
Report To:	Environment and Regeneration Committee	Date:	1 May 2014
Report By:	Corporate Director, Environment, Regeneration and Resources	Report No:	E&R/14/05 02/SJ/MP
Contact Officer:	Stuart W Jamieson	Contact No:	01475 712493
Subject:	Glasgow and the Clyde Valley Wind Turbine Landscape Capacity Study		

1.0 PURPOSE

- 1.1 The purpose of this report is to inform Committee of the publication in March 2014 of the Landscape Capacity Study for Wind Turbine Development in Glasgow and the Clyde Valley and to provide details of how it can assist in the determination of the appropriate locations for wind turbines in Inverclyde.

2.0 SUMMARY

- 2.1 The Landscape Capacity Study, commissioned by the Glasgow and Clyde Valley Strategic Development Planning Area, was undertaken between September 2013 and March 2014 with the aim of providing a strategic view of landscape sensitivity to wind energy development and available capacity for further development in the eight authorities making up Glasgow and the Clyde Valley.
- 2.2 The Landscape Character Typologies (LCT) used in the study were taken from the 1999 Glasgow and the Clyde Valley Landscape Character Assessment, previously used in the 2005 Local Plan. Sensitivity of the landscape was assessed for a series of wind turbine heights while the relative landscape value was assessed through regional and local landscape designations. Both were used to evaluate the underlying capacity for wind turbine development. Within each LCT, taking account of the underlying capacity and details of operational, consented and proposed wind turbine developments, an assessment was made of the remaining capacity for further development, known as residual capacity. Finally the potential for cumulative effects of wind turbine developments over the wider strategic area was examined.
- 2.3 On completion of the study, a report was produced specific to Inverclyde and an overview report for the wider Glasgow and the Clyde Valley area will follow. The Inverclyde Report concludes that there is limited opportunity for large scale wind energy development in the Inverclyde landscape without it adversely impacting upon it. There are, however, potential opportunities for smaller scale developments at the fringes although regard would have to be made to potential cumulative effects.

3.0 RECOMMENDATION

- 3.1 That Committee:
- welcome the publication of the study and recognise the importance of its findings for the determination of future wind energy applications; and
 - note the intention to use the study to update Supplementary Guidance on Renewable Energy to accompany the forthcoming adoption of the Local Development Plan.

Aubrey Fawcett
Corporate Director, Environment, Regeneration and Resources

4.0 BACKGROUND

- 4.1 Wind turbine applications in Inverclyde are increasing. Up until 2008 there had been 7 applications; since 2008, there have been 29. The height of turbines is also increasing. With government targets for more renewables and 'Feed in Tariffs' offering landowners an additional source of income, this trend for more and larger turbines is likely to continue.
- 4.2 With increased pressure for wind turbine developments, it is important that they are located in the most appropriate locations. Whether this means ruling out some areas or ensuring that, within acceptable areas, the most appropriate locations are identified.
- 4.3 To assist in determining the most appropriate locations, a landscape capacity study for wind turbines has been prepared by Land Use Consultants, jointly funded by Glasgow and the Clyde Valley Strategic Development Planning Authority, Scottish Natural Heritage (SNH) and the eight constituent local authorities of the SDPA. This is a study Inverclyde Council was intending to carry out to better inform the determination of future planning applications. The timing was therefore advantageous to allow the Council to benefit from the financial savings arising from a joint study whilst also obtaining a strategic overview.

The Study

- 4.4 Four 'Landscape Character Typologies' (LCT) from the previous study, 1999 Landscape Character Assessment, cover Inverclyde. These are 1 - Raised Beach, 6 – Rugged Upland Farmland, 12 – Upland River Valleys and 20 – Rugged Moorland Hills. The map in Appendix 1 shows the area covered by each. An assessment of sensitivity and the indicators of landscape value were used to determine the underlying capacity of each LCT. Sensitivity of the landscape was evaluated using SNH guidance for wind turbines ranging in height from 15m to 150m representing the variety currently in operation and approved by the planning system. Turbines are categorised as follows:

App. 1

Small turbine	(15-30 m to tip)
Small-medium turbine	(31-50 m to tip)
Medium turbine	(51-80 m to tip)
Large turbine	(81-120 m to tip)
Very large turbine	(over 120 m to tip, up to around 150 m)

- 4.5 Landscape value was based on landscape designations such as Regional Parks and Areas of Great Landscape Value, or similar. Information gathered on existing, consented and proposed wind turbine developments in each LCT (up to October/November 2013) was used to carry out an evaluation of the remaining capacity for further development. This is referred to as 'residual capacity'. Table 6.1 in Appendix 2 shows a summary of sensitivity and capacity for the four LCTs in Inverclyde.

App. 2

Summary of Findings

- 4.6 The study found that the landscapes of Inverclyde are of relatively high sensitivity to wind turbine development, particularly the medium and large turbines. Similarly high levels of sensitivity were assessed for the Raised Beach, Upland River Valley and Rugged Moorland Hills, whilst the Rugged Upland Farmland had slightly lower sensitivity to small-medium and medium turbines.
- 4.7 There is limited opportunity for large scale wind energy development in the Inverclyde landscape without it having an adverse impact upon it. This is the case both in the small scale raised beach areas and in the wider expanses of the open moorlands. The presence of the Regional Park covering extensive parts of the Rugged Moorland Hills also presents a constraint on the development of larger turbines.
- 4.8 While there are potential opportunities for smaller scale developments at the fringes of the moorlands, regard would have to be made to potential cumulative effects which would arise from a dispersed pattern of many turbines.

4.9 The proximity of Inverclyde to viewpoints in and around the Firth of Clyde also produces restrictions to the development of large scale turbines, although the small number of consented turbines is unlikely to impact on the views.

5.0 PROPOSALS

5.1 As stated in the current Supplementary Guidance on Renewable Energy (May 2013), the aim of the planning system is *'to locate renewable energy developments where the technology can operate efficiently and environmental and cumulative impacts can be addressed satisfactorily'*. The findings from this study will be used to update part of the Supplementary Guidance which will accompany the forthcoming adoption of the Local Development Plan. With new detailed information on the sensitivity and landscape value of the different areas, it will be of value to inform decisions by officers and Elected Members when determining applications for wind turbine developments in Inverclyde.

5.2 This study will also provide additional information to developers wishing to identify locations in Inverclyde for wind turbine development. In conjunction with the criteria already in the Supplementary Guidance for identifying a broad area of search, these new considerations will guide them to the best locations for their type of development.

6.0 IMPLICATIONS

Finance

6.1 There are no direct financial implications arising from this report.

Cost Centre	Budget Heading	Budget Year	Proposed Spend this Report	Virement From	Other Comments
n/a	n/a	n/a	n/a	n/a	n/a

Annually Recurring Costs/Savings

Cost Centre	Budget Heading	With Effect from	Annual Net Impact	Virement From	Other Comments
n/a	n/a	n/a	n/a	n/a	n/a

Legal

6.2 There are no direct legal implications arising from this report.

Human Resources

6.3 There are no direct human resource implications arising from this report.

Equalities

6.4 There are no direct equalities implications arising from this report.

Repopulation

6.5 There are no direct repopulation implications arising from this report.

7.0 CONSULTATIONS

7.1 **Chief Financial Officer:** no requirement to comment.

7.2 **Head of Legal and Property Services:** no requirement to comment.

7.3 **Head of Organisational Development, HR and Communications:** no requirement to comment.

8.0 BACKGROUND PAPERS

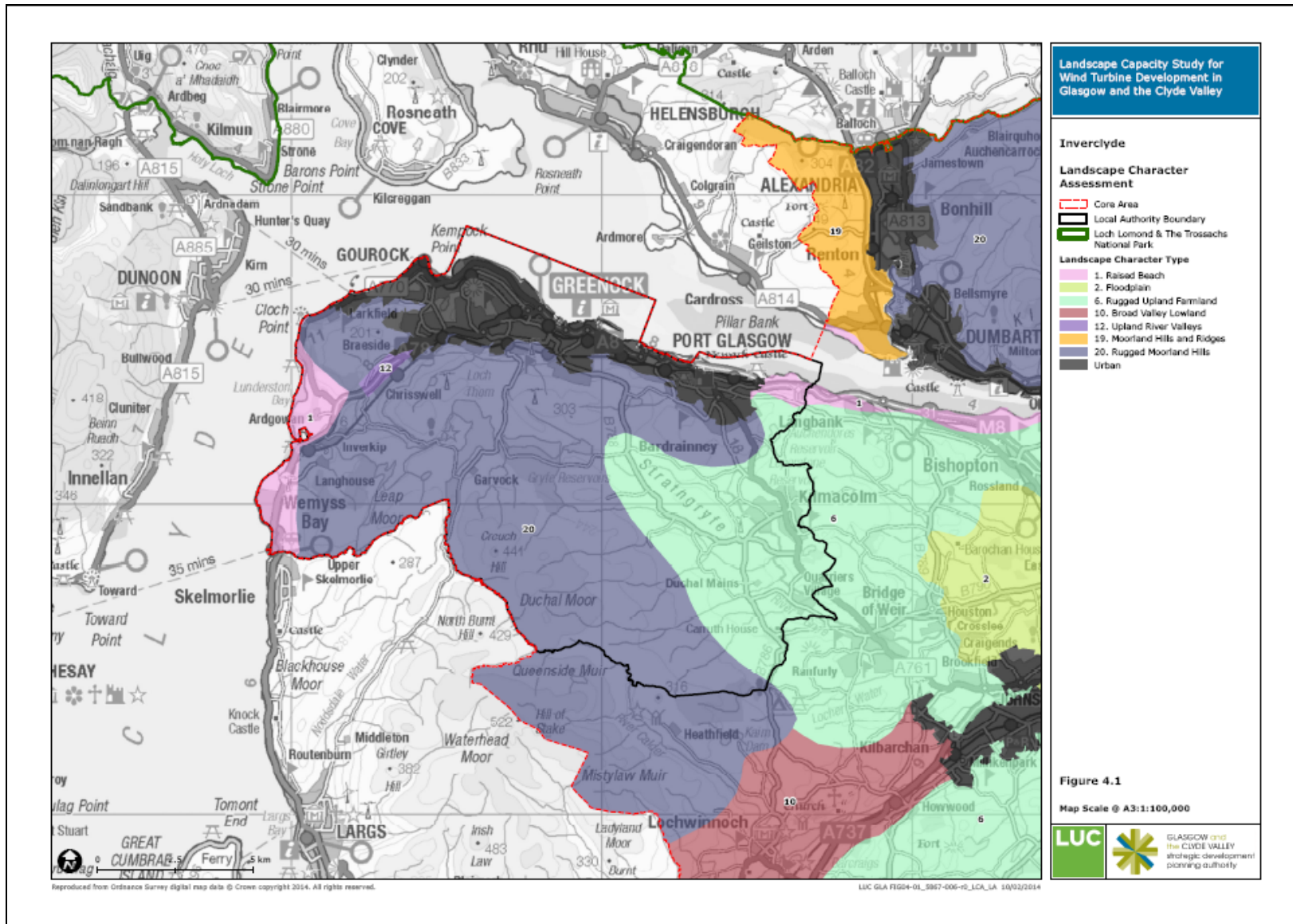
Attachments

- 8.1 Appendix 1 – Location of Landscape Character Types: Inverclyde and Surrounding Area
- 8.2 Appendix 2 – Summary of Sensitivity and Capacity in Inverclyde (from Table 6.1 of the Study)

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E&R Cmtee: GCV L'scape Capacity Study, May 2014

Appendix 1: Location of Landscape Character Types: Inverclyde and Surrounding Area



Appendix 2: Summary of Findings on Sensitivity and Capacity in Inverclyde

LCT	Turbine Typology	Sensitivity	Underlying Capacity	Residual Capacity
1 Raised Beach	Small turbine	Medium	Lower capacity for wind turbine development, particularly at medium or larger scales.	<i>Wemyss Bay and Inverkip area</i> Very limited capacity for wind energy development, except at the small typology. <i>Inner Firth area</i> Little or no capacity for turbines within this physically restricted area.
	Small-medium turbine	High-medium		
	Medium turbine	High		
	Large turbine	High		
	Very large turbine	High		
6 Rugged Upland Farmland	Small turbine	Medium	Moderate or lower capacity for wind energy development at smaller scales, with lower capacity for medium development and little or no capacity for larger turbines.	As underlying capacity.
	Small-medium turbine	Medium		
	Medium turbine	High-medium		
	Large turbine	High		
	Very large turbine	High		
12 Upland River Valley	Small turbine	Medium	Lower capacity for wind turbine development at all but the smallest developments.	As underlying capacity.
	Small-medium turbine	High-medium		
	Medium turbine	High		
	Large turbine	High		
	Very large turbine	High		
20 Rugged Moorland Hills	Small turbine	Medium	Lower capacity for wind turbine development at all scales, with little or no capacity for medium or larger turbines.	Capacity in most of this landscape is likely to be restricted to small-medium or small turbines, following the pattern of smaller-scale development at the edges of the area, and seeking to protect the remote qualities of the interior.
	Small-medium turbine	High-medium		
	Medium turbine	High		
	Large turbine	High		
	Very large turbine	High		

Source: Table 6.1 of the Study