



Tweed Valley Hospital Carpark

February Report

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Attention To	ADCO Constructions Pty Ltd

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1 INTRODUCTION

Acoustic Logic has been engaged to carry out noise, dust and vibration monitoring for the impacts associated with the earthworks, excavation, and construction components of the Tweed Valley Hospital Carpark.

- Vibration Monitoring: 1st of February to 28th of February 2022; and
- Noise Monitoring: 1st of February to 28th of February 2022; and
- Dust Monitoring: 1st of February to 28th of February 2022.

The location of the site is shown in [Figure 2-1](#) below. The location of the on-site monitors relative to the site has also been shown in [Figure 2-1](#).

The following Noise, Dust and Vibration Management levels have been derived from the Construction Noise, Dust and Vibration Management Plan, document reference 20211491.1/2911A/R2/OB.

2 SITE DESCRIPTION AND SENSITIVE RECEIVERS

The subject site is located on Cudgen Rd, Kingscliff as indicated in [Figure 2-1](#). The land uses surrounding the proposed multi-storey carpark site are existing commercial, residential and educational receivers. The nearest potentially most affected receivers are:

- **Receiver 1:** Tweed Regional Aquatic Centre – Kingscliff (east)
- **Receiver 2:** Residential dwellings located on 32-58 Cudgen Road (east)
- **Receiver 3:** Residential dwelling located at 792 Cudgen Road (south)
- **Receiver 4:** TAFE NSW – Kingscliff (south)
- **Receiver 5:** Residential dwelling located at 764 Cudgen Road (south)
- **Receiver 6:** Residential receivers at 6-30 John Robb Way (west)

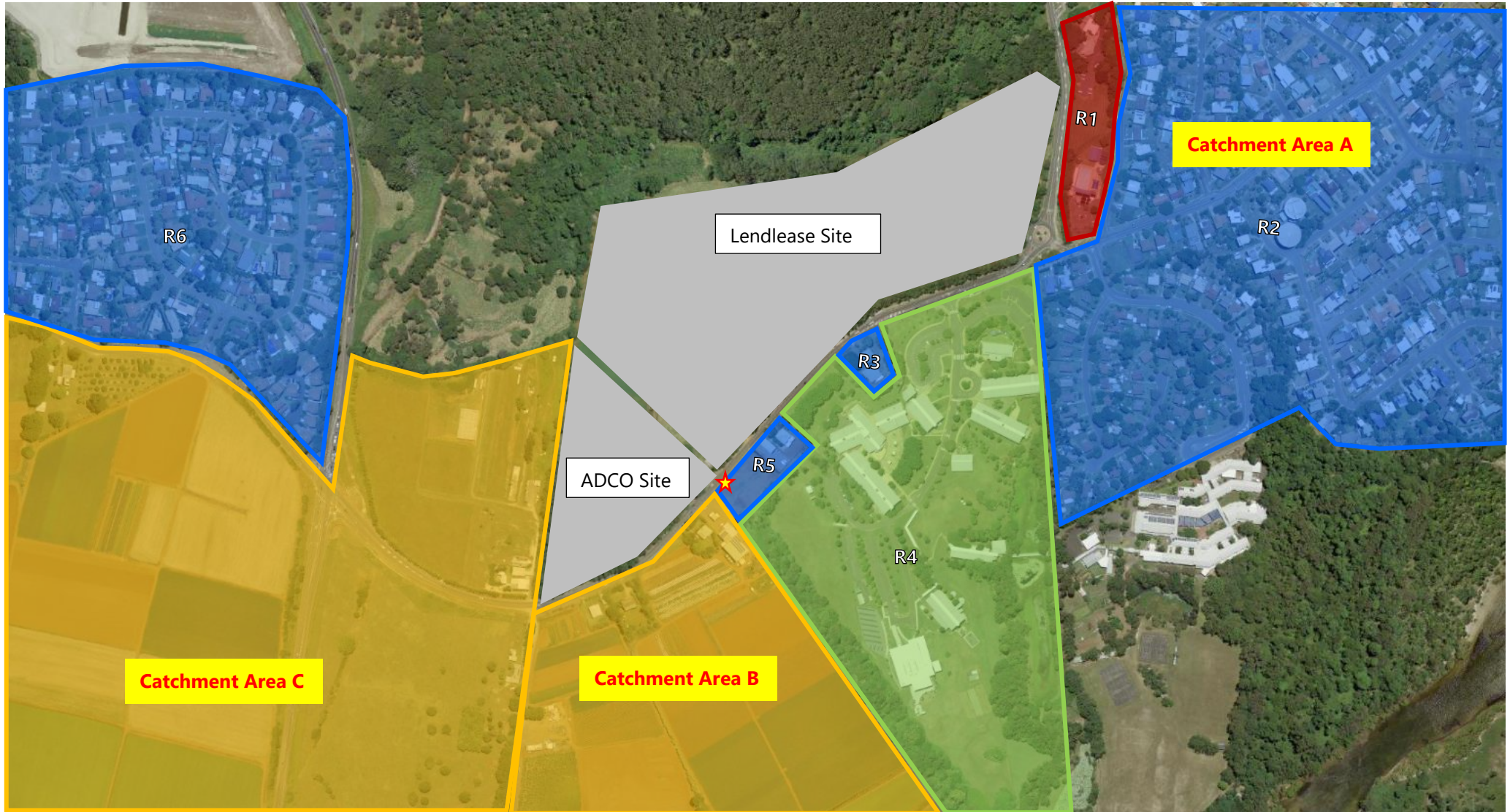


Figure 2-1 –Site and Sensitive Receiver Locations

- Industrial/Agricultural
- Commercial Receiver
- Monitoring Location

- Site
- Residential Receiver
- Educational/Tafe

3 VIBRATION CRITERIA

The following vibration monitoring criteria has been derived from the Construction Noise, Dust and Vibration Management Plan, document reference 20211491.1/2911A/R2/OB.

CONSTRUCTION VIBRATION CRITERIA

Vibration criteria for the nearest receivers will be based on the following documents:

- DIN 4150, *Vibration in Buildings (2016-12)*;
- EPA *“Assessing Vibration: A technical guideline”*; and
- ASHRAE Handbook 2007.

Summarised Recommended Vibration Limits

The summarised vibration criteria are presented in the table below.

Table 9 – Recommended Vibration Limit

Vibration Receiver	Recommended Vibration Limits PPV (mm/s)
Residential Buildings	5
Commercial/Other Buildings	20

4 VIBRATION MONITORING

4.1 MEASUREMENT EQUIPMENT

Vibration monitoring was conducted using one Texcel ETM vibration monitor with an external tri-axial geophone. The monitor is programmed to store statistical vibration data over every 5-minute period, along with any 'triggered' events that occur throughout the monitoring period. The following Section presents the results of vibration monitoring for the period between the 1st of February to the 28th of February 2022.

4.2 MEASUREMENT RESULTS

Table 1 – Vibration Monitoring Results

Vibration Geophone Location	Date	Maximum Measured Vibration Level mm/s	Criteria Vibration Level	Complies
Monitoring Location	1/02/2022	1.29	5mm/s PPV	Yes
	2/02/2022	1.49		Yes
	3/02/2022	0.93		Yes
	4/02/2022	0.94		Yes
	5/02/2022	0.77		Yes
	6/02/2022	0.89		Yes
	7/02/2022	0.94		Yes
	8/02/2022	0.81		Yes
	9/02/2022	0.82		Yes
	10/02/2022	1.09		Yes
	11/02/2022	1.62		Yes
	12/02/2022	0.81		Yes
	13/02/2022	1.12		Yes
	14/02/2022	4.77 ¹		Yes
	15/02/2022	2.71		Yes
	16/02/2022	0.86		Yes
	17/02/2022	9.22 ²		No - Note 2
	18/02/2022	1.12		Yes
	19/02/2022	0.69		Yes
	20/02/2022	0.65		Yes
	21/02/2022	0.83		Yes
	22/02/2022	0.87		Yes
	23/02/2022	0.79		Yes
	24/02/2022	0.79		Yes
	25/02/2022	0.61		Yes
	26/02/2022	0.65		Yes
	27/02/2022	1.64		Yes
	28/02/2022	0.68		Yes

(1) Excavation works along bitumen road of site entry triggered warning vibration level of 4mm/s.

(2) Changeover of battery by ADCO site representative triggered level (not ADCO construction works).

5 NOISE MONITORING

5.1 DEFINITION OF TERMS

Environmental noise is complex in nature. The noise level fluctuates from moment to moment and the noise characteristic can vary depending on the particular noise source in the vicinity (for example road, railway, and factory).

For this reason, various terms and descriptors have been developed to quantify the noise environment in a way that reflects human perception. The terms used in this noise assessment are described below:

dB(A)

Unit of loudness. The higher the number, the louder the noise. A change in noise level of up to 3 dB(A) is barely perceptible. A 5 dB(A) change is noticeable. A 10 dB(A) change is subjectively a doubling of noise.

Noise Descriptors

For time varying noise sources (such as traffic noise and general environmental noise) it is not possible to assess noise impacts based on a single instantaneous measurement. It is necessary to measure noise over a discrete period until a representative sample of noise has been obtained.

The descriptors used in this assessment are defined below.

L₁

The sound pressure level that is exceeded for 1 percent of the time for which the given sound is measured.

L₁₀

The sound pressure level that is exceeded for 10 percent of the time for which the given sound is measured.

L₉₀

The sound pressure level that is exceeded for 90 percent of the time for which the given sound is measured.

L_{Aeq}

Equivalent sound pressure level – steady sound level that, over a specified period, would produce the same energy equivalence as the fluctuating sound level actually occurring.

5.2 NOISE MANAGEMENT CRITERIA

NOISE MANAGEMENT LEVEL

Establishment of criteria for construction noise requirements will be in accordance with the following documents.

- NSW Environmental Protection Authority, 'Interim Construction Noise Guideline';
- Australian Standard AS2107:2016; and
- Australian Standards AS2436:2010 Guide to Noise Control on Construction, Maintenance and Demolition Sites.

Location	Management level, dB(A) L_{eq} (15 min)
Residential Receivers	Recommended Standard Hours "Noise Affected" Level – 55 "Highly Noise Affected" Level - 75
Commercial Receivers	70
Educational Receivers	45 (Internal)
Office Areas	
X-Ray Areas	50(Internal)

5.3 EQUIPMENT USED

Unattended noise monitoring was conducted using a *SiteHive Hexanode 134* noise and dust monitor. The monitor was programmed to store 15-minute statistical noise levels throughout the monitoring period. Measurements were taken on A-frequency weighting and fast time weighting.

5.4 MEASURED NOISE LEVELS

The available measured noise levels have been analysed by this office and the graphed noise data presented in Appendix 1.

Please note that the presented data represents the available monitoring data for the period described in [Table 2](#). Summarised results are also in [Table 2](#) below.

Table 2 – Noise Monitoring Results

Date	Measured typical worst noise level dB(A) L_{eq} 15min	Noise Management Level dB(A) L_{eq} 15min <i>"Highly Affected Noise"</i>	Exceedance
1/02/2022	71	75	No
2/02/2022	72		
3/02/2022	75		
4/02/2022	73		
5/02/2022	69		
6/02/2022	69		
7/02/2022	72		
8/02/2022	72		
9/02/2022	72		
10/02/2022	73		
11/02/2022	72		
12/02/2022	70		
13/02/2022	68		
14/02/2022	74		
15/02/2022	75		
16/02/2022	73		
17/02/2022	72		
18/02/2022	71		
19/02/2022	68		
20/02/2022	67		
21/02/2022	72		
22/02/2022	72		
23/02/2022	75		
24/02/2022	73		
25/02/2022	71		
26/02/2022	70		
27/02/2022	70		
28/02/2022	73		

6 DUST

6.1 ASSESSMENT CRITERIA

Dust monitoring has been conducted to measure mechanically generated respirable PM_{2.5} dust particles (< 2.5µm) and PM₁₀ dust particles (< 10µm), which are generally understood to be the main health concern in airborne dust. The air quality limits are based on the standards outlined in Department of the Environment's *National Environment Protection (Ambient Air Quality) Measure* and NSW EPA's air quality categories.

It should be noted that the dust monitoring results can be influenced by events such as fires and dust storms, thus the PM₁₀ limit has an allowance of 5 days per year to account for the effects of such events.

The PM_{2.5} and PM₁₀ goals are summarised below.

Table 3 – PM_{2.5} and PM₁₀ Goals (24-Hour Average)

Pollutant	Averaging Time	Maximum Concentration
PM _{2.5}	24 hours	25 µg/m ³
PM ₁₀	24 hours	50 µg/m ³

The EPA has air quality categories based on particle concentration over a one hour average. As per the Construction Noise, Dust and Vibration management Plan, this project has targeted the 'Poor' category as a reference, **however, the assessment level is the 24-hour average.**

Table 4 – PM_{2.5} and PM₁₀ Goals (1-Hour Average)

Pollutant	Air Quality Category	Maximum Concentration
PM _{2.5}	Poor	62-97 µg/m ³
PM ₁₀		80-120 µg/m ³

6.2 MEASUREMENT DETAILS

6.2.1 Equipment

The dust monitoring was conducted using a *SiteHive Hexanode 134* noise and dust monitor.

6.2.2 Period

Dust monitoring was conducted from 01/02/2022 to 28/02/2022.

6.3 MEASUREMENT RESULTS

The **daily average** PM_{2.5} and PM₁₀ concentration levels are presented below.

Table 5 – 24hr Average PM_{2.5} and PM₁₀ Concentration

Date	24hr Average PM _{2.5} and PM ₁₀ Concentration						
	PM _{2.5} Level (µg/m ³)	PM _{2.5} Limit (µg/m ³)	Complies	PM ₁₀ Level (µg/m ³)	PM ₁₀ Limit (µg/m ³)	Complies	
1/02/2022	6	25	Yes	26	50	Yes	
2/02/2022	8		Yes	32		Yes	
3/02/2022	4		Yes	18		Yes	
4/02/2022	10		Yes	23		Yes	
5/02/2022	15		Yes	38		Yes	
6/02/2022	14		Yes	35		Yes	
7/02/2022	11		Yes	29		Yes	
8/02/2022	12		Yes	36		Yes	
9/02/2022	8		Yes	28		Yes	
10/02/2022	5		Yes	21		Yes	
11/02/2022	7		Yes	25		Yes	
12/02/2022	12		Yes	28		Yes	
13/02/2022	12		Yes	32		Yes	
14/02/2022	11		Yes	31		Yes	
15/02/2022	18 ^{Note 1}		Yes	52 ^{Note 1}		No	
16/02/2022	10		Yes	31		Yes	
17/02/2022	8		Yes	28		Yes	
18/02/2022	8		Yes	33		Yes	
19/02/2022	6		Yes	21		Yes	
20/02/2022	9		Yes	28		Yes	
21/02/2022	6		Yes	22		Yes	
22/02/2022	9		Yes	28		Yes	
23/02/2022	16		Note 2			51	Note 2
24/02/2022	23					51	
25/02/2022	28					66	
26/02/2022	29					74	
27/02/2022	24					67	
28/02/2022	11					34	

(1) Excavation work on farmland adjacent to monitoring location (Works not undertaken at ADCO Site)

(2) Extreme rainfall event triggering Dust Exceedances (Not ADCO Construction works)

The **daily maximum 1hour** PM_{2.5} and PM₁₀ concentration levels are presented below.

Table 6 – 1Hr Maximum PM_{2.5} and PM₁₀ Concentration

Date	Maximum 1hr Average PM _{2.5} and PM ₁₀ Concentration						
	PM _{2.5} Level (µg/m ³)	PM _{2.5} Limit (µg/m ³)	Complies	PM ₁₀ Level (µg/m ³)	PM ₁₀ Limit (µg/m ³)	Complies	
1/02/2022	14	62-97	Yes	44	80-120	Yes	
2/02/2022	13		Yes	45		Yes	
3/02/2022	11		Yes	58		Yes	
4/02/2022	19		Yes	48		Yes	
5/02/2022	23		Yes	55		Yes	
6/02/2022	18		Yes	49		Yes	
7/02/2022	15		Yes	39		Yes	
8/02/2022	15		Yes	54		Yes	
9/02/2022	11		Yes	40		Yes	
10/02/2022	8		Yes	46		Yes	
11/02/2022	11		Yes	49		Yes	
12/02/2022	21		Yes	47		Yes	
13/02/2022	16		Yes	39		Yes	
14/02/2022	23		Yes	72		Yes	
15/02/2022	21		Yes	68		Yes	
16/02/2022	13		Yes	51		Yes	
17/02/2022	11		Yes	42		Yes	
18/02/2022	13		Yes	99		Yes	
19/02/2022	21		Yes	62		Yes	
20/02/2022	18		Yes	57		Yes	
21/02/2022	9		Yes	53		Yes	
22/02/2022	17		Note 1			49	Note 1
23/02/2022	34					88	
24/02/2022	39					93	
25/02/2022	34					85	
26/02/2022	41					109	
27/02/2022	45					138	

(1) Extreme rainfall event triggering Dust Exceedances (Not ADCO Construction works)

7 CONCLUSION

Acoustic Logic Consultancy has carried out noise, dust and vibration monitoring for the month of February at the Tweed Valley Hospital Carpark. Earthworks and excavation are noted as the major activities undertaken during this monitoring period.

This monitoring report presents the noise and vibration monitoring for the periods as follows:

- Vibration Monitoring: 1st of February to 28th of February 2022; and
- Noise Monitoring: 1st of February to 28th of February 2022; and
- Dust Monitoring: 1st of February to 28th of February 2022.

We note:

- 1- Vibration exceedance of the criteria was due to battery changeover and **not construction related**, therefore the exceedance is acceptable.
- 2- Vibration trigger of 4mm/s occurred during extraction works on the road at site entry, however, measurement did not exceed the 5mm/s criteria value.
- 3- Extreme weather events are noted from 21st February 2022 to 28th February 2022. Due to the excessive rainfall, the Dust Monitoring results indicate water/rainfall triggers as the site was closed due to the rain event.

We trust this information is satisfactory. Please contact us should you have any further queries.

Yours faithfully,

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Acoustic Logic Pty Ltd

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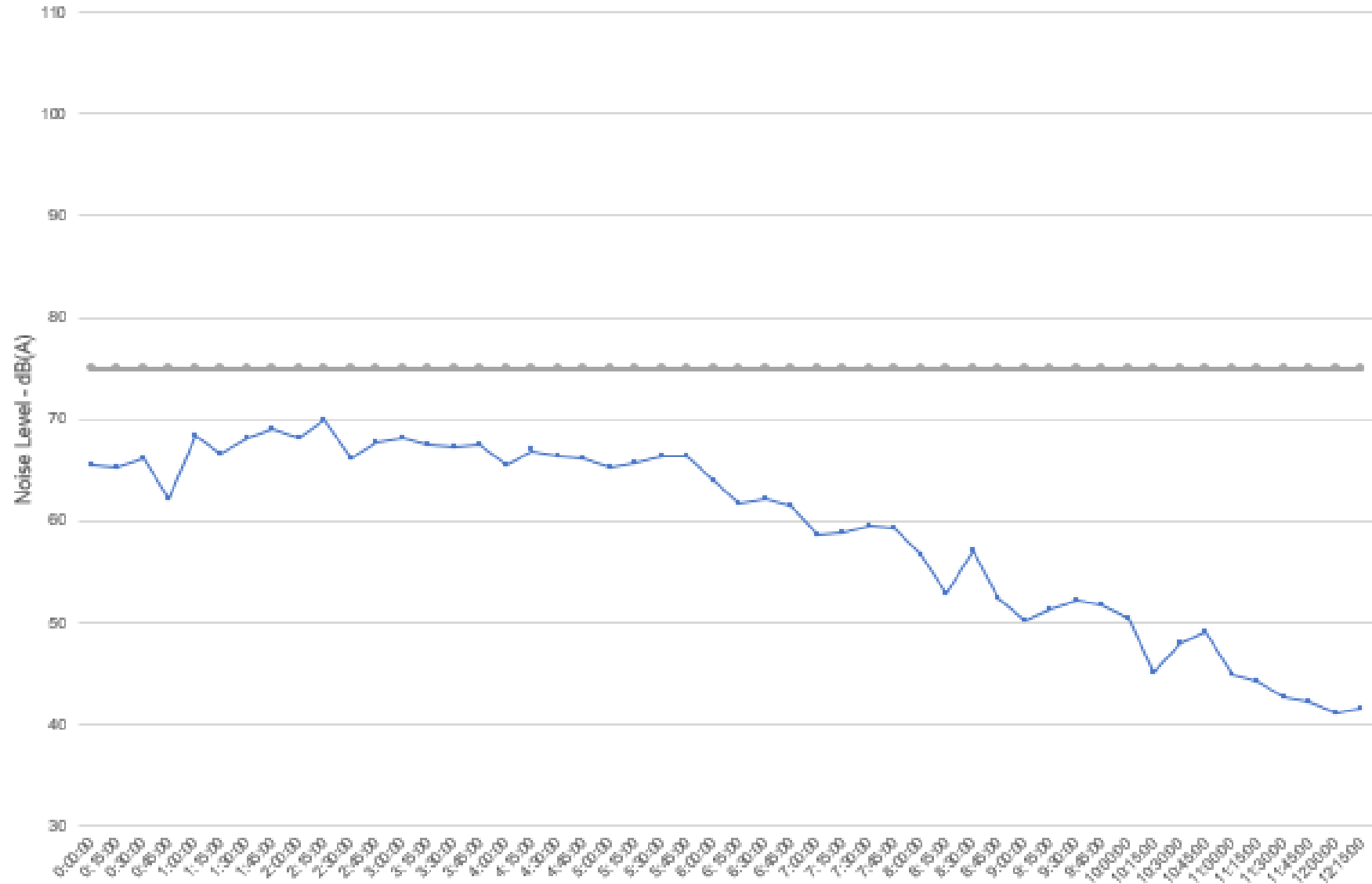
APPENDIX 1 – NOISE MONITORING RESULTS



ACOUSTIC LOGIC

Noise Monitoring: 01/02/2022

— Leq — Highly Noise Effected

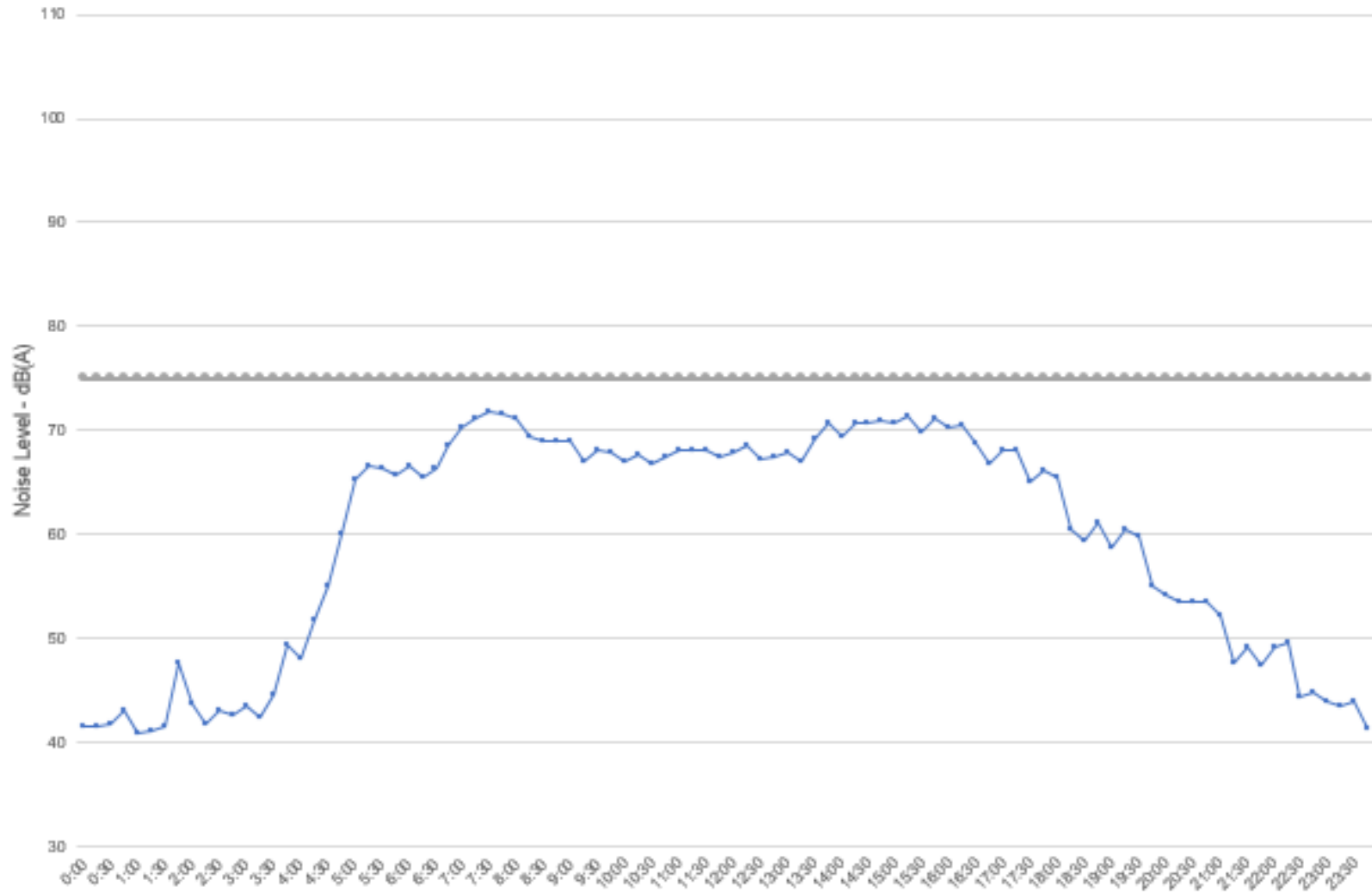




ACOUSTIC LOGIC

Noise Monitoring: 02/02/2022

— Leq — Highly Noise Effected

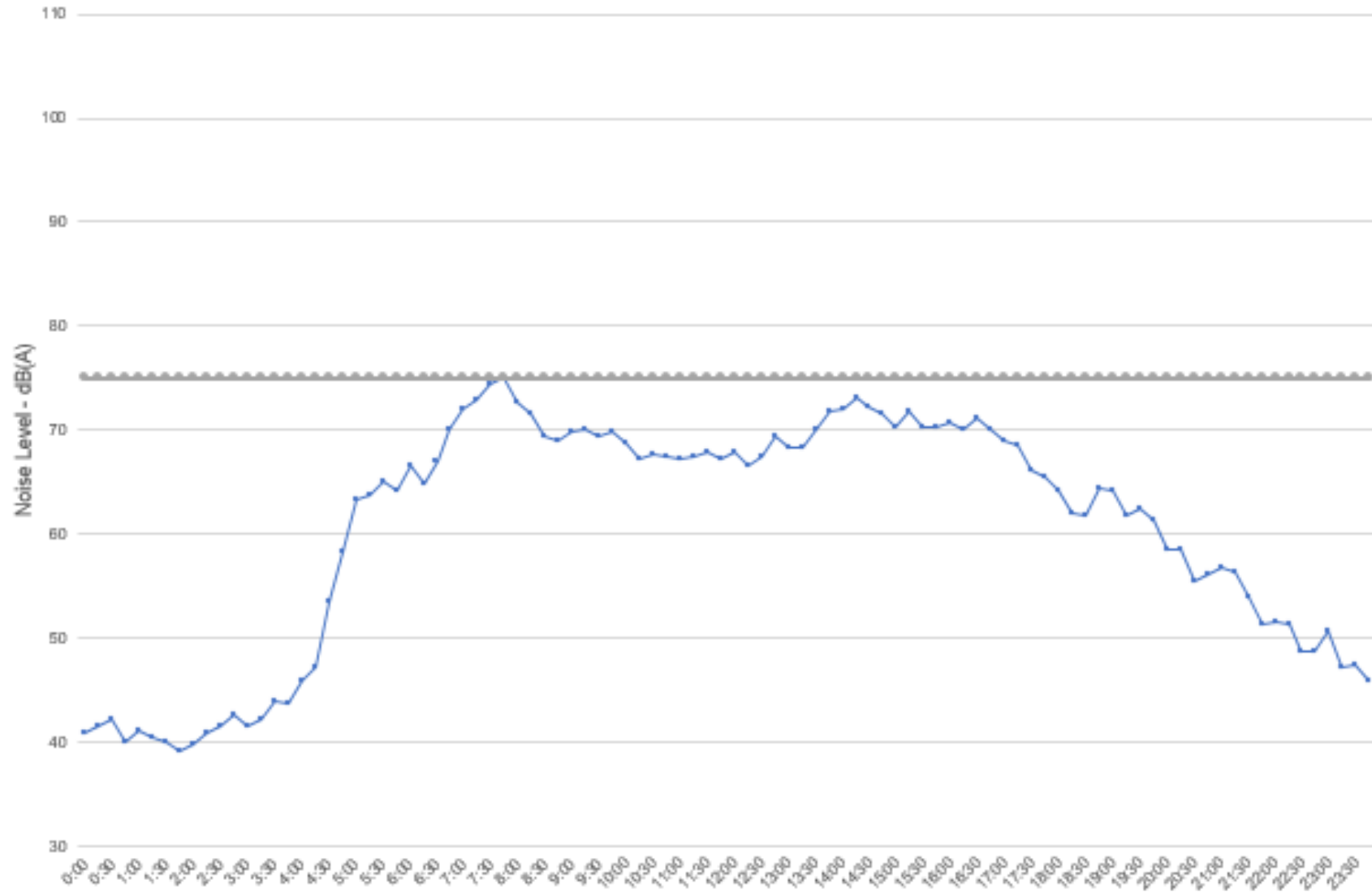




ACOUSTIC LOGIC

Noise Monitoring: 03/02/2022

— Leq — Highly Noise Effected

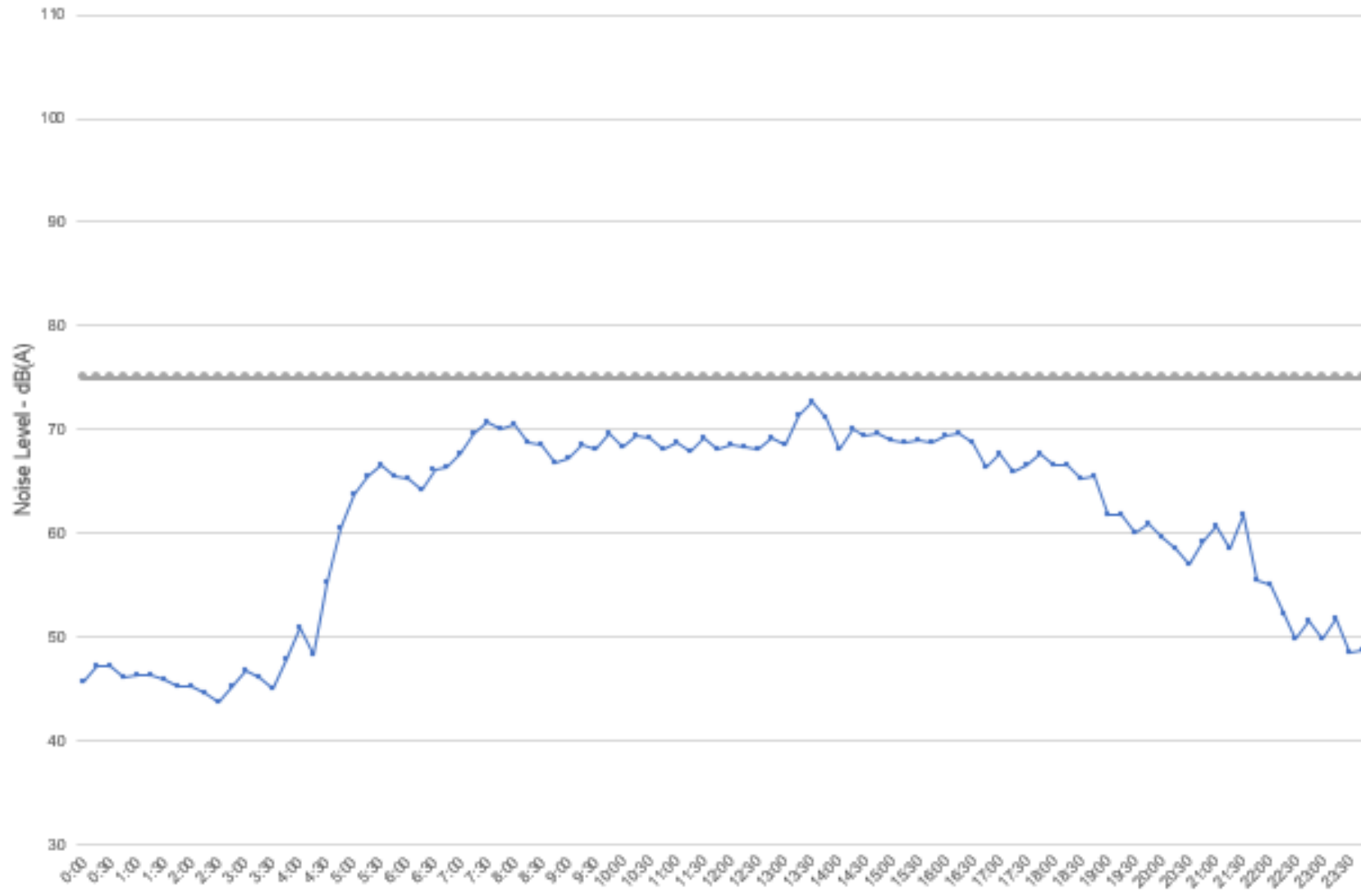




ACOUSTIC LOGIC

Noise Monitoring: 04/02/2022

— Leq — Highly Noise Effected

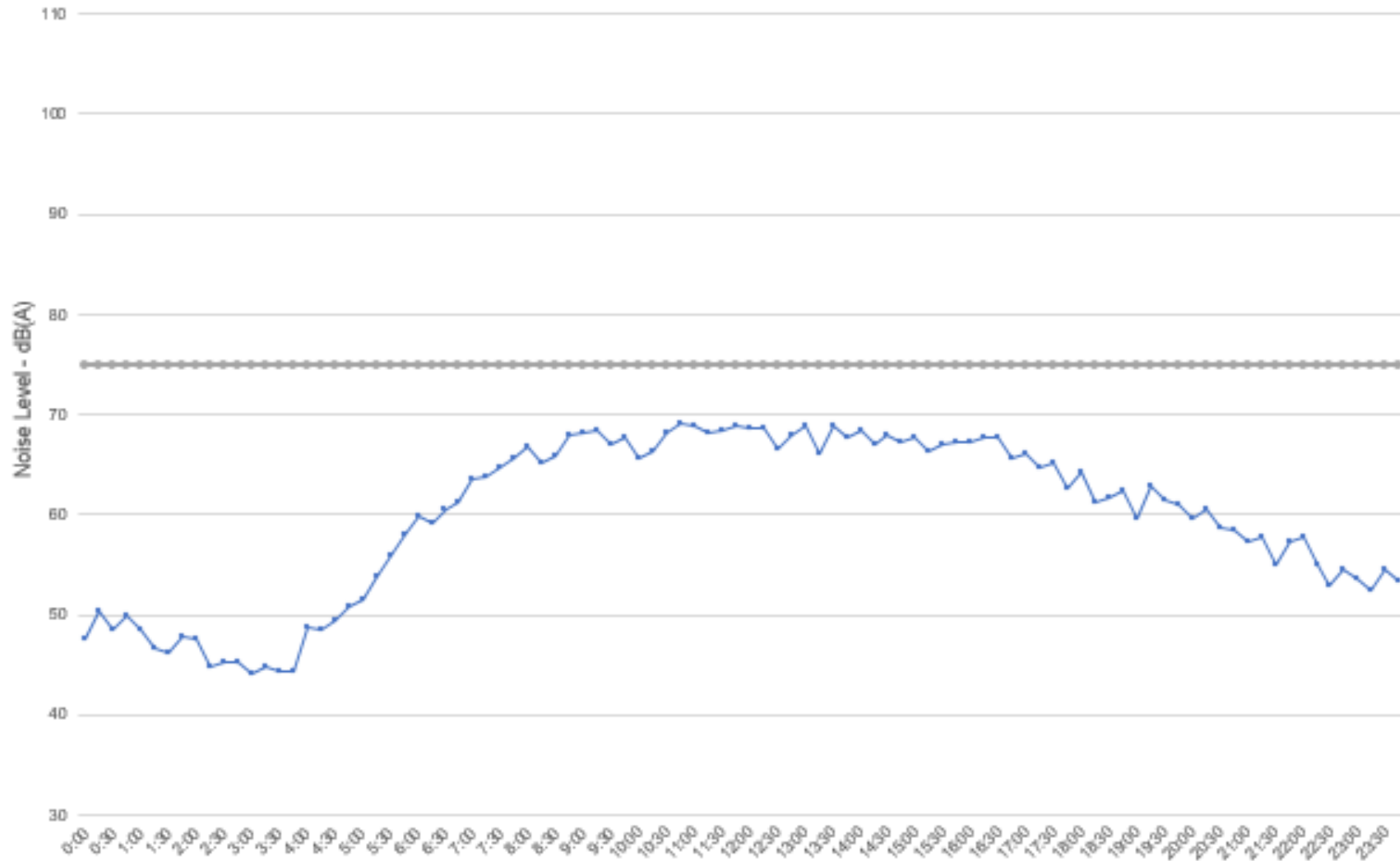




ACOUSTIC LOGIC

Noise Monitoring: 05/02/2022

— Leq — Highly Noise Effected

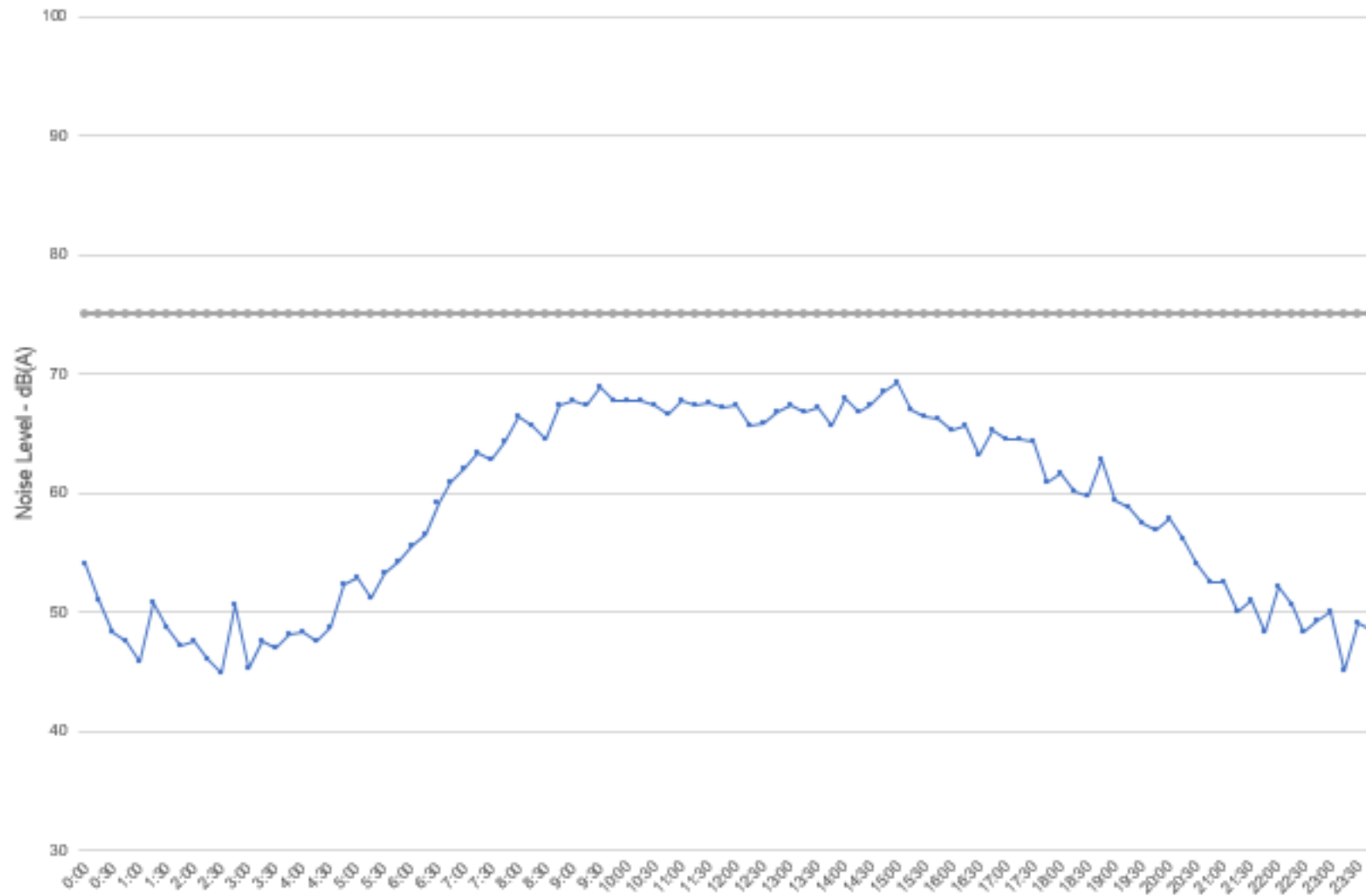




ACOUSTIC LOGIC

Noise Monitoring: 06/02/2022

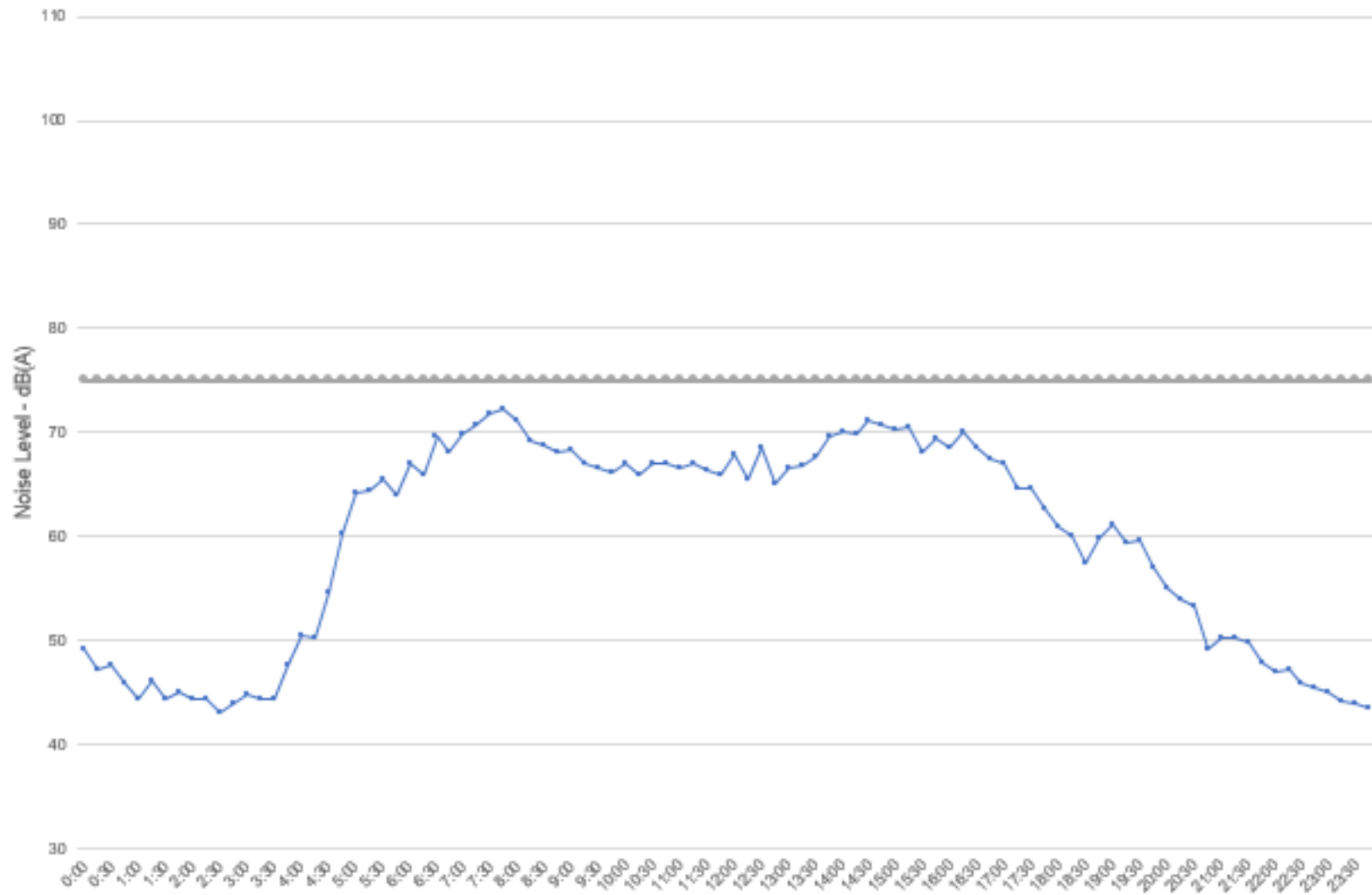
— Leq — Highly Noise Effected





Noise Monitoring: 07/02/2022

— Leq — Highly Noise Effected

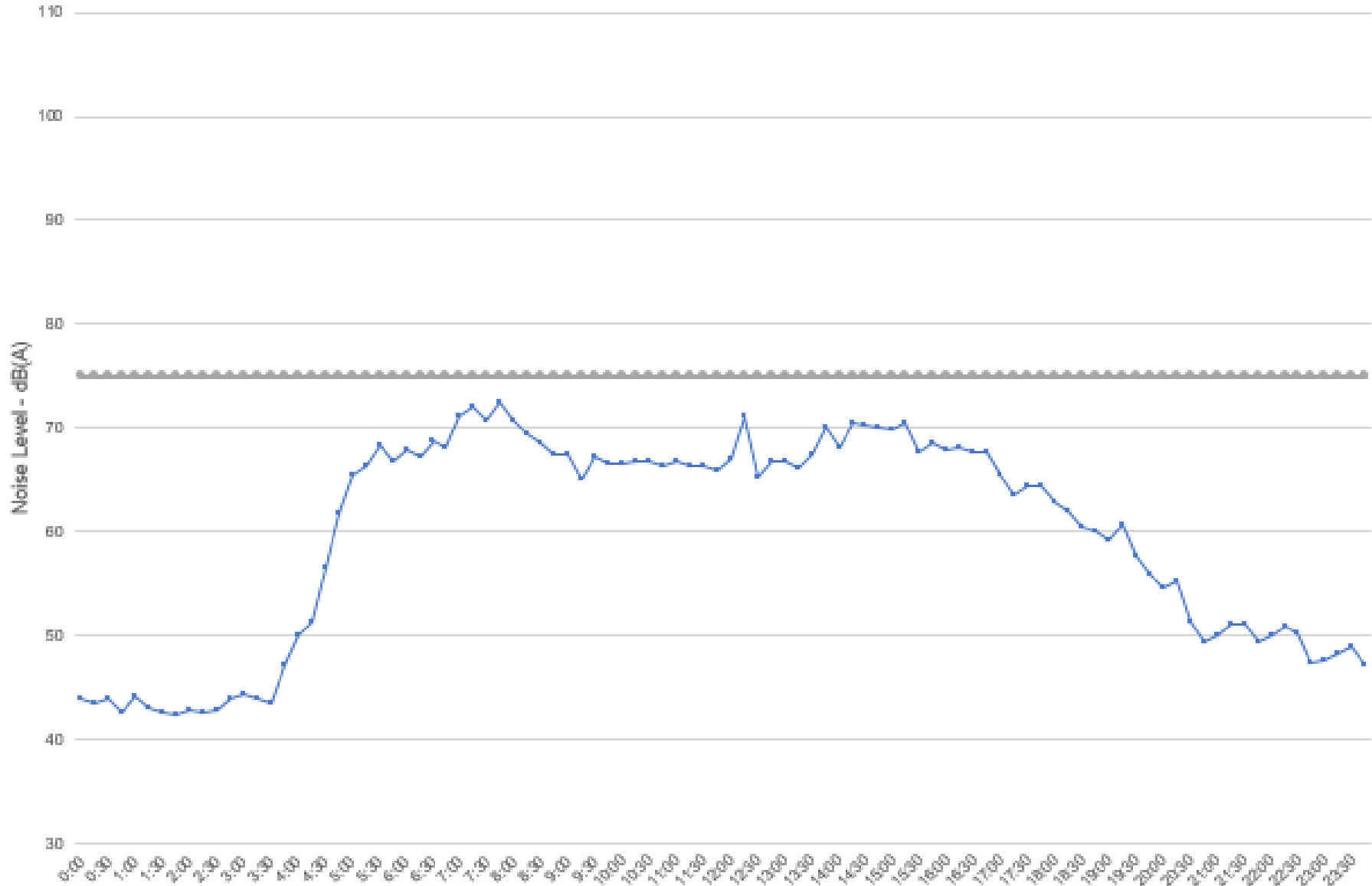




ACOUSTIC LOGIC

Noise Monitoring: 08/02/2022

— Leq — Highly Noise Effected

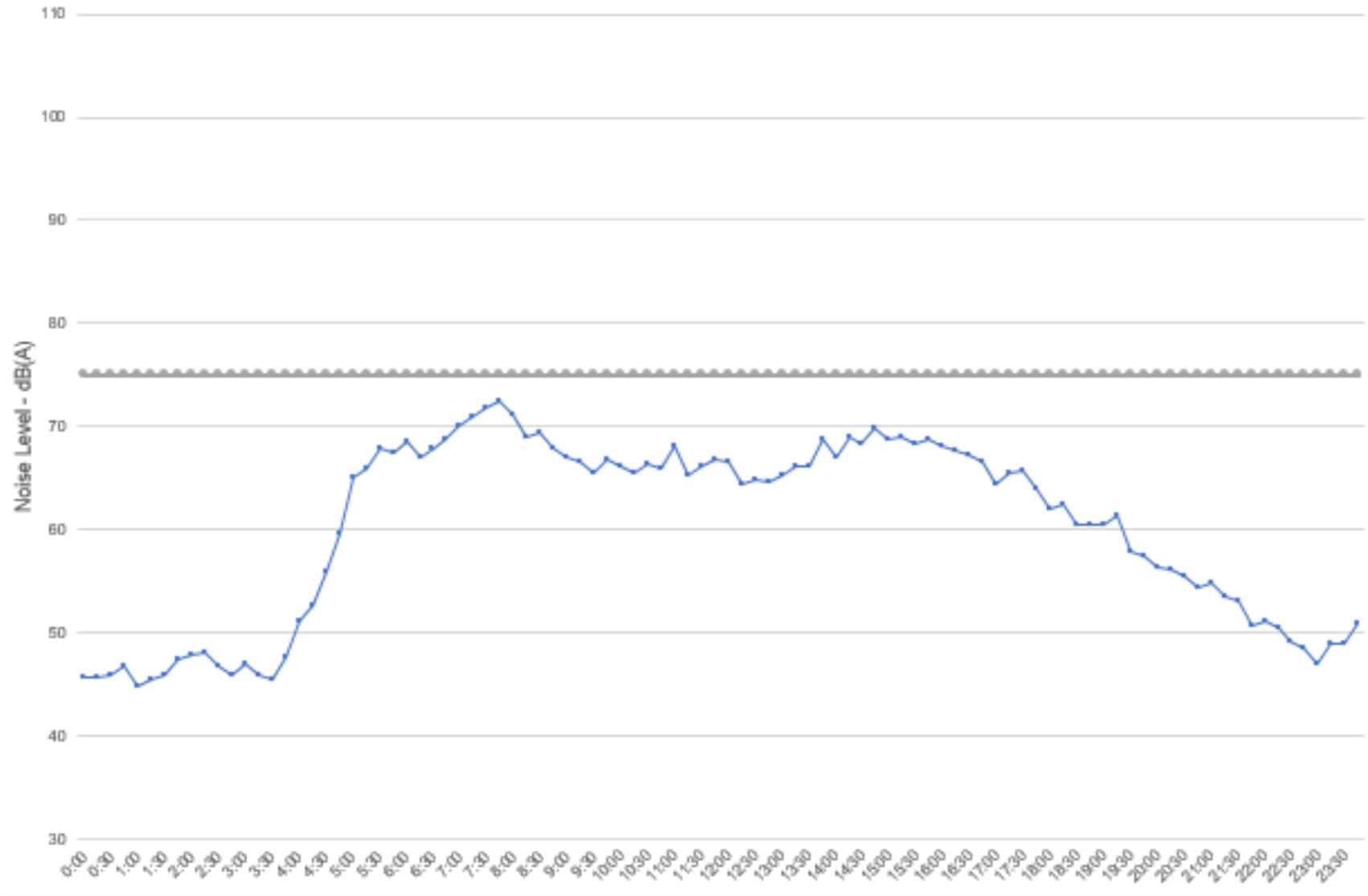




**ACOUSTIC
LOGIC**

Noise Monitoring: 09/02/2022

— Leq — Highly Noise Effected

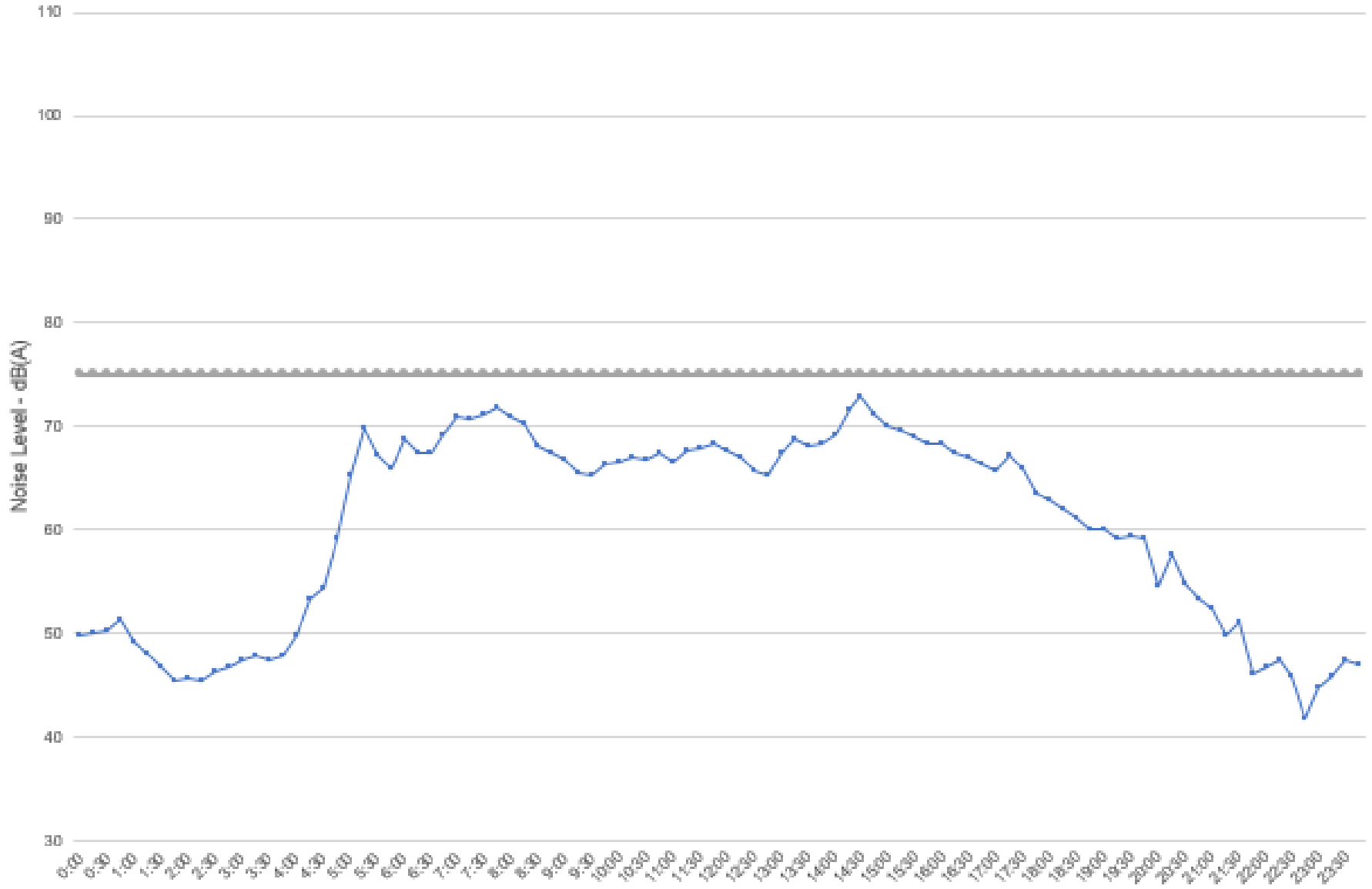




ACOUSTIC LOGIC

Noise Monitoring: 10/02/2022

— Leq — Highly Noise Effected

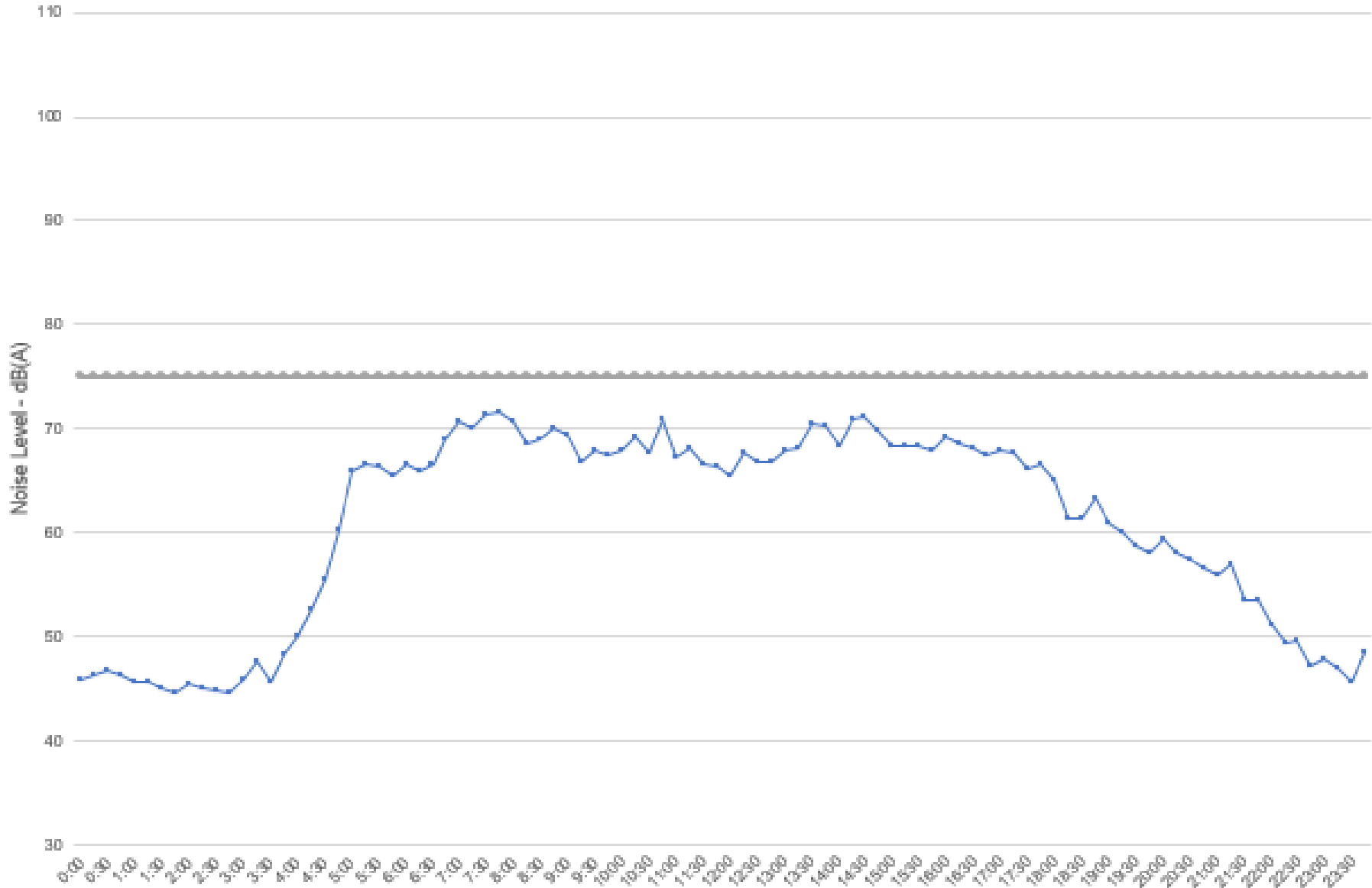




ACOUSTIC LOGIC

Noise Monitoring: 11/02/2022

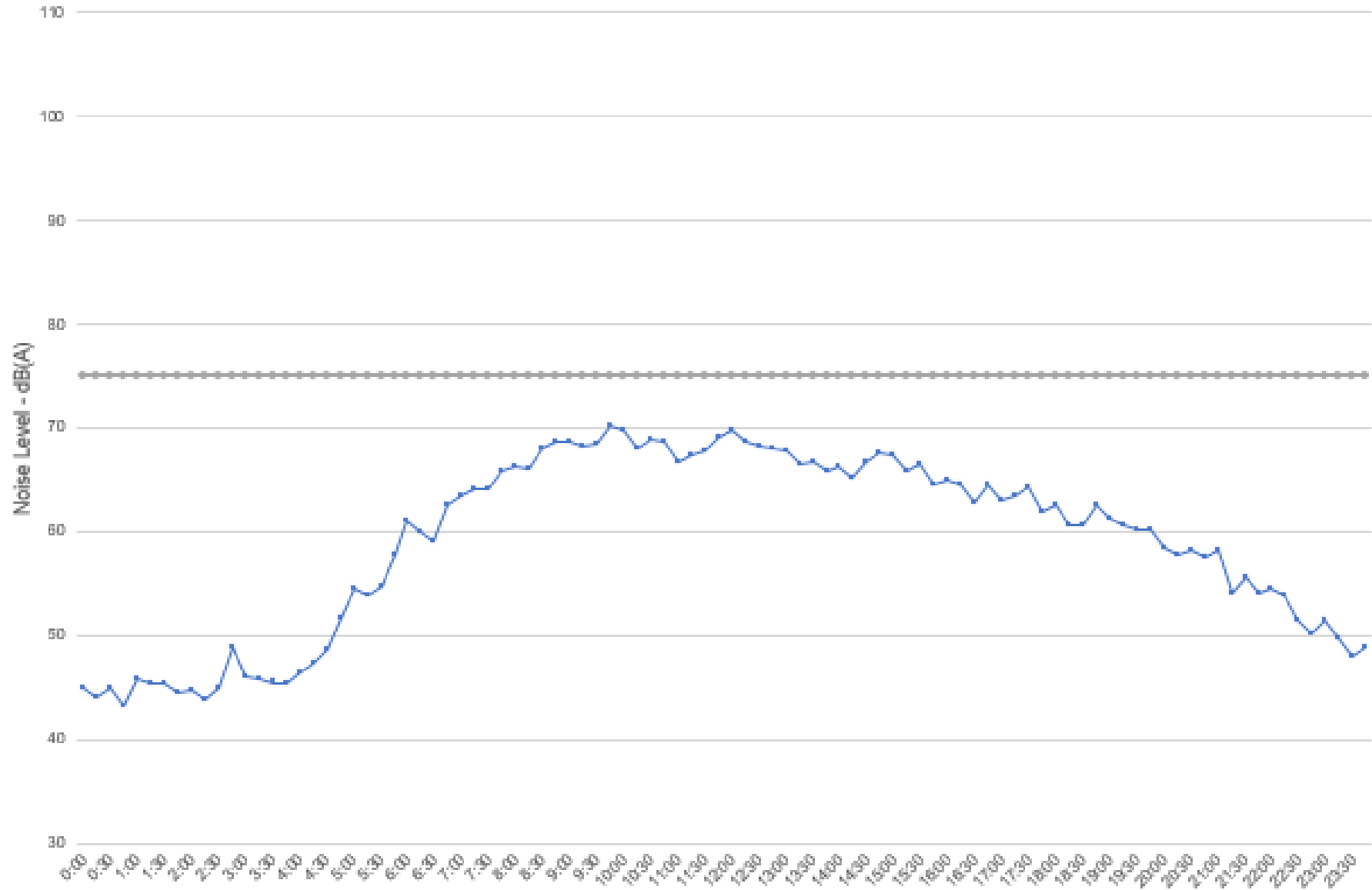
— Leq — Highly Noise Effected





Noise Monitoring: 12/02/2022

— Leq — Highly Noise Effected

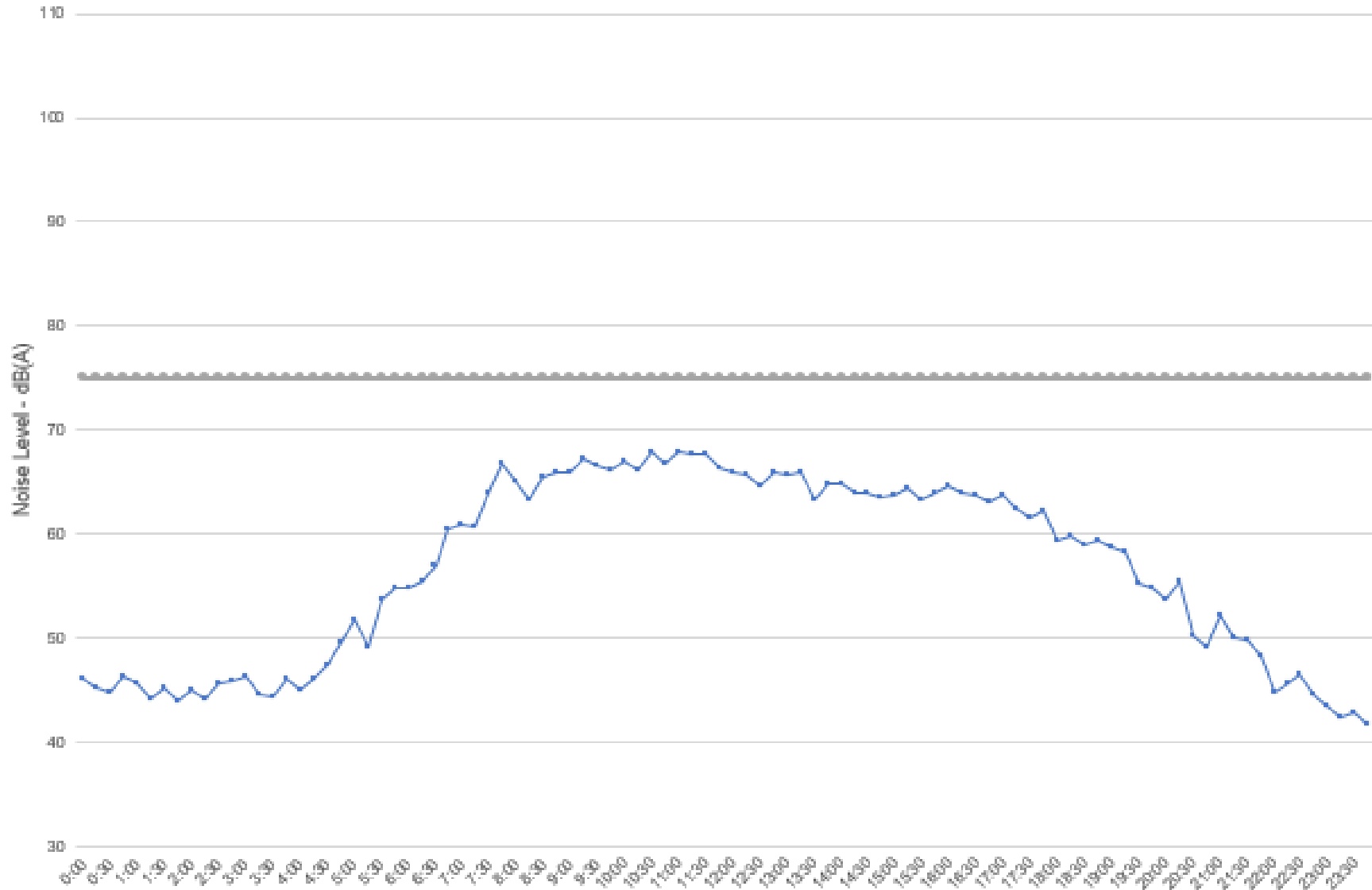




ACOUSTIC LOGIC

Noise Monitoring: 13/02/2022

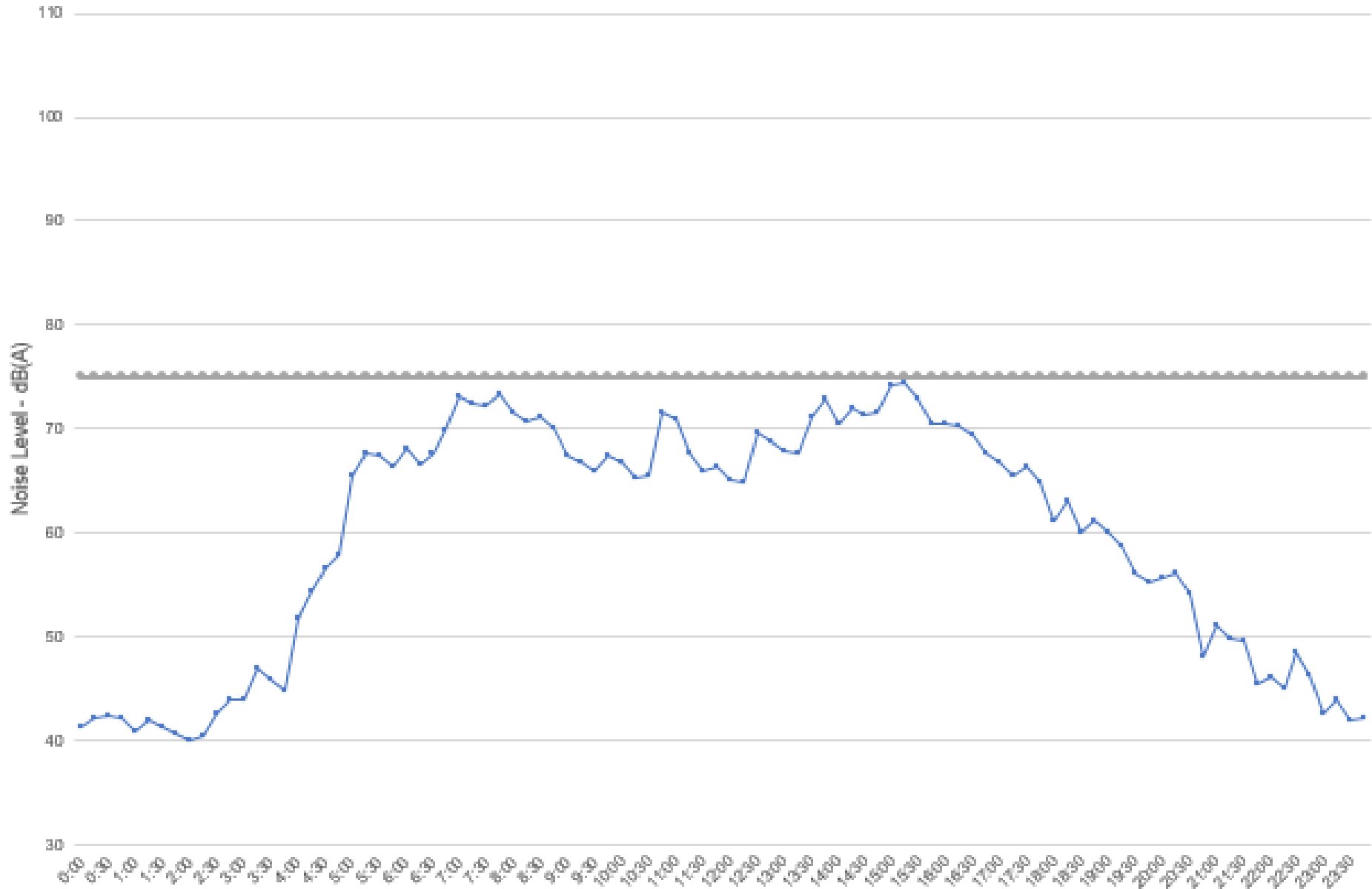
— Leq — Highly Noise Effected





Noise Monitoring: 14/02/2022

— Leq — Highly Noise Effected

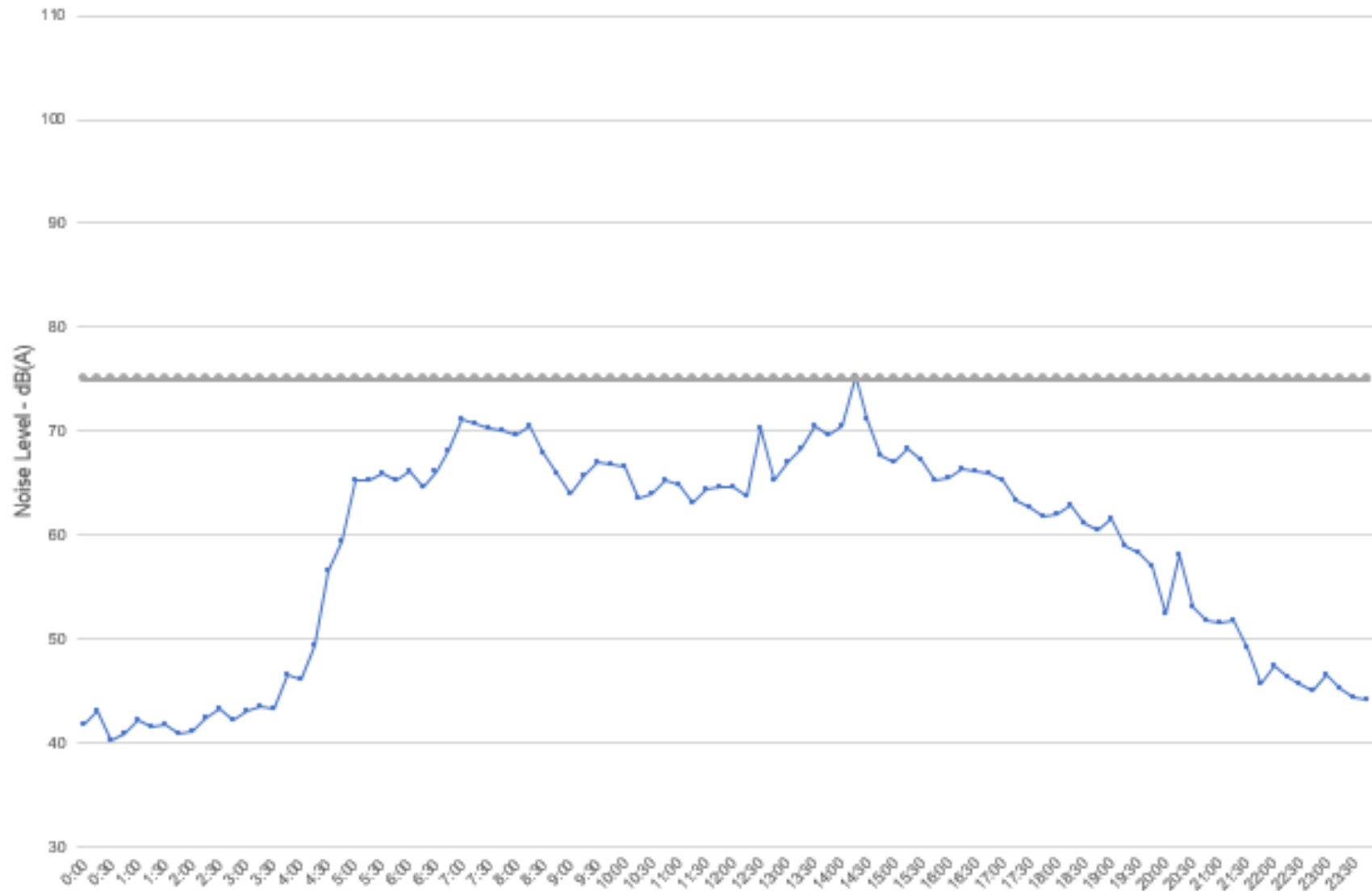




ACOUSTIC LOGIC

Noise Monitoring: 15/02/2022

— Leq — Highly Noise Effected

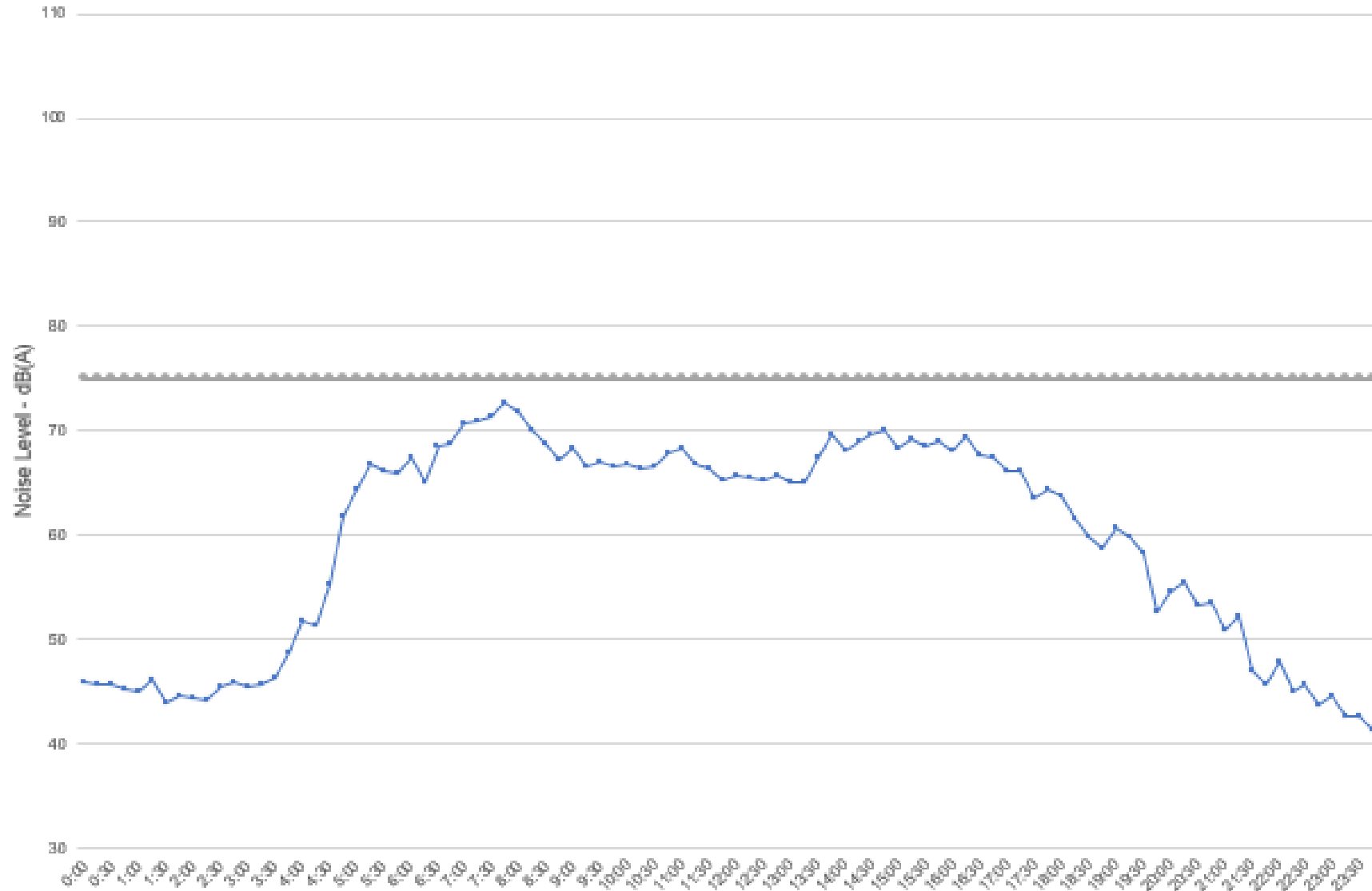




ACOUSTIC LOGIC

Noise Monitoring: 16/02/2022

— Leq — Highly Noise Effected

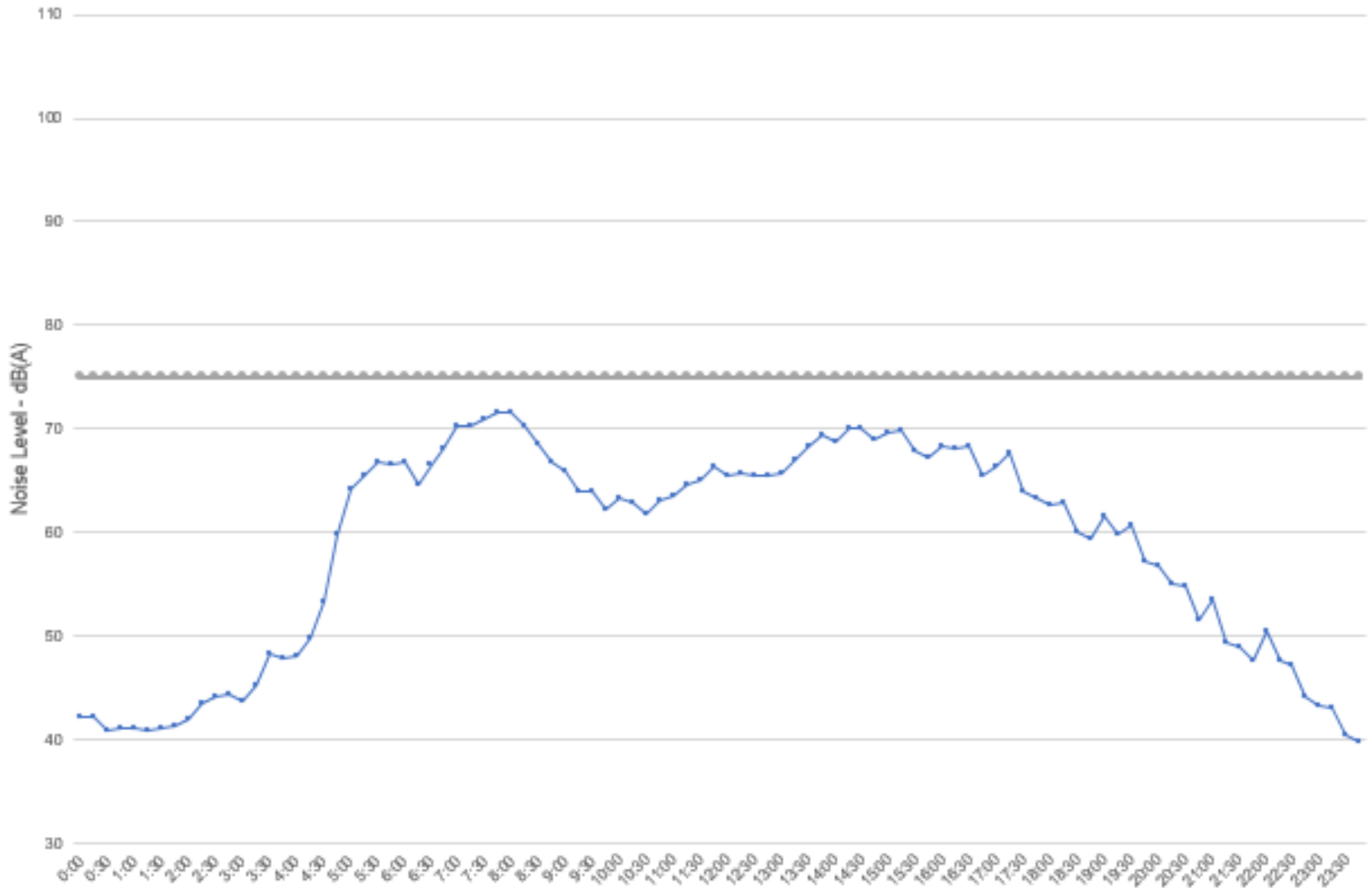




**ACOUSTIC
LOGIC**

Noise Monitoring: 17/02/2022

— Leq — Highly Noise Effected





ACOUSTIC LOGIC

Noise Monitoring: 18/02/2022

— Leq — Highly Noise Effected

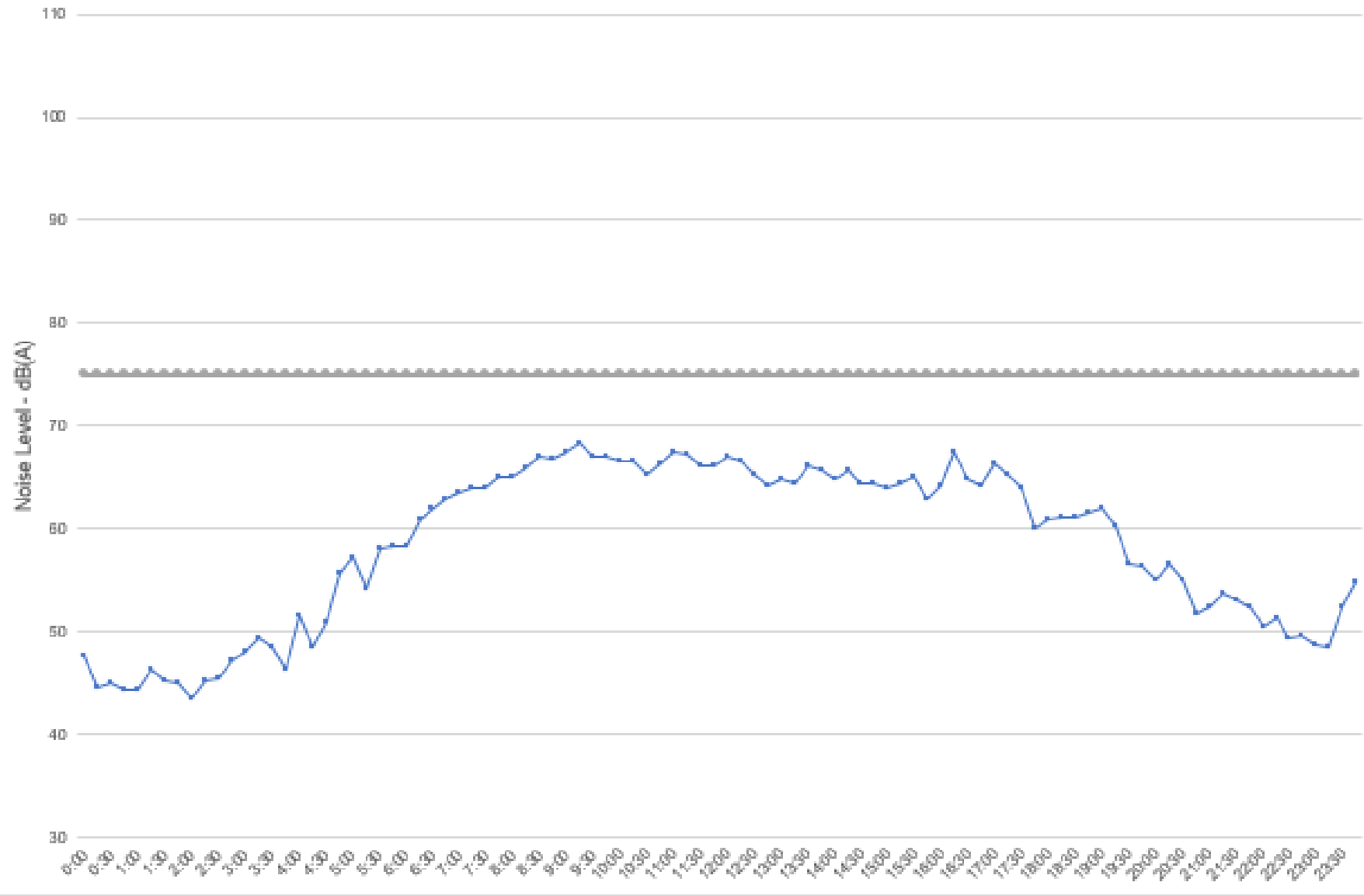




ACOUSTIC LOGIC

Noise Monitoring: 19/02/2022

— Leq — Highly Noise Effected

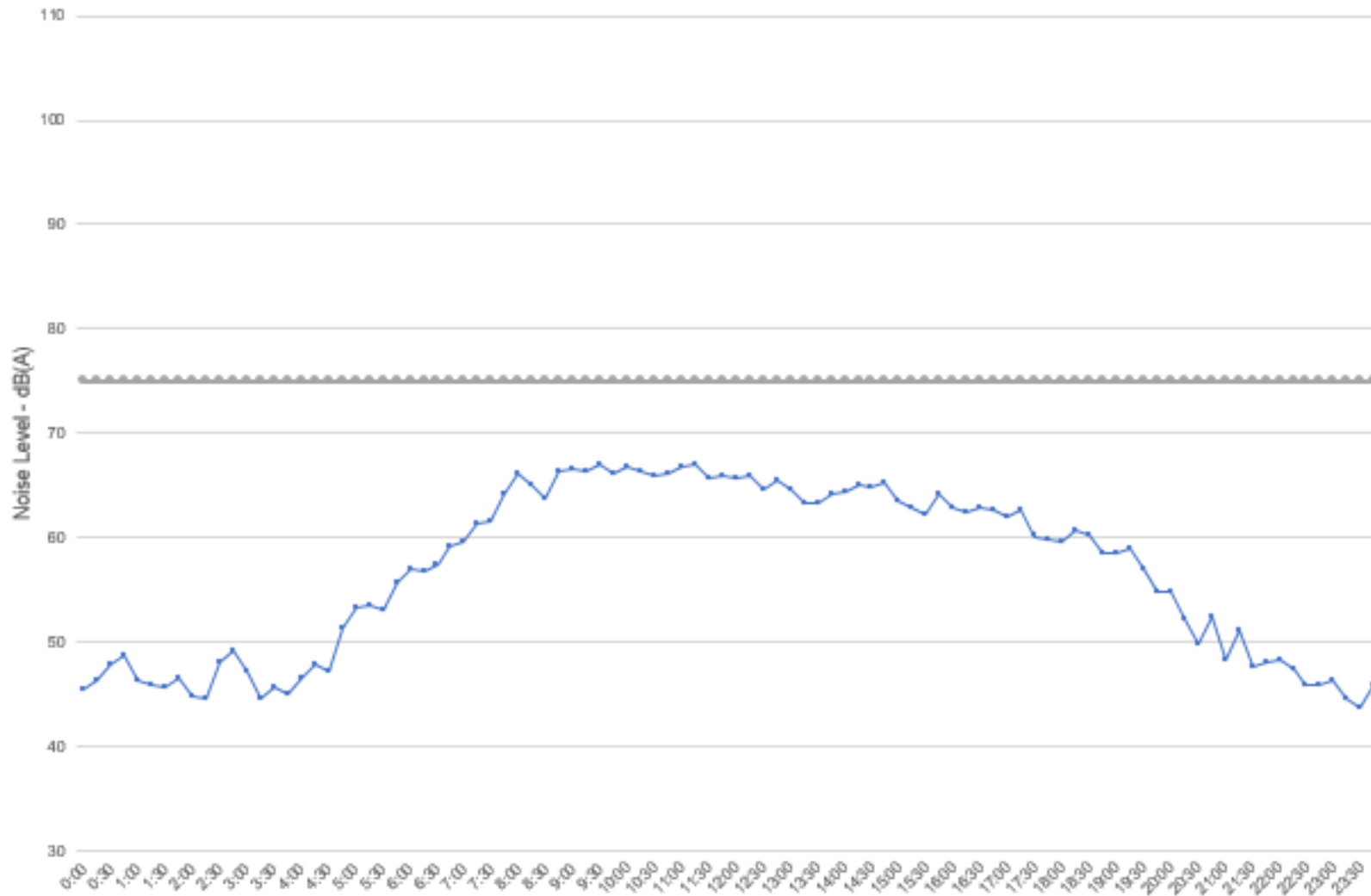




ACOUSTIC LOGIC

Noise Monitoring: 20/02/2022

— Leq — Highly Noise Effected

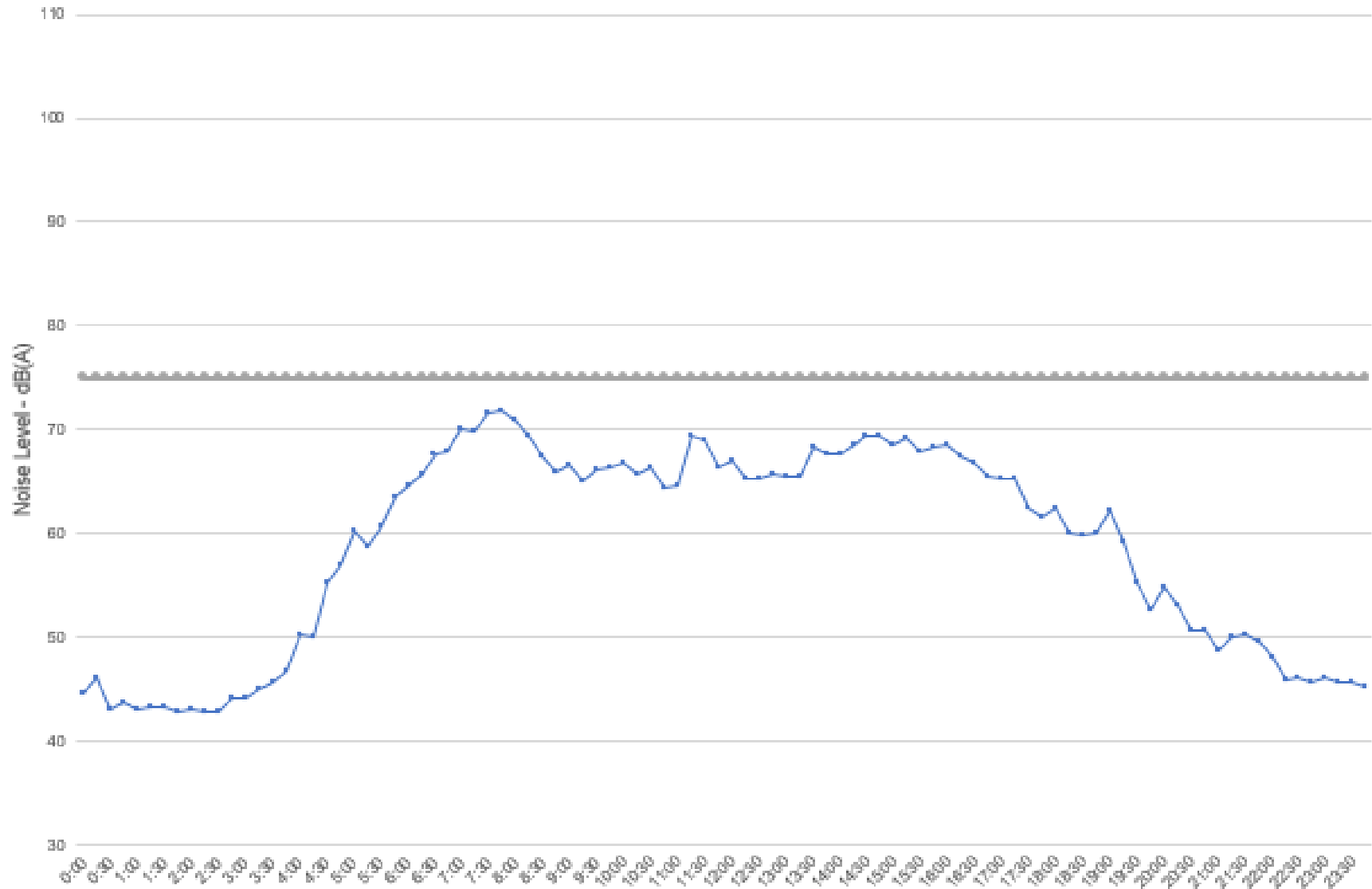




**ACOUSTIC
LOGIC**

Noise Monitoring: 21/02/2022

— Leq — Highly Noise Effected

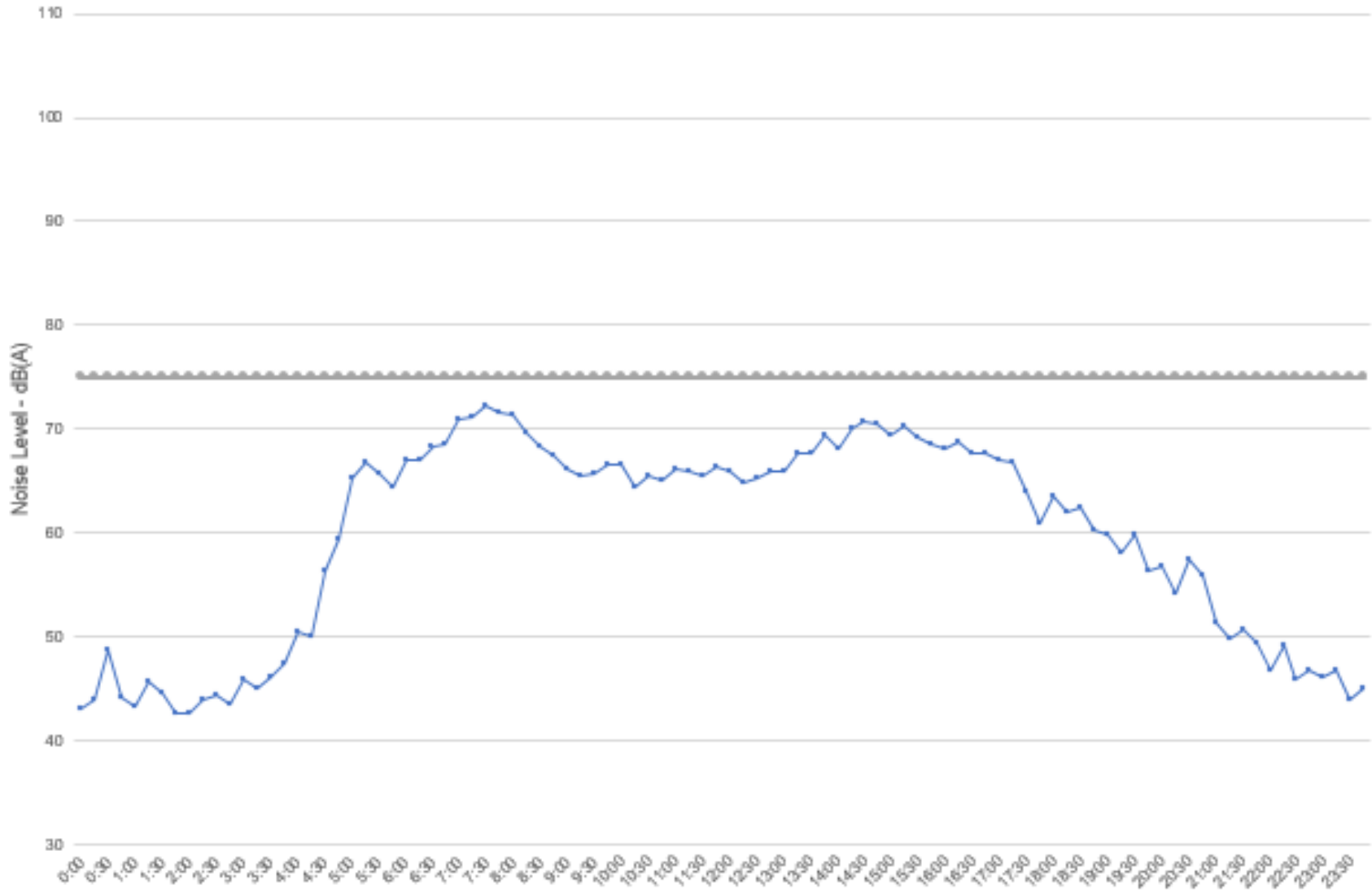




**ACOUSTIC
LOGIC**

Noise Monitoring: 22/02/2022

— Leq — Highly Noise Effected





— Leq — Highly Noise Effected

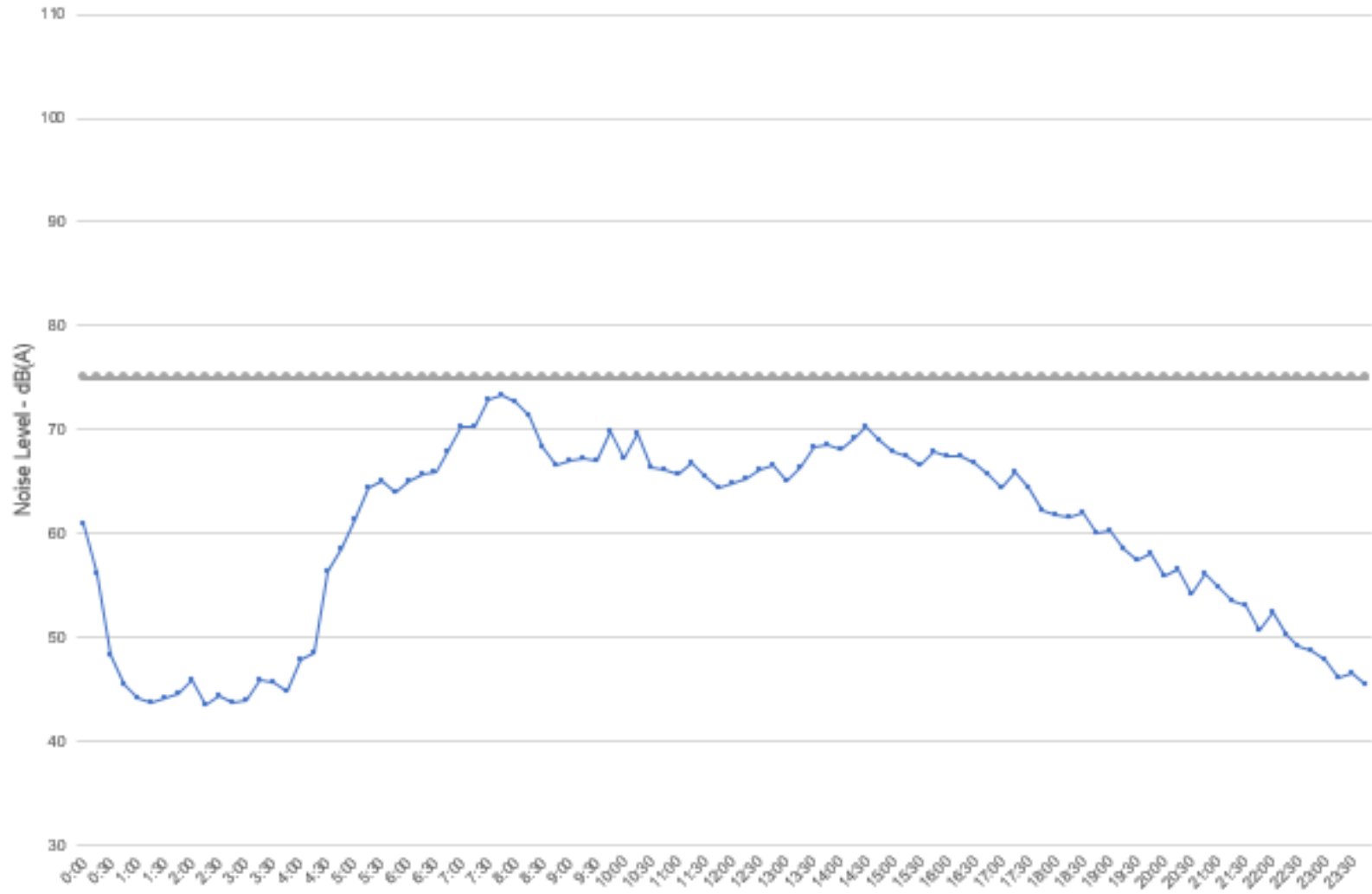




ACOUSTIC LOGIC

Noise Monitoring: 24/02/2022

— Leq — Highly Noise Effected

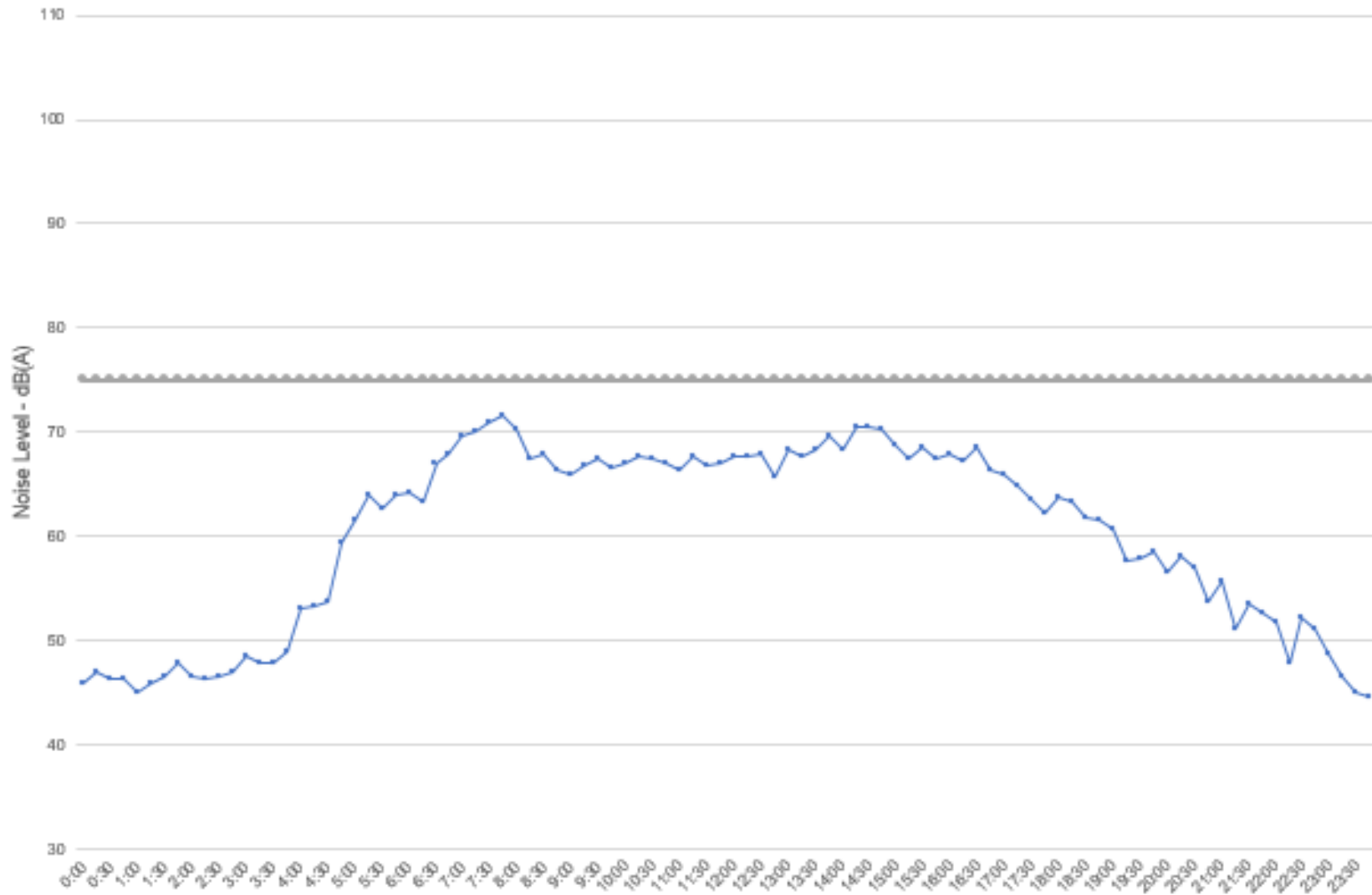




ACOUSTIC LOGIC

Noise Monitoring: 25/02/2022

— Leq — Highly Noise Effected





Noise Monitoring: 26/02/2022

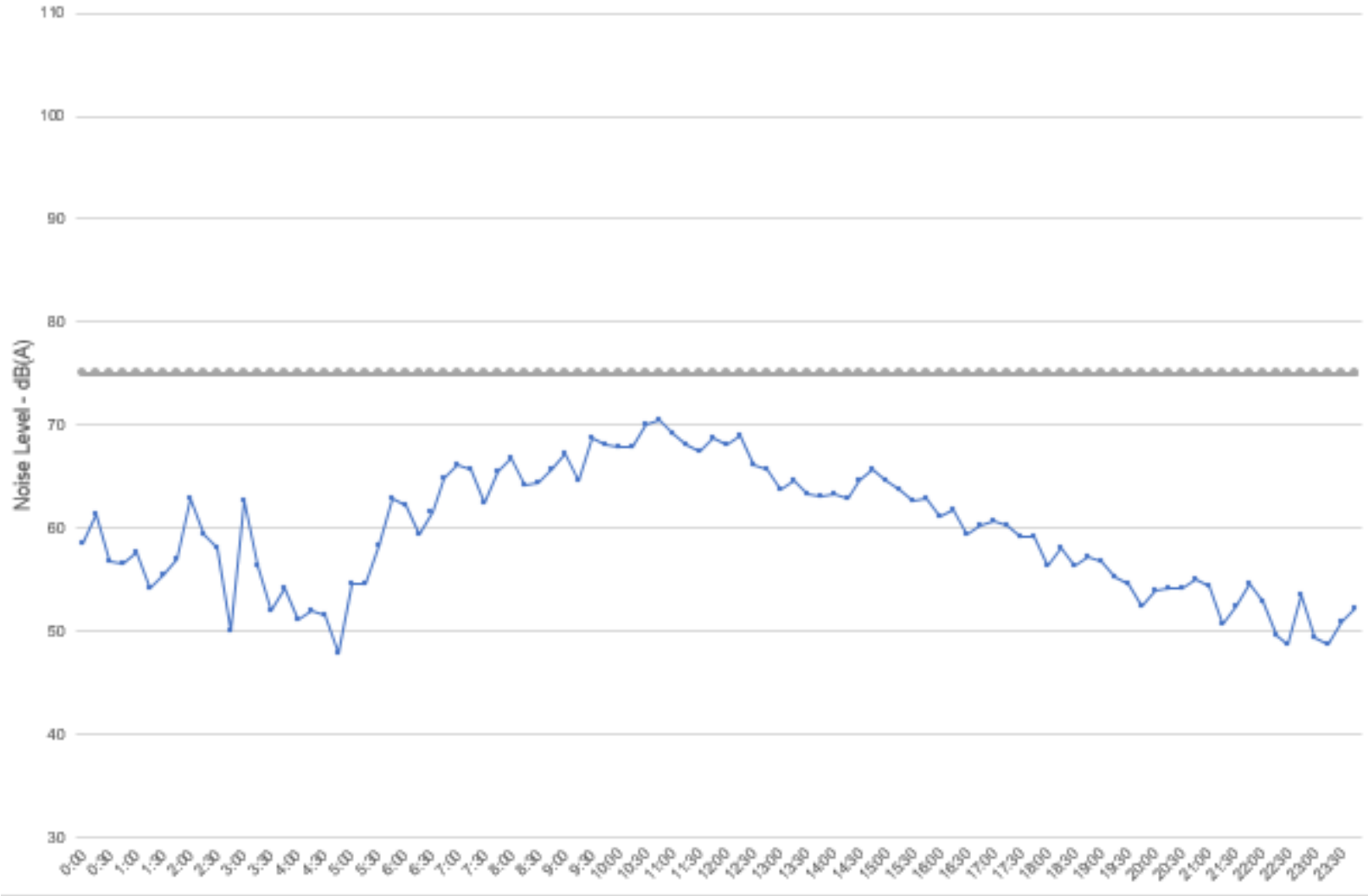




ACOUSTIC LOGIC

Noise Monitoring: 27/02/2022

— Leq — Highly Noise Effected

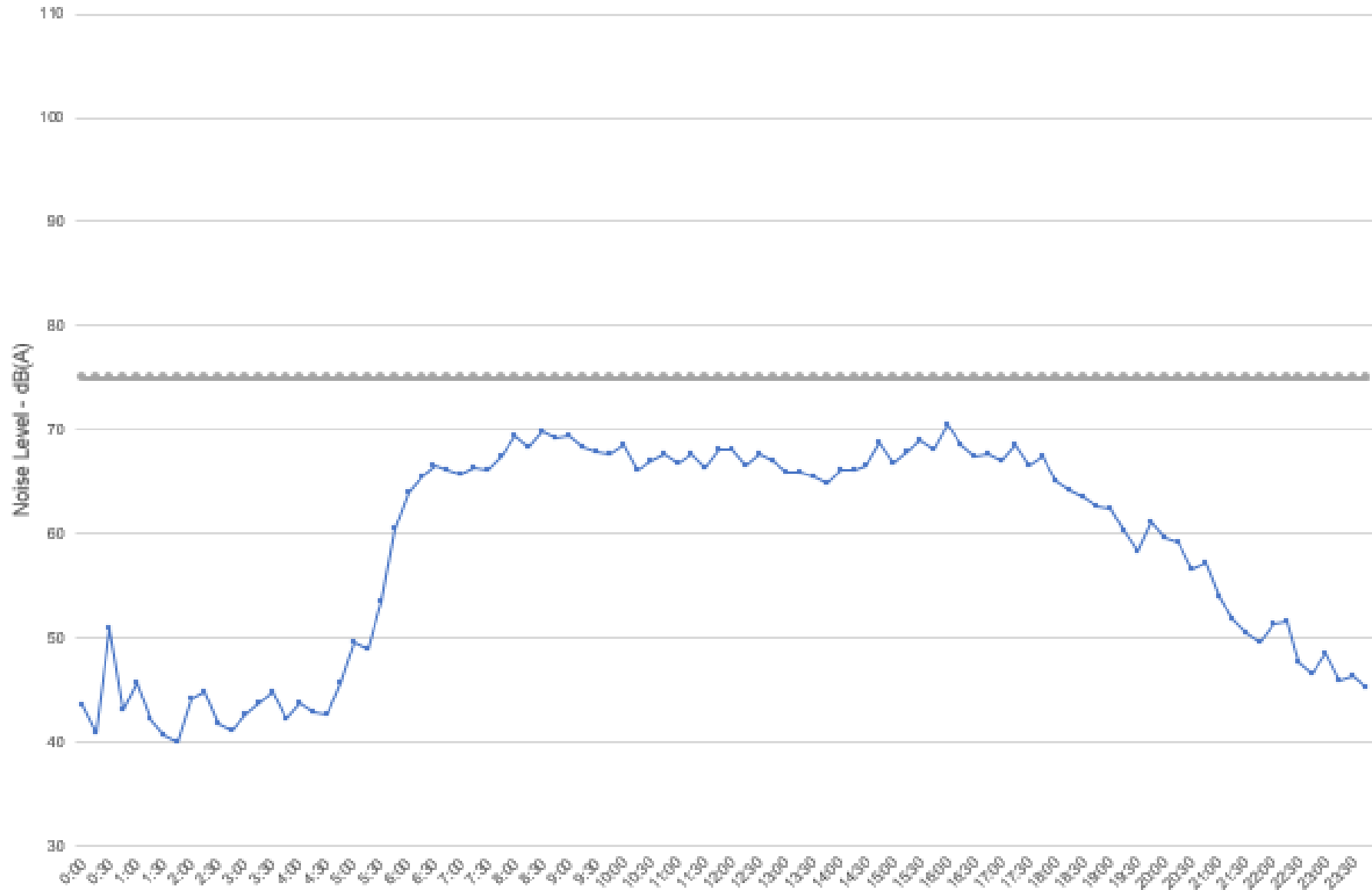




ACOUSTIC LOGIC

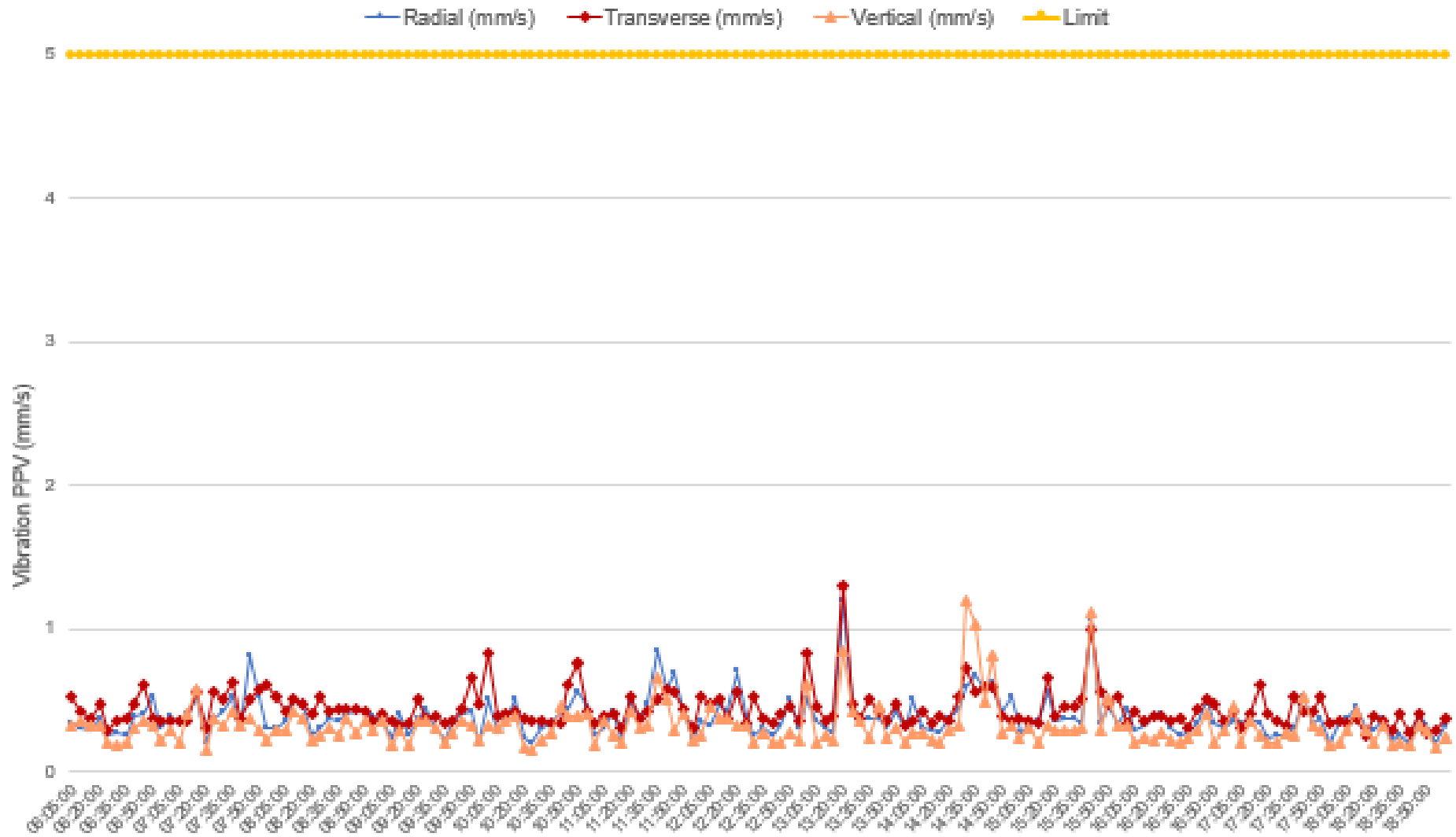
Noise Monitoring: 28/02/2022

— Leq — Highly Noise Effected



APPENDIX 2 – VIBRATION MONITORING RESULTS

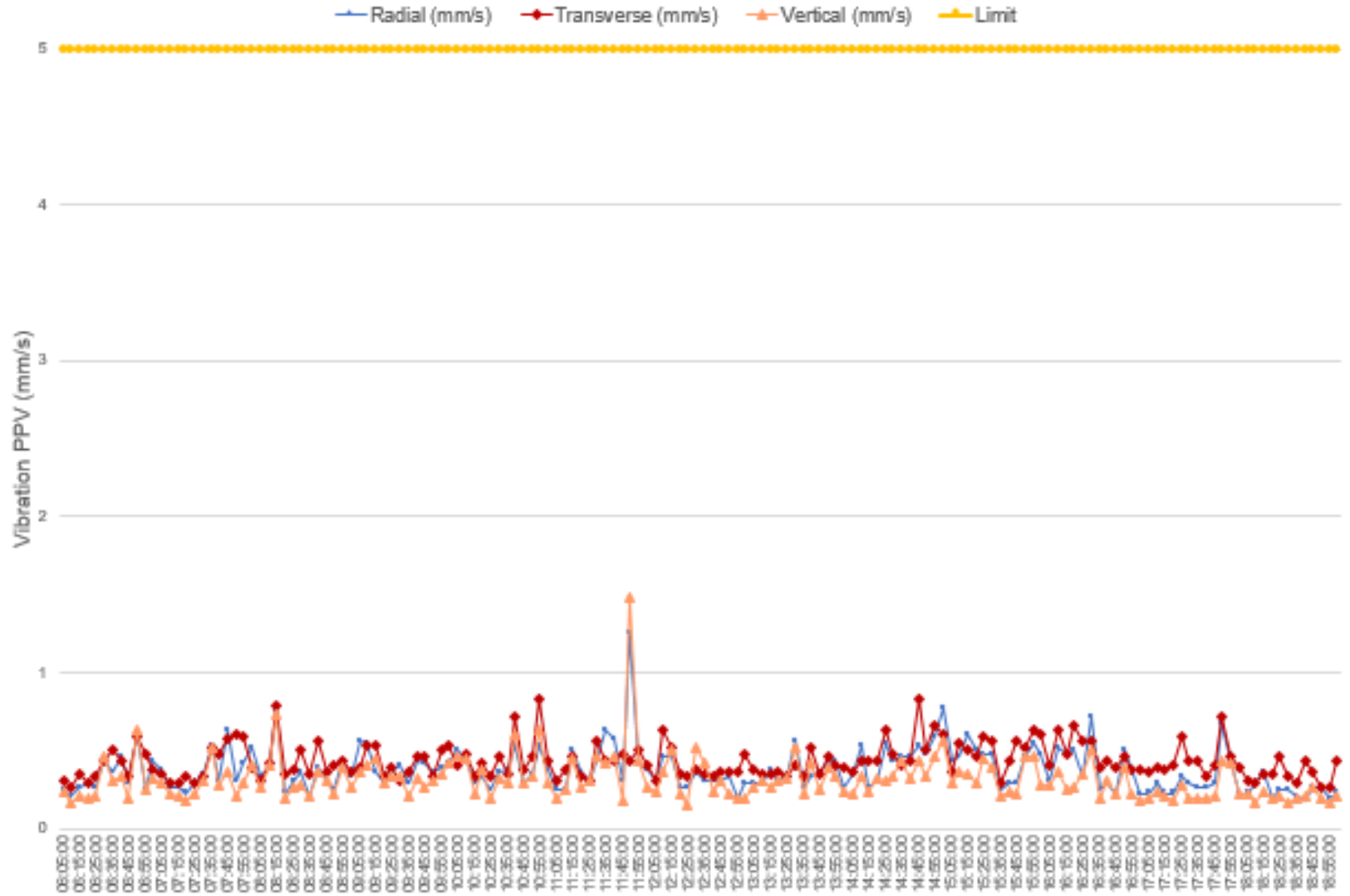
Vibration Monitoring: 01/02/2022





ACOUSTIC LOGIC

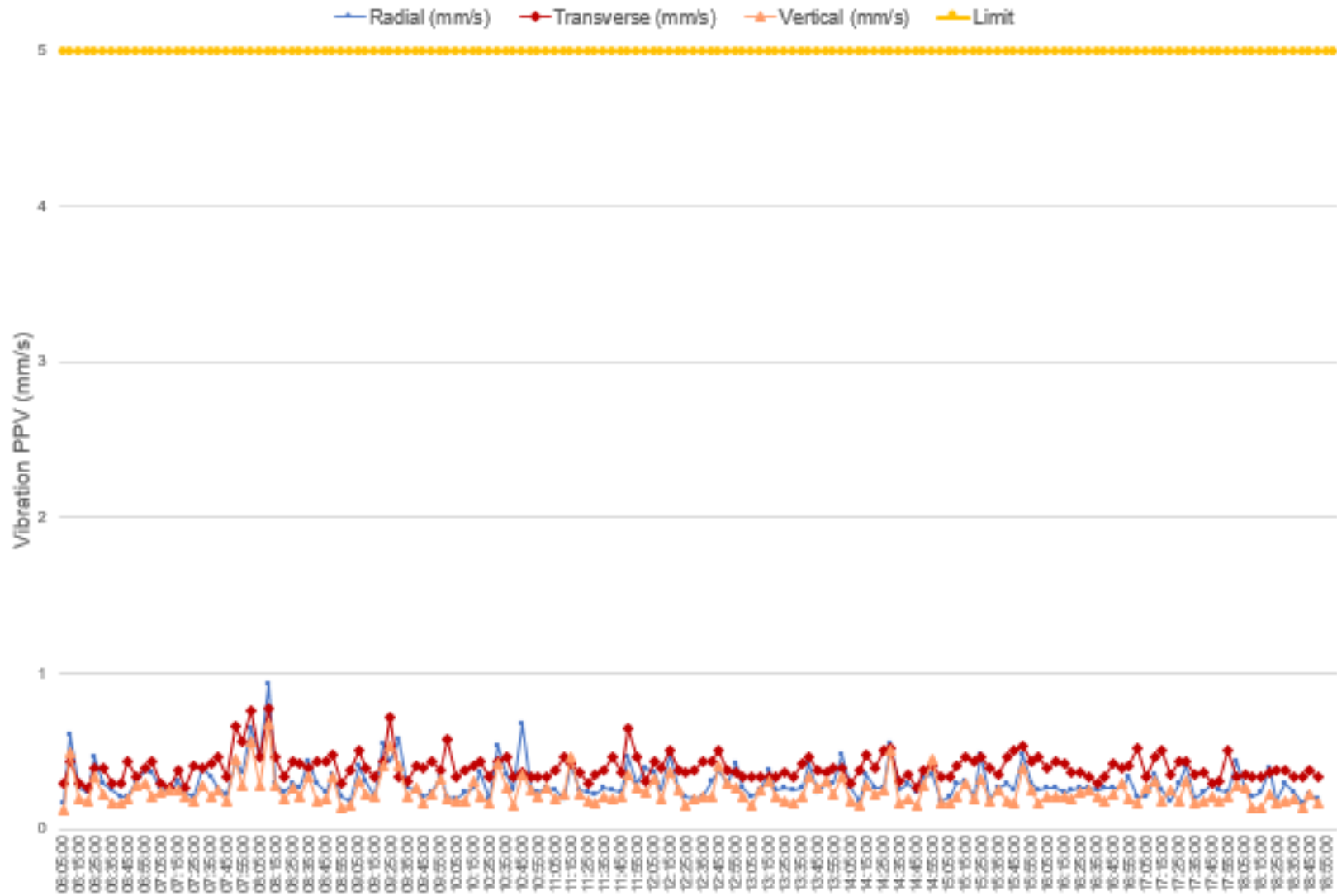
Vibration Monitoring: 02/02/2022





ACOUSTIC LOGIC

Vibration Monitoring: 03/02/2022

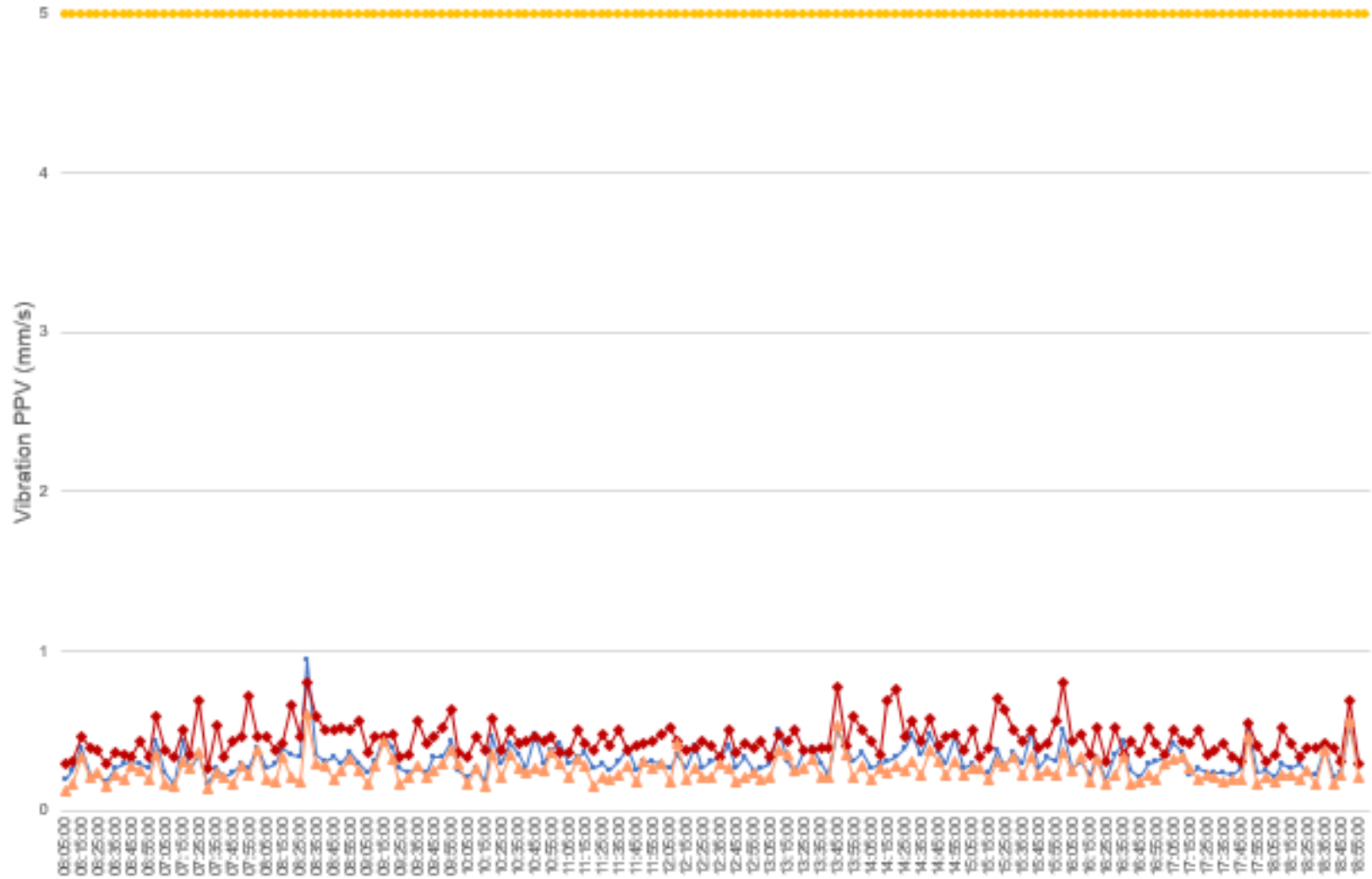




ACOUSTIC LOGIC

Vibration Monitoring: 04/02/2022

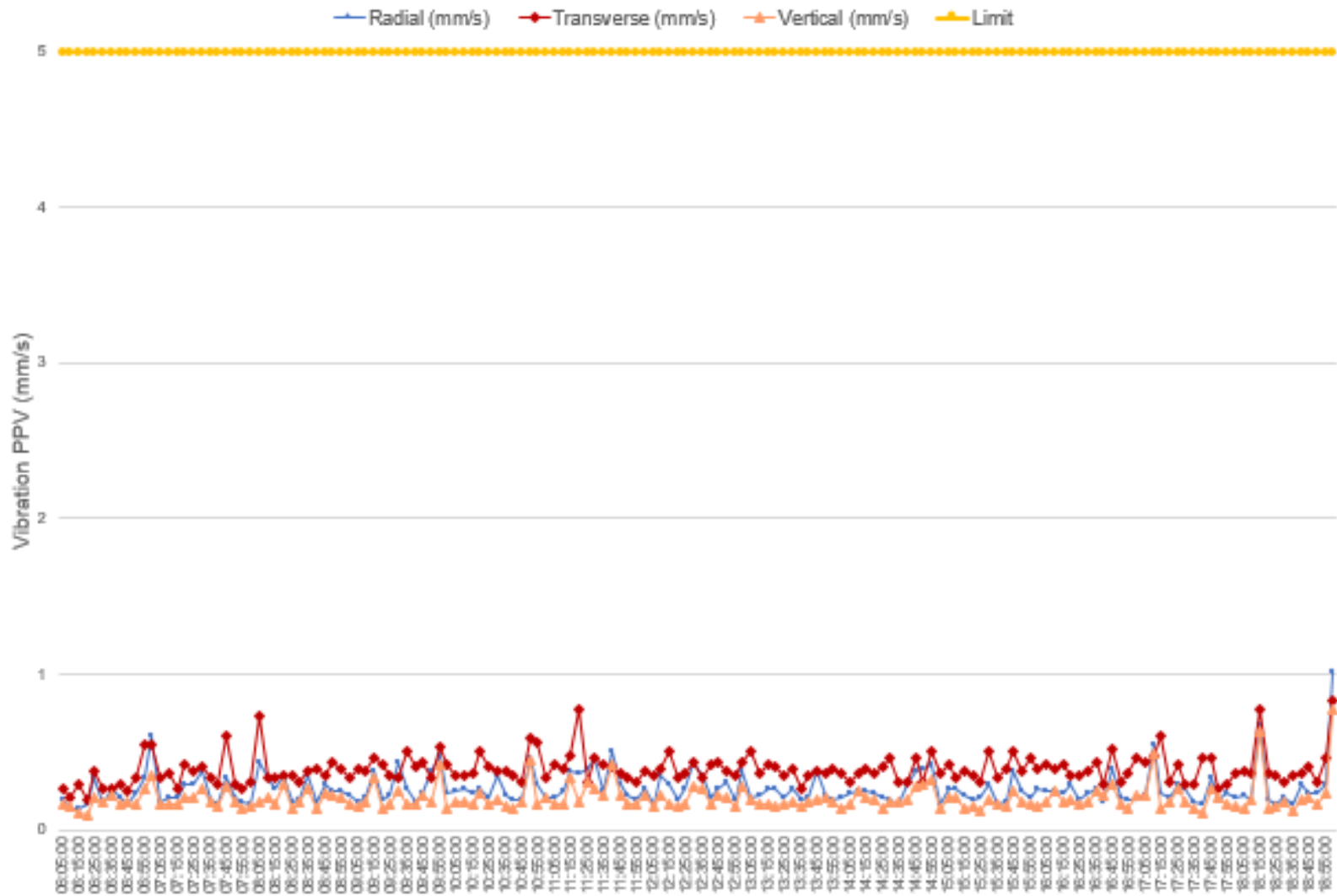
— Radial (mm/s) — Transverse (mm/s) — Vertical (mm/s) — Limit





ACOUSTIC LOGIC

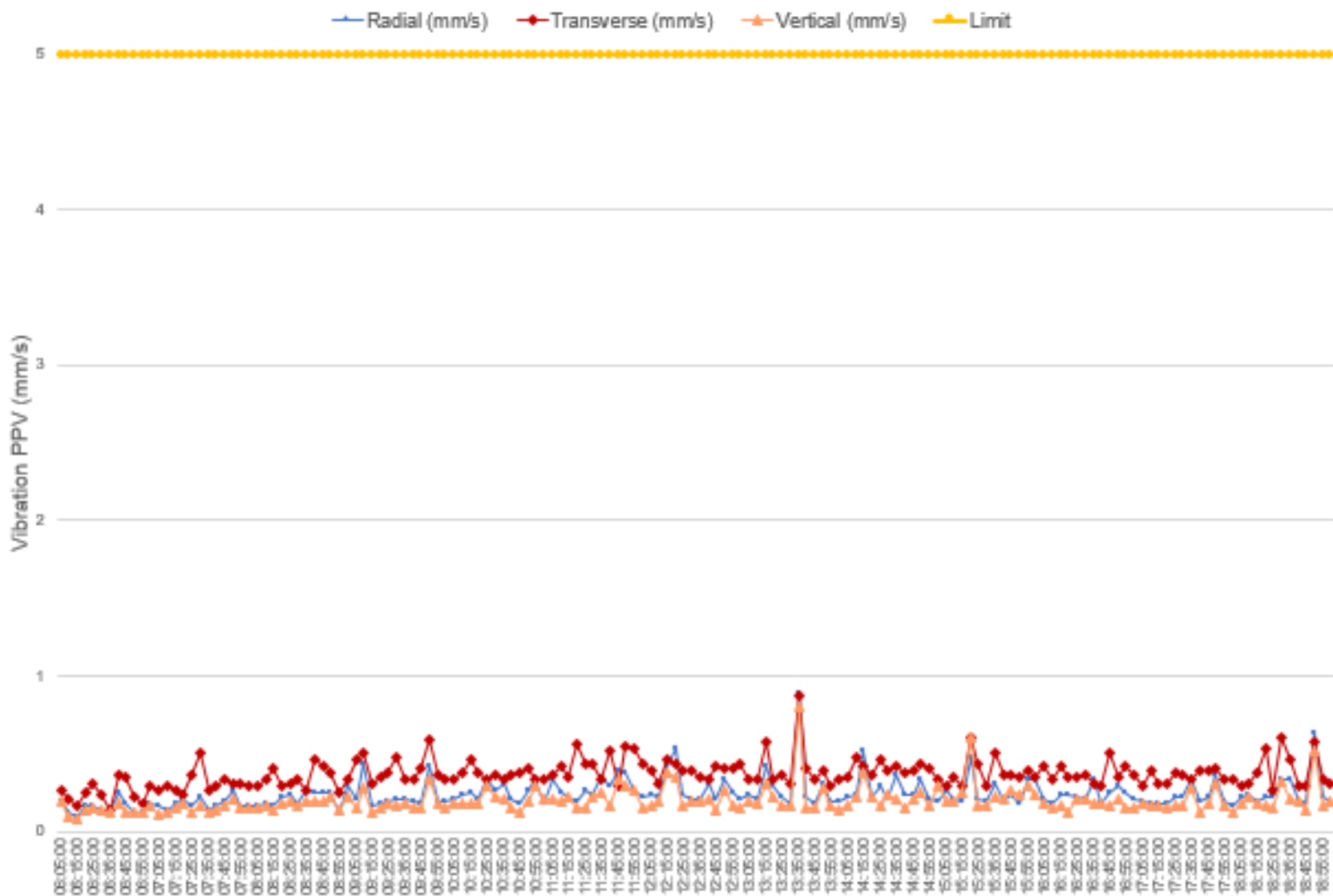
Vibration Monitoring: 05/02/2022





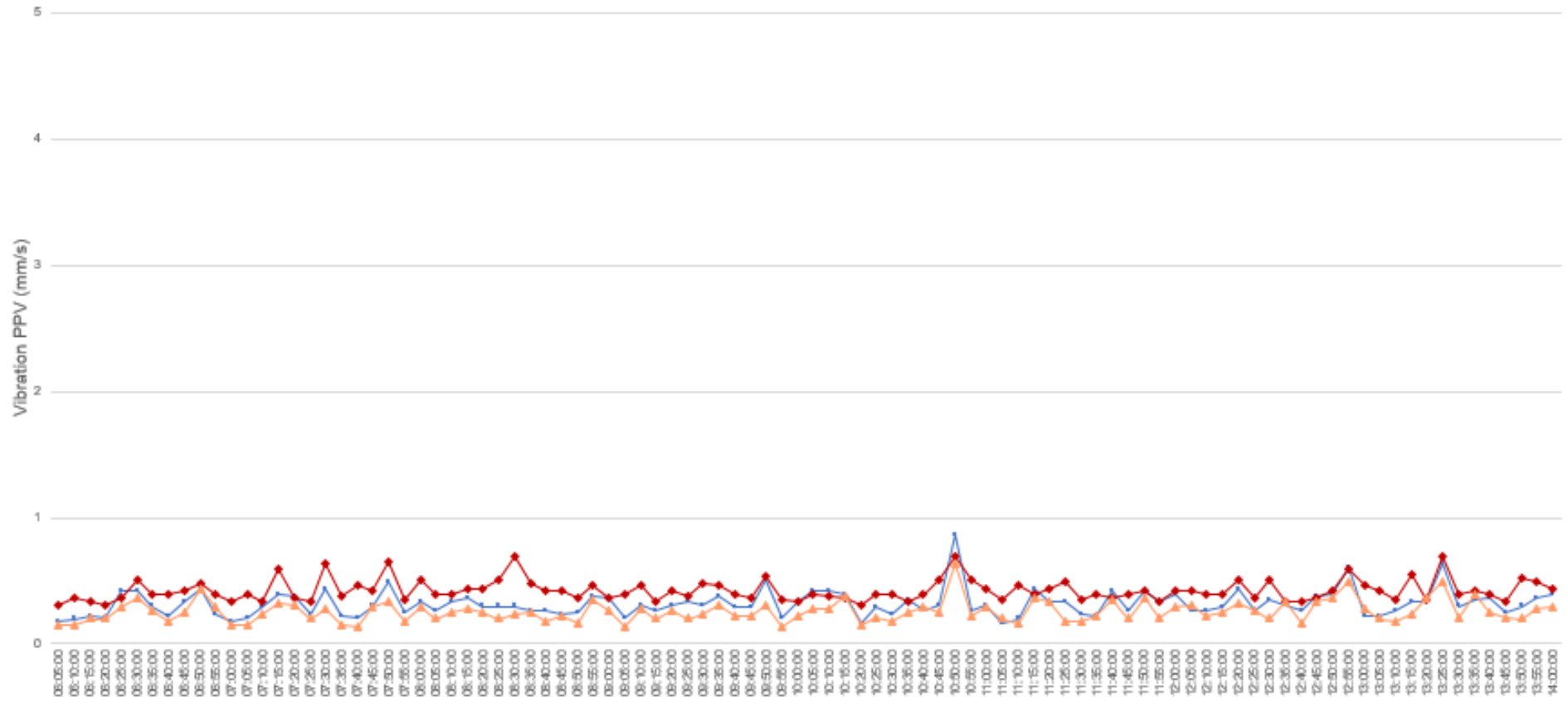
ACOUSTIC LOGIC

Vibration Monitoring: 06/02/2022



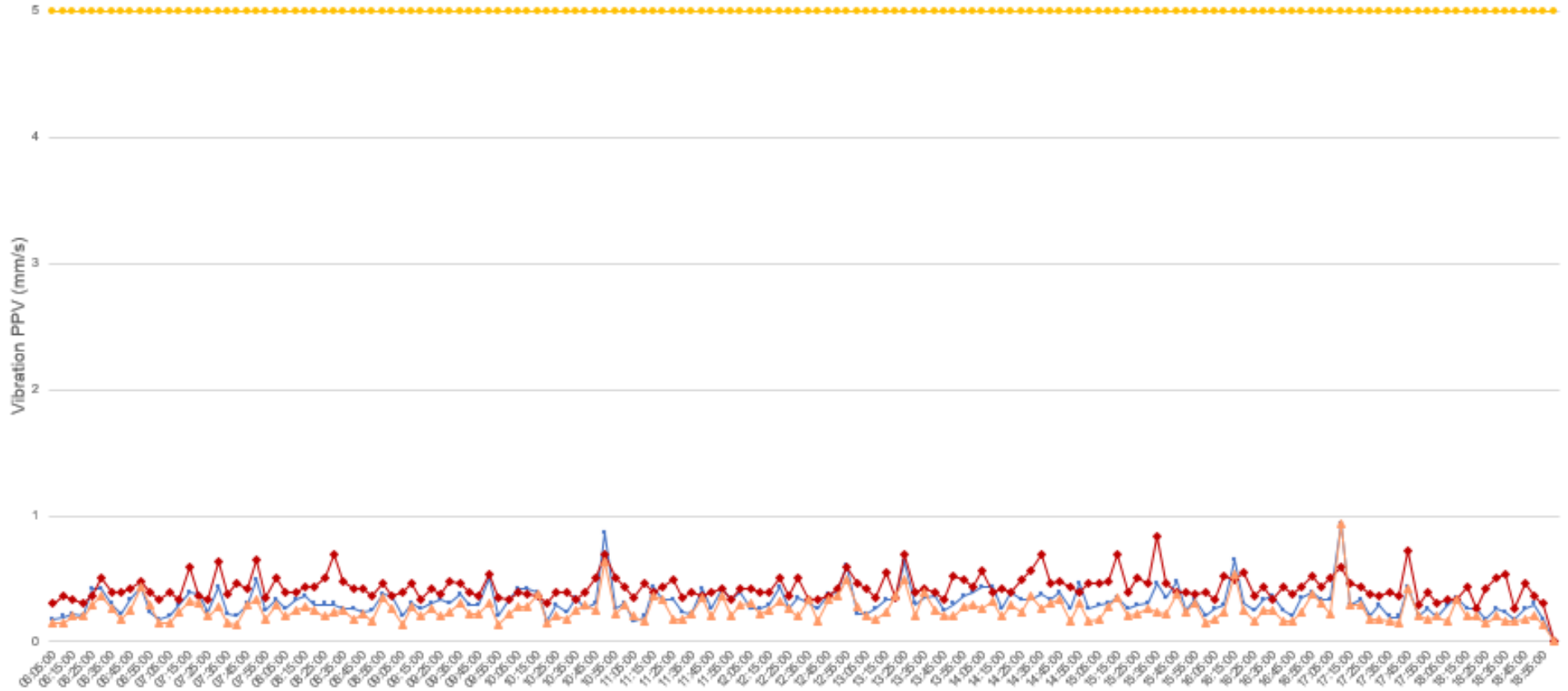
Vibration Monitoring: 07/02/2022

— Radial (mm/s) — Transverse (mm/s) — Vertical (mm/s) — Limit



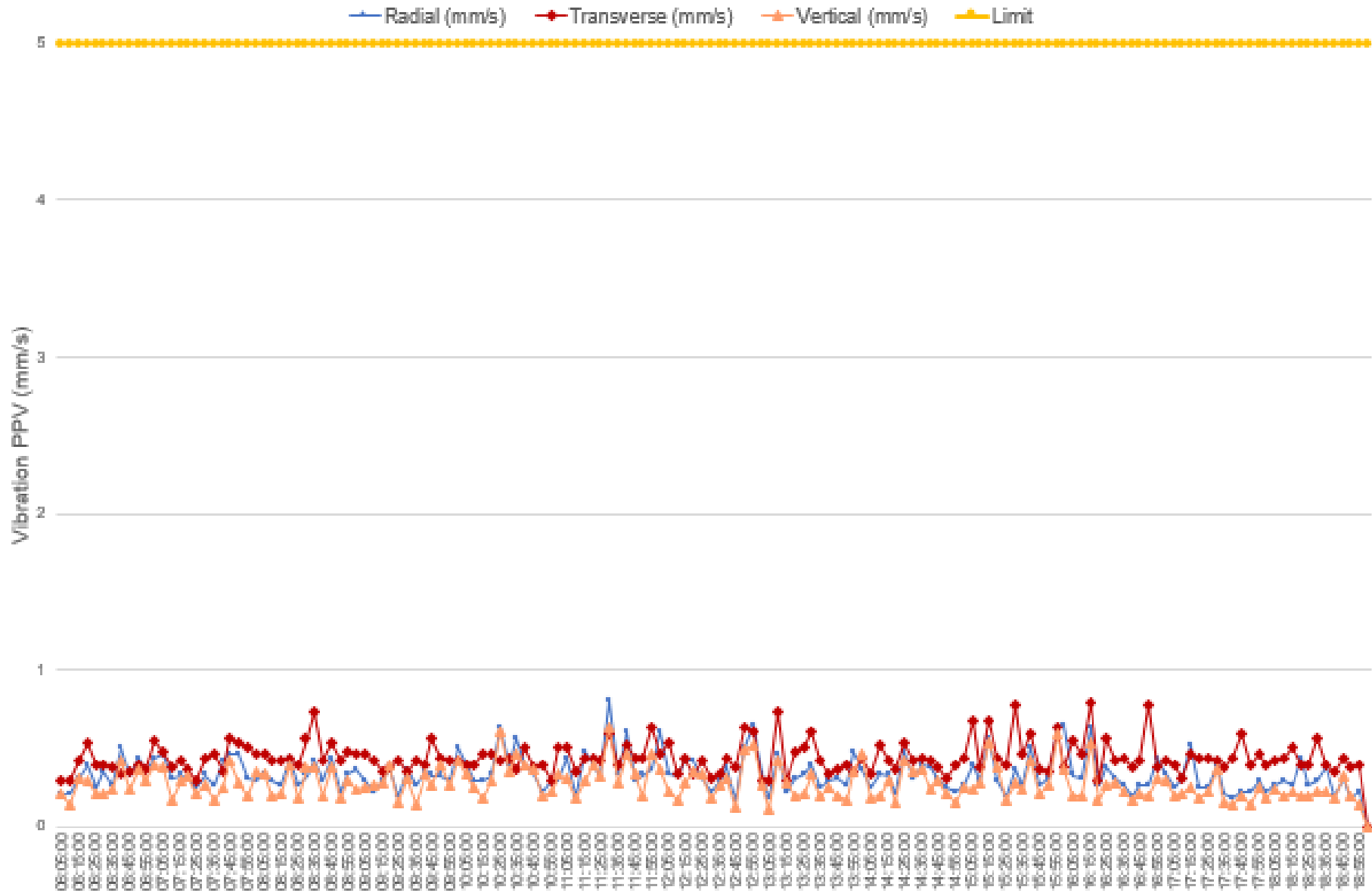
Vibration Monitoring: 07/02/2022

— Radial (mm/s) — Transverse (mm/s) — Vertical (mm/s) — Limit

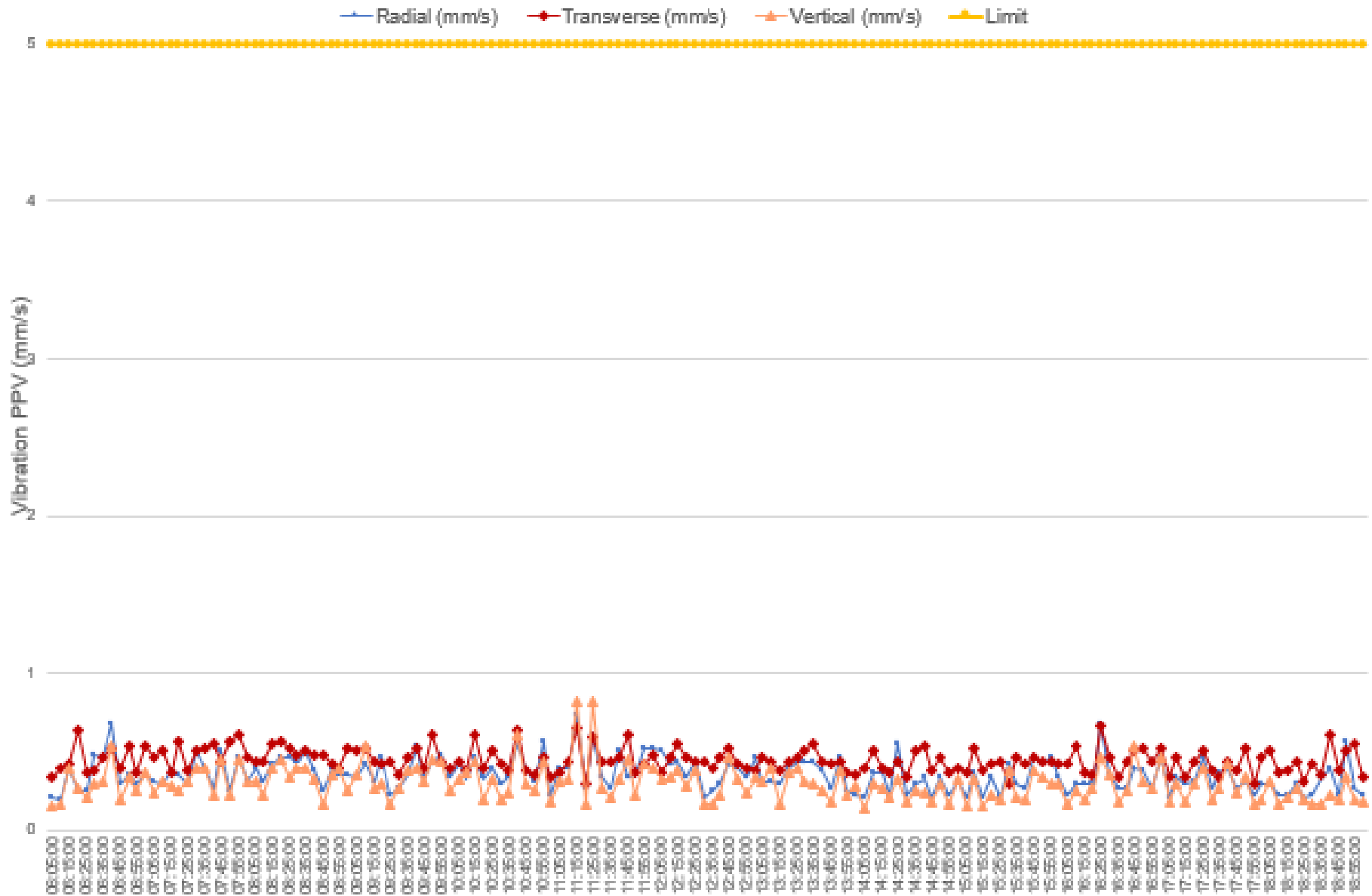


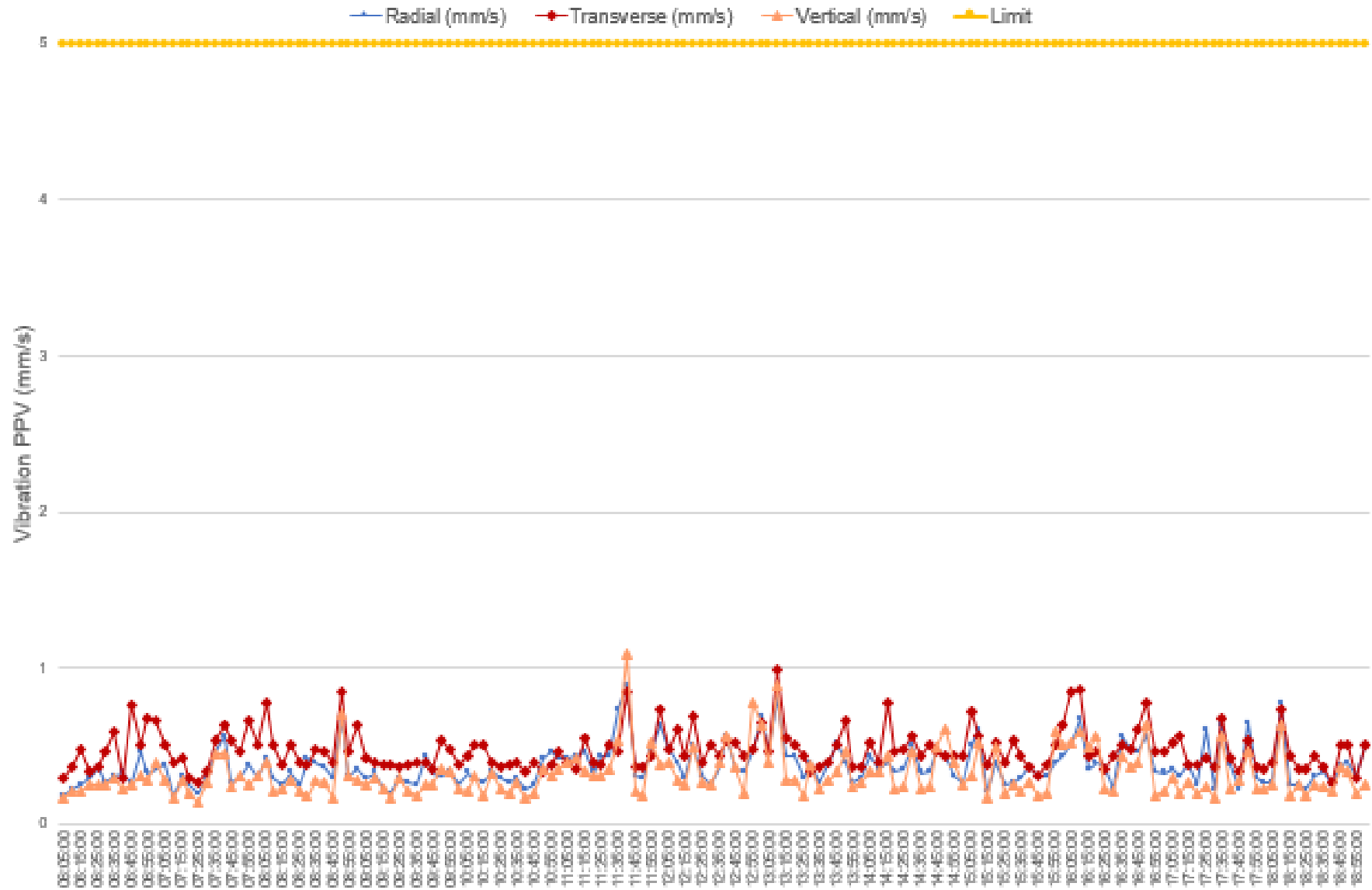


Vibration Monitoring: 08/02/2022

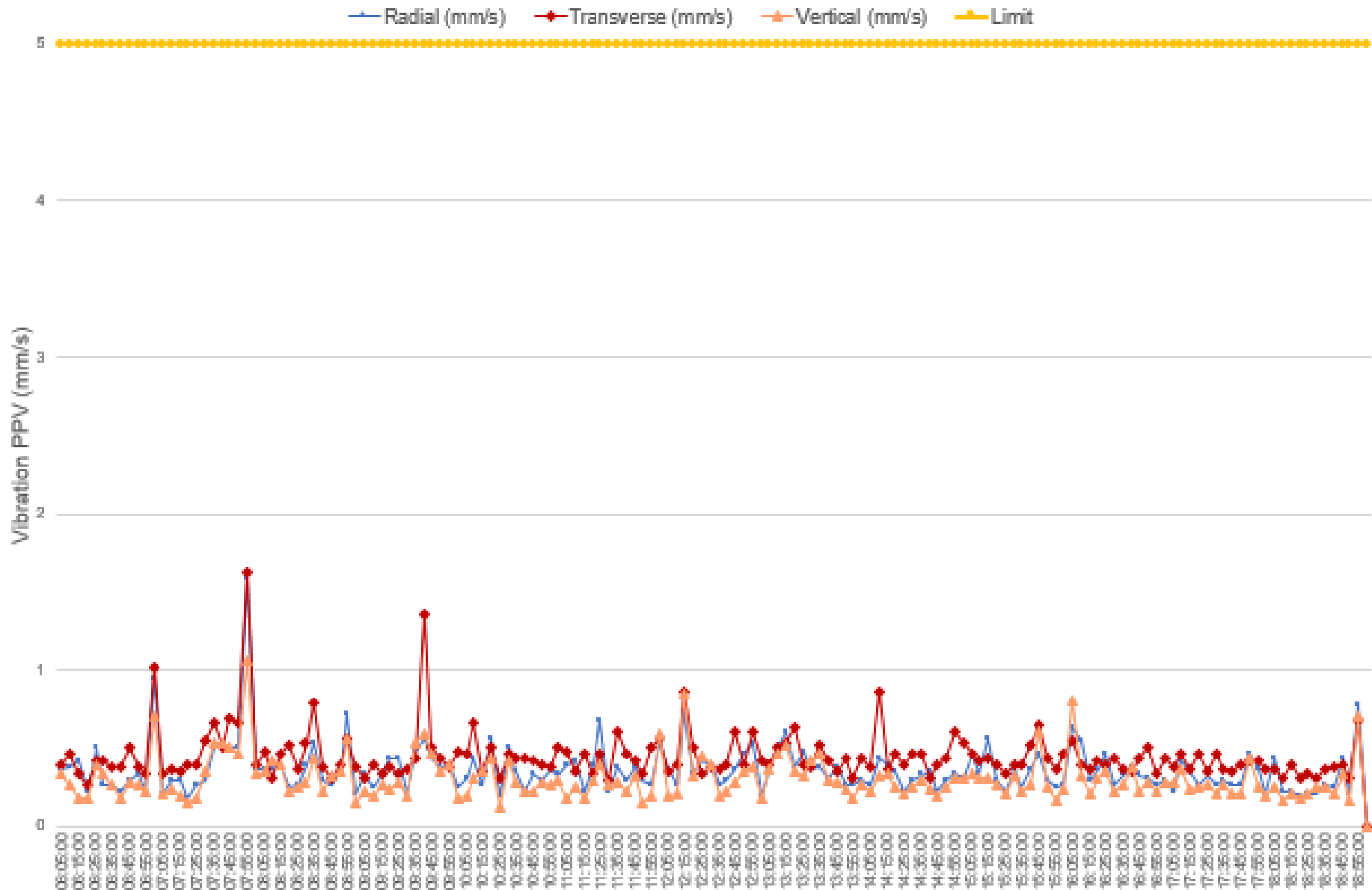


Vibration Monitoring: 09/02/2022





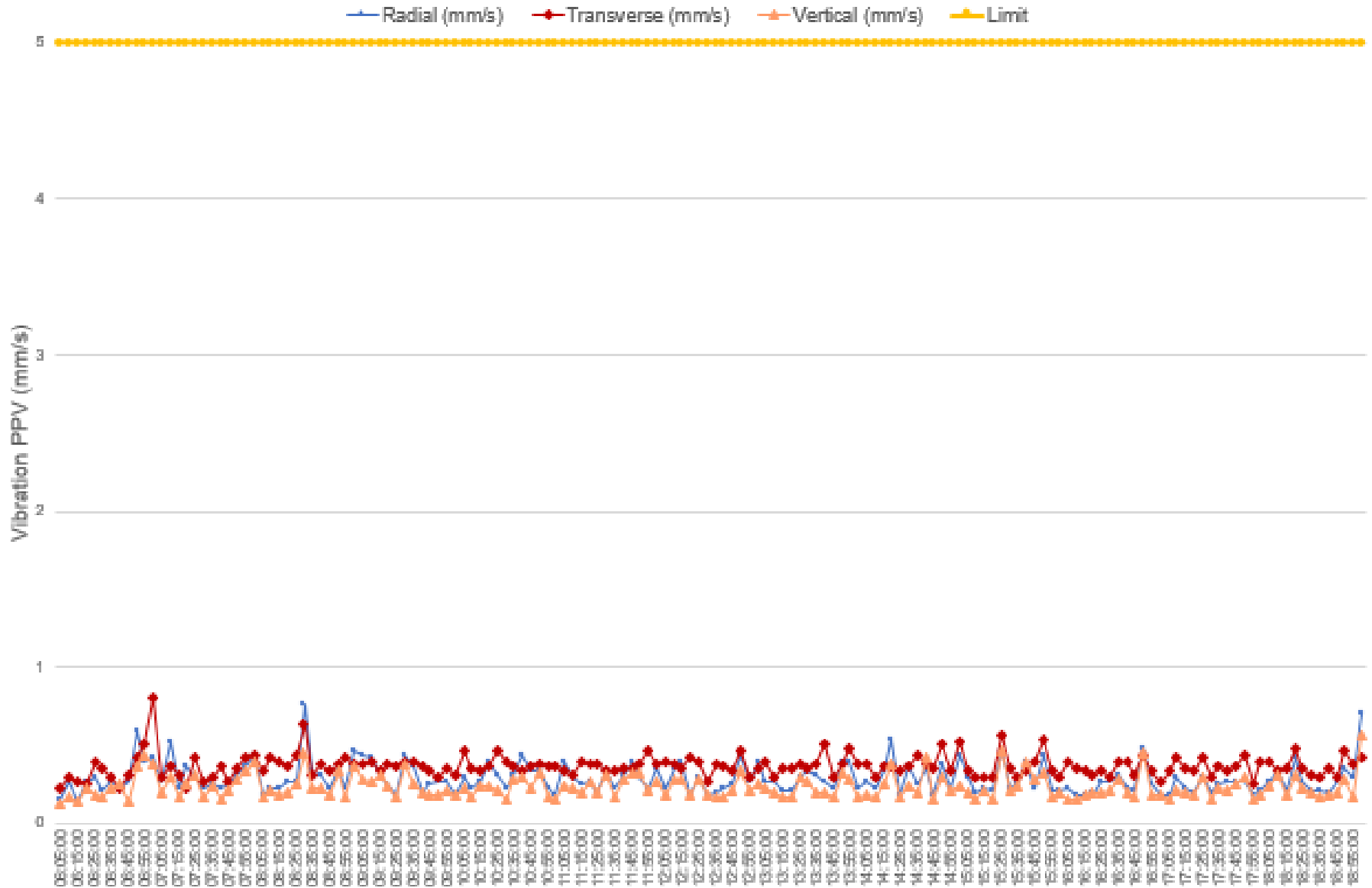
Vibration Monitoring: 11/02/2022



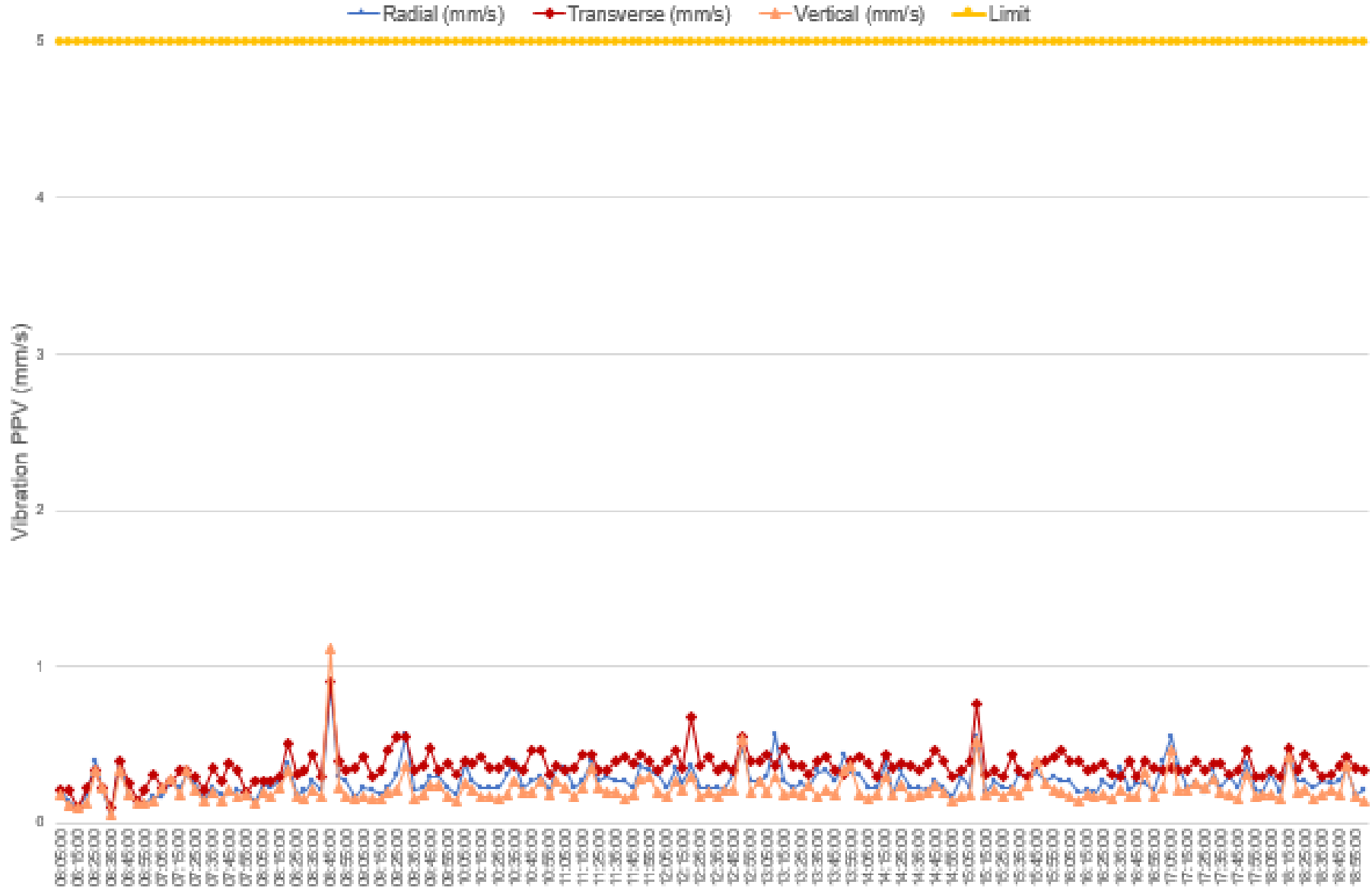


ACOUSTIC LOGIC

Vibration Monitoring: 12/02/2022

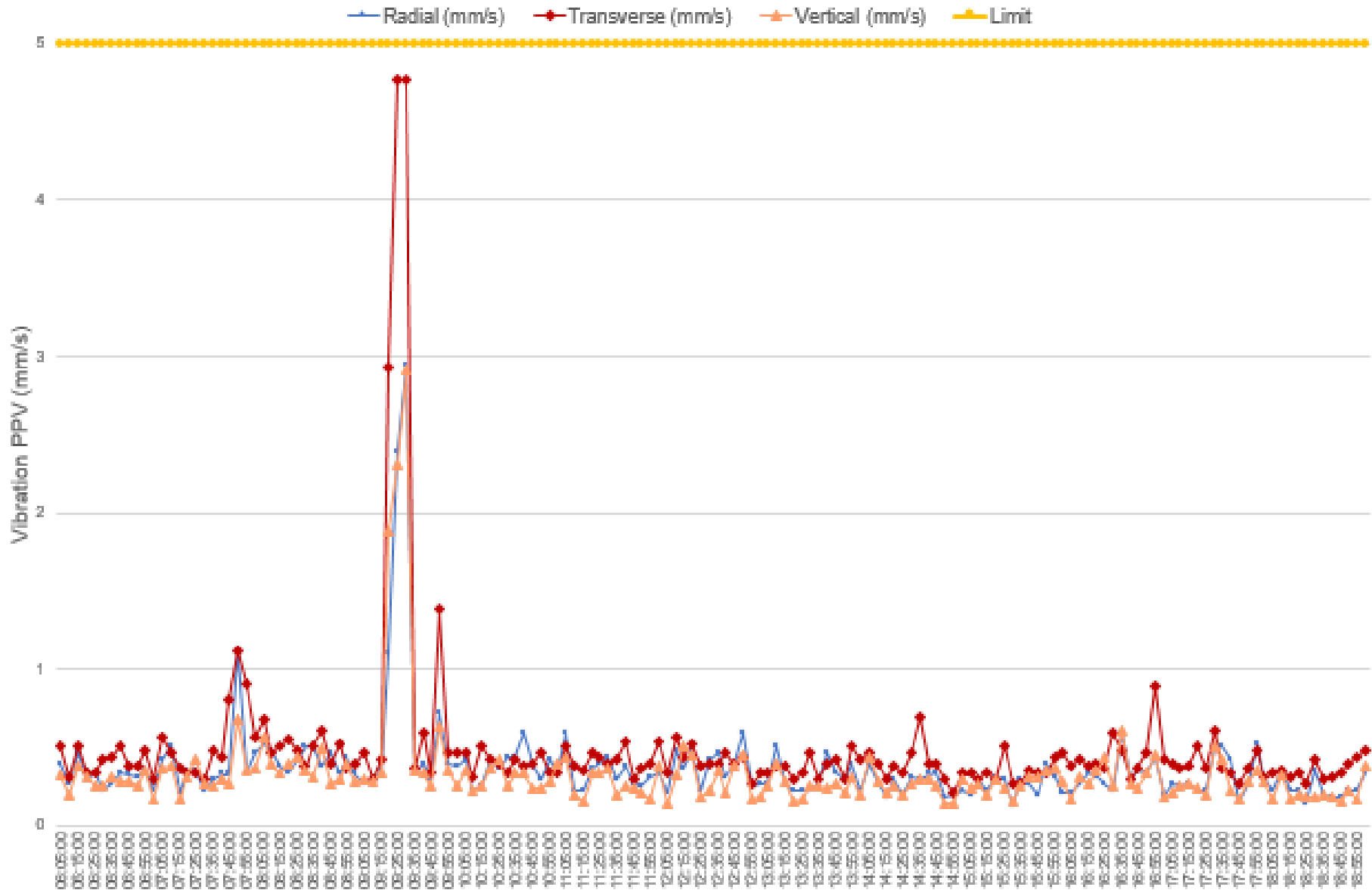


Vibration Monitoring: 13/02/2022

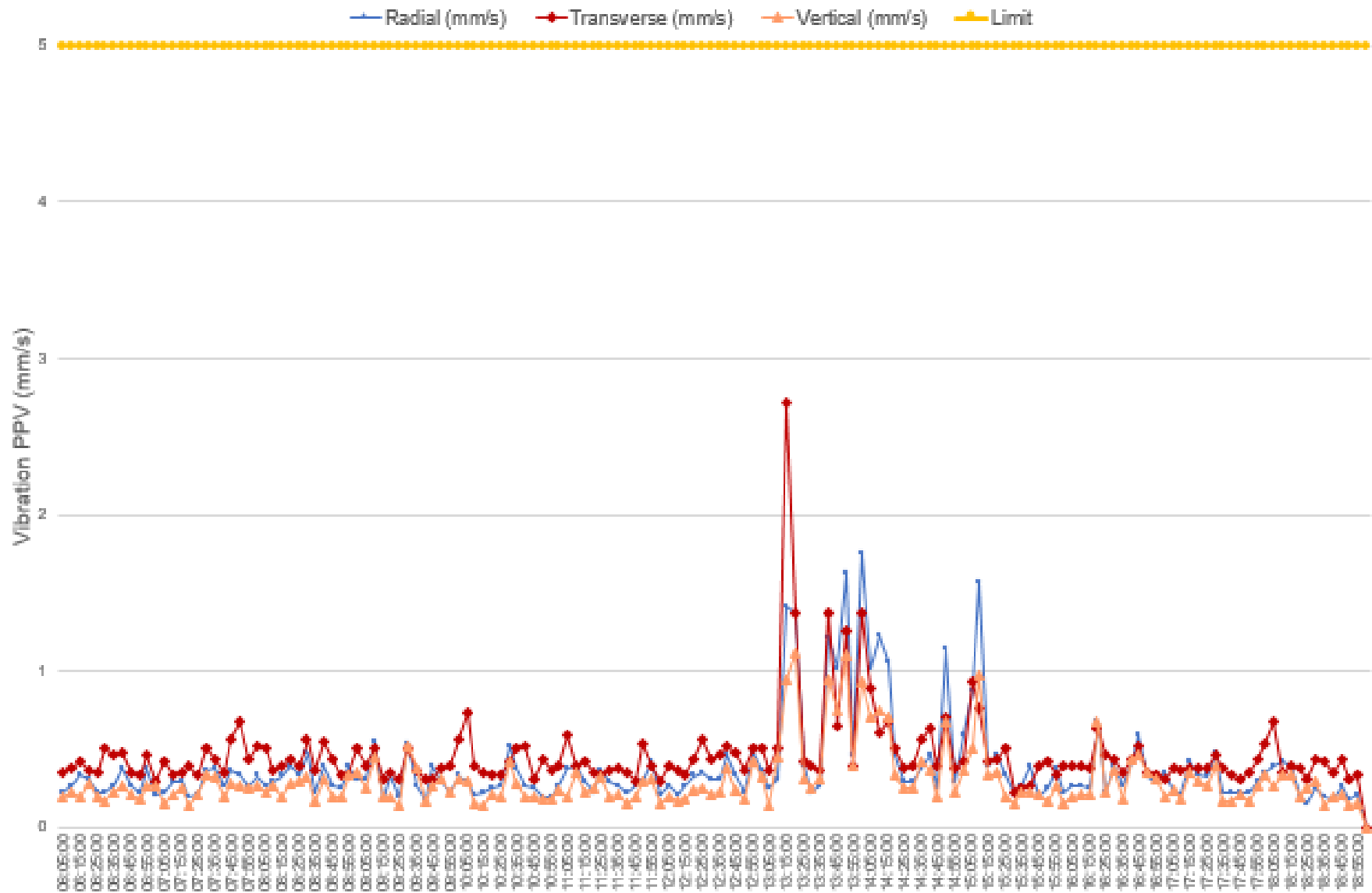




Vibration Monitoring: 14/02/2022

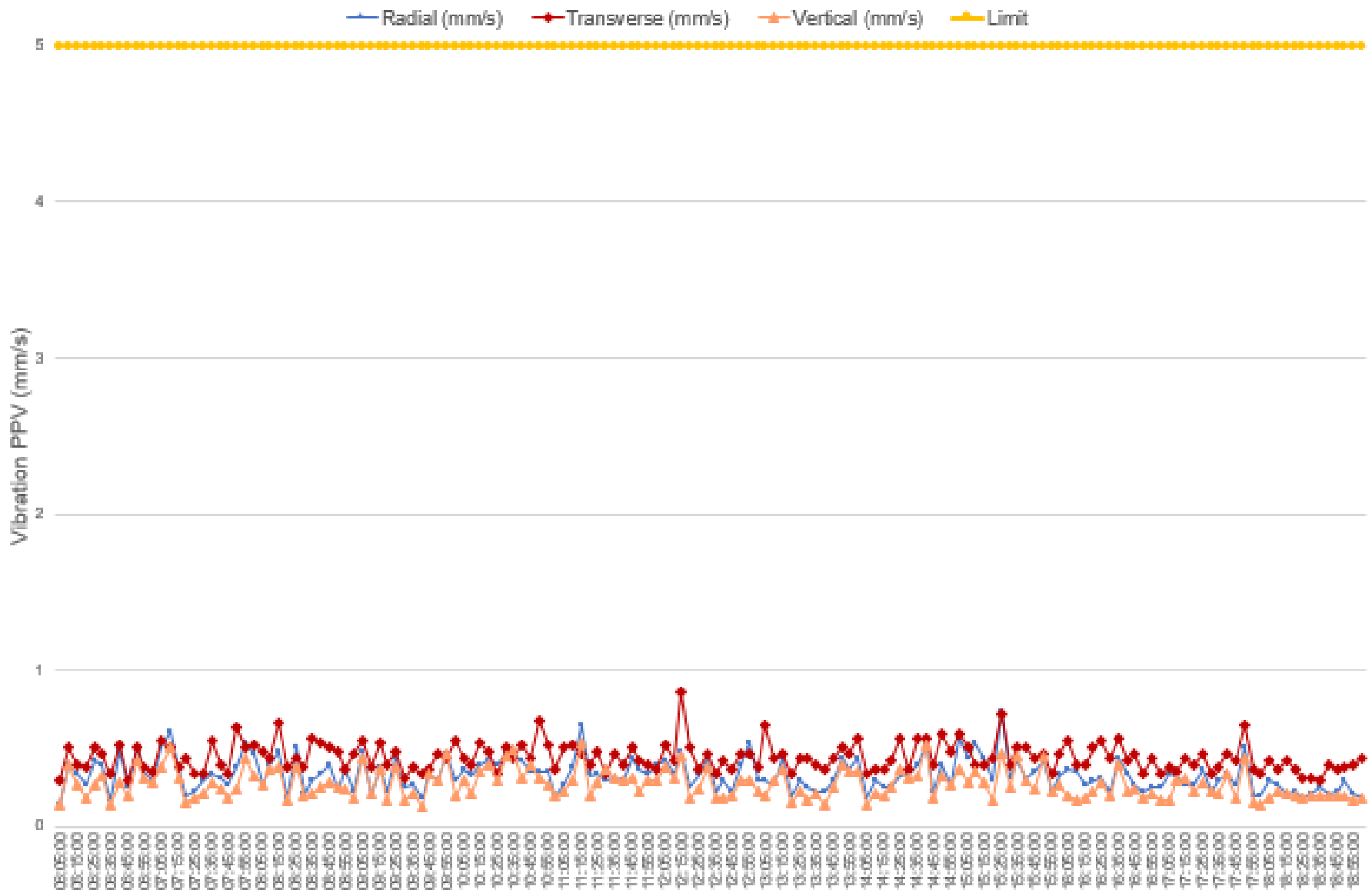


Vibration Monitoring: 15/02/2022





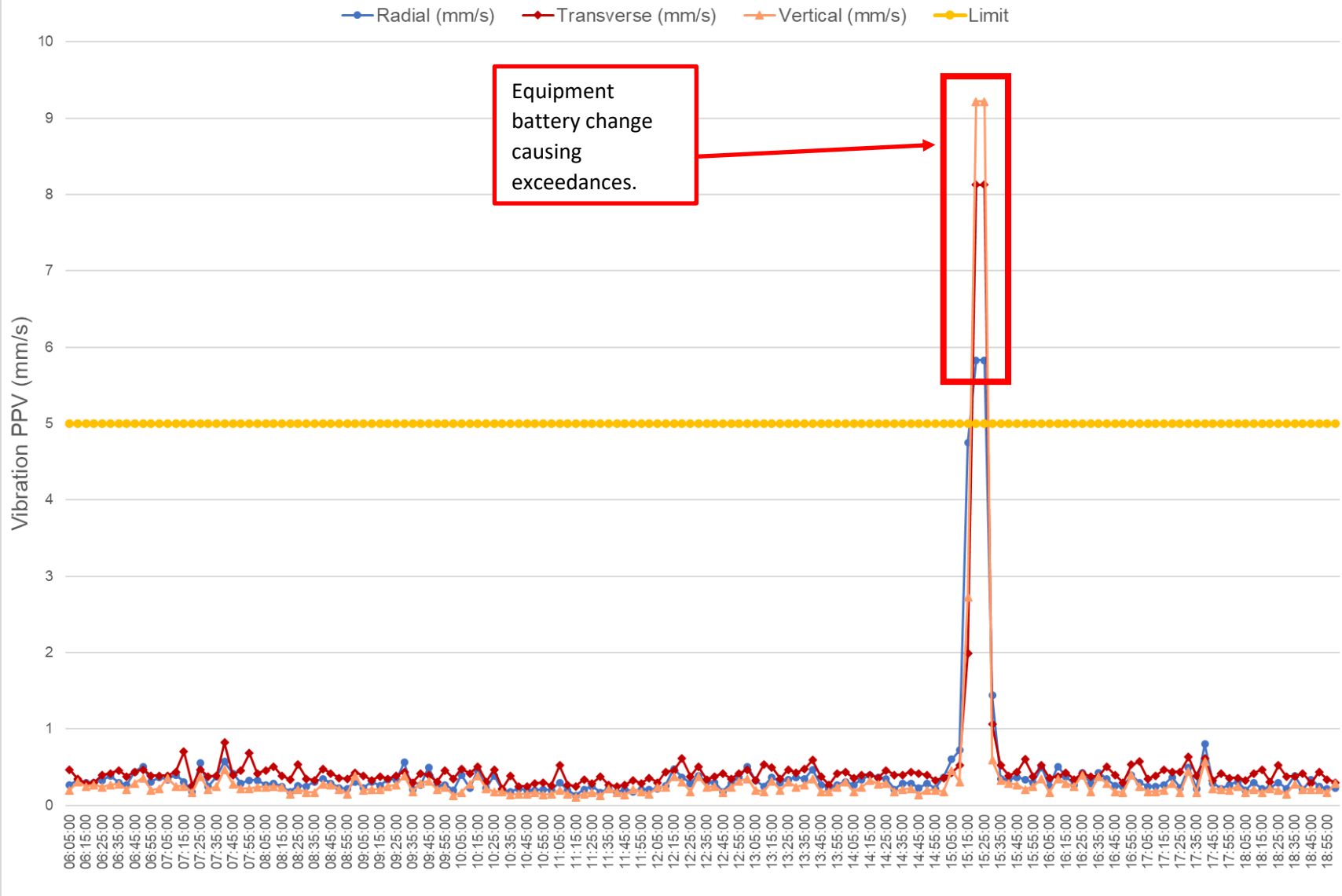
Vibration Monitoring: 16/02/2022





ACOUSTIC LOGIC

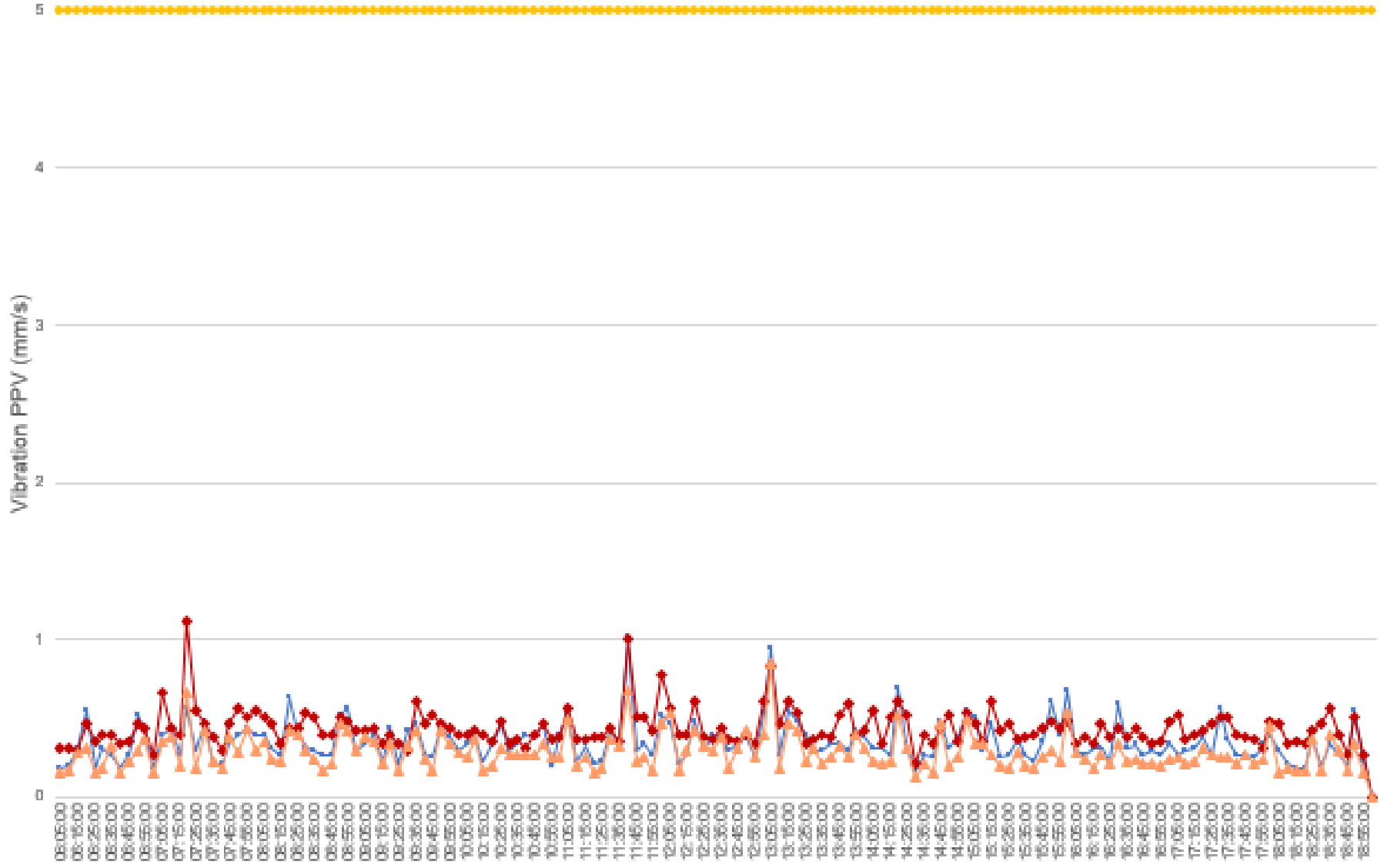
Vibration Monitoring: 17/02/2022





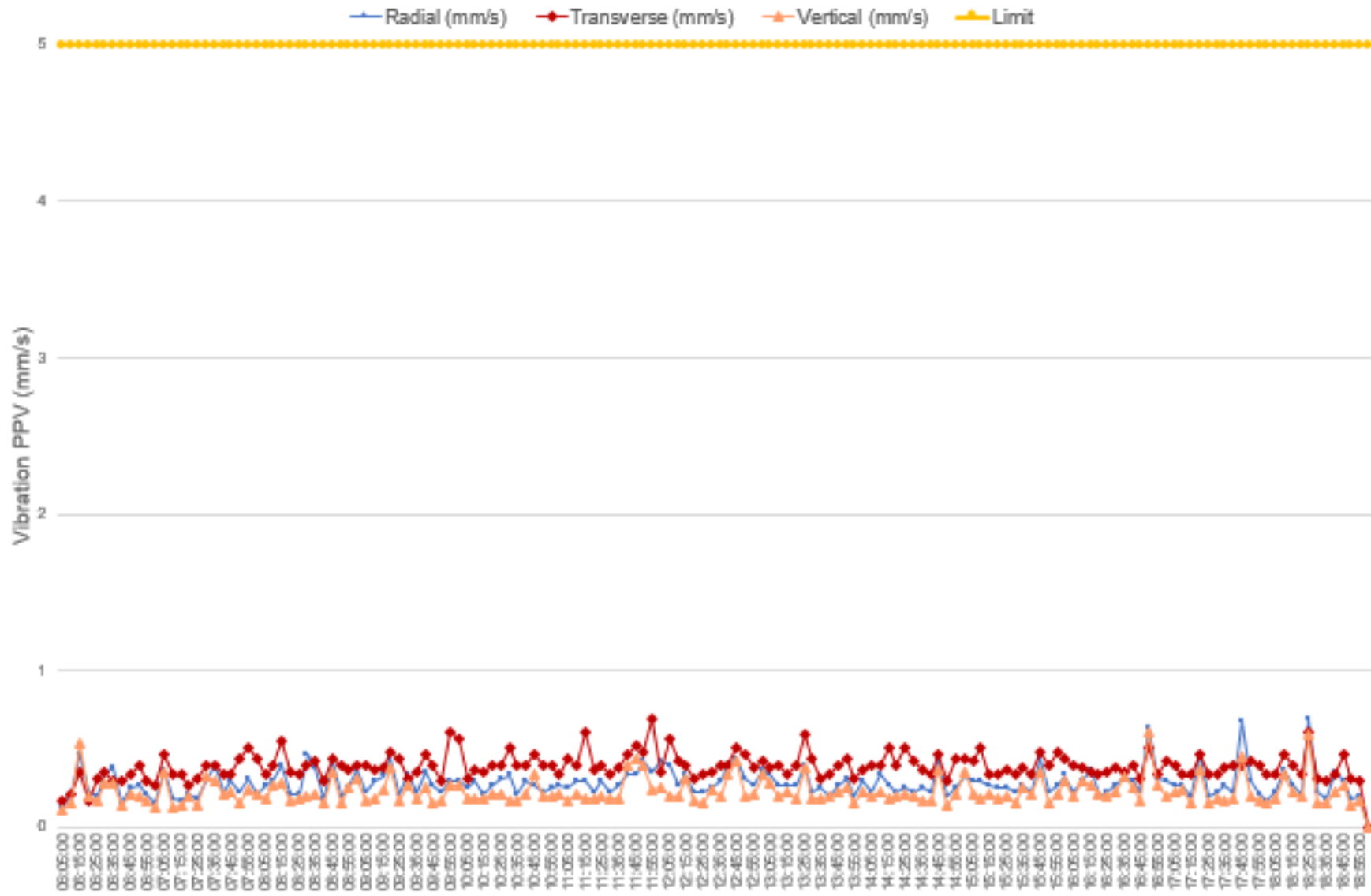
Vibration Monitoring: 18/02/2022

—•— Radial (mm/s) —•— Transverse (mm/s) —•— Vertical (mm/s) —▲— Limit





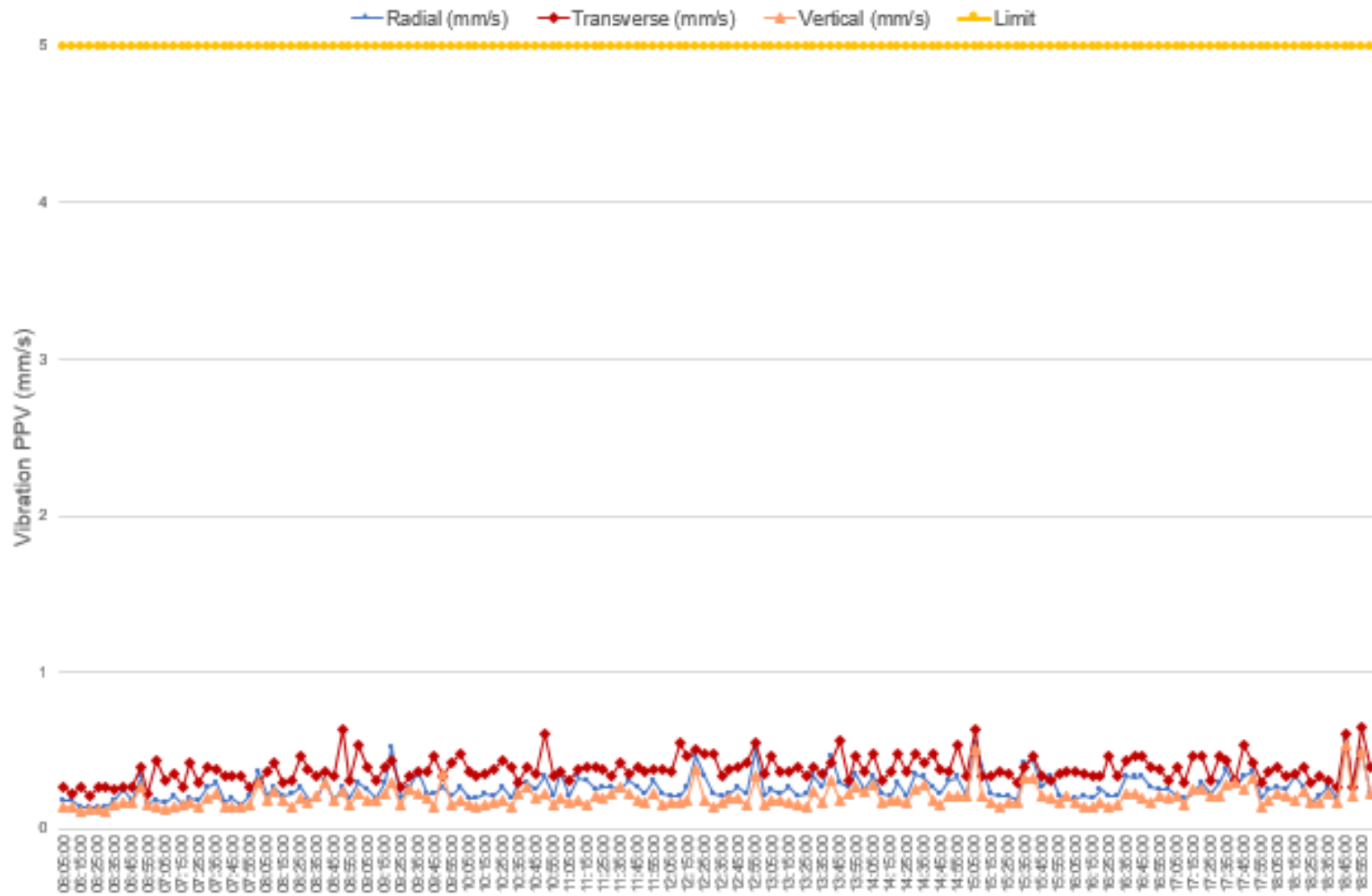
Vibration Monitoring: 19/02/2022



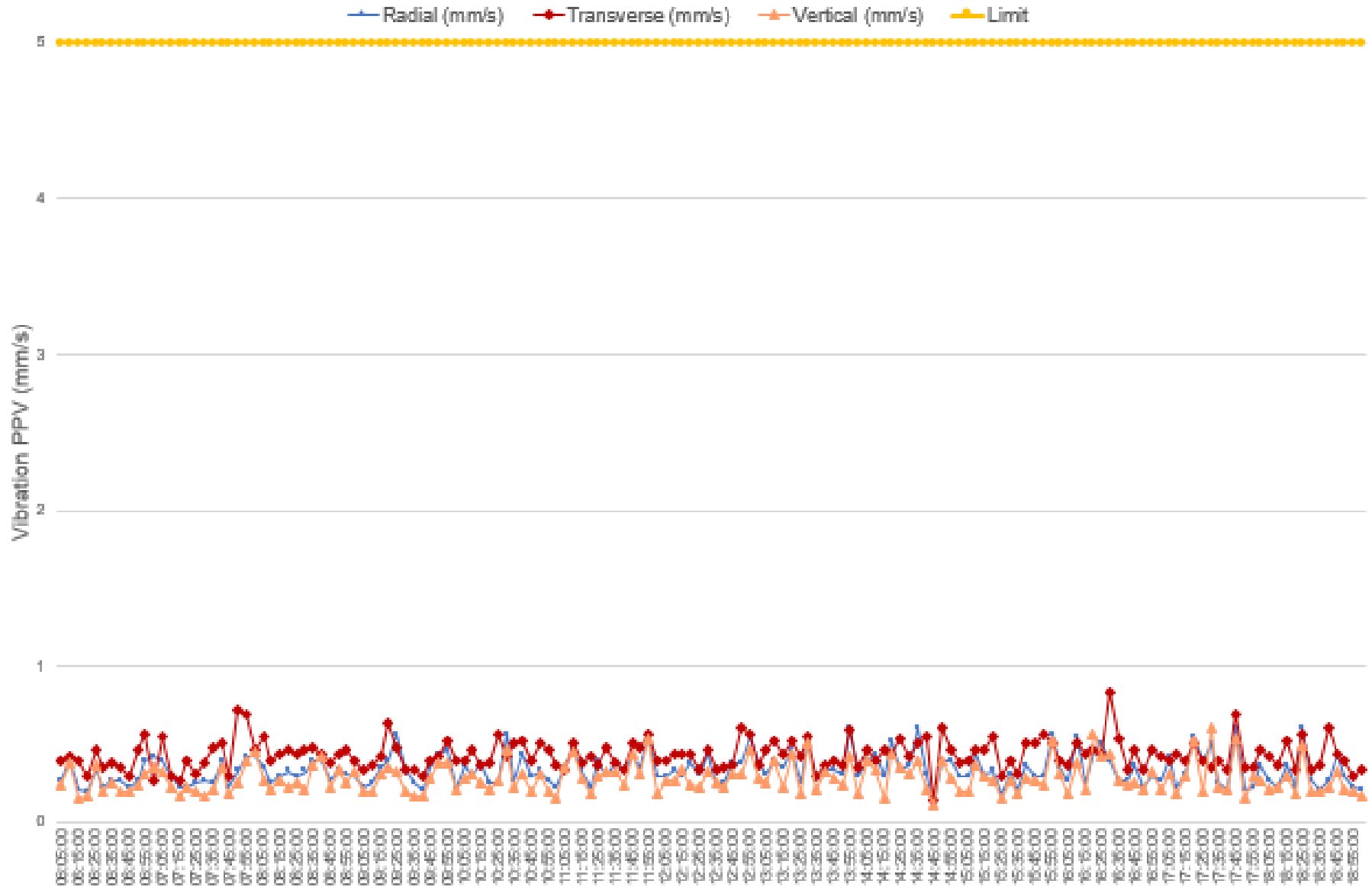


ACOUSTIC LOGIC

Vibration Monitoring: 20/02/2022



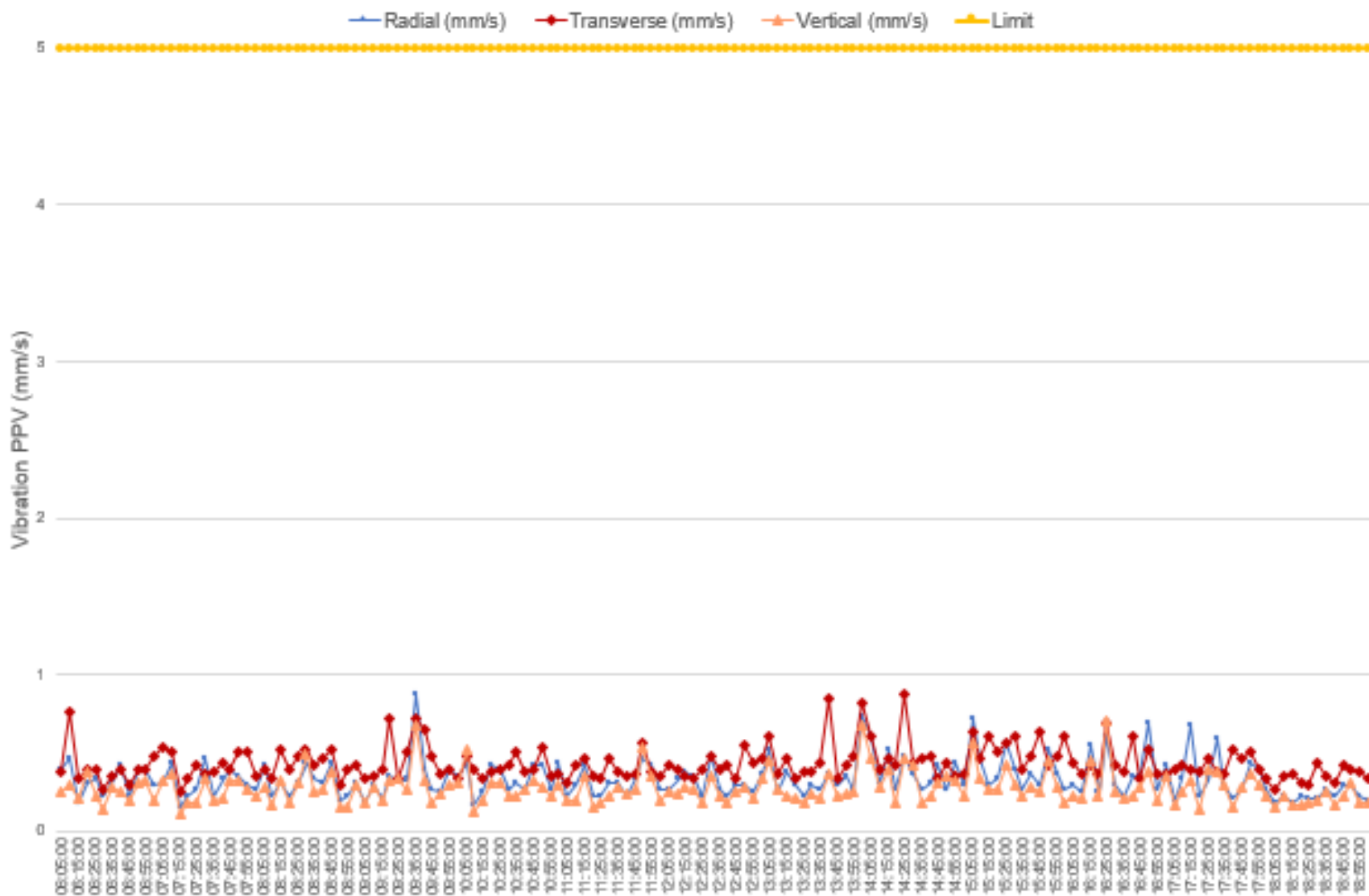
Vibration Monitoring: 21/02/2022

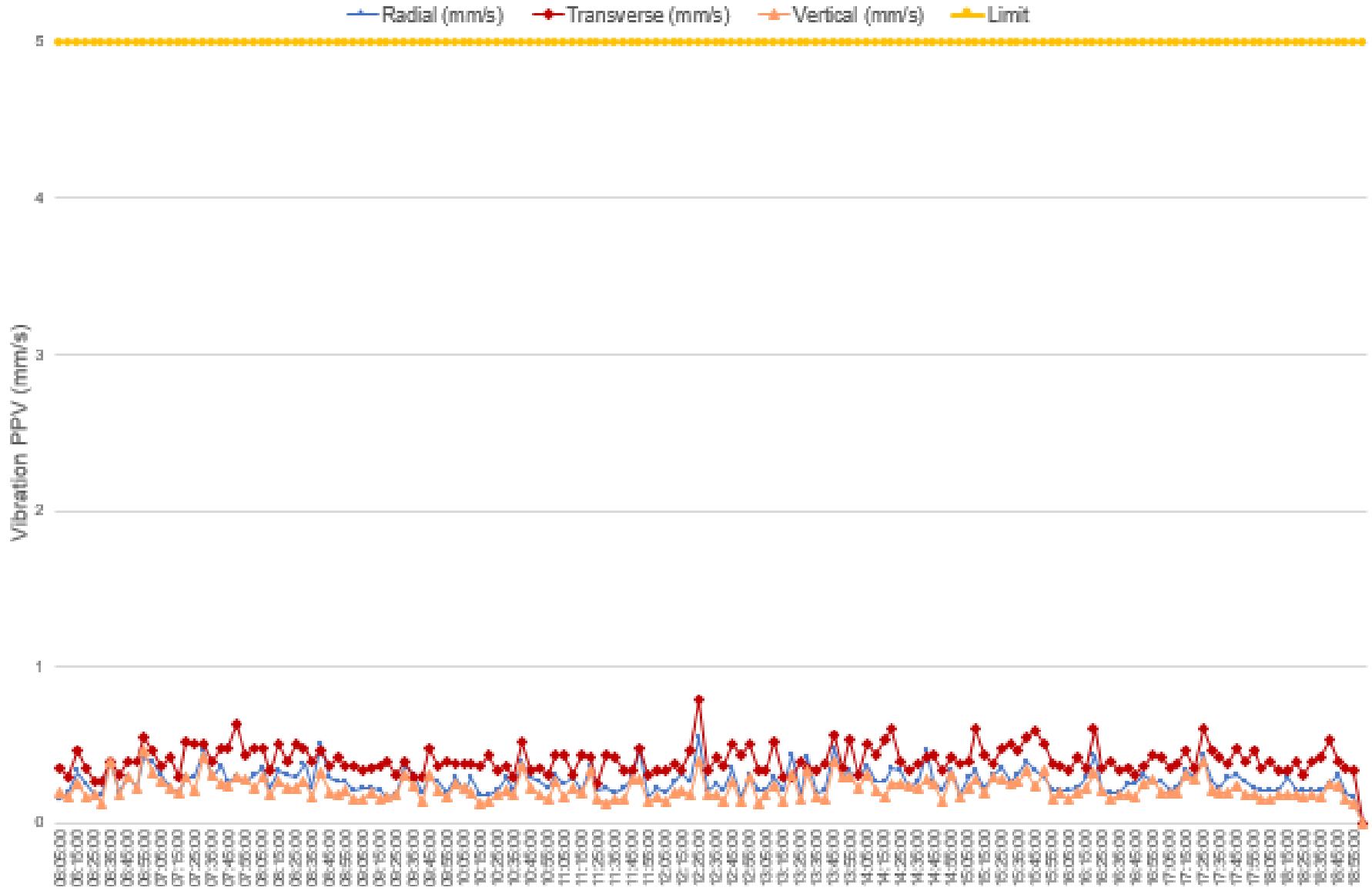




ACOUSTIC LOGIC

Vibration Monitoring: 22/02/2022

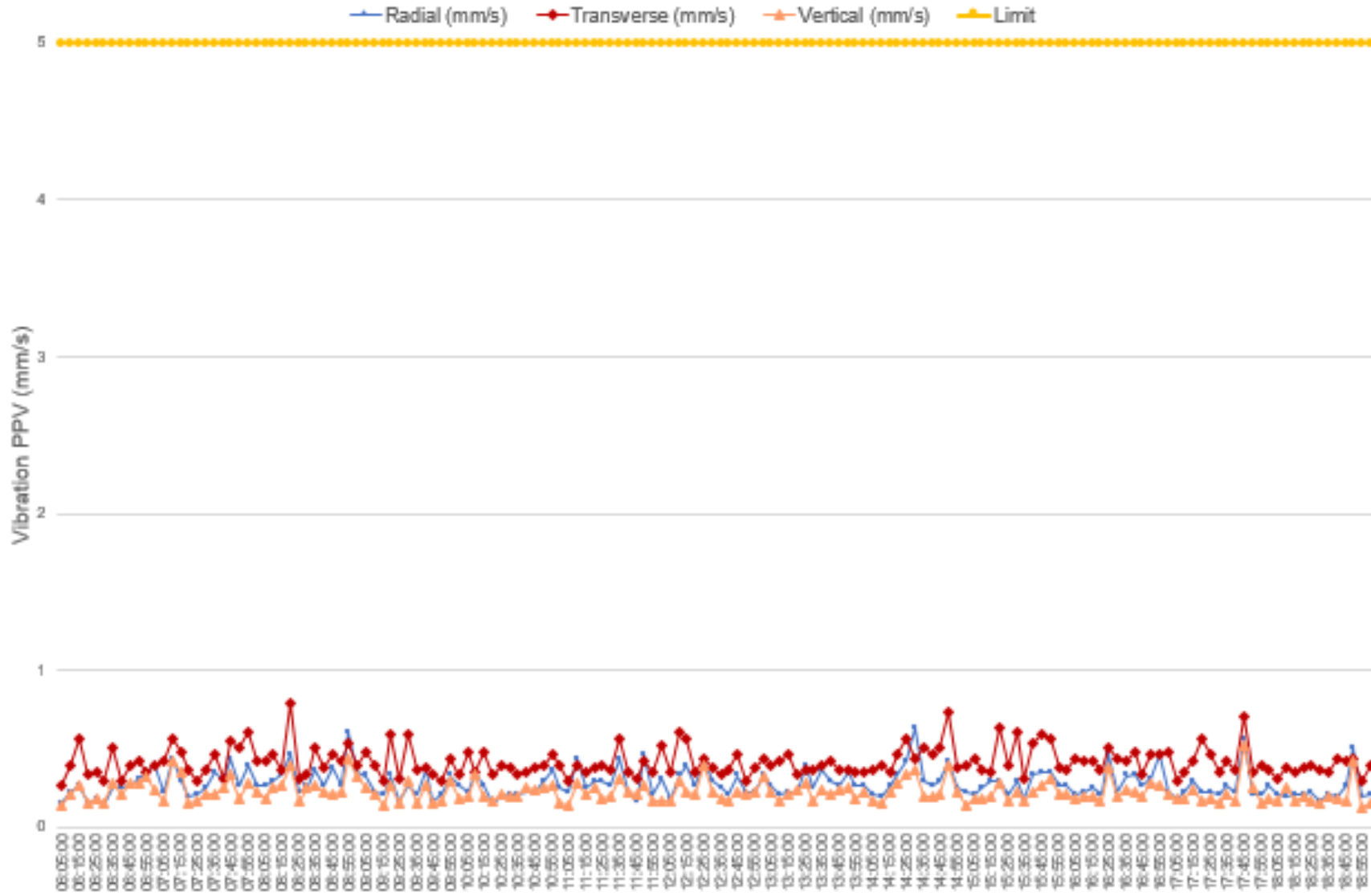


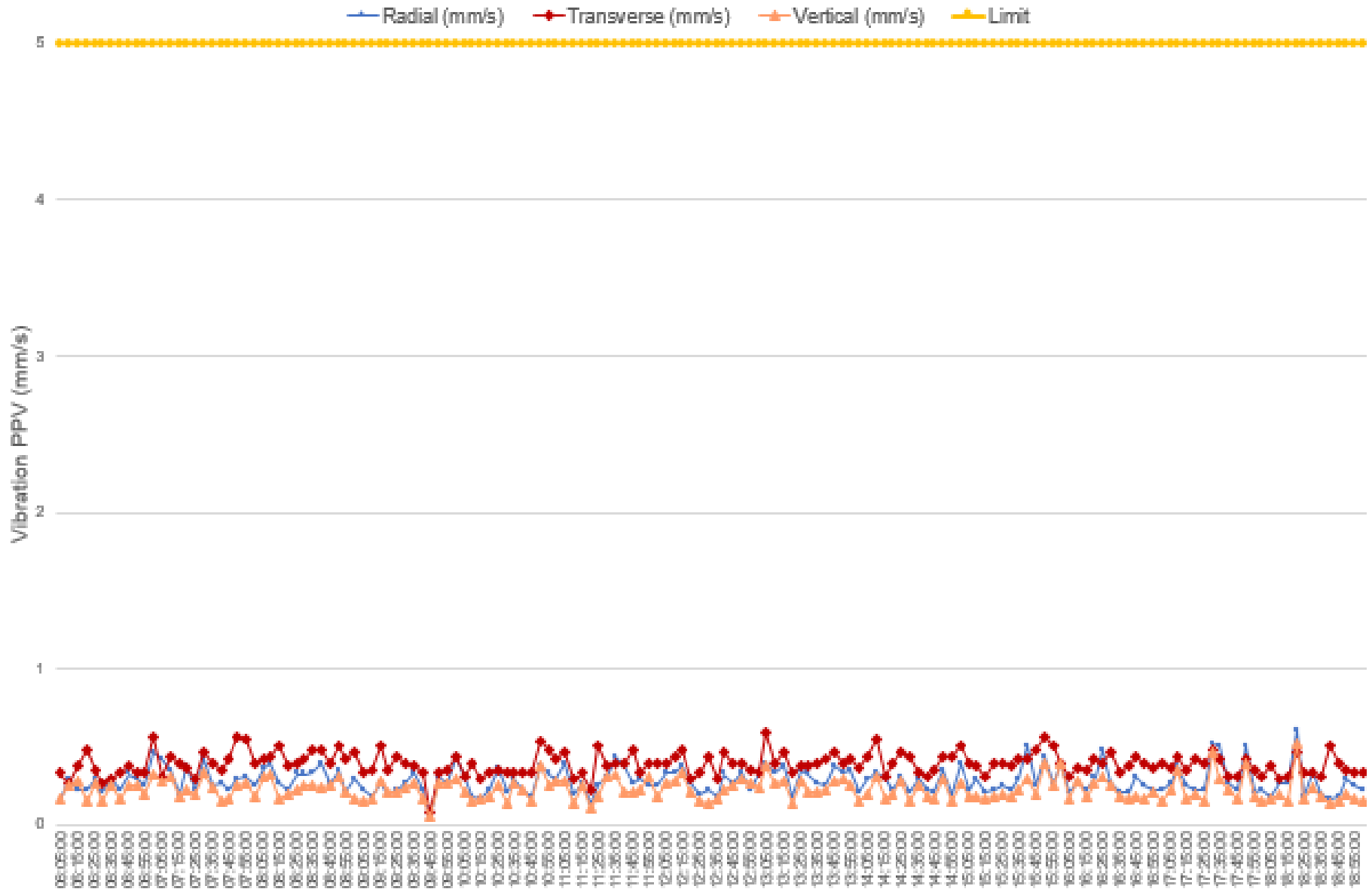




ACOUSTIC LOGIC

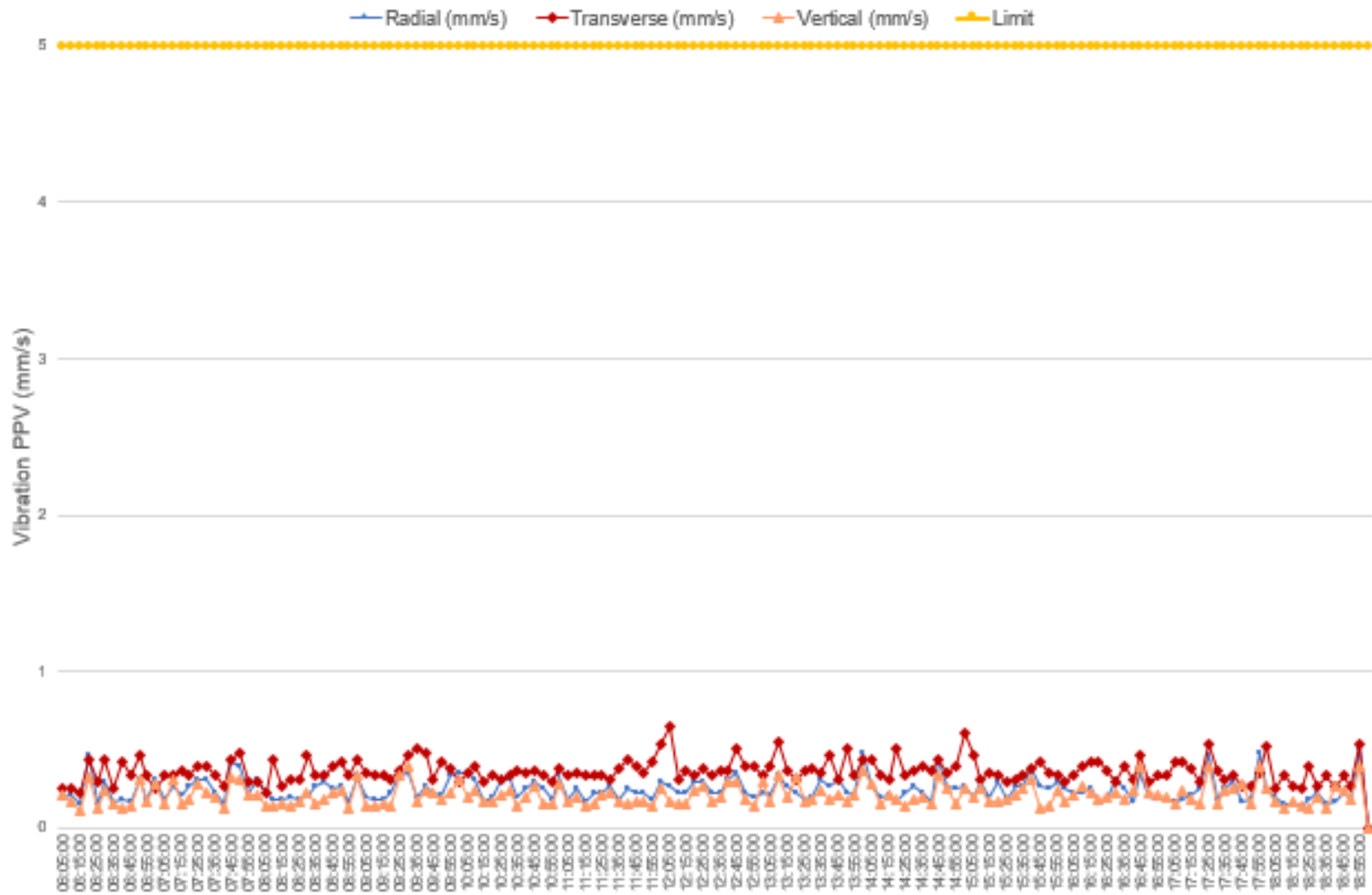
Vibration Monitoring: 24/02/2022



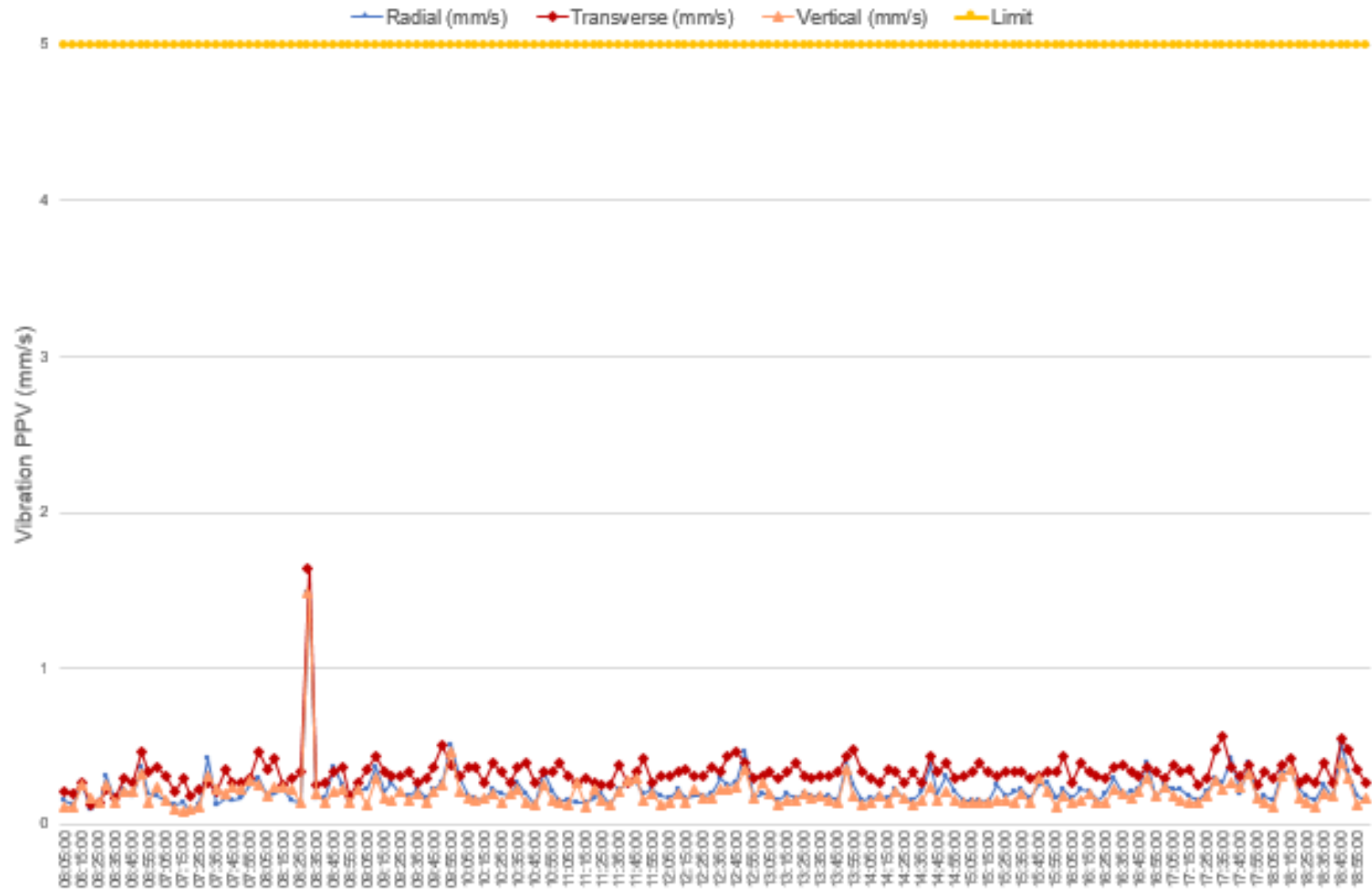




Vibration Monitoring: 26/02/2022



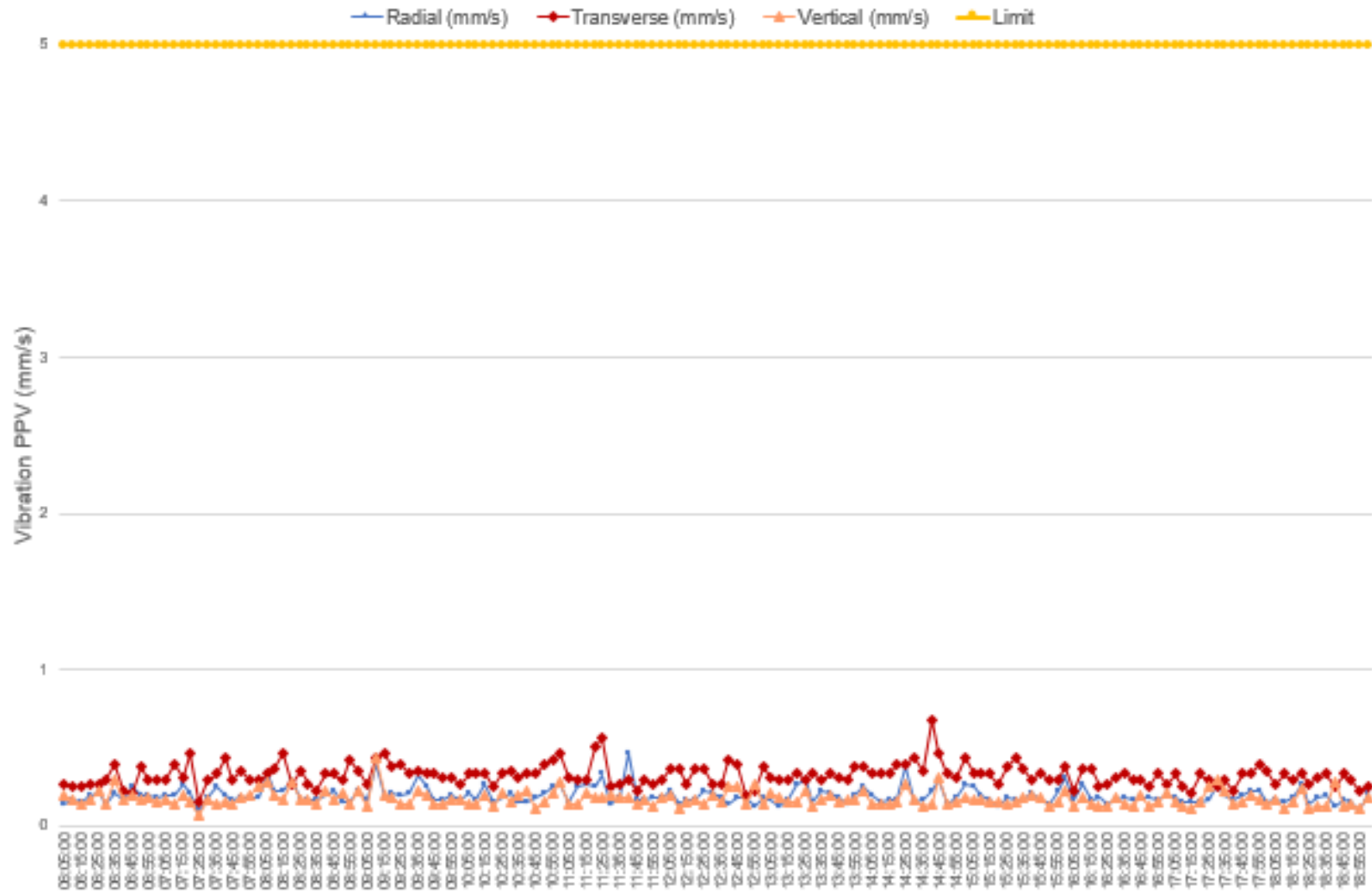
Vibration Monitoring: 27/02/2022





ACOUSTIC LOGIC

Vibration Monitoring: 28/02/2022



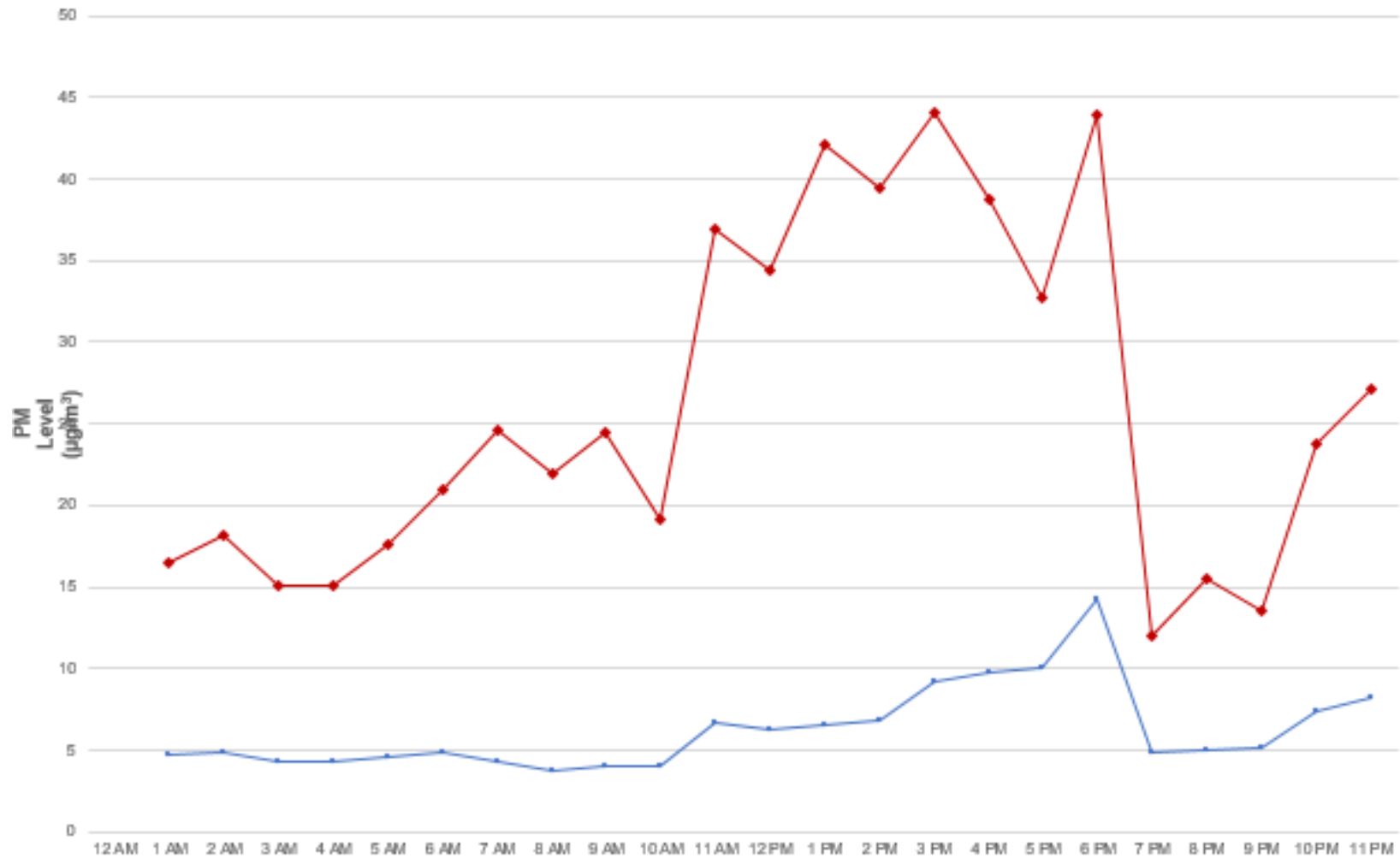
APPENDIX 3 – DUST MONITORING RESULTS



ACOUSTIC LOGIC

Dust Monitoring: 01/02/2022

— Average of pm2.5 — Average of pm10

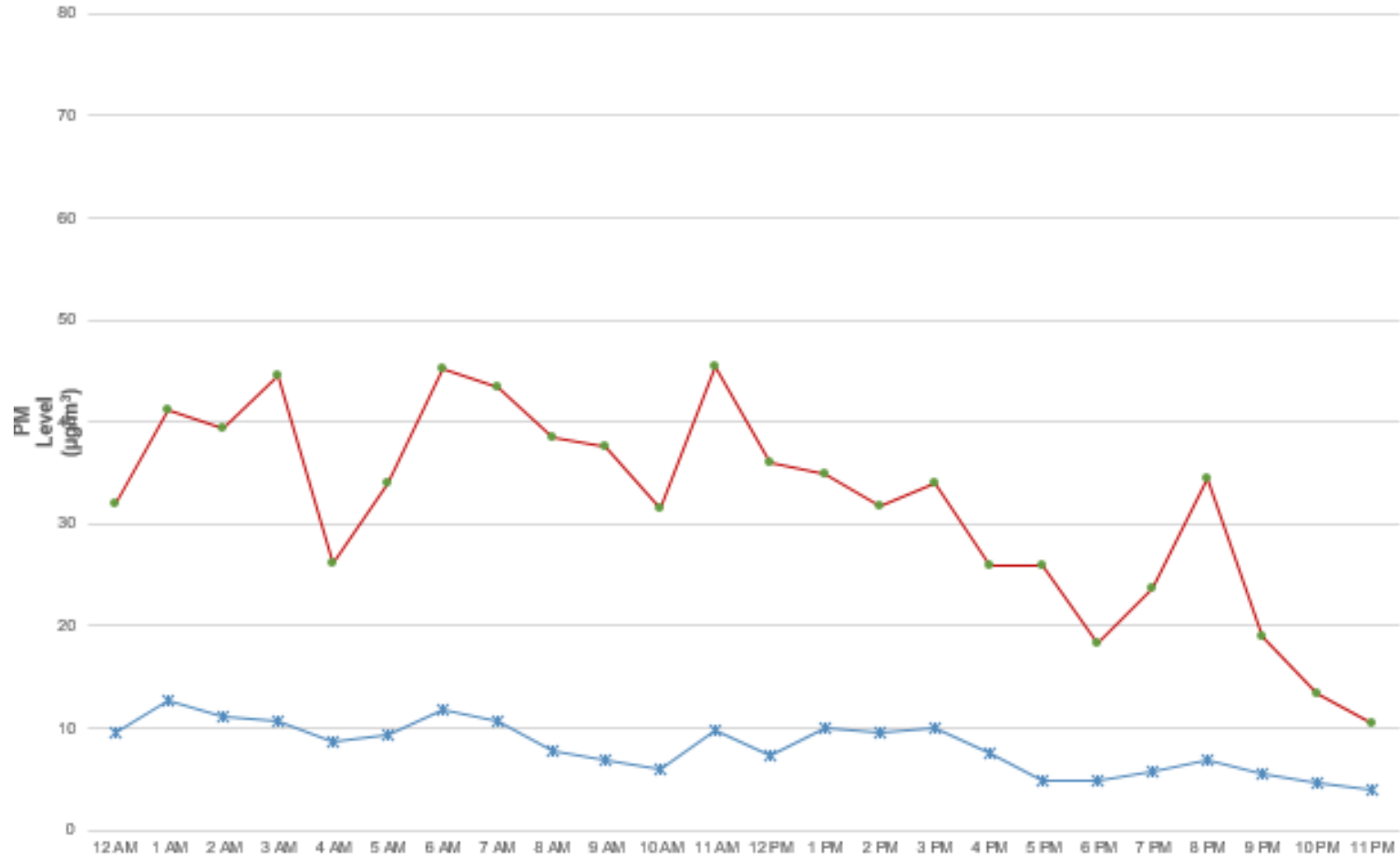




ACOUSTIC LOGIC

Dust Monitoring: 02/02/2022

* Average of pm2_5mc * Average of pm10mc

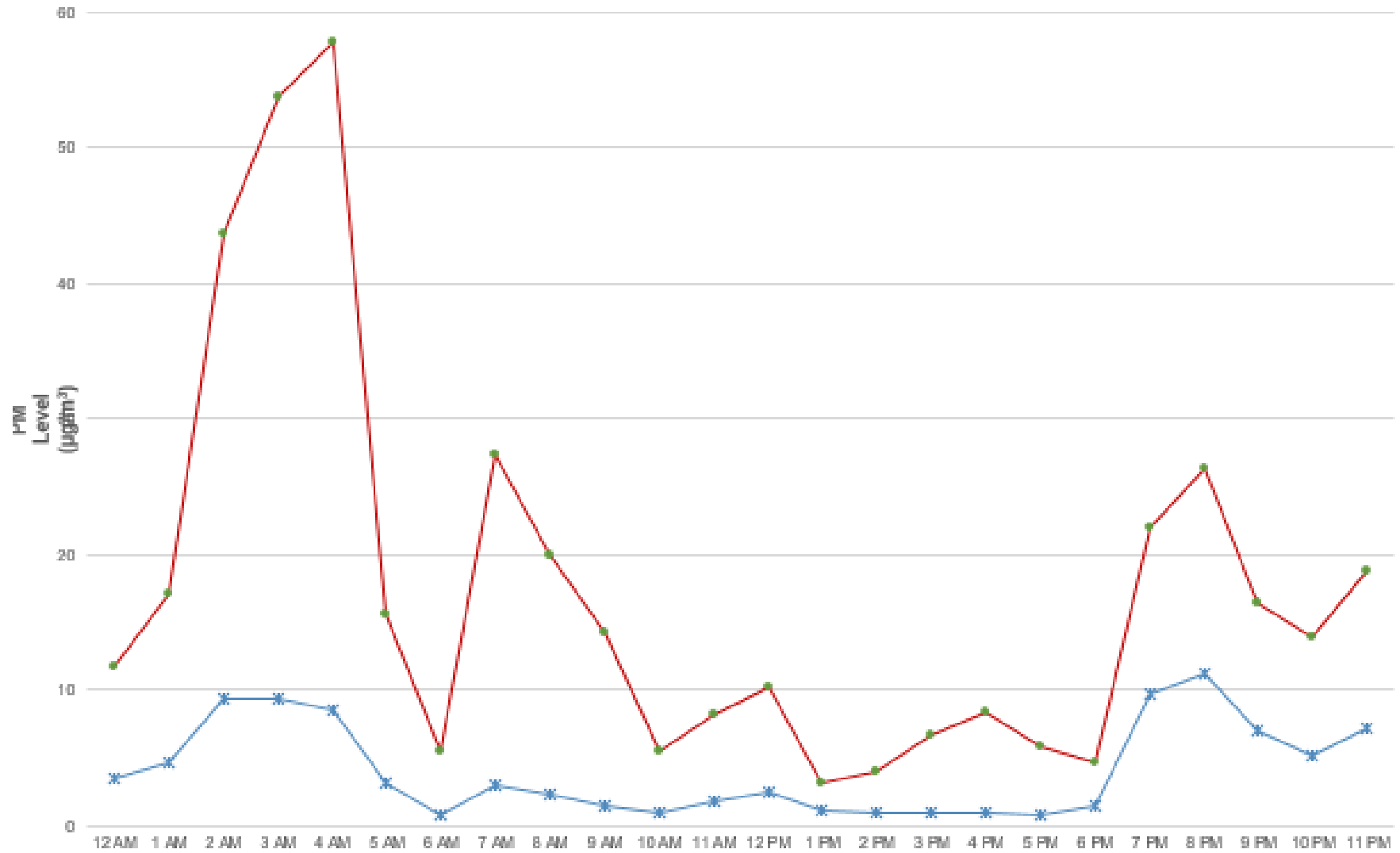




ACOUSTIC LOGIC

Dust Monitoring 03/02/2022

* Average of pm2_5mc * Average of pm10mc

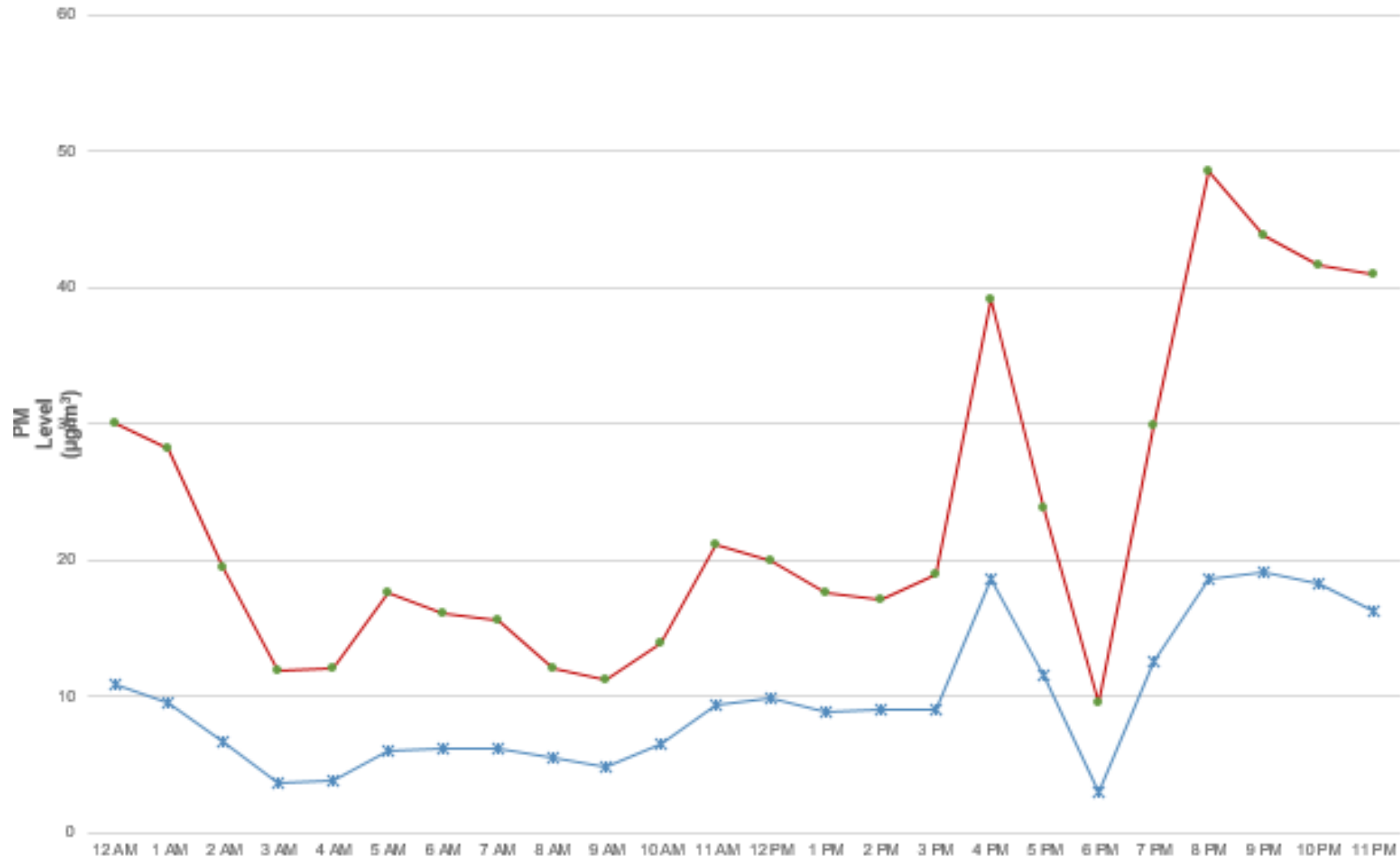




ACOUSTIC LOGIC

Dust Monitoring: 04/02/2022

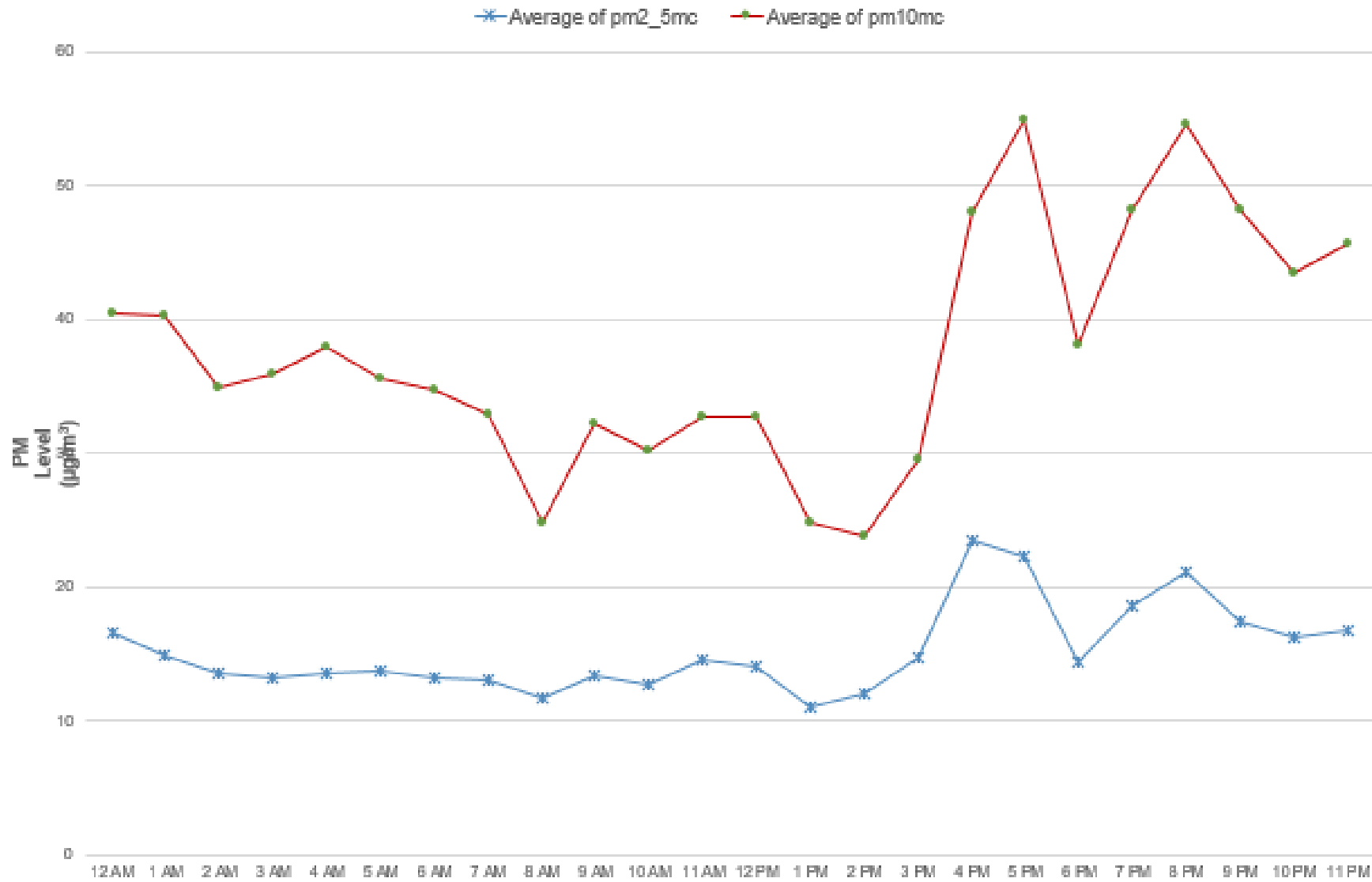
* Average of pm2_5mc * Average of pm10mc





ACOUSTIC LOGIC

Dust Monitoring: 05/02/2022

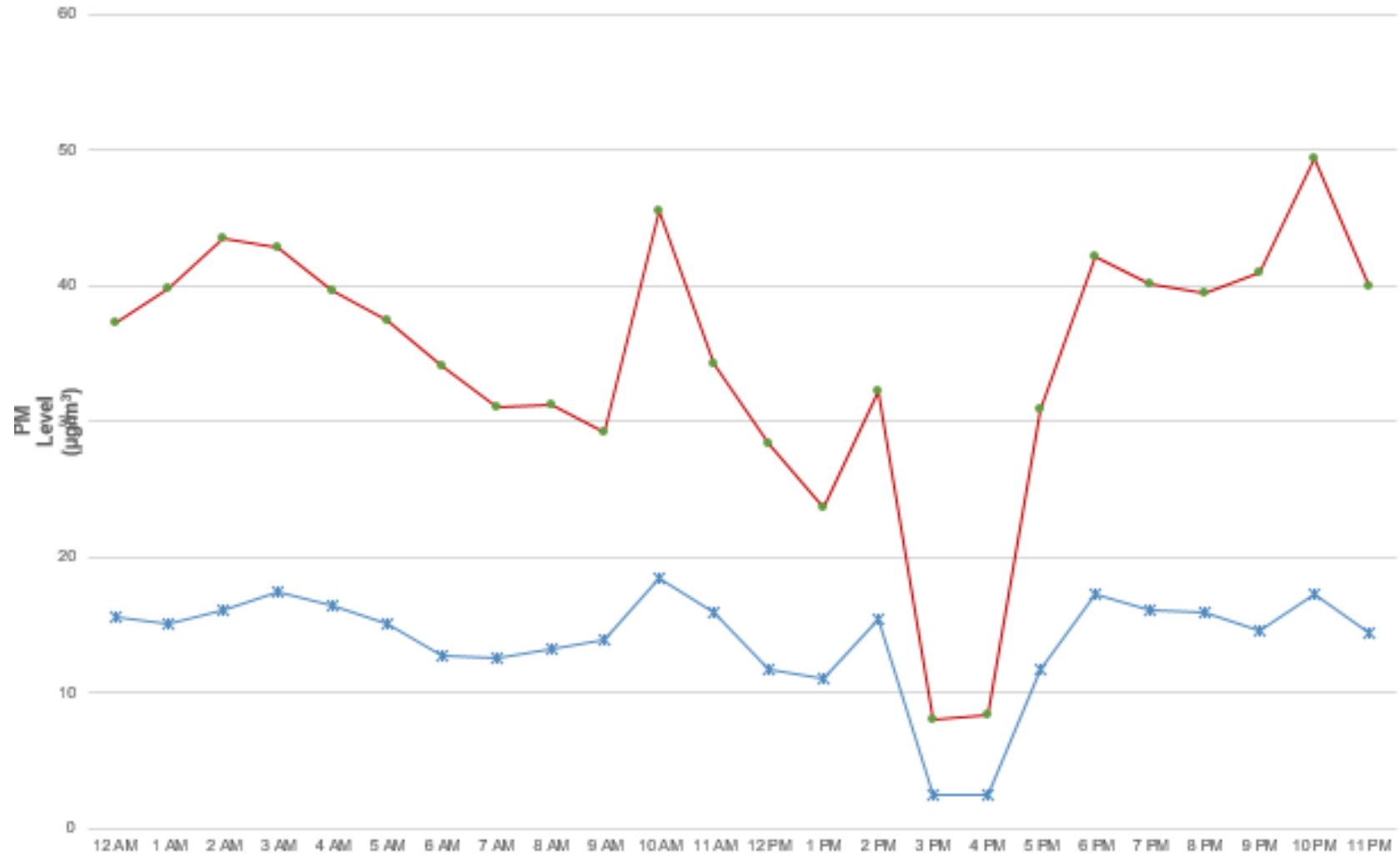




ACOUSTIC LOGIC

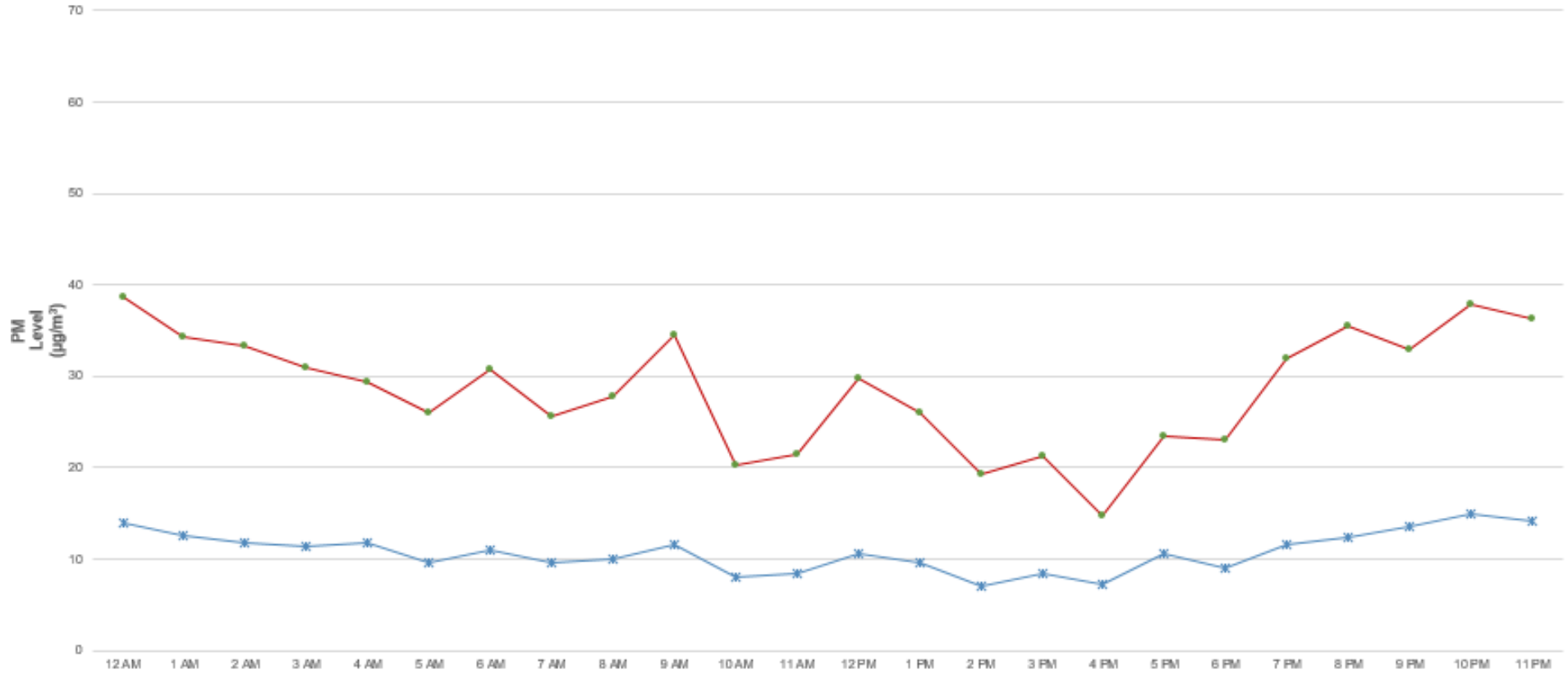
Dust Monitoring: 06/02/2022

* Average of pm2_5mc * Average of pm10mc



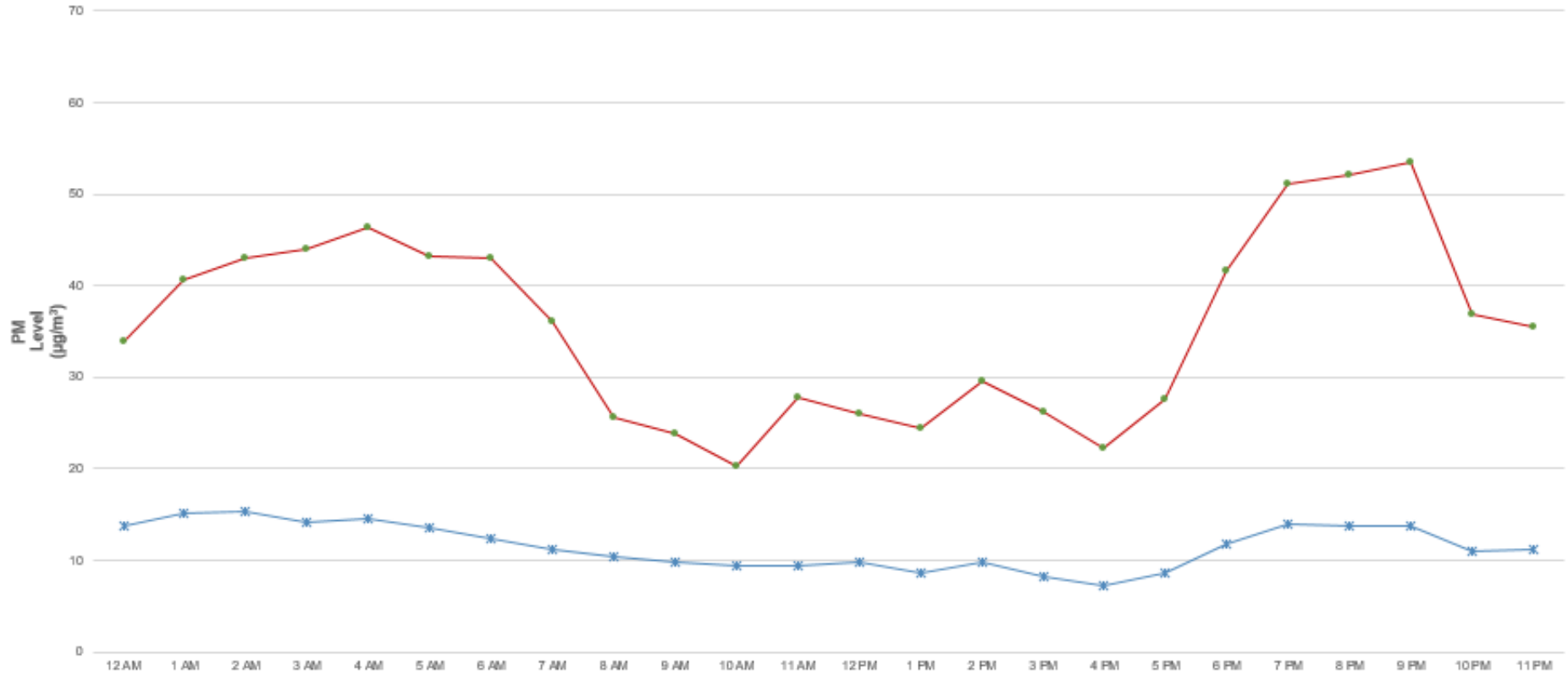
Dust Monitoring: 07/02/2022

Average of pm2_5mc Average of pm10mc



Dust Monitoring: 08/02/2022

Average of pm2_5mc Average of pm10mc

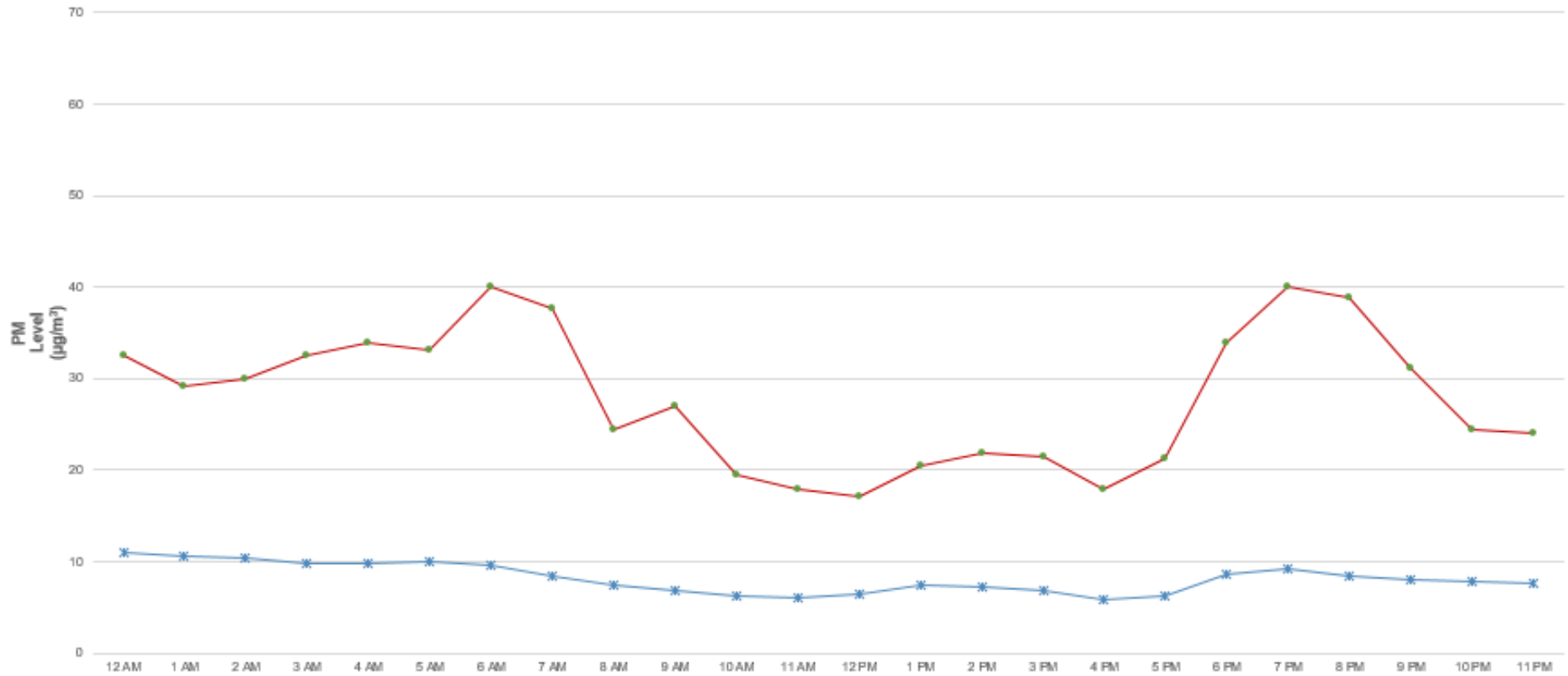




ACOUSTIC LOGIC

Dust Monitoring: 09/02/2022

Average of pm2_5mc Average of pm10mc

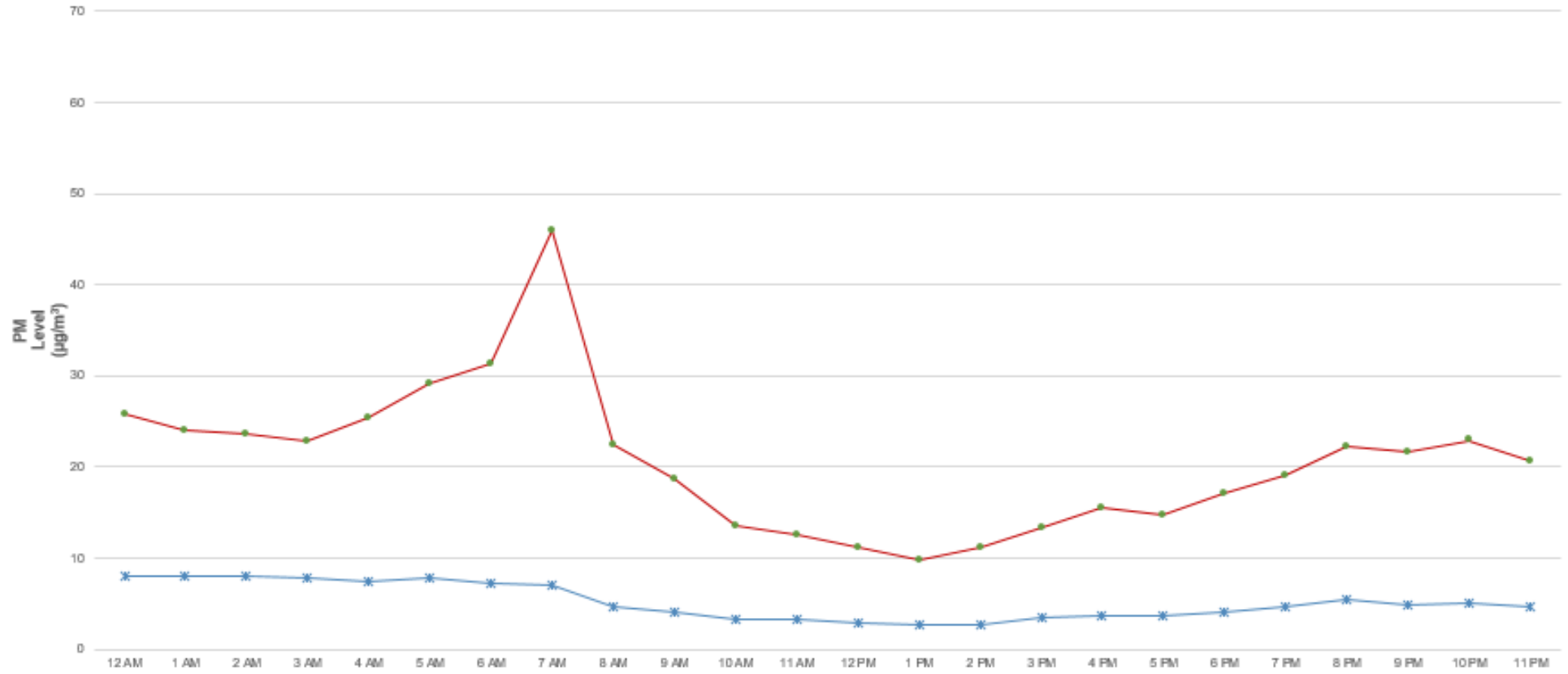




ACOUSTIC LOGIC

Dust Monitoring: 10/02/2022

Average of pm2_5mc Average of pm10mc

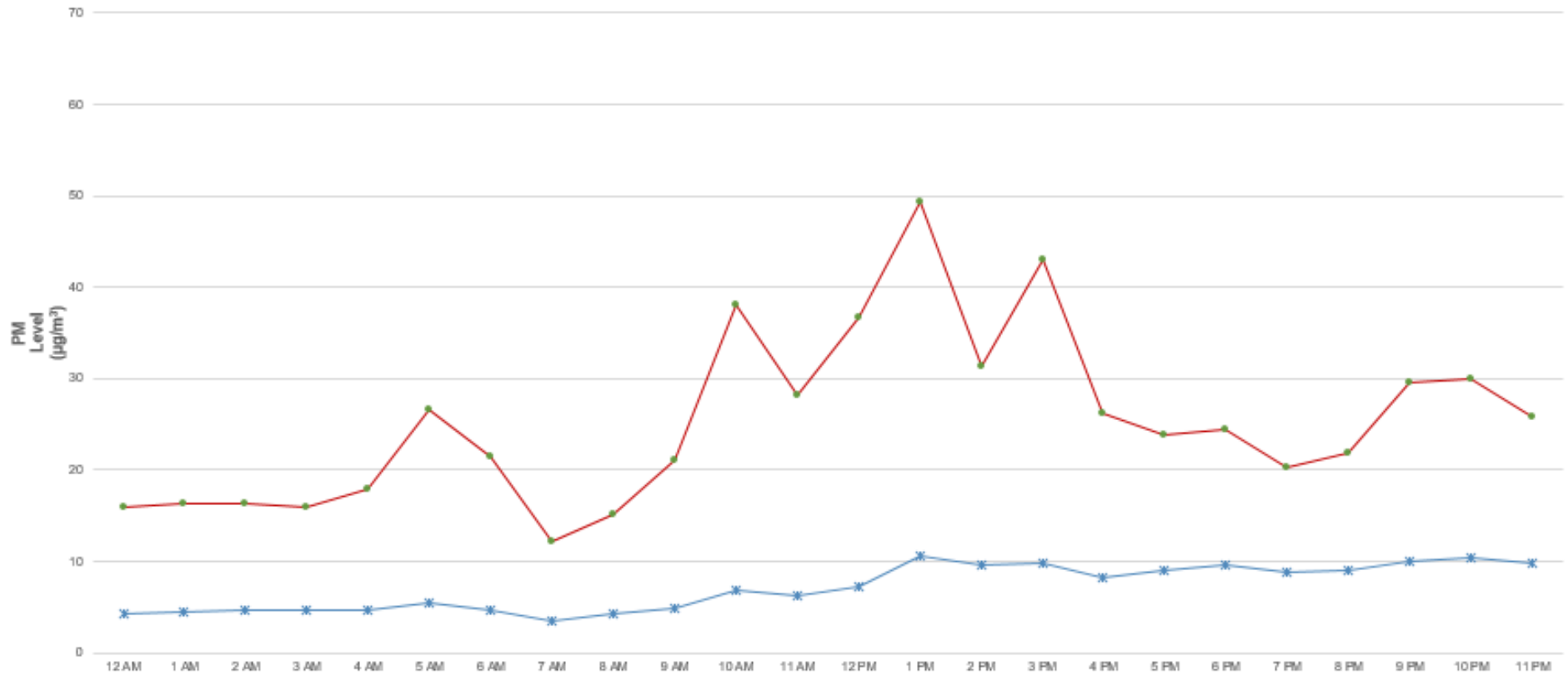




ACOUSTIC LOGIC

Dust Monitoring: 11/02/2022

Average of pm2_5mc Average of pm10mc

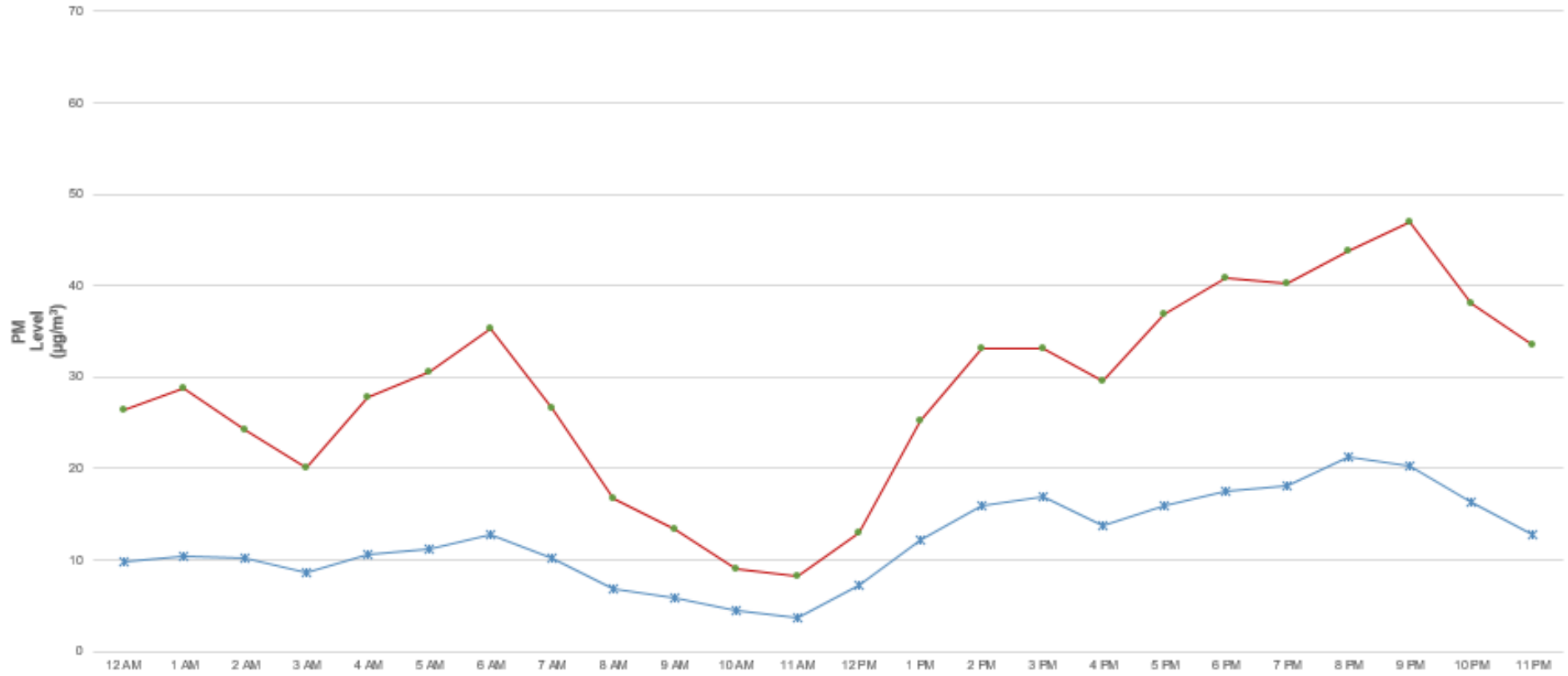




ACOUSTIC LOGIC

Dust Monitoring: 12/02/2022

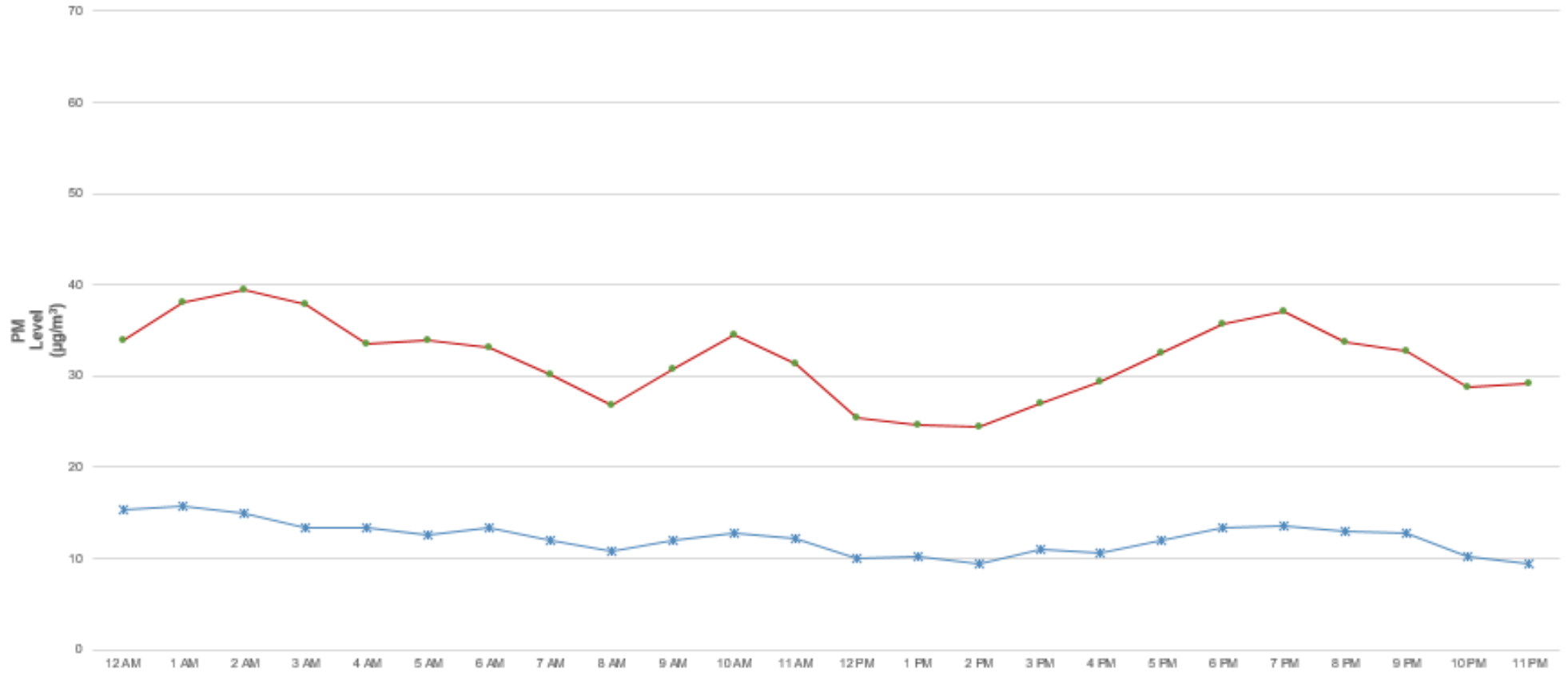
Average of pm2_5mc Average of pm10mc





Dust Monitoring: 13/02/2022

Average of pm2_5mc Average of pm10mc

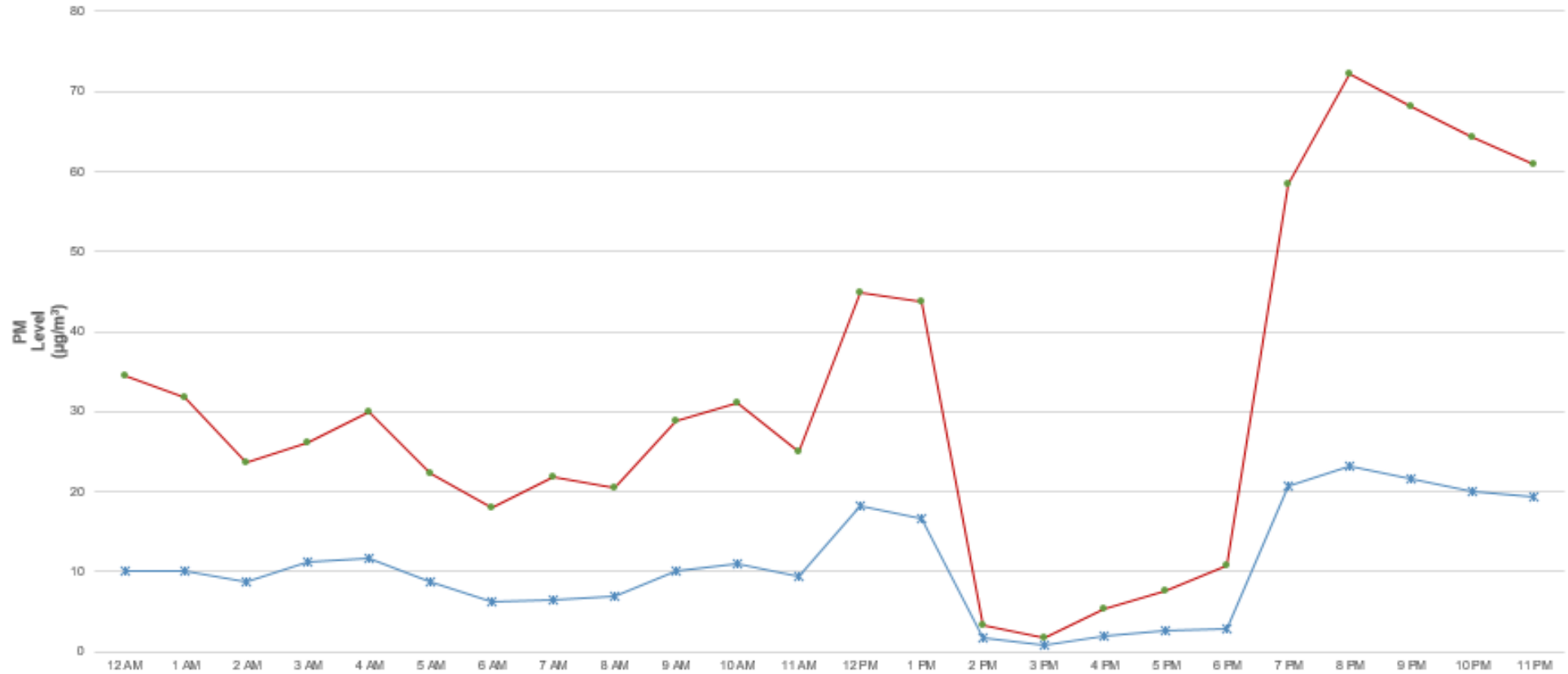




ACOUSTIC LOGIC

Dust Monitoring: 14/02/2022

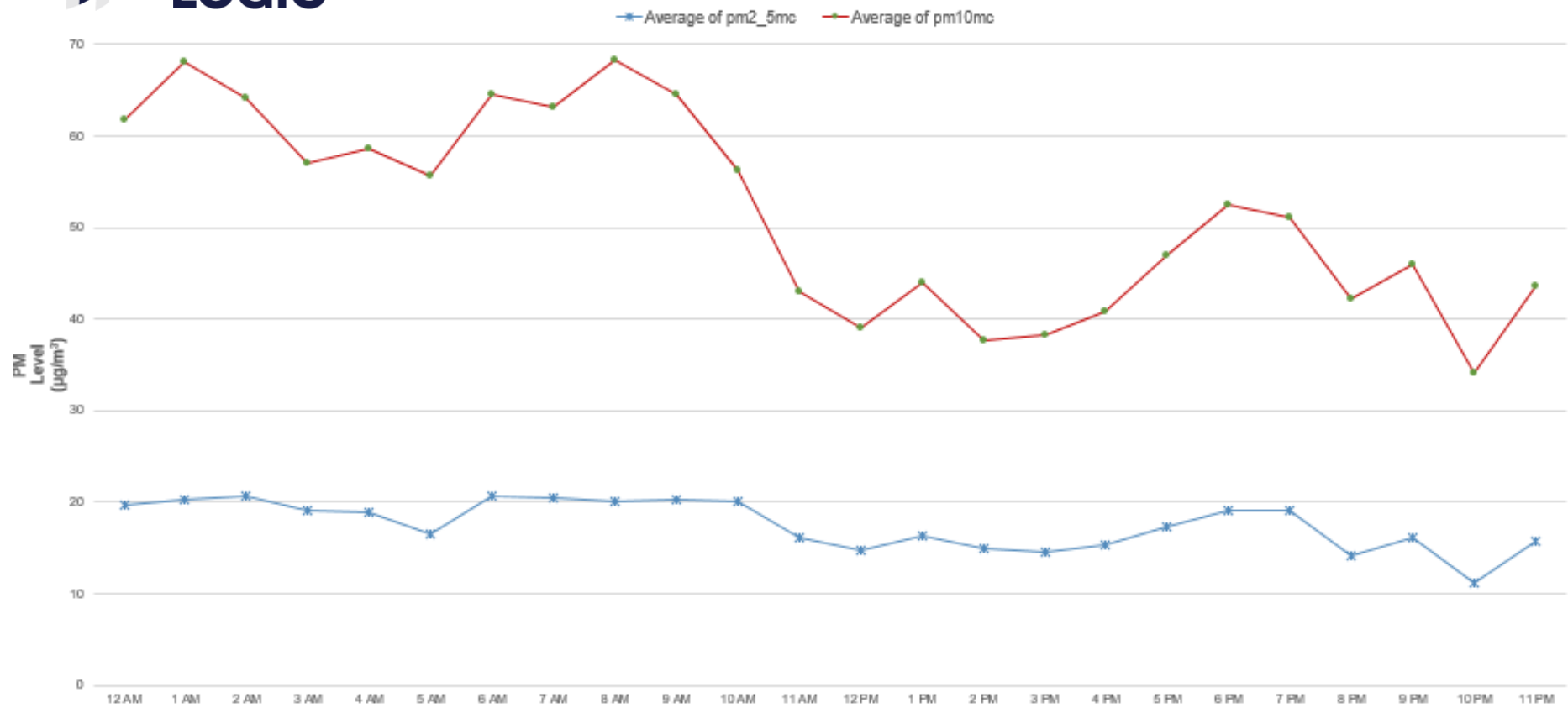
—*— Average of pm2_5mc —*— Average of pm10mc





ACOUSTIC LOGIC

Dust Monitoring: 15/02/2022

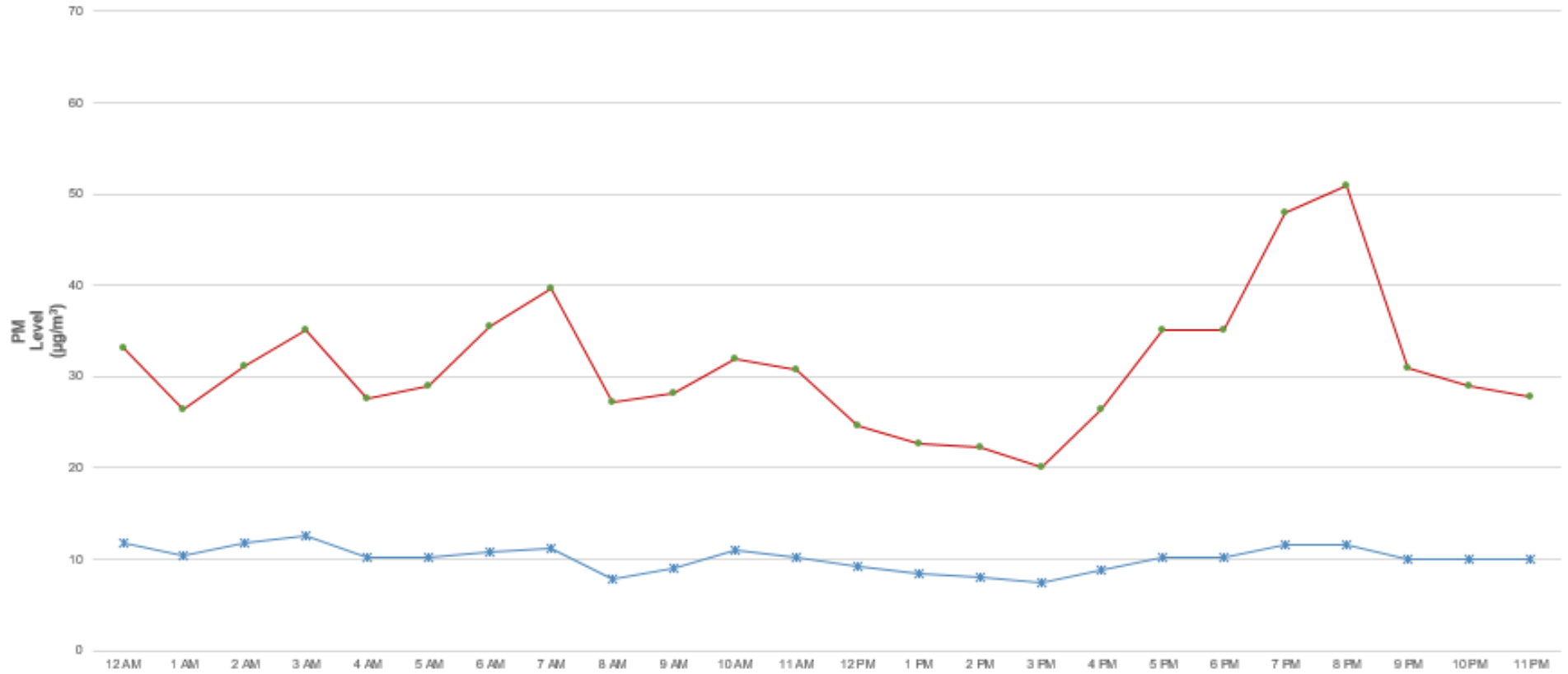




ACOUSTIC LOGIC

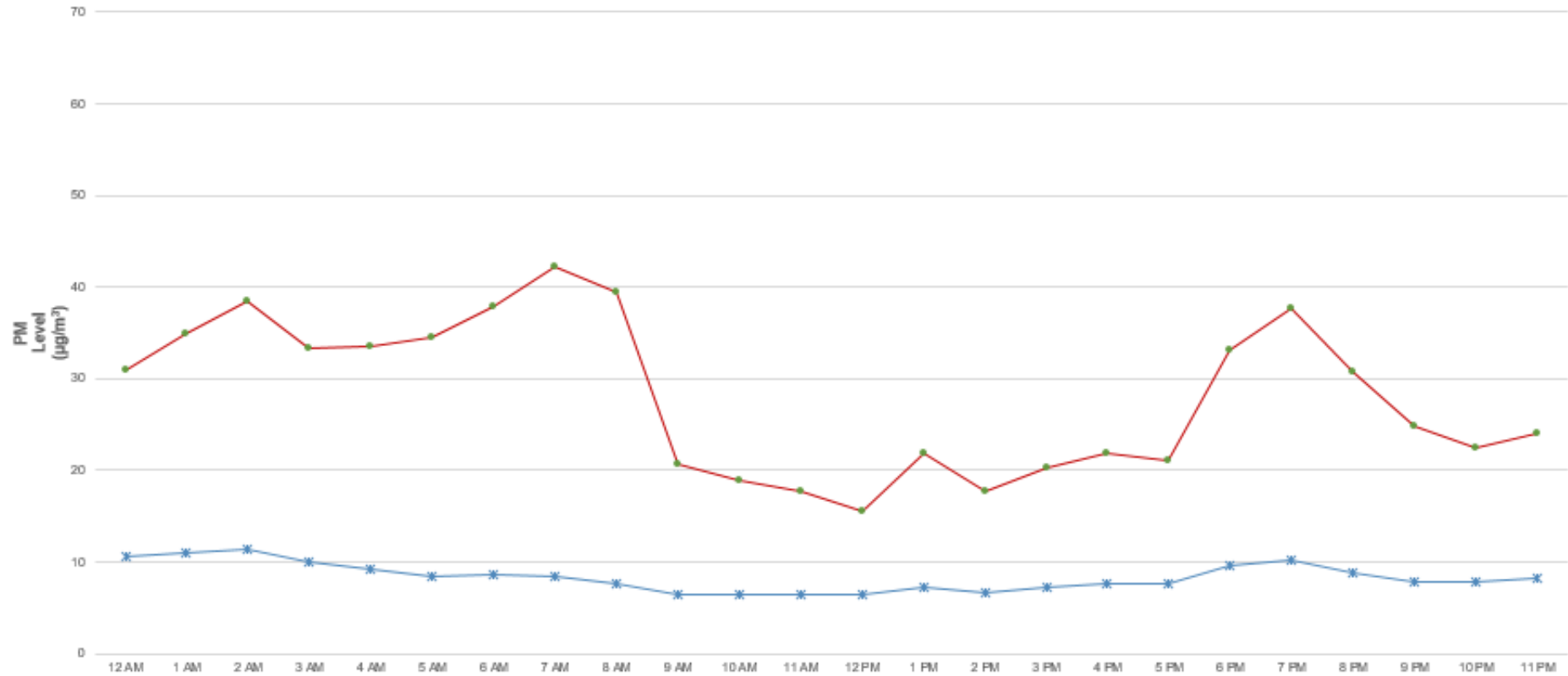
Dust Monitoring: 16/02/2022

Average of pm2_5mc Average of pm10mc



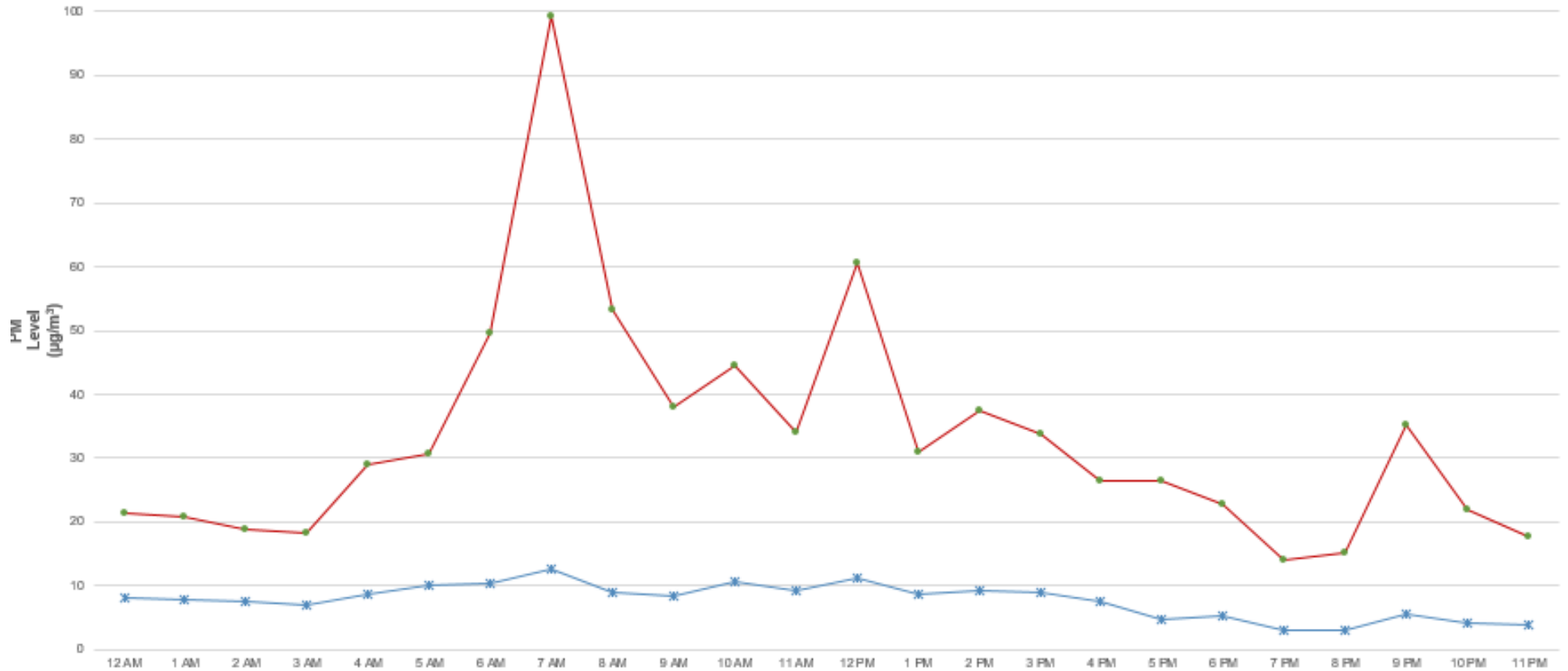
Dust Monitoring: 17/05/2022

—*— Average of pm2_5mc —*— Average of pm10mc



Dust Monitoring: 18/02/2022

—*— Average of pm2_5mc — Average of pm10mc

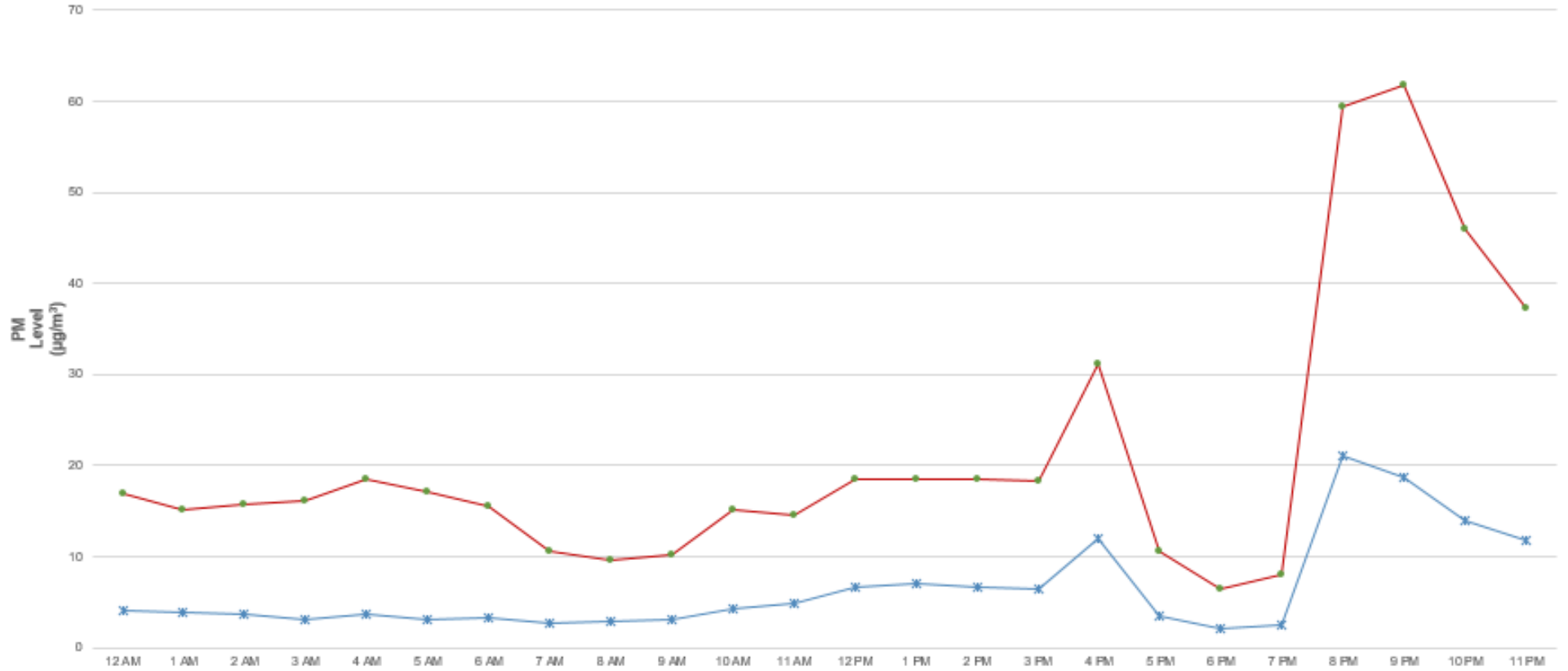




ACOUSTIC LOGIC

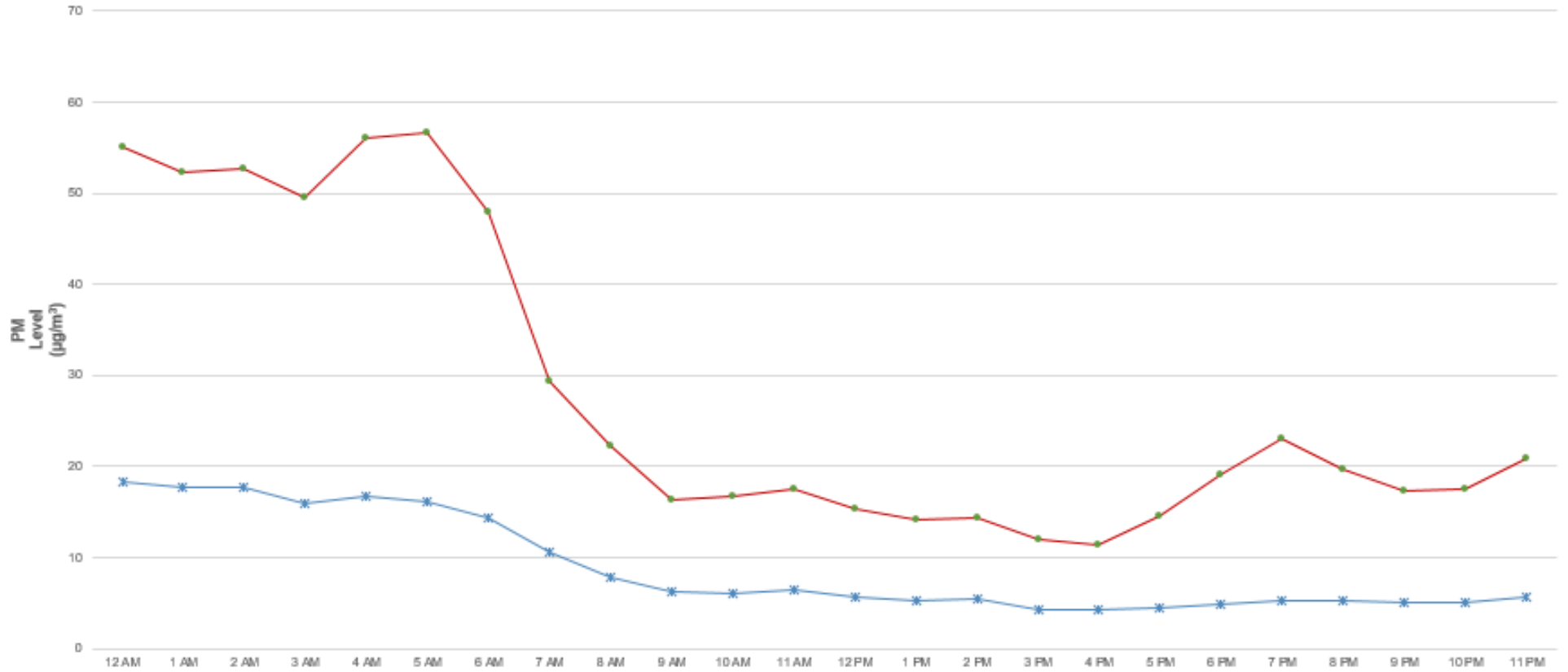
Dust Monitoring: 19/02/2022

Average of pm2_5mc Average of pm10mc



Dust Monitoring: 20/02/2022

Average of pm2_5mc Average of pm10mc

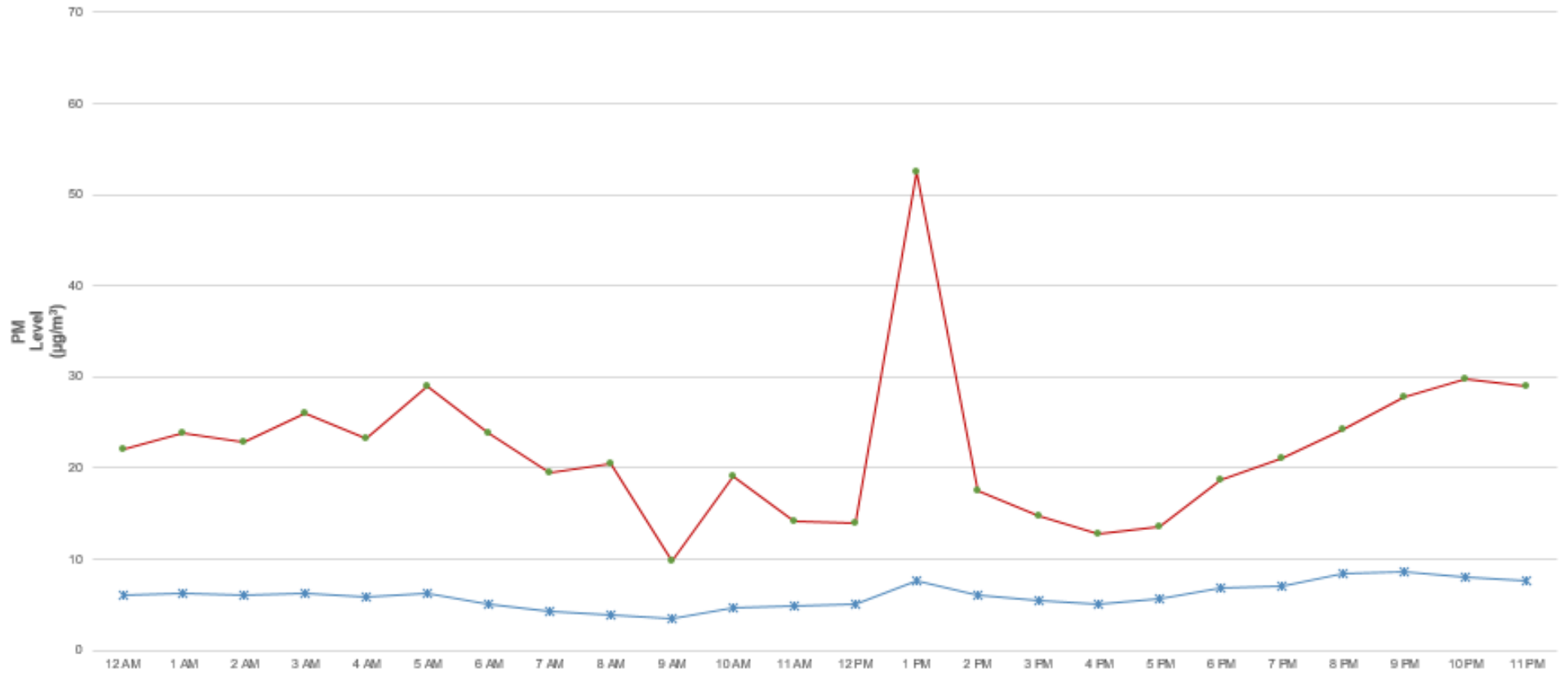




ACOUSTIC LOGIC

Dust Monitoring: 20/02/2022

Average of pm2_5mc Average of pm10mc

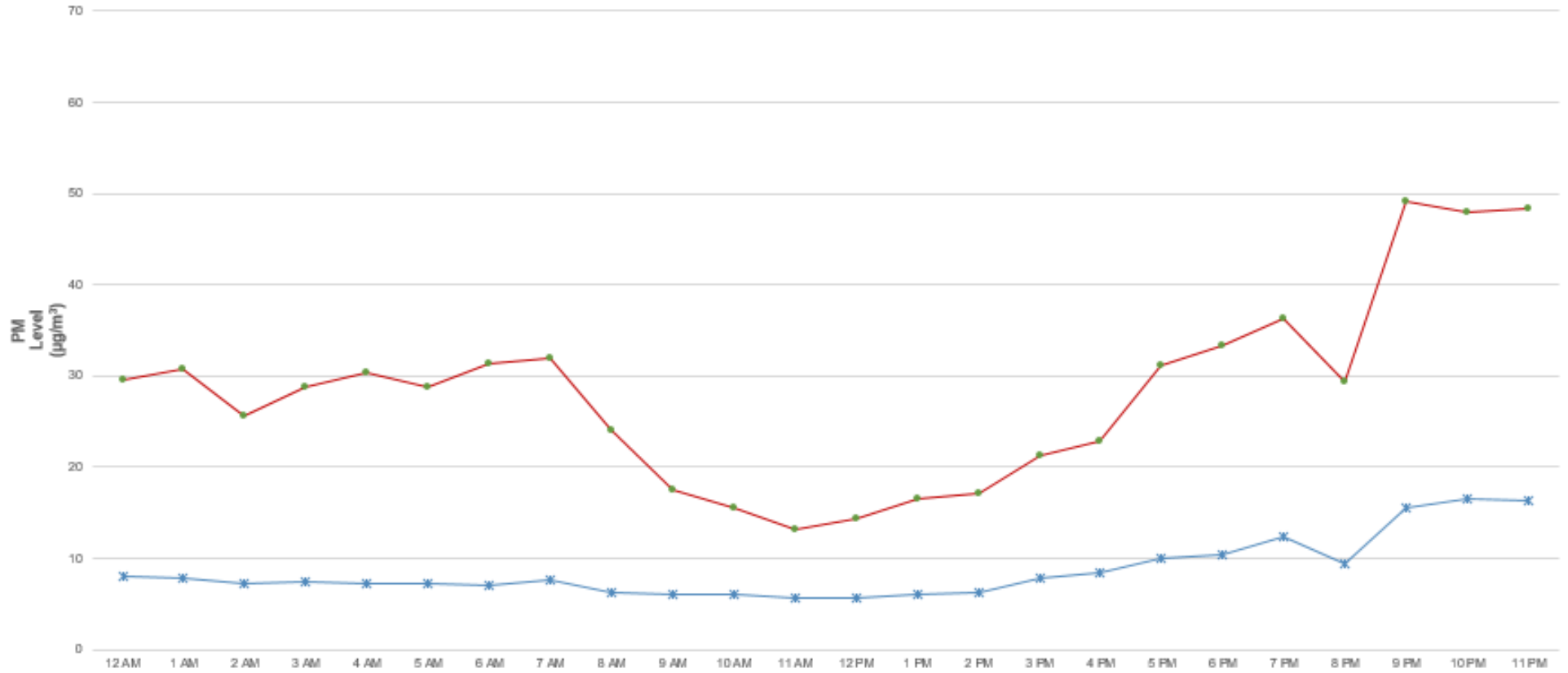




ACOUSTIC LOGIC

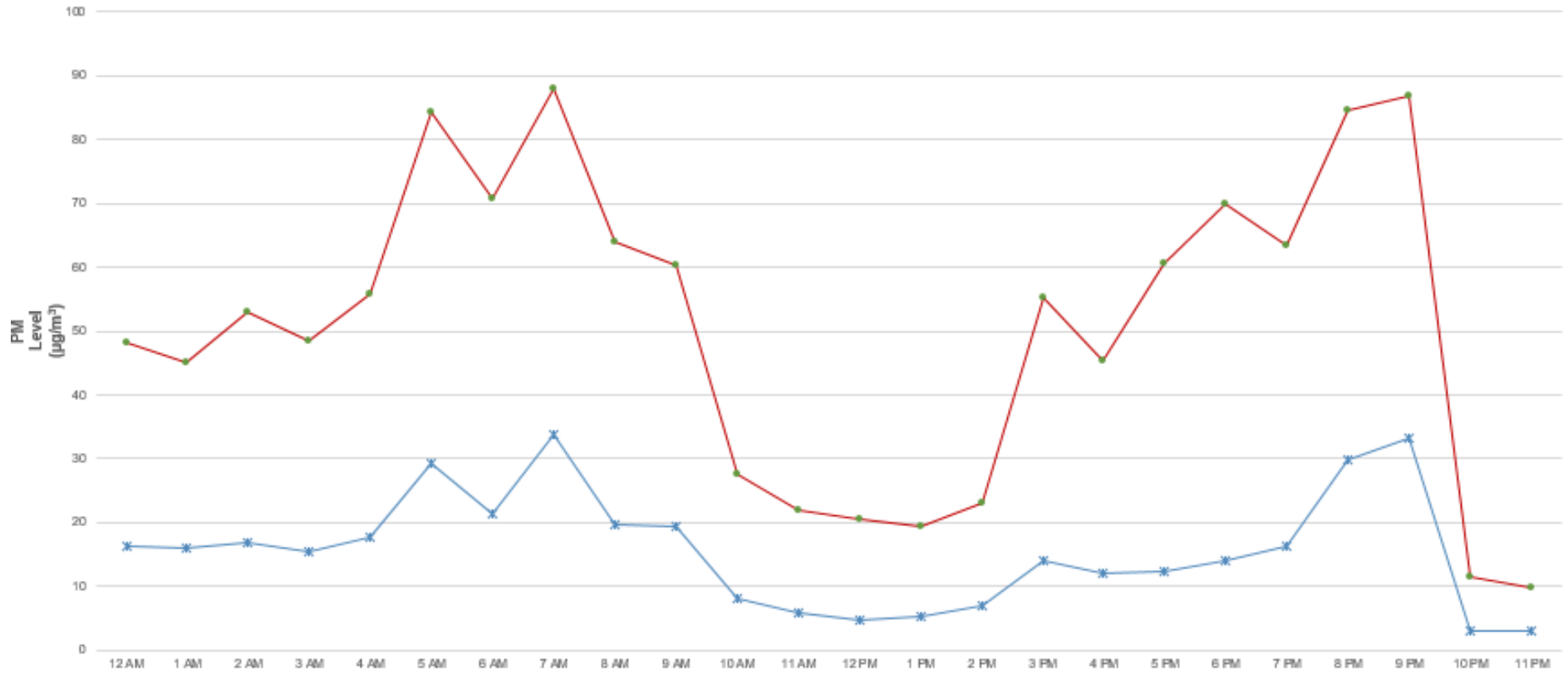
Dust Monitoring: 22/02/2022

Average of pm2_5mc Average of pm10mc



Dust Monitoring: 23/02/2022

—*— Average of pm2_5mc —*— Average of pm10mc

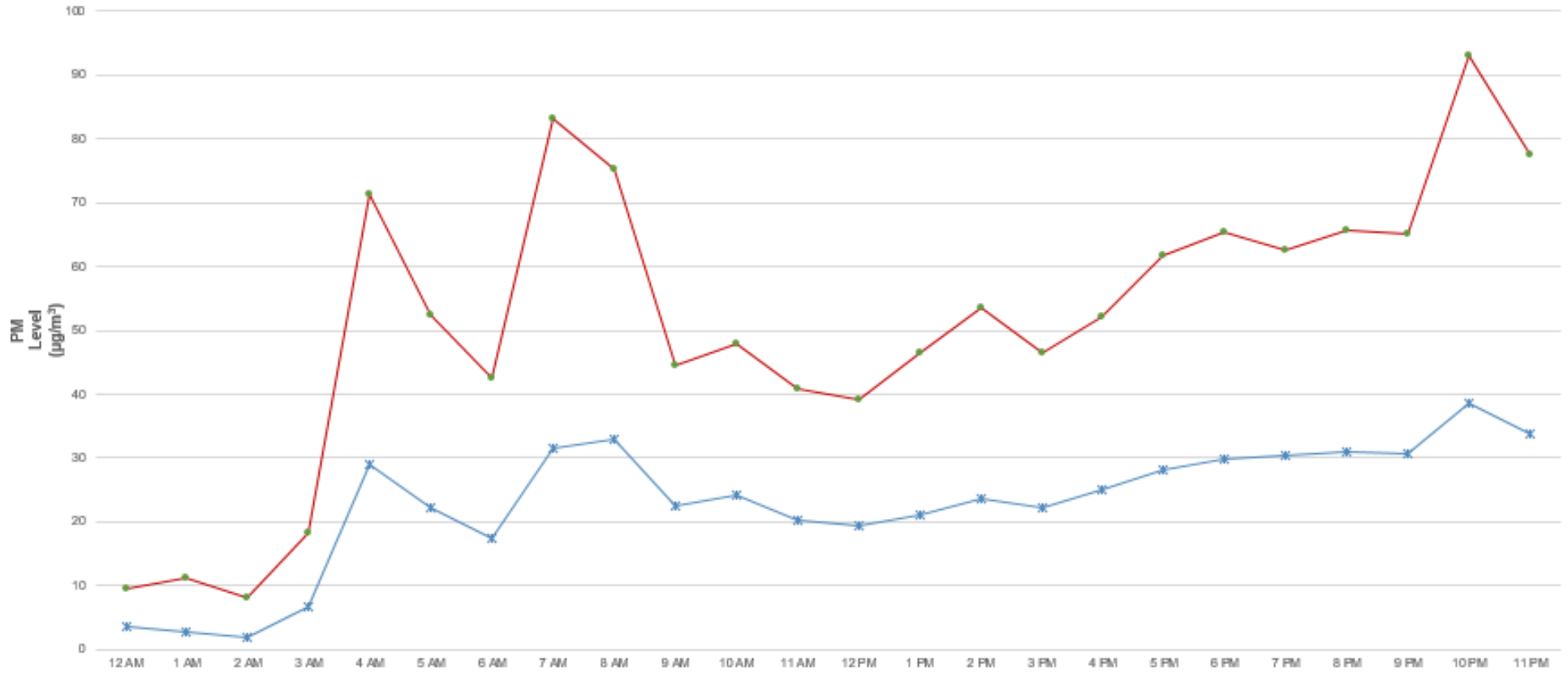




ACOUSTIC LOGIC

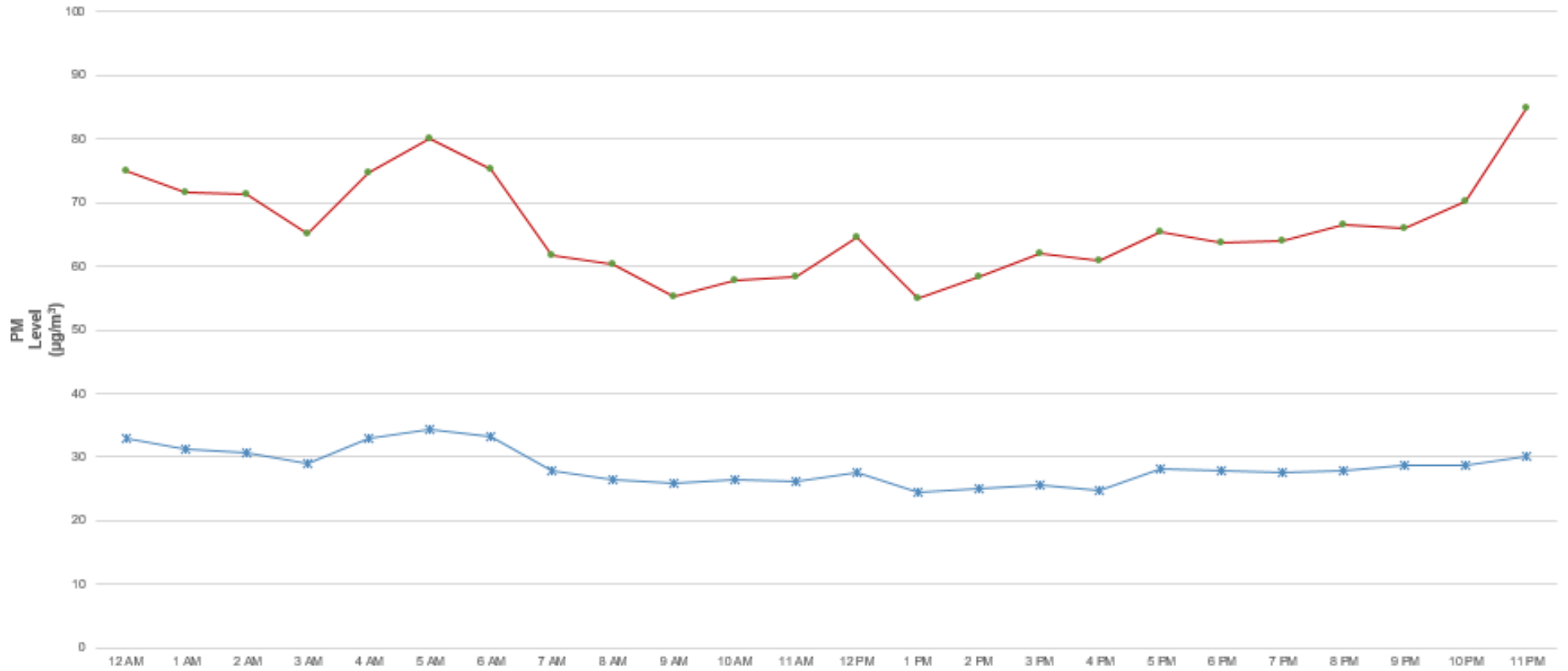
Dust Monitoring: 24/02/2022

Average of pm2_5mc Average of pm10mc



Dust Monitoring: 25/02/2022

—*— Average of pm2_5mc —*— Average of pm10mc

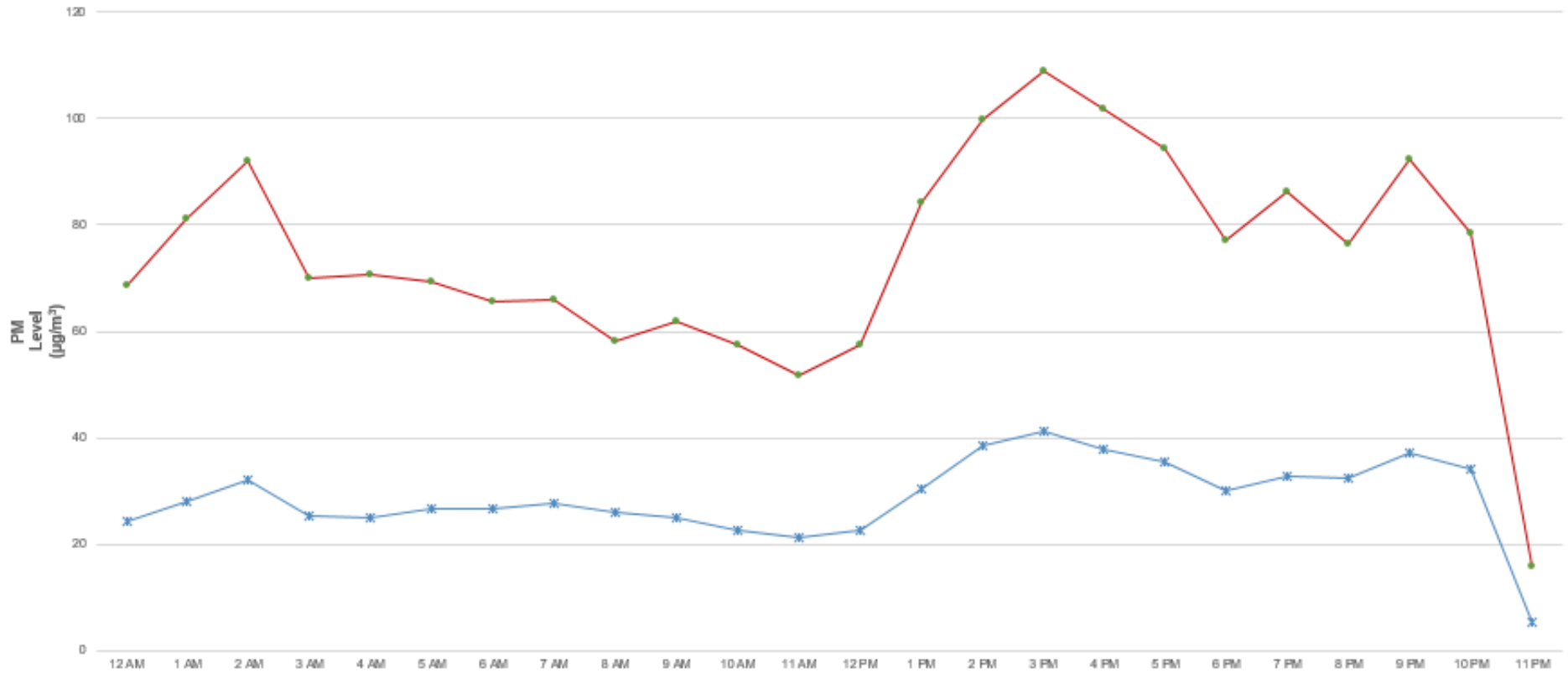




ACOUSTIC LOGIC

Dust Monitoring: 26/02/2022

Average of pm2_5mc Average of pm10mc

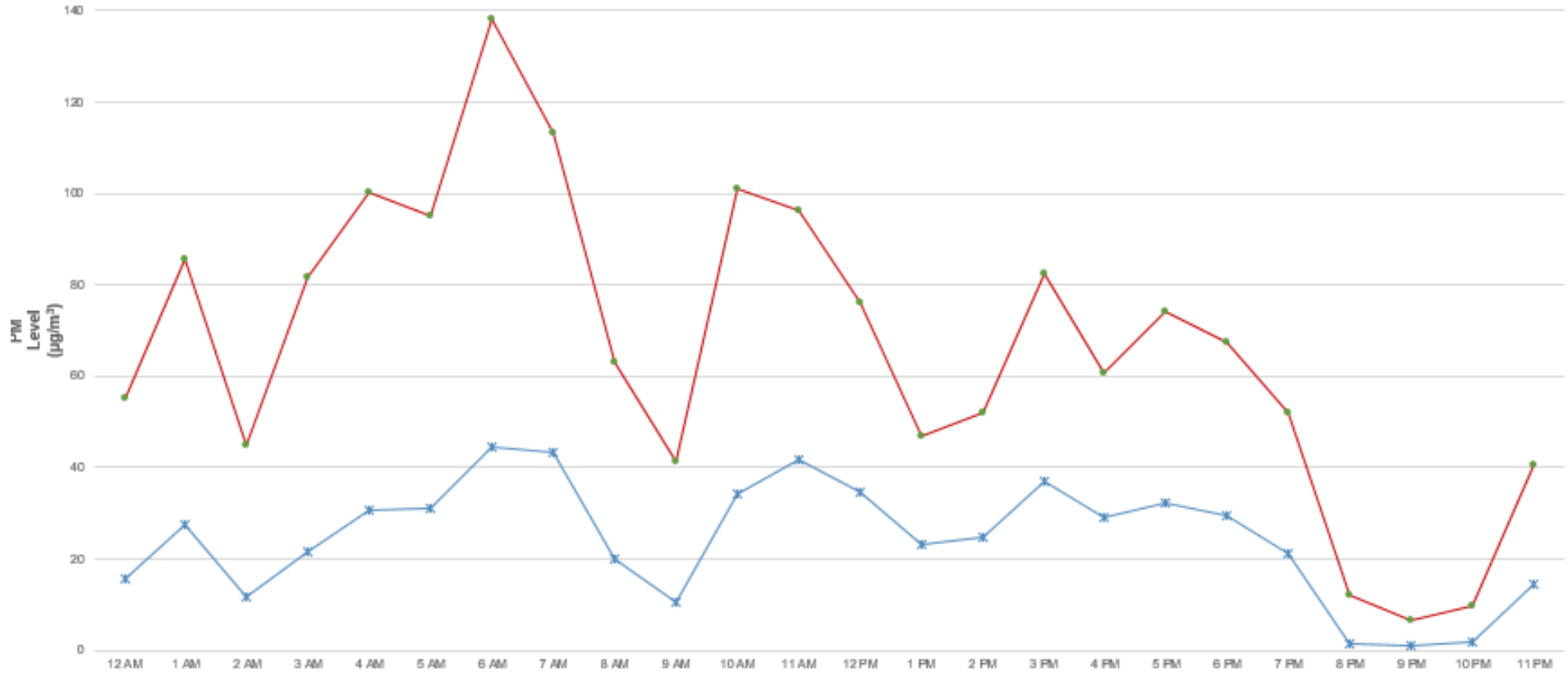




ACOUSTIC LOGIC

Dust Monitoring: 27/02/2022

* Average of pm2_5mc * Average of pm10mc

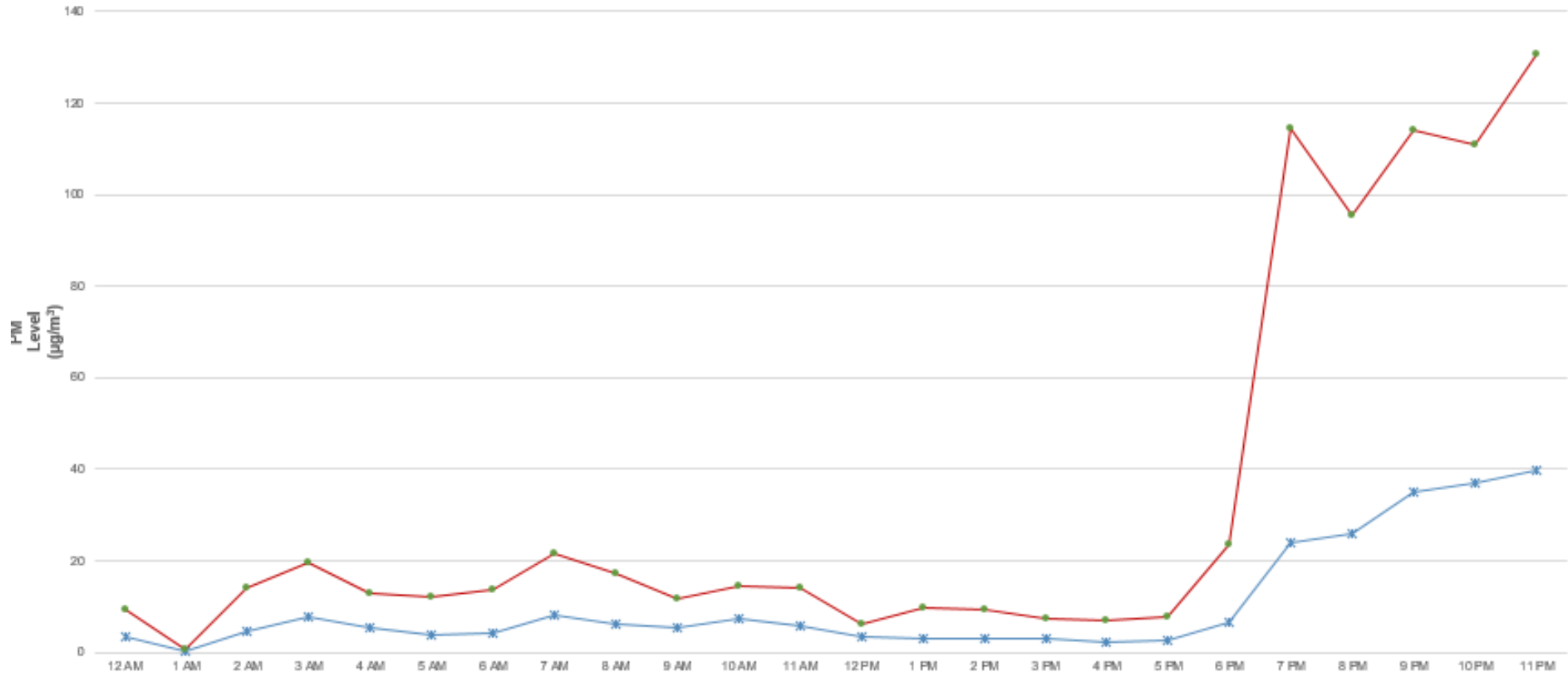




ACOUSTIC LOGIC

Dust Monitoring: 28/02/2022

Average of pm2_5mc Average of pm10mc



APPENDIX 4 – SITE PHOTO OF MONITORING LOCATION

