

**ELECTRICITY ACT 1989 (SECTION 36 AND SCHEDULE 8)  
TOWN AND COUNTRY PLANNING ACT 1990 (SECTION 90)  
THE ELECTRICITY GENERATION STATIONS AND OVERHEAD LINES  
(INQUIRIES PROCEDURE)(ENGLAND AND WALES) RULES 2007**

**PUBLIC INQUIRY TO CONSIDER SECTION 36 ELECTRICITY ACT 1989  
APPLICATIONS BY:**

- (1) STEADINGS WIND FARM LIMITED FOR CONSENT AND DEEMED PLANNING PERMISSION TO CONSTRUCT AND OPERATE A WIND FARM AT KIRKWHELPINGTON, NORTHUMBERLAND (KNOWN AS STEADINGS)**
- (2) AMEC PROJECT INVESTMENTS LIMITED FOR CONSENT AND DEEMED PLANNING PERMISSION TO CONSTRUCT AND OPERATE A WIND FARM AT RAY ESTATE, NORTHUMBERLAND (KNOWN AS RAY WIND FARM)**
- (3) WIND PROSPECTS DEVELOPMENT LIMITED FOR CONSENT AND DEEMED PLANNING PERMISSION TO CONSTRUCT AND OPERATE A WIND FARM AT GREEN RIGG FELL, BIRTLEY, NORTHUMBERLAND (KNOWN AS GREEN RIGG WIND FARM)**

**SQD LDR COLIN DEANE  
SUMMARY OF PROOF OF EVIDENCE  
IN SUPPORT OF OBJECTION BY  
MINISTRY OF DEFENCE**

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**Glossary of defined terms**

AAC - Army Air Corps  
 AARA - Air-to-Air Refuelling Area  
 Airprox - Air Proximity Hazard  
 AOR - Area of Responsibility  
 ATC - Air Traffic Control  
 ATCO - Air Traffic Control Officer  
 ATS - Air Traffic Services  
 CAS - Close Air Support  
 DAP - Directorate of Airspace Policy  
 DCSA - Defence Communication Services Agency  
 DSATCO - Deputy Senior Air Traffic Control Officer  
 EW - Electronic Warfare  
 EWTR - Electronic Warfare Tactics Range  
 FAC - Forward Air Controller  
 FIS - Flight Information Service  
 FL - Flight Level  
 HQ - Headquarters  
 JFACTSU - Joint Forward Air Control Training & Standards Unit  
 JSP - Joint Service Publication  
 LEO - Local Examining Officer  
 LFM - Low Flying Monitoring  
 MANPADS - Man-Portable Air Defence Systems  
 MDA - Managed Danger Area  
 Mil - Military  
 MOD - Ministry of Defence  
 NATO - North Atlantic Treaty Organisation  
 NATS - National Air Traffic Services  
 nm - Nautical Mile  
 OTA - Operational Training Area  
 POC - Point of Contact  
 RAF - Royal Air Force  
 RAS - Radar Advisory Service  
 RIS - Radar Information Service  
 RN - Royal Navy  
 RTA - Road Traffic Accident  
 ScATCC - Scottish Air Traffic Control Centre  
 SEWRT - Spadeadam Electronic Warfare and Tactics Range  
 Sqn Ldr - Squadron Leader  
 TESD - Test & Evaluation Services Division  
 UK - United Kingdom  
 UKLFS - United Kingdom Low Flying System  
 USAF - United States Air Force

**Summary of Proof of Evidence*****Qualifications and history***

1. I am Sqn Ldr Colin Deane and hold the post of HQ Air Command ATC Aerodrome Infrastructure & Safeguarding. I am the single POC for matters

affecting the ATC operations on and around military aerodromes within the UK and overseas with regard to statutory Safeguarding and for wind farm assessment for RAF and Army airfields.

2. I joined the RAF in April 1991 and was awarded a Commission in September that year before graduating as an ATCO in March 1992. I have served as an ATCO in Area Radar operations at RAF West Drayton as well as in control towers at RAF Kinloss, RAF Lossiemouth, and RAF Linton-on-Ouse, where I was the Senior LEO and DSATCO. Additionally, I have been employed as an Air Traffic Control Instructor at RAF Shawbury, where I taught both Terminal and Area Radar Control disciplines, before taking up the post of Officer Commanding Trade Training Flight, which was responsible for all aspects of Phase 2 training of our Trade Group 9 Air Traffic Control Assistants. More recently, I returned from Basra, Iraq, where I was again LEO and DSATCO. Following this, and as a result of qualifications in Airspace Management and Air Battle Staff, I took up a role within the Joint Force Air Component HQ managing the production of Air Tasking Orders and Special Instructions to aircrew for that organisation. I was promoted into my current post in October 2007 and have examined a multitude of wind farm proposals to date.

### ***Procedure***

3. In my proof of evidence I discuss the procedure adopted by the MOD for reviewing pre-planning applications for wind farm developments. As this topic is covered in more detail by Julian Chafer, I will not address it further in this summary. I can indicate, however, that we are pragmatic in our assessments: we only object to a wind farm proposal if it will have an adverse effect upon one or more RAF facility and the developer has not been able to allay our concerns.

### ***RAF Spadeadam***

4. RAF Spadeadam is the only EWTR in the UK, and one of only two in North West Europe. It is used to train aircrew to evade radar guided missiles. It is a very important military training facility and a national asset. The EWTR provides training for UK, USAF and NATO aircraft and aircrews by utilising a variety of equipment including real threat radars and a selection of emulators and simulators.

5. Spadeadam forms part of what is already a complex airspace construct. It is adjacent to both Otterburn Range, which is used by the British Army for artillery and other tactical training, and Newcastle Airport's Control Zone. It is also beneath extant civilian airways and is within the UK Low Flying System. Aircraft wishing to

transit into and out of the RAF Spadeadam EWTR are not permitted to fly through Otterburn Range or the Newcastle Control Zone.

6. The role of ATCOs at SEWTR is to provide ATS to aircraft whilst they are conducting EW training. Effectively ATC is the lookout for the pilots, who may be performing high-energy manoeuvres and low flying.

7. The Range is regularly used by almost all of the RAF's assets as well as RN Merlin and Sea King, AAC Apaches, USAF F15s and C-130s and NATO EW aircraft. On average over the last 5 years, I would estimate that the facility has been used on at least 200 of the 250 working days per year. The facility may be used during any time of a 24 hour day.

8. The facility also used by the airforces of our NATO partners. The provision of this service is part of a reciprocal arrangement crucial to the defence strategy of the UK. Over the last 5 years, I estimate that foreign airforces have used the facility on an average of 70 days per year. Their lack of familiarity with the area often places a heightened reliance upon the information provided by ATCOs at Spadeadam, and requires the instantaneous provision of correct information in order to avoid catastrophic consequences

9. In my Proof of Evidence I discuss in detail how the operations room at Spadeadam runs. During normal operations, ATCOs at will have 2 or 3 dedicated controllers to man the 2 controlling positions and allow the other to be on a break. Each controller could typically work up to 4 aircraft, depending on intensity, traffic split, frequency separation and sortie complexity.

10. Training can take place within 60nm of SEWTR, up to FL245 (24,500 feet). This was increased to FL660 (66,000 feet) in January 2008. In my Proof of Evidence I give details of the areas in which training activities occur, and of how aircraft move between these areas and Spadeadam Range. In summary, it is sufficient to say that the airspace over the proposed developments is a busy entry-point into Spadeadam, in which aircraft, as part of their training, will be attempting to evade threat radars.

### ***The proposed wind farms***

11. In my professional assessment, the operational significance of the anticipated effects of each of these three wind farms upon what is displayed upon the screens of ATCOs at RAF Spadeadam is very significant. The operational

significance of the three wind farms combined is even greater. In my professional assessment, in both cases the operational significance would be such as to materially reduce the ability to use RAF Spadeadam for the purposes for which it is currently (and has for a long time) used. I know of no way of getting around this undesirable conclusion.

12. The basis for this assessment is spelt out in detail in my Proof of Evidence. In summary, the reasons for it are as follows:

- a. The difficulty of distinguishing the returns generated by the proposed developments from primary returns generated by certain civilian and military aircraft;
- b. The impact that any additional clutter would have on our ability to see SSR labels in such a congested area;
- c. The position of the proposed wind farm developments (or any one of them), which would virtually eliminate the opportunity for aircraft to pass between Otterburn Range and Newcastle Airport Zone as it would not be possible to achieve the required lateral separation from the edges of the restricted airspaces and the primary radar returns caused by the proposed wind farms;
- d. The increase in sortie duration, fuel consumption and time delays caused by taking avoiding action on unknown returns;
- e. The increase in workload of radar operators at Spadeadam, leading to an increase in stress;
- f. The “human factors”, which form a spectrum ranging from controllers paying disproportionate amounts of attention to the area of the proposed developments at the expense of scanning other areas, to controllers becoming dangerously habituated to returns from the wind farms.

### ***Mitigation and Conditions***

13. I have considered whether the objections of the Ministry of Defence would be capable of being accommodated by a suitably worded condition. I have not seen any formula of words that would achieve that objective. Nor can I think of any formula of words that would achieve that objective. No current technical solution meaningfully addresses the adverse effects upon the facility at Spadeadam, nor am I aware of any such solution that could possibly come forward in the next five years.

14. Wind Prospect Developments Ltd suggested that a management plan could be developed to allow the proposed Green Rigg turbines to be shut down at certain times. This is unlikely to provide a workable solution for either the development or Spadeadam. RAF Spadeadam trains approximately 3000 aircraft each year and aircraft are booked onto the range on every working day. It is also not unusual for pilots to call in while in the air to request use of the range without notice.

15. The MOD has also considered whether one or two (as opposed to three) of the proposed wind farms would be capable of being accommodated. On our analysis, whichever one (or two) of the wind farms were developed, the adverse effects identified above would result. Although the adverse effects would be lessened, they would still remain very significant.

16. It is therefore not possible for any of the three developments to proceed without causing an unacceptably deleterious effect upon the facility at RAF Spadeadam.

C C DEANE  
Sqn Ldr  
For COS Ops