



Doc Ref: WI337-02F03(rev2)- Wind Shear Letter.docx

Date: March 4, 2024

Address: Level 4, 21 Terminal Ave, Canberra, ACT

To: CANBERRA AIRPORT

RE: 19 & 21 SCHERGER DRIVE, FAIRBAIRN, ACT  
WIND SHEAR LETTER

Dear Sir/Madam,

This letter is in relation to the proposed development located at 19 & 21 Scherger Drive, Fairbairn, ACT, and presents an opinion on the likely impact of the proposed design in generating wind shear and turbulence airport operations of Canberra International Airport. This assessment is based on an examination of the architectural drawings prepared by AMC Architecture, received on December 14, 2023 and updated on the February 27. The development has a height of 21.7m above ground. No wind tunnel tests have been undertaken for the subject development.

Buildings located near runways have the potential to generate wind shear and turbulence which may affect the operations of the airport. Partly in response to this risk, the Dutch Aerospace research organisation (NLR) prepared a detailed report titled "Wind Criteria due to obstacles at and around airports" (NLR Report, 2010). This report includes recommendations with regard to the construction of buildings near runways. A detailed review was conducted for use by aviation safety authorities and is titled "Guidance Material: Building-induced wake effects at Airports". These reports formed the basis for the recommendations contained in Guideline B of the National Airports Safeguarding Framework which was developed by the National Airports Safeguarding Advisory Group. The guidelines and guidance material aim to manage and reduce the risk of building-generated wind shear and turbulence near airports. These guidelines were updated in May 2018.

The location of the proposed development relative to the two-intersecting 17/35 and 12/30 runways is shown in Figure 1. The closest distance between the development and the approach flight path to Runway 30 is 780m, which occurs when winds prevail from the 15° direction. This location (Point A, Figure 1) is 176m from the runway threshold zone. The closest distance between the development and the approach flight path to Runway 35 is 1,045m and this occurs when winds occur from 90°. This location (Point B, Figure 1) is 1,012m from the runway threshold zone. Hence the subject development is within the NASF Guideline B assessment trigger area for the south-eastern touchdown zone of Runway 30 but is outside for the southern touchdown zone of Runway 35, as per Clause 49 of NASF Guideline B.



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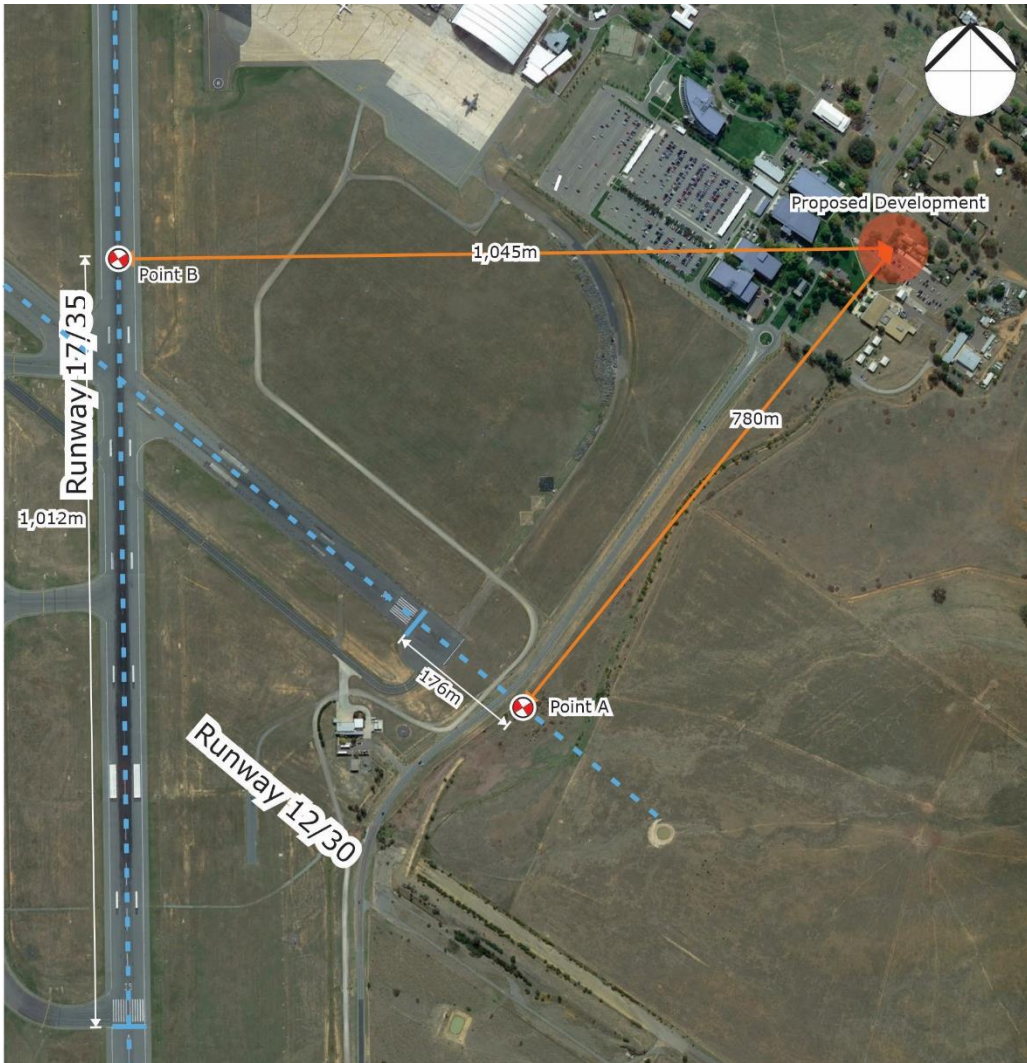


Figure 1: Proposed development in relation to Canberra International Airport

A review of the provided architectural drawings, prepared by AMC Architecture has been undertaken to determine the proposed developments acceptability due to its location within the assessment trigger area. As per Clause 51, NASF Guideline B, "...buildings should not penetrate a 1:35 surface extending perpendicular from the runway centreline." At 780m from the centreline, the subject development needs to have a total height less than 22.3m to not penetrate the 1:35 surface. Thus, with a total height of 21.7m, the subject development is below the 1:35 surface, as per Clause 51 of NASF Guideline B and there is no requirement for the further examination of the subject development's potential to generate wind shear and turbulence.

Regards,

Windtech Consultants

Matthew Micali BEng  
Supervising Engineer