29 July 2022

Ref: 212083R/29831

Catholic Schools Office
Diocese of Maitland and Newcastle
c/- Principle Project Management

RE: ACOUSTIC CERTIFICATION – CATHERINE MCAULEY COLLEGE

This letter is to confirm compliance with the provisions of the D.A. conditions number F10 and F11 for Blocks C and D and the hardstand basketball courts at the Catherine McAuley College at Medowie, NSW as reproduced below;

Operational Noise Limits

F10. The Applicant must ensure that noise generated by operation of the development does not exceed the noise limits in Noise Assessment.

F11. 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 use of each stage of the development to verify that operational noise levels do not exceed the recommended noise levels for mechanical plant identified in Noise Assessment dated March 2018 and prepared by Spectrum Acoustic. 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.

The compliance follows on from Spectrum Acoustics original acoustic assessment for the development (Report number 171542/7595 dated March 2018) and, for completeness, should be read in conjunction with that report. The original report determined applicable noise criteria for the operation of the mechanical plant at the school as reproduced below;

Day	**53 dB(A) L_{eq} (15 min)**
Evening	**43 dB(A) L_{eq} (15 min)**
Night	**38 dB(A) L_{eq} (15 min)**

A site visit was undertaken on Wednesday, July 27th, 2022 to inspect the construction and the installed mechanical plant and to measure noise emissions where appropriate.

There are two a/c condensers located at the rear (east) of Block C and one condenser at the rear Block D. The combined sound power level of all of these condensers (taken from published data and confirmed by site noise measurement) is 87 dB(A). When calculated to the nearest residential boundaries to the north, and taking into account distance loss only, the resultant received noise would be about 36 dB(A) Leq (15 min). This is significantly lower than the day time noise criterion. The calculation doesn't take into account ground absorption and/or the effects of screening from topography and other structures and, therefore, there is a degree of conservatism in the results.

Other plant (compressor and dust collection unit) at the rear of Block D (TAS building) has a combined sound power level of less than 80 dB(A). This equates to a level of about 29 dB(A) at the nearest residential boundaries to the north.

The worst case combined noise from all plant would be 37 dB(A) Leq (15 min) at the most potentially affected receiver. Noise from the operating plant was not audible at the roadside boundary of the school.

The mechanical plant will be shielded from receivers to the north by the structure of the buildings and the noise would be significantly lower than the applicable noise criterion at the boundaries of those receivers.

There will, therefore, be no acoustic issues associated with any of the mechanical plant.

A series of noise measurements were made at various distances from the hardstand basketball courts and open grassed play area during the morning recess break. The play areas were in general use with pupils variously seated in groups or playing basketball or football games.

The loudest of the activities was the basketball games. The noise from this was measured to be in compliance with the day time noise criterion of 53 dB(A) Leq (15 min) at a distance of approximately 40m from the basketball courts. The nearest residential boundaries are more than 200m away from the courts.

Noise from the various football games on the grassed play area were less than 80 dB(A) Leq (15 min) and would, therefore, be in compliance with the day time noise criterion at distances of greater than 10m from the centre of a game. The nearest residential boundary to the north is approximately 50m from the school boundary at this location (there is a Reserve between the two). The received noise from football games would, therefore, be in compliance with the day time criterion at all times.

Further calculations show that the combined noise from all sources associated with the operation of Blocks C and D and the hardstand basketball courts will be in compliance with the day time noise criterion.

Similarly, the combined noise from the operation of the entire school as operating in July 2022 (i.e., Blocks A, B, C and D and the hardstand basketball courts) is in compliance with the adopted noise criteria (for completeness see also the previous compliance report by Spectrum Acoustics, Report No. 212083R/29308, dated 17 March 2021).

There will, therefore, be no adverse noise impacts as a result of the operation of the school and it is concluded that D.A. conditions F10 and F11 will be satisfied.

We trust this letter fulfils your requirements at this time, however, should you require additional information or assistance please do not hesitate to contact the undersigned.

Yours faithfully

SPECTRUM ACOUSTICS PTY LIMITED

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