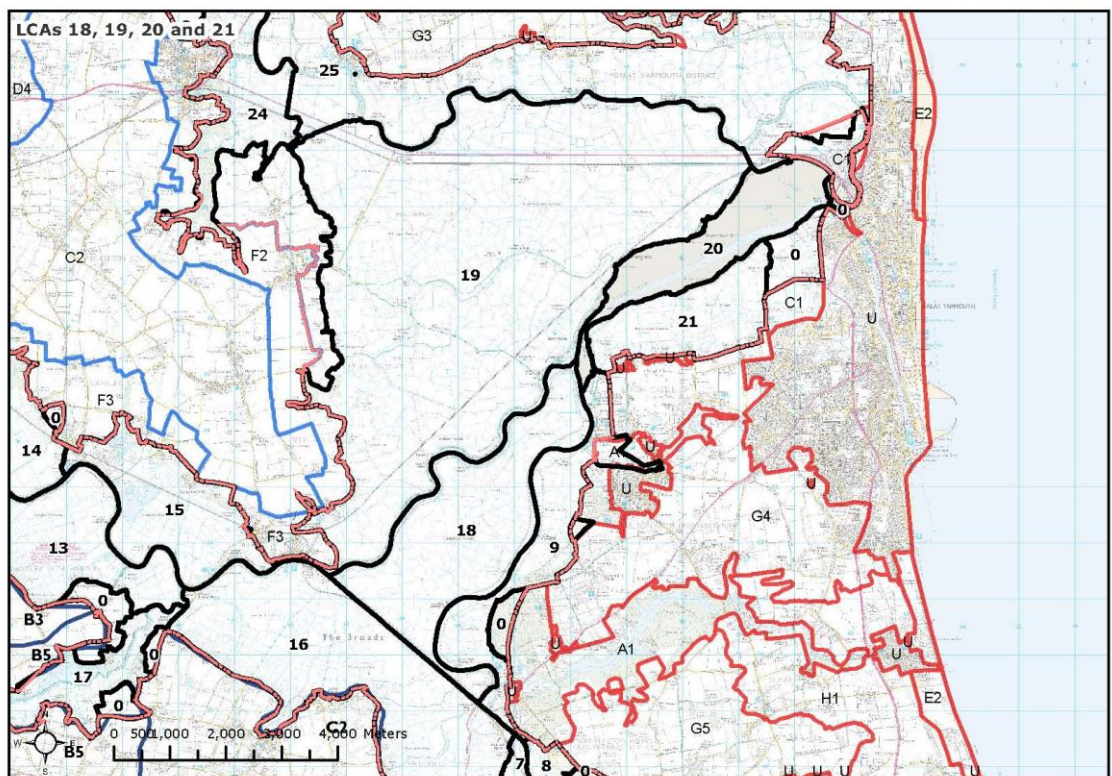


## **LCA 18: Haddiscoe Island; LCA 19: Halvergate Marshes (excluding Bure Loop and the west of Tunstall Dyke), LCA 20: Breydon Water; LCA 21: Yare Valley – Church Farm, Burgh Castle, Fisher’s and Humberstone Marshes**

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>				
	Sensitive special qualities are represented by the sense of openness and simple skylines in areas 18 and 19, and the sense of space evident in both areas 19 and 20. These characteristics are also reflected in area 21. The sense of space and openness and of big, simple skies in these areas would be highly sensitive to the introduction of large scale elements which could alter this character, such as turbines.			
<b>2.Enclosure and scale</b>				
	These areas are generally expansive, largely open marshland landscapes of vast scale, although variation is provided by complex dyke patterns within area 21 for example. A degree of wider context enclosure is provided in area 18 by the presence of the wooded ridge at St Olaves on which Waveney Forest is sited and by the low carr woodland fringed ridge to the west of the Halvergate Marshes, which is also reflected in area 19. Similarly, enclosure is provided to area 21 by the low cliffs on which Burgh Castle is located. Breydon Water (area 20) is an entirely open estuary, although variation in scale is introduced by the mud flats and creeks at low tide and by the low sea wall fringing the water. Occasional human scale references are provided by wind pumps and seasonally by sailing boats. These factors, together with elements which provide localised enclosure, increase the sensitivity of these character areas to wind turbines, to moderate.			
<b>3.Landscape and land cover pattern</b>				
	These are predominantly open marshland landscapes of simple pattern, although variation is introduced by riverside reed beds in area 18 and 21 and by rectilinear dyke networks, which create variations in scale within the areas. Similarly in area 19, occasional variations are created by intermittent trees/tree lines, domestic buildings to the edges (e.g. within Halvergate village) and occasional World War II Pill Boxes on the marshes. Within area 20, variations in landscape pattern are primarily formed by the sinuous creeks visible in the mudflats at low tide. Wind pumps and church towers are the only other recognisably 'human scale' features, together with sailing boats. These and the localised variations in landscape pattern described above, increase the sensitivity of the landscape to turbines, to moderate-high.			
<b>4.Skylines</b>				
	These are generally landscapes of largely flat, open skylines with relatively few modern development influences, and would therefore be sensitive to large scale features such as wind turbines. Historic drainage mills such as Toft Monks at area 18 provide occasional skyline punctuation elements which would be sensitive to the introduction of turbines, although pylons are also significant skyline elements in area 18. Other aspects of skyline character which are sensitive are the low wooded ridges as at St Olaves and Halvergate (area 18/19) and the former coastal cliffs at Burgh Castle on the southern edge of area 21. The sensitive, simple skyline character is reflected at Breydon Water (area 20), albeit with intrusions to the east in the form of large scale modern and industrial development edges at Great Yarmouth. Although skyline sensitivity is locally reduced due to the latter, overall skyline sensitivity to wind turbines is high given the simple, mostly undeveloped character.			
<b>5.Perception and experience of the landscape</b>				
	These are a series of remote, isolated marshland landscapes of often vast scale, and with few obvious modern human influences, and which have a strong sense of remoteness and tranquillity, with few intrusions. All of these factors indicate a high sensitivity to turbines in perceptual terms.			

	Specific relevant aspects of the areas in this group are: the mostly tranquil character of area 18, albeit with localised intrusions created by adjacent developments outside the Broads and by the influences of St Olaves Marina and the large number of pylons crossing the area. Area 19 is largely isolated with only movement and aural effects from the A47 and the railway line affecting tranquillity. The greatest level of intrusion is provided by the settlement edge and A47 at Great Yarmouth on the eastern edge of Breydon Water (area 20) and area 21, indicating slightly lower landscape sensitivity, although this is localised. Given the general level of remoteness and isolation, this area group would be highly sensitivity to wind turbines in perceptual terms.			
<b>6. Historic landscape character</b>				
	Historic drainage mills such as at Toft Monks (area 18) are sensitive to wind turbine development, due to the potential effect they would have on one's ability to appreciate such elements. This also applies to features such as Burgh Castle on the ridge which overlooks areas 18, 20 and 21. Areas of boundary loss associated with the A47 in areas 19 and 21 reduce historic landscape sensitivity, although Breydon Water is an important and ancient relic of a formerly much more expansive coastal landscape, and is therefore sensitive for this reason. Taking all the above into account, sensitivity to turbines in historic terms is judged to be moderate-high.			
<b>7. Visual sensitivities and intervisibility with areas outside the Broads</b>				
	<p>These predominantly exposed, open marshland landscapes have exceptionally high levels of intervisibility with adjacent landscapes within and outside the Broads. This open visual character means that the landscape character group would be highly sensitive to turbines in visual terms. Areas 19 and 20 in particular also have intervisibility with existing wind farms such as Scroby Sands (off shore) and such features often appear prominent in the landscape.</p> <p>Within area 18, wider views are truncated by the Waveney Forest, which lies on the edge of the adjacent Great Yarmouth/Waveney character area A1: Waveney Rural Wooded Valley. Area 19 has high levels of intervisibility with adjacent marshland character areas in the Broads, as far as Breydon Water to the east and to the edge of Great Yarmouth, beyond the Executive Area. The low ridge to the west of area 19 (within Broadland District) is visually prominent and important in containing views in a westerly direction. The Burgh Castle ridge within Great Yarmouth character area G4 is significant in providing visual containment to parts of areas 20 and 21, with Burgh Castle a visually sensitive historic feature. Taking the above into account, the areas have a high sensitivity to turbines due to their often open visual character.</p>			
<b>Discussion on landscape sensitivity</b>				
	<p>Overall landscape sensitivity of this area grouping to wind turbines is high. This is due to the representation of sensitive special qualities such as the sense of openness/wide open landscapes, simple skylines and big skies, the sense of which would be vulnerable to wind turbines. Other factors important to this sensitivity judgement are the open visual character and level of intervisibility with adjacent landscapes in the Broads, and the largely tranquil perceptual character, which would again be vulnerable to turbines.</p> <p>This judgement also applies to large infrastructure for off shore wind farm schemes, such as pylons.</p>			
	<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>

<b>Sensitivity to different turbine heights</b>				
	Medium (20-50m)	H	Medium (20-50m)	H
	Large (50-70m)	H	Large (50-70m)	H
	Very large (70m+)	H	Very large (70m+)	H
	<p><b>Commentary:</b></p> <p>Turbines within the smallest typology would respond more closely to existing vertical scale elements within the landscape, such as church towers and historic wind pumps, resulting in a slightly lower landscape sensitivity rating. However, all larger turbine typologies could appear visually dominant in these simple landscapes, hence the high sensitivity rating.</p> <p><b><i>Landscapes outside the Executive Area</i></b></p> <p>Relevant character areas and sensitivities are:</p> <p>Great Yarmouth/Waveney character area A1: Waveney Rural Wooded Valley: Fieldwork has confirmed the low wooded ridge at Waveney Forest to be visually important/sensitive in relation to the Broads.</p> <p>Great Yarmouth character area G4: Hobland Estate Farmland. Fieldwork confirms the prominent ridge on which Burgh Castle is sited to be sensitive in relation to the Broads.</p> <p>Broadland District character area F2: South Walsham to Reedham Marshes Fringe: Survey has confirmed the low ridge to the west of Halvergate Marshes and on which Halvergate Village is sited, as being sensitive in relation to the Broads.</p> <p>Given the prominence of these topographic features in relation to the marshland landscapes of these parts of the Broads, landscape sensitivity to turbines is the same as for the areas in the Broads as set out above.</p>			
<b>Commentary on different cluster sizes</b>	<b>Land within the character areas</b>		<b>Land outside the Executive Area</b>	
	Single turbine	M-H	Single turbine	M-H
	<5 turbines	H	<5 turbines	H
	6-10 turbines	H	6-10 turbines	H
	11-25 turbines	H	11-25 turbines	H
	>26 turbines	H	>26 turbines	H
	<p><b>Commentary:</b></p> <p>Single turbines would respond more closely to existing vertical scale elements within the landscape, such as church towers and historic wind pumps, resulting in a slightly lower landscape sensitivity rating. However, all multiple turbine clusters could appear visually dominant in these simple landscapes and skylines, hence the high sensitivity rating.</p> <p><b><i>Landscapes outside the Executive Area</i></b></p> <p>Relevant landscape character areas and sensitivities are:</p>			

	<p>Great Yarmouth/Waveney character area A1: Waveney Rural Wooded Valley: Fieldwork has confirmed the low wooded ridge at Waveney Forest to be visually important/sensitive in relation to the Broads.</p> <p>Great Yarmouth character area G4: Hobland Estate Farmland. Fieldwork confirms the prominent ridge on which Burgh Castle is sited to be sensitive in relation to the Broads.</p> <p>Broadland District character area F2: South Walsham to Reedham Marshes Fringe: Survey has confirmed the low ridge to the west of Halvergate Marshes and on which Halvergate Village is sited, as being sensitive in relation to the Broads.</p> <p>Given the prominence of these topographic features in relation to the marshland landscapes of these parts of the Broads, landscape sensitivity to turbines is the same as for the areas in the Broads as set out above.</p>
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