and on the wild character of the area. Care also needs to be taken to avoid adverse visual effects on areas of complex terrain and areas of upland loughs and rocky outcrops. The landscape interests of natural and cultural features and recreational resources should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA; the nearest such sites were at Corkey and Gruig, around 7km north-west of this LCA. Additional wind energy development has been applied for just to the south-west, in the Central Ballymena Glens LCA. Careful consideration will need to be given to separation distances from developments in adjoining LCAs (particularly LCA 117 Central Ballymena Glens). Cumulative impacts within this LCA could be a future issue. Due to the proximity of the Antrim coast seaward issues may be a consideration especially in parts of the landscape from which there are high level views.

LCA 123 Larne Glens

Location: County Antrim. Deeply incised glens between the Garron plateau and the coast.

Key Landscape and Visual Characteristics and Values

Scale

Large scale, deeply incised glens rising to stepped moorland summits and reaching approximately 190m AOD. Small to medium scale landscape patterns and features.

Landform

Steep-sided and incised glen valleys of the Glencloy and Glenarm Rivers. Towards the coast the glens open out and the terrain is undulating.

Enclosure

Broadleaved woodland on steeper glen slopes, and small to medium scale patterns of stone walls and hedges with hedgerow trees, provide enclosure and distinctive pattern. There is also topographic enclosure by the surrounding moorland summits.

Complexity of landcover and features

Dramatic contrasts in colour between the lush pastures within the glens and the more exposed moorlands above. Old quarry workings create dramatic features along the steep slopes. Settlements of Carnlough and Glenarm are located on coast at the mouth of the glens. Elsewhere there is a dispersed pattern of farmsteads.

Man-made influence

Conifer plantations in Glenarm. Quarry above Carnlough creates a distinctive landmark.

Skylines and settings

The lower lying coastal areas and mouth of the glen rivers provide important landscape settings to the coastal settlements. The upper moorland slopes form high visible and simple open skylines, framing and enfolding these sheltered glen landscapes.

Visibility and views

Elevated and spectacular views across the glens and down their length to and from the sea. Also memorable views along the coastline. This landscape is highly visible from surrounding moorland slopes.

Landscape quality (condition)

Extremely good condition – well managed landscape elements, robust stone walls, well maintained hedgerows and strong landscape structure.

Scenic quality

High – the whole of this LCA is included within the Antrim Coast and Glens AONB.

Wildness and tranquillity

This is a landscape of contrasts – the upper moorland slopes of the glens and the exposed rocky coastline both express a high degree of relative wildness, whereas the glen landscapes are more sheltered and deeply tranquil.

Natural and cultural heritage features

Old quarry sites are of earth science interest and designated ASIs. Much of the deciduous woodland is ancient and designated ASSI eg Glenarm Woods and Straidkilly Wood (the latter also being a NR); Lemnally is a grassland ASSI. Much of the Glenarm is a Registered Park as part of the Glenarm Castle Estate; Garron Tower in the north of the LCA is also a Registered Park. Conservation Areas at Carnlough and Glenarm.

Cultural associations

Rich history and folklore associated with the glens.

Amenity and recreation

This landscape is valued for its recreation opportunities and is a major tourist destination. The Ulster Way long distance follows the coast through this LCA. There are also a number of other walking routes associated with this area.

Assessment for Wind Energy Development

Overall sensitivity

This landscape is highly sensitive overall. The more open areas nearer the coast offer long coastal views, and although the lower lying areas are relatively well treed they are also overlooked from surrounding higher ground and form a central visual focus within the LCA. Similarly the upper slopes of the glens are of high visual sensitivity, providing an outstanding backdrop and skyline to the valleys. Both these areas are inherently sensitive to wind energy development. The outstanding scenic quality of this landscape and its popularity for visitors and for outdoor recreation increase its sensitivity still further.

This very high sensitivity across the whole area indicates that there is limited scope for wind energy development in this LCA.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has a highly distinctive and valued landscape setting and has high landscape and visual sensitivity throughout. It is recommended that any turbine development be closely associated with and reflects the scale of farmsteads and sheltering woodland.

Care should be taken to avoid adverse impacts on the extremely sensitive, open, exposed slopes, shorelines, prominent knolls and the settings of cultural heritage sites and on the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in this LCA; the nearest such developments were at Elliotts Hill and Wolf Bog approximately 10km away to the south-west, but they are not visible from this LCA. Due to the proximity of the Antrim coast seaward issues may be a consideration in the future.

LCA 124 Larne Basalt Moorland

Location: County Antrim. Upland moorland between Ballymena and the coast.

Key Landscape and Visual Characteristics and Values

Scale

Large scale, broad, rounded summits reaching between 300 and 400m AOD.

Landform

Exposed broad upland area with distinctive rounded summits which often have simplicity of outline. This area extends into a narrower ridge in the north separating Glenarm from the coast. On the east is the dramatic rounded cliff of Sallagh Braes – the product of a massive landslip, and to the south the cliffs of Agnew's Hill.

Enclosure

Windswept, open landscape with little enclosure due to lack of trees, high elevation and expansive topography.

Complexity of landcover and features

Derelict pastures on the edge of the moor invaded by rushes and gorse giving rise to strongly textured landscape. The upper slopes and summits are covered in tussocky moorland grasses with areas of peat bog and heather. Small isolated stone dwellings and areas of small scale peat cutting.

Man-made influence

Radio masts are prominent vertical features. Commercial forestry in places eg Capanagh and Shillanavogy Woods and Ballyboley Forest. Narrow roads cross the moorland and wind around the edges of the summits.

Skylines and settings

The volcanic plug known as Slemish is an exceptional landmark. Outer summits and fringes are prominent landmarks in views from adjacent lowlands and valleys, particularly the Glenwhirry valley.

Visibility and views

The steep cliffs of Sallagh Braes are a notable landscape feature and viewpoint. Numerous long distance views are also available from the narrow lanes which cross the moorland and skirt its fringes.

Landscape quality (condition)

Good condition overall although some areas of derelict pastures and tumbled down stone walls.

Scenic quality

High. Most of this LCA (with the exception of the southern fringes) falls within the Antrim Coast and Glens AONB.

Wildness and tranquillity

The upper and central parts of this landscape have a wild character due to their openness and remoteness. The dramatic and majestic knolls and cliffs also have relative wildness as a result of their scale and dominance.

Natural and cultural heritage features

The majority of this area is covered by the Antrim Hills SPA which supports breeding hen harrier and merlin. Slemish and Scawt Hill and Sallagh Braes are ASIs of earth science interest while Scawt Hill is also an ASSI. Concentration of scheduled archaeological sites on the northern finger of this LCA (Knockdhu ASI), as well as on its southern fringes and at Slemish.

Cultural associations

Not known.

Amenity and recreation

Ulster Way and Antrim Hills Way long distance paths pass through this LCA.

Assessment for Wind Energy Development

Overall sensitivity

This LCA has a large scale, simple landform and land cover that suggest some suitability for wind energy development. However, the outer hills often have a distinctive form and wide visibility; hence they are especially sensitive to wind energy development, whether they lie within the AONB or not. This also applies to the narrow finger of land in the northern part of this LCA which forms an important setting to Glenarm and the coastal landscapes. As in other parts of the Antrim Plateau, areas that can be seen from the coast and coastal glens are of the utmost sensitivity.

The central parts of the LCA have an open plateau landform with simple, uniform land cover and these areas might be less sensitive, particularly where there is some topographic screening and where forestry plantations have already affected the area's landscapes and moorland habitats.

Overall Sensitivity – High to medium

Location, siting, layout and design considerations

Parts of the large scale and horizontal form of the upland plateau within this LCA are well suited to wind energy development, in particular the central plateau areas of the LCA, away from steep hillsides, distinctive summits and rocky cliffs, and where commercial forestry reduces landscape and visual sensitivity and facilitates access. Consideration could be given to the clustering of wind energy development (of a consistent layout, height and design) as more than one area of wind energy development on the central plateau of this LCA could introduce cumulative impacts and undermine the integrity of the landscape. Consideration could be given to setting wind energy development well back from the steep upland and plateau edges to help contain its visibility.

Particular care should be taken to avoid adverse impacts on the settings of Slemish, Sallagh Braes and Knockdhu, on key views from either the lowland landscapes to the west or from the glens and coast to the north and east, and on the wild character of the area. The landscape interests of natural and cultural features and recreational resources should be respected.

At the time of assessment there were no operational or consented wind farms in this LCA. The nearest such developments were at Elliots Hill and Wolf Bog, around 4km south-west of the LCA. Careful consideration will need to be given to separation distances from existing developments in adjoining LCAs (particularly LCA 125 Tardree Upland Pastures). Cumulative impacts within this LCA could be a future issue. Due to the proximity of the Antrim coast seaward issues may be a consideration especially in parts of the landscape from which there are high level views.

LCA 125 Tardree Upland Pastures

Location: County Antrim. South-west of Larne Basalt Moorland and northeast of Antrim.

Key Landscape and Visual Characteristics and Values

Scale

Medium scale upland fringe area with hills and ridges rising to 353m AOD.

Landform

Transitional landscape comprising undulating topography. Ridges have a smooth stepped profile with some rocky outcrops or crags. The Glenwhirry valley, which cuts through the centre of the LCA, is broad and shallow.

Enclosure

Relatively open landscape even in valley. Localised enclosure created by topography and roadside trees and conifer plantations.

Complexity of landcover and features

Marginal pastures and poorly drained grassland and heather create a textured landscape divided by a strong pattern of stone walls and hedges. Some commercial forestry on Tobernavene Hill. Scattered distribution of rural dwellings, concentrating within the Glenwhirry valley.

Man-made influence

Electricity pylons pass through the central and southern parts of this landscape. Quarries (disused and existing) eg Craigs Quarry. Existing wind farm (Elliot's Hill) on Big Collin.

Skylines and settings

The uplands to the north-east of this LCA form an important and prominent skyline. The south-facing slopes of Tobernavene and Drumdarragh Hill also form prominent skylines and a setting to the town of Antrim.

Visibility and views

Long open views across this landscape from main ridges. Also views across the Glenwhirry Valley.

Landscape quality (condition)

Condition of this landscape varies. In some areas the stone wall enclosures are intact and well maintained but elsewhere tumbled down. In places the landscape is degraded due to quarries, electricity pylons and prominent development.

Scenic quality

Scenic quality in this LCA is mixed. The north and eastern fringes of this LCA fall within the Antrim Coast and Glens AONB.

Wildness and tranquillity

This is a rural landscape which has a high degree of tranquillity away from main road routes. The upland ridges with their rougher vegetation and more exposed aspect express relative wildness in places.

Natural and cultural heritage features

Sandy Braes is an ASI. There are a number of archaeological sites which are scheduled, many of which occur on the upland ridges.

Cultural associations

Not known.

Amenity and recreation

Tardree Forest is valued for recreation with marketed picnic spots and viewpoints.

Assessment for Wind Energy Development

Overall sensitivity

The visually exposed character of this LCA suggests some sensitivity to wind energy development. The southern slopes form a setting to Antrim and are particularly visible from the M2; while the northern slopes and ridges protrude into the lower-lying landscape of the Ballymena Farmland (LCA 116) and form part of the Antrim Coast and Glens AONB. Scenic quality in these areas is also relatively good.

However there are some locations in the central and southern parts of the LCA where the ridges have a smooth profile, visibility is reduced by dips in the landform or by forestry, and the landscape has already been affected by man-made influences. In these areas landscape sensitivity might be less.

Overall Sensitivity - Medium

Location, siting, layout and design considerations

The middle slopes of the ridges in the central and southern parts of this LCA (particularly where there are existing man-made influences) may be better able to accommodate wind energy development than other areas. It is recommended that wind energy development relates well to field patterns and topography. If lower hills adjacent to lowlands and valleys are being considered it is recommended that wind energy development reflects the scale of this landscape. It is recommended that attempts be made to minimise visual clutter where turbines are seen in conjunction with pylons.

Care should be taken to avoid adverse impacts on very sensitive rocky knolls, ridge summits and steep slopes. Care should also be taken to avoid adverse impacts on the Antrim Plateau and on the settings of settlements and cultural heritage sites.

At the time of assessment this LCA had an existing wind farm at Elliots Hill (10 turbines of 65m) and a consented site adjacent at Wolf Bog (5 turbines of 100m). Further wind farms are also proposed within the LCA and in other LCAs to the north and south (although these sites are generally more than 15km away). This means that cumulative impacts must be very carefully considered for any proposals in this LCA.

LCA 126 Larne Coast

Location: County Antrim. Coastal strip north of Larne.

Key Landscape and Visual Characteristics and Values

Scale

Relatively narrow coastal strip with dramatic vertical form rising to approximately 200m AOD.

Landform

Undulating lowland between upland moorland to north-west and coast. Indented coastline of headlands and cliffs creating a sequence of striking gateways.

Enclosure

Small wooded glens on steep slopes, and wind sculpted vegetation along the coast.

Complexity of landcover and features

Inland pastures divided by stone walls and a rugged belt of rough pasture along coastline. Exposed rocks form landscape features in places. Settlements include Carncastle, Ballygally and Larne; otherwise there is a dispersed pattern of farmsteads. Dramatic coast road hugs the coastline.

Man-made influence

Significant urban, industrial and port development associated with Larne in the south of this LCA. Golf courses and tourism developments are scattered sporadically along the A2.

Skylines and settings

Circular cliffs of Sallagh Braes overshadow this landscape and form a distinctive landmark, as do the upper slopes of the Antrim plateau moorlands above.

Visibility and views

Expansive seaward views particularly from the coast road.

Landscape quality (condition)

Stone walls are an important visual component of this landscape and are in a good state of repair.

Scenic quality

High scenic quality. The whole of this area with the exception of Larne is included within the Antrim Coast and Glens AONB.

Wildness and tranquillity

Wild windswept character, particularly along the coastal area and on upper slopes to the north and east.

Natural and cultural heritage features

Coastal area has a number of important earth science sites including the Waterloo ASSI at Chaine Memorial Park and Larne Lough SPA. The SPA supports breeding terns and overwintering brent geese. Wealth of archaeological interest including mottes, standing stones and raths along the upland margins. There are a number of Registered Parks in this landscape including Cairndhu, Carnfunnock Country Park, Chaine Park, and Drumalis.

Cultural associations

Not known.

Amenity and recreation

Popular area for tourism and recreation. Carnfunnock Country Park. The A2 is an important tourist route through this landscape. The Ulster Way long distance route hugs the coastline. There are also a number of other marketed walking routes eg Linn Glen circular walk.

Assessment for Wind Energy Development

Overall sensitivity

This LCA is highly sensitive to wind energy development because it is highly visible from the A2 tourist route and from elevated land above – particularly from key viewpoints such as Sallagh Braes. Towards Larne urban influences make the area somewhat less sensitive but nevertheless it is still highly visible. This high visibility, together with high scenic quality, dramatic and memorable coastal views, strong natural and cultural heritage interests, and value in terms of tourism and recreation, means that there are limited areas within this LCA of lower sensitivity to wind energy development.

The possible exception is land associated with the port of Larne, where brownfield and industrial sites might have a lower sensitivity to appropriately scaled wind energy development.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has space constraints and high landscape and visual sensitivity. Industrial land associated with the port of Larne might have landscape capacity for some form of wind energy development. Careful consideration should be given to relationships with existing built structures.

Care should be taken to avoid adverse impacts on highly sensitive exposed slopes and ridges, shoreline landscapes, and views along the coast and from higher ground to the west and on the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in or near this LCA. Potential future cumulative impacts would have to be very carefully considered within this LCA and between any future wind energy developments in the adjacent LCA28. Due to the proximity of the Antrim coast seaward issues may be a consideration in the future.

LCA 127 Larne Ridgeland

Location: County Antrim. South of Larne Basalt Moorland and north of Carrickfergus Uplands.

Key Landscape and Visual Characteristics and Values

Scale

Medium scale landscape with low ridges rising to 219m AOD at Black Hill.

Landform

Gently undulating farmland dominated by long south-west to north-east ridges and trough-like valleys. South-west part of this LCA forms a distinct broad valley landscape along the line of the Six Mile Water Fault.

Enclosure

Strong sense of enclosure due to thickets of woodland especially on upper valley slopes eg Glenoe and presence of higher moorland topography to north and south.

Complexity of landcover and features

Well-structured farmland with large scale geometric fields defined by hedges. Pastures show a transition from lush grassland to smaller marginal upland fields defined by stone walls. Farms and isolated bungalows and houses and small loughside settlement of Glynn.

Man-made influence

Main communications and service corridor containing prominent pylons and roads which are visually intrusive at times. Settlement focuses in the valleys including settlement of Millbrook which forms an extension or suburb of Larne. Significant quarry at Magheramorne.

Skylines and settings

Moorland ridges above form prominent and simple skyline. The steep woodland on slopes of Carnduff and Glynn Hill provide a strong setting for Glynn. The power station at Ballylumford (outside the LCA) forms a prominent landmark. The upland ridge of Black Hill forms an immediate setting to Larne Lough.

Visibility and views

Views from the valleys are bounded by the skyline ridges of moorland. Views from higher ground are more extensive and take in most of Larne Lough.

Landscape quality (condition)

Reasonable. Field structure is still robust but vulnerable to decline.

Scenic quality

Mixed. The area to the north-west of the A8 to Larne falls within the Antrim Coast and Glens AONB.

Wildness and tranquillity

Relative wildness is felt on upper slopes and ridges. Tranquillity is felt away from the main transport corridors but is not widespread.

Natural and cultural heritage features

The shores of Larne Lough are protected as part of the Lough Shores ASSI, Ramsar and SPA and are important bird habitat as is Swan Island SPA. The SPAs support breeding terns and overwintering brent geese. There is also an ASSI at Newlands. There are scattered archaeological sites many of which are scheduled. Registered Parks at Magheramorne House and Kilwaughter Castle.

Cultural associations

Not known.

Amenity and recreation

Waterfall and walks in Glenoe. Main tourist routes to the coast.

Assessment for Wind Energy Development

Overall sensitivity

This landscape is contained visually by higher land to the north and south; and parts of the LCA are affected by development such as the power station, quarrying, pylons and transport corridors. These factors tend to reduce the landscape's sensitivity to wind energy development. However, the northern slopes of this LCA are valued for their scenic quality and the ridges in the south-east are highly visible from Larne Lough and the coast to the north. These factors tend to increase sensitivity.

The low ridges behind Black Hill and Cross Hill are potentially most suited to wind energy development, but they are relatively narrow and the landscape could easily be overwhelmed by inappropriate wind energy development. They would be less sensitive to turbine groupings, that are set well back from the edge of Larne Lough, thus avoiding both significant visual impacts and also impacts on important bird habitats and species.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The low ridgelines behind Black Hill and Cross Hill in the south-east of the LCA might be the best suited area in this LCA for some form of wind energy development. It is recommended that wind energy development reflects the scale of the landform and landscape features and creates a site layout which relates well to field and lane patterns. It is recommended that attempts be made to minimise visual clutter where turbines might be seen in conjunction with electricity transmission lines.

Care should be taken to avoid adverse impacts on the Glenoe valley, views from the coast to the north, and the setting of settlements.

At the time of assessment there were no operational or consented wind farms in this LCA; the nearest such sites were at Elliots Hill and Wolf Bog approximately 10km to the west; there were also additional applications in that area. Due to the proximity of the Antrim coast seaward issues may be a consideration, especially in parts of the landscape from which there are high level views.

LCA 128 Island Magee

Location: County Antrim. South and east of Larne.

Key Landscape and Visual Characteristics and Values

Scale

Broad landscape of open water, wide valley and low ridges rising to approximately 160m AOD. Area has a strong horizontal form.

Landform

Flat expansive open lough and valley land to the south, enclosed by low, smooth ridges which run north-south and form rounded skylines. The lough has areas of tidal mudflats and a rocky eastern shore.

Enclosure

Large areas of woodland on ridge slopes give rise to some enclosure in a landscape which is otherwise generally open and exposed.

Complexity of landcover and features

Distinctive, regular hedgerow field patterns on ridges. Diverse landcover of rough grassland on floodplain in wide valley, and pastoral farmed slopes on the ridges. Enclosed harbour villages eg Portmuck.

Man-made influence

Caravan parks along the shoreline. Key settlement of Whitehead. Power station at Ballylumford, and associated lines of pylons radiating outwards which interrupt the smooth skyline.

Skylines and settings

The lower slopes of Black Hill to the west of the LCA form an important skyline ridge above the southern part of Larne Lough. The slopes of Carnbrock and Muldersleigh Hill form an important setting to the settlement of Whitehead.

Visibility and views

Notable views out to sea from east side of Island Magee. Views across and down Larne Lough from higher ground in the western half of the LCA.

Landscape quality (condition)

The condition of landscape elements is mixed, being relative good on Island Magee but showing signs of degradation in the valley floor and on some of the ridges.

Scenic quality

Generally high. Island Magee has been identified as an ASQ.

Wildness and tranquillity

The east side of Island Magee has a wild and remote character due to its relative inaccessibility and exposure to the Irish Sea.

Natural and cultural heritage features

Important area for nature conservation – Larne Lough is designated an ASSI, Ramsar and SPA for its bird habitat, as is Swan Island SPA. The SPAs support breeding terns and overwintering brent geese. The lough head carries an ASI designation at Ballycarry and Swan Island is an SPA and designated as a NR. The eastern coast of the peninsula is also ASI. In addition Red Hall estate is a Registered Park and there are a number of scheduled or proposed scheduled archaeological sites especially in the south of the LCA. Conservation Area at Whitehead.

Cultural associations

Not known.

Amenity and recreation

This area is important for tourism and caravan holidays.

Assessment for Wind Energy Development

Overall sensitivity

The general openness of the landscape and the remote and wild qualities of Island Magee itself make this LCA very sensitive to wind energy development. Similarly the hills and ridges which flank the settlement of Whitehead are important in defining a setting to the town and are also visually sensitive to wind energy development. In addition, Island Magee is valued for its high scenic quality; and Larne Lough and its shores for their nature conservation and bird habitats. It may therefore be difficult to accommodate wind energy developments in this LCA.

A possible exception is land associated with the power station at Ballylumford, which might have lower sensitivity to appropriately scaled wind energy development.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has high landscape and visual sensitivity. The industrial land associated with Ballylumford Power Station might be the best suited area in this LCA to accommodate some form of wind energy development. Careful consideration should be given to the scale of and relationships with existing built structures.

Care needs to be taken to avoid adverse impacts on highly sensitive, exposed upper slopes and shoreline landscapes and on the key landscape and visual characteristics and values that were described in this section. Careful consideration should be given to impacts on views along the coast and from higher ground to the west.

At the time of assessment there were no operational wind farms in this LCA; the closest such site lay more than 20km away to the west. Potential future cumulative impacts would have to be very carefully considered within this LCA and between any wind energy developments in the adjacent LCAs particularly LCA 126. Due to the proximity of the Antrim coast seaward issues may be a consideration in the future.

LCA 129 Carrickfergus Shoreline

Location: County Antrim, shoreline between Whitehead and Newtownabbey

Key Landscape and Visual Characteristics and Values

Scale

Fringe of flat land, 1-3km wide, rising to around 100m AOD on the edge of the LCA below the escarpment to the north-west.

Landform

Narrow, flat coastal plain, rising gently inland towards the escarpment. Pronounced hilltop at Castle Dobbs and valley of Kilroot river to north-east of LCA.

Enclosure

Almost continuous belt of coastal development including Greenisland and Carrickfergus, broken by urban farmland. Well treed in parts but increasingly open towards the east, except for pockets of woodland around Castle Dobbs.

Complexity of landcover and features

Communications and service corridor. Peripheral industry and scattered housing along roads links settlements and obscures their separate identities.

Man-made influence

Large institutional, commercial and industrial developments along the coastal edge and extensive urban development inland. Prominent industrial structures, notably the stack of Kilroot Power Station, can be seen from miles around. The linearity of the LCA is emphasised by roads, a railway and transmission lines. Ribbon development along A2 and B90.

Skylines and settings

Inland the Carrickfergus Escarpment provides the setting to this LCA. The wooded setting of Castle Dobbs and the Kilroot valley is locally important.

Visibility and views

Views of the sea are a key characteristic, especially between Newtownabbey and Carrickfergus, but coastal development blocks views from some inland locations. Significant waterfront views, notably at Carrickfergus Castle. East of Carrickfergus the railway follows the shoreline offering fine views across the lough.

Landscape quality (condition)

Generally relatively poor.

Scenic quality

Only localised areas of scenic quality within the LCA, at Castle Dobbs. However Carrickfergus Escarpment ASQ abuts the LCA north of Greenisland.

Wildness and tranquillity

Generally limited.

Natural and cultural heritage features

Inner and Outer Belfast Lough ASSIs (also SPA and Ramsar) comprise intertidal foreshore important for wintering waders and wildfowl (including great crested grebe and redshank) and earth science. A number of castles, notably Norman Carrickfergus Castle and a cluster of historic sites and monuments in the Kilroot valley. Registered Parks at Castle Dobbs and Sea Park. Conservation Area at Carrickfergus.

Cultural associations

Many historical associations relating to Carrickfergus Castle.

Amenity and recreation

Most opportunities are concentrated in Carrickfergus, on the waterfront.

Assessment for Wind Energy Development

Overall sensitivity

This LCA is generally not sensitive in landscape terms due to the existing extent of man-made influence, but is of higher sensitivity visually as it forms the foreground to views of the Carrickfergus Escarpment and is very open to view from Belfast Lough and its southern shores.

There might be some opportunity for wind energy development associated with existing industrial sites, where sensitivity is less.

Overall Sensitivity - High to medium

Location, siting, layout and design considerations

The area where wind energy development is most likely to be suited in this LCA is on flat land close to Kilroot Power Station. Proposals could consider creating a site layout which has a strong visual and design relationship to existing industrial structures.

Particular care should be taken to avoid adverse impacts on key views of Belfast Lough from public open space and residential areas within the LCA. Care should also be taken to avoid adverse impacts on the cliffs above Greenisland, exposed hill slopes and shoreline landscapes and on the settings of Carrickfergus Castle and harbour, Castle Dobbs and the monument at Knockagh.

At the time of assessment there were no operational or consented wind farms in this LCA. Due to the proximity of the Antrim coast seaward issues may be a consideration in the future.

LCA 130 Carrickfergus Farmed Escarpment

Location: County Antrim. Land between the Carrickfergus shoreline and the upland pastures to the north.

Key Landscape and Visual Characteristics and Values

Scale

Rolling farmland with distinctive field patterns on the steep face of the escarpment at Carrickfergus, generally between 100 and 200m AOD.

Landform

Narrow apron of undulating land forming the transition between the Carrickfergus Shoreline (LCA 129) and the Carrickfergus Upland Pastures (LCA 98). Woodburn Glen cuts back into the slope, breaking the otherwise regular and smooth profile. Escarpment is highest and most pronounced in the south-west.

Enclosure

Very open to view topographically. Almost wholly pasture land with a grid of small regular fields enclosed by hedges and trees. Scots pine is a characteristic feature in hedges on the steeper slopes. Narrow wooded glens incised into the hill slopes.

Complexity of landcover and features

There are two small reservoirs and areas of conifer woodland set within the characteristic small-scale ladder field pattern.

Man-made influence

Strong rural character, but new houses form an incongruous recent addition. Numerous transmission lines and pylons along most of the length of the LCA.

Skylines and settings

The basalt scarp and monument of Knockagh form notable skyline elements. The gradual transition from small scale pastures to broader, more wooded landscape patterns on the ridge top is very distinctive, and conservation of the visual integrity of the ridge top is important. LCA provides the setting and backdrop to Newtownabbey and Carrickfergus.

Visibility and views

Panoramic views over Belfast Lough and its northern and southern shores. Urban development and Kilroot Power Station and its industrial setting are prominent in many views.

Landscape quality (condition)

Hedges are gappy and poorly maintained and this is affecting the small scale landscape patterns in places. Much of the farmland retains a rural character although there are strong pressures for housing on the lower slopes.

Scenic quality

Notwithstanding some intrusive influences scenic quality is relatively high, reflecting the views and strategic role of this LCA relative to Belfast Lough. The south-western part of the LCA forms part of the Carrickfergus Escarpment ASQ.

Wildness and tranquillity

Sense of wildness and grandeur associated with views from the upper slopes.

Natural and cultural heritage features

North Woodburn Glen has ash-hazel woodland designated as an ASSI and a cluster of archaeological sites.

Cultural associations

Not known.

Amenity and recreation

Few formal opportunities but extensive informal use by nearby urban populations eg at North Woodburn Glen and reservoir sites.

Assessment for Wind Energy Development

Overall sensitivity

Notwithstanding some intrusive influences, this LCA is intrinsically highly sensitive to wind energy development in landscape and visual terms, sharing many of its characteristics and sensitivities with other escarpment landscapes around Belfast, notably the Belfast Basalt Escarpment, of which it is the geological continuation. It has distinctive small scale field patterns, notable skylines and settings and is visually very exposed, with a relatively wild character.

Wind energy development could easily dominate landscape character, and be visually very prominent, intrusive and be difficult to access.

Overall Sensitivity - High

Location, siting, layout and design considerations

This LCA has high landscape and visual sensitivity and is in a highly prominent location. It is recommended that any turbine development be closely associated with and reflects the scale of groups of buildings and trees.

Care should be taken to avoid adverse impacts on the highly sensitive skylines and views and on the key landscape and visual characteristics and values that were described in this section.

At the time of assessment there were no operational or consented wind farms in this LCA.



Our aim is to protect, conserve and promote the natural environment and built heritage for the benefit of present and future generations.

Northern Ireland Environment Agency
Klondyke Building
Cromac Avenue
Gasworks Business Park
Belfast BT7 2JA

www.ni-environment.gov.uk



An Agency within the Department of the
Environment
www.doeni.gov.uk



**INVESTORS
IN PEOPLE**

Online — ISBN 1751-7796
Hard Copy — ISBN 1367 - 1979