

# Sunfield Fast-track

Auckland Council Specialist Memo

**Annexure 15:  
Lighting  
Domenico De Vincentis  
4 August 2025**

# Lighting Memo

**Prepared by:** Domenico de Vincentis, S&T Lighting

**Date:** 4 August 2025

## QUALIFICATIONS AND RELEVANT EXPERIENCE

1. I hold the qualification of BA Architecture (Hons) by Bennett University (Rio de Janeiro, Brazil) and Simon Bolivar University (Caracas, Venezuela), and have 35 years of experience in lighting design and lighting planning. I'm also a lecturer of lighting design at Massey University lighting course
2. I am an associate member of the Illuminating Engineering Society of Australia and New Zealand – IESANZ, and a member of the Illuminating Engineering Society of North America - IESNA.
3. I have prepared expert evidence and technical assessments for resource consent applications, plan changes, and notices of requirement for designation, and have appeared as an expert witness before consent authorities and the Environment Court on multiple occasions.

## Code of Conduct

4. I confirm that I have read the Environment Court Practice Note 2023 – Code of Conduct for Expert Witnesses (Code), and have complied with it in the preparation of this memorandum. I also agree to follow the Code when participating in any subsequent processes, such as expert conferencing, directed by the Panel. I confirm that the opinions I have expressed are within my area of expertise and are my own, except where I have stated that I am relying on the work or evidence of others, which I have specified.

## PEER REVIEW OF LIGHTING EFFECTS ASSESSMENT REPORT

### INTRODUCTION

5. At the request of Auckland Council, I carried out a peer review of the above Resource Consent application's lighting reports and accordingly prepared this report.

### Application Documentation Reviewed

I carried out my peer review based on the following documents:

- a) BUN60477430 – Specialist Brief, issued by Auckland Council, dated January 2025

- b) “Sunfield Community - Application Planning Report”, prepared by Tattico, dated 31 March 2025.
- c) 01a – “Sunfield Planning Report Attachment 2 - Conditions of Consent (Draft)”, prepared by Tattico, dated 31 March 2025.
- d) 3a – “Sunfield Community Concept Masterplan, parts A, B, and C”, prepared by Studio Pacific Architecture, dated February 2025.
- e) 04 – “Sunfield Concept Masterplan – Urban Design Assessment”, prepared by Studio Pacific Architecture, dated 11 February 2025.
- f) 19 – “Sunfield Development – Ardmore Airport Safeguarding Assessment Report”, prepared by L+M Airport Consulting, dated March 2025.
- g) 20 – “Sunfield Community – Aviation Peer Review Report”, prepared by AVLAW Aviation Consulting, dated 27 February 2025.
- h) 22 – “Sunfield Community – Ardmore Airport Safeguarding, Lighting and Glare Report”, prepared by IBEX and signed by Andy Collins, dated 25 January 2025.  
23 – “Sunfield Community - Solar Installation on Ardmore Airport Interface Letter”, issued by Lightforce Solar, dated 10 April 2024.
- i) 38 – “Sunfield Community – Solar Installation Feasibility Report”, prepared by Lightforce Solar, dated 5 April 2024.
- j) “Auckland Unitary Plan (OP) – Designation Schedule No. 200 – Ardmore Airport.

#### PRELIMINARY

- 6. The proposed 55 Cosgrave Road – Sunfield Community consists of a large-scale urban development that includes a town centre area, a school, local hubs for the community, residential dwellings and retirement villages, open spaces, recreational parks and reserves, and ecological areas. The development also includes the installation of solar panel for power generation.
- 7. The development will be located in the vicinity of Ardmore Airport, and its external lighting and sunlight reflected by the proposed solar panels could potentially affect aviation safety and airport operations.
- 8. The Sunfield Community Planning report notes that consultation has occurred to ensure that the development design provides an appropriate level of protection to the airport activities and flights.
- 9. The report also notes that there is still no detailed lighting design at this stage, and the Auckland Unitary Plan Designation No. 200 applies on the site, imposing restrictions to the construction’s height. The report refers to specialist reports regarding lighting and glare issues, and mitigation actions.
- 10. Lambert & Rehbein (L+R) Airport Consulting report confirms the above regarding height restrictions and mentions in item 5.5 – “Lighting and Glare” that glare could potentially blind or distract pilots, and lights could confuse pilots and/or being mistaken for aeronautical ground lights.

11. Regarding constructions heights, which includes street light poles, the report notes that it is not anticipated that their height will exceed the construction heights limits.
12. Regarding glare, the report notes that the AUP Designation Schedule establishes a protection area extending 900m from the runway bases, and proposes that any external lighting located within this area should comply with the National Airports Safeguarding Framework (NASF) Guideline “E” luminous intensity limits, arranged in 4 zones and measured at 3 degrees above the horizontal, as follows:
  - Zone “A” – 0 cd
  - Zone “B” – 50 cd
  - Zone “C” – 150 cd
  - Zone “D” – 450cd

The Appendix “A” figure B22156/07 included in the report shows that the proposed development will be within all above zones of Ardmore Airport runway 03/21 protection area.

13. The IBEX lighting report states that compliance with the requested glare limits noted on L+R report is feasible as street lighting will be designed to comply with the Auckland Transport Technical Design Manual (AT-TDM) requirements, which are more stringent than the values stated on the NASF Guideline “E”. The report notes that the NASF recommends maximum 3 degrees tilt above the horizontal plane on all street lighting luminaires, noting that the limit requested on the AT-TDM is zero tilt.
14. Additional to the above, the Lightforce Solar report states that the potential adverse effects on flights caused by the effect of sunlight reflected on the proposed solar panels will be mitigated by adjusting their orientation and tilt angle to avoid any glare or reflection, and by the addition of anti-reflective coating and/or texturing coating to reduce the glare.
15. The Sunfield Community Planning reports also includes an attachment with the proposed consent conditions, requesting at the developed design stage a complete street lighting design, clarifying the selected lighting subcategories of each road and showing compliance with the AT-TDM rules, AS/NZS 1158 street lighting standard, AUP E24 lighting rules and AUP E27 carparking and pedestrian lighting recommendations.

## COMMENTS

16. Based on the above, I have reviewed the supplied information regarding the proposed external lighting and the restrictions that apply, and can conclude the following:
  - a) Agree with the comments stated on the L+R report regarding construction height limits, and concur that it is not expected at any point of the development that any external luminaire will exceed the height limits.

- b) Agree with the comments stated on the IBEX report and concur that the limits imposed by AT-TDM are more stringent than the NASF luminous intensity values recommended on L+R report.
- c) Based on this, compliance with the proposed limits will be achieved if the street lighting is designed to comply with AT-TDM standard.
- d) Agree that the Lightforce Solar report mitigation actions to be undertaken to limit the adverse effects of glare caused by the solar panels reflected sunlight are appropriate and will effectively mitigate glare to pilots, contributing to the safety of Ardmore Airport air navigation.
- e) Agree with the consent conditions requested on the draft document and concur that the applicant shall submit, at no later than the developed design stage, a street lighting design project, showing compliance with the lighting parameters of the selected street lighting subcategories as detailed on AT-TDM and AS/NZS 1158 Standard, and complying with the restrictions imposed by AUP Designation No. 200, and the lighting rules of AUP E23 Signs, AUP E24 Lighting & AUP E27 Carparking.
- f) Additional conditions are included in our recommendations.

## RECOMMENDATIONS

I recommend that the following additional conditions are included in the Resource Consent decision:

1. Within 30 days of the completion of each stage of the development external lighting being put into service, the Consent Holder shall submit a report from a suitably qualified and experienced lighting practitioner accepted by Council, confirming the following:
  - a) The external lighting has been installed as specified on the lighting design layouts and specifications.
  - b) The lighting installation complies with the glare limits stated on the L+R report, the requirements of AT-TDM, AS/NZS 1158 Standards, and the lighting rules of AUP E23 Signs, AUP E24 Lighting & AUP E27 Carparking.
  - c) The installed lighting is not causing any adverse effect on the pilot's visual conditions at night-time, and is not affecting the safety of Ardmore Airport air navigation conditions.
  - d) There is no obtrusive glare to road users at night-time.

Yours faithfully  
S&T Wellington Limited



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Associate Lighting Designer



**S&T** Lighting