



SH-OO-PWN-AC-RP-00-01-0001-A

TO: Ilse Luybaert **DATE:** 15 September 2022
COMPANY: BESIX Watpac
EMAIL: Aconex Issue
FROM: Matthew Furlong
SUBJECT: **New Shellharbour Hospital (NSH) – Review of Measured Noise, Dust and Vibration Levels – November & December 2024**

CONFIDENTIALITY

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Pulse White Noise Acoustics Pty Ltd (PWNA) has been requested to undertake a detailed review of the measured noise, vibration and dust levels onsite at the New Shellharbour Hospital (NSH) project site located at 82 Dunmore Road, Dunmore NSW.

This review has been undertaken in accordance with the requirements as listed in the Construction Environmental Management Plans (CEMP and CNVMSP) prepared for the site in accordance with several conditions of consent for Major Planning Approval (SSDA) 57064458, dated 12th August 2024.

Specifically, the information contained in this review is relevant to **November and December 2024**.

Based on the information contained in the reviews provided in Appendix A and B, PWNA can confirm that BESIX Watpac are undertaking all onsite works in accordance with the management plans. Noting in some cases, exceedances have occurred across all three (3) data sets (i.e. noise, vibration and dust), however all exceedances have been reviewed by PWNA and deemed acceptable as all exceedances are/were managed in accordance with the CEMP (and sub-plans).

In the event you require any further information or clarification regarding this document, please contact the undersigned.

Kind Regards,

Matthew Furlong
Principal Acoustic Engineer & Project Lead
PULSE WHITE NOISE ACOUSTICS PTY LTD
AAS Member and AAAC Member Firm

Appendix A – November 2024 – Noise, Vibration and Dust Monitoring Results

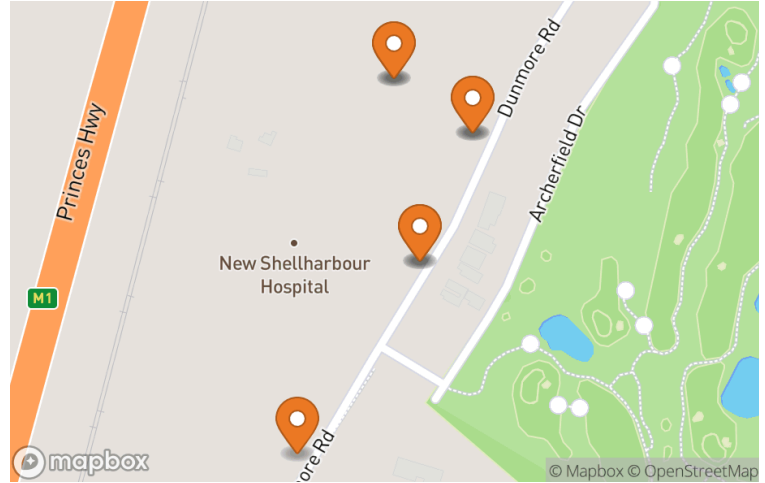
New Shellharbour Hospital

November 2024 - Dust

Monitoring Devices

Date Range 01 Nov 2024 - 30 Nov 2024

Device Serial	Monitoring Points
HEX-000426	North
HEX-000673	North East
HEX-000074	Gate 1
HEX-000442	Gate 2
HEX-000732	-
HEX-000547	-
HEX-000343	-



Dust Monitoring Statistics

▼ Gate 1

14 $\mu\text{g}/\text{m}^3$ AVERAGE PM2.5

43 $\mu\text{g}/\text{m}^3$ AVERAGE PM10

▼ North

13 $\mu\text{g}/\text{m}^3$ AVERAGE PM2.5

38 $\mu\text{g}/\text{m}^3$ AVERAGE PM10

▼ North East

-- $\mu\text{g}/\text{m}^3$ AVERAGE PM2.5

-- $\mu\text{g}/\text{m}^3$ AVERAGE PM10

▼ Gate 2

14 $\mu\text{g}/\text{m}^3$ AVERAGE PM2.5

46 $\mu\text{g}/\text{m}^3$ AVERAGE PM10

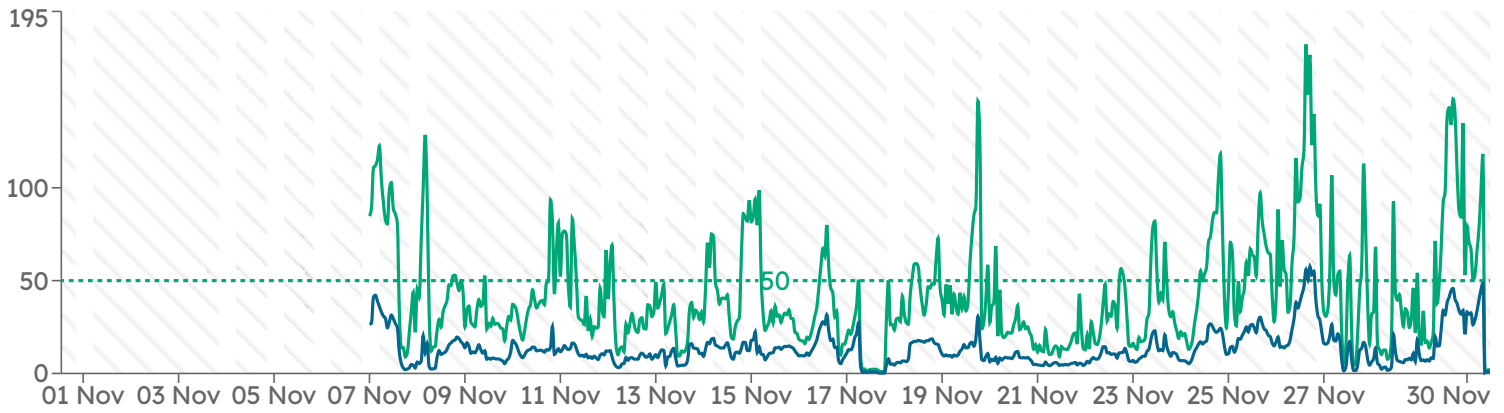
These averages are statistical means calculated from all samples across the chosen period.

Dust Monitoring Graphs

Gate 1

01 Nov 2024 - 30 Nov 2024

$\mu\text{g}/\text{m}^3$ 1h averages



Parameters

PM10

PM2.5

Thresholds

50 PM10 Daily Average

Other

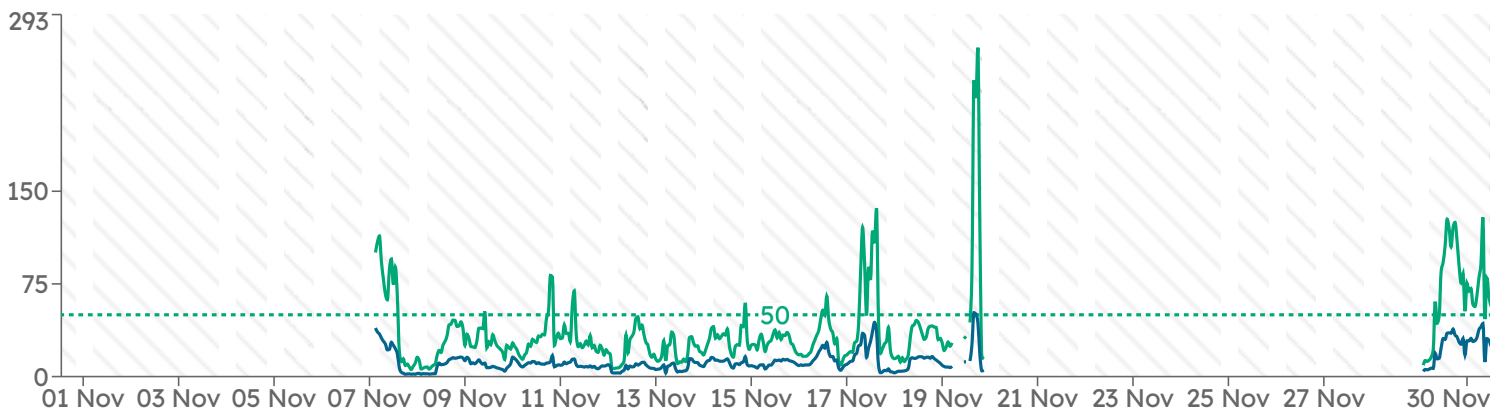
Potentially weather affected periods

Out of Hours

North

01 Nov 2024 - 30 Nov 2024

$\mu\text{g}/\text{m}^3$ 1h averages



Parameters

PM10

PM2.5

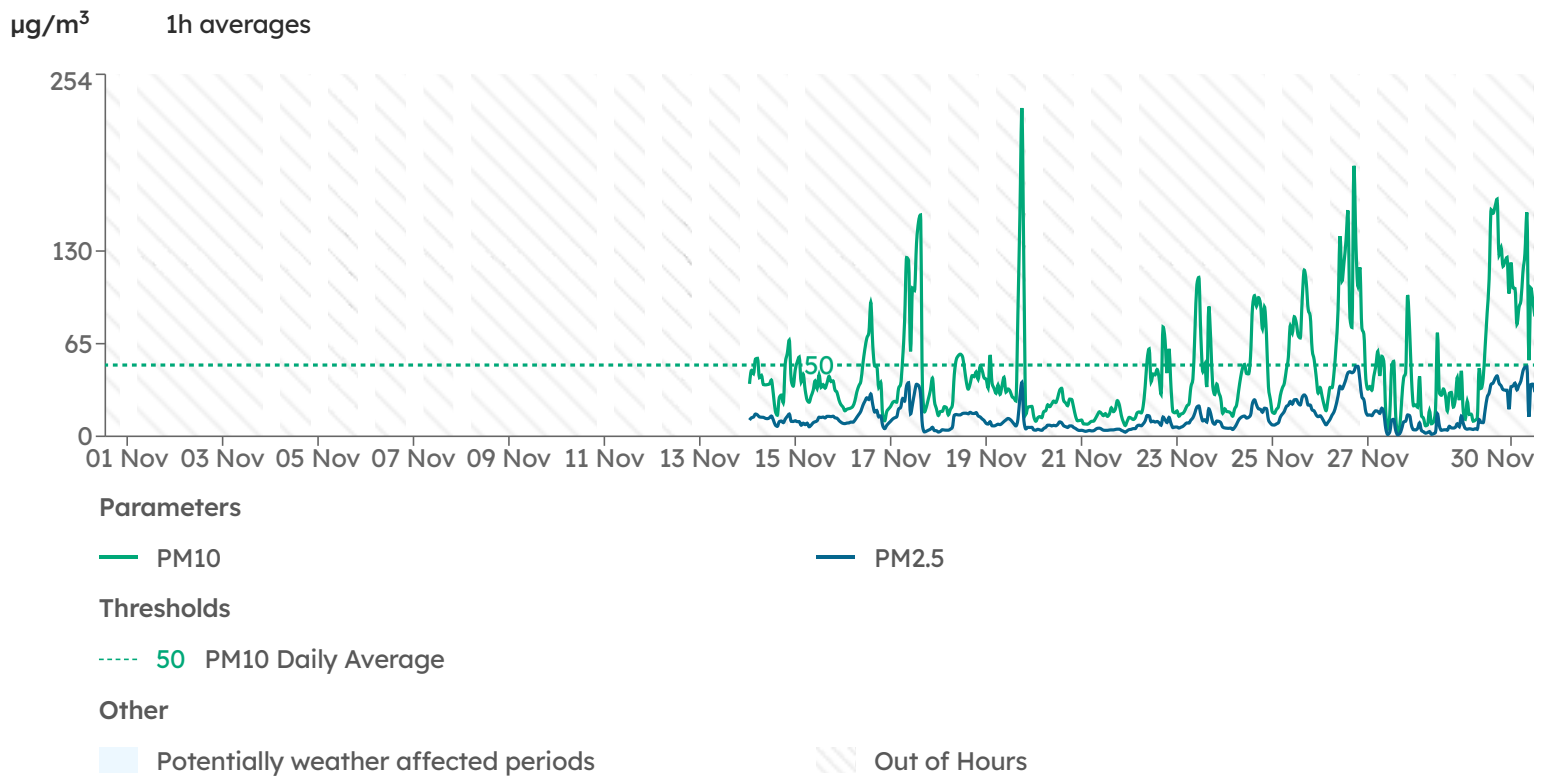
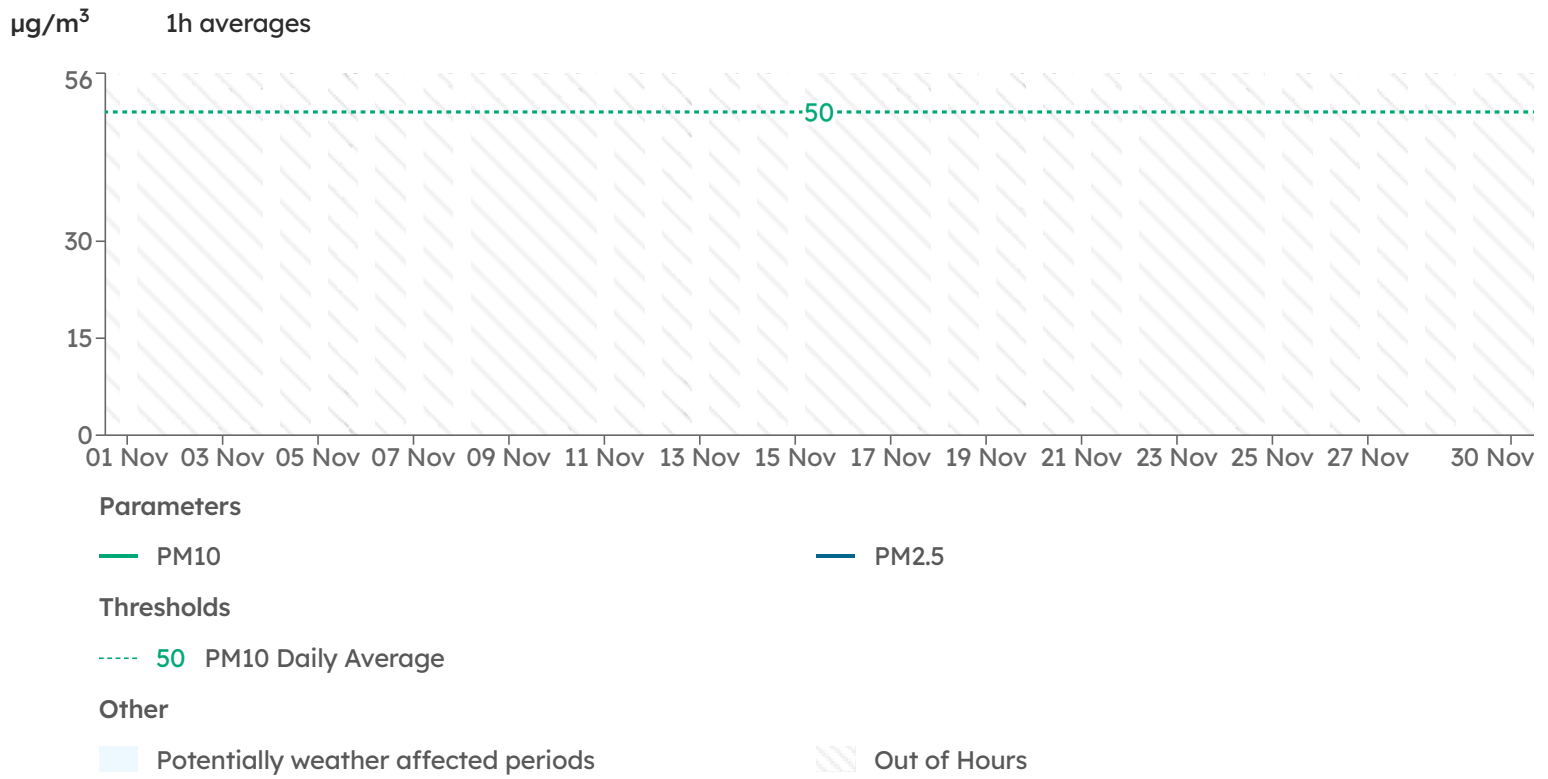
Thresholds

50 PM10 Daily Average

Other

Potentially weather affected periods

Out of Hours



Dust Explained Events

Time	Rule	Values	Monitoring	Category	Event Notes
Thu, 07 Nov 2024					
11:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	99.1	Gate 1	NR Out of hours	Localised weather. Outside approved construction hours.
11:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	88	North	NR Out of hours	Localised weather. Outside approved construction hours.
Mon, 11 Nov 2024					
08:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	54.1	Gate 1	NR Out of hours	Localised weather. Outside approved construction hours.
Fri, 15 Nov 2024					
10:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	52.3	Gate 1	NR Out of hours	Localised weather. Outside approved construction hours.
Sun, 17 Nov 2024					
11:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	53.1	Gate 2	NR Out of hours	Localised weather. Outside approved construction hours.
Wed, 20 Nov 2024					
08:00 AM	PM10 Daily Average 50.00 µg/m ³ PM10	144.6	North	NR Monitor error	Equipment issue. Results are incorrect.
Mon, 25 Nov 2024					
07:00 PM - 09:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	61.7	Gate 1	NR Out of hours	Localised weather. Outside approved construction hours.
07:00 PM - 09:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	58.9	Gate 2	NR Out of hours	Localised weather. Outside approved construction hours.

Time	Rule	Values	Monitoring	Category	Event Notes
Tue, 26 Nov 2024					
07:00 PM - 08:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	65.8	Gate 1	NR Out of hours	Localised weather. Outside approved construction hours.
07:00 PM - 08:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	66.1	Gate 2	NR Out of hours	Localised weather. Outside approved construction hours.

Wed, 27 Nov 2024					
09:00 AM - 11:00 AM	PM10 Daily Average 50.00 µg/m ³ PM10	79.3	Gate 1	NR Plant too close to monitor	Construction works in immediate area of monitor.
09:00 AM - 11:00 AM	PM10 Daily Average 50.00 µg/m ³ PM10	69.1	Gate 2	NR Plant too close to monitor	Construction works in immediate area of monitor.

Sat, 30 Nov 2024					
08:00 AM - 12:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	81.5	Gate 1	NR Out of hours	Localised weather. Outside approved construction hours.
08:00 AM - 12:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	85.9	North	NR Out of hours	Localised weather. Outside approved construction hours.
08:00 AM - 12:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	117.2	Gate 2	NR Out of hours	Localised weather. Outside approved construction hours.

Daily Notes

No notes for this period

Device Details

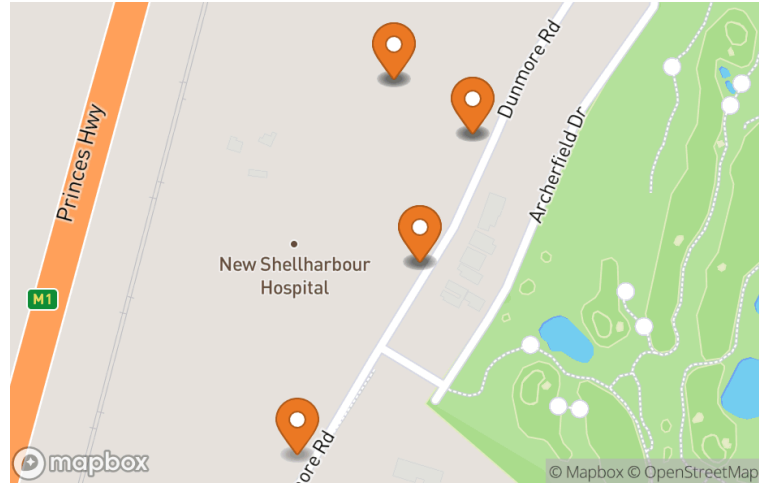
Device Serial	Monitoring Points	Model	Calibration Date	Calibration Due
HEX-000426	North	SiteHive Hexanode	25 Oct 2024	25 Oct 2026
HEX-000673	North East	SiteHive Hexanode	03 Oct 2024	03 Oct 2026
HEX-000074	Gate 1	SiteHive Hexanode	03 Oct 2024	03 Oct 2026
HEX-000442	Gate 2	SiteHive Hexanode	28 Nov 2024	28 Nov 2026
HEX-000732	-	SiteHive Hexanode	13 Nov 2024	13 Nov 2026
HEX-000547	-	SiteHive Hexanode	27 Sep 2024	27 Sep 2026
HEX-000343	-	SiteHive Hexanode	24 Oct 2024	24 Oct 2026

New Shellharbour Hospital

Monitoring Devices

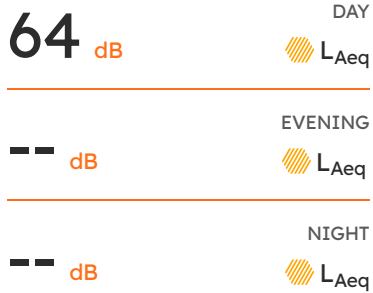
Date Range 01 Nov 2024 - 30 Nov 2024

Device Serial	Monitoring Points
HEX-000426	North
HEX-000673	North East
HEX-000074	Gate 1
HEX-000442	Gate 2
HEX-000732	-
HEX-000547	-
HEX-000343	-



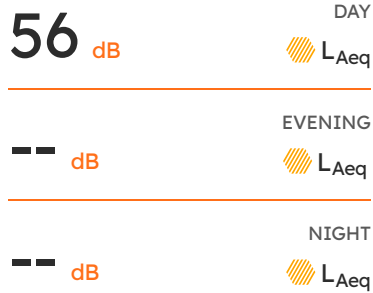
Noise Monitoring Statistics

▼ Gate 1



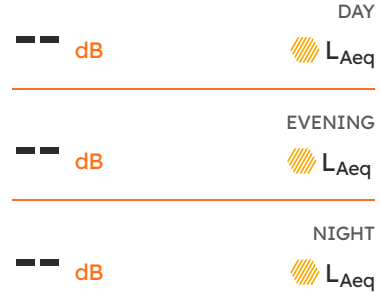
Average value across selected time period

▼ North



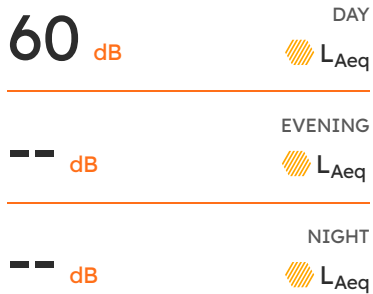
Average value across selected time period

▼ North East



Average value across selected time period

▼ Gate 2



Average value across selected time period

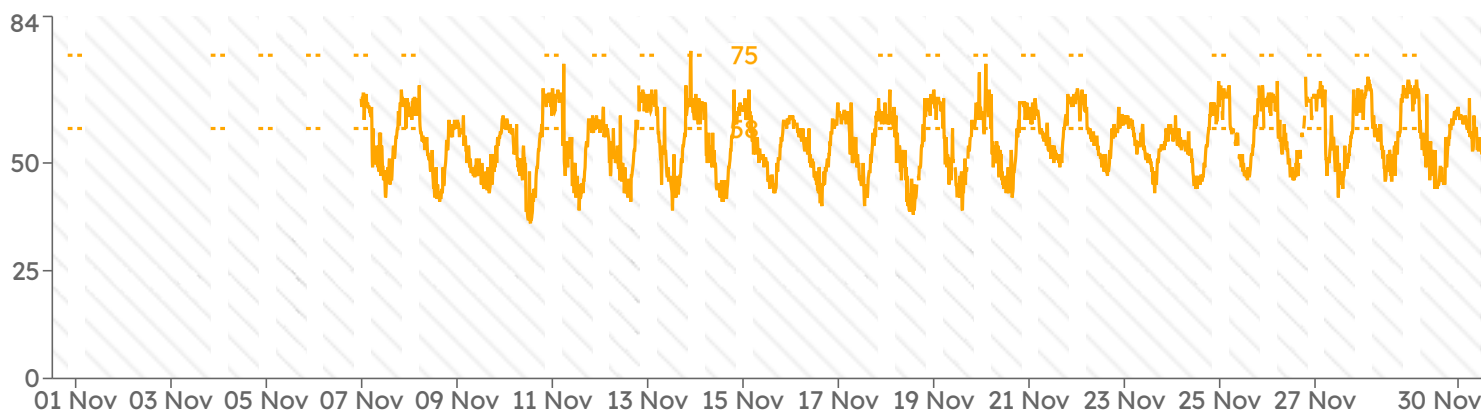
Average value across selected time period. Time of Day Periods: Day (7am to 6pm) Evening (6pm to 10pm) Night (10pm to 7am).

Noise Monitoring Graphs

Gate 1

01 Nov 2024 - 30 Nov 2024

dB 15m averages



Parameters

— LAeq

Thresholds

----- 75 HNAL

----- 58 NAFL

Other

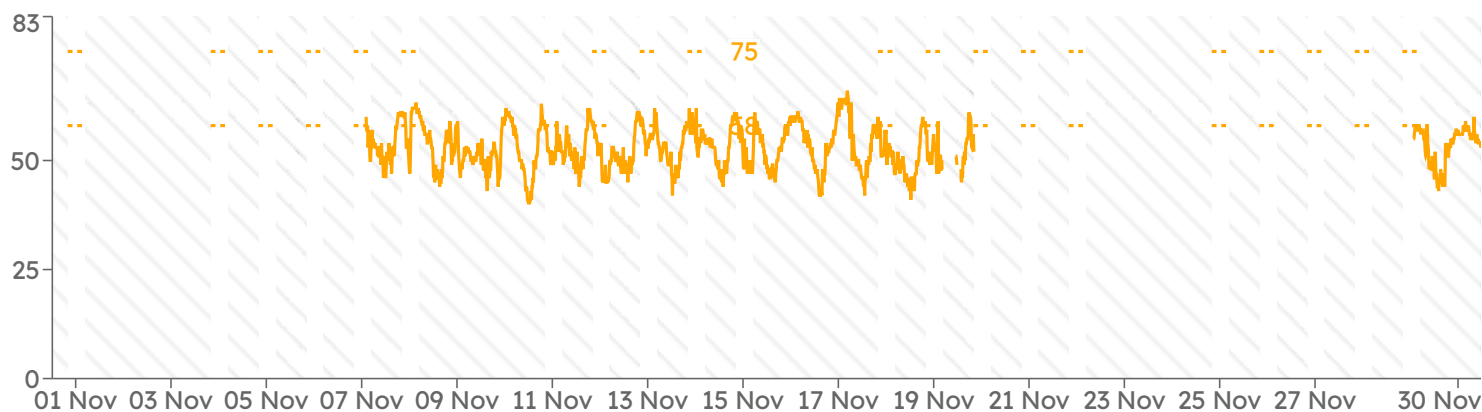
□ Potentially weather affected periods

▨ Out of Hours

North

01 Nov 2024 - 30 Nov 2024

dB 15m averages



Parameters

— LAeq

Thresholds

----- 75 HNAL

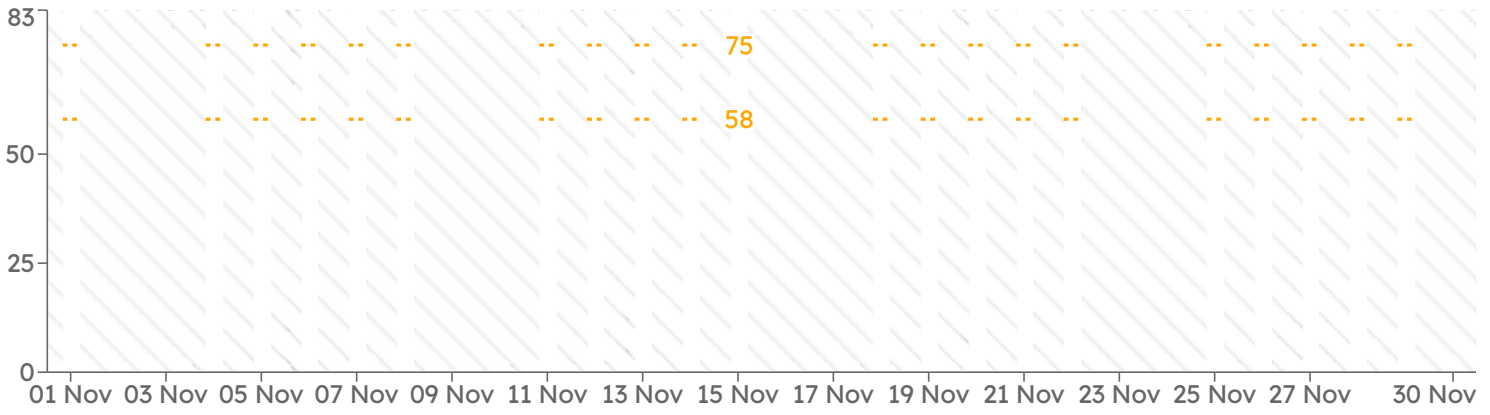
----- 58 NAFL

Other

□ Potentially weather affected periods

▨ Out of Hours

dB 15m averages



Parameters

— L_{Aeq}

Thresholds

- - - 75 HNAL

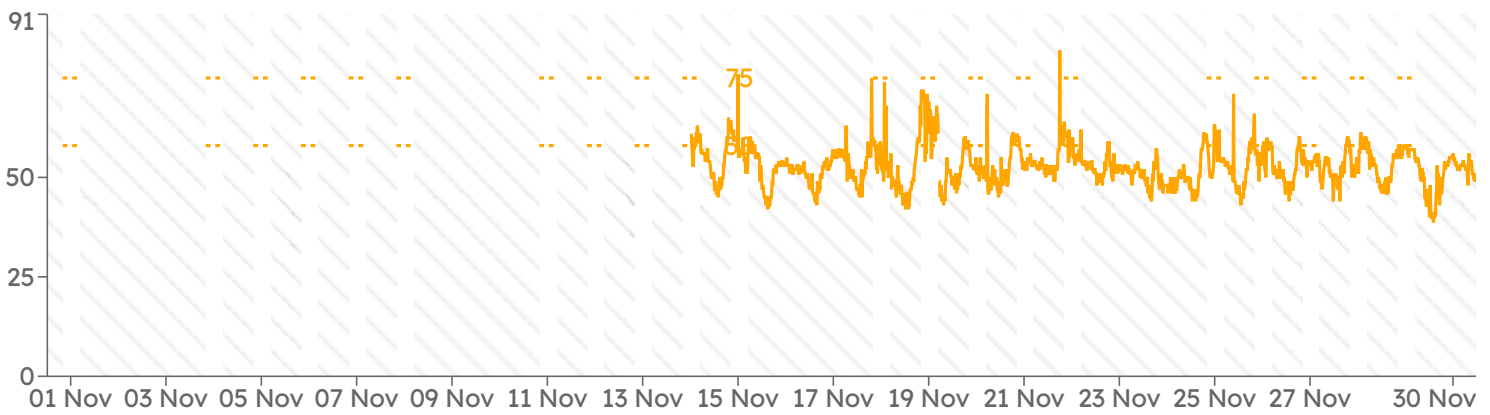
- - - 58 NAFL

Other

☐ Potentially weather affected periods

▨ Out of Hours

dB 15m averages



Parameters

— L_{Aeq}

Thresholds

- - - 75 HNAL



- - - 58 NAFL

Other

☐ Potentially weather affected periods

▨ Out of Hours

Noise Explained Events

Time	Rule	Values	Monitoring	Category	Event Notes
Thu, 14 Nov 2024					
09:45 AM	HNAL 75.00 dB  L _{Aeq}	76.3	Gate 1	R Power tool	Minor exceedance above the HNAL noise level limit of 75dBA cuase by loud work being undertaken in close proximity to the noise monitoring location. Event investigated and respite was provided immediately after the exceedance with noise levels recorded signficantly lower than the HNAL of 75dBA. PWNA Reviewed and confirm compliance with CNVMSP.
Fri, 15 Nov 2024					
12:00 PM	HNAL 75.00 dB  L _{Aeq}	75.5	Gate 2	NR Monitor error	Monitor error.

Daily Notes

No notes for this period

Device Details

Device Serial	Monitoring Points	Model	Calibration Date	Calibration Due
HEX-000426	North	SiteHive Hexanode	25 Oct 2024	25 Oct 2026
HEX-000673	North East	SiteHive Hexanode	03 Oct 2024	03 Oct 2026
HEX-000074	Gate 1	SiteHive Hexanode	03 Oct 2024	03 Oct 2026
HEX-000442	Gate 2	SiteHive Hexanode	28 Nov 2024	28 Nov 2026
HEX-000732	-	SiteHive Hexanode	13 Nov 2024	13 Nov 2026
HEX-000547	-	SiteHive Hexanode	27 Sep 2024	27 Sep 2026
HEX-000343	-	SiteHive Hexanode	24 Oct 2024	24 Oct 2026

New Shellharbour Hospital

Attended Summary Report

Attended Monitoring Summary

Date Range 01 Nov 2024 - 30 Nov 2024

Monitoring Locations

Location Name	Lat	Long
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Attended Monitoring Results Summary Table

No measurements for this period

BESIX Watpac

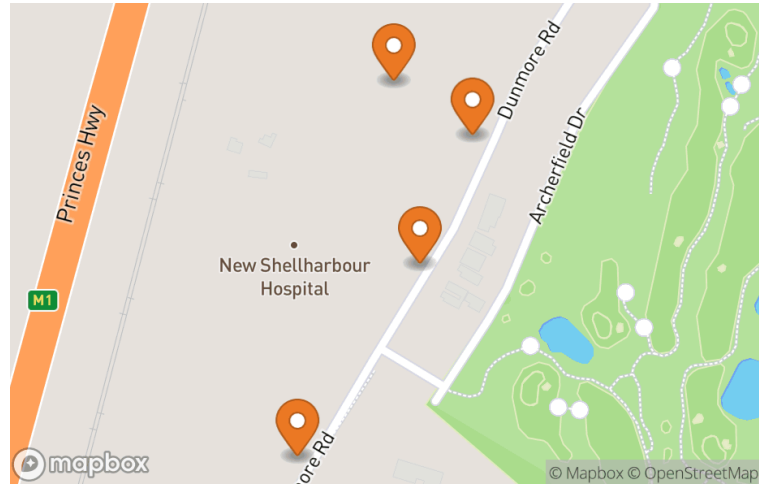
New Shellharbour Hospital

November 2024 - Vibration

Monitoring Devices

Date Range 01 Nov 2024 - 30 Nov 2024

Device Serial	Monitoring Points
VIB-000052	Gate 2
VIB-000214	North East
VIB-000270	North
VIB-000274	Gate 1



▼ Gate 1

63 mm/s MAXIMUM
X Peak

48 mm/s MAXIMUM
Y Peak

59 mm/s MAXIMUM
Z Peak

▼ Gate 1

-- m/s^{1.75} MAXIMUM
X VDV

-- m/s^{1.75} MAXIMUM
Y VDV

0.01 m/s^{1.75} MAXIMUM
Z VDV

▼ North

145 mm/s MAXIMUM
X Peak

82 mm/s MAXIMUM
Y Peak

28 mm/s MAXIMUM
Z Peak

▼ North

0.01 m/s^{1.75} MAXIMUM
X VDV

0.01 m/s^{1.75} MAXIMUM
Y VDV

0.01 m/s^{1.75} MAXIMUM
Z VDV

▼ North East

33 mm/s MAXIMUM
X Peak

16 mm/s MAXIMUM
Y Peak

3 mm/s MAXIMUM
Z Peak

▼ North East

0.12 m/s^{1.75} MAXIMUM
X VDV

0.06 m/s^{1.75} MAXIMUM
Y VDV

0.05 m/s^{1.75} MAXIMUM
Z VDV

▼ Gate 2

107 mm/s MAXIMUM
X Peak

127 mm/s MAXIMUM
Y Peak

158 mm/s MAXIMUM
Z Peak

▼ Gate 2

0.1 m/s^{1.75} MAXIMUM
X VDV

0.31 m/s^{1.75} MAXIMUM
Y VDV

0.67 m/s^{1.75} MAXIMUM
Z VDV

mm/s

▼ Gate 1

Daily Max

 X Peak  Y Peak  Z Peak

01 Nov 2024	--	--	--
02 Nov 2024	--	--	--
03 Nov 2024	--	--	--
04 Nov 2024	--	--	--
05 Nov 2024	--	--	--
06 Nov 2024	--	--	--
07 Nov 2024	10	8	3
08 Nov 2024	0	48	59
09 Nov 2024	--	--	--
10 Nov 2024	--	--	--
11 Nov 2024	0	0	0
12 Nov 2024	0	0	0
13 Nov 2024	0	0	0
14 Nov 2024	0	0	0
15 Nov 2024	0	0	0
16 Nov 2024	--	--	--
17 Nov 2024	--	--	--
18 Nov 2024	1	1	0
19 Nov 2024	0	0	0
20 Nov 2024	0	0	0
21 Nov 2024	1	3	0
22 Nov 2024	0	0	0
23 Nov 2024	--	--	--
24 Nov 2024	--	--	--
25 Nov 2024	0	0	0
26 Nov 2024	0	0	0
27 Nov 2024	63	43	19
28 Nov 2024	0	0	0
29 Nov 2024	1	1	1
30 Nov 2024	--	--	--
	--	--	--

m/s^{1.75}

▼ Gate 1

Daily VDV

 Day  Night

01 Nov 2024	-- (Z)	-- (Z)
02 Nov 2024	-- (Z)	-- (Z)
03 Nov 2024	-- (Z)	-- (Z)
04 Nov 2024	-- (Z)	-- (Z)
05 Nov 2024	-- (Z)	-- (Z)
06 Nov 2024	-- (Z)	-- (Z)
07 Nov 2024	-- (Z)	-- (Z)
08 Nov 2024	-- (Z)	-- (Z)
09 Nov 2024	-- (Z)	-- (Z)
10 Nov 2024	-- (Z)	-- (Z)
11 Nov 2024	-- (Z)	-- (Z)
12 Nov 2024	-- (Z)	-- (Z)
13 Nov 2024	-- (Z)	-- (Z)
14 Nov 2024	-- (Z)	-- (Z)
15 Nov 2024	-- (Z)	-- (Z)
16 Nov 2024	-- (Z)	-- (Z)
17 Nov 2024	-- (Z)	-- (Z)
18 Nov 2024	-- (Z)	-- (Z)
19 Nov 2024	-- (Z)	-- (Z)
20 Nov 2024	-- (Z)	-- (Z)
21 Nov 2024	-- (Z)	-- (Z)
22 Nov 2024	-- (Z)	-- (Z)
23 Nov 2024	-- (Z)	-- (Z)
24 Nov 2024	-- (Z)	-- (Z)
25 Nov 2024	-- (Z)	-- (Z)
26 Nov 2024	-- (Z)	-- (Z)
27 Nov 2024	-- (Z)	-- (Z)
28 Nov 2024	-- (Z)	-- (Z)
29 Nov 2024	0.01 (Z)	-- (Z)
30 Nov 2024	-- (Z)	-- (Z)

mm/s

▼ North

Daily Max


 X Peak  Y Peak  Z Peak

01 Nov 2024	--	--	--
02 Nov 2024	--	--	--
03 Nov 2024	--	--	--
04 Nov 2024	--	--	--
05 Nov 2024	--	--	--
06 Nov 2024	--	--	--
07 Nov 2024	145	82	28
08 Nov 2024	0	0	0
09 Nov 2024	--	--	--
10 Nov 2024	--	--	--
11 Nov 2024	0	0	0
12 Nov 2024	0	0	0
13 Nov 2024	0	0	0
14 Nov 2024	0	0	0
15 Nov 2024	0	0	0
16 Nov 2024	--	--	--
17 Nov 2024	--	--	--
18 Nov 2024	0	0	0
19 Nov 2024	0	0	0
20 Nov 2024	0	0	0
21 Nov 2024	0	0	0
22 Nov 2024	0	0	0
23 Nov 2024	--	--	--
24 Nov 2024	--	--	--
25 Nov 2024	0	0	0
26 Nov 2024	0	0	0
27 Nov 2024	0	0	0
28 Nov 2024	0	0	0
29 Nov 2024	4	2	1
30 Nov 2024	--	--	--
	--	--	--

m/s^{1.75}

▼ North

Daily VDV

 Day  Night

01 Nov 2024	-- (Z)	-- (Z)
02 Nov 2024	-- (Z)	-- (Z)
03 Nov 2024	-- (Z)	-- (Z)
04 Nov 2024	-- (Z)	-- (Z)
05 Nov 2024	-- (Z)	-- (Z)
06 Nov 2024	-- (Z)	-- (Z)
07 Nov 2024	-- (Z)	-- (Z)
08 Nov 2024	-- (Z)	-- (Z)
09 Nov 2024	-- (Z)	-- (Z)
10 Nov 2024	-- (Z)	-- (Z)
11 Nov 2024	0.01 (Z)	-- (Z)
12 Nov 2024	0.01 (Z)	-- (Z)
13 Nov 2024	0.01 (Z)	-- (Z)
14 Nov 2024	0.01 (Z)	-- (Z)
15 Nov 2024	0.01 (Z)	-- (Z)
16 Nov 2024	-- (Z)	-- (Z)
17 Nov 2024	-- (Z)	-- (Z)
18 Nov 2024	0.01 (Z)	-- (Z)
19 Nov 2024	0.01 (Z)	-- (Z)
20 Nov 2024	0.01 (Z)	-- (Z)
21 Nov 2024	0.01 (Z)	-- (Z)
22 Nov 2024	0.01 (Z)	-- (Z)
23 Nov 2024	-- (Z)	-- (Z)
24 Nov 2024	-- (Z)	-- (Z)
25 Nov 2024	0.01 (Z)	-- (Z)
26 Nov 2024	0.01 (Z)	-- (Z)
27 Nov 2024	0.01 (Z)	-- (Z)
28 Nov 2024	0.01 (Z)	-- (Z)
29 Nov 2024	0.01 (Z)	-- (Z)
30 Nov 2024	-- (Z)	-- (Z)

mm/s

▼ North East

Daily Max

 X Peak  Y Peak  Z Peak

01 Nov 2024	--	--	--
02 Nov 2024	--	--	--
03 Nov 2024	--	--	--
04 Nov 2024	--	--	--
05 Nov 2024	--	--	--
06 Nov 2024	--	--	--
07 Nov 2024	11	11	0
08 Nov 2024	0	0	0
09 Nov 2024	--	--	--
10 Nov 2024	--	--	--
11 Nov 2024	0	0	0
12 Nov 2024	0	0	0
13 Nov 2024	0	0	0
14 Nov 2024	0	0	0
15 Nov 2024	0	0	0
16 Nov 2024	--	--	--
17 Nov 2024	--	--	--
18 Nov 2024	0	0	0
19 Nov 2024	0	0	0
20 Nov 2024	0	0	0
21 Nov 2024	0	0	0
22 Nov 2024	0	0	0
23 Nov 2024	--	--	--
24 Nov 2024	--	--	--
25 Nov 2024	0	0	0
26 Nov 2024	0	0	0
27 Nov 2024	1	1	0
28 Nov 2024	0	0	0
29 Nov 2024	33	16	3
30 Nov 2024	--	--	--
	--	--	--

m/s^{1.75}

▼ North East

Daily VDV



 Day  Night

01 Nov 2024	-- (Z)	-- (Z)
02 Nov 2024	-- (Z)	-- (Z)
03 Nov 2024	-- (Z)	-- (Z)
04 Nov 2024	-- (Z)	-- (Z)
05 Nov 2024	-- (Z)	-- (Z)
06 Nov 2024	-- (Z)	-- (Z)
07 Nov 2024	-- (Z)	-- (Z)
08 Nov 2024	-- (Z)	-- (Z)
09 Nov 2024	-- (Z)	-- (Z)
10 Nov 2024	-- (Z)	-- (Z)
11 Nov 2024	0.01 (Z)	-- (Z)
12 Nov 2024	0.01 (Z)	-- (Z)
13 Nov 2024	0.01 (Z)	-- (Z)
14 Nov 2024	0.01 (Z)	-- (Z)
15 Nov 2024	0.01 (Z)	-- (Z)
16 Nov 2024	-- (Z)	-- (Z)
17 Nov 2024	-- (Z)	-- (Z)
18 Nov 2024	0.01 (Z)	-- (Z)
19 Nov 2024	0.01 (Z)	-- (Z)
20 Nov 2024	0.01 (Z)	-- (Z)
21 Nov 2024	0.01 (Z)	-- (Z)
22 Nov 2024	0.01 (Z)	-- (Z)
23 Nov 2024	-- (Z)	-- (Z)
24 Nov 2024	-- (Z)	-- (Z)
25 Nov 2024	0.01 (Z)	-- (Z)
26 Nov 2024	0.01 (Z)	-- (Z)
27 Nov 2024	0.01 (Z)	-- (Z)
28 Nov 2024	0.01 (Z)	-- (Z)
29 Nov 2024	0.12 (X)	-- (Z)
30 Nov 2024	-- (Z)	-- (Z)

mm/s

▼ Gate 2

Daily Max

 X Peak  Y Peak  Z Peak

01 Nov 2024	--	--	--
02 Nov 2024	--	--	--
03 Nov 2024	--	--	--
04 Nov 2024	--	--	--
05 Nov 2024	--	--	--
06 Nov 2024	--	--	--
07 Nov 2024	3	2	1
08 Nov 2024	107	95	158
09 Nov 2024	--	--	--
10 Nov 2024	--	--	--
11 Nov 2024	0	0	0
12 Nov 2024	0	0	0
13 Nov 2024	0	0	0
14 Nov 2024	38	127	42
15 Nov 2024	0	0	0
16 Nov 2024	--	--	--
17 Nov 2024	--	--	--
18 Nov 2024	0	0	0
19 Nov 2024	0	0	0
20 Nov 2024	0	0	0
21 Nov 2024	0	0	0
22 Nov 2024	0	0	0
23 Nov 2024	--	--	--
24 Nov 2024	--	--	--
25 Nov 2024	0	0	0
26 Nov 2024	0	0	0
27 Nov 2024	0	0	0
28 Nov 2024	0	0	0
29 Nov 2024	0	0	0
30 Nov 2024	--	--	--
	--	--	--

m/s^{1.75}

▼ Gate 2

Daily VDV

 Day  Night

01 Nov 2024	-- (Z)	-- (Z)
02 Nov 2024	-- (Z)	-- (Z)
03 Nov 2024	-- (Z)	-- (Z)
04 Nov 2024	-- (Z)	-- (Z)
05 Nov 2024	-- (Z)	-- (Z)
06 Nov 2024	-- (Z)	-- (Z)
07 Nov 2024	-- (Z)	-- (Z)
08 Nov 2024	-- (Z)	-- (Z)
09 Nov 2024	-- (Z)	-- (Z)
10 Nov 2024	-- (Z)	-- (Z)
11 Nov 2024	0.01 (Z)	-- (Z)
12 Nov 2024	0.01 (Z)	-- (Z)
13 Nov 2024	0.01 (Z)	-- (Z)
14 Nov 2024	0.67 (Z)	-- (Z)
15 Nov 2024	0.02 (Z)	-- (Z)
16 Nov 2024	-- (Z)	-- (Z)
17 Nov 2024	-- (Z)	-- (Z)
18 Nov 2024	0.01 (Z)	-- (Z)
19 Nov 2024	0.04 (Z)	-- (Z)
20 Nov 2024	0.01 (Z)	-- (Z)
21 Nov 2024	0.02 (Z)	-- (Z)
22 Nov 2024	0.01 (Z)	-- (Z)
23 Nov 2024	-- (Z)	-- (Z)
24 Nov 2024	-- (Z)	-- (Z)
25 Nov 2024	0.01 (Z)	-- (Z)
26 Nov 2024	0.02 (Z)	-- (Z)
27 Nov 2024	0.01 (Z)	-- (Z)
28 Nov 2024	0.01 (Z)	-- (Z)
29 Nov 2024	0.01 (Z)	-- (Z)
30 Nov 2024	-- (Z)	-- (Z)

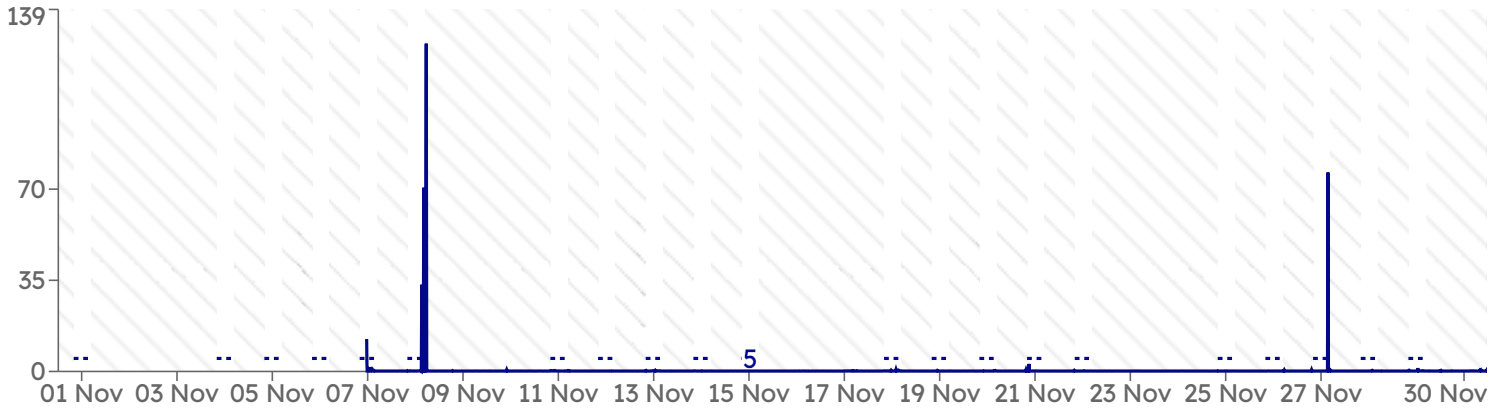
Vibration Monitoring Graphs



Gate 1

01 Nov 2024 - 30 Nov 2024

mm/s 15m maximums



Parameters

— vSum

Thresholds

- - - - 5 PPV Limit

Other

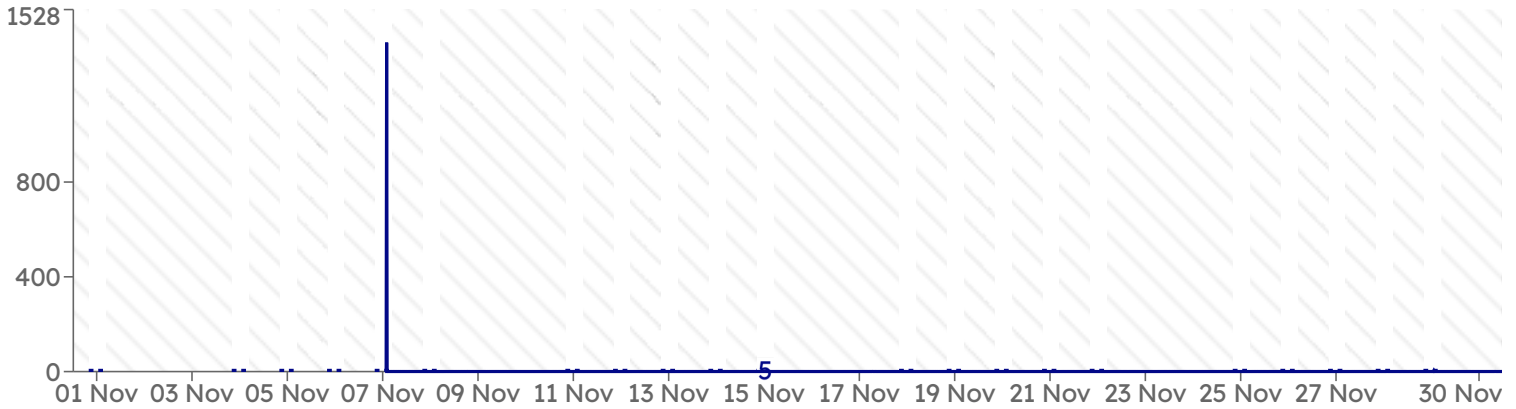
Out of Hours



North

01 Nov 2024 - 30 Nov 2024

mm/s 15m maximums



Parameters

— vSum

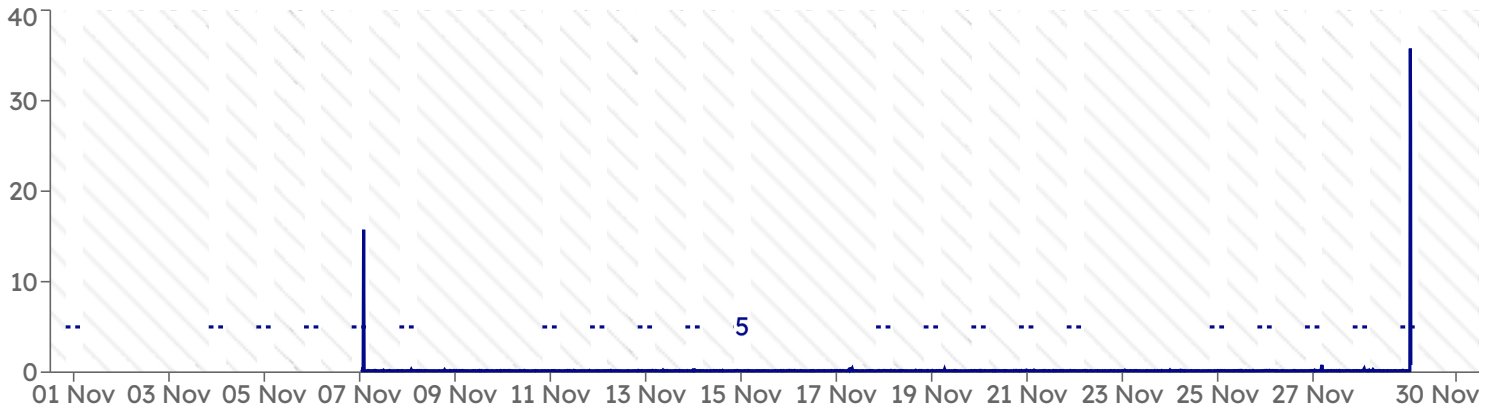
Thresholds

- - - - 5 PPV Limit

Other

Out of Hours

mm/s 15m maximums



Parameters

— vSum

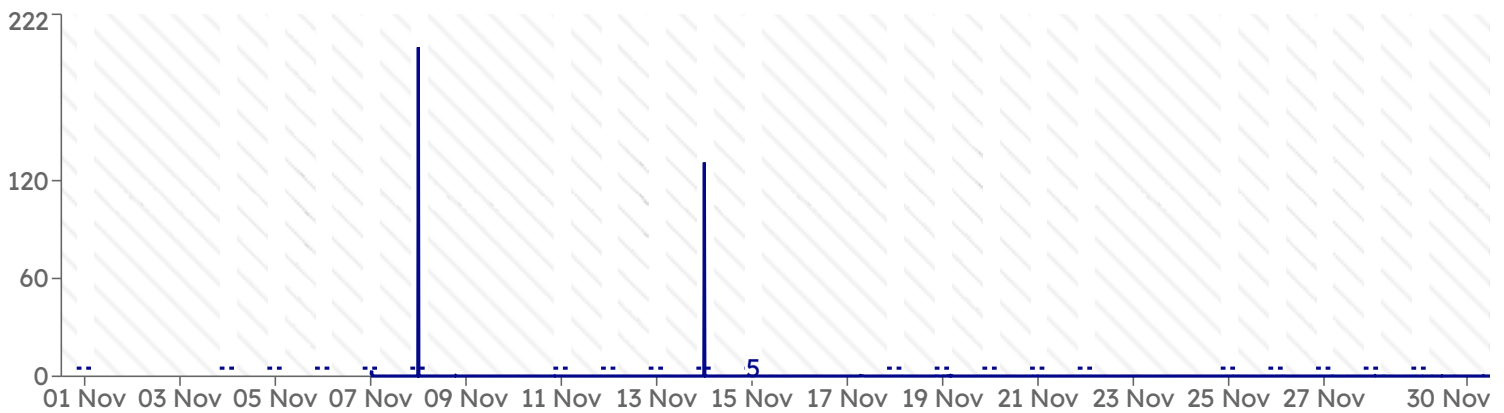
Thresholds

- - - - 5 PPV Limit

Other

Out of Hours

mm/s 15m maximums



Parameters

— vSum

Thresholds

- - - - 5 PPV Limit

Other

Out of Hours

Vibration Explained Events

Time	Rule	Values	Monitoring	Category	Event Notes
Thu, 07 Nov 2024					
11:25 AM	PPV Limit 5.00 mm/s  vSum	12.459	Gate 1	NR Monitor installation	Event caused by monitor installation. Not reportable.
01:47 PM - 01:56 PM	PPV Limit 5.00 mm/s  vSum	1388.536	North	NR Monitor installation	Event caused by monitor installation. Not reportable.
01:47 PM - 01:56 PM	PPV Limit 5.00 mm/s  vSum	15.74	North East	NR Monitor installation	Event caused by monitor installation. Not reportable.
Fri, 08 Nov 2024					
11:47 AM - 04:57 PM	PPV Limit 5.00 mm/s  vSum	33.311, 70.561, 60.128	Gate 1	NR Worker next to monitor	Monitor impacted by close proximity work. Not realistic value. Not Reportable.
11:47 AM - 04:57 PM	PPV Limit 5.00 mm/s  vSum	201.728	Gate 2	NR Worker next to monitor	Monitor impacted by close proximity work. Not realistic value. Not Reportable.
Thu, 14 Nov 2024					
11:58 AM	PPV Limit 5.00 mm/s  vSum	131.08	Gate 2	NR Worker next to monitor	Monitor impacted by close proximity work. Not realistic value. Not Reportable.
Wed, 27 Nov 2024					
03:22 PM	PPV Limit 5.00 mm/s  vSum	76.384	Gate 1	NR Plant too close to monitor	Monitor was impactde by localise earthworks and provided a exagerated level. Not a true representation of vibration levels being emitted by the site.
Fri, 29 Nov 2024					
12:59 PM	PPV Limit 5.00 mm/s  vSum	35.756	North East	NR Monitor error	Error with monitoring system. Not considered an exceedance.

Daily Notes

No notes for this period

Device Details

Device Serial	Monitoring Points	Model	Calibration Date	Calibration Due
VIB-000052	Gate 2	SiteHive Hexanode	24 Jul 2024	24 Jul 2026
VIB-000214	North East	SiteHive Hexanode	09 Aug 2024	09 Aug 2026
VIB-000270	North	SiteHive Hexanode	05 Sep 2024	05 Sep 2026
VIB-000274	Gate 1	SiteHive Hexanode	05 Sep 2024	05 Sep 2026

Appendix B – December 2024 – Noise, Vibration and Dust Monitoring Results

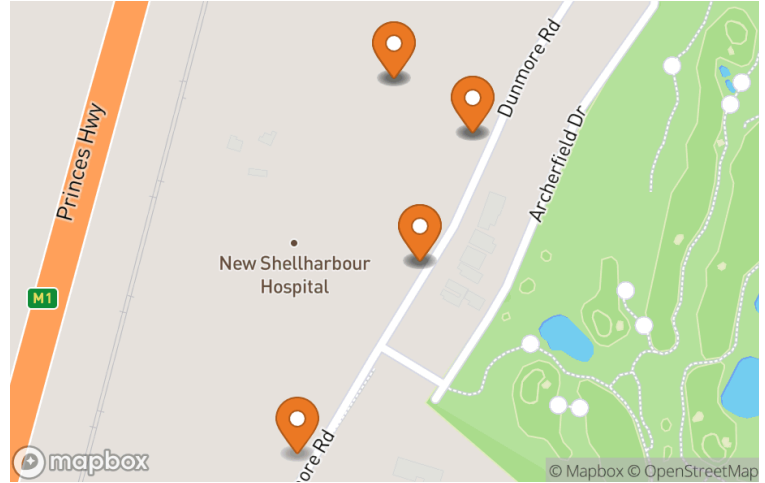
New Shellharbour Hospital

December 2024 - Dust

Monitoring Devices

Date Range 01 Dec 2024 - 31 Dec 2024

Device Serial	Monitoring Points
HEX-000426	North
HEX-000673	North East
HEX-000074	Gate 1
HEX-000442	Gate 2
HEX-000732	Gate 2
HEX-000547	North East
HEX-000343	North



Dust Monitoring Statistics

▼ Gate 1

9 $\mu\text{g}/\text{m}^3$

AVERAGE
PM2.5

38 $\mu\text{g}/\text{m}^3$

AVERAGE
PM10

▼ North

6 $\mu\text{g}/\text{m}^3$

AVERAGE
PM2.5

10 $\mu\text{g}/\text{m}^3$

AVERAGE
PM10

▼ North East

3 $\mu\text{g}/\text{m}^3$

AVERAGE
PM2.5

6 $\mu\text{g}/\text{m}^3$

AVERAGE
PM10

▼ Gate 2

8 $\mu\text{g}/\text{m}^3$

AVERAGE
PM2.5

24 $\mu\text{g}/\text{m}^3$

AVERAGE
PM10

These averages are statistical means calculated from all samples across the chosen period.

µg/m³

Daily Averages

▼ Gate 1

PM2.5 PM10

▼ North

PM2.5 PM10

▼ North East

PM2.5 PM10

▼ Gate 2

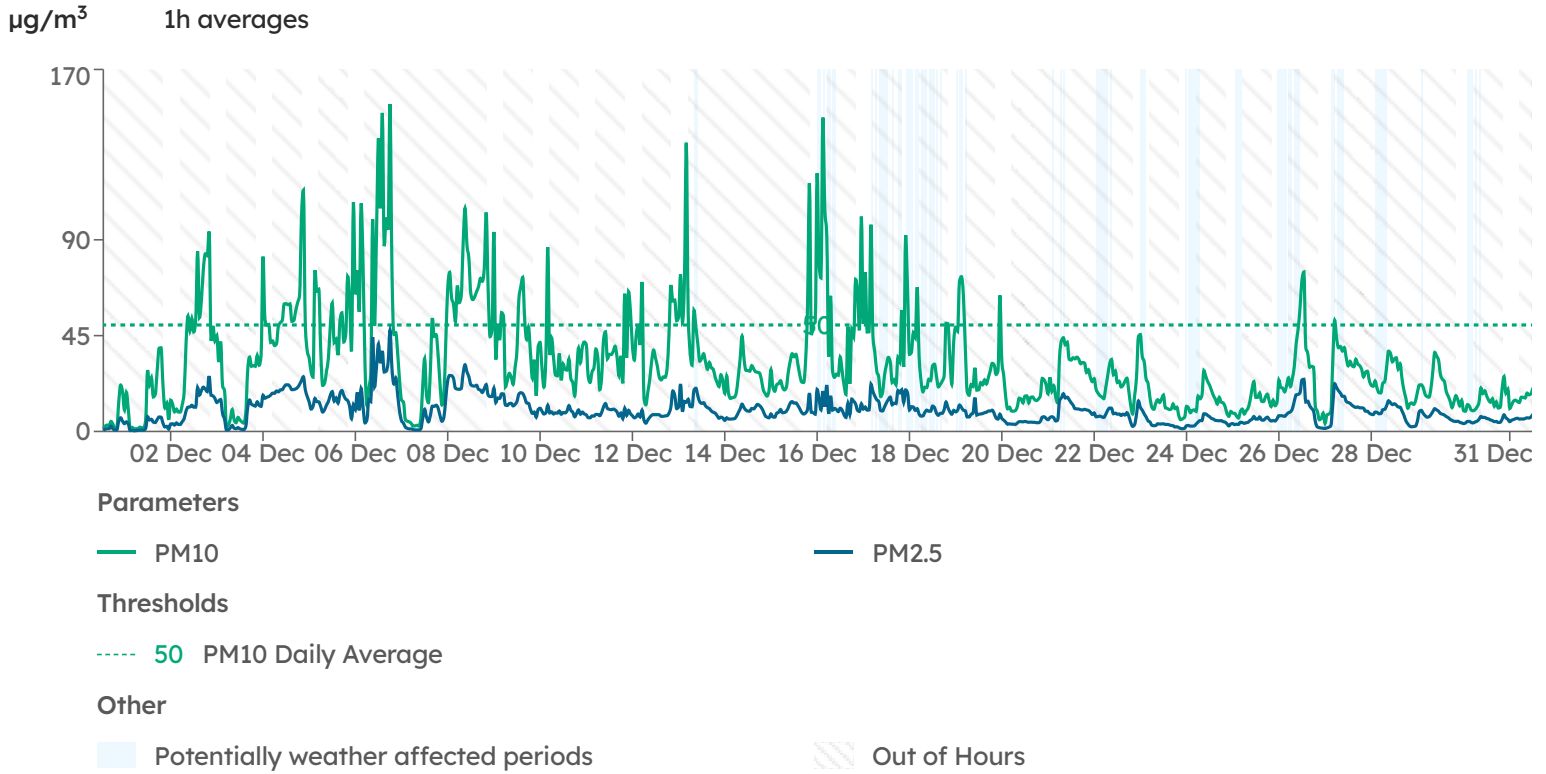
PM2.5 PM10

01 Dec 2024	--	--	--	--	--	--	--
02 Dec 2024	3	11	--	--	--	--	3 10
03 Dec 2024	12	33	--	--	--	--	11 32
04 Dec 2024	15	46	14	24	15	32	13 35
05 Dec 2024	16	55	14	24	14	35	12 34
06 Dec 2024	12	69	2	3	1	3	6 16
07 Dec 2024	--	--	--	--	--	--	-- --
08 Dec 2024	--	--	--	--	--	--	-- --
09 Dec 2024	17	55	14	29	3	8	16 49
10 Dec 2024	9	36	10	17	2	6	8 27
11 Dec 2024	8	33	9	17	1	2	7 28
12 Dec 2024	8	48	7	16	1	2	6 26
13 Dec 2024	15	68	2	2	1	3	9 27
14 Dec 2024	--	--	--	--	--	--	-- --
15 Dec 2024	--	--	--	--	--	--	-- --
16 Dec 2024	14	84	2	2	2	4	7 20
17 Dec 2024	13	64	4	5	3	9	11 35
18 Dec 2024	13	51	5	8	2	6	12 37
19 Dec 2024	10	49	4	5	1	4	10 46
20 Dec 2024	5	25	2	2	0	2	4 15
21 Dec 2024	--	--	--	--	--	--	-- --
22 Dec 2024	--	--	--	--	--	--	-- --
23 Dec 2024	8	29	5	7	2	6	8 25
24 Dec 2024	2	9	3	3	0	1	2 7
25 Dec 2024	4	8	1	1	0	1	5 11
26 Dec 2024	7	19	4	5	2	5	7 15
27 Dec 2024	5	15	4	5	1	4	6 14
28 Dec 2024	--	--	--	--	--	--	-- --
29 Dec 2024	--	--	--	--	--	--	-- --
30 Dec 2024	4	12	6	8	1	1	5 13
31 Dec 2024	6	16	8	13	0	1	6 18
	--	--	--	--	--	--	-- --

Dust Monitoring Graphs

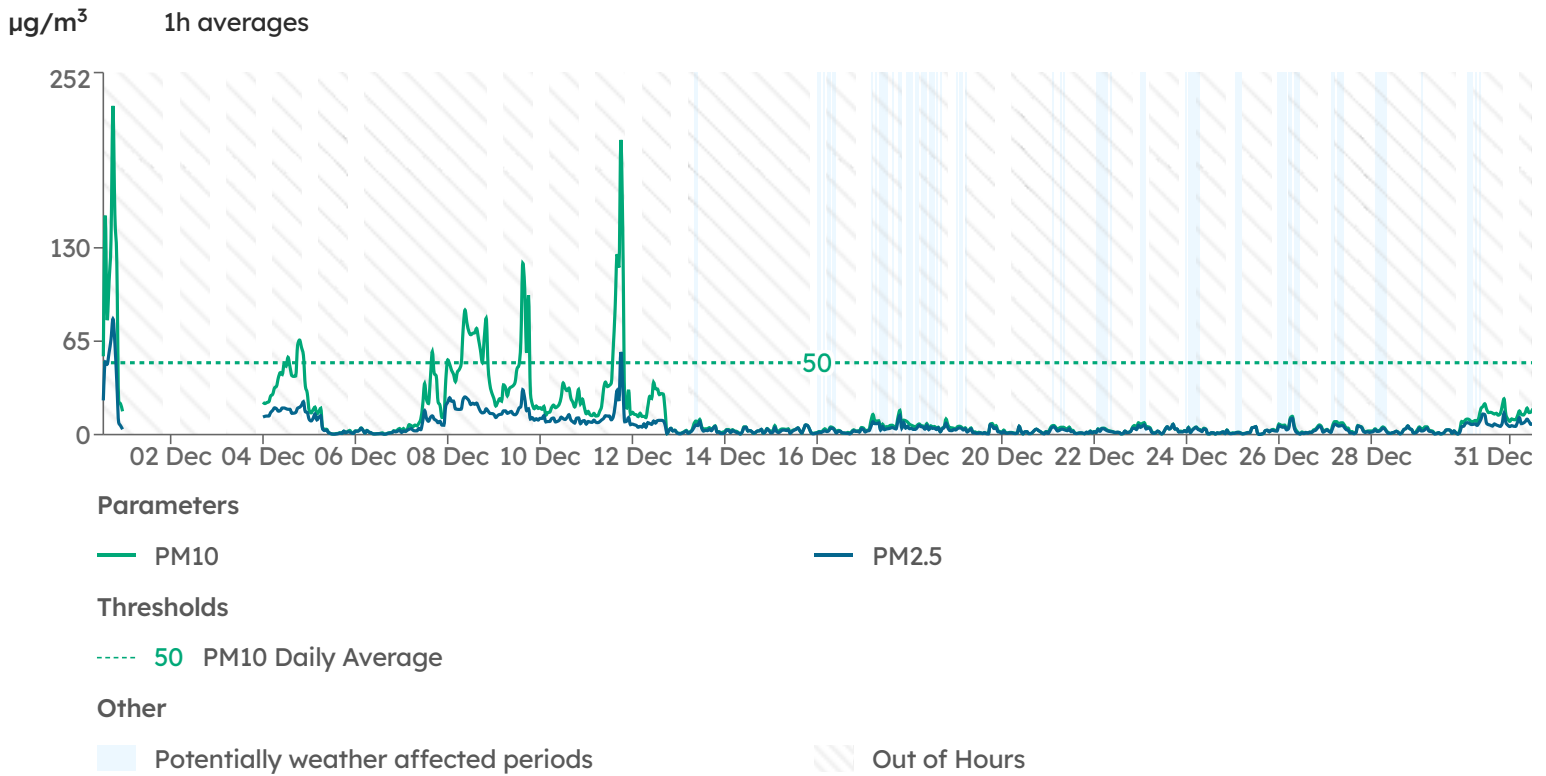
Gate 1

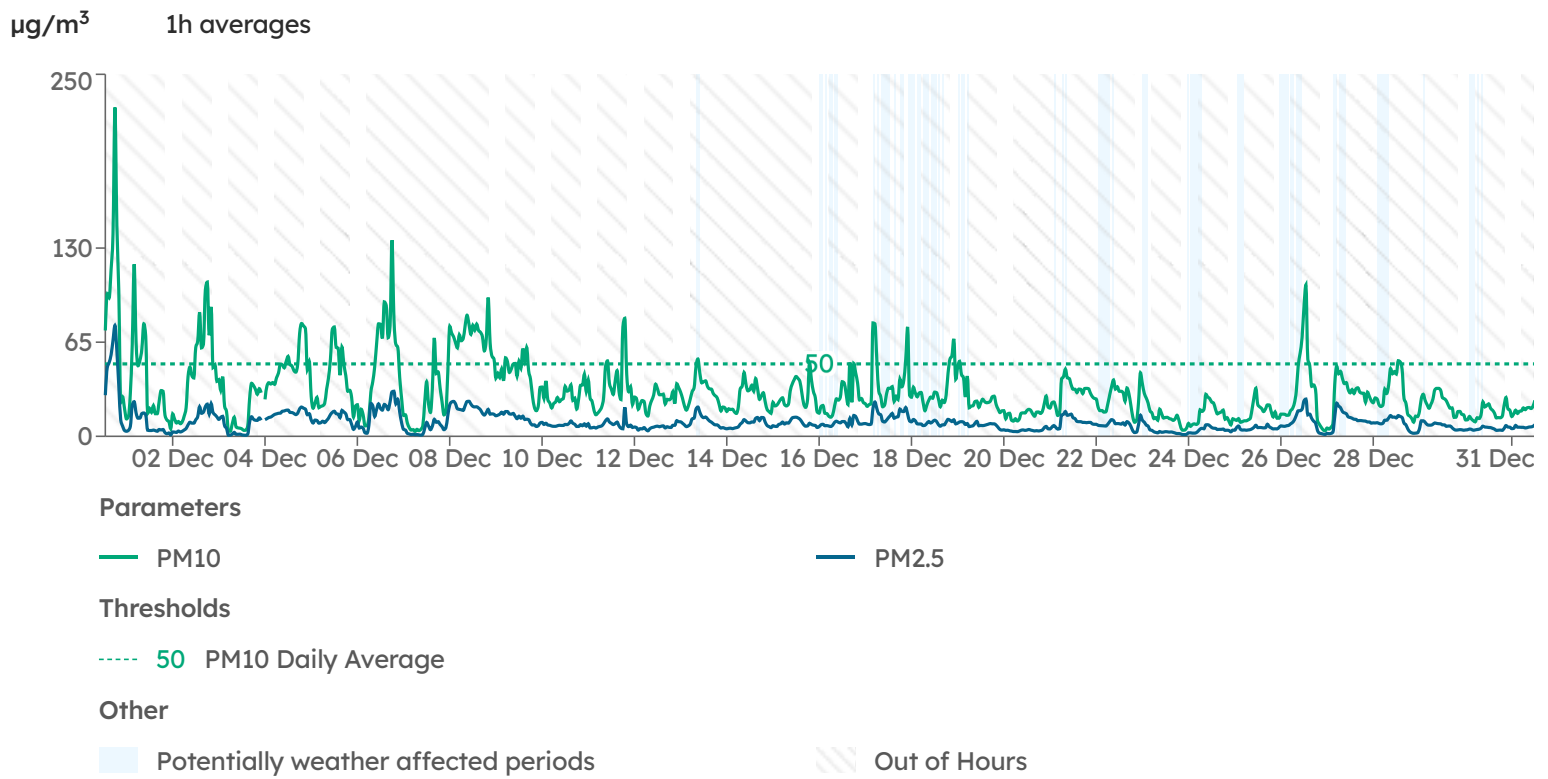
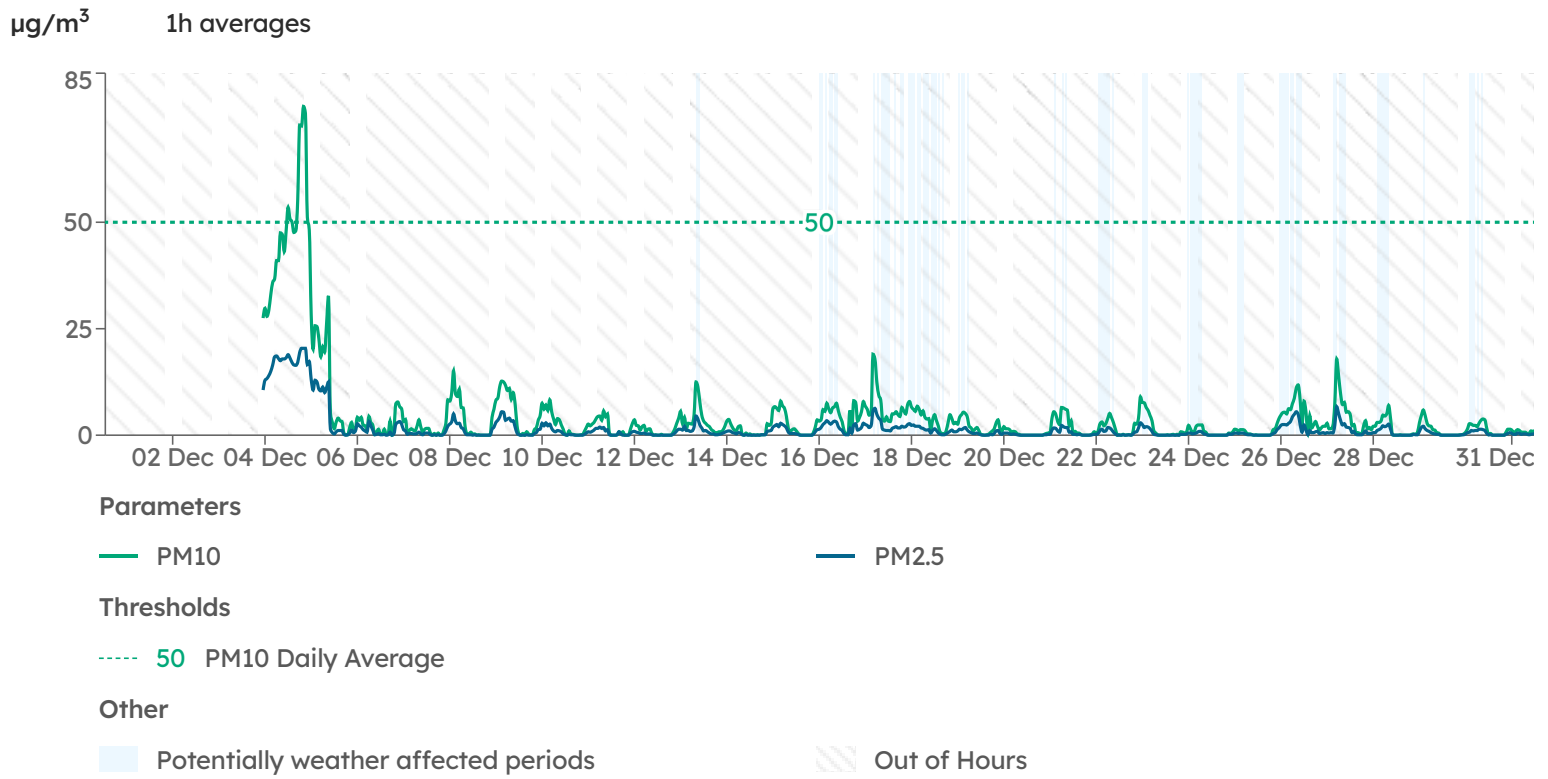
01 Dec 2024 - 31 Dec 2024



North

01 Dec 2024 - 31 Dec 2024





Dust Explained Events

Time	Rule	Values	Monitoring	Category	Event Notes
Sun, 01 Dec 2024					
10:00 AM - 03:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	99.3	North	NR Out of hours	Localised weather. Outside approved construction hours.
10:00 AM - 03:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	70.8	Gate 2	NR Out of hours	Localised weather. Outside approved construction hours.
Thu, 05 Dec 2024					
11:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	52.4	Gate 1	NR Out of hours	Localised weather. Outside approved construction hours.
Fri, 06 Dec 2024					
09:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	60.4	Gate 1	NR Out of hours	Localised weather. Outside approved construction hours.
Sun, 08 Dec 2024					
10:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	52.8	Gate 1	NR Out of hours	Localised weather. Outside approved construction hours.
10:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	53.8	Gate 2	NR Out of hours	Localised weather. Outside approved construction hours.
Mon, 09 Dec 2024					
08:00 PM - 10:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	52.4	Gate 1	NR Out of hours	Localised weather. Outside approved construction hours.
08:00 PM - 10:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	56.6	Gate 2	NR Out of hours	Localised weather. Outside approved construction hours.
Mon, 16 Dec 2024					
06:00 PM	PM10 Daily Average 50.00 µg/m ³ PM10	55.7	Gate 1	NR Gate 1 Location identified as unsuitable	Localised weather. Outside typical construction hours.

Daily Notes

No notes for this period

Device Details

Device Serial	Monitoring Points	Model	Calibration Date	Calibration Due
HEX-000426	North	SiteHive Hexanode	25 Oct 2024	25 Oct 2026
HEX-000673	North East	SiteHive Hexanode	03 Oct 2024	03 Oct 2026
HEX-000074	Gate 1	SiteHive Hexanode	03 Oct 2024	03 Oct 2026
HEX-000442	Gate 2	SiteHive Hexanode	28 Nov 2024	28 Nov 2026
HEX-000732	Gate 2	SiteHive Hexanode	13 Nov 2024	13 Nov 2026
HEX-000547	North East	SiteHive Hexanode	27 Sep 2024	27 Sep 2026
HEX-000343	North	SiteHive Hexanode	24 Oct 2024	24 Oct 2026

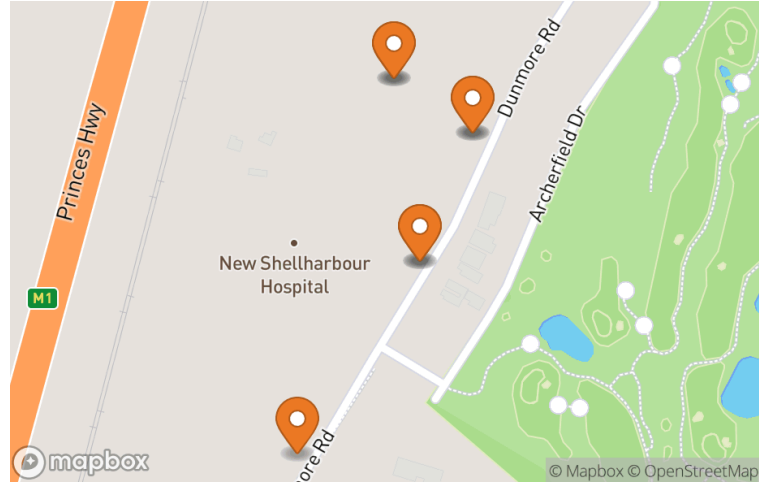
New Shellharbour Hospital

December 2024 - Noise

Monitoring Devices

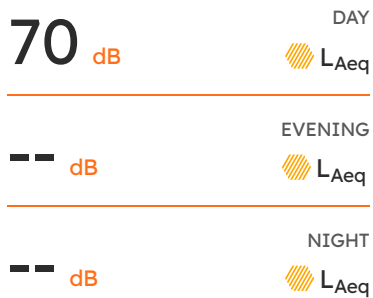
Date Range 01 Dec 2024 - 31 Dec 2024

Device Serial	Monitoring Points
HEX-000426	North
HEX-000673	North East
HEX-000074	Gate 1
HEX-000442	Gate 2
HEX-000732	Gate 2
HEX-000547	North East
HEX-000343	North



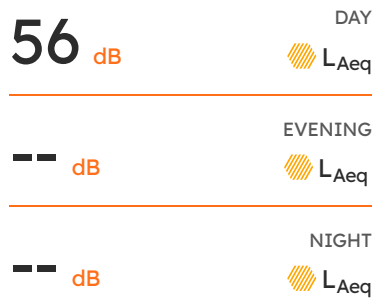
Noise Monitoring Statistics

▼ Gate 1



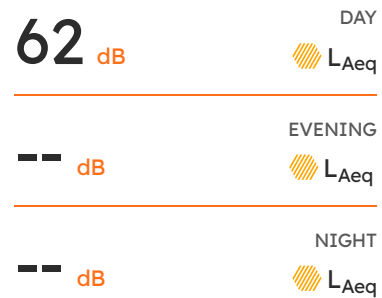
Average value across selected time period

▼ North



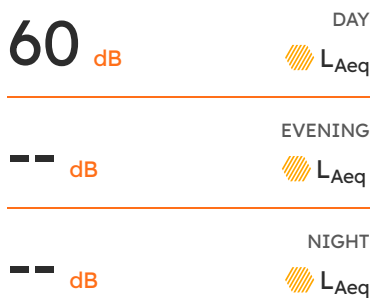
Average value across selected time period

▼ North East



Average value across selected time period

▼ Gate 2



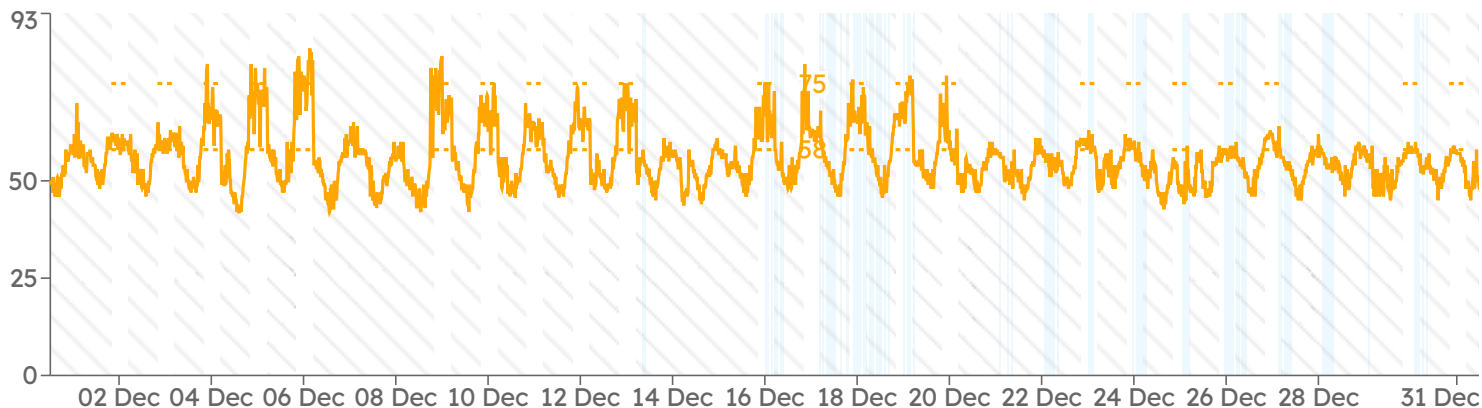
Average value across selected time period

Noise Monitoring Graphs

Gate 1

01 Dec 2024 - 31 Dec 2024

dB 15m averages



Parameters

— LAeq

Thresholds

----- 75 HNAL

----- 58 NAFL

Other

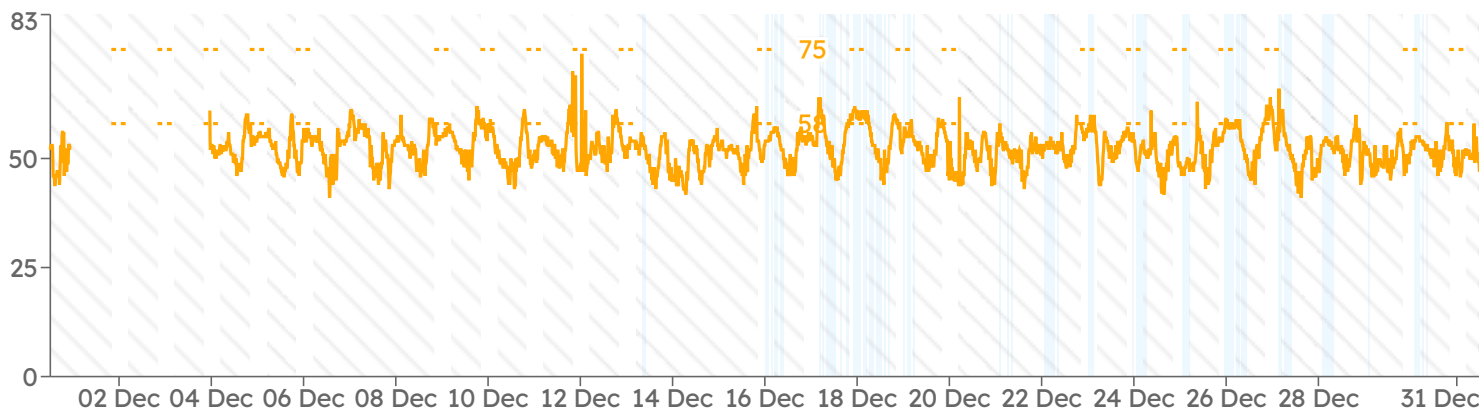
☐ Potentially weather affected periods

▨ Out of Hours

North

01 Dec 2024 - 31 Dec 2024

dB 15m averages



Parameters

— LAeq

Thresholds

----- 75 HNAL

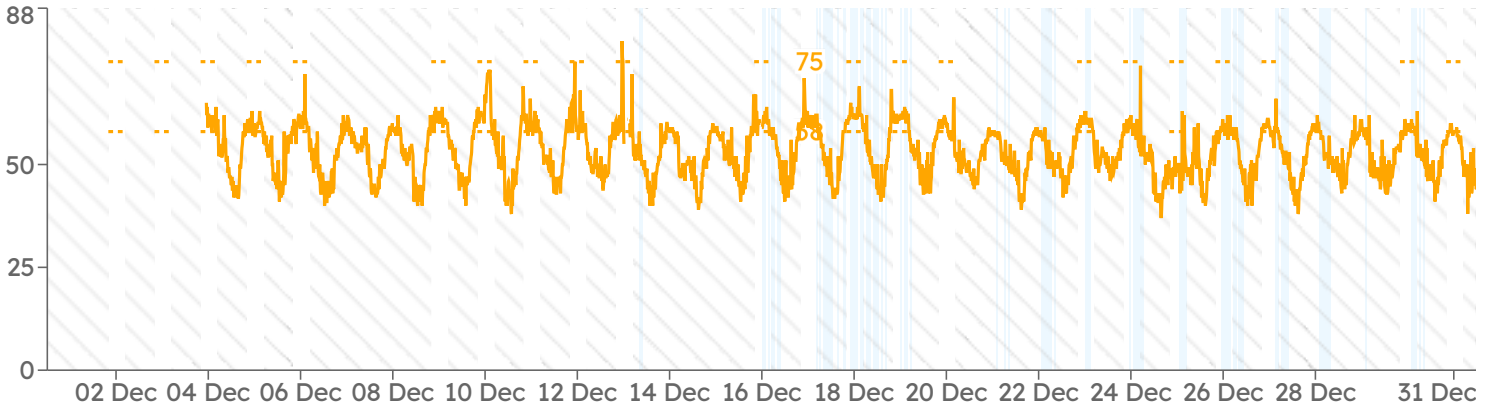
----- 58 NAFL

Other

☐ Potentially weather affected periods

▨ Out of Hours

dB 15m averages



Parameters

— L_{Aeq}

Thresholds

----- 75 HNAL

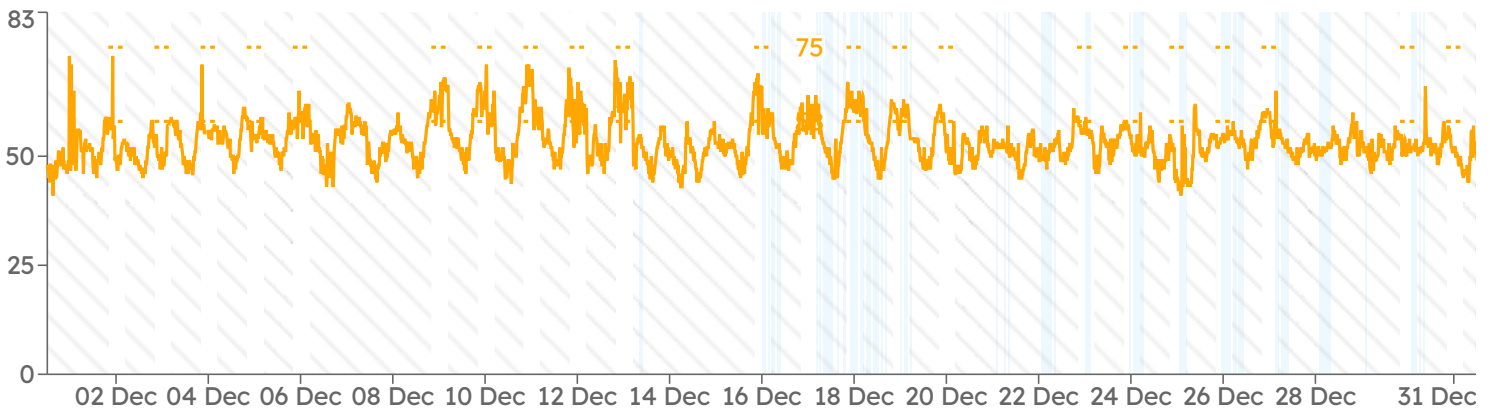
----- 58 NAFL

Other

☐ Potentially weather affected periods

▨ Out of Hours

dB 15m averages



Parameters

— L_{Aeq}

Thresholds

----- 75 HNAL

----- 58 NAFL

Other

☐ Potentially weather affected periods

▨ Out of Hours

Noise Explained Events

Time	Rule	Values	Monitoring	Category	Event Notes
Wed, 04 Dec 2024					
09:30 AM - 10:00 AM	HNAL 75.00 dB L _{Aeq}	77.9, 78.7, 79.8	Gate 1	NR Gate 1 Location identified as unsuitable	Monitor was originally installed directly adjacent to driveway. All large vehicles entering the site and undertaking civil works immediately adjacent are triggering the noise monitor due to the close proximity. Monitor has being relocated to a more suitable location reflective of the potential noise impacts to the neighbouring residential receivers.
Thu, 05 Dec 2024					
08:45 AM - 03:45 PM	HNAL 75.00 dB L _{Aeq}	79.9, 75.9, 78.5, 78.8	Gate 1	NR Gate 1 Location identified as unsuitable	Monitor was originally installed directly adjacent to driveway. All large vehicles entering the site and undertaking civil works immediately adjacent are triggering the noise monitor due to the close proximity. Monitor has being relocated to a more suitable location reflective of the potential noise impacts to the neighbouring residential receivers.

Time	Rule	Values	Monitoring	Category	Event Notes
Fri, 06 Dec 2024					
08:45 AM - 04:45 PM	HNAL 75.00 dB L _{Aeq}	77.8, 81.3, 81.5, 82.5, 79.3, 75.4, 75.9, 77.9, 76.8, 75.5, 75.2, 76.2, 76.8, 75.9, 75.9, 76.3, 76, 80.6, 80.1, 80, 84.2, 81.3, 79.8, 83.2, 77.7, 81.5	Gate 1	NR Gate 1 Location identified as unsuitable	Monitor was originally installed directly adjacent to driveway. All large vehicles entering the site and undertaking civil works immediately adjacent are triggering the noise monitor due to the close proximity. Monitor has being relocated to a more suitable location reflective of the potential noise impacts to the neighbouring residential receivers.
Mon, 09 Dec 2024					
08:30 AM - 12:00 PM	HNAL 75.00 dB L _{Aeq}	75.2, 79.4, 77.7, 78.5, 79, 80.7, 81.5, 82.5	Gate 1	NR Gate 1 Location identified as unsuitable	Monitor was originally installed directly adjacent to driveway. All large vehicles entering the site and undertaking civil works immediately adjacent are triggering the noise monitor due to the close proximity. Monitor has being relocated to a more suitable location reflective of the potential noise impacts to the neighbouring residential receivers.
Thu, 12 Dec 2024					
10:45 AM	HNAL 75.00 dB L _{Aeq}	75.1	North East	NR Traffic	Truck on public road.

Time	Rule	Values	Monitoring	Category	Event Notes
Fri, 13 Dec 2024					
11:00 AM	HNAL 75.00 dB L _{Aeq}	75.3	Gate 1	NR Gate 1 Location identified as unsuitable	Monitor was originally installed directly adjacent to driveway. All large vehicles entering the site and undertaking civil works immediately adjacent are triggering the noise monitor due to the close proximity. Monitor has being relocated to a more suitable location reflective of the potential noise impacts to the neighbouring residential receivers.
11:15 AM - 11:30 AM	HNAL 75.00 dB L _{Aeq}	79.9, 75.5	North East	NR Plant too close to monitor	Monitor was originally installed directly adjacent to driveway. All large vehicles entering the site and undertaking civil works immediately adjacent are triggering the noise monitor due to the close proximity. Monitor has being relocated to a more suitable location reflective of the potential noise impacts to the neighbouring residential receivers.

Time	Rule	Values	Monitoring	Category	Event Notes
Mon, 16 Dec 2024					
12:00 PM	HNAL 75.00 dB L _{Aeq}	75.3	Gate 1		Monitor was originally installed directly adjacent to driveway. All large vehicles entering the site and undertaking civil works immediately adjacent are triggering the noise monitor due to the close proximity. Monitor has being relocated to a more suitable location reflective of the potential noise impacts to the neighbouring residential receivers.
Tue, 17 Dec 2024					
08:45 AM	HNAL 75.00 dB L _{Aeq}	80.3	Gate 1	NR Gate 1 Location identified as unsuitable	Monitor was originally installed directly adjacent to driveway. All large vehicles entering the site and undertaking civil works immediately adjacent are triggering the noise monitor due to the close proximity. Monitor has being relocated to a more suitable location reflective of the potential noise impacts to the neighbouring residential receivers.
Wed, 18 Dec 2024					
09:45 AM	HNAL 75.00 dB L _{Aeq}	75.8	Gate 1	NR Gate 1 Location identified as unsuitable	Traffic on public road.

Time	Rule	Values	Monitoring	Category	Event Notes
Thu, 19 Dec 2024					
02:30 PM - 04:30 PM	HNAL 75.00 dB L _{Aeq}	75.2, 75.7, 76.7, 76.4, 75.6	Gate 1	NR Gate 1 Location identified as unsuitable	Monitor was originally installed directly adjacent to driveway. All large vehicles entering the site and undertaking civil works immediately adjacent are triggering the noise monitor due to the close proximity. Monitor has being relocated to a more suitable location reflective of the potential noise impacts to the neighbouring residential receivers.

Fri, 20 Dec 2024					
10:30 AM	HNAL 75.00 dB L _{Aeq}	77	Gate 1	NR Plant too close to monitor	Monitor was originally installed directly adjacent to driveway. All large vehicles entering the site and undertaking civil works immediately adjacent are triggering the noise monitor due to the close proximity. Monitor has being relocated to a more suitable location reflective of the potential noise impacts to the neighbouring residential receivers.

Daily Notes

No notes for this period

Device Details

Device Serial	Monitoring Points	Model	Calibration Date	Calibration Due
HEX-000426	North	SiteHive Hexanode	25 Oct 2024	25 Oct 2026
HEX-000673	North East	SiteHive Hexanode	03 Oct 2024	03 Oct 2026
HEX-000074	Gate 1	SiteHive Hexanode	03 Oct 2024	03 Oct 2026
HEX-000442	Gate 2	SiteHive Hexanode	28 Nov 2024	28 Nov 2026
HEX-000732	Gate 2	SiteHive Hexanode	13 Nov 2024	13 Nov 2026
HEX-000547	North East	SiteHive Hexanode	27 Sep 2024	27 Sep 2026
HEX-000343	North	SiteHive Hexanode	24 Oct 2024	24 Oct 2026

New Shellharbour Hospital

Attended Summary Report

Attended Monitoring Summary

Date Range 01 Dec 2024 - 31 Dec 2024

Monitoring Locations

Location Name	Lat	Long
---------------	-----	------



Attended Monitoring Results Summary Table

No measurements for this period

BESIX Watpac

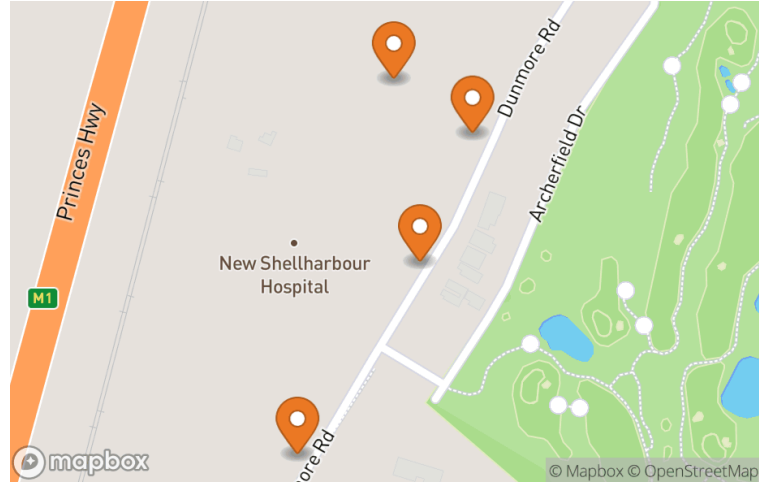
New Shellharbour Hospital

December 2024 - Vibration

Monitoring Devices

Date Range 01 Dec 2024 - 31 Dec 2024

Device Serial	Monitoring Points
VIB-000052	Gate 2
VIB-000214	North East
VIB-000270	North
VIB-000274	Gate 1



▼ Gate 1

950 mm/s MAXIMUM
X Peak

1630 mm/s MAXIMUM
Y Peak

922 mm/s MAXIMUM
Z Peak

▼ Gate 1

3.62 m/s^{1.75} MAXIMUM
X VDV

3.66 m/s^{1.75} MAXIMUM
Y VDV

7.93 m/s^{1.75} MAXIMUM
Z VDV

▼ North

8 mm/s MAXIMUM
X Peak

8 mm/s MAXIMUM
Y Peak

2 mm/s MAXIMUM
Z Peak

▼ North

0.03 m/s^{1.75} MAXIMUM
X VDV

0.03 m/s^{1.75} MAXIMUM
Y VDV

0.06 m/s^{1.75} MAXIMUM
Z VDV

▼ North East

199 mm/s MAXIMUM
X Peak

319 mm/s MAXIMUM
Y Peak

599 mm/s MAXIMUM
Z Peak

▼ North East

0.52 m/s^{1.75} MAXIMUM
X VDV

1.18 m/s^{1.75} MAXIMUM
Y VDV

8.21 m/s^{1.75} MAXIMUM
Z VDV

▼ Gate 2

2 mm/s MAXIMUM
X Peak

1 mm/s MAXIMUM
Y Peak

1 mm/s MAXIMUM
Z Peak

▼ Gate 2

0.01 m/s^{1.75} MAXIMUM
X VDV

0.01 m/s^{1.75} MAXIMUM
Y VDV

0.04 m/s^{1.75} MAXIMUM
Z VDV

mm/s

▼ Gate 1

Daily Max	X Peak	Y Peak	Z Peak
01 Dec 2024	--	--	--
02 Dec 2024	0	0	0
03 Dec 2024	0	0	0
04 Dec 2024	950	1113	922
05 Dec 2024	5	3	2
06 Dec 2024	5	6	1
07 Dec 2024	--	--	--
08 Dec 2024	--	--	--
09 Dec 2024	8	8	2
10 Dec 2024	584	1630	788
11 Dec 2024	1	1	0
12 Dec 2024	2	2	0
13 Dec 2024	3	3	1
14 Dec 2024	--	--	--
15 Dec 2024	--	--	--
16 Dec 2024	--	--	--
17 Dec 2024	--	--	--
18 Dec 2024	1	1	0
19 Dec 2024	2	2	1
20 Dec 2024	5	5	1
21 Dec 2024	--	--	--
22 Dec 2024	--	--	--
23 Dec 2024	0	1	0
24 Dec 2024	0	0	0
25 Dec 2024	0	0	0
26 Dec 2024	1	1	0
27 Dec 2024	0	1	0
28 Dec 2024	--	--	--
29 Dec 2024	--	--	--
30 Dec 2024	0	1	0
31 Dec 2024	0	0	0
	--	--	--

m/s^{1.75}

▼ Gate 1

Daily VDV	Day	Night
01 Dec 2024	-- (Z)	-- (Z)
02 Dec 2024	0.01 (Z)	-- (Z)
03 Dec 2024	0.01 (Z)	-- (Z)
04 Dec 2024	5.87 (Z)	-- (Z)
05 Dec 2024	0.16 (Z)	-- (Z)
06 Dec 2024	0.13 (Z)	-- (Z)
07 Dec 2024	-- (Z)	-- (Z)
08 Dec 2024	-- (Z)	-- (Z)
09 Dec 2024	0.24 (Z)	-- (Z)
10 Dec 2024	7.93 (Z)	-- (Z)
11 Dec 2024	0.02 (Z)	-- (Z)
12 Dec 2024	0.04 (Z)	-- (Z)
13 Dec 2024	0.03 (Z)	-- (Z)
14 Dec 2024	-- (Z)	-- (Z)
15 Dec 2024	-- (Z)	-- (Z)
16 Dec 2024	-- (Z)	-- (Z)
17 Dec 2024	-- (Z)	-- (Z)
18 Dec 2024	0.01 (Z)	-- (Z)
19 Dec 2024	0.04 (Z)	-- (Z)
20 Dec 2024	0.15 (Z)	-- (Z)
21 Dec 2024	-- (Z)	-- (Z)
22 Dec 2024	-- (Z)	-- (Z)
23 Dec 2024	0.01 (Z)	-- (Z)
24 Dec 2024	0.01 (Z)	-- (Z)
25 Dec 2024	0.01 (Z)	-- (Z)
26 Dec 2024	0.01 (Z)	-- (Z)
27 Dec 2024	0.01 (Z)	-- (Z)
28 Dec 2024	-- (Z)	-- (Z)
29 Dec 2024	-- (Z)	-- (Z)
30 Dec 2024	0.01 (Z)	-- (Z)
31 Dec 2024	0.01 (Z)	-- (Z)

mm/s

▼ North

Daily Max

X Peak Y Peak Z Peak

01 Dec 2024	--	--	--
02 Dec 2024	0	0	0
03 Dec 2024	0	0	0
04 Dec 2024	8	8	2
05 Dec 2024	1	0	0
06 Dec 2024	0	0	0
07 Dec 2024	--	--	--
08 Dec 2024	--	--	--
09 Dec 2024	0	0	0
10 Dec 2024	7	6	2
11 Dec 2024	0	0	0
12 Dec 2024	1	1	0
13 Dec 2024	0	0	0
14 Dec 2024	--	--	--
15 Dec 2024	--	--	--
16 Dec 2024	0	0	0
17 Dec 2024	0	0	0
18 Dec 2024	0	0	0
19 Dec 2024	0	0	0
20 Dec 2024	0	0	0
21 Dec 2024	--	--	--
22 Dec 2024	--	--	--
23 Dec 2024	0	0	0
24 Dec 2024	0	0	0
25 Dec 2024	0	0	0
26 Dec 2024	0	0	0
27 Dec 2024	0	0	0
28 Dec 2024	--	--	--
29 Dec 2024	--	--	--
30 Dec 2024	0	0	0
31 Dec 2024	0	0	0
	--	--	--

m/s^{1.75}

▼ North

Daily VDV

Day Night

01 Dec 2024	-- (Z)	-- (Z)
02 Dec 2024	0.01 (Z)	-- (Z)
03 Dec 2024	0.01 (Z)	-- (Z)
04 Dec 2024	0.05 (Z)	-- (Z)
05 Dec 2024	0.01 (Z)	-- (Z)
06 Dec 2024	0.01 (Z)	-- (Z)
07 Dec 2024	-- (Z)	-- (Z)
08 Dec 2024	-- (Z)	-- (Z)
09 Dec 2024	0.01 (Z)	-- (Z)
10 Dec 2024	0.06 (Z)	-- (Z)
11 Dec 2024	0.01 (Z)	-- (Z)
12 Dec 2024	0.01 (Z)	-- (Z)
13 Dec 2024	0.01 (Z)	-- (Z)
14 Dec 2024	-- (Z)	-- (Z)
15 Dec 2024	-- (Z)	-- (Z)
16 Dec 2024	0.01 (Z)	-- (Z)
17 Dec 2024	0.01 (Z)	-- (Z)
18 Dec 2024	0.01 (Z)	-- (Z)
19 Dec 2024	0.01 (Z)	-- (Z)
20 Dec 2024	0.01 (Z)	-- (Z)
21 Dec 2024	-- (Z)	-- (Z)
22 Dec 2024	-- (Z)	-- (Z)
23 Dec 2024	0.01 (Z)	-- (Z)
24 Dec 2024	0.01 (Z)	-- (Z)
25 Dec 2024	0.01 (Z)	-- (Z)
26 Dec 2024	0.01 (Z)	-- (Z)
27 Dec 2024	0.01 (Z)	-- (Z)
28 Dec 2024	-- (Z)	-- (Z)
29 Dec 2024	-- (Z)	-- (Z)
30 Dec 2024	0.01 (Z)	-- (Z)
31 Dec 2024	0.01 (Z)	-- (Z)

mm/s

▼ North East

Daily Max

X Peak Y Peak Z Peak

01 Dec 2024	--	--	--
02 Dec 2024	--	--	--
03 Dec 2024	--	--	--
04 Dec 2024	199	319	599
05 Dec 2024	0	0	0
06 Dec 2024	0	0	0
07 Dec 2024	--	--	--
08 Dec 2024	--	--	--
09 Dec 2024	0	0	0
10 Dec 2024	1	0	0
11 Dec 2024	0	0	0
12 Dec 2024	2	1	1
13 Dec 2024	1	1	0
14 Dec 2024	--	--	--
15 Dec 2024	--	--	--
16 Dec 2024	0	1	0
17 Dec 2024	0	0	0
18 Dec 2024	0	0	0
19 Dec 2024	3	7	1
20 Dec 2024	0	0	0
21 Dec 2024	--	--	--
22 Dec 2024	--	--	--
23 Dec 2024	0	0	0
24 Dec 2024	0	0	0
25 Dec 2024	0	0	0
26 Dec 2024	0	0	0
27 Dec 2024	0	0	0
28 Dec 2024	--	--	--
29 Dec 2024	--	--	--
30 Dec 2024	0	0	0
31 Dec 2024	0	0	0
	--	--	--

m/s^{1.75}

▼ North East

Daily VDV


Day Night

01 Dec 2024	-- (Z)	-- (Z)
02 Dec 2024	-- (Z)	-- (Z)
03 Dec 2024	-- (Z)	-- (Z)
04 Dec 2024	8.21 (Z)	-- (Z)
05 Dec 2024	0.01 (Z)	-- (Z)
06 Dec 2024	0.01 (Z)	-- (Z)
07 Dec 2024	-- (Z)	-- (Z)
08 Dec 2024	-- (Z)	-- (Z)
09 Dec 2024	0.01 (Z)	-- (Z)
10 Dec 2024	0.01 (Z)	-- (Z)
11 Dec 2024	0.01 (Z)	-- (Z)
12 Dec 2024	0.02 (Z)	-- (Z)
13 Dec 2024	0.02 (Z)	-- (Z)
14 Dec 2024	-- (Z)	-- (Z)
15 Dec 2024	-- (Z)	-- (Z)
16 Dec 2024	0.01 (Z)	-- (Z)
17 Dec 2024	0.01 (Z)	-- (Z)
18 Dec 2024	0.01 (Z)	-- (Z)
19 Dec 2024	0.02 (Z)	-- (Z)
20 Dec 2024	0.01 (Z)	-- (Z)
21 Dec 2024	-- (Z)	-- (Z)
22 Dec 2024	-- (Z)	-- (Z)
23 Dec 2024	0.01 (Z)	-- (Z)
24 Dec 2024	0.01 (Z)	-- (Z)
25 Dec 2024	0.01 (Z)	-- (Z)
26 Dec 2024	0.01 (Z)	-- (Z)
27 Dec 2024	0.01 (Z)	-- (Z)
28 Dec 2024	-- (Z)	-- (Z)
29 Dec 2024	-- (Z)	-- (Z)
30 Dec 2024	0.01 (Z)	-- (Z)
31 Dec 2024	0.01 (Z)	-- (Z)

mm/s

▼ Gate 2

Daily Max

 X Peak  Y Peak  Z Peak

01 Dec 2024	--	--	--
02 Dec 2024	0	0	0
03 Dec 2024	1	1	0
04 Dec 2024	2	1	1
05 Dec 2024	0	0	0
06 Dec 2024	0	0	0
07 Dec 2024	--	--	--
08 Dec 2024	--	--	--
09 Dec 2024	0	0	0
10 Dec 2024	1	1	0
11 Dec 2024	1	0	0
12 Dec 2024	0	0	0
13 Dec 2024	1	1	1
14 Dec 2024	--	--	--
15 Dec 2024	--	--	--
16 Dec 2024	1	1	1
17 Dec 2024	0	0	0
18 Dec 2024	0	0	0
19 Dec 2024	0	0	0
20 Dec 2024	0	0	0
21 Dec 2024	--	--	--
22 Dec 2024	--	--	--
23 Dec 2024	0	0	0
24 Dec 2024	0	0	0
25 Dec 2024	0	0	0
26 Dec 2024	0	0	0
27 Dec 2024	0	0	0
28 Dec 2024	--	--	--
29 Dec 2024	--	--	--
30 Dec 2024	0	0	0
31 Dec 2024	0	0	0
	--	--	--

m/s^{1.75}

▼ Gate 2

Daily VDV

 Day  Night

01 Dec 2024	-- (Z)	-- (Z)
02 Dec 2024	0.01 (Z)	-- (Z)
03 Dec 2024	0.01 (Z)	-- (Z)
04 Dec 2024	0.02 (Z)	-- (Z)
05 Dec 2024	0.01 (Z)	-- (Z)
06 Dec 2024	0.01 (Z)	-- (Z)
07 Dec 2024	-- (Z)	-- (Z)
08 Dec 2024	-- (Z)	-- (Z)
09 Dec 2024	0.02 (Z)	-- (Z)
10 Dec 2024	0.04 (Z)	-- (Z)
11 Dec 2024	0.03 (Z)	-- (Z)
12 Dec 2024	0.01 (Z)	-- (Z)
13 Dec 2024	0.04 (Z)	-- (Z)
14 Dec 2024	-- (Z)	-- (Z)
15 Dec 2024	-- (Z)	-- (Z)
16 Dec 2024	0.04 (Z)	-- (Z)
17 Dec 2024	0.02 (Z)	-- (Z)
18 Dec 2024	0.02 (Z)	-- (Z)
19 Dec 2024	0.01 (Z)	-- (Z)
20 Dec 2024	0.01 (Z)	-- (Z)
21 Dec 2024	-- (Z)	-- (Z)
22 Dec 2024	-- (Z)	-- (Z)
23 Dec 2024	0.01 (Z)	-- (Z)
24 Dec 2024	0.01 (Z)	-- (Z)
25 Dec 2024	0.01 (Z)	-- (Z)
26 Dec 2024	0.01 (Z)	-- (Z)
27 Dec 2024	0.01 (Z)	-- (Z)
28 Dec 2024	-- (Z)	-- (Z)
29 Dec 2024	-- (Z)	-- (Z)
30 Dec 2024	0.01 (Z)	-- (Z)
31 Dec 2024	0.01 (Z)	-- (Z)

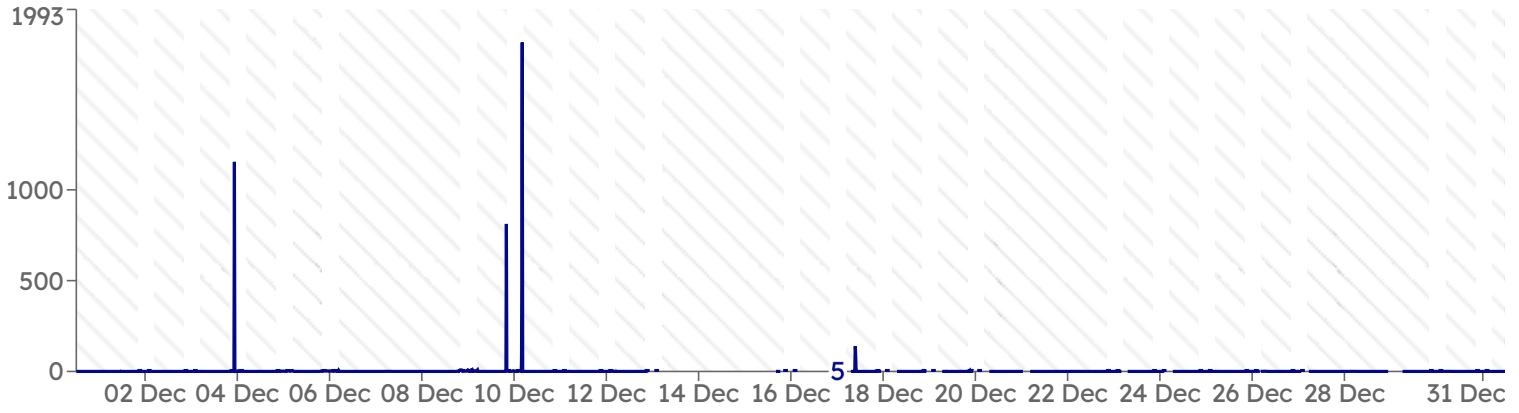
Vibration Monitoring Graphs



Gate 1

01 Dec 2024 - 31 Dec 2024

mm/s 15m maximums



Parameters

— vSum

Thresholds

--- 5 PPV Limit

Other

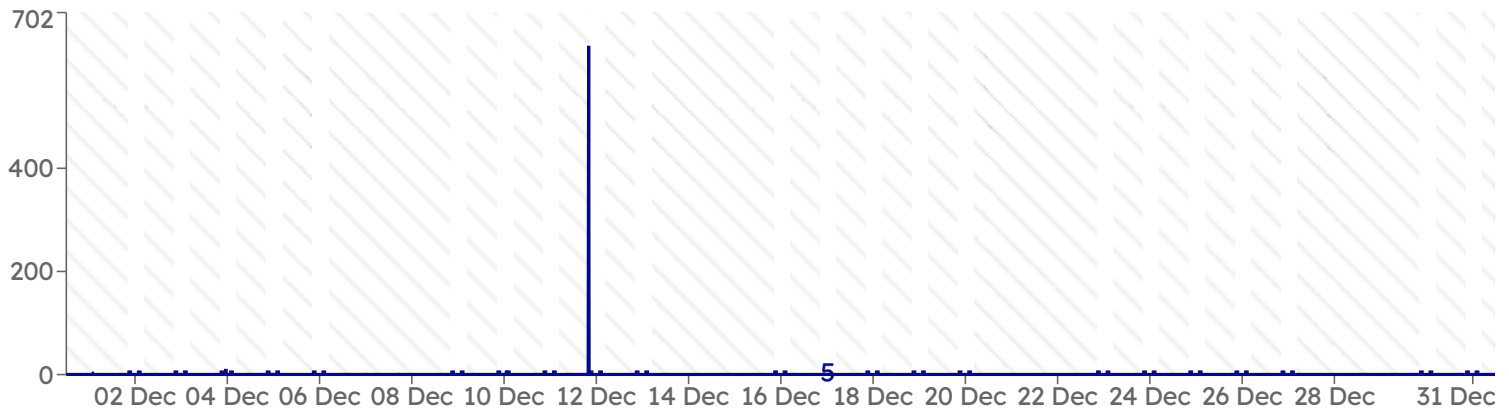
Out of Hours



North

01 Dec 2024 - 31 Dec 2024

mm/s 15m maximums



Parameters

— vSum

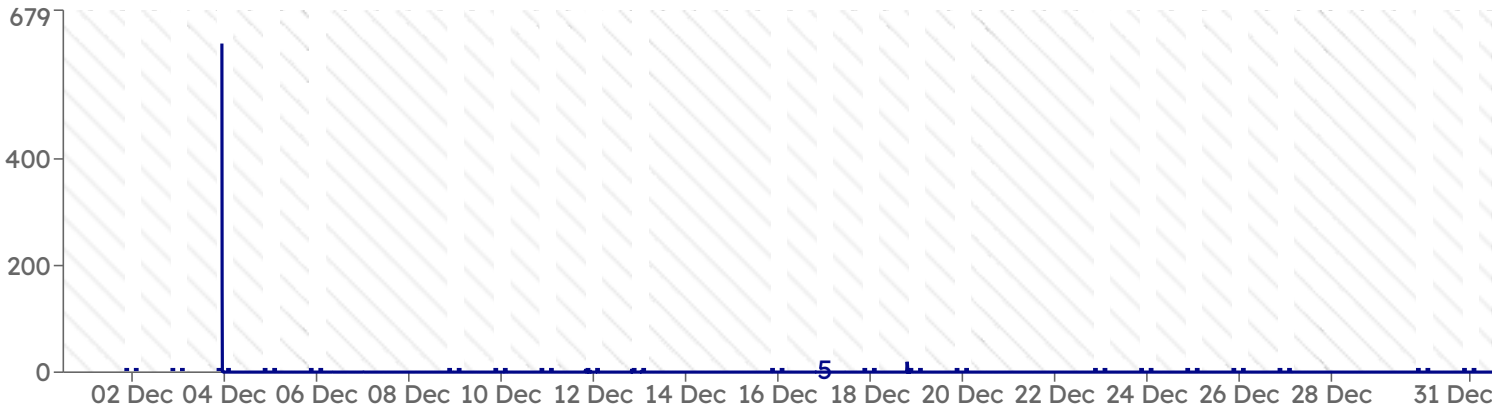
Thresholds

--- 5 PPV Limit

Other

Out of Hours

mm/s 15m maximums



Parameters

— vSum

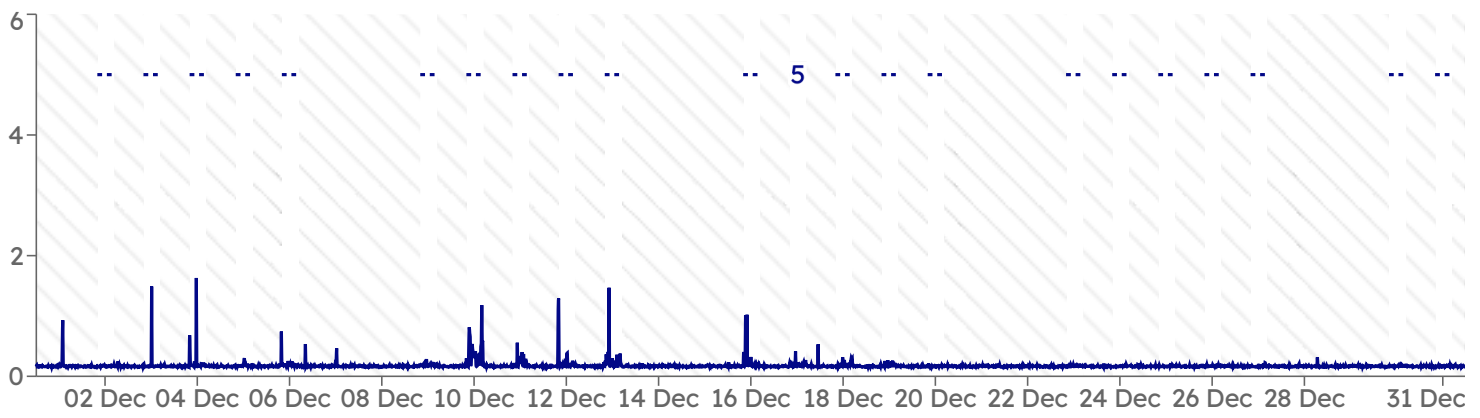
Thresholds

- - - 5 PPV Limit

Other

Out of Hours

mm/s 15m maximums



Parameters

— vSum




Thresholds



- - - 5 PPV Limit

Other


Out of Hours

Vibration Explained Events


Time	Rule	Values	Monitoring	Category	Event Notes
Wed, 04 Dec 2024					
10:20 AM - 11:05 AM	PPV Limit 5.00 mm/s  vSum	1046.372, 1153.953	Gate 1	NR Gate 1 Location identified as unsuitable	Monitor was originally installed directly adjacent to driveway. All large vehicles entering the site and undertaking civil works immediately adjacent are triggering the noise monitor due to the close proximity. Monitor has being relocated to a more suitable location reflective of the potential noise impacts to the neighbouring residential receivers.
10:20 AM - 11:05 AM	PPV Limit 5.00 mm/s  vSum	10.79	North	NR Gate 1 Location identified as unsuitable	Monitor was originally installed directly adjacent to driveway. All large vehicles entering the site and undertaking civil works immediately adjacent are triggering the noise monitor due to the close proximity. Monitor has being relocated to a more suitable location reflective of the potential noise impacts to the neighbouring residential receivers.
10:20 AM - 11:05 AM	PPV Limit 5.00 mm/s  vSum	616.433	North East	NR Gate 1 Location identified as unsuitable	Monitor was originally installed directly adjacent to driveway. All large vehicles entering the site and undertaking civil works immediately adjacent are triggering the noise monitor due to the close proximity.




Time	Rule	Values	Monitoring	Category	Event Notes
					Monitor has being relocated to a more suitable location reflective of the potential noise impacts to the neighbouring residential receivers.
10:39 AM	PPV Limit 5.00 mm/s  vSum	616.433	North East	NR Monitor installation	Vibration event caused by monitor service.
11:05 AM	PPV Limit 5.00 mm/s  vSum	10.79	North	NR Monitor error	Vibration event caused by monitor service.



Fri, 06 Dec 2024

04:36 PM - 04:42 PM	PPV Limit 5.00 mm/s  vSum	5.074, 5.447, 5.648, 6.069, 5.49, 6.523	Gate 1	R Complaint Event (Vibration Analysis)	Event reviewed with consideration of frequency domain. All measured levels are below the relevant criteria at the measured dominant frequency. Event is considered compliant.
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Mon, 09 Dec 2024

08:00 AM - 04:50 PM	PPV Limit 5.00 mm/s  vSum	7.974, 7.708, 7.439, 7.242, 5.464, 6.679, 6.8, 6.675, 5.478, 5.538, 6.768, 6.199, 7.58, 5.183, 5.306, 5.639, 7.864, 8.541, 8.302, 7.736, 7.547, 5.752, 6.708, 5.649, 5.723, 7.512, 7.983, 8.317, 7.835, 7.128, 7.128, 5.282, 5.493, 5.381, 9.353, 6.618, 6.014	Gate 1	R Complaint Event (Vibration Analysis)	Event reviewed with consideration of frequency domain. All measured levels are below the relevant criteria at the measured dominant frequency. Event is considered compliant.
------------------------	--	--	--------	---	---

Time	Rule	Values	Monitoring	Category	Event Notes
Tue, 10 Dec 2024					
01:00 PM	PPV Limit 5.00 mm/s  vSum	7.438	North	NR Worker next to monitor	
01:00 PM	PPV Limit 5.00 mm/s  vSum	7.438	North	R Complaint Event (Vibration Analysis)	Event reviewed with consideration of frequency domain. All measured levels are below the relevant criteria at the measured dominant frequency. Event is considered compliant.
03:57 PM - 04:00 PM	PPV Limit 5.00 mm/s  vSum	258.25, 103.654, 462.439, 1811.038	Gate 1	NR Gate 1 Location identified as unsuitable	Monitor was originally installed directly adjacent to driveway. All large vehicles entering the site and undertaking civil works immediately adjacent are triggering the monitor due to the close proximity. Monitor has being relocated to a more suitable location reflective of the potential impacts to the neighbouring residential receivers.

Time	Rule	Values	Monitoring	Category	Event Notes
Thu, 19 Dec 2024					
08:28 AM	PPV Limit 5.00 mm/s  vSum	7.243	North East	R Traffic	
08:28 AM	PPV Limit 5.00 mm/s  vSum	7.243	North East	R Complaint Event (Vibration Analysis)	Event has exceeded the recommended vibration level due to the close proximity to the monitor. PWNA have reviewed the event and believe based on the measured value, compliance at the neighbouring receiver location will be compliant based on additional distance separation

Fri, 20 Dec 2024					
09:07 AM - 10:41 AM	PPV Limit 5.00 mm/s  vSum	5.198, 5.215, 5.255	Gate 1	R Complaint Event (Vibration Analysis)	Event reviewed with consideration of frequency domain. All measured levels are below the relevant criteria at the measured dominant frequency. Event is considered compliant.

Daily Notes

No notes for this period

Device Details

Device Serial	Monitoring Points	Model	Calibration Date	Calibration Due
VIB-000052	Gate 2	SiteHive Hexanode	24 Jul 2024	24 Jul 2026
VIB-000214	North East	SiteHive Hexanode	09 Aug 2024	09 Aug 2026
VIB-000270	North	SiteHive Hexanode	05 Sep 2024	05 Sep 2026
VIB-000274	Gate 1	SiteHive Hexanode	05 Sep 2024	05 Sep 2026

Appendix C – Author Curriculum Vitae – Matthew Furlong

MATTHEW FURLONG PRINCIPAL ACOUSTIC ENGINEER

Bachelor of Creative Technology (Audio Engineering and Sound Production), JMC Academy

Member of Australian Acoustical Society (MAAS)

UTS Certification Short Course - Acoustics (NSW Fair Trading Approved)



Matthew is an acoustic consultant with over 10 years' experience in acoustic design for various architectural, environmental and infrastructure projects. He has provided services during the conceptual, planning approval, detailed design, design finalisation and IFC, construction, commissioning, and post-construction stages for a range of different projects.

Matthew's key strength is large scale acoustic design and delivery across the residential, commercial, education and healthcare sectors. As an acoustic consultant, he has also contributed his expertise to other development types including cultural and performance art spaces, licensed premises office fitouts, and industrial developments.

☎ 0452 414 785

✉ MatthewF@pwna.com.au

SKILL SET:

Architectural acoustic design

Building services acoustic design

Construction and commissioning

Expert witness & court works

Environment impact assessments (SSI & SSD)

Façade acoustic design

NCC/BCA design and compliance

New business development

Team management

Project management

MAJOR PROJECTS:

Sydney Children's Hospital Stage 1 and Minderoo Children's Comprehensive Cancer Centre (SCH1 & MCCCC)

Client: LCI/NSW HI/John Holland

Western Sydney Airport (WSA)

Client: LCI

Chatswood Education Precinct (Chatswood HS & PS)

Client: Richard Crookes Constructions

Macquarie Park Village (MPV)

Client: Frasers

Crown Casino Sydney

Client: Crown Sydney/Lendlease

P W N A

PULSE WHITE NOISE ACOUSTICS
Suite 601, L6, 32 Walker St, North Sydney NSW 2060 P 1800 478 573 pwna.com.au

1 of 7

MATTHEW FURLONG
PRINCIPAL ACOUSTIC ENGINEER, PWNA

EXPERIENCE

EDUCATION

- **Schematic, SSDA, Detailed Design, IFC, Construction Carlingford West Public School**
- **Detailed Design, IFC, Construction Cumberland High School**
- Masterplan, Concept, Schematic, SSDA, Design Development Tallawong Station Public School.
- Masterplan, Concept, Schematic and SSDA Tallawong Public School.
- Schematic and SSDA Macquarie Park Public School.
- Detailed Design, IFC and Construction Neutral Bay Public School.
- SSDA and Acoustic Design Meadowbank Education Precinct
- Schematic, SSDA, Detailed Design, IFC, Construction and Commissioning New Primary School in Murrumbateman
- Schematic, SSDA, Detailed Design, IFC, Construction and Commissioning New Primary School in Googong.
- Detailed Design, IFC, Construction and Commissioning at Epping South
- Detailed Design, IFC, Construction and Commissioning at Epping West.
- **Design Finalisation, IFC, Construction and Commissioning Chatswood High School.**
- **Design Finalisation, IFC, Construction and Commissioning Chatswood Public School.**
- Schematic, Planning Pathway Hurlstone Agricultural High School
- Schematic, Planning Pathway Yanco Agricultural High School
- SSDA, Construction (Mech) and Commissioning (Mech) Meadowbank School.
- Construction and Commissioning Meadowbank TAFE Building.
- CNVMP and Construction Services Anzac Park Public School
- CNVMP and Construction Services Alexandria Park Public School (Stage 1)
- **Design Finalisation, IFC, Construction Melonba High School**
- **Design Finalisation, IFC, Construction Melonba Public School**

RESIDENTIAL

- **Acoustic Design for Crown Casino Sydney.**
- Acoustic Design and Construction Services 130 Elizabeth Street, Sydney (One30Hyde).
- Acoustic Design and Construction Services Trinity Terraces Rosebery.
- Construction Services 1a Coulson Street, Erskinville.
- Construction Services for the Erko Apartments Erskinville.
- Construction Services for the Eve Apartments Erskinville.
- Acoustic Design 54-56 Riley Street and 1 Crown Lane, Darlinghurst.
- Development Application, Acoustic Design and Construction Services New Life Darling Harbour, 495 Harris Street, Ultimo.
- **Development Application, Acoustic Design and Construction Services Meriton Developments (Mascof, Rosebery, Epping, Parramatta, Pagewood, Bondi, Dee Why, Zetland, Waterloo, North Sydney, Sydney, Macquarie Park).**
- Development Application, Acoustic Design and Construction Services Summer Hill Flourmill Stages 1, 2, 3 and 4.
- **Acoustic Design and Construction Services Macquarie Park Village.**
- **Acoustic Design and Construction Services Ryde Gardens.**
- Acoustic Design and Construction Services Tempo Apartments Victoria Road Drummoyne.
- Development Application, Acoustic Design and Construction Services Winston Hills Mall Residential.
- Construction Services Presbyterian Aged Care Paddington.
- Acoustic Design and Construction Services Wahroonga Nursing Home.
- Acoustic Design and Construction Anglicare Castle Hill (ARV).
- Acoustic Design and Construction Cardinal Freeman Village, Ashfield.

COMMERCIAL

- **Development Application, Acoustic Design and Construction Services Winston Hills Mall Enabling Works.**
 - Development Application and Acoustic Design 210-220 George Street Sydney.
- **Acoustic Design and Construction Services 151 Clarence Street, Sydney.**
 - Development Application for 390-396 Pitt Street, Haymarket.
- **Acoustic Design and Construction Services Chifley Plaza Internal Works.**
 - Development Application 371-375 Pitt Street, Sydney.
 - Construction Services Fitout of the Department of Premier and Cabinets.
 - Noise Investigations for Transport NSW (Chatswood and Burwood).
- **Schematic Design for Western Sydney Airport – Nancy Warbird (WSA).**
 - Schematic Design, Detailed Design, Tender, IFC, Construction Johnson Winter Slattery (JWS) Sydney Office Fitout.
 - Schematic Design, Detailed Design, Tender, IFC, Construction UHY Haines Norton Sydney Office Fitout.

CULTURAL AND PERFORMING ART SPACES

- **Acoustic Design and demonstration for the Wintjiri Wiru drone, light and sound show (Uluru).**
- **Acoustic Design for Powerhouse Parramatta.**
 - Acoustic Design and construction services for Manning Entertainment Centre.
 - Acoustic Design and construction services for Brickworks Sydney Broadcast and Podcast Spaces.
 - Acoustic Design and construction services for Channel 9 Sydney Headquarters and Studio Spaces.
 - Acoustic Design for Maclean Community Precinct.
- **Commissioning services for Sydney Modern.**
 - Acoustic Design for School Infrastructure NSW School Hall and Performing Arts Spaces (including Chatswood Public School, Chatswood High School, Googong Public School, Murrumbateman Public School, Tallawong Station Public School, Tallawong Public School, Melonba Public School, Marsden Park High School, Cumberland High School, Carlingford West Public School, New Primary, Nharala Public School etc).

- Acoustic Design and Construction for Scientia Project, Monte Sant' Angelo Mercy College.

HEALTH FACILITIES

- **Master Planning, Feasibility, Schematic, SSDA, Detailed Design and IFC for Sydney Children's Hospital Stage 1 & Minderoo Children's Comprehensive Cancer Centre (SCH1/MCCCC), Randwick.**
- Formulation of the new Victorian Health Engineering Guidelines (Acoustics).
- Construction Services for Wagga Wagga Base Hospital Stage 2.
- SSDA and Acoustic Design for Concord Repatriation General Hospital.
- SSDA and Acoustic Design Nepean Public Hospital.
- **CNVMP, Design Finalisation, IFC, Construction Campbelltown Hospital Redevelopment Works.**
- Acoustic Design for Eurobodalla Regional Hospital.

LICENSED PREMISES

- Development Application for The Cauliflower Hotel, Waterloo
- Development Application for Christopher Hanna Salon and Bar, 13-15a Bridge Street, Sydney
- Development Application for the Tilbury Hotel Woolloomooloo.
- Development Application for the Exchange Hotel, Balmain.
- Development Application for the Town Hall Hotel, Balmain.
- Development Application for the Exchange Hotel, Darlinghurst.
- Development Application for 388 George Street, Sydney.
- Development Application for 88 Pitt Street, Sydney.
- Development Application for 92 Pitt Street, Sydney.
- Development Application for Pulu Freshwater.
- **Development Applications for the Redevelopment of Ibis Hotels:**
 - Enfield NSW.
 - Liverpool NSW.
 - Wentworthville NSW.

MATTHEW FURLONG
PRINCIPAL ACOUSTIC ENGINEER, PWNA

- Sydney Airport NSW.
- St Peters NSW.
- Olympic Park NSW.
- Thornleigh NSW.

INDUSTRIAL

- Acoustic design Erskine Park Industrial Area.
- CNVMP, Acoustic Design, IFC and Construction Snackbrands Orchard Hills.
- **CNVMP, Acoustic Design, IFC and Construction Logos Moorebank (Warehouse 6 & 7).**