

**Vibration Monitoring Data-Monthly Summary**

<b>Month and Year:</b>	Mar-21
<b>Project:</b>	Central Station Main Works
<b>EPL Licence Number:</b>	21148
<b>EPL Web link:</b>	<a href="https://centralstationmetro.com/documents/">https://centralstationmetro.com/documents/</a>
<b>Specific EPL Monitoring Condition:</b>	M7.2- Vibration Monitoring

Monitoring Location:	Number of Monitoring Events during the Month	Attended/Continuous Monitoring	Event Based Monitoring? (Y/N)	Measured Parameter: Peak Particle Velocity (PPV) (mm/s)	Predicted Parameter: Peak Particle Velocity (PPV) (mm/s)	Comment
TCAC AKA. CEB (Central Electric Building)	1	Continuous	Y	22/03/2021 Max 35.16mm/s due to construction.	Project Screening criteria <25mm/s Target <25mm/s (based on activity)	Intermittent breaking occurred in the lower northern concourse throughout the month of March. Typical vibration below cited 12.5 mm/s level corresponding to a near-zero probability of damage. The large majority of high impact noise and vibration occurred at night to reduce impact on Central Station patrons.  No vibration levels above the BS 7385 criteria for reinforced or framed structures for industrial and heavy commercial buildings of 50mm/s observed.
Sydney Dental Hospital (Northern Stairwell)	1	Continuous	Y	During the period of measure the Max PPV was 6.76mm/s Typical vibration in the presence of construction was elevated above ~0.5mm/s	Target <2mm/s during breaking	Location of monitoring: Northern Stairwell is next to the habitable office space in the dental hospital and next door to the Eastern Entrance work site.  16 individual data points above PPV of 2mm/s observed throughout the month. No more than 12 in any one day.  At the time of measure, the vibration levels at the dental hospital were noticeable (between 0.35mm/s to 1mm/s) during breaking activity. Respite periods provided, appropriate additional mitigation measures in place.
20-28 Chalmers St	1	Continuous	Y	Max due to construction 5.63mm/s	Project Screening criteria <25mm/s Target <7.5mm/s (based on activity)	Predominant vibration generating activity at Eastern Entrance was due to excavation works including breaking. Generally a low vibration month.  Typical vibration below cited 12.5 mm/s level corresponding to a near-zero probability of damage.

**Definitions**

**Attended:** Operator attended measure at either the façade of sensitive receiver, internal dwelling of a sensitive receiver or at a location of interest, typically in anticipation of an event.

**Continuous:** Real time vibration data recording the peak within a 1 min intervals, 24/7.

**Event:** The peak particle velocity (PPV) measured in mm/s of any measuring interval either during attended monitoring or a period of interest reviewed from the continuous data. The period is typically selected to monitor works as the works occur, or to validate predictions of planned works, or in response to a complaint, or due to an unexplained elevated PPV in the continuous data noise trace.