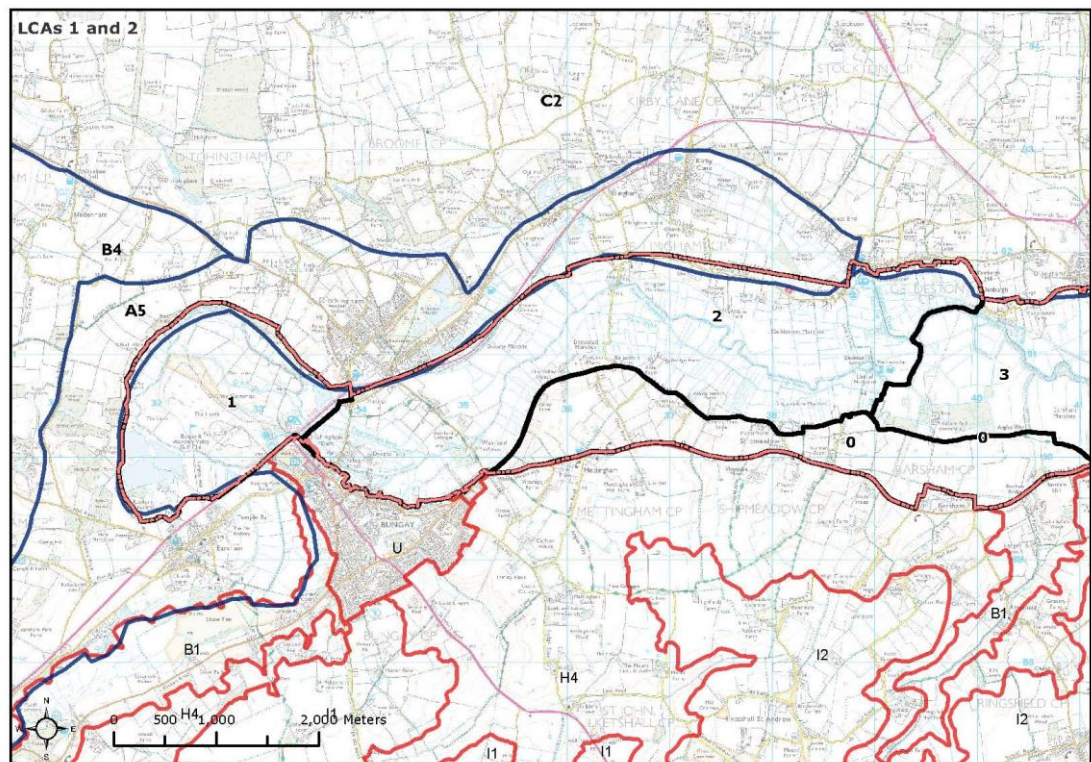


# **LCA 1: Waveney Valley - Outney Common and Bath Hills Area: LCA 2: Waveney Valley – Bungay/Ditchingham to Shipmeadow/Geldeston**

## Location and landscape character context



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### Landscape Sensitivity Assessment for Wind Turbines

Criteria	Lower sensitivity		↔		Higher sensitivity
<b>1.Scenic and special qualities</b>					
	Special qualities such as areas of open landscape within both character areas and the sense of tranquillity are particularly sensitive to the introduction of larger structures such as wind turbines. The sense of tranquillity is however reduced by some large scale industrial development on the western edge of Bungay in area 1. Although located outside the Broads Executive Area, it negatively influences the perception of remoteness from within and immediately surrounding the settlement and thus reduces sensitivity. However, area 2 comprises of a more sensitive landscape due to its undeveloped nature and as a result the areas when combined have an overall moderate-high sensitivity to wind turbine development in these terms.				
<b>2.Enclosure and scale</b>					
	Both areas display similar riverine characteristics (low-lying river valley) with gently sloping valley sides. Character area 1 however has a more undulating character with steep valley sides rising to 30m to the north outside the Broads Executive Area, which provides a degree of containment while character area 2 has a broad, flat character. There are some subtle differences in relation to field pattern and scale in these areas. Character area 1 is defined by a medium scale field pattern and large open bodies of water which would indicate a lower sensitivity, while character area 2 has a small scale enclosed (hedgerows) field pattern indicating a higher sensitivity. The areas when combined have a high sensitivity due to the sense of enclosure and containment provided by hedgerows and landform, in addition to small scale field pattern in area 2 in particular.				
<b>3.Landscape and land cover pattern</b>					
	Landscape and land cover within these areas is formed by a rich and varied pattern of elements (pasture, woodland, river valley topography and areas of open water) which are sensitive to wind turbine development due to the potential for wind turbines to dominate small scale features. Although area 1 exhibits a more varied composition of elements in comparison to the slightly more simplistic nature of elements within character area 2, both areas combine to create a combination of elements which indicate a moderate-high sensitivity to wind turbine development.				
<b>4.Skylines</b>					
	Both character areas have well defined skylines, particularly to the west of character area 1 where the ridge encircles the area. The ridges to the north and south of character area 2 are also prominent with rising landform and well wooded ridges defining the extent of views. As a result these uninterrupted skylines and rising landform indicate a higher sensitivity. However the interface of character area 1 with the settlement of Bungay is formed by modern, large scale development on the skyline and although confined, this locally lowers sensitivity in the surrounding character area. The areas are considered to have a combined high sensitivity to wind turbine development.				
<b>5.Perception and experience of the landscape</b>					
	The tranquil, undisturbed character of area 2 is enhanced by the isolated and remote perception of the area indicating a higher sensitivity. This is however in contrast to the localised level of intrusion associated with the edges of both character areas where the boundaries adjoin the settlement of Bungay. The influence of the large scale development on the edge of Bungay indicates a lower sensitivity, although elsewhere within character area 1, away from the settlement, the area displays a strong sense of tranquillity indicating a higher sensitivity. Therefore the overall sensitivity is moderate-high.				

<b>6. Historic landscape character</b>	The distinct medieval dole pattern and the traditional 17 <sup>th</sup> century grazing marsh within the south of character area 2 indicate a higher sensitivity to wind turbine development. Also sensitive are the malting complexes and historic settlements (Geldeston, Bungay and Ellingham Mill) within character area 2 which have a strong association with former water mills of the area. Large scale wind turbine development could impact upon the coherence of the historic landscape in these areas. In addition, character area 1 also displays some important historic features (i.e. historic common at The Hards, the Bath Hills which are closely associated with the Ditchingham Estate and commons within the area). When combined, these historic features indicate a high sensitivity to wind turbine development.			
<b>7. Visual sensitivities and intervisibility with areas outside the Broads</b>				
	This is an enclosed landscape which is defined by ridge topography and surrounded by wooded skylines that provide a degree of containment, indicating a lower sensitivity to wind turbine development in these terms. Although contained, there is some intervisibility with adjacent character areas outside the Broads Executive Area (namely areas A5 and B4 in South Norfolk District and area H4 in Waveney District). This is particularly evident where these areas are on higher ground (A5 and B4) having the additional impact of being more prominent in views from the character area. Due to the level of structural screening provided by landform balanced with filtered views of adjacent areas and the degree of intervisibility the overall sensitivity of the areas is considered to be moderate-high.			
<b>Discussion on landscape sensitivity</b>				
	<p>Overall the two areas have a high landscape sensitivity to wind turbine development. This is due to the special qualities such as the sense of tranquillity, the strong sense of enclosure provided by undulating landform, wooded ridges and steeper valley sides in the adjacent character areas (A5 and B4 in South Norfolk). In addition, the historic landscape features reflected in the area's commons, the 17<sup>th</sup> century grazing marsh enclosures and the historic settlement pattern increase sensitivity to wind turbine development. As a result, the areas when combined, demonstrate a high sensitivity to wind turbine development overall.</p> <p>This judgement also applies to large infrastructure for off shore wind farm schemes, such as pylons.</p>			
<b>Sensitivity to different turbine heights</b>	<b>Land within the character areas</b>		<b>Land outside the Executive Area</b>	
	Small (15-20m)	<b>M-H</b>	Small (15-20m)	<b>M-H</b>
	Medium (20-50m)	<b>H</b>	Medium (20-50m)	<b>H</b>
	Large (50-70m)	<b>H</b>	Large (50-70m)	<b>H</b>
	Very large (70m+)	<b>H</b>	Very large (70m+)	<b>H</b>

	<p><b>Commentary:</b></p> <p>This grouping of character areas is likely to have a lower sensitivity to small scale turbines (15-20m) where topography and vegetation can provide an element of screening. Siting will need careful consideration so as not to impact upon the distinctive historic settlement and landscape pattern of the areas, in addition to taking account of intervisibility with adjacent character areas and the well-defined skylines. As outlined above, the landscape would be highly sensitive to all other larger scale turbine typologies.</p> <p><b><i>Landscapes outside the Executive Area</i></b> Relevant character areas and sensitivities are:</p> <p>South Norfolk – A5: Waveney Rural River Valley: Rising valley sides to the Broads which provide intervisibility. B4: Waveney Tributary Farmland: Elevated land close to the Broads in the north. Waveney District - H4: Mettingham Tributary Farmland: Steeply rising valley sides (10-15m AOD) to the north and forms part of the landscape setting of the Broads abutting the Broads Authority boundary along much of its length.</p> <p>Fieldwork confirmed that the elevated ridgelines of areas A5 and B4 which surround character areas 1 and 2 are sensitive. H4 character area also displays a strong visual association with the Broads and is therefore of high sensitivity. The rising ridges are sensitive to wind turbine development of most typologies, particularly those at the higher end of the scale due to their prominence. Adjacent areas are less sensitive to small scale turbines (15-20m) where there is careful consideration of siting and impact upon sensitive characteristics (i.e. skylines, scale and intervisibility).</p>			
<p><b>Commentary on different cluster sizes</b></p> <p><b><i>Single turbine</i></b> <b><i>Small clusters (&lt;5 turbines)</i></b> <b><i>Medium (6-10)</i></b> <b><i>Large (11-25)</i></b> <b><i>Very large (&gt;26)</i></b></p>	<b>Land within the character areas</b>		<b>Land outside the Executive Area</b>	
	Single turbine	<b>M-H</b>	Single turbine	<b>M-H</b>
	<5 turbines	<b>H</b>	<5 turbines	<b>H</b>
	6-10 turbines	<b>H</b>	6-10 turbines	<b>H</b>
	11-25 turbines	<b>H</b>	11-25 turbines	<b>H</b>
	>26 turbines	<b>H</b>	>26 turbines	<b>H</b>
	<p><b>Commentary:</b></p> <p>Within both character areas the landscape has a moderate-high sensitivity to single wind turbine schemes provided careful consideration of the sensitive characteristics (e.g. skylines) is demonstrated. The areas would however be sensitive to larger clusters due to the potential to interrupt skylines and in turn create visual clutter within an otherwise largely undeveloped skyline.</p> <p><b><i>Landscapes outside the Executive Area</i></b> Relevant character areas and sensitivities are:</p> <p>South Norfolk –</p>			

	<p>A5: Waveney Rural River Valley: Rising valley sides to the Broads which provide intervisibility.</p> <p>B4: Waveney Tributary Farmland: Elevated land close to the Broads in the north.</p> <p>Waveney District –</p> <p>H4: Mettingham Tributary Farmland: Steeply rising valley sides (10-15m AOD) to the north and forms part of the landscape setting of the Broads abutting the Broads Authority boundary along much of its length.</p> <p>Fieldwork confirms that due to the relative prominence of the valley sides and ridges in these adjacent areas as they overlook the Broads, multiple turbine clusters could be more dominant in relation to skyline character and intervisibility, resulting in a high landscape sensitivity. Although the landscape has a lower sensitivity (moderate-high) to schemes of up to five turbines, design and siting would require careful consideration in relation to the predominantly undeveloped skylines to the Broads.</p>
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