



AIR NAVIGATION, AIRSPACE AND AERODROMES BRANCH

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CASA ASSESSMENT – KERI KERI WIND FARM SSD-38358962

CASA has reviewed the Aviation Impact Assessment (AIA) (Appendix L to the EIS) by Aviation projects of 29 February 2024 for the proposed Keri Keri Wind Farm.

- The proposal includes up to 155 Wind Turbine Generators (WTGs) that will be up to 291.5 m Above Ground Level (AGL) tip height.
- There will be up to 8 (4 permanent and 4 temporary) wind monitoring towers (up to 159 m AGL)
- The WTGs are located beyond the Obstacle Limitation Surface (OLS) of the nearest certified aerodrome - Balranald Aerodrome (YBRN)
- The Airservices Assessment of 8 June 2023 advises that the wind farm turbines 172, 173, 174 and 175 at a maximum height of 364.98 m (1198 ft) AHD will affect air route segment W762 NATYA - TREST. The route LSALT for this segment will need to be raised to 2200 ft.
- The Aviation Impact Assessment advises that there are two landing grounds located within 3 nm of the closest WTG.

This CASA assessment is made in accordance with the *National Airports Safeguarding Framework (Guideline D)* as developed by the Department of Infrastructure, Transport, Regional Development, Communications and the Arts, to provide planning advice to State and Local Planning Authorities.

With regards to Visual Flight Rules (VFR) operations, pilots are permitted to fly as low as 500 ft AGL (ie, terrain). The WTGs will reach up to a maximum height of approximately 291.5 m (956 ft) AGL.

Except for Recommendation 9 '*Lighting of WTGs*', CASA agrees with the Recommendations at Section 11 of the Aviation Impact Assessment.

Contrary to Recommendation 9, CASA considers the proposed wind farm will be a hazard to aviation safety and recommends that the wind farm is obstacle lit with steady medium-low intensity

red obstacle lighting in accordance with the National Airports Safeguarding Framework Guideline D 'Managing the Risk of Wind Turbine Farms as Physical Obstacles to Air Navigation' [National Airports Safeguarding Framework Principles and Guidelines \(infrastructure.gov.au\)](#) and section 9.31 of Part 139 Aerodromes Manual of Standards [Part 139 \(Aerodromes\) Manual of Standards 2019 \(legislation.gov.au\)](#) (lower level lights on the turbine support columns are not essential).

International standards require 2,000 candela lighting intensity on the nacelle (also recommended in the NASF guideline) and 200 candelas at the mid-point of the turbine mast. CASA recommends that 200 candela as a minimum intensity lighting on the nacelle would suffice (due mainly to the lack of background lighting in the vicinity of the turbines). The obstacle lighting should be monitored to alert the wind farm operator of any outage and at least some of the obstacle lights remain on during an outage. CASA is prepared to review a lighting plan that indicates which turbines are proposed to be lit.

As the Aviation Safety regulator, CASA does not consider the visual impact of obstacle lighting on neighbours / homesteads. However, there are mitigations for visual impact such as baffling and intensity control (as described in the Aviation Impact Assessment Table 10 / Page 57 'Effect of obstacle lighting on neighbours').

Further to Recommendation 11, and as recommended by the Aerial Application Association of Australia, CASA recommends that the following Australian Standard be considered regarding overhead transmission lines:

- AS 3891.2, Air navigation — Cables and their supporting structures — Marking and safety requirements, Part 2: Low-level aviation operations.

The impact on LSALTs (Lowest Safe Altitude) is covered in Aviation Impact Assessment Section 5 Consultation and Section 10 Conclusions but not specifically included in Section 11 Recommendations. The proponent (or the proponent's Aviation Consultant) should engage with Airservices Australia regarding the changes to LSALTs, before the offending WTGs have been erected. (Airservices may need some lead time).

Yours sincerely

David Alder

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