Australian Government

Civil Aviation Safety Authority

STAKEHOLDER ENGAGEMENT GROUP

CASA Ref: GI17/652

23 August 2017

Mr Tim Stuckey
Planning Officer
Resource and Energy Assessments
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SYDNEY NSW 2001

Email: Tim.Stuckey@planning.nsw.gov.au

Dear Mr Stuckey

I refer to your email of 7 August 2017 requesting comments from the Civil Aviation Safety Authority (CASA) on the proposed modifications to the Glen Innes Wind Farm.

I am advised that the wind farm proposal is outside the obstacle limitation surface for Glen Innes Aerodrome by definition, but is still very closely located to the aerodrome.

The aerodrome itself is experiencing growth with an increase in training operations forecast (highlighted in the risk assessment provided by the proponent). Major development works (funding provided at State and Federal level) are in the planning stages to cater for the expected introduction of a commercial flying college. Runway 10/28 is to be sealed, a parallel taxiway to be constructed and a new hardstand for 40 aircraft is being built. These improvements will see an increase in the number of low experience pilots flying to and from Glen Innes Aerodrome in most weather conditions and at night.

At 180m high Above Ground Level, the proposed turbines and taller blades will infringe the navigable airspace (150m height limit) in close proximity to Glen Innes Aerodrome and will require an increase in minimum sector altitudes (MSA) for Glen Innes Aerodrome.

Airservices Australia advise that turbine WTG07 will affect the RNAV (GNSS) RWY14 instrument procedure at Glen Innes Aerodrome. In addition, turbines WTG07, WTG08 WTG09 and WTG12B will affect the 25nm MSA NE sector at Glen Innes Aerodrome.

The report only refers to Airservices Australia as the procedure design organisation responsible for the published instrument approach procedures, however, The Airport Group is responsible for maintenance of the RWY 32 RNAV approach. It is therefore strongly recommended that both procedure design organisations are consulted for possible impact. To check which organisations are responsible you can view the procedures at http://www.airservicesaustralia.com/aip/aip.asp then 'Departure and Approach Procedures'. The logo on the bottom of each procedure plate indicates the design organisation responsible. The operator of Glen Innes Aerodrome should also be consulted prior to any changes being made to the Aerodrome's Instrument Flight Procedures.

The report does not discuss any impact on the circling area of the approach procedures. Aerodrome weather is available through an Aerodrome Weather Information Service by phone. If actual aerodrome QNH is used by a pilot, the minimum descent altitude (MDA) may be reduced by 100'. This has not been taken into account in the report. For example, Table 7.1, using an MDA of 4040' for RWY14 RNAV shows that the aircraft height above the turbine #7 is clear by 107'. With an MDA of 3940' using actual QNH, this clearance is minimal.

It is not known what atmospheric assumptions have been used in the report or in the design of the published procedures by Airservices Australia and The Airport Group. This affects, among other things, the turn radius and climb speeds used in the designs. The results provided in Table 7.1 may not correlate with actual design calculations.

CASA recommends that the wind farm should be provided with steady red medium intensity aviation hazard lighting which complies with Section 9.4 of the Civil Aviation Safety Authority Manual of Standards Part 139 – 'Aerodromes', and spaced in accordance with the National Airports Safeguarding Framework (NASF) Guidelines. Further information on the NASF guidelines is available from the following link:
https://infrastructure.gov.au/aviation/environmental/airport_safeguarding/nasf/

Should such lighting be considered a negative impact on visual amenity and result in resident objection, CASA would recommend that an Aircraft Detection Lighting System (as recommended in the United States Federal Aviation Administration Advisory Circular AC 70/7460-1L CHG1 – 'Obstruction Marking and Lighting'), be installed. Such a system would only activate the lights when an aircraft is detected in the near vicinity and deactivate the lighting once the aircraft has passed. This would be a reasonable and feasible alternative to having lights activated from dusk to dawn and in low light levels during the day and would ensure aviation hazard lighting is implemented in a manner that minimises visual intrusion to surrounding residences.

I trust this information is of assistance.

Yours sincerely

Carolyn Hutton
Manager
Government and International Relations Branch