



## Calderdale LDF Evidence Base Summary



**Evidence:** Landscape Capacity Study for Wind Energy Developments in the South Pennines

**Date of publication:** January 2010

### **Purpose of the Evidence:**

The overall aim of the study was to provide a landscape capacity study for wind energy developments to inform and provide a sound evidence base for the production and monitoring of the Local Development Frameworks in the six participating districts (Burnley, Bury, Calderdale, Kirklees, Rochdale and Rossendale).

The purpose of the study was to provide baseline information and assessments but not policy development. The study was intended to provide broad strategic guidance on appropriate locations for wind energy development. Every proposal is unique and there remains a need for detailed consideration of the landscape and visual impacts as well the sitting layout and design of individual applications on a case by case basis. **It was not the intention of the study to identify specific locations for wind energy developments.**

Specific objectives of the study were to:

- Identify at a strategic scale broad landscape areas which may be able to accommodate various scales of wind energy developments subject to detailed appraisal
- Identify any specific strategic constraints which may reduce the potential of particular landscape areas to accommodate wind energy developments
- Identify any likely cumulative and cross border impacts of wind power developments
- In doing the above, assist the local planning authorities in producing Local Development Frameworks, future energy and landscape strategies, and scoping opinions and assessments for wind energy development proposals.

### **Main Issues Raised:**

#### ***Development of an Appropriate Methodology***

Discussion of the **assessment approach** and principles used to prepare the wind energy landscape sensitivity and capacity assessment are covered in section 2 of the report. This also includes key terms and definitions, sensitivity criteria, a wind energy development typology, and principles affecting capacity. The **assessment process** (Section 3) involved the development of a spatial framework for the baseline (Natural England's National Character Areas selected) and sensitivity (Local Authority Landscape Character Types based on SCOSPA work selected) and capacity assessments (developed specifically for this study).

#### ***Baseline Assessment***

Provides an introduction to the landscape of the South Pennines and reviews the distribution of existing wind energy developments. The spatial framework used is based on the National Character Areas (NCAs) defined by Natural England, 2 of which are within

Calderdale (see Figure 6 in report):

**NCA 36 - Southern Pennines** – Considerable operational and consented wind energy developments exist within this area. The landscape of the northern and western parts of the study area is rapidly becoming a landscape with wind farms. Cumulative impacts requiring careful consideration include growing levels of impact on the area’s open moorland character, separation distances, mitigation of impacts of access tracks and visual clutter associated with wind farm developments.

**NCA 37 - Yorkshire Southern Pennine Fringe** – the part of the NCA that lies within the study area has little existing wind energy development and what there is is very small in scale. In the wider landscape context it is affected by wind farm development in the Southern Pennine NCA and careful consideration of the cumulative effects with wind farm development in the adjoining NCA will be required.

**Landscape Sensitivity Assessment** - The spatial framework for the landscape sensitivity assessment was local authority level landscape character types (see Figure 7 in the study report). As the majority of the study area was already covered by the SCOSPA landscape character assessment undertaken some 10 years ago and/or the Lancashire landscape assessment this was used although parts of some districts including Calderdale did not have complete coverage. In order to achieve consistent coverage the SCOSPA landscape typology was extrapolated across all parts of the study area. This provided those districts without complete landscape character assessments, such as Calderdale, with complete landscape character assessment as an additional study output.

For each Landscape Character Type the landscape was systematically assessed against the landscape sensitivity criteria (set out in Table 3 of the study report). The assessments are presented in the 14 sensitivity assessment sheets for each Landscape Character Type and summarised in Table 10 (reproduced below) and Figure 9 of the study report. These assessments are intended as broad guidance only since most Landscape Character Types vary in sensitivity across their areas and also because sensitivity varies depending on the scale of wind energy development proposed.

**Summary of Overall Sensitivity by Landscape Character Type (see Table 10 of study report)**

LCT	Name	Overall Sensitivity
A	High Moorland Plateaux	High (Moderate-High in the west)
B	Moorland Hills	Moderate-High
C	Enclosed Uplands	Moderate-Low
D	Moorland Fringes/ Upland Pastures	High (locally Moderate-High)
E	Rural Fringes	Moderate
F	Settled Valleys	Moderate-High
G	Wooded Rural Valleys	Moderate-High
I	Reservoir Valleys	Moderate-High
K	Coalfield Edge Urban Fringe Farmland	Moderate-Low
L	Lowland Farmland	Moderate-Low
M	Industrial Lowland Valleys	Moderate-Low
N	Rolling Wooded Farmland	Moderate-Low

O	Industrial/Business Parks	Low
U	Urban	Not assessed

\*red text = LCTs present within Calderdale

**Capacity Assessment** –some of the Landscape Character Types cover very extensive areas and as generic units they occur in different parts of the study area and so are not very suitable as a means of indicating where wind energy development may or may not be accommodated in the landscape. The Landscape Character Types are subdivided into Landscape Character Areas but many of these are very small making any assessment almost site specific. Therefore a broad pragmatic subdivision of the study area was undertaken with the boundaries generalised and representing the main areas of landscape and visual association as informed by strategic analysis of topography and the ways in which it influences visibility. For each of the 12 capacity areas identified an assessment of landscape capacity for wind energy development was prepared. These cover location and context, intervisibility and a Capacity Assessment.

Of these 12 Capacity Areas, 3 fall wholly or partially within Calderdale:

**Area 5 – South Pennine Moors**

- 3 large wind farms with large turbines (Coal Clough, Ovenden Moor, Crook Hill)
- 1 small group of large turbines (Reaps Moss)
- 1 small group of small or medium turbines

**Area 6 – Calder Valley Moorland Fringe**

- 1 or 2 small groups of turbines or a small wind farm, with turbines of small or medium height at most

**Area 7 Halifax and Brighouse**

- Several small groups of turbines, or exceptionally a small wind farm with medium or large turbines on the higher ground in the north-eastern part of this capacity area
- Several single or small groups of very small or small turbines in the south around Southowram and the Calder river corridor

**Landscape and Visual Guidance on Wind Energy Proposals** – the final section of the report (section 6) explains how to use the landscape sensitivity and capacity assessments in planning wind energy development providing good practice guidance under the following main headings:

- Key principles of good siting, layout and design
- Good practice requirements for landscape and visual impact assessment
- Checklist of presentation material for wind energy

Figure 1 of the Report (re-produced below) provides a summary of how to use the report with references to the relevant report sections.

Steps and Tasks	Relevant Report Sections	Key Reference Material
<b>Step 1: Review background and collect information</b>		
Understand factors underlying landscape sensitivity	Section 2.3	<ul style="list-style-type: none"> <li>Table 3 Landscape sensitivity criteria</li> </ul>
Understand factors underlying landscape capacity	Sections 2.4 and 2.5	<ul style="list-style-type: none"> <li>Table 6 Principles of fit with landscape character</li> <li>Table 7 Principles relating to scale and cumulative impact</li> </ul>
Consider the South Pennines landscape as a whole	Section 4.2	<ul style="list-style-type: none"> <li>Figure 3 Physical features of the study area</li> <li>Figure 4 South Pennines landscape context</li> </ul>
<b>Step 2: Assess landscape sensitivity and capacity</b>		
Identify location of proposed development		<ul style="list-style-type: none"> <li>OS 1:25,000 scale map</li> </ul>
Identify scale of proposed development		<ul style="list-style-type: none"> <li>Table 4 Wind energy development typology</li> </ul>
Consider existing wind energy developments and their impacts at a strategic scale	Section 4.5 – text for relevant National Character Area	<ul style="list-style-type: none"> <li>Figure 6 Wind energy developments and National Character Areas</li> </ul>
Identify landscape character type(s) and capacity area(s) within which the development would sit	Annexes 1 and 2 Landscape character descriptions	<ul style="list-style-type: none"> <li>Figure 7 Landscape character types</li> <li>Figure 8 Capacity areas</li> </ul>
Review sensitivity and capacity assessment sheets and consider whether or not location and scale are consistent with advice given. <i>(If so, proceed to Step 3. If not, identify alternative location and/or scale)</i>	Sections 5.2 and 5.3	<ul style="list-style-type: none"> <li>Relevant sensitivity and capacity assessment sheets</li> </ul>
<b>Step 3: Design and assess impacts of proposed development</b>		
If location and scale are appropriate, review and address detailed siting, layout and design issues	Section 6.4	<ul style="list-style-type: none"> <li>Table 11 Principles of good siting, layout and design</li> <li>Guidance and cumulative and cross-district sections of capacity assessment sheet(s)</li> </ul>
Assess landscape and visual impacts and if necessary, seek to revise scheme siting, layout and design	Section 6.5	<ul style="list-style-type: none"> <li>Table 12 Good practice requirements for landscape and visual impact assessment</li> <li>Table 13 Checklist of presentation material</li> </ul>

**Recommendations/ Conclusions:**

The report provides a methodology for assessing wind energy proposals with broad guidance on the relative sensitivity of each of the landscape character types and indicative advice on the landscape capacity of different parts of the study area.

The sensitivity and capacity assessments must be read together for any given location when considering any specific development site or proposal.

Decisions need to be taken in a holistic manner given the effects on the wider landscape with a key purpose of the study being to promote a common understanding of and approach to wind energy development in the South Pennines landscape.

The baseline assessment represents a snapshot of the landscape and visual impacts of existing wind energy development in and around the study area as at October 2009 and will need to be regularly updated to take account of further wind energy development within the study area and a 30 km radius around.

**Further Work Required:**

Monitoring of wind energy developments to maintain an up-to-date register of wind farm developments.

For the Local Development Framework use of the study to explain and justify decisions and recommendations that may be made in relation to landscape and visual issues when looking at the potential for wind energy development.

Use of the study in determining planning applications for wind energy development.