



AIR NAVIGATION, AIRSPACE AND AERODROMES BRANCH

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To be submitted through major projects portal

CASA ASSESSMENT AND RECOMMENDATIONS – MALLEE WIND FARM SSD-53293710

CASA has reviewed the Aviation Impact Assessment (AIA) (Appendix 20 to the EIS) by Aviation projects of 25 September 2024 for the proposed Mallee Wind Farm.

- The proposal includes up to 76 Wind Turbine Generators (WTGs) that will be up to 280 m Above Ground Level (AGL) tip height.
- There will be up to 7 permanent wind monitoring towers (up to 170 m AGL) and some temporary wind monitoring towers.
- The WTGs are located beyond the Obstacle Limitation Surface (OLS) of the nearest certified aerodrome - Mildura Aerodrome (YBRN).
- Aviation Projects advises that the 10nm MSA will need to be raised to 2300 ft and the 25 MSA to 2400 ft.
- Aviation Projects advises that the instrument approach procedures flight path for the DME or GNSS Arrival Procedure is located above the wind farm footprint and will require the initial approach segment minimum altitude to be increased to 2400 ft.
- Aviation Projects advises that all lowest safe altitudes (LSALTs) (Air Routes Q4, J19, W451 and Grid LSALTs) in the vicinity of the Project Area will need to be increased to 2400 ft AMSL.
- Aviation Projects advises that there is one uncertified aerodrome located within 3 nm of the closest WTG. The location map shows it to be 12km+ to the nearest turbine or wind monitoring tower.

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 280 m (919 ft) AGL.

CASA agrees with the Recommendations at Section 11 of the Aviation Impact Assessment.

However, 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 candela 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 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 / the dark sky. However, there are mitigations for visual impact such as baffling and intensity control (as described in the Aviation Impact Assessment Table 10 / Page 49 '*Effect of obstacle lighting on neighbours*' and page 7 of Annexure 3 '*Regulatory Requirements – Lighting and Marking*').

Further to Recommendation 5, 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 MSAs and LSALTs is covered in Aviation Impact Assessment Sections 6 and 10 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 MSAs and LSALTs, before the infringing WTGs have been erected. (Airservices may need some lead time). As described by Aviation Projects on page 22 of the AIA, the Mildura Airport operator will also need to approve the changes.

Yours sincerely

David Alder

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