AECOM Australia Pty Ltd
Level 21, 420 George Street
Sydney NSW 2000
PO Box Q410
QVB Post Office NSW 1230
Australia
www.aecom.com

+61 2 8008 1700 tel

ABN 20 093 846 925

23 December 2021

Marisa Sidoti
Jacobs
Level 7, 177 Pacific Highway
Sydney, NSW, 2060

Dear Marisa

Acoustic response to SSDA submissions

1.0 Introduction

The Department of Planning, Industry and Environment (DPIE) has received a number of submissions regarding the development application for the Upgrades to John Palmer Public School (JPPS) (SSD-23330227). A submission was provided by Higgins Planning, dated 10 November 2021, on behalf of ISPT Limited. This letter provides a response to the noise related items within that submission.

The Ponds Shopping Centre (TPSC) is owned by ISPT Limited and is located at 91 The Ponds Boulevarde, The Ponds. TPSC is located to the north of the northern boundary of John Palmer Public School. The major environmental noise sources at TPSC include external mechanical plant, light vehicles entering the underground car park, fork-lift and truck activity in the loading dock and truck movements within the site. The location of TPSC and JPPS are shown below in Figure 1.

Figure 1 Location map

2.0 Submission

This section provides extracts of noise related items raised by Higgins Planning in the submission:

> *2.3 Proximity of the proposed building to The Ponds shopping centre loading dock*
>
> *….ISPT cannot find what / if any, mechanisms are to be included in the design of the proposed new building to ensure any noise associated with trucks servicing the loading dock are*

maintained during the operations of The Ponds. That is what noise attenuating walls and their locations are proposed along the northern boundary of the school site to mitigate impacts of locating the 3-storey building which includes learning areas and classrooms.

ISPT request information be provided and designed into the proposal given that the school seeks to locate in close proximity to an existing site condition such that the introduction of the proposed school building will not result in complaints being lodged with Council or the Department by the school.

3.0 Response to Submission

3.1 Proposed construction of the new JPPS buildings

Section 7.7 of the Noise and Vibration Assessment for JPPS reference 60654726-RPNV-01_D JPPS SSDA dated 13 October 2021, provides details of the traffic noise level likely to be incident on the northern façade of the proposed new JPPS buildings. It also provides recommendations for the building construction to achieve the appropriate criteria inside the classrooms. The façade constructions provided in the noise and vibration assessment are extracted below:

The following minimum acoustic performances for the northern and eastern facing façade are recommended to meet the traffic noise intrusion requirements:

- *Glazed elements*
  - *Minimum R_w 37 acoustic performance*
  - *Indicative construction: 10.5 mm Hush Vlam glass*
  - *Sliding doors must be closed to meet traffic noise intrusion requirements*
- *Ventilation louvres*
  - *Minimum R_w 33 acoustic performance*
  - *Indicative construction: 6.38 mm laminated glass*
- *Opaque elements*
  - *Minimum R_w 45 acoustic performance*
  - *Indicative construction:*
    - *60 mm thick panelised brick, 28 mm furring channel with 25 mm bulk insulation in cavity and 13 mm plasterboard; OR*
    - *9 mm fibre cement sheet, 64 mm steel stud with 50 mm bulk insulation in cavity and 13 mm fire rated plasterboard.*

It can be seen above in the report extract, that the northern façade which faces TPSC is recommended to include additional façade treatment to control a traffic noise level of 58 dB(A). Although not explicitly stated in the report, these treatments would also reduce the noise impact from the operation of TPSC on the proposed JPPS buildings.

3.2 Outdoor play areas and the existing operation of TPSC

To determine the existing noise levels from The Ponds Shopping Centre at outdoor play areas and at the proposed new buildings, noise monitoring was conducted at the approximate location of the proposed new building closest to The Ponds Shopping Centre. The noise logger was placed at the Location M1 shown in Figure 2 between Thursday 16 December and Wednesday 22 December 2021. The noise monitor was placed at approximately 4 metres above ground level. An attended measurement was also conducted between 1.45 om and 2.00 pm on 22 December 2021, at M2 in Figure 2 at approximately 1.5 metres above the ground for a 15 minute period to understand the impact of various sources on the outdoor play areas.

Figure 2 Measurement locations

The unattended measured $L_{Aeq,9hr}$ noise level at location M1 was 58 dB(A) during the daytime over the five day measurement period. The $L_{Aeq,15min}$ noise level ranged between 54 dB(A) and 61 dB(A) during the measurement period.

The attended measured $L_{Aeq,15min}$ noise level at location M2 was 54 dB(A) during the measurement period. The noise level at M2 include noise from road traffic on The Ponds Boulevard, vehicles entering and exiting the car park, three trucks and activities in the loading dock and vacation care children in the outdoor play area. During the attended measurement period noise from loading dock activities was subjectively not considered to be intrusive in the outdoor area. During the attended measurement, the noise level from cars entering the underground car park was similar to the noise level from traffic on The Ponds Boulevarde.

It should be noted that an existing precast concrete wall is located on the boundary between TPSC loading dock and the proposed new buildings. The existing concrete wall ranges from 1.5 metres to 3.5 metres in height in the area of the proposed new buildings.

The Educational Facilities Standards and Guidelines (EFSG) DG-11 Acoustics does not provide a criterion for outdoor learning areas, however the Road Noise Policy's recommended amenity noise

level for passive recreational areas is 55 dB(A) and for active recreation is 60 dB(A). Whilst the noise level in the outdoor area exceeded this level at times the acoustic environment was subjectively considered to be suitable for outdoor learning and playing activities.

3.3 Predicted noise levels within the proposed JPPS buildings

Based on the maximum measured $L_{Aeq15\ minute}$ noise level at location M1 of 61 dB(A) and proposed façade construction, the internal noise level criteria of 35 dB(A) will be achieved with the façade construction details presented above in Section 3.1. The noise level inside the spaces of the proposed new buildings will comply with the internal noise level criterion 35 dB(A) detailed in Table 11.06.1 of the Educational Facilities Standards and Guidelines (EFSG) DG-11 Acoustics. It should be noted that the $L_{Aeq,15min}$ levels would be lower than 61 dB(A) for significant periods of time and noise levels within spaces of the proposed new buildings would therefore be less than 35 dB(A).

I trust that the above information addresses the items raised by Higgins Planning in the Submission dated 10 November 2021.

Yours faithfully

Tom Roseby
Acoustic Engineer
tom.roseby@aecom.com

Direct Dial: +61 8934 0457

cc: Boris Santana (Jacobs)
Marcus Kraefft (Jacobs)
Katy Johnson (School Infrastructure)
Mathew Wood (School Infrastructure)