

SOUTH CAMBRIDGESHIRE DISTRICT COUNCIL

REPORT TO:	Development and Conservation Control Committee	2 nd February 2005
AUTHOR/S:	Director of Development Services	

S/1569/02/F - Bourn
Wind turbine at Rockery Farm for Mrs Ward

Recommendation: Approval
Date of Determination: 27th September 2002

Site and Proposal

1. The site is within a paddock to the east of the house and yard at Rockery Farm. Land within Rockery Farm falls gently from west to east. Surrounding land is undulating. There is a bridleway, The Drift, approximately 200m to the south which runs southwest to northeast. The nearest dwellings to the site are Rockery Farm (approx. 150m) and Drift End Stables, The Drift (approx. 200m). Bourn airfield is situated approximately 500m to the northeast. The approach to runway 1 is close to the site.
2. This full application, received on the 2nd August 2002, proposes the erection of a three blade wind turbine. The tubular tower would be 31.5m high to the hub, 2.4m diameter at the bottom and 1.4m diameter at the top. The blades would have a diameter of 27m and would rotate to orientate upwind. The highest point of the blades as they rotate would be 45m high. The turbine would be painted with a non-reflective matt paint. The installation would be used to provide electricity for the business at Rockery Farm with the surplus being exported to the national grid. The cables to and from the tower would run underground.

Planning History

3. No relevant history.

Planning Policy

4. The site is within the countryside and the Bedfordshire and Cambridgeshire Claylands Landscape Character Area as defined in the Local Plan 2004. Structure Plan 2003 **Policy P1/2** states that development in the countryside will be restricted unless the proposals can be demonstrated to be essential in a particular rural location. Local Plan 2004 **Policy EN1** states that planning permission will not be granted for development which would have an adverse effect on the character and local distinctiveness of the Landscape Character Areas.
5. Local Plan 2004 **Policy EN44** states that the District Council will support and encourage proposals for the use of renewable energy resources subject to other policies in the plan.
6. Structure Plan 2003 **Policy P7/7** states that proposals for generating energy from renewable energy sources such as wind will be favourably considered. It also states that Local Planning Authorities will consider areas of search for generating energy from wind in locations that: attain adequate wind speeds; do not cause unacceptable

impact on residential amenity or to the local environment; and can be efficiently connected to new or existing energy demands.

7. National Guidance in relation to renewable energy, including wind energy, is set out in **PPS22 'Renewable Energy' 2004** and its Companion Guide, '**Planning for Renewable Energy' 2004**.

Consultation

Parish Councils

8. **Bourn Parish Council** "generally recommends approval, but with qualifications:
 - Every effort should be made to avoid undue impact on neighbours by sound or visual effect. Ultimately, perhaps some landscaping with trees would help?
 - In construction can heavy vehicles use the A428 approach?
 - It is understood that the Flying Club on Bourn Airfield has objected. When asked, its spokesman Mr Trevor Gilpin said advice had been obtained from the Civil Aviation Authority. It said, while the wind turbine would not infringe their surfaces, it would by its size and proximity to Runway 01 have a visual distraction. The RFC/CAA have submitted objections to the Planning Department, Bourn is told."
9. **Caxton Parish Council** recommends approval.
10. **Caldecote Parish Council** recommends refusal but does not give any reasons for its recommendation.
11. **Cambourne Parish Council** makes no recommendation.

District Council Departments

12. The **Chief Environmental Health Officer** requested additional information in relation to sound power level, shadow flicker and flashing, and potential for TV interference which was duly forwarded by the applicant. He also contacted local authorities in Cumbria and Norfolk where there are similar installations who confirmed that they are not aware of any complaints, noise or TV interference or any other disturbance from such apparatus. He therefore raises no objections.
13. The **Council's Strategic Development Officer** states that the proposal complements the Council's Corporate commitment towards sustainability and this is precisely the type of proposal that needs to be encouraged. However, he states that the current application fails to indicate whether an assessment of the prevailing wind speed and direction of the proposed site has been carried out and, moreover, the type of turbine currently proposed is driven via a gearbox whereas he understands direct drive turbines are both quieter and more efficient in terms of energy generated. In response, the agent has confirmed that a second-hand turbine is proposed which is why a gearbox driven turbine is proposed.

Affect on Bourn Airfield

14. The **Civil Aviation Authority Safety Regulation Group** states that Bourn airfield is not statutorily safeguarded but, provided the height of the turbine, including blades, does not exceed 108.09m AOD, and would therefore be outside the safeguarded surface (the Approach Surface for runway 01) it does not object to the application. It

APPENDIX

states that the purpose of the Approach Surface is to safeguard one of the more critical stages of flight.

15. The **Owner and Licence Holder of Bourn Airfield** and its agent objects on the grounds that a 45m high turbine in this location would cause a distraction to pilots, and trainee pilots in particular, during a safety critical phase of flight and would thereby present a danger to aircraft. It also states that: the airfield is licensed by the CAA and handles around 20,000 aircraft movements per year, many of these are for pilot training; at the moment about 90% of the flying from Bourn takes place from runway 01-19 (the north/south runway). If the turbine was to be built, runway 06-24 would have to be used for the majority of flying as this runway would be safer. This would result in substantially more overflying of Cambourne which is something that can currently be avoided. Should the application be approved, lighting should be fitted to the turbine for aircraft safety. Both day and night flying take place from Bourn (pilot training only takes place during daylight) and lighting would also help during times of poor visibility.
16. The **Rural Flying Corps at Bourn Aerodrome** states that even if the turbine does not project through the Inner Horizontal Surface, the large moving blades are so close to the approach path for runway 01 that it would cause a significant distraction to pilots during a safety critical phase of flight (i.e. the landing approach to Runway 01 and take-offs or go-arounds from Runway 19) and strongly objects on this basis.

Affect on Radar

17. **Defence Estates** states that it has no concerns in relation to the construction of 1 wind turbine but states that, should the development go ahead, it would like to receive the following data: date of commencement; date of completion; the height above ground level of the tallest structure; the maximum extension height of any construction equipment; the position of the mast in latitude and longitude; and clarification as to whether the site will be lit.
18. **Cambridge City Airport** raises no objections to the proposal.
19. **National Air Traffic Services (En Route) Limited**, which comments from the point of view of navigational equipment and air traffic control for large airports, has withdrawn its original objection and states that the development would be acceptable.
20. **Civil Aviation Authority's Directorate of Airspace Policy**, which comments on the affect of wind turbines on aeronautical navigation and communication systems, has no observation other than that the developer should consult the Rural Flying Corps, the licensee of the licensed aerodrome at Bourn.

Affect on Public Bridleway No.15 (Bourn) - The Drift

21. The **County Council Countryside Services Team** has no objections but requests that conditions relating to the obstruction, use and affect on users of The Drift, Public Bridleway 15 (Bourn), are attached to any approval.
22. The **British Horse Society** states that its Policy is that a safety margin of 200 metres should be provided between any wind turbine and public rights of way and other highways used by equestrians, and objects to the proposal on the grounds that this distance is not met between the turbine and The Drift. It also states that, if permission is granted, a condition should be attached to the effect that The Drift should not be used at any time by construction vehicles.

23. The **Ramblers` Association** states that it might be concerned if horses were likely to be disturbed by the sight or sound of the turbine - agitated horses and ramblers do not mix happily. It therefore gives limited support to any concerns raised by the British Horse Society.

Representations

24. The occupiers of 40 Broadway object on the grounds of visual intrusion, mechanical noise from the turbine, aerodynamic noise from the blades, precedent, and safety issues due to its close proximity to Bourn Airfield. They also query the need for, and productivity of, the development.
25. The occupiers of 48 Broadway in 2002 felt sustainable energy sources such as wind power should be encouraged and therefore supported this application.
26. The occupiers of Drift End Stables, The Drift, expressed concern in 2002 over the close proximity of the turbine to the flying school and feel that any structure of this height must surely be hazardous to 'learner pilots'.
27. An employee at Drift Farm, The Drift, objected in 2002 on the following grounds: the continual disturbance caused by the noisy rotation of the propeller; it would completely change the character of the area which is and should remain predominantly rural; it would be an eyesore; and it would be a danger to birds.

Planning Comments - Key Issues

28. The key issues in relation to this application are: the visual and landscape impact of the proposal; the impact on residential amenity; the affect on the approach to Runway 01 at Bourn airfield/flight safety; and the affect on Cambridge Airport's radar.

Visual and landscape impact

29. At 31.5m high to the hub and with the highest point of the blades as they rotate being 45m high, the wind turbine will be clearly visible in the landscape. Although the previous 'Area of Best Landscape' designation is replaced in the Adopted Plan by Landscape Character Areas, it is perhaps worthy of note that the site is outside the Area of Best Landscape as defined in previous versions of the Local Plan. Many consider that wind turbines can be an interesting feature in the landscape and it is my view that the proposal for a single wind turbine of the height proposed would not seriously detract from the visual amenities of the landscape.

Impact on residential amenity

30. Given the comments of the Council's Environmental Health Officer, I do not consider that the proposal is likely to serious affect the amenity of nearby residents in terms of noise, shadow flicker or TV interference. 'Shadow flicker' occurs when the sun passes behind the rotor blades of a turbine and, as the blades rotate, the shadow flicks on and off.

Flight safety

31. Although just outside the Inner Horizontal Surface (an imaginary surface situated above Bourn Airfield which extends to a radius of 2000 metres from the centre of the runway), the proposed turbine is close to the approach path for runway 01 at the

Airfield, which is used for pilot training. The license holder and flying corps at the Airfield are concerned that the large moving blades would cause a significant distraction to pilots during a safety critical phase of flight and would thereby present a danger to flight safety. It appears to me that the blades could cause such a distraction and it is therefore my view that, for this reason, the application should not be supported.

Affect on Cambridge radar

32. The main reason for the long delay in putting the application before Members was the case officer's and agent's ongoing unsuccessful attempts to get the various bodies originally concerned about the affect of the proposal on Cambridge Radar to clarify their original objections. As a result of further discussions, all of these bodies have now confirmed that they do not object to the proposal.

Other Matters

33. The British Horse Society states that its Policy is that a safety margin of 200 metres should be provided between any wind turbine and public rights of way and other highways used by equestrians and objects to the proposal on the grounds that this distance is not met between the turbine and The Drift. However, the base of the turbine would be 200 metres from the Public Right of Way and I do not consider that the proximity of the wind turbine to the bridleway is reason for refusal. Paragraph 55 of 'Planning for Renewable Energy' states that the suggested 200 metres exclusion zone could be deemed desirable, but is not a statutory requirement.
34. Given the relative limited sweep of the blades, I do not consider that a refusal could reasonably be substantiated in terms of its affect on birds/wildlife.

Recommendation

35. Refusal (as amended by additional information received 3.10.02).

The proposed turbine is close to the approach path for runway 01 at Bourn Airfield, which is used for pilot training. The large moving blades would cause a significant distraction to pilots during a safety critical phase of flight and would thereby present a danger to flight safety. The proposal is therefore contrary to Planning Policy Statement 22: Renewable Energy which requires Local Planning Authorities to satisfy themselves that proposals for wind turbines have addressed potential impacts in relation to aviation.

Background Papers: the following background papers were used in the preparation of this report:

- Cambridgeshire and Peterborough Structure Plan 2003
- South Cambridgeshire Local Plan 2004
- Planning Policy Statement 22 'Renewable Energy' 2004 and its Companion Guide, 'Planning for Renewable Energy' 2004.
- Planning file ref. S/1569/02/F

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