

# BWEA CONFERENCE WIND ENERGY SEMINAR

Squadron Leader

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(Aerodrome Infrastructure & Safeguarding)



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## Scope

- Responsibilities of SO2 ATC (AI & S)
- Aim of RAF ATC
- Effects of Wind Turbines on RAF ATC Radars
- Assessment Process
- Ongoing Work
- Questions

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## Responsibilities

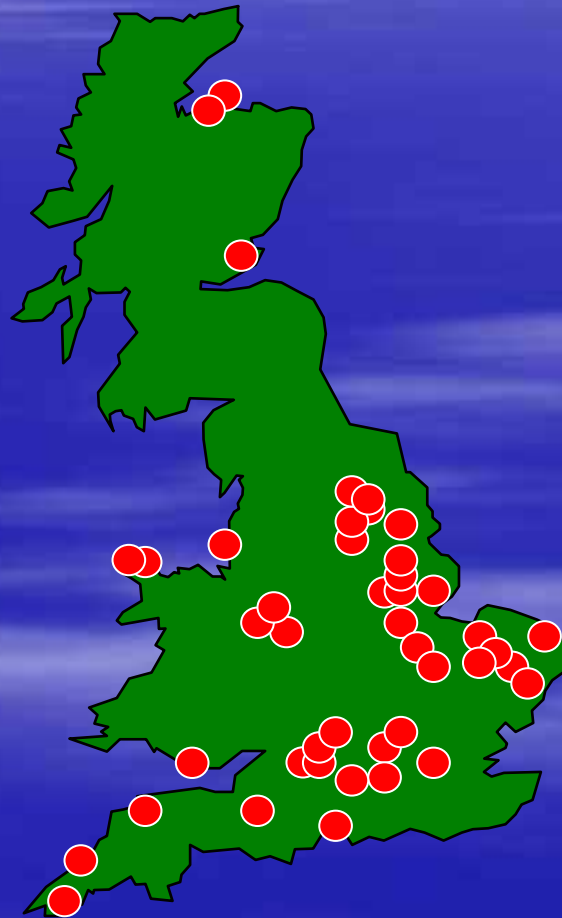
- Safeguarding Military Aerodromes
  - Infrastructure  
(Pavements/Markings/Lighting)
  - Obstacle Clearance Criteria/Safeguarding Surfaces

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Military

Safeguarded

Sites



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## Responsibilities

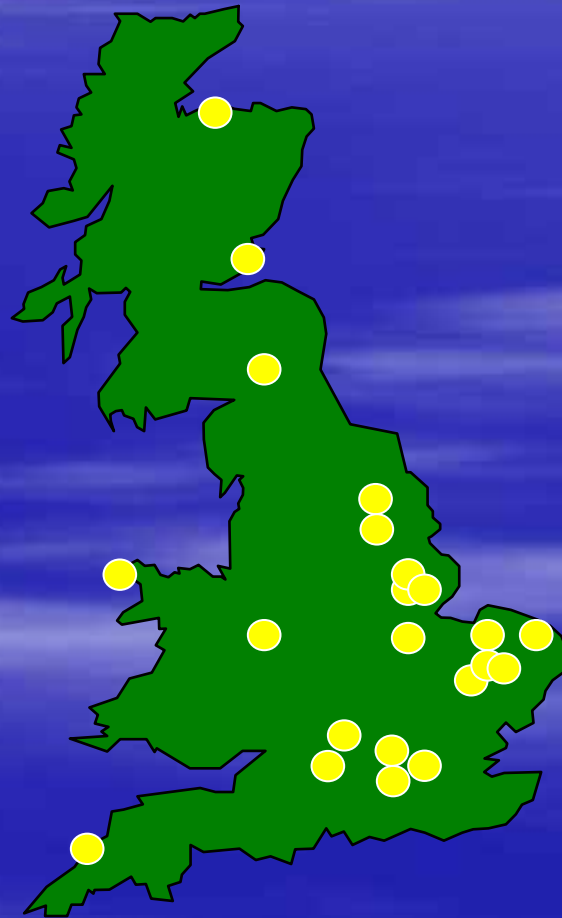
- Safeguarding Military Aerodromes
  - Infrastructure (Pavements/Markings/Lighting)
  - Obstacle Clearance Criteria/Safeguarding Surfaces
- RAF ATC Radars
  - Effect of Wind Turbines on Operations

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RAF ATC

Radar

Sites



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## Aim of RAF ATC

To Maintain a Safe  
and Expeditious  
Flow of Air Traffic

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## Effects of Wind Turbines on RAF ATC Radars

- Study into Effect of Wind Turbines on Radar Performance in Aug 1994
  - RAFSEE Technical Report 94010 dated Dec 1994
  - False Radar Returns
  - Masking Radar Returns
  - Reduced Radar Coverage

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## Effects of Wind Turbines on RAF ATC Radars

- RAF Guidelines for Siting Wind Turbines Close to RAF ATC Radars
  - Annex A to RAFSEE/2196/11011/GR dated Feb 1995
  - Not to be Sited in Line of Sight within 60% of Maximum Instrumented Range of RAF ATC Radar (36nm)
  - Not to be Sited Within PAR Parameters

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## Effects of Wind Turbines on RAF ATC Radars (Challenged)

- HQ 3GP ATC Sponsored Trial (Nov 04 – ivo Cleve Hill)
  - Validate/Amend Assessment Criteria
  - RAF Valley Watchman & Deployed Watchman
    - Identified Overhead Obscuration
    - Identified Clutter as Highly Detrimental to Safe Provision of ATS.
    - Identified Shadowing Both Sides of Turbines

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## Effects of Wind Turbines on RAF ATC Radars (Apres Challenge)

— RAF Guidelines for Siting of Wind Turbines Close to  
RAF ATC Radars Amended

- No restriction on Line of Sight distances
- Not to be Sited Within PAR Parameters

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## Assessment Process

- Approximately 70-100 proposals per month
  
- Responses
  - Technical Advice from RAF Henlow
  - Position in Relation to Airfield Flight Profiles
  - Proliferation
  - Position in Relation to Obstacle Clearance Criteria/Safeguarding Surfaces

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## Ongoing Work

- HQ STC ATC Sponsored Trial
  - Mobile Watchman Deployed to Validate/Amend Assessment Criteria
  - Opportunity for Developers to Visit Site
  - Full Report Expected to Assist Development
- Maps to Provide Line of Sight Information from RAF ATC Radars
- Participation in Radar Sub-Group/Steering Groups/Seminars

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Questions?