


## MONTHLY NOISE AND VIBRATION REPORT CITY & SOUTHWEST ACOUSTICS ADVISOR

<b>Project:</b>	<b>Chatswood to Sydenham SSI-7400</b>		
<b>For period:</b>	<b>August 2023</b>	<b>Authorisation:</b>	
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### **Introduction**

EMM Consulting Pty Limited (EMM) presents the August 2023 AA Noise and Vibration Report for the Sydney Metro City and Southwest project as required by SSI 15\_7400 A27 (g) vi.

A reference table for the acronyms used in this report is provided on the last page.

### **Acoustics Advisor Activity**

- Review and/or endorsement of:
  - Barangaroo NVMR Oct 2022 to Mar 2023 Rev 0
  - CNISD CMR October 22 to March 23 Rev 1
  - CNISD July noise monitoring report Rev A
  - CNISD June noise monitoring report Rev C
  - CNISD August noise monitoring report Rev A
  - CSM CNVMP Rev 14
  - PSISD CMR Q1 Q2 2023 Rev 0
  - PSISD CNVIS Rev 18.3
  - PSISD Cumulative Assessment (Utilities)
  - PSISD Utilities Assessment (two crews – Pitt Street)
  - SCLWW CNVMP C2B Rev 5
  - VCISD CNVMP Rev E
  - WISD CNVMP Rev 4.
- Review and/or endorsement of out of hours work applications (OOHWA) and extensions for:
  - Barangaroo OOHWA 1 Rev 5
  - Barangaroo OOHWA 2.8 Rev 0
  - Barangaroo OOHWA 20 Rev 2 (date extension)
  - Barangaroo OOHWA 24 Footbridge Removal Rev 0
  - CNISD OOHWA 33 Pacific Highway Intersection Upgrade Rev 0
  - LWW OOHWA 313 Chatswood Dive Kiosk Removal and Cabling Works Rev 0
  - LWW OOHWA 46 Botany Rd Hydrant Rev 3
  - PSISD OOHWA 57 July – September 2023 Rev 6
  - WISD OOHWA 46 Botany Road Hydrant Works Rev 3
  - WISD OOHWA 52 Aug, Sep, Oct 2023 (Civil Investigation) Rev 4
  - WISD OOHWA 57 Aug, Sep, Oct 2023 (General) Rev C

- WISD OOHWA 58 Aug, Sept, Oct 2023 (Utilities) Rev B.
- Attendance at ongoing meetings with CNISD, VCISD, Barangaroo Station, LWW, PSISD, MPISD, CSM and WISD contractors.

### ***Inspections, audits and site visits***

The following was completed:

- WISD inspection with ER on 3 August 2023
- PSISD inspection with ER on 15 August 2023
- Barangaroo inspection with ER on 24 August 2023.

### ***Monitoring status***

Real-time noise and vibration monitoring (with real-time access) is ongoing at CNISD, VCISD (noise only), Barangaroo, PSISD (noise only), MPISD and CSM (noise only).

The VCISD south RTNM has recently been relocated to 1 Denison Street, North Sydney. Given the current state of the site with most of the OSD structure now complete, this location provides a better representation of noise levels at the nearest residential receiver of 79-81 Berry Street, North Sydney.

The WISD contractor is operating real-time noise monitors to assist with site noise management. This is not a requirement of their CNVMP and is optional only. We have access to this data on an as-needs basis only (eg when complaints are received).

### ***Noise and vibration complaints***

Complaints from Barangaroo (x3), CNISD (x3), PSISD (x4), VCISD (x3) and WISD (x4) were received. The majority of these were classed as unavoidable. Three remain open and are under investigation by the PC.

Avoidable complaints were received in relation to OOH utility works on Hickson Road, Barangaroo, which included a plant item that was fitted with a tonal movement alarm. A non-compliance was issued for this event and this plant item has since been fitted with a non-tonal movement alarm.

An avoidable complaint was received at VCISD in relation to noise at the south site after 3am which was outside the approved times in OOHWA-17. A non-compliance was issued for this event and a toolbox talk was delivered to the construction team reinforcing approved construction times. The structural works (reduced scope) that are approved in OOHWA-17 are now complete which will reduce the risk for OOH noise impacts. The increase in complaints at VCISD south is also a key reason for relocating the RTNM to 1 Denison Street, which will provide the PC with a more representative reference point to manage noise from site.

At VCISD, there was a complaint for works prior to 7am on a Sunday however the PC has confirmed that this was for an OSOM crane delivery to site that was undertaken in accordance with E44a.

### ***Initiatives, continual improvement and feedback***

- There has been a positive outcome at VCISD north in relation to capping beam removal near the north boundary adjacent to 243 Miller Street. The initial assessment found that the demolition would have to be undertaken using an excavator mounted hydraulic hammer due to space restrictions. The capping beam is positioned approximately 2m from 243 Miller Street and material noise and vibration impacts were expected. Upon closer review, a design solution has

been identified which has eliminated the need to remove most of the capping beam. Instead, only small sections need removal to allow for services and integration with existing adjacent structure. This work can be undertaken using a handheld jackhammer.

- The PSISD PC has implemented AA ideas and recommendations in further refining and developing a scope of works for gas relocation on Bathurst Street and is resulting in reduced noise impacts. This includes acoustic tents (three sides and a roof) for both road saws and excavators with hydraulic hammers for Bathurst Street gas works and also for a package of utilities works on Pitt Street. A noticeable reduction of 5dB has been confirmed for excavator with hydraulic hammer for elevated sensitive receivers. We anticipate further noise reduction for road saw activities that can be contained wholly within the acoustic tent (AA awaiting further verification measurements).
- The gas works on Bathurst Street (forecast to be complete by 14<sup>th</sup> September 2023) a further scope of work is being reviewed for stormwater works and anticipated to commence week of 18<sup>th</sup> September 2023. AA and ER have also reviewed and approved works for simultaneous activities on Bathurst and Pitt Street with conditions and restrictions to minimise noise impacts and reduce overall duration of disturbance to the community, however these are not anticipated to commence prior to 1 October 2023.

### ***Non-compliances, incidents and events***

Two non-compliances in relation to noise (one at VCISD and one at Barangaroo) were raised this month due to the events described in the complaints section.

### ***Ongoing and upcoming environmental risks***

- Significant utility works remain to be completed at PSISD and WISD. OOH is required due to ROL requirements and footpath permits from Council. Timing of some of these works has been delayed due to Women's World Cup, contractor and subcontractor issues and coordination with utility service providers.
- Public domain works at CNISD will continue for several months. This will require a substantial scope of utility works, of which some will be required OOH to facilitate utility service provider requirements. The PC is scheduling a large portion of this work during standard hours to minimise OOH impacts to residents, however a consequence of this is increased impacts at commercial receivers.
- A significant phase of utility works is proposed to start at CNISD in early September. The works will be at the intersection of Pacific Highway and Oxley Street, and Pacific Highway and Hume Street. The PC has approval for early ROLs on weekday nights to expedite the works and minimise potential noise impacts at night. We are advocating for early engagement and consultation with the community, particularly around respite periods.
- Capping beam removal will continue at CNISD during standard construction hours. Alternative methods to capping beam demolition other than using excavators with hydraulic hammers is not possible at CNISD due to space limitations, however the PC is alternating capping beam demolition between Site A and Site B week to week to provide respite to nearest receivers to each site, in addition to the scheduled respite hours that are currently agreed with the community.
- ER and AA are currently reviewing the potential for two crews to work at Pitt Street simultaneously to manage overall impacts and limit the duration and number of nights required for utilities works. We have provided preliminary advice in terms of the requirement for community consultation and implementation of all feasible and reasonable mitigation measures.

***Recommendations (incl auditing):***

Nothing to report.

## Acronyms

<i>AMMs</i>	<i>Additional Mitigation Measures</i>
<i>CMR</i>	<i>Construction Monitoring Report</i>
<i>CTR</i>	<i>Compliance Tracking Report</i>
<i>CNISD</i>	<i>Crows Nest Integrated Station Development</i>
<i>CNVIS</i>	<i>Construction Noise and Vibration Impact Statement</i>
<i>CNVMP</i>	<i>Construction Noise and Vibration Management Plan</i>
<i>CNVMPR</i>	<i>Construction Noise and Vibration Management Program Report</i>
<i>CSM</i>	<i>Central Station Metro</i>
<i>DPE</i>	<i>NSW Department of Planning and Environment</i>
<i>ER</i>	<i>Environmental Representative</i>
<i>ISD</i>	<i>Integrated Station Development</i>
<i>LWW</i>	<i>Line Wide Works</i>
<i>MPISD</i>	<i>Martin Place Integrated Station Development</i>
<i>NCR</i>	<i>Non-Compliance Report</i>
<i>NML</i>	<i>Noise Management Level</i>
<i>NVA</i>	<i>Noise and Vibration Assessment</i>
<i>NVMP</i>	<i>Noise and Vibration Monitoring Plan</i>
<i>NVMR</i>	<i>Noise and Vibration Monitoring Report</i>
<i>OOH</i>	<i>Out of hours</i>
<i>OOHW</i>	<i>Out of hours work</i>
<i>OOHWA</i>	<i>Out of Hours Work Application</i>
<i>OOHWP</i>	<i>Out of Hours Work Protocol</i>
<i>OSD</i>	<i>Overstation development</i>
<i>OSOM</i>	<i>Oversize, overmass</i>
<i>PCB</i>	<i>Precast Beams</i>
<i>PC</i>	<i>Principal Contractor</i>
<i>PSISD</i>	<i>Pitt Street Integrated Station Development</i>
<i>PSN</i>	<i>Pitt Street North</i>
<i>PSS</i>	<i>Pitt Street South</i>
<i>ROL</i>	<i>Road Occupancy License</i>
<i>RTNM</i>	<i>Real Time Noise Monitor</i>
<i>SSJ</i>	<i>Sydenham Station Junction</i>
<i>TSOM</i>	<i>Trains, Systems, Operations and Maintenance</i>
<i>TSS</i>	<i>Traction Substation</i>
<i>VCISD</i>	<i>Victoria Cross Integrated Station Development</i>
<i>WISD</i>	<i>Waterloo Integrated Station Development</i>