Noise & Vibration Monthly Report

Barangaroo Cutaway Cultural Facility

3847.01

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Customer Name:	FDC Construction
Report Number:	3847.01
Reporting Period	13/06/2024 to 24/06/2024
Issue Date:	24/06/2024

Compiled By:	Jonathan South	Reviewed By	Jake Donovan Parker

1 Executive Summary

Noise and vibration associated with construction activities were monitored between 13th June and 24th June 2024. There were zero instances where noise or vibration levels exceeded established alerting or alarming levels at nearby sensitive receivers along Merriman Street, and Munn Street.

Additional analysis with statistical techniques will be explored to provide the best representation of noise impacts to sensitive receivers along Merriman Street, and ensure a reasonable acoustic amenity is maintained.

NoiseNet should be informed in advance of any planned activities likely to cause high levels of vibration, such as piling or rock breaking. Key personnel should continue to observe alerting and alarming via email and SMS, as established in installation report reference *3847_Installation_Report_Barangaroo_Cutaway_FDC_Construction_R01*.

2 Noise

Over the reporting period, there were zero instances where noise from construction activities at the Barangaroo Cutaway that were considered high emission.

The primary sources of noise were identified as noise from fixed mechanical plant such as generators, reverse beepers, mobile machinery, jackhammering, power tools, metal banging together and other general impulsive noise. Site activity generally begins around 6:00am-6:30am, with observed noises around this time being voices, light vehicle activity, and gates being opened. Higher impact activities such as generator startup and heavy vehicle movement begin at 7:00am in accordance with operating restrictions, which are generally adhered to. Particular care should be taken to keep noise to a minimum prior to 7:00am (and 8:00am Saturdays).

Noise impacts to sensitive receivers on Merriman Street are the most common cause for concern over the duration of the project, and will be monitored closely. Additional noise statistics and analysis methodology will be explored in order to ensure a reasonable amenity is maintained at nearby sensitive receivers.

A selection of notable noises that were observed over the reporting period are showed in Table 1 below, with reference recordings provided.

Filename	Date	Time	Description	Merriman Street Receiver Levels		Munn Street Offices Receiver Levels	
				LA_{eq} (dB)	LA_{max} (dB)	LA_{eq} (dB)	LA_{max} (dB)
2024-06-18T15_37_00_Circular_Saw.wav	18/6/2024	15:37:00-15:39:00	Circular Saw	-	-	62	73
2024-06-20T13_52_00_Reverse_Beeper_Metal_Generator.wav	20/6/2024	13:52:00-13:54:00	Reverse Beeper, Engine/Machinery/Generator, Metal Clanging	67	88	64	83
2024-06-20T15_10_00._Generator_Impulsive.wav	20/6/2024	15:10:00-15:10:30	Engine/Machinery/Generator, Impulsive Noise	66	85	55	75
2024-06-21T13_48_00_Metal_Banging.wav	21/6/2024	13:48:00-13:51:00	Metal Clanging	63	84	56	70

Table 1: Most notable noises during the reporting period.

3 Vibration

Over the reporting period, there were zero instances where vibration from construction activities at the Barangaroo Cutaway exceeded warning or alarm levels. NoiseNet should be informed in advance of any activities likely to cause significant vibration, such as piling or rock breaking.

The most notable vibrations observed are reported in Table 2 below.

Date	Time	Description	Street Level Peak Vibration Velocity Peak mm/s	Site Ground Level Velocity Peak mm/s
17/6/2024	07:30	Vibration peak at site ground level sensor (1004v). Potentially due to construction activities.	0.21	0.38
19/06/2024	19:00	Vibration peak on multiple sensors. Unlikely due to construction activities (due to time of day).	0.4	0.24

Table 2: Most notable vibrations during the reporting period.

4 Report Issue Log

Document Title	Reference	Reporting Period	Issue Date
3847_Installation_Report_Barangaroo_Cutaway_FDC_Construction_R01	3847	13/06/2024	24/06/2024

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