

APPENDIX 8.1:
Hemsby Wind Farm
Designated Sites

Contents

1. Aims	3
2. Methodology.....	3
3. Results	3
Figure 1. Map of Designated Sites within 2km of the proposed Hemsby Wind Farm.	7

1. Aims

The desk study aimed to locate the closest statutory nature conservation sites (SACs, SPAs, Ramsar sites, NNRs, and SSSIs) and all non-statutory nature conservation sites within 2km. An understanding of the separating distances and qualifying features of the designated sites were required to fully assess the potential for impacts arising from the proposed development.

2. Methodology

The desk study accumulated designated site data from on-line resources and via a records request from Norfolk Biological Records Centre.

- Natural England's interactive *Nature on the Map* website was used to identify designated sites and their qualifying features.
- The Norfolk Biological Records Centre provided biological records for all 1km grid squares within 2km surrounding the proposed wind farm site.

3. Results

The nearest internationally designated nature conservation sites are:

- Hall Farm Fen, Hemsby SSSI/part of Broadland SPA/part of Broadland Ramsar

This site lies partially within the northwest corner of the proposal site. At its closest point it is approximately 290 metres from the nearest proposed turbine position.

- The qualifying features of the SPA are its use by annex 1 bird species Bittern and Marsh Harrier during the breeding season; and over winter its use by Bewick's Swan, Bittern, Ruff and Whooper Swan. The site also qualifies due to its use over winter by the migrant bird species Gadwall, Pink-footed Goose and Shoveler. This site also has an assemblage qualification as a wetland of international importance by supporting 22,603 wildfowl (RSPB, Count 1999/2000), constituted of the following species: Cormorant, Bewick's Swan, Whooper Swan, Ruff, Pink-footed Goose, Gadwall, Bittern, Great Crested Grebe, Coot, Bean Goose, White-fronted Goose, Wigeon, Teal, Pochard, Tufted Duck and Shoveler.
- The qualifying features of the Ramsar are its Annex 1 habitats, Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*, Calcium-rich fen dominated by great fen sedge (saw sedge), Alkaline fens, Calcium-rich springwater-fed fens, Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*), and Alder woodland on floodplains. Also present are Annex II species Desmoulin's whorl snail, fen orchid and otter. Also protected are the following avian species which occur in Broadland at levels of international

importance: Tundra (Bewick's) Swan, Eurasian Wigeon, Gadwall, Northern Shoveler, Pink-footed Goose and Greylag Goose.

- Trinity Broad SSSI/part of The Broads SAC

This site lies partially within the northwest corner of the proposal site, coming to within approximately 290 metres of the proposed turbines at its nearest point. The rest of the SAC site is located to the west and southwest of the proposed turbines. The qualifying features of the SAC are its following Annex 1 habitats: Hard oligo-mestrophic waters with benthic vegetation of *Charra spp.*, Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation, Transition mires and quaking bogs, Calcareous fens with *Cladium mariscus* and species of the *Caricion davalliana**, Alkaline fens, Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion-incanae*, *Salicion albae*)*, and *Molina* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*). Also present as qualifying features are the Annex 2 species Desmoulin's Whorl Snail, Fen Orchid and Otter.

*priority feature

- Winterton-Horsey Dunes SAC/SSSI

This coastal site is situated approximately 1.85km to the northeast of the nearest proposed turbine. The qualifying features of the SAC are the Annex 1 habitats Atlantic decalcified fixed dunes (*Calluno-Ulicetea*)*, Humid dune slacks, Embryonic shifting dunes, and shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes').

*priority feature

- Great Yarmouth North Denes SPA/SSSI

This coastal site is located approximately 1.97km north of the nearest proposed turbine and occupies the seaward side of the Winterton-Horsey Dunes site. The qualifying feature of the SPA is the presence of the Annex 1 species Little Tern during the breeding season.

- Breydon Water SPA/Ramsar/SSSI

This site is located approximately 7.4km south of the proposed turbines.

- The qualifying features of the SPA are its use by the Annex 1 species Common Tern during the breeding season, and Avocet, Bewick's Swan and Golden Plover over winter. This site also has an assemblage qualification as a wetland of international importance by supporting 43,225 wildfowl (5 year peak mean 1991/2 - 1995/6), constituted of the following species: Black-tailed Godwit, Dunlin, Lapwing, Shoveler, Wigeon, White-fronted Goose, Cormorant, Golden Plover, Avocet and Bewick's Swan.

- The qualifying features of the Ramsar are its use by 68,175 waterfowl (5 year peak mean 1998/99 – 2002/03) constituted of the following species: Tundra (Bewick's) Swan, Northern Lapwing, Pink-footed Goose, Eurasian Wigeon, Northern Shoveler, European Golden Plover and Black-tailed Godwit

It should be noted that Broadland SPA, The Broads SAC, Broadland Ramsar and Great Yarmouth North Denes SPA are all multiple-site designations. Broadland SPA and The Broads SAC each occupy the same 27 SSSIs (although the section of Trinity Broad which is not overlaid by Hall Farm Fen, Hemsby is not an SPA). Broadland Ramsar occupies 25 of those same SSSIs and Great Yarmouth North Denes SPA covers two separate sections of the coastline. The conservation objectives/qualifying features of each designation are uniform across all of their component sites. The SSSI sections of these designations which are closest to the proposal site are listed above; no other SSSIs are within 2km of the proposal site.

There are no National Nature Reserves within 2km of the proposed turbines; the closest is Winterton Dunes NNR, 3.5km to the north. Martham Broad is the only other NNR within 5km, situated approximately 4km to the northwest.

There is one non-European level designated site, a County Wildlife Sites (CWS), within 2km of the proposed turbines. Brick Kiln Covert CWS is situated approximately 0.58km north of the proposed turbines and consists of 3.65ha of broadleaf woodland. The next nearest CWS is California Coastal Strip CWS, 2.7km southeast of the nearest proposed turbine.

Table 1: Statutorily protected and/or biodiversity action plan bird species documented in the area surrounding the proposed Hemsby Wind Farm.

Species	Observation records*	Legal/ BAP status	BoCC status*
Barn Swallow	1 record from 2005		
Brambling	1 record from 2003	Schedule 1 of WCA 1981	Green listed
Bullfinch	2 records from 2003/04		
Goldcrest	1 record from 2003	Basic protection under WCA 1981	Amber listed
Green Woodpecker	1 record from 2005	Basic protection under WCA 1981	Amber listed
Hen Harrier	1 record from 2006	Schedule 1 of WCA 1981; EC Birds Directive Annex I	Red listed
House Martin	2 records from 2005	Basic protection under WCA 1981	Amber listed

Species	Observation records*	Legal/ BAP status	BoCC status*
Linnet	1 record from 2003	Basic protection under WCA 1981; UKBAP priority species	Red listed
Pied Flycatcher	1 record from 2003		
Redstart	1 record from 2006	Basic protection under WCA 1981	Amber listed
Ring Ouzel	1 record from 2005		
Sand Martin	1 record from 2003; breeding	Basic protection under WCA 1981	Amber listed
Short-eared Owl	1 record from 2006	Basic protection under WCA 1981	Amber listed
Starling	2 records from 2003, 1 from 2005	Basic protection under WCA 1981; UKBAP priority species	Red listed
Tawny Pipit	1 record from 2003		
Water Rail	1 record from 2005	Basic protection under WCA 1981	Amber listed
* provided by Norfolk Biological Records Centre			

Biological records of Hall Farm Fen revealed the presence of Fen Orchid, 3 species of bats, Grass Snake, Common Lizard, Great Crested Newt and Smooth Newt.

A 2006 Bat survey found 7 species using the site of the proposed turbines.

Trinity Broads biological records indicate the following: the site is used by breeding pochard, tufted duck and shoveler and small numbers of gadwall. Smew also gather on site between November and March, together with small numbers of gadwall, goldeneye, teal, goosander and Slavonian grebe. The site is regularly used by wintering Bittern. Other notable birds present include Cetti's warbler and kingfisher. Otters are regularly recorded on the site.

Dr. Mark Eaton, organiser of the RSPB's 2005 Marsh Harrier survey confirmed that the nearest recorded breeding pair was situated 5.4km from the nearest proposed turbine, but within 6km there were 4 breeding pairs which successfully raised 4 chicks.

No Bitterns were recorded on site, but Simon Wotton and Mike Meadows of the RSPB advised that there have been wintering Bitterns in the area and in 2008 there was one booming male at Little Broad (approximately 4.7km southwest of the nearest proposed turbine) for around 3

weeks, which was the first confirmed booming record from this area since records began in 1990.

Figure 1. Map of Designated Sites within 2km of the proposed Hemsby Wind Farm.

