



Noise & Vibration Monthly Report

Barangaroo Cutaway Cultural Facility

3847.09 R02

NoiseNet Operations Pty Ltd

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Customer Name: FDC Construction

Report Number: 3847.09 R02

Reporting Period 19/12/2024 to 26/01/2025

Issue Date: 29/1/2025

Compiled By: Jake Donovan-Parker

Reviewed By: Jonathan South

1 Executive Summary

Noise and vibration associated with construction activities were monitored between 19th of December 2024 and 26th of January 2025 (inclusive).

There were thirteen instances where noise levels exceeded the alarm level for high noise emission, with levels reducing significantly after 3 hours of site activity. All respite periods were observed. There were also multiple periods of elevated noise not associated with works at the Barangaroo Cutaway Cultural Facility.

There were fifteen instances where vibration levels exceeded established alerting or alarming levels. These instances were all isolated to one vibration sensor. Therefore, the vibration levels are not expected to pose a potential threat to nearby residential or heritage buildings.

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_R02*.

2 Noise

Over the reporting period, there were thirteen instances where noise exceeded the established levels for high emission.

Noise during general work hours was typically observed to be from drilling and/or jackhammering, movement of plant and equipment as well as general construction noise such as reverse beepers and power tools.

High noise emissions after site hours was found to be rain, thunder, insects, fireworks or nearby talking/music noise not related to activities being carried out by FDC.

Any applicable periods of high noise emission were within allowable hours and appropriate respite periods were observed.

It should be noted that skylight noise monitor 5037 was offline until 2:30 pm 21/1/2025, since this time it has been operating as intended.

All periods of high noise emissions are outlined in Table 1.

Noise impacts are primarily to sensitive receivers along Merriman Street, with relatively little impact to commercial receivers near Munn Street. In all cases, noise levels returned to acceptable levels within a reasonable time and all required respite periods were observed.

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)
2024-12-19T20_38_53.wav	19/12/2024	20:25-21:15	Insect noise close to microphone.	n/a	n/a	77	84
2024-12-20T20_38_57.wav	20/12/2024	20:25-21:00	Insect noise close to microphone.	n/a	n/a	77	81
2024-12-21T20_39_02.wav	21/12/2024	20:25-21:00	Insect noise close to microphone.	n/a	n/a	78	80
2024-12-23T04_20_32.wav	23/12/2024	4:15-4:35	Machine (possibly vacuum cleaner) near monitor. Not detected on Merriman street so not expected to be from site works.	n/a	n/a	78	95
2024-12-27T14_20_31.wav	27/12/2024	14:00-14:40	Power tools, talking and metal on metal sounds.	n/a	n/a	77	99
2024-12-31T21_00_07.wav	31/12/2024	21-21:20	Fireworks.	80	96	82	96
2025-01-01T00_08_17.wav	1/1/2025	00:00-00:25	Fireworks.	82	95	84	98
2025-01-02T12_14_20.wav	2/1/2025	11:52-12:30	Truck engine.	n/a	n/a	77	103
n/a	13/1/2025	21:40-22:00	Birds and people talking as walking by.	58	76	76	94
2025-01-15T20_45_10.wav	15/1/2025	20:30-21:05	Rain and thunder.	70	96	83	110
2025-01-21T15_01_27.wav	21/1/2025	14:40-15:30	Drilling and other heavy machinery.	83	95	n/a	n/a
2025-01-24T10_47_37.wav	24/1/2025	10:45-11:00	Drilling and other heavy machinery.	76	90	n/a	n/a
2025-01-24T12_17_41.wav	24/1/2025	12:05-12:50	Drilling in event hall and other heavy machinery.	82	93	n/a	n/a

Table 1: Most notable noises during the reporting period.

3 Vibration

Over the reporting period, there were fifteen instances where vibrations from construction activities at the Barangaroo Cutaway exceeded warning or alarm levels.

All warning/alarms were isolated to a single vibration sensor and the readings above 10 mm/s peak velocity are confirmed to be from works being conducted in close proximity to vibration sensor 1002v in the skylight.

NoiseNet should be informed in advance of any planned activities likely to cause high levels of vibration, such as piling or rock breaking.

It should be noted that connection to vibration monitor 1004V was restored on 21/1/2025, but has been offline since 10:30 am 24/1/2025. We are working to resolve this issue.

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

Date	Time	Description	Street Level Peak Vibration	Site Ground Level
			Velocity Peak mm/s	Velocity Peak mm/s
21/1/2025	13:23	Sensor bumped by EWP.	78.87	n/a
21/1/2025	14:20	Skylight works near sensor 1002V.	13.66	n/a
21/1/2025	14:37	Skylight works near sensor 1002V.	27.67	n/a
21/1/2025	14:41	Skylight works near sensor 1002V, likely sensor bumped.	165.63	n/a

21/1/2025	14:51	Skylight works near sensor 1002V.	78.80	n/a
21/1/2025	14:57	Skylight works near sensor 1002V.	95.49	n/a
21/1/2025	15:03	Skylight works near sensor 1002V.	132.84	n/a
21/1/2025	15:15	Skylight works near sensor 1002V.	47.08	n/a
23/1/2025	13:16	Isolated to ground floor sensor. Likely plant activities/movement in close proximity.	n/a	7.29
24/1/2025	10:20	Isolated to ground floor sensor. Likely plant activities/movement in close proximity.	n/a	29.99
24/1/2025	10:47	Drilling and other heavy machinery, likely near sensor 1002V.	12.28	n/a
24/1/2025	12:12	Drilling in event hall and other heavy machinery, likely near sensor 1002V.	8.49	n/a
24/1/2025	12:18	Drilling in event hall and other heavy machinery, likely near sensor 1002V.	4.73	n/a
24/1/2025	12:29	Drilling in event hall and other heavy machinery, likely near sensor 1002V.	81.43	n/a
24/1/2025	12:38	Drilling in event hall and other heavy machinery, likely near sensor 1002V.	38.31	n/a

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 (Superseded)	3847	13/06/2024	24/06/2024
3847_01_NVMR_Barangaroo_Cutaway_FDC_Construction_R01	3847_01	13/06/2024 to 24/06/2024	24/06/2024
3847_Installation_Report_Barangaroo_Cutaway_FDC_Construction_R02	3847	11/07/2024	25/07/2024
3847_02_NVMR_Barangaroo_Cutaway_FDC_Construction_R01	3847_02	25/06/2024 to 24/07/2024	25/07/2024
3847_03_NVMR_Barangaroo_Cutaway_FDC_Construction_R01 (Superseded)	3847_03	25/07/2024 to 26/08/2024	26/08/2024
3847_03_NVMR_Barangaroo_Cutaway_FDC_Construction_R02	3847_03	25/07/2024 to 26/08/2024	26/08/2024
3847_04_NVMR_Barangaroo_Cutaway_FDC_Construction	3847_04	26/08/2024 to 25/09/2024	25/09/2024
3847_05_NVMR_Barangaroo_Cutaway_FDC_Construction (Superseded)	3847_05	26/09/2024 to 25/10/2024	25/10/2024
3847_05_NVMR_Barangaroo_Cutaway_FDC_Construction_R02	3847_05	26/09/2024 to 25/10/2024	31/10/2024
3847_06_NVMR_Barangaroo_Cutaway_FDC_Construction	3847_06	25/10/2024 to 11/11/2024	12/11/2024
3847_07_NVMR_Barangaroo_Cutaway_FDC_Construction (Superseded)	3847_07	12/11/2024 to 26/11/2024	26/11/2024
3847_07_NVMR_Barangaroo_Cutaway_FDC_Construction_R02	3847_07	12/11/2024 to 26/11/2024	27/11/2024
3847_08_NVMR_Barangaroo_Cutaway_FDC_Construction	3847_08	27/11/2024 to 18/12/2024	18/12/2024
3847_08_NVMR_Barangaroo_Cutaway_FDC_Construction (Superseded)	3847_09	19/12/2024 to 26/1/2025	27/1/2025

Compiled By:

Jake Donovan-Parker



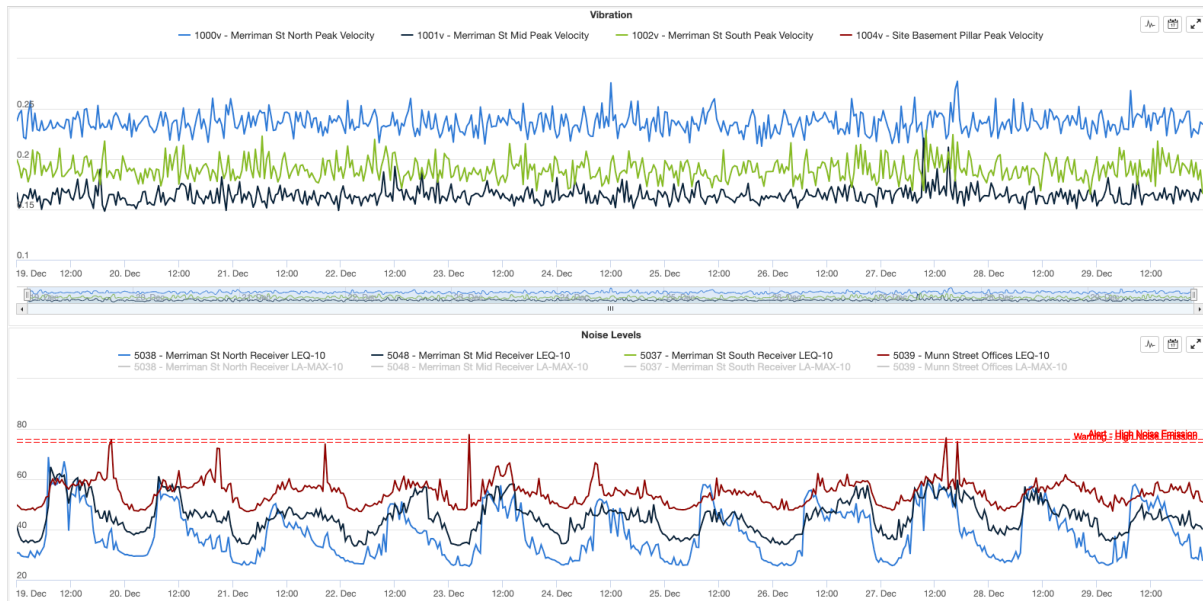
Reviewed By:

Jonathan South



5 Noise and Vibration Data

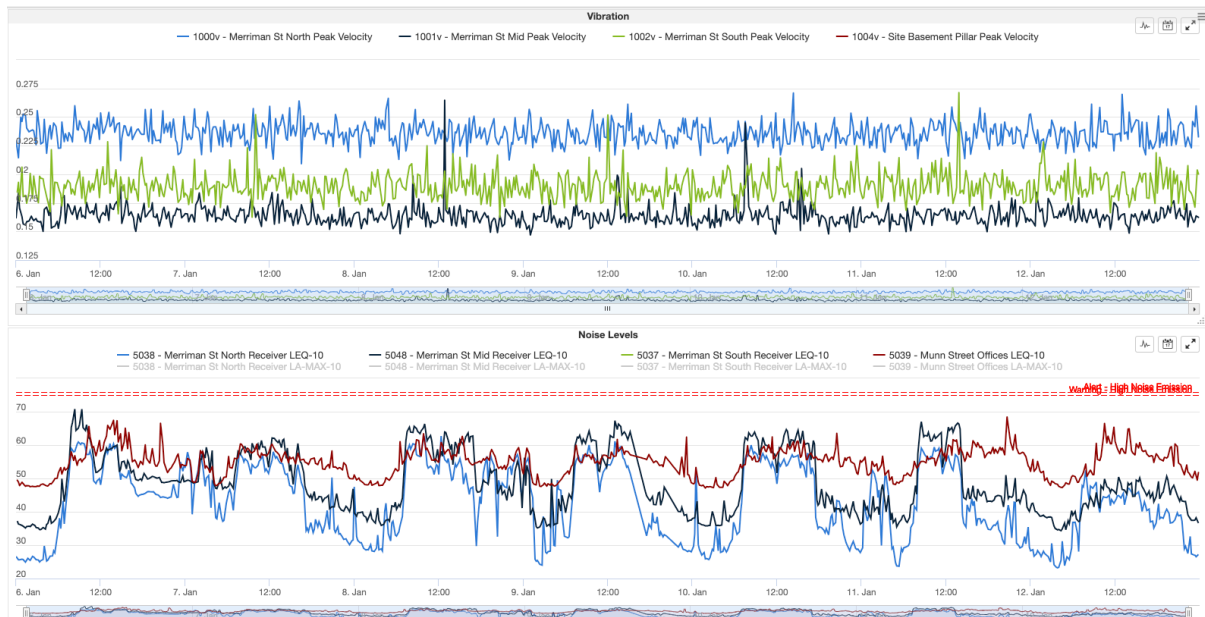
5.1 19/12/2024 – 29/12/2024



5.2 30/12/2024 – 5/1/2025



5.3 6/1/2025 – 12/1/2025



5.4 13/1/2025 – 19/1/2025



5.5 19/1/2025 – 26/1/2025

