13 September 2021

303, 74 Pitt Street
Sydney, NSW 2000

WHITE NOISE ACOUSTICS

Attention: Reg Struwig
Hindmarsh

Linfield Learning Village (LLV) Stage 2 – External Plant Noise Compliance Testing

This memorandum outlines the results of our onsite acoustic compliance survey of the recently completed plant items within Stage 2 of the Lindfield Learning Village (LLV) development located at 100 Eton Road, Linfield as required by item E10 pf the projects *Development Consent* including the SSD 8114, which includes the following:

> E10. 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 operation of each stage of the development (or other timeframe agreed by the Planning Secretary) to verify that operational noise levels do not exceed the recommended noise levels for mechanical plant identified in the Revised Noise Impact Assessment prepared by White Noise Acoustics dated 18 August 2020. Should the noise monitoring program identify any exceedance of the recommended noise levels referred to above, the Applicant must 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.

External noise emissions from the operation of the buildings plant items are required to comply with the following:

- The *Linfield Learning Village Phase 2 and 3, Revised Noise Impact Assessment (Ref:19009_140519_Noise Impact Assessment_BW_R7)* and undertaken by White Noise Acoustics for the approval stages of the proposed Phase 2 and 3 project.

Noise emission criteria established in the Acoustic Logic Noise Impact Assessment originally prepared for the site is shown below.

Note: The noise levels which will be adopted for this compliance assessment are the levels shown below.

ABN: 35 632 449 122

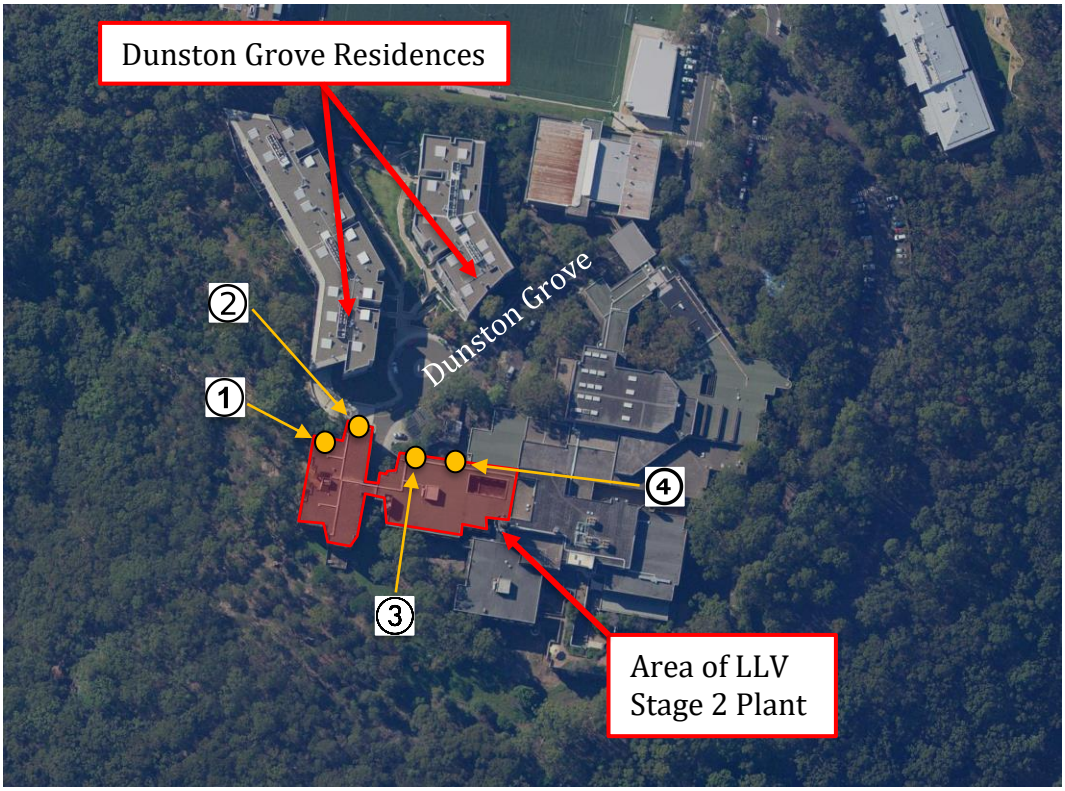
Figure 1 **Exact of Acoustic Logic Report – *Lindfield Learning Village Noise Impact Assessment***

Table 4 – EPA Intrusiveness Criteria

Location	Time of Day	Background noise Level - dB(A)L_{90}	Intrusiveness Noise Objective dB(A)$L_{eq(15min)}$ (Background + 5dB)
Residential Receivers 1–(Dunstan Grove) and 3 (Shout Ridge)	Day Time (7am – 6pm)	42	47
	Evening (6pm-10pm)	41	46
	Night (10pm – 7am)	39	44
Residential Receiver 2 – Tubbs View	Day Time (7am – 6pm)	44	49
	Evening (6pm-10pm)	42	47
	Night (10pm – 7am)	38	43

As shown below the nearest most affected residences are the located along Dunstan Grove, as shown below. The Dunston Grove residents at their nearest point to the LLV stage 2 building is approximately 20m.

Figure 2 **Site Map**



The noise level survey was performed using a Brüel & Kjær Hand-held Analyser Type 2250 (serial number 2709757 (Unit) & 2726283 (microphone)). Calibration of the sound level meter was checked with a Brüel & Kjær Type 4231 acoustical calibrator (serial number 3009148) prior to and following the measurements. Drift in calibration did not exceed ±0.5 dBA. All equipment carried current NATA calibration certificates. Attended measurements took place between 5:00pm and 6:00pm on Thursday 2nd September 3032.

Prior to all the noise measurements being undertaken all rooftop ventilation and air conditioning systems were checked to be operational and were confirmed by the mechanical contractor as to being in operation.

A review of the site topography, receiver locations and plant locations it was determined that the upper floor residents within the Duston Grove building would more than likely be affected greater than the residents located on lower floors. This is due to the majority of the installed plant items associated with LLV Stage 2 being located on the roof.

Unfortunately, site access was not granted to undertake measurements on the upper floors of the Dunston Grove building. As such measurements of rooftop plant items were undertaken at the slab edge (or near) of the LLV building and further back calculated to the known distance of the LLV building and the Dunston Grove Building. These are presented below.

Additionally, measurements within the street were undertaken around the Dunston Grove buildings to determine the noise levels at lower ground levels.

Table 1 Measured external noise levels (Roof Level)

Location on LLV (Left to right - Figure 2	Measured Noise Level at slab edge of LLV building dBA $L_{Aeq\ (1\text{-}minute)}$	Predicted Noise Level at Receiver dBA $L_{Aeq\ (1\text{-}minute)}$	Acoustic Criteria dBA $L_{Aeq\ (T)}$	Compliance
1	56	<45	Day: 47 (Typical school hours)	**Yes**
2	51	<45		**Yes**
3	58	<45		**Yes**
4	61	<45		**Yes**

Table 2 Measured external noise levels (Ground Level)

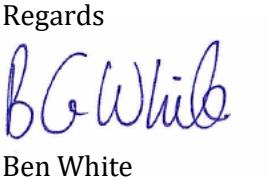
Location	Measured Noise Level dBA $L_{Aeq\ (1\text{-}minute)}$	Acoustic Criteria dBA $L_{Aeq\ (T)}$	Compliance
Dunston Grove Residences- Southern Façade Ground Level	Inaudible @ 49dBA	Day: 47 Evening: 45 Night: 43	**Yes.** **Inaudibility is achieved when a noise under investigation is at least 10dBA below the measured level.**

From our onsite acoustic survey outlined above, the operation of the mechanical systems during the testing complied with the acoustic requirements originally established in the Acoustic Logic *Noise Impact Assessment*, including additional acoustic documentation prepared for the site.

Based on the results of the noise level testing undertaken on the site the operation of the mechanical plant and equipment is compliant with the projects Conditions of Consent including Item E10 of SSD 8114.

If you have any additional questions, please contact the author below.

Regards



Ben White
Director
White Noise Acoustics