Appendix 4

Approx position of Deeping St. Nicholas shown.

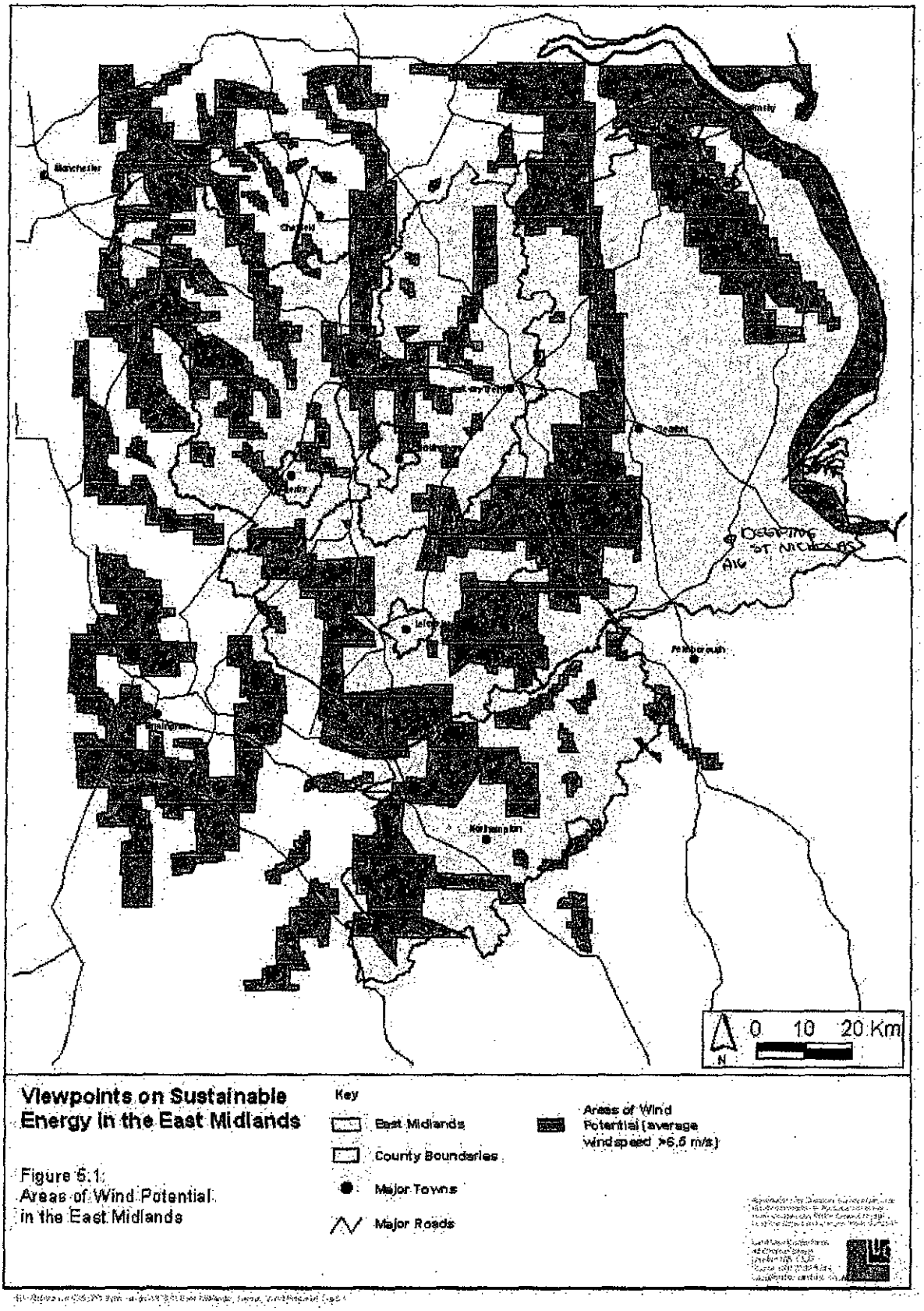
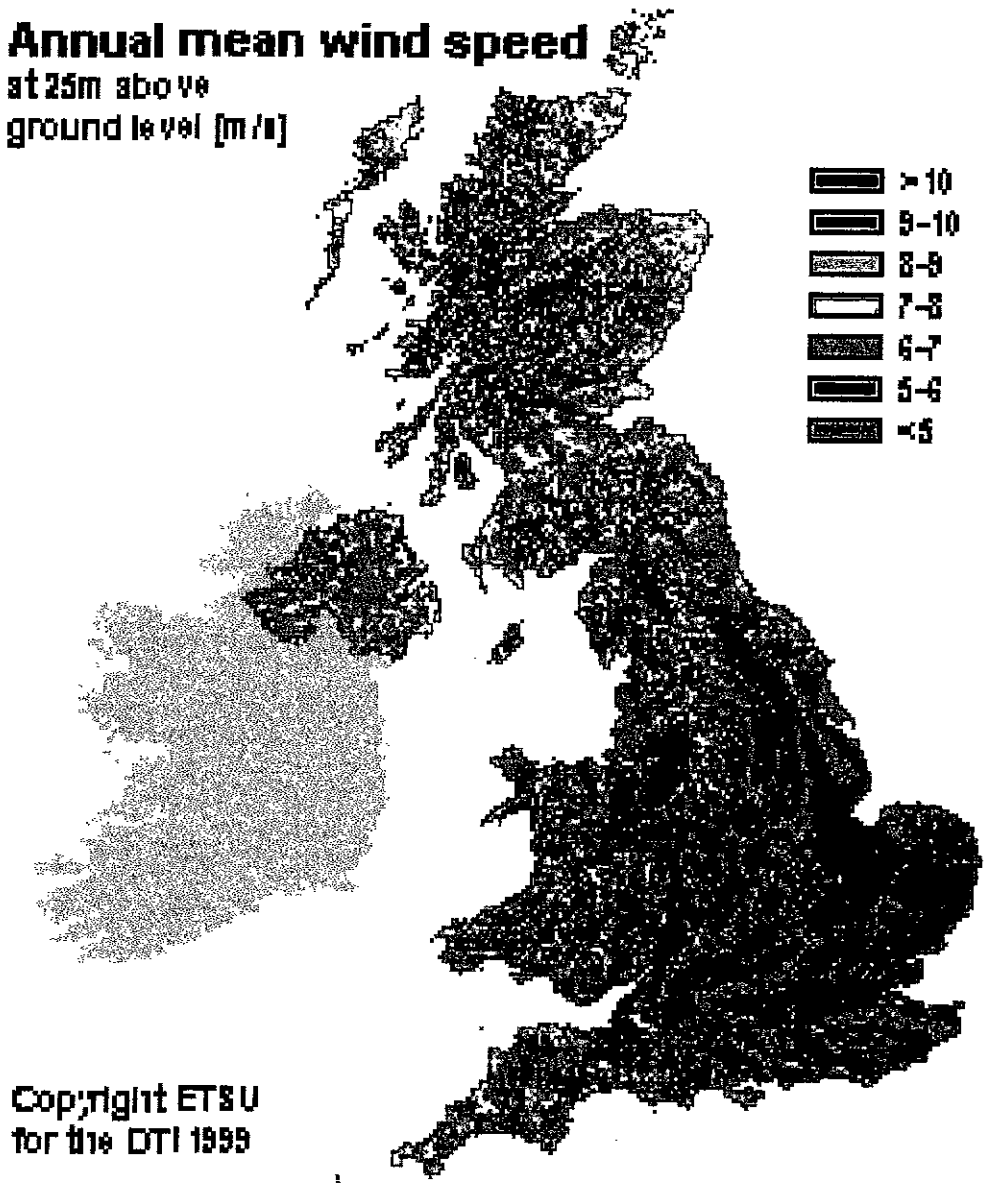


Figure 5.1:
Areas of Wind Potential in the East Midlands

Appendix 5


Annual mean wind speed
at 25m above
ground level [m/s]
>10
9-10
8-9
7-8
6-7
5-6
<5
Copyright ETSU
for the DTI 1999

Appendix 6 DUKES emissions data (from DTI)

data for 'Miriam',18-12-01

ELECTRICITY EMISSION FACTOR FOR MIRIAM ('phil&woody')								
		fuel uses, GWh				fuel uses, Mtherms		
DUKES data (all generators)	year	coal	oil	gas		coal	oil	gas
	2000	332925	16463	312692		11360	562	10669

data for 'Miriam',18-12-01

emis facs				emissions	gross		
coal	oil	gas		MtC	supply GWh		gCO2/kWh
2493	2094	1501		45.510803	358640		126.9
emissions							
coal	oil	gas					
28.32	1.1763	16.015					

127g CO_2/Kwh
2000
mix of generating plant.

Appendix 7. Information Day at Deeping St. Nicholas 22/2/2001 Photo: Lincs Free Press

Photo - Lincs Free Press.

Appendix 8. Winterton, Norfolk. Visual Impact

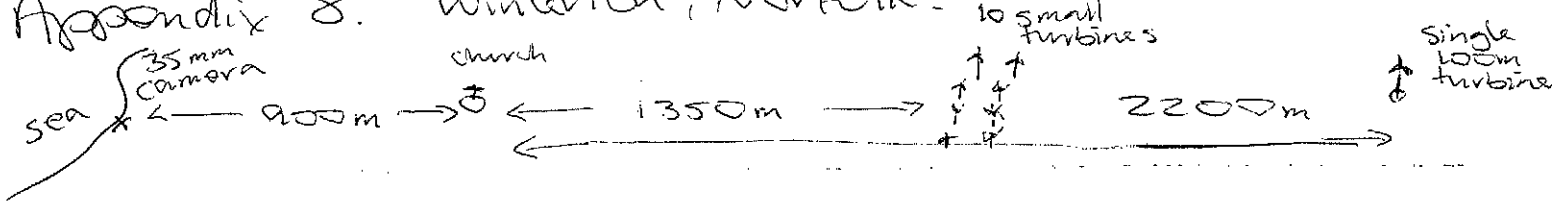
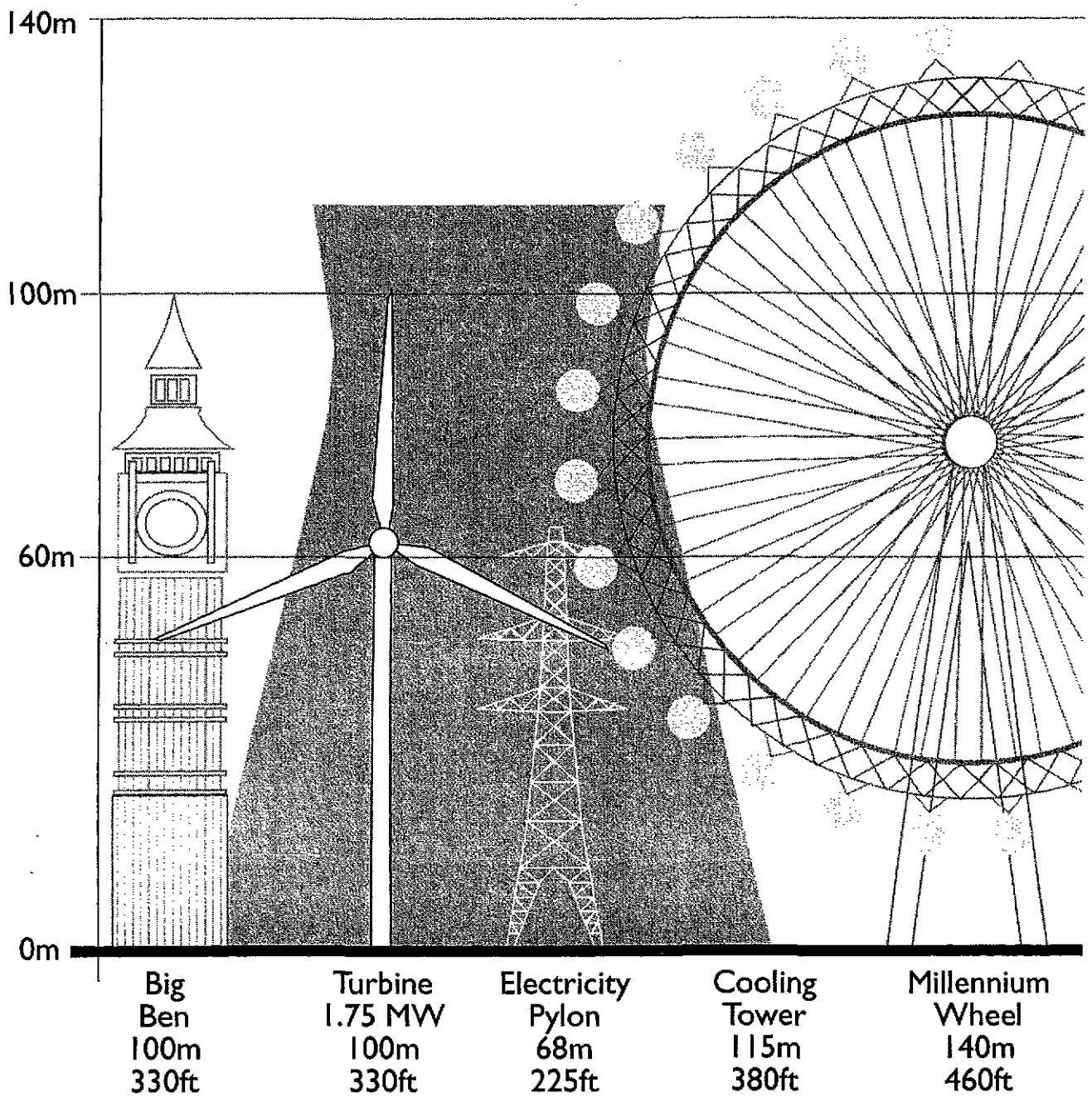


Photo. M. Crouch

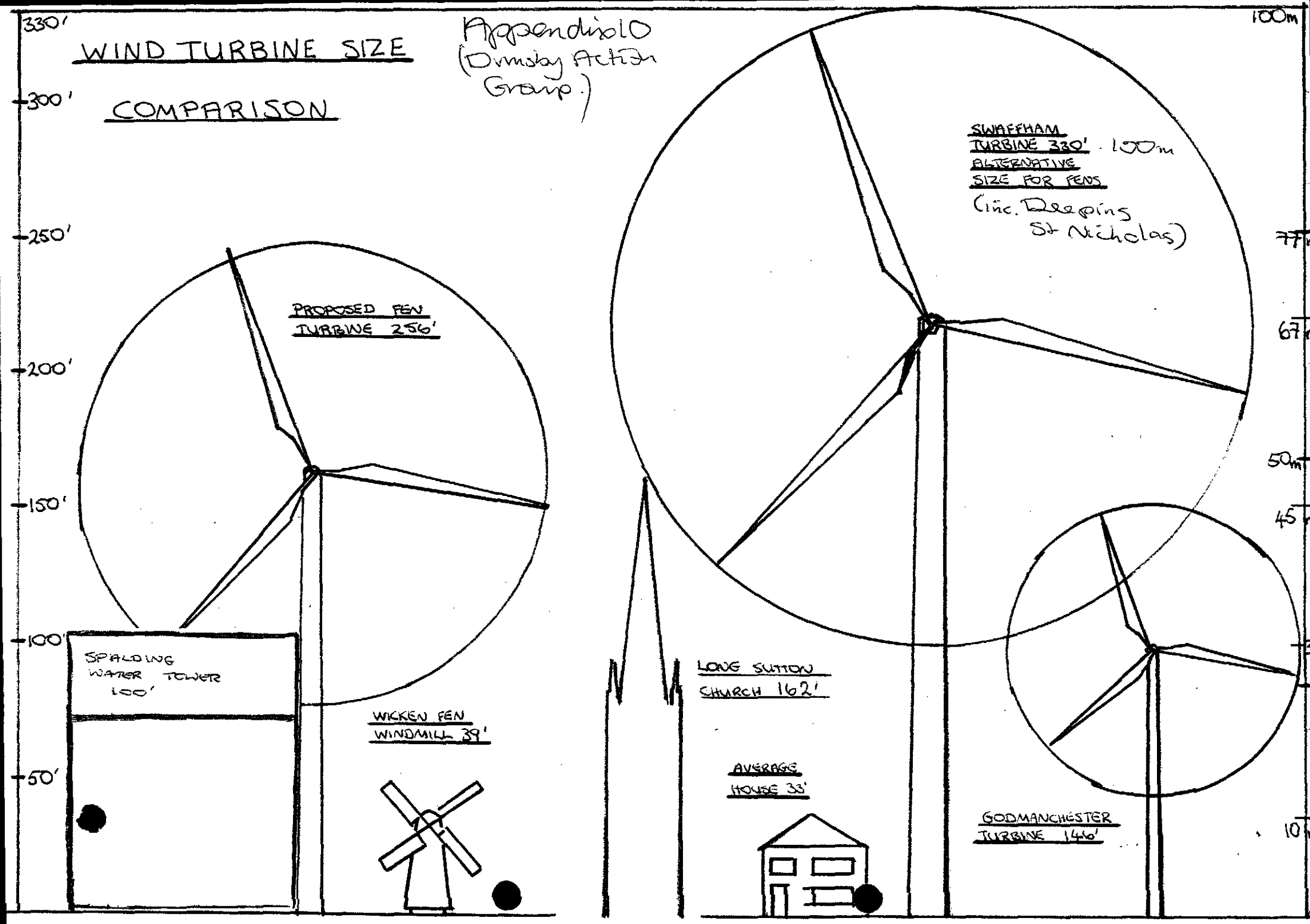
Appendix 9.

Turbine size comparison



WIND TURBINE SIZE COMPARISON

Appendix 10
(Ormsby Action Group.)



Appendix 11.
RSPB's "vested interest" with the energy industry.

From Stracathro & District Civic Society Newsletter Feb 02

ENERGY

RSPB ENERGY is run by the RSPB and Scottish & Southern Energy plc. All the electricity you use is matched by generation from *renewable resources*. It costs no more than from your present supplier. Further, when you join the scheme, S & SE donate £20 to the RSPB, with a continuing £10 for every year you remain with the scheme. Further information from: Scottish and Southern Energy plc, Grampian House, 200 Dunkeld Rd, Perth, PH1 3AQ OR (free) 0800 0288 552 OR www.scottish-southern.co.uk.

GREEN ELECTRICITY

FAST-TRACK TO NO-SAY

EVERYONE KNOWS that the current planning process doesn't work very well, but the Government's recent proposals to take it in hand look set to throw out baby, bath-water and bath-tub as well.

First, so-called 'national' projects would be decided by parliament. There would be no right to challenge a radio-active waste

Hence, new "business enterprise zones", with no planning restrictions at all.

Third, local planning would pass from county and local councils to *unelected* regional planning bodies. Unelected = unaccountable. Regional = out-of-touch with the people and places actually affected by the planning decisions. Out would go

COMMENTS

SOUTH HOLLAND DISTRICT COUNCIL
- 8 JUL 2002
RECEIVED PU

Head of Planning,
for the attention of
Mike Saywood
Development Control Section
South Holland District Council
Council Offices
Priory Rd
Spalding
Lincs PE11 2XE

Ms. M. Crouch
French's Farm
Dunsby Fen
Bourne
Lincs
PE10 0UH

Tel: 01775 640119
E-mail: philandwoody@meem.freeserve.co.uk

5th July 2002

Dear Mr Saywood,

Re: application ref. HO3/0161/02 to erect 8 wind turbines at Deeping St Nicholas.
Important Additional Information

Following correspondence with Department of Trade and Industry, they have sent me a copy of a letter from the Secretary of State justifying her decision to grant planning permission for a "wind farm" in Wales. It says (excerpts) -

"..in reponse to the Energy Review the Government is considering a more ambitious target for generation from renewable sources by the year 2020. all areas of the United Kingdom wil have to contribute. Some areas will contribute more than others because of their richness in resources of one type of fuel rather than another, for example Wales and Scotland are rich in wind and water resources whereas Lincolnshire is rich in biomass resources. With this in mind the Government has requested the Regional offices in England to draw up plans for each region with regard to the renewable energy generation each region should aim to achieve."

"Also when considering the location of a windfarm, it is essential that a site has the necessary wind values."

I have already sent you details of how the East Midland target for on-shore wind power was arrived at, showing that the Fenland is specifically excluded because wind values are insufficient. The matter could hardly be clearer. That Lincolnshire is being specifically targeted by developers for giant wind farms is thus simply absurd. Note that wind farms do not come instead of biomass burning etc but **in addition.** The technical document "Viewpoints on Renewable Energy in the East Midlands" (from which the wind target was taken) shows that Lincolnshire's target for producing power from energy crops is **almost half that of the entire region for 2010** (20/46 MW).

So Lincolnshire is to be targeted for renewables for which it is deemed suitable **and** for renewables for which it is clearly unsuitable. The hand of politics is not difficult to see in this.

Yours Sincerely

Miriam Crouch

SHDC
Planning & Development
0 8 JUL 2002
PI P

Additional info received by MJS following discussion a requested target tips with Mrs Crouch.

Mike Saywood
Development Control Section
South Holland District Council
Council Offices
Priory Rd
Spalding
Lincs PE11 2XE

French's Farm
Dunsby Fen
Bourne
Lincs
PE10 0UH

Tel: 01775 640119
E-mail: philandwoody@meem.freeserve.co.uk

8th May 2002

Dear Mr Saywood,

Regional wind energy targets

Following our telephone conversation this afternoon, I have pleasure in sending you the relevant pages from the document 'Viewpoints on Sustainable Energy in the East Midlands'. I've highlighted the references to the minimum viable wind-speed, which the authors, the British Wind Energy Association and Government have all agreed as 7m/s. Areas which have an average wind speed falling below that figure are specifically **excluded** from consideration as suitable for wind generation. You will see from the report's own wind speed map that Deeping St Nicholas even lies **outside** the 'Area of Wind Potential' (i.e areas worthy of closer scrutiny because wind speeds exceed 6.5 m/s) by which the target was established. Thus building wind turbines in that area cannot possibly fulfill any target.

I have just spoken to Tony Aitchison of the East Midlands Regional Assembly, and he confirmed that although the Viewpoints document is still a 'stepping stone' to regional policy making, the Secretary of State has adopted some of it, including this target figure, for planning policy guidance. That seems somewhat bizarre considering this fundamentally flawed document is still being discussed by the East Midlands Energy Task group in Nottingham. My husband wrote a response pointing out its obvious flaws and is still waiting, eleven months later for any of the various promised attempts to answer his damning criticisms. (It would seem that the authors of the report did not expect critical analysis. It would be amusing if it were not so serious.) However, there is clearly no onus on SHDC to approve any proposal on the grounds that it is part of a Government target, as the target does not refer to this area - indeed, it seems an excellent ground to reject inappropriate proposals.

It must be said that the Wind Prospect's manner of presentation to the public (ie suggesting that we are under some sort of Government obligation to have wind turbines) leaves much to be desired.

I hope you find the enclosed is useful, and thank you in advance for sending me the relevant PPG pages.

Yours sincerely

Miriam Crouch

Miriam Crouch

SOUTH HOLLAND DISTRICT COUNCIL
10 MAY 2002
RECEIVED

DCM

VIEWPOINTS ON SUSTAINABLE ENERGY IN THE EAST MIDLANDS

A Study of Current Energy Projects & Future Prospects

FINAL REPORT

By

Land Use Consultants

with

IT Power Ltd

March 2001

IT Power

43 Chalton Street
London NW1 1JD
Tel: 020 7383 5784
Fax: 020 7383 4798
Email: luc@landuse.co.uk

VIEWPOINTS ON SUSTAINABLE ENERGY IN THE EAST MIDLANDS

A Study of Current Energy Projects & Future Prospects

FINAL REPORT

By

Land Use Consultants

with

IT Power Ltd

March 2001

IT Power Ltd

ON-SHORE WIND POWER

Introduction

5.6. The UK has the largest wind resource in Europe, though the East Midlands is one of the least windy parts of the country. Wind power has however been harnessed for milling and water pumping in the East Midlands for hundreds of years. Modern wind energy developments typically consist of individual wind turbines (either small domestic scale or standard large scale turbines) and wind farms comprising groups of turbines. The latter tend to use turbines of between 40-60 metres in height with a rotor diameter of 50-60 metres. A medium sized wind farm comprising 12 turbines with a capacity of 12 MW could supply sufficient power for over 6,000 homes. It would also 'offset' some 27,000 tonnes of CO_2 per annum.

Existing on-shore wind activity in the East Midlands

5.7. There are currently over 40 wind energy projects generating approximately 340 MW of electricity within the UK. However, there are no windfarms or large wind turbines within the East Midlands area.

5.8. There are two 25 kW wind turbines installed at West Beacon Farm in Leicestershire, producing 45 MWh/y. In addition there are several very small turbines installed elsewhere in the Region, including those at treatment works operated by Anglian Water at Mablethorpe and a 6kW turbine at a school in Skegness.

Technically feasible on-shore wind resource

5.9. If all the land with an average wind speed of 7 m/s or more (893 km^2) were developed with wind farms, a total of 8,000 MW of wind power could be installed, generating 21,100 GWh of electricity. A wind speed of 7 m/s at 45m above the ground is generally accepted as the economic minimum for windfarms. Lower wind speeds and low hub heights will be more suited to smaller schemes.

5.10. **Table 5.2** below shows the technically feasible resource, taking account of urban areas, villages, isolated buildings, reservoirs, roads, rivers, and woodland.

Table 5.2: Technically feasible on-shore wind resource

	Capacity (MW)	Electricity Output (GWh/y)
Derbyshire	2,029	4,919
Leicestershire	109	210
Lincolnshire	215	417
Northamptonshire	43	79
Nottinghamshire	27	51
East Midlands Total	**2,423**	**5,676**

Figure 5.1 shows those areas which have wind potential with an average windspeed of >6.5m/s[37].

Accessible on-shore resource

5.11. Table 5.3 below shows how potential planning and development constraints would limit the technically feasible resource. Such constraints are taken to include designations such as: National Parks, Green Belts, Areas of Outstanding Natural Beauty (AONBs), Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR). However, sensitively sited wind turbines, particularly small scale units providing power to local dwellings may be sited within some of these areas.

Table 5.3: Potential on-shore wind resource

	Capacity (MW)	Electricity Output (GWh/y)
Derbyshire	170	363
Leicestershire	104	200
Lincolnshire	71	137
Northamptonshire	27	51
Nottinghamshire	16	30
East Midlands Total	**388**	**781**

Analysis of strengths, opportunities and barriers associated with on-shore wind power

Strengths/opportunities

- Employment – local and national
- Impermanence – can be decommissioned with few long lasting effects
- Potential for community control or involvement in the process

Barriers

- Landscape impact
- Visual intrusion
- Access to the grid
- Disruption of telecommunications
- Noise

[37] As wind is highly variable, the map illustrates those areas where windspeeds are greater than 6.5m/s, as it is likely that windspeeds at or to near to where points where the wind measurements were taken will reach or exceed 7m/s. enclosed

Figure 5.1 shows the areas which have wind potential with an average windspeed of >6.5m/s*.

Accessible on-shore resource

5.1.1. Table 5.3 below shows how potential planning and development constraints could limit the practically feasible resource. Such constraints are taken to include designations such as National Parks, Green Belts, Areas of Outstanding Natural Beauty (AONBs), Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR). However, sensitively sited wind turbines, particularly small scale units providing power to local dwellings may be sited within some of these areas.

Table 5.3: Potential on shore wind resource

Dartmoor	170	303
Forestdale Shire	106	260
Troodenshire	71	132
Hardtarmpacadise	27	91
Nottinghamshire	18	30
East Midlands Total	386	781

Analysis of strengths, opportunities and barriers associated with on-shore wind power

Strengths/opportunities

- Employment – local and national
- Impermanence – can be decommissioned with few long lasting effects
- Potential for community control or involvement in the process

Barriers

- Landscape impact
- Visual intrusion
- Access to the grid
- Disruption of telecommunications
- Noise

* As wind is highly variable, this map illustrates those areas where windspeeds are greater than 6 m/s, as it is likely that turbines at or to near to these points where the wind measurements were taken will result or exceed 7m/s.

- Biodiversity: bird populations
- Loss of agricultural land
- Interference with aircraft activity
- Risk of shadow flicker / driver distraction
- Power transmission – visual impacts in scenic areas
- Public perception

Recommended on-shore wind energy targets for 2003 and 2010

5.12. The wind criteria of 7 m/s minimum average speed used for identifying suitable areas for wind farms is accepted as the minimum threshold for schemes to be economically viable. Local factors do however make some locations more favourable than others. Smaller wind turbines operating in areas of lower than average wind speeds may also be appropriate in many areas.

5.13. Taking into account economic, planning and network constraints, in addition to the strengths, opportunities and barriers identified above, the following table sets out the recommended on-shore wind energy targets for 2003 and 2010:

Table 5.4: Recommended on-shore wind energy targets for 2003 and 2010

County	Target 2003		Target 2010	
	Capacity (MW)	Electricity (GWh/y)	Capacity (MW)	Electricity (GWh/y)
Derbyshire	4	10	40	104
Leicestershire	2	6	24	63
Lincolnshire	5	13	48	126
Northamptonshire	1	2	8	21
Nottinghamshire	0	0	2	5
East Midlands Total	**12**	**31**	**122**	**319**

5.14. Details of the methodologies used to set the targets for on-shore wind energy are provided in **Appendix 5.1.** enclosed

5.15. These targets could be met via the installation of individual turbines to meet local energy needs, of wind clusters on brown-field or rural sites, and the construction of wind farms. A typical wind farm would have a capacity of between 15MW and 30MW, a wind cluster would typically contain three to five turbines of between 300kW and 1.5MW each, whilst single turbine installations could range from a few kW to over 1MW. So, for example, the development of three wind farms, five wind clusters and several individual turbines would be sufficient to meet the target for 2010. – one could ask why are Wind Prospect 'eyeing' 21 sites in The Fens !! (Spalding Guardian 25/4/02)

APPENDIX 5.1: ONSHORE WIND

Methodology

1. The base data for the wind resource study were derived from the DTI windspeed database. It is derived from atmospheric wind speed data interpolated to given heights above the ground, and corrected by cross-reference to other Met Office data. NOABL divides the whole of the UK into 1 km squares, and gives the annual mean wind speed for the south-western corner of each square. The use of 1 km squares assumes a certain uniformity of terrain, and means that some potential turbine locations, such as isolated ridges, may be neglected.

2. Reference was also made to ETSU's wind resource report, which was the basis of the previous EM Resource Study. There is a more recent ETSU report on the wind resource in the UK, R99 (Ref. 3), but the potential resource data in R99 is not been broken down into regions or counties, and could not be used here. Both studies assume similar minimum wind speeds for economic wind turbine installations. R82 takes 6.5 m/s mean average wind speed at a 25 m hub height, while R99 takes 7 m/s at 45 m hub height, but these are approximately equivalent. The NOABL data is used to identify all 1 km squares within the region with wind speeds equal to or exceeding this. The economic assumptions behind taking 7 m/s as the minimum wind speed are shown in the table below:

Table 5.1A: Electricity Cost – p/k Wh

Year	8% Discount Rate	15% Discount Rate
2005	3.6	5.1
2010	3.4	4.8

Source ETSU R99, Ref. 3

3. Areas occupied by towns, villages, inland waters and woodland were excluded, and it was assumed that turbines could be installed on all the remaining land with more than the minimum average wind speed. Turbines are installed at a density of 3.6 MW/km^2, and this gives the potential resource. Planning constraints are then taken into account by removing designated areas protected for their landscape or for environmental reasons.

4. The potential resource for the whole country according to the more recent study, R99, is somewhat higher than that given in R82. For example, the resource in England taking into taking into account planning constraints is 14, 135 MW in R99, compared with the previous 10,662 MW, an increase of over 30%. This would suggest that the resource figures given above for the East Midlands may also underestimated.

5. In R99 the potential resource is found by removing from the area with suitable windspeeds all the land occupied by towns, villages, inland waters and woodland to give the total area that could be occupied by wind farms. Land sloping at more than 10° is also excluded. Land-use data is derived from satellite images, and dwellings and business premises are located by OS postcode data. Buffer zones are then added of 400 m around settlements or business premises, 100 m around woodland, roads, rivers, railways, canals, etc., and 6 km around airports. These constraints mean that

considerably less area is available for wind farms. However, the installation density is increased to 9 MW/km^2, which more than offsets the loss of area. R99 also includes some arbitrary limits on wind farm size, which can only be between 12 MW and 30 MW. Wind farms cannot be closer than 7 km, and sparsely separated turbines are not allowed. Planning constraints are taken account of in R99 by removing designated areas such as National Parks, Greenbelt, AONBs, SSSIs, and NNRs. R99 gives the practicable resource for the East Midlands as 134 MW.

6. The target capacity figures given here are derived in a slightly different manner. The R99 figure is effectively the total amount of wind power that could be readily developed. The figure is somewhat tentative, as many assumptions are made, and best case and worst case scenarios are considerably different. A separate analysis conducted by the BWEA (Ref. 4) takes into account a number of other factors, and comes up with a slightly lower target of 122 MW by 2010. Though this is slightly lower than the ETSU figure, it is clearly similar.

7. The BWEA analysis aims at a target capacity, rather than using the total capacity that could be developed. It takes the target from the DTI's Prospects for New and Renewable Energy report. This shows a "high wind" scenario with onshore wind producing 26% of the country's renewable electricity demand in 2010, which amounts to 3,773 MW (with renewable electricity constituting 10% of the total electricity usage). It meets the target by weighting both the theoretical wind capacity and the electricity demand to produce a wind target for each region.

8. The BWEA wind capacity analysis starts again from the NOABL data. It excludes inland waters, and puts a 500 m buffer zone around urban areas, villages and isolated dwellings. It assumes the same economic limit of 7 m/s wind speed at 45 m height, and the same turbine density of 9 MW/km^2. This is in line with current wind farm practice, equivalent to six 1.5 MW machines per square kilometre, but the exact size of turbine used does not have a significant impact on the density figure (R99 uses 600 kW turbines, but also used 9 MW/km^2). A load factor of 30% is assumed to give the energy production, which is an average figure for wind farms within the UK, and takes into account both variation in the wind and availability. The BWEA report then removes all areas that are SACs, SPAs, NNRs, and National Parks, to give 516 km^2 of land suitable for wind developments, leading to a potential wind capacity of 4,644 MW, and generating 12,204 GWh/y of energy. Electricity demand figures are derived from information from RECs, The Electricity Association, and the DTI. The final DTI target figure is arrived at by giving different weightings to the potential wind capacity and the demand, and scaling the total capacity of the UK. This produces an EM wind capacity of 3% of the UK total, or 122 MW of wind power, which can be provided from an area of 13.5 km^2.

9. The BWEA target for the East Midlands has been taken as the target figure for this study. It is within the practicable resource defined by ETSU, but takes account of demand and national targets as well as the resource. The distribution of this total within the region has been assumed to follow the same proportions as R99. Since the planning procedure for wind farms can take several years, less than 10% of the target has been given for 2003.

Comparison with the East Midlands Renewable Energy Planning Study

10. The previous East Midlands Renewable Energy Planning Study (Ref. 1) was published by ETSU in 1998, but was based on work done in 1995/6. The wind resource was derived from the ETSU R82 wind resource study done in 1994 (Ref. 6). The figures for feasible and accessible resources given here are based on the figures used in the previous EMREPS.

11. The targets given here make use of the updated wind resource figures in the 1997 ETSU report R99 (Ref. 3). There are some significant differences between R82 and R99, as discussed in the methodology section above. (A detailed analysis of the differences has been made by Econnect in its report *UK Regional Wind Resource Assessment and Planning*, Ref 5.) The EMREPS used outdated land-use data, while R99 uses considerably improved information. Environmentally Sensitive Areas (ESAs), which are related to agricultural land use, were excluded from the previous study, but are included in R99. The previous study also did not include buffer zones around buildings or other features, and did not eliminate slopes.

12. Interestingly, while R99 generally shows a larger resource in England than the previous study, the practicable figure it gave for the East Midlands of 134 MW is almost identical to the upper limit from the previous study (115-133 MW).

Comments

13. The East Midlands has a small wind resource compared with other regions of the UK, the prevailing south-westerly winds having travelled a long distance across land before reaching the area. Nevertheless, it still has significant potential, and wind strengths comparable with many parts of Europe in which wind farms are being developed.

14. The wind power targets given here require a relatively small amount of land to be given over to wind turbines, around 13.5 km^2, which appears readily achievable within the useable land with adequate wind resource. The majority of the resource is located within Derbyshire. It should be noted that almost all sensitive areas have been excluded from the analysis, but it may still be possible to site wind farms in certain of these areas, for example in parts of the Peak District.

15. Wind turbines do not exclude other land usage, and can often be combined with agriculture. They occupy a relatively small "footprint" of land on the ground, being mounted on a tower a few metres in diameter, and agriculture can continue right up close to them. Some additional land may be required for access roads to a wind farm or individual turbines. Turbines need to be mounted on reinforced concrete structures buried in the ground, and care must be taken not to site these on areas with archaeological significance, such as the abandoned mediaeval villages visible in many fields in the region.

16. Visual impact is almost certainly the major consideration in siting wind farms. There is often strong resistance to proposed wind farm developments, though this tends to be from a vocal minority, with surveys showing that a majority of local people often support wind farms once they are built. Crucial to the success of meeting a wind power target will be an open consultation process aimed at involving local people in the decision making process. Wind farm developers have a range of visualisation

tools available to them so that turbines can be sited where they have minimum impact, and photomontages can be generated for discussion with local communities.

17. Turbines do generate some noise from the movement of the blades in the air, and mechanical noise from generators and gearboxes, but modern turbines are relatively quiet and are unlikely to be heard unless the listener is close to them. Provided turbines are located sensitively, and some distance from dwellings, noise should not be a major planning issue.

18. *It is reported that EMEB have a policy of removing 33 kV lines within the region.* This could have a significant impact on wind farm development, and specifically on the size of farm that is economic. If the wind farm is to deliver only to an 11 kV system, then its size is limited to a few MW. Very large wind farms can deliver economically to a 132 kV line. Intermediate sized wind farms could be caught with very expensive connection charges.

19. If wind farms are to be successfully developed within the East Midlands region, it is crucial that there is co-operation between planning authorities and wind developers. Recent experience within UK has seen ninety percent of all wind farm planning applications rejected, and potential owners and operators cannot be expected to commit to expensive planning, design and preparation work with so small a chance of success. In other countries, areas preferred for wind development have been identified by the authorities first, with developers then knowing that planning consent is much more likely to be achieved if they choose sites within these areas.

References:

1. East Midlands Renewable Energy Planning Study, LUC report for ETSU, May 1998.

2. New and Renewable Energy Prospects for the 21st Century, Supporting Documentation, ETSU-R-122, DTI, March 1999.

3. A Review of the UK Onshore Wind Energy Resource, ETSU-R-99, Fiona Brocklehurst, ETSU, February 1997.

4. Planning for Wind Energy, A Guide for Regional Targets, BWEA, 2000.

5. UK Regional Wind Resource Assessment and Planning, Econnect report for BWEA, 6 January 2000.

6. An Assessment of Renewable Energy for the UK, ETSU-R-82, ETSU, 1994, ISBN 0 11 515348 9.

tools available to them so that turbines can be sited where they have minimum impact, and photomontages can be generated for discussion with local communities.

17. Turbines do generate some noise from the movement of the blades in the air, and mechanical noise from generators and gearboxes, but modern turbines are relatively quiet and are unlikely to be heard unless the listener is close to them. Provided turbines are located sensitively, and some distance from dwellings, noise should not be a major planning issue.

18. It is reported that EMEB have a policy of removing 33 kV lines within the region. This could have a significant impact on wind farm development, and specifically on the size of farm that is economic. If the wind farm is to deliver only to an 11 kV system, then its size is limited to a few MW. Very large wind farms can deliver economically to a 132 kV line. Most medium sized wind farms could be caught with very expensive connection charges.

19. If wind farms are to be successfully developed within the East Midlands region, it is crucial that there is co-operation between planning authorities and wind developers. Recent experience within UK has seen ninety percent of all wind farm planning applications rejected, and potential owners and operators cannot be expected to commit to expensive planning, design and preparation work with so small a chance of success. In other countries, areas preferred for wind development have been identified by the authorities first, with developers then knowing that planning consent is much more likely to be achieved if they choose sites within these areas.

References:

1. East Midlands Renewable Energy Planning Study, LUC report for ETSU, May 1998.

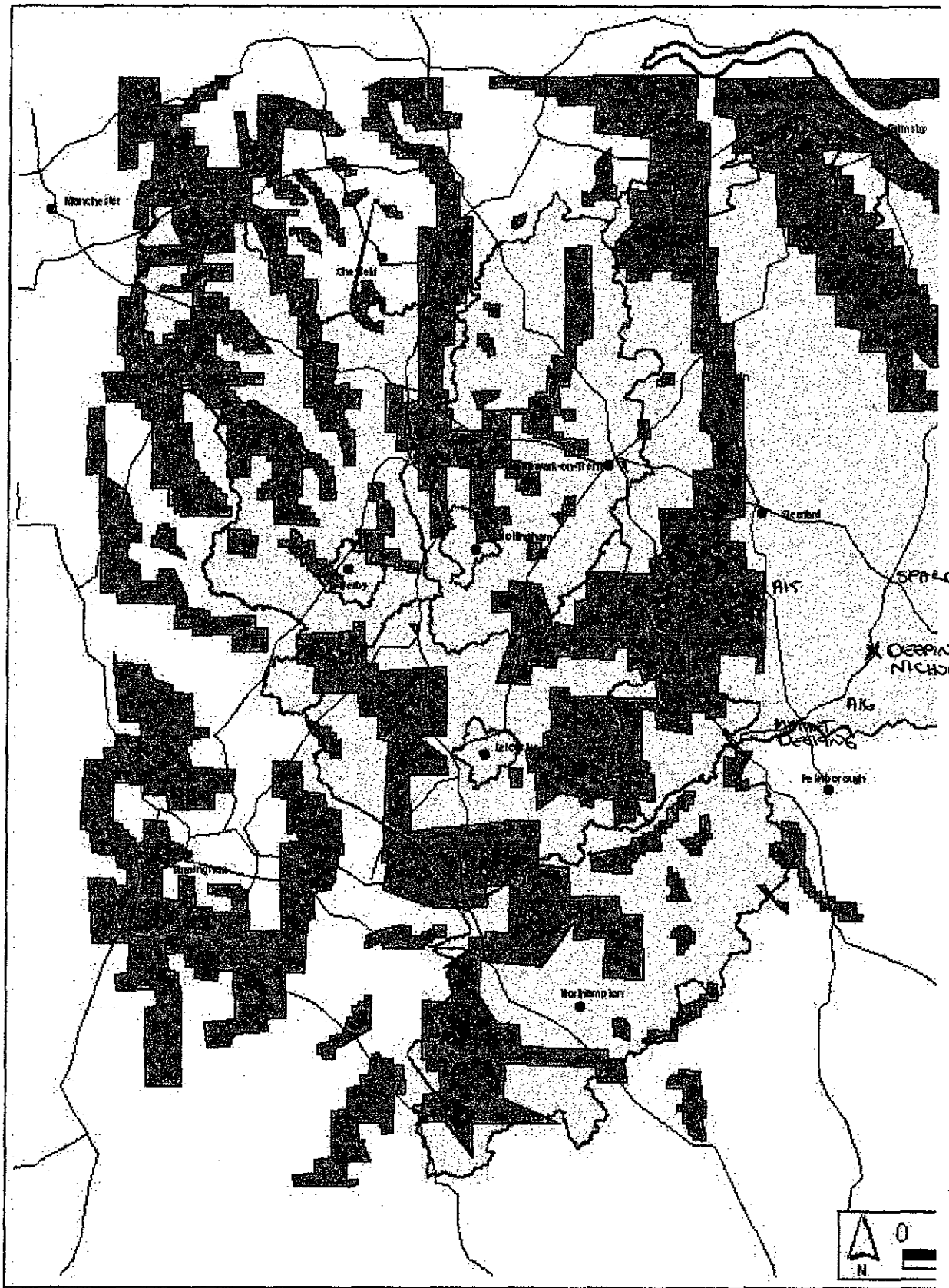
2. New and Renewable Energy Prospects for the 21st Century, Supporting Documentation, ETSU-R-122, OTI, March 1998.

3. A Review of the UK Onshore Wind Energy Resource, ETSU-R-99, Flora Brocklehurst et. ETSU, February 1997.

4. Planning for Wind Energy, A Guide for Regional Targets, BWEA, 2000.

5. UK Regional Wind Resource Assessment and Planning, Technical report for BWEA, 5 January 2000.

6. An Assessment of Renewable Energy for the UK, ETSU-R-82, ETSU, 1994, ISBN 0 11 515749 9.



Viewpoints on Sustainable Energy in the East Midlands

Key

- East Midlands
- County Boundaries
- Major Towns
- Areas of Wind Potential (average windspeed >6.5 m/s)

Figure 5.1:
Areas of Wind Potential
in the East Midlands

North End Farm
Dunsby, Bourne
Lincolnshire PE10 0UB
01778 440721

OBJECTION

25 March 2002

Mr T Huggins
Head of Customer Services
South Holland District Council
Council Offices
Priory Road
Spalding
Lincolnshire PE11 2XE

Dear Sir

Planning Ref: H03/0161/02

Application to erect eight 100m high wind turbines at Deeping St Nicholas

I formally object to the above planning application on the following grounds:

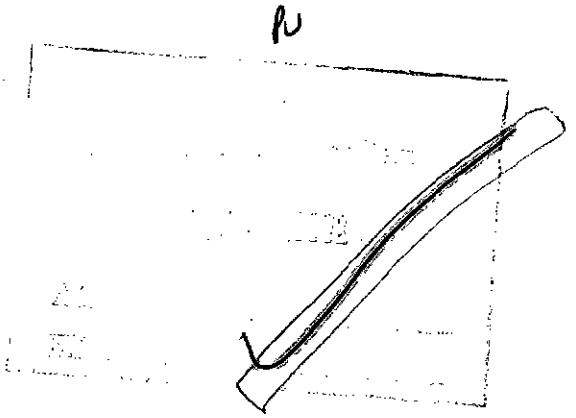
- No proper visual assessment has taken place along Government recommended guidelines GL VIA 1995. At over three hundred feet high, the turbines will be three times the height of the famous 'pink water tower' in Spalding, which is clearly visible from Dunsby. The movement of the twenty four rotating turbine blades will attract attention across a radius of twenty miles or more.

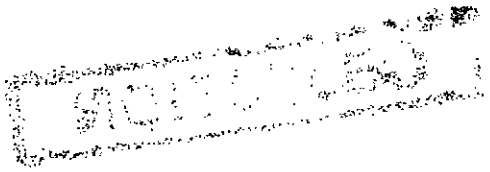
- The proposed 'wind farm' will produce only intermittent, unreliable, unstorable electricity in tiny amounts compared to its great size and the environmental damage sustained.

Please forward my objections to any appeal.

Yours faithfully,

Mr M A HOUGHTON





North End Farm
Dunsby, Bourne
Lincolnshire PE10 0UB
01778 440721

25 March 2002

OBJECTION

Mr T Huggins
Head of Customer Services
South Holland District Council
Council Offices
Priory Road
Spalding
Lincolnshire PE11 2XE

Dear Sir

Planning Ref: H03/0161/02

Application to erect eight 100m high wind turbines at Deeping St Nicholas

I formally object to the above planning application on the following grounds:

- At 100m high, the proposed wind turbines will adversely affect the quality of the surrounding flat landscape, directly contradicting the DEFRA White Paper 'Our Countryside: Our Future', forwarded by Rt Hon John Prescott who states that "We must preserve the things that make the countryside special: peace, space, wildlife and the natural beauty of the landscape".

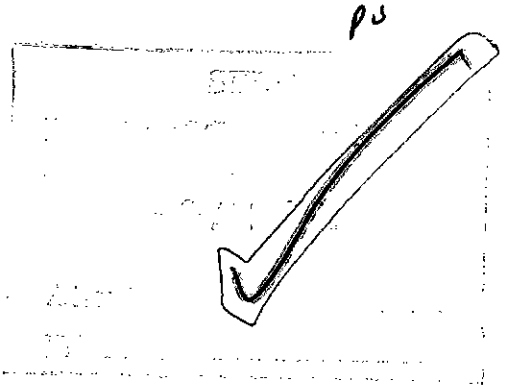
- Construction and operation of this facility will seriously affect local flora and fauna, contrary to EU Directive 79/4091EE which states that "member states shall take appropriate steps to avoid deterioration of habitats or disturbances affecting the birds". There is well known evidence of bird strikes and disturbance of birds from nesting sites. SHDC Draft Plan Policy NF4 states that "development will not be permitted which may directly or indirectly destroy or adversely impair the integrity of wildlife corridors".

Please forward my objections to any appeal.

Yours faithfully,

Mrs S J HOUGHTON

PS



OBJECTION

SHDC

10 APR 2002

The Old School House
Main Road
Dunsby
Bourne
Lincs PE10 0UB
01778 440 129

Mr T Huggins,
South Holland District Council
Council Offices,
Priory Road,
Spalding PE11 2XE

6th April 2002

Planning ref. HO3/0161/02
Application to erect eight 100m high wind turbines at Deeping St Nicholas.

Dear Sir,

I formally object to the above proposal on the following grounds:-

1). the proposed wind turbines are of a totally inappropriate height, and will therefore adversely affect the quality of the surrounding flat "traditional" fen landscape. In the DEFRA White Paper "Our Countryside: The Future", Rt Hon John Prescott states in his forward that "We must preserve the things that make the countryside special: peace, space, wildlife, and the natural beauty of the landscape." Existing wind turbines have been documented as adversely affecting all of these criteria.

2). The proposed wind 'farm' is an industrial development which would be totally out of keeping with the surrounding rural area. The SHDC Draft Plan 2001 policy NE6 states that "The rural character of the countryside will be protected for its own sake."

30. The proposed wind 'farm' will produce only intermittent, unreliable, unstorable electricity in tiny amounts compared to its great size and the environmental damage it will cause.

please forward my objections to any appeal.,

Yours faithfully

Mrs. S. Gaunt

Mr T Burgess
South Holland District Council
Council Offices
Priory Road
Spalding PE11 2XE

The Old School House
Main Road
Dunsby
Boston
Lincs PE20 0UB
01778 420 129

6th April 2007

Planning ref: H03/0041/07
Application to erect eight 100m high wind turbines at Dooping St Nicholas

Dear Sir,

I formally object to the above proposal on the following grounds:-

1) The proposed wind turbines are of a totally inappropriate height, and will therefore adversely affect the quality of the surrounding flat "traditional" fen landscape. In the *DETR's White Paper "Our Countryside: the Future – A Fair Deal for Rural England"* John Prescott states in his foreword that "We must preserve the things that make the countryside special: peace, space, wildlife, and the natural beauty of the landscape." Towering wind turbines have been demonstrated as adversely affecting all of these criteria.

2) The proposed wind farm is an industrial development which would be totally out of keeping with the surrounding rural area. The SHDC Draft Plan 2001 policy #13 states that "The rural character of the countryside will be protected for its own sake."

3) The proposed wind farm will produce only intermittent, unreliable, unstorable electricity in tiny amounts compared to its great size and the environmental damage it will cause.

please forward my objections to my appeal.

Yours faithfully

Mrs. K. Caunt

OBJECTION

Rosewood Cottage
Main Road
Dunsby
Bourne
Lincs PE10 0UB
01778 440 745

Mr T Huggins,
South Holland District Council
Council Offices,
Priory Road,
Spalding PE11 2XE

7th April 2002

Planning ref. H03/0161/02
Application to erect eight 100m high wind turbines at Deeping St Nicholas.

Dear Sir,

I formally object to the above proposal on the following grounds:-

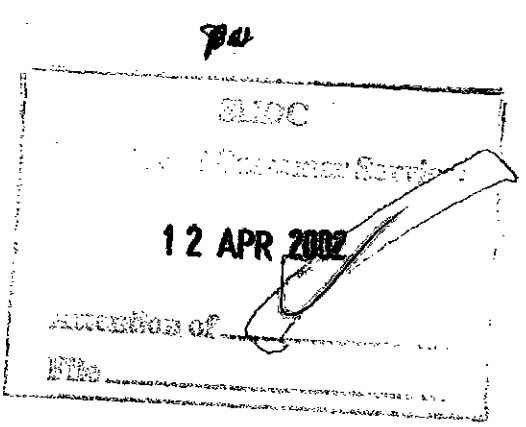
1) At over three hundred feet high the turbines will be three times the height of the 'pink' water tower in Spalding, which is clearly visible from Dunsby (and slightly further away). The movement of the rotating turbine blades will attract attention across a radius of 20 miles, and will be totally out of keeping with the character of the fens. No proper visual assessment has taken place along government recommended guidelines GLVIA 1995.

2). Construction and operation of this facility will seriously affect local flora and fauna, contrary to EU directive 79/4091EE which states that "member states shall take appropriate steps to avoid ... deterioration of habitats or any disturbances of birds from nesting sites. There is documented evidence of lapwings being disturbed from nesting sites by wind turbines (British Wildlife Oct 2000). Also this would probably be the first wind farm to be built in an area favoured by barn owls, so one can only imagine the effect turbine noise would have on them, given that they locate their prey by sound. SHDC Draft Plan Policy NE4 states that development will not be permitted which may directly or indirectly destroy or adversely impair the integrity of wildlife corridors."

please forward my objections to any appeal.,

Yours faithfully

Mrs. C Bates



Ms J Higgins
South Norfolk District Council
Council Offices
Long Stratton
Norwich
NR15 2XE

Planning Ref: 2013/0161/F
Application to erect eight 100m high wind turbines - Decision 31 July 2013

Dear Sir,

I formally object to the above proposal on the following grounds:-

1) At over three hundred feet high the turbines will be three times the height of the 'park' wind tower in Spooner Row which is clearly visible from Wymondham and will be taken over by Breckland Council when the boundary changes in April 2014. The distance from the turbines to the Pearing Heritage Park is only 2.5 miles and therefore will be clearly visible from the park and the surrounding area.

2) Construction and operation of this facility would create a lot of noise and disturbance to the detriment of the residents of Bunwell and Carleton Rode. The applicant admits that "construction activities will result in a temporary increase in noise levels" and that "noise from wind turbines can be audible in areas frequented by humans". Also this would probably be the case with the proposed Bunwell Bridge development which is only 1.5 miles away.

3) Concerns about the adverse effect on the local economy and tourism.

4) Concerns about the adverse effect on the local bird population.

5) Concerns about the adverse effect on the local bat population.

6) Concerns about the adverse effect on the local deer population.

7) Concerns about the adverse effect on the local badger population.

8) Concerns about the adverse effect on the local otter population.

9) Concerns about the adverse effect on the local water vole population.

10) Concerns about the adverse effect on the local barn owl population.

11) Concerns about the adverse effect on the local red kite population.

12) Concerns about the adverse effect on the local hedgehog population.

13) Concerns about the adverse effect on the local brown hare population.

14) Concerns about the adverse effect on the local grey partridge population.

15) Concerns about the adverse effect on the local skylark population.

16) Concerns about the adverse effect on the local yellowhammer population.

17) Concerns about the adverse effect on the local tree sparrow population.

18) Concerns about the adverse effect on the local reed bunting population.

19) Concerns about the adverse effect on the local corn bunting population.

20) Concerns about the adverse effect on the local linnet population.

21) Concerns about the adverse effect on the local yellow wagtail population.

22) Concerns about the adverse effect on the local grey wagtail population.

23) Concerns about the adverse effect on the local pied wagtail population.

24) Concerns about the adverse effect on the local meadow pipit population.

25) Concerns about the adverse effect on the local tree pipit population.

26) Concerns about the adverse effect on the local rock pipit population.

27) Concerns about the adverse effect on the local water pipit population.

28) Concerns about the adverse effect on the local yellow pipit population.

29) Concerns about the adverse effect on the local green pipit population.

30) Concerns about the adverse effect on the local blue pipit population.

31) Concerns about the adverse effect on the local purple pipit population.

32) Concerns about the adverse effect on the local orange pipit population.

33) Concerns about the adverse effect on the local black pipit population.

34) Concerns about the adverse effect on the local white pipit population.

35) Concerns about the adverse effect on the local grey pipit population.

36) Concerns about the adverse effect on the local brown pipit population.

37) Concerns about the adverse effect on the local yellow pipit population.

38) Concerns about the adverse effect on the local green pipit population.

39) Concerns about the adverse effect on the local blue pipit population.

40) Concerns about the adverse effect on the local purple pipit population.

41) Concerns about the adverse effect on the local orange pipit population.

42) Concerns about the adverse effect on the local black pipit population.

43) Concerns about the adverse effect on the local white pipit population.

44) Concerns about the adverse effect on the local grey pipit population.

45) Concerns about the adverse effect on the local brown pipit population.

46) Concerns about the adverse effect on the local yellow pipit population.

47) Concerns about the adverse effect on the local green pipit population.

48) Concerns about the adverse effect on the local blue pipit population.

49) Concerns about the adverse effect on the local purple pipit population.

50) Concerns about the adverse effect on the local orange pipit population.

51) Concerns about the adverse effect on the local black pipit population.

52) Concerns about the adverse effect on the local white pipit population.

53) Concerns about the adverse effect on the local grey pipit population.

54) Concerns about the adverse effect on the local brown pipit population.

55) Concerns about the adverse effect on the local yellow pipit population.

56) Concerns about the adverse effect on the local green pipit population.

57) Concerns about the adverse effect on the local blue pipit population.

58) Concerns about the adverse effect on the local purple pipit population.

59) Concerns about the adverse effect on the local orange pipit population.

60) Concerns about the adverse effect on the local black pipit population.

61) Concerns about the adverse effect on the local white pipit population.

62) Concerns about the adverse effect on the local grey pipit population.

63) Concerns about the adverse effect on the local brown pipit population.

64) Concerns about the adverse effect on the local yellow pipit population.

65) Concerns about the adverse effect on the local green pipit population.

66) Concerns about the adverse effect on the local blue pipit population.

67) Concerns about the adverse effect on the local purple pipit population.

68) Concerns about the adverse effect on the local orange pipit population.

69) Concerns about the adverse effect on the local black pipit population.

70) Concerns about the adverse effect on the local white pipit population.

71) Concerns about the adverse effect on the local grey pipit population.

72) Concerns about the adverse effect on the local brown pipit population.

73) Concerns about the adverse effect on the local yellow pipit population.

74) Concerns about the adverse effect on the local green pipit population.

75) Concerns about the adverse effect on the local blue pipit population.

76) Concerns about the adverse effect on the local purple pipit population.

77) Concerns about the adverse effect on the local orange pipit population.

78) Concerns about the adverse effect on the local black pipit population.

79) Concerns about the adverse effect on the local white pipit population.

80) Concerns about the adverse effect on the local grey pipit population.

81) Concerns about the adverse effect on the local brown pipit population.

82) Concerns about the adverse effect on the local yellow pipit population.

83) Concerns about the adverse effect on the local green pipit population.

84) Concerns about the adverse effect on the local blue pipit population.

85) Concerns about the adverse effect on the local purple pipit population.

86) Concerns about the adverse effect on the local orange pipit population.

87) Concerns about the adverse effect on the local black pipit population.

88) Concerns about the adverse effect on the local white pipit population.

89) Concerns about the adverse effect on the local grey pipit population.

90) Concerns about the adverse effect on the local brown pipit population.

91) Concerns about the adverse effect on the local yellow pipit population.

92) Concerns about the adverse effect on the local green pipit population.

93) Concerns about the adverse effect on the local blue pipit population.

94) Concerns about the adverse effect on the local purple pipit population.

95) Concerns about the adverse effect on the local orange pipit population.

96) Concerns about the adverse effect on the local black pipit population.

97) Concerns about the adverse effect on the local white pipit population.

98) Concerns about the adverse effect on the local grey pipit population.

99) Concerns about the adverse effect on the local brown pipit population.

100) Concerns about the adverse effect on the local yellow pipit population.

Yours faithfully,

Please find enclosed my objections to the appeal

Mrs C Hayes

Shelton House, Haconby Fen, Bourne, Lincs PE10 0UN
Telephone: 01778 570228

2nd April, 2002

OBJECTION

Mr T Huggins
Head of Customer Services
South Holland District Council
Council Offices
Priory Road
Spalding
Lincs
PE11 2XE

Planning Ref: H03/0161/02 – Application to erect eight 100m high wind turbines at Deeping St Nicholas

Dear Mr Huggins

I formally object to the above planning application on the following grounds:

There is much evidence to suggest that a proposal on this scale can inflict long term health problems on nearby residents, not only from the audible noise produced but also from low frequencies which are emitted. These can cause sleep deprivation (which can be defined as a legal nuisance – ETSU-R-97) and psychological problems. There is also documented evidence that the blade glint and shadow flicker can result in a strobing effect which is accepted as a trigger for epileptic attacks.

The proposed "wind farm" is an industrial development which would be totally out of keeping with the surrounding rural area The SHDC Draft Plan 2001 Policy NE6 states that "The rural character of the Countryside will be protected for its own sake".

Please forward my objections to any appeal.

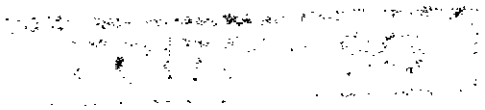
Yours sincerely,

D J Shelton

D J Shelton (Mrs)

PU

SHDC
- 4 APR 2002



Shelton House, Haconby Fen, Bourne, Lincs PE10 0UN
Telephone: 01778 570228

2ND April, 2002

OBJECTION

Mr T Huggins
Head of Customer Services
South Holland District Council
Council Offices
Priory Road
Spalding
Lincs
PE11 2XE

Planning Ref: H03/0161/02 – Application to erect eight 100m high wind turbines At Deeping St Nicholas

Dear Mr Huggins

I formally object to the above planning application on the following grounds:

There are as yet no other developments of this size turbine, and so there are no actual noise assessments. The SHDC Draft Plan 2001 Policy 3EN 1 state: "proposals for development...do not cause pollution of the surrounding area by noise...etc". Each hub will produce 102.5dB, which the wind industry says is almost the level of noise produced by a jet aircraft 250m overhead. Plus each of the 24 blade tips will cut through the air at speeds of around 160mph producing 24 repetitive "swish" type noises. This combined and continuous industrial noise will seriously reduce the quality of life for residents.

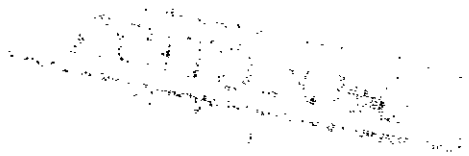
At 100m high the proposed wind turbines will adversely affect the quality of the surrounding flat landscape, directly contradicting the DEFRA White Paper "Our Countryside: The Future", forwarded by Rt Hon John Prescott who states that "We must preserve the things that make the countryside special: peace, space, wildlife, and the natural beauty of the landscape".

Please forward my objections to any appeal.

Yours sincerely,

P M Shelton (Mr)

SHDC
Director of Customer Services
- 4 APR 2002
Attention of
File



OBJECTION

Mr A Berry
132 Merlin House
Alma Road
Enfield
London
16th March 2002

Mr T Huggins
Director of Customer Services
South Holland District Council
Council Offices
Priory Road
Spalding
PE11 2XE

Dear Sir,
I wish to object to planning application ref HO3 / 0161 / 02 for the following reasons.

View :- The change to the view will lower the enjoyment of my home, it is also a breach of the SHDC Policy NE 6 which states: "The rural character of the Countryside will be protected for its own sake..." and the SHDC Policy GEN 1 which states: proposals shall "maintain prominent views""

Noise :- Any turning bladed object that moves in the wind makes a whump-whump noise, as the wind turbines are so big and the noise made so high up then it will radiate out for a long distance. I think this noise will intrude on my enjoyment of my property. SHDC Draft Plan 2001 states "proposals must reflect the need to safeguard the quality of life for residents", EU Directive ETSU R-97 states "Excessive and repetitive noise will seriously reduce the quality of life that residents reasonably expect from living in a rural area" I suggest that if the development makes a noise over 5db from background, for 75% of the time then it should be classed as a nuisance and the blades should be removed.

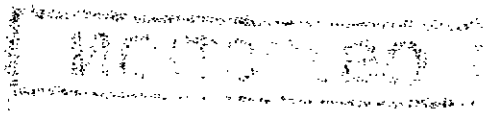
Wildlife:- There are many birds migrate over this site and these paths should be protected, indeed SHDC Policy NE4 states:" Development will not be permitted which may directly or indirectly destroy or adversely impair the integrity of wildlife corridors", Policy NE 3 expressly forbids development which would "harm a statutorily protected species or its habitat" and EU Directive 79/4091EE states that "member states shall take appropriate steps to avoid, deterioration of habitats or any disturbances affecting the birds

Yours sincerely

A. Berry

SHDC
Planning & Development
18 MAR 2002

H P&D	PM	DC	POL
CONS.	BC	ADMIN	PAO



SHDC
OBJECTION
Planning & Development
10 MAR 2002
HP&D | PM | DC | POL
CONS | BC | ADMIN | PAO
SHDC
Planning & Development
18 MAR 2002
Ref

2 North Liddle Street
Newcastleton
Roxburghshire
TD9 0RJ
Tel/fax: 013873 75375
e-mail:
bodgson.copshaw@ntlworld.com

12 March 2002

Your ref: H03/0161/02:
Our ref:

Dear Sirs

Objection to windfarm Planning ref: H03/0161/02

Can you please consider our objections to the above planning application, which include the following:

1 **Detrimental effect on the water table**
Each turbine will be set in enough concrete to build a municipal swimming pool. Insufficient evidence has been presented to determine that this huge change to the hydrology will not seriously interfere with the excellent drainage system provided to residents by the Welland & Deepings Internal Drainage Board.
S1-I1DC Draft Plan 2001 Policy NE 8 states: "development shall not degrade or threaten the quality of water or the water environment. "Furthermore, development proposals shall "protect both ground water and surface water resources . . . from the harmful effects which may arise from physical change to water features."

2 **Noise**
The proposed development will be contrary to SHDC Draft Plan 2001 policy.
3EN 1 states: "proposals for development.., do not cause pollution of the surrounding area by noise. .etc".
GEN 2 states: "proposals must reflect the need to safeguard the quality of life for residents.." and a noise nuisance will also contravene E.U. .Directive ETSU R-97 Excessive and repetitive noise will seriously reduce the quality of life that residents reasonably expect from living in a rural area.
The Developers accept noise as an issue. The British Wind Energy Association accepts that "No windfarm will be inaudible". The area is of course "rurally quiet" and any noise intrusion is a serious intrusion. Developers have consistently under estimated the noise from wind turbines.

3 **Visual impact**
The visual impact will be huge with each turbine being 330 feet high. These turbines will very adversely affect the quality of the surrounding landscape.
DEFRA White Paper —Our Countryside: The Future — Forward by Rt.Hon. John Prescott MP States that:
."We must preserve the things that make the countryside special: peace, space, wildlife and the natural beauty of the landscape."
The development is contrary to SHDC Draft Plan 2001 Policy NE 6, which states: "The rural character of the Countryside will be protected for its own sake..." Policy GEN 1 Para 2 states: proposals shall "maintain prominent views"
Policy 9.2 states that the district possesses a "... unique fenland landscape and dramatic skies. No proper visual assessment has taken place along Government recommended guidelines- GLVIA 1995.

4 **Reduction in property values**

There is now sufficient evidence to state that property values will be devalued by 20-30%. Some properties may become virtually unsellable since potential buyers are usually looking to move from an industrial setting to a rural one not visa versa.

5 **Wildlife & Ecology**

There are bats in and around Vine House Farm, disturbance of which is a Criminal Offence under the Wildlife and Countryside Act 1981 Section 9 (4)a. Construction and operation of this facility will seriously affect local flora & fauna. E.U. Directive 79/4091EE states that "member states shall take appropriate steps to avoid deterioration of habitats or any disturbances affecting the birds." also the Conservation Regulations 1994 39(1) b & d. The development is contrary to SHDC Draft Plan Policy NE4 which states "Development will not be permitted which may directly or indirectly destroy or adversely impair the integrity of wildlife corridors" Similarly Policy NE 3 expressly forbids development which would "harm a statutorily protected species or its habitat".

6 **The Kyoto agreement**

Since windfarms produce power only intermittently (about 25% of the time), no contribution is made to reduction of emissions since the boilers of fossil fuel plants have to kept running as "back-up" power sources (that's why cheap off-peak electricity is offered). The total effect is that our international agreements are not fulfilled. Energy from Renewable Resources is already being practised in South Lincolnshire. Willow coppicing is undertaken and straw is produced for burning in the power station at Ely, which does fulfil our commitments.

7 **Health and recreation**

There is much evidence to suggest that long-term health problems are associated with low frequencies generated by wind turbines in close proximity to dwellings. Sleep deprivation is one effect & psychological problems another. These have been recognised by a group of academics in the 'Darmstadt Manifesto'. Shadow flicker caused by sunlight being reflected off the blades results in a strobing effect which is accepted as a cause of epileptic attacks. Sleep deprivation can be defined as a legal nuisance as defined in ETSU R 97— assessment of rating of noise from wind turbines. Horse riding is not possible within visibility of windfarms.

We trust you will consider our submissions when making a decision the above application.

Yours faithfully

P. & A. Hodgson

Ann & Peter Hodgson