

14th July 2021

Ref: SY190518-AUL01-A

Hansen Yuncken
Building 1, L3, 75-85 O'Riordan Street
Alexandria NSW 2015

ATTN: Nick Ko

Dear Nick,

Re: Acoustic Assessment – Noise Assessment at East Leppington Public School

Northrop Consulting Engineers (Northrop) Acoustics have been engaged by Hansen Yuncken to assess the new East Leppington Public School located at Commissioners Dr & Elkhorn St, East Leppington NSW 2179 for compliance with consent conditions relating to noise. The report summarizes the measurement results and provides an assessment of noise impact in relation to the consent conditions and recommended noise level criteria.

Project Criteria

Consent Conditions

The following consent conditions pertaining to noise and acoustics have been prescribed:

E8 The Applicant must undertake short term noise monitoring in accordance with the Noise Policy for Industry where valid data is collected following the commencement of use of each stage of the development. The monitoring program must be carried out by an appropriately qualified person and a monitoring report must be submitted to the Planning Secretary within two months of commencement of use of each stage of the development (or other timeframe agreed to by the Planning Secretary) to verify that operational noise levels do not exceed the recommended noise levels for mechanical plant and for the use of the multipurpose hall outside of school hours identified within Acoustic Report for School Building – East Leppington Public School dated 20 February 2020 and prepared by Northrop. Should the noise monitoring program identify any exceedance of the recommended noise levels referred to above, the Applicant is required to implement appropriate noise attenuation measures so that operational noise levels do not exceed the recommended noise levels or provide attenuation measures at the affected noise sensitive receivers.

Project Noise Trigger Levels

The Project Noise Trigger Levels at the boundary of the nearest affected residences as determined in the Acoustic Report for SSDA are shown in Table 1, below.

Table 1 Project noise criteria

Assessment period	Project Noise Trigger Levels – dB(A)
Day (7:00am – 6:00pm)	48 L_{Aeq} , 15 minute
Evening (6:00pm – 10:00pm)	43 L_{Aeq} , 15 minute
Night (10:00pm – 7:00am)	38 L_{Aeq} , 15 minute

Measurements

Instrumentation

The survey was conducted with an NTI XL2 Precision Integrating Octave Band Sound Level Meter (and windshield), Type 1 with 1/3 Oct band filter unit, which conforms to applicable standards of IEC 61672-1:2002-05 CLASS1 & IEC 60651 TYPE1. Measurements were taken continuously, and the microphone was set to receive direct frontal sound and facing the direction of sound emission. Equipment was calibrated before and after the measurements using a Brüel & Kjær Acoustic Calibrator. No calibration deviations were recorded.

Measurements

Measurements were conducted on Monday 12th July 2021 to assess noise emissions from the mechanical plants upon the nearest affected receivers at Commissioners Drive and Elkhorn Street. Measurements were conducted with all air conditioning units associated with the buildings switched on. Measurement locations were selected to be 3 Elkhorn Street, 73 and 61 Commissioners Drive as they are the nearest to the external mechanical plant areas.

At the time of visit noise from traffic, birds and a nearby construction site was present so 15-minute measurements were not possible. Shorter measurements were undertaken at 73 Commissioners Drive and 3 Elkhorn Street while there were breaks in traffic noise, birds and construction noise.

Noise measurement results are shown in Table 2, below.

Table 2 Measurement results-Mechanical noise levels

Measurement location	L_{Aeq} – dB(A)	Notes
73 Commissioners Drive	45	Some light traffic noise
3 Elkhorn Street	45	Some light traffic noise

Measurements were also undertaken at 61 Commissioners Drive to quantify noise impact of the Block A mechanical plant. As there was a flow of traffic and the ambient was affected by constant traffic noise, measurements were undertaken comparing noise levels with units switched on and off.

Noise measurement results are shown in Table 3, below.

Table 3 Measurement results – 61 Commissioners Drive

Measurement	L_{Aeq} – dB(A)	Notes
Units on	57	Traffic noise dominating
Units off	64	Traffic noise dominating

Assessment

Measurements with all air conditioning units switched on are found not to exceed the day time Project Noise Trigger Levels at the nearest affected receivers at 73 Commissioners Drive and 3 Elkhorn Street.

At 61 Commissioners Drive, traffic noise was dominating the acoustic environment and the measurements. It was found that at this location there was no contribution from the mechanical plant of Block A as it did not raise the ambient level.

The mechanical plant areas are operational only within the day period with operational hours of the school proposed to be 8am to 4pm. The assessment was undertaken during the day; hence this report assesses noise levels for daytime only. At the far end at 61 Commissioners Drive the ambient is dominated by traffic noise and the plant noise does not raise the ambient (is below the ambient level).

Conclusion

On site measurements indicate that the cumulative noise from the operation of all mechanical plant measured at the nearest affected residences do not exceed the recommended Project Noise Trigger Levels for the day period.

Yours sincerely,



Isabella Adlington
Acoustic Consultant
Northrop Consulting Engineers

Date	Rev	Issue	Author	Verifier
14.07.2021	A	Preliminary	I. Adlington	J. Ameli