


MONTHLY NOISE AND VIBRATION REPORT CITY & SOUTHWEST ACOUSTICS ADVISOR

Project:	Chatswood to Sydenham SSI-7400		
For period:	July 2023	Authorisation:	
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Introduction

EMM Consulting Pty Limited (EMM) presents the July 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 April to September 2022 Rev 2
 - CNISD Construction Monitoring Report Oct 22 to March 23 Rev 0
 - CNISD CTR Q2, Q3 and Q4 2022 Rev 3
 - CNISD OOHWA 25.2 June Noise Monitoring Report Rev 0
 - PSISD CNVIS Rev 18.0 and 18.2
 - SCLWW Construction Noise and Vibration Management Plan C2B Rev 4
 - SSJ Construction Noise and Vibration Management Plan Rev 13
 - SSJ CTR Q1 and Q2 2023.
- Review and/or endorsement of out of hours work applications (OOHWA) and extensions for:
 - Barangaroo OOHWA 17 HV Outage Works Rev 3
 - Barangaroo OOHWA 18 Shed Demolition Rev 3
 - Barangaroo OOHWA 20 Zone 6 Services Rev 1
 - MPISD OOHWA 100 50MP public domain Rev 2
 - PSISD OOHWA 57 Project Works July to Sept 2023 Rev 3
 - WISD OOHWA 47 Lighting Install Rev 5
 - WISD OOHWA 52 Civil Investigation Aug, Sep, Oct Rev 1
 - WISD OOHWA 54 Civil Main Works Rev C
 - WISD OOHWA 57 Aug, Sep, Oct (General) Rev B
 - WISD OOHWA 58 August, September, October 2023 (Utilities) Rev A.
- 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:

- PSISD inspection with ER on 19 July 2023

- WISD inspection with ER on 20 July 2023
- MPISD inspection with ER on 21 July 2023
- CNISD inspection with ER on 26 July 2023
- Barangaroo inspection with ER on 27 July 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 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 (x4), PSISD (x1), VCISD (x2) and WISD (x4) were received. Of these:

- two complaints (CNISD x1 and VCISD x1) are under investigation by the Contractor and/or Sydney Metro.
- two avoidable complaints were received at CNISD regarding works undertaken on a Saturday that impacted local businesses. High impact activities were undertaken including jackhammering and sawing of pavers close to local businesses which was not consistent with works described in the community notification. No local noise blankets were installed.
- one avoidable complaint was received at PSISD due to the use of a vacuum truck very close to Castlereagh Boutique Hotel (CBH). We advised the PC to locate the vacuum truck as far south of CBH as practicably possible and with additional noise blankets blocking line of sight, where feasible. The PC continues to implement active mitigation by reducing vacuum truck operating speed and suction rates to minimise noise emissions.

The remaining complaints were classified as unavoidable.

Initiatives, continual improvement and feedback

- Generally, we are re-emphasizing the need for a strong justification for out of hours applications and that contractors exhaust all options to conduct work during standard hours before they seek an OOHW approval.
- We are encouraging pro-active and wholistic scheduling of work that needs to be undertaken OOH (eg utilities) with the view of prioritising respite nights for the community. This includes scheduling separate OOHW packages on the same night where possible.
- We continue to advocate the use of alternative work practices to rock hammering for the removal of temporary structures, where practicable.
- The CNISD PC has successfully negotiated with a non-project related contractor undertaking local roadworks on Hume Street about maintaining the same respite hours as Sydney Metro to minimise noise impacts on nearby childcare centre, Kelly's Place, which is positioned between the two work sites.

- The CNISD PC has consulted with residents with driveway access off Clarke Lane regarding adjacent Site A capping beam demolition works which are currently underway. The community were presented with two options:
 - accelerate the capping beam demolition with multiple excavators with hydraulic hammers which would block driveway access or
 - use a single excavator with hydraulic hammer which would mean slower progress however driveway access could be maintained.

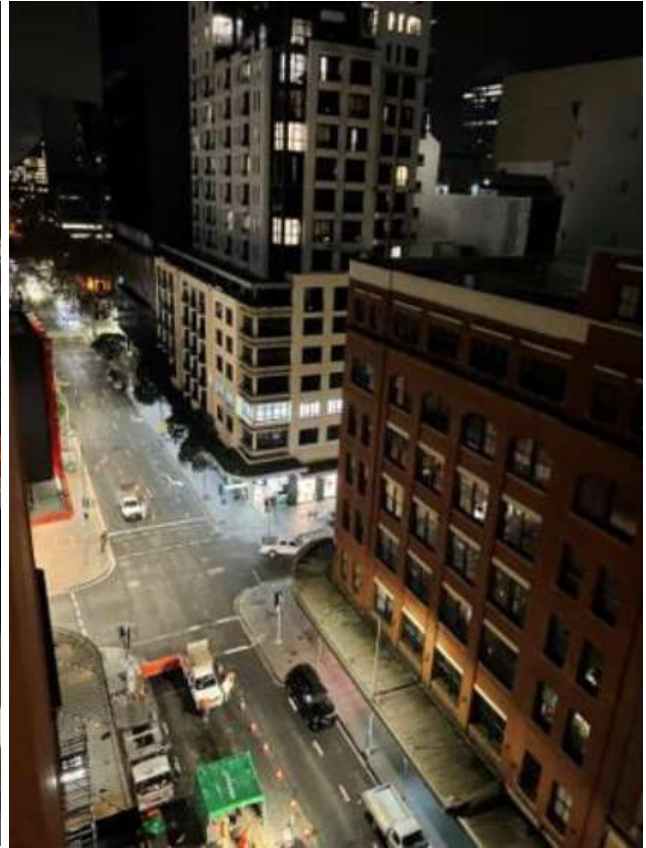
The community selected the latter option.

- There is a good practice example of noise control at Barangaroo that is worthy to note. Two 350 kW temporary generators are needed 24/7 to support HV outage works. The generators have been specified with additional redundancy so that they can operate at 75%, reducing the sound power level by 10dB. The generators are also contained within a well-built noise blanket compound. The generators operate within NML 24/7 with receivers approximately 50m away.



Barangaroo 24/7 temporary generator noise blanket installation

- The PSISD PC has been receptive to 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. The PC has incorporated acoustic tents (three sides and a roof) for use of both road saws and excavators with hydraulic hammers on gas works on Bathurst Street and will also be implementing these measures 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 (to be confirmed).



Bathurst Street (gas relocation works) - temporary acoustic tent

- The WISD PC continues to be highly proactive with the community in terms of information sharing and engagement with several events and initiatives being undertaken in 2023. A site open day was completed in July displaying archaeological finds for the site. Continued careful planning of work locations and timing is being implemented, with a two-week calendar look ahead advocated by the AA and ER and being implemented by the contractor to provide greater visibility of times and locations of OOHW to the AA and ER.

Non-compliances, incidents and events

The CNISD PC has raised a non-compliance for the Saturdays works that generated two avoidable noise complaints as discussed above.

Ongoing and upcoming environmental risks

- A significant phase of utility works will continue at PSISD and WISD. OOHW is required due to ROL requirements and footpath permits from Council.
- 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.
- Capping beam removal is ongoing at VCISD North. The alternate method including wire saw and core drilling has been investigated but is not feasible due to space limitations. Capping beam demolition will occur near the north boundary that is shared with the 243 Miller Street residence, hence noise and vibration will be monitored closely by the PC.
- PSISD South has an ongoing scope of works for the realignment of a gas main in Bathurst Street. Due to location of works in Bathurst Steet and multiple lane closures, ROLs will be required and works are being completed at night. Verification monitoring was conditioned on these works and has be supplied to satisfaction of the AA demonstrating effectiveness of acoustic tent. No complaints from these works have been recorded in July.
- A further large package of utilities works is required for PSISD South on Pitt Street for gas, water and electricity. AA and ER are currently working on a review of cumulative noise levels to ensure that no further adverse impacts are experienced for sensitive receivers. Contractor is seeking to conduct Pitt Street and Bathurst Street works simultaneously. AA is considering these activities where it is shown that cumulative noise does not result in an overall increase in the individual package of works (Pitt Street or Bathurst Street) by more than 1dB. Lessons learned in provision of acoustic tents, restrictions to high noise level equipment prior to 12am and limitations of operation of vacuum truck will be implemented and conditioned on Pitt Street utilities works. The intent of these works is to limit cumulative noise whilst also minimising the total number of OOH night works that sensitive receivers are exposed.

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>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>

