RenewableUK
Greencoat House, Francis Street
London SW1P 1DH, United Kingdom

Tel: +44 (0)20 7901 3000
Fax: +44 (0)20 7901 3001

Web: www.RenewableUK.com
Email: info@RenewableUK.com

Guidance on Low Flying Aircraft & Onshore Anemometer Masts and Wind Turbines February 2018

In the past wind developers and operators have been advised of the risk associated of low flying aircraft unexpectedly encountering onshore wind energy developments through guidance provided by RenewableUK (RUK) based on work with stakeholders (2012). This has been updated based on discussions with the Defence Geographic Centre (DGC), the Low Flying Operations Flight (LOF) of the Royal Air Force (RAF) and the CAA led Airspace and Safety Initiative Windfarms Working Group (ASIWWG).

Current Situation

Discussions with the RAF have identified issues with the awareness of obstacle locations when conducting low flying activities. There are two distinct issues – awareness of temporary anemometer masts which due to their slender nature are difficult to acquire visually and late notification of the erection of wind turbines as a result of the conditions applied by Planning Authorities.

The master database of obstacles, called the Digital Vertical Obstruction File (DVOF), is maintained by the DGC and used to generate the charts and databases used by military pilots when planning their flights. Civil operators have access to an output from the DVOF, available from NATS Aeronautical Information Services and updated approximately monthly, that lists all recorded UK structures that are 300 feet or over in height, meeting the UK's international obligations. However, DGC's general mapping requirement is for all structures over 150ft to be recorded. In addition, there is an interest in structures of lower heights in relation to low flying operations in some areas whether this is military, emergency service, airborne inspections of ground equipment or some recreational flying activities, particularly gliding activities.

Planning conditions for wind turbines and anemometer masts may have required notification immediately upon the grant of planning permission with a confirmation some weeks after the commissioning of the final turbine. Given delays in construction following consent and long build periods for large developments this approach leads to inaccurate data in the databases used for flight planning. From a pilot's point of view the result is the presence of 'phantom' obstacles which have not yet been built or apparently clear areas being populated with unexpected tall structures. Planning conditions have also sometimes erroneously identified the body that needs to be notified leading to confusion. Furthermore, as there is no consistent requirement to notify the DGC for shorter structures and not all private airfields are easily identified for the purposes of consultation, there is a risk of a pilot encountering an Anemometer Mast or Wind Turbine unexpectedly. This presents a flight safety risk, particularly for high energy low-level RAF operations. To avoid the risk of these encounters the aviation community requires more comprehensive information on the locations of masts. RUK recommend that the DGC are kept informed routinely of the erection and removal anemometer masts and wind turbines (along with any operational ones) to enable stakeholders to be kept as update to date as possible, following the processes below.

RenewableUK
Greencoat House, Francis Street
London SW1P 1DH, United Kingdom

Tel: +44 (0)20 7901 3000
Fax: +44 (0)20 7901 3001

Web: www.RenewableUK.com
Email: info@RenewableUK.com

Improving the quality of information available to pilots will enable them to plan their flights to avoid encountering wind turbines or anemometer masts thus ensuring that they can fulfil their legal obligations under aviation law and not present an increased risk to personnel who may be working on site.

Routine Notification of Erection or Removal of Anemometer Masts and Wind Turbines

RUK members are advised to contact the DGC at least 6 weeks in advance of the erection or removal of an anemometer mast or first turbine and to follow up on the day with a confirmation that the activity has taken place, **irrespective of the height**. The data shall include location, height, date of erection, date of removal and lighting type (none, infra-red or brightness). The communication should be copied to the

GAAC which will arrange for the wider General Aviation community to be informed. It is also recommended that any local aerodrome identified during consultation is notified, particularly any police helicopter or air ambulance unit. By copying RenewableUK their database of onshore developments will be maintained. RUK may also share the information with official agencies such as BEIS, the CAA and Emergency Services (SAR, Police, Ambulance).

Notifications should be sent to the DGC with copies to the RAF Low Flying Operations Flight, the General Aviation Awareness Council and RenewableUK – see table below for contact details.

Details should include planning reference and authority, location, height, date of erection, date of removal and lighting type (none, infra-red or brightness). The DGC can receive most formats whether they are paper or electronic, file types can include spread sheets, shape files, or text documents. The coordinate system used for locations should be specified and again the DGC can accept all forms (OSGB36, WGS84, UTM etc) although WGS84 Latitude and Longitude would be the preferred form.

The DGC will use this information to validate and update their list of masts and turbines in the database increasing the confidence in the data. If there are any unknown masts or turbines in locations of low flying interest the RAF Low Flying Operations Flight will arrange for urgent temporary notification to be made via the Notification to AirMen (NOTAM) system.

Where multiple anemometers and turbines are being erected, the details provided to DGC should include the location, height, date of erection, date of removal and lighting type (none, infra-red or brightness) of each mast/turbine.

Summary

- Advise Defence Geographic Centre of locations of existing, to be erected and removed anemometer masts and turbines as soon as practicable. Copy this to the RAF Low Flying Operations Flight.
- Notify the Defence Geographic Centre at least 6 weeks in advance of construction with a confirmation on the day.
- Copy the above notifications to the General Aviation Awareness Council and RenewableUK.

RenewableUK
Greencoat House, Francis Street
London SW1P 1DH, United Kingdom

Tel: +44 (0)20 7901 3000
Fax: +44 (0)20 7901 3001

Web: www.RenewableUK.com
Email: info@RenewableUK.com

Key Contact Details

Organisation	Postal Address	Email
Defence Geographic Centre	Geospatial Air Information Team UK DVOF and Power Lines Defence Geographic Centre Hotine Building, Rm 19 Elmwood Ave Feltham Middlesex TW13 7AH	DVOF@mod.gov.uk
Low Flying Operations Flight	Warrant Officer Low Flying Operations Flight Operations Flight Royal Air Force Wittering Peterborough PE6 6HB	swk-lfofwo@mod.gov.uk
General Aviation Awareness Council	Chairman General Aviation Awareness Council Bicester Airfield, Skimmingdish Lane, Bicester, Oxfordshire, OX26 5HA	Charles.henry@gaac.org.uk or planning@gaac.org.uk
RenewableUK	RenewableUK Greencoat House Francis Street London SW1P 1DH	aviation@renewableuk.com

For further information please contact:
Dujon Goncalves-Collins
Programme Director
dujon.goncalves-collins@renewableuk.com