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**Tatsiana Bandaruk** A/Senior Environmental Assessment Officer 4 Parramatta Square 12 Darcy Street PARRAMATTA NSW 2150

Dear Tatsiana

## UUNGULA WIND FARM (SSD 6687) - REQUEST FOR ADVICE ON ENVIRONMENTAL IMPACT STATEMENT

Thank you for referring the abovementioned wind farm proposal to the Department of Defence (Defence) for comment. Defence understands that this is a proposal for the construction, operation and decommissioning of a wind farm with 97 turbines and maximum height of 250 metres AGL (to blade tip); and ancillary infrastructure including access tracks, road upgrades, battery storage, electricity cabling, substations and grid connection.

As tall structures, wind farms can have the potential to pose a number of concerns for Defence, particularly with regard to aircraft safety, military low flying and radar interference. Defence has conducted an assessment of the amended proposal for potential impacts on the safety of Defence flying operations.

There is an ongoing need to obtain and maintain accurate information about tall structures so that this information can be marked on aeronautical charts. Marking tall structures on aeronautical charts assists pilot navigation and enhances flight safety. Airservices Australia (ASA) is responsible for recording the location and height of tall structures. The information is held in a central database managed by ASA and relates to the erection, extension, or dismantling of tall structures, the top of which is above:

a. 30 metres AGL, that are within 30 kilometres of an aerodrome; and

b.45 metres AGL elsewhere.

The proposed 250 metres AGL turbines meet the requirements for reporting of tall structures. Defence therefore requests that the applicant provide ASA with "as constructed" details. The details can be emailed to ASA at vod@airservicesaustralia.com.

Defence notes that the National Airports Safeguarding Framework Guideline D – Managing the Risk to Aviation Safety of Wind Turbine Installations (Wind Farms)/Wind Monitoring Towers recommends that where a wind turbine 150 metres or taller in height is proposed away from aerodromes, the proponent should conduct an aeronautical risk assessment and

submit that assessment to the Civil Aviation Safety Authority (CASA) to determine whether the proposal is a hazard to aircraft safety and requires approved lighting or marking. If CASA determines that obstacle lighting is to be provided, it should be compatible with persons using night vision devices. If LED lighting is proposed, the frequency range of the LED light emitted should be within the range of wavelengths 665 to 930 nanometres. Defence also requests that the colour used for the wind turbines ensure that they are conspicuous to aircraft during daylight hours.

Due to low flying military aircraft originating from RAAF Base Williamtown to this area, Defence requests the installation of powerline marker balls along the powerline connecting the wind farm to the electricity grid to assist with obstacle avoidance.

Regarding the wind monitoring masts as part of this proposal, Defence notes that the National Airports Safeguarding Framework Guideline D - Managing the Risk to Aviation Safety of Wind Turbine Installations (Wind Farms)/Wind Monitoring Towers - Paragraph 39, recommends the top 1/3 of wind monitoring towers are painted in alternating contrasting bands of colour in accordance with the Manual of Standards for Part 139 of the Civil Aviation Safety Regulations 1998.

Defence has no objection to the proposed wind farm provided that the project complies with the above conditions.

Should you wish to discuss the content of this advice further, my point of contact is Adam Murray at land.planning@defence.gov.au or telephone on (02) 6266 8474.

Yours sincerely,

**Charles Mangion** Director Land Planning & Regulation

01 July 2020