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# Appeal Decision

Site visit made on 20 February 2012

**by K D Barton BA(Hons) Dip Arch DipArb RIBA FCI Arb**

**an Inspector appointed by the Secretary of State for Communities and Local Government**

**Decision date: 20 March 2012**

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**Appeal Ref: APP/R3325/A/11/2166714**

**VRS, Badgers Cross Lane, Somerton, Somerset TA11 7JB**

- The appeal is made under section 78 of the *Town and Country Planning Act 1990* against a refusal to grant planning permission.
  - The appeal is made by David Smith of VRS against the decision of South Somerset District Council.
  - The application Ref 10/04403/FUL, dated 19 October 2010, was refused by notice dated 8 June 2011.
  - The development proposed is the installation of an 11kw wind turbine on an 18m tower.
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## Decision

1. The appeal is dismissed.

### Effect on Safety in Terms of ATC Radar at RNAS Yeovilton

2. A tower and turbine have been erected on the site but the Council states, in a letter dated 23 January 2012, that it is not the same as that the subject of this appeal which would be around 24.8m from ground to tip of blade. The turbine erected is in the region of 19m from ground to tip of blade.
3. Defence Infrastructure Organisation (DIO) for the Ministry of Defence has consistently objected to the appeal proposal since 4 November 2010 but has indicated that it would not object to a turbine less than 11m from ground to tip of blade. It is accepted by both parties that the proposed turbine would be in line of sight to the Air Traffic Control (ATC) radar and Secondary Surveillance Radar (SSR) at RNAS Yeovilton and would be seen by the radar. A report for the appellant includes a number of accepted errors but maintains that any radar shadow would be small, and that most of the Doppler effects could be filtered out. However, DIO assesses each application on its merits and only objects when an impact is unmanageable.
4. Turbines create 'false' aircraft returns that have to be treated as real. The erected turbine has been detected on the radar at RNAS Yeovilton appearing as a 'legitimate' target and so has been the subject of a Stop Notice. The Watchman ATC radar filters out ground clutter and traffic but cannot filter out turbines as the blade tip speed is high enough to exceed any 'speed' filtering. The radar return from a moving turbine blade is a stationary echo and radar with a digital video processing facility can suppress such returns. However, the Watchman radar at Yeovilton does not have this facility. Although the

appellant considers that the turbine would not be in a critical radar sector and that most air traffic operates without a radar service, the Navy considers the location to be in an area of significant ATC operations and when weather conditions are unsuitable for visual flying radar is used. In addition, both the Deconfliction and Traffic Services provided are radar services. Reference has been made to range azimuth gating (RAG) this has the effect of desensitising radar systems by blanking out a portion of radar coverage over an area. Using RAG at such a short range to the airfield would be detrimental to the safety of operations. The taller appeal proposal would also appear on the radar and the impact would not be manageable.

5. An addendum to a report for the appellant includes calculations and concludes that the probability of interference with the Yeovilton SSR would be extremely remote. DIO has not had an opportunity to comment on these calculations but accepts that confusion between returns from aircraft and other objects on the SSR is highly unlikely. However, it notes that multi path reflections of transmissions could be caused by wind turbines up to a range of 16km from an SSR site. Misidentification or mislocation of aircraft could apply and potentially have flight safety implications. This lends weight to the conclusion on the effect on the ATC radar.
6. In support of the proposal, reference has been made to a number of other turbines. Each case involves unique circumstances such as turbine height, rotor diameter, location, terrain, radar cover, proximity to assets and operations, and flight patterns and movements. In any event, the turbine at Houndstone Business Park does not paint on the radar or appear as a legitimate target. Goonhilly Down Wind Farm close to RNAS Culdrose was deemed manageable when assessed by MOD as the radar patterns were not affected. These examples would not justify allowing this proposal. The fact that MOD has, in the past, withdrawn objections when pressed on technical matters differs from this case where it has consistently objected to the proposals. The appellant has referred to a 2003 study by QuinetiQ but several other trials have since been carried out and knowledge of the effects on radar are now much more developed.
7. Mitigation in the form of a radar absorbent coating has been suggested but this is an immature technology where some trials have not been successful and it is not considered acceptable. The appellant has also offered a transponder sited at the wind turbine, on a mast high enough to achieve line of sight to the SSR, as a solution but this is not part of the appeal proposal and has not been the subject of consultation. It has not, therefore, been considered in determining this appeal. Although the appellant states that there could not have been an MOD objection in place as the Council's Planning Officer was recommending approval, the report to committee recommends refusal. Although Yeovil Westland Aerodrome/Agusta Westland saw no reason to object it does not represent or speak for MOD or RNAS Yeovilton.
8. Some Councillors considered that there was no latitude to ignore the opinion of RNAS Yeovilton as consultee but each case should be considered on its own merits without discretion being fettered. The erected turbine appears on the radar at RNAS Yeovilton and cannot be satisfactorily managed or mitigated. The larger turbine proposed in this appeal would raise similar problems. Notwithstanding the objectives of the *Planning Policy Statement 22: Renewable Energy*, the *Supplement to Planning Policy Statement 1* and *Planning for*

*Growth*, and the climate change context, the 'interference' created would not be outweighed by the benefit of generating renewable energy. In the interests of flight safety the appeal is dismissed.

*K D Barton*

INSPECTOR