



Tweed Valley Hospital Carpark

May Report

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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 May to 31st of May 2022;
- Noise Monitoring: 1st of May to 31st of May 2022; and
- Dust Monitoring: 1st of May to 31st of May 2022.

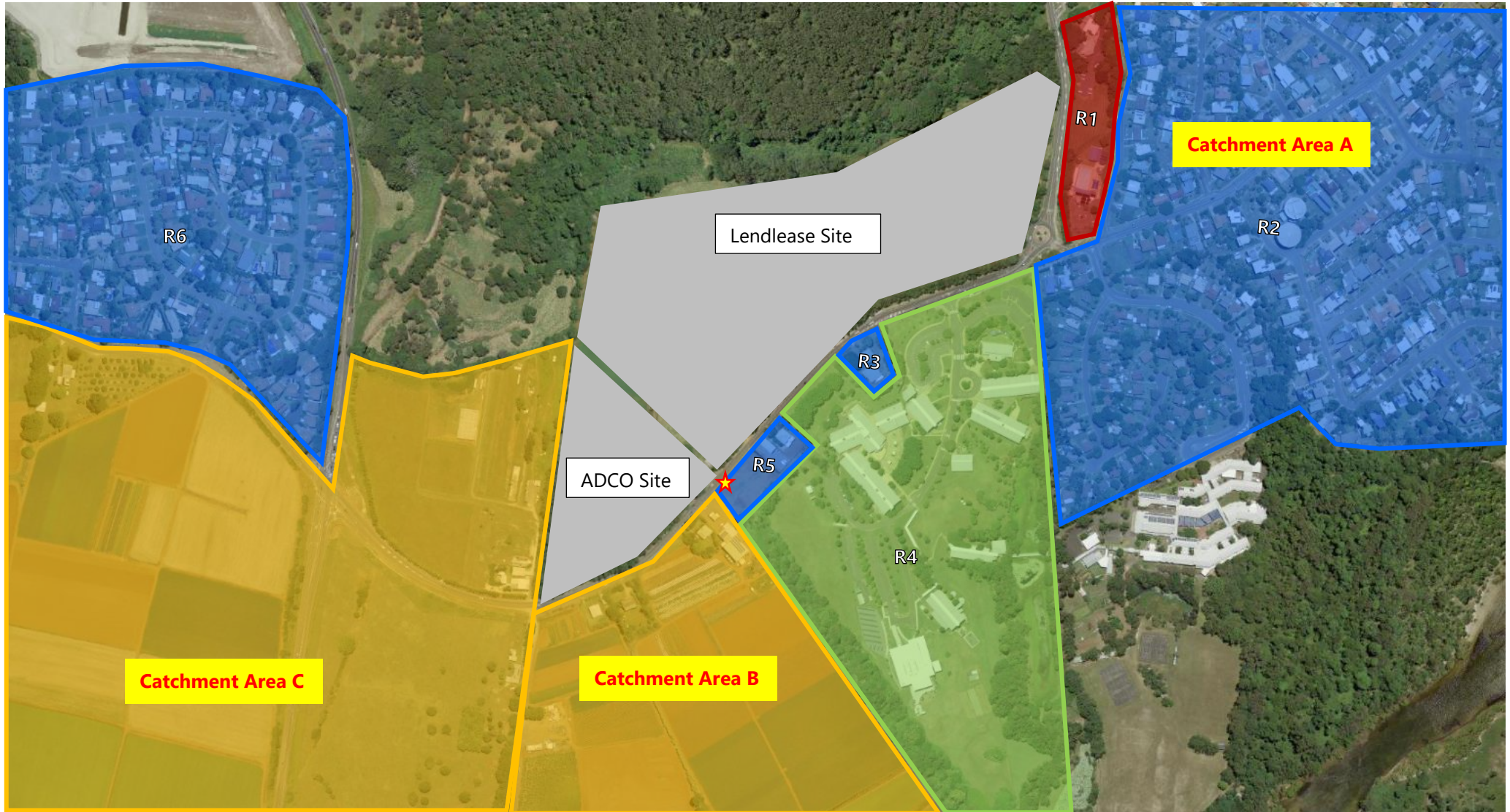
The location of the site is shown in [Figure 2-1](#) below. The location of the on-site monitors relative to the site has also been shown in [Figure 2-1](#).

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)



- Industrial/Agricultural
- Commercial Receiver
- ★ Monitoring Location

Figure 2-1 –Site and Sensitive Receiver Locations

- Site
- Residential Receiver
- Educational/Tafe

3 VIBRATION MONITORING

3.1 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

3.2 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 May to the 31st of May 2022.

3.3 MEASUREMENT RESULTS

Table 1 – Vibration Monitoring Results

Vibration Geophone Location	Date	Maximum Measured Vibration Level mm/s	Criteria Vibration Level	Complies
Monitoring Location	2022-05-01	2.22	5mm/s PPV	Yes
	2022-05-02	0.62		Yes
	2022-05-03	0.87		Yes
	2022-05-04	20.32		No - Note 1
	2022-05-05	0.76		Yes
	2022-05-06	1.11		Yes
	2022-05-07	0.92		Yes
	2022-05-08	0.76		Yes
	2022-05-09	0.77		Yes
	2022-05-10	0.73		Yes
	2022-05-11	1.2		Yes
	2022-05-12	0.92		Yes
	2022-05-13	0.81		Yes
	2022-05-14	0.59		Yes
	2022-05-15	0.72		Yes
	2022-05-16	6.03 ^{Note 2}		Yes
	2022-05-17	0.73		Yes
	2022-05-18	0.83		Yes
	2022-05-19	0.88		Yes
	2022-05-20	1.19		Yes
	2022-05-21	0.78		Yes
	2022-05-22	0.8		Yes
	2022-05-23	1.15		Yes
	2022-05-24	0.8		Yes
	2022-05-25	1.01		Yes
	2022-05-26	1.06		Yes
	2022-05-27	1.11		Yes
	2022-05-28	0.81		Yes
	2022-05-29	0.69		Yes
	2022-05-30	0.95		Yes
	2022-05-31	0.84		Yes

Note 1: Exceedance measured outside of construction hours of activity and not related to ADCO works.

Note 2: Lawn maintenance/mowing occurred around perimeter fencing of monitoring location advised by ADCO site manager. The maximum measured vibration level excluding advised lawn maintenance events was less than the criteria vibration level.

4 NOISE MONITORING

4.1 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.

4.2 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)

4.3 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.

4.4 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) $L_{eq\ 15min}$ "Highly Affected Noise"	Exceedance	
2022-05-01	Note 1	75	No	
2022-05-02				
2022-05-03				
2022-05-04				
2022-05-05				
2022-05-06	69			
2022-05-07	65			
2022-05-08	66			
2022-05-09	Note 1			
2022-05-10				
2022-05-11				
2022-05-12				
2022-05-13				
2022-05-14				
2022-05-15	Note 1			
2022-05-16				69
2022-05-17				69
2022-05-18				69
2022-05-19				70
2022-05-20				70
2022-05-21				66
2022-05-22				65
2022-05-23				Note 1
2022-05-24				
2022-05-25	69			
2022-05-26	69			
2022-05-27	70			
2022-05-28	65			
2022-05-29	65			
2022-05-30	70			
2022-05-31	69			

Note 1: Rain events impacting noise measurements, causing technical failures, and limiting maintenance works.

5 DUST MONITORING

5.1 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

5.2 MEASUREMENT DETAILS

5.2.1 Equipment

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

5.2.2 Period

Dust monitoring was conducted from the 1st of May to the 31st of May 2022.

5.3 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
2022-05-01	Note 1	25	Yes	Note 1	50	Yes
2022-05-02			Yes			Yes
2022-05-03			Yes			Yes
2022-05-04			Yes			Yes
2022-05-05			Yes			Yes
2022-05-06	5		Yes	23		Yes
2022-05-07	10		Yes	22		Yes
2022-05-08	241 ^{Note 2}		Yes	242 ^{Note 2}		Yes
2022-05-09	Note 1		Yes	Note 1		Yes
2022-05-10			Yes			Yes
2022-05-11			Yes			Yes
2022-05-12			Yes			Yes
2022-05-13			Yes			Yes
2022-05-14			Yes			Yes
2022-05-15			Yes			Yes
2022-05-16	379 ^{Note 3}		Yes	381 ^{Note 3}		Yes
2022-05-17	234 ^{Note 3}		Yes	248 ^{Note 3}		Yes
2022-05-18	9		Yes	43		Yes
2022-05-19	6		Yes	26		Yes
2022-05-20	7		Yes	26		Yes
2022-05-21	14		Yes	42		Yes
2022-05-22	14		Yes	39		Yes
2022-05-23	Note 1		Yes	Note 1		Yes
2022-05-24			Yes			Yes
2022-05-25	9		Yes	33		Yes
2022-05-26	5	Yes	20	Yes		
2022-05-27	5	Yes	20	Yes		
2022-05-28	6	Yes	31	Yes		
2022-05-29	2	Yes	10	Yes		

2022-05-30	3		Yes	24		Yes
2022-05-31	3		Yes	28		Yes

Note 1: Rain events causing equipment technical failures and limiting maintenance works.

Note 2: Exceedance occurred outside of construction days and as such is not attributed to construction works.

Note 3: High particle concentration levels measured consistently both during and outside of construction hours, and therefore is not indicated to be associated with construction works. High particle concentration levels likely due to consistent rain events occurring throughout approximately the first 2 weeks of May.

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
2022-05-01	Note 1	62-97	Yes	Note 1	80-120	Yes
2022-05-02			Yes			Yes
2022-05-03			Yes			Yes
2022-05-04			Yes			Yes
2022-05-05			Yes			Yes
2022-05-06	15		Yes	54		Yes
2022-05-07	96		Yes	96		Yes
2022-05-08	645 ^{Note 2}		Yes	653 ^{Note 2}		Yes
2022-05-09	Note 1		Yes	Note 1		Yes
2022-05-10			Yes			Yes
2022-05-11			Yes			Yes
2022-05-12			Yes			Yes
2022-05-13			Yes			Yes
2022-05-14			Yes			Yes
2022-05-15	Yes		Yes			
2022-05-16	681 ^{Note 3}	Yes	690 ^{Note 3}	Yes		
2022-05-17	1102 ^{Note 3}	Yes	1120 ^{Note 3}	Yes		
2022-05-18	13	Yes	91	Yes		
2022-05-19	9	Yes	35	Yes		
2022-05-20	9	Yes	41	Yes		
2022-05-21	23	Yes	76	Yes		
2022-05-22	23	Yes	66	Yes		
2022-05-23	Note 1	Yes	Note 1	Yes		
2022-05-24		Yes		Yes		

2022-05-25	11		Yes	46		Yes
2022-05-26	7		Yes	42		Yes
2022-05-27	14		Yes	48		Yes
2022-05-28	18		Yes	119		Yes
2022-05-29	4		Yes	20		Yes
2022-05-30	8		Yes	69		Yes
2022-05-31	6		Yes	52		Yes

Note 1: Rain events causing equipment technical failures and limiting maintenance works.

Note 2: Exceedance occurred outside of construction days and as such is not attributed to construction works.

Note 3: High particle concentration levels measured consistently both during and outside of construction hours, and therefore is not indicated to be associated with construction works. High particle concentration levels likely due to consistent rain events occurring throughout approximately the first 2 weeks of May.

6 CONCLUSION

Acoustic Logic Consultancy has carried out noise, dust and vibration monitoring for the month of May 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 May to 31st of May 2022;
- Noise Monitoring: 1st of May to 31st of May 2022; and
- Dust Monitoring: 1st of May to 31st of May 2022.

We note that significant rain events occurred at times during the monitoring period, impacting measured data and causing equipment technical failures. However, there were no exceedances as a result of construction works during the reporting period listed above, which demonstrates compliance with the conditions of consent.

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

Yours faithfully,

A redacted signature block consisting of a black rectangular box. A handwritten signature, possibly 'A', is visible above the top edge of the box.

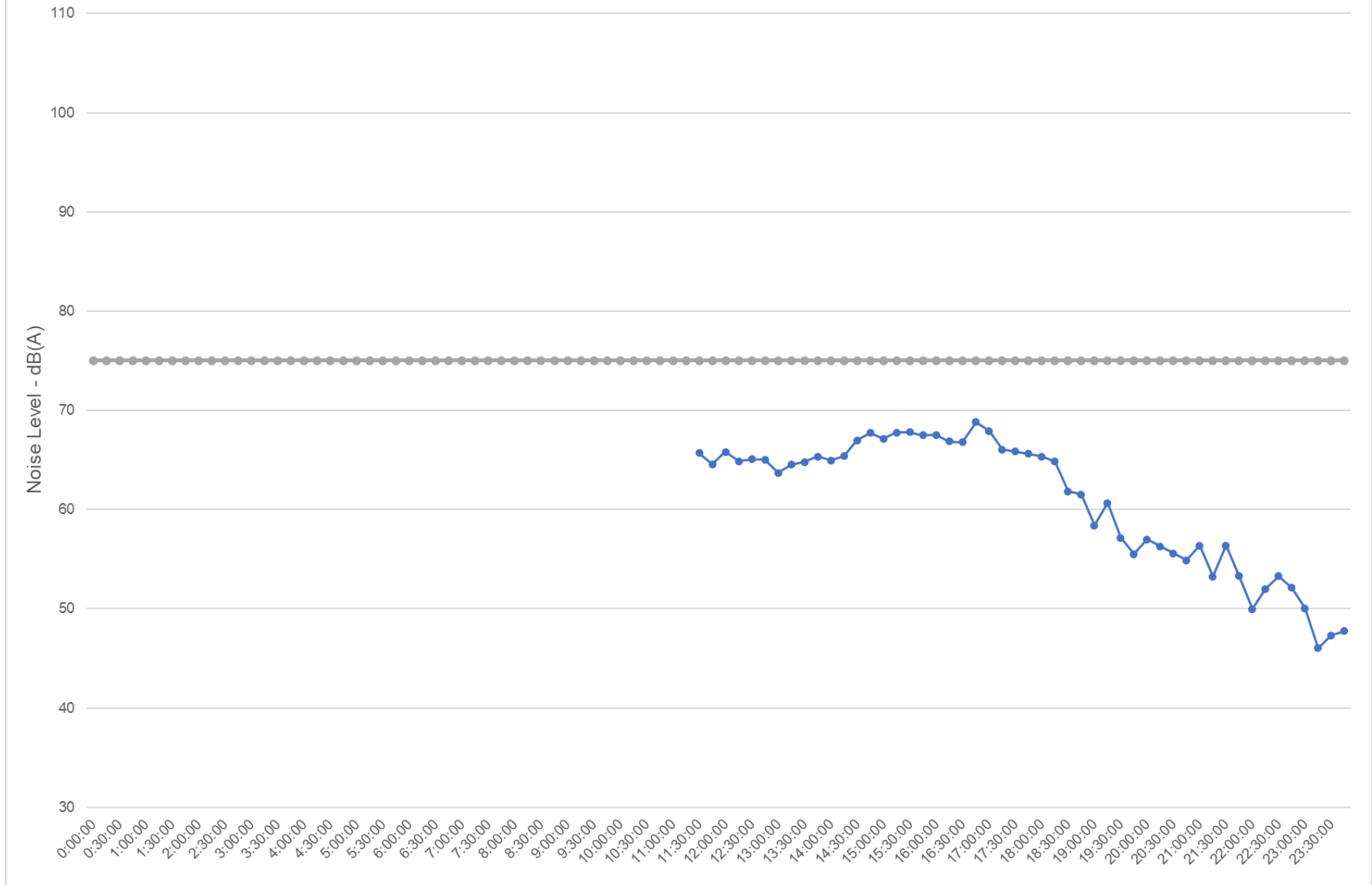
Acoustic Logic Pty Ltd

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APPENDIX 1 – NOISE MONITORING RESULTS

Noise Monitoring: 06/05/2022

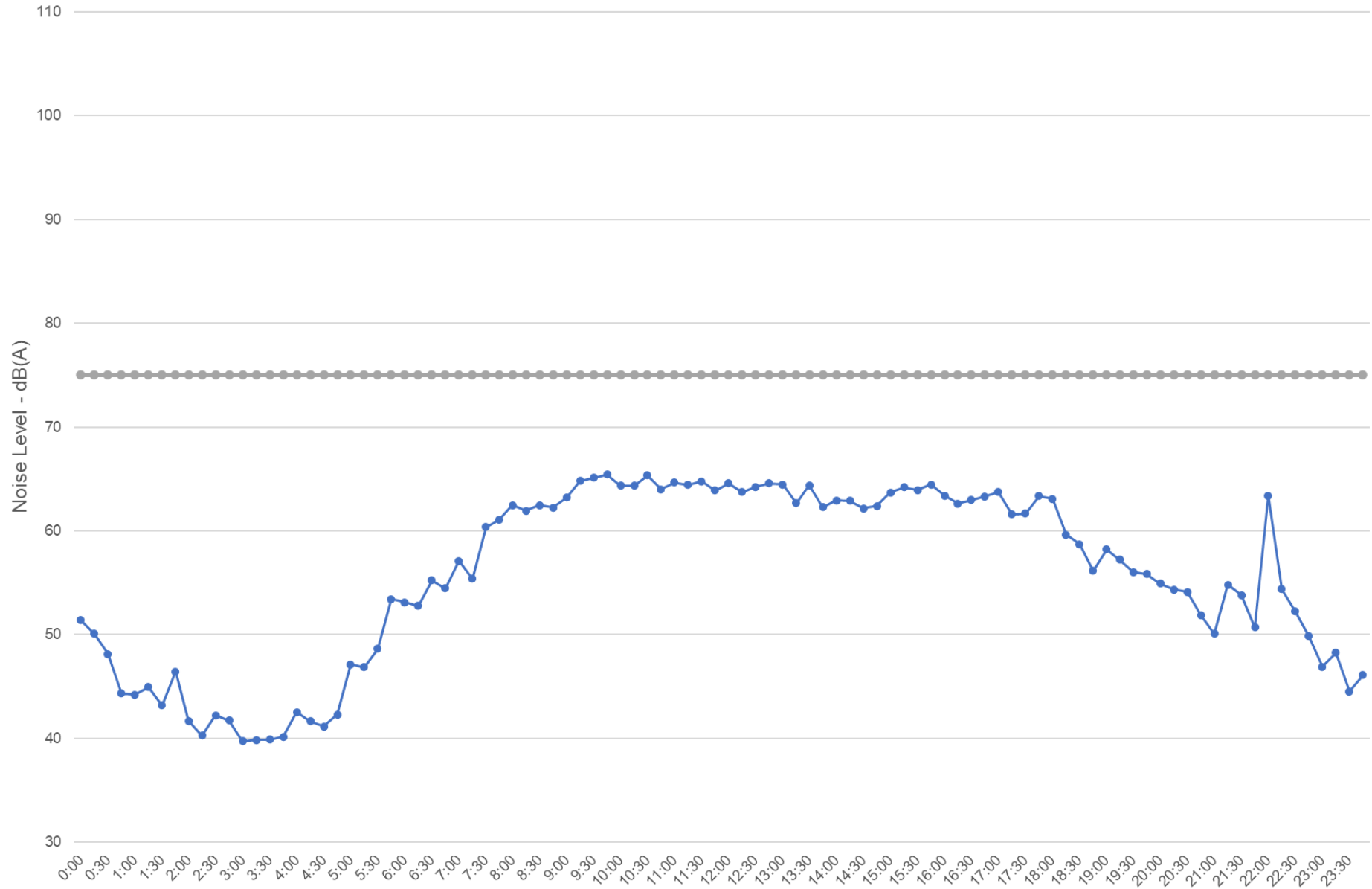
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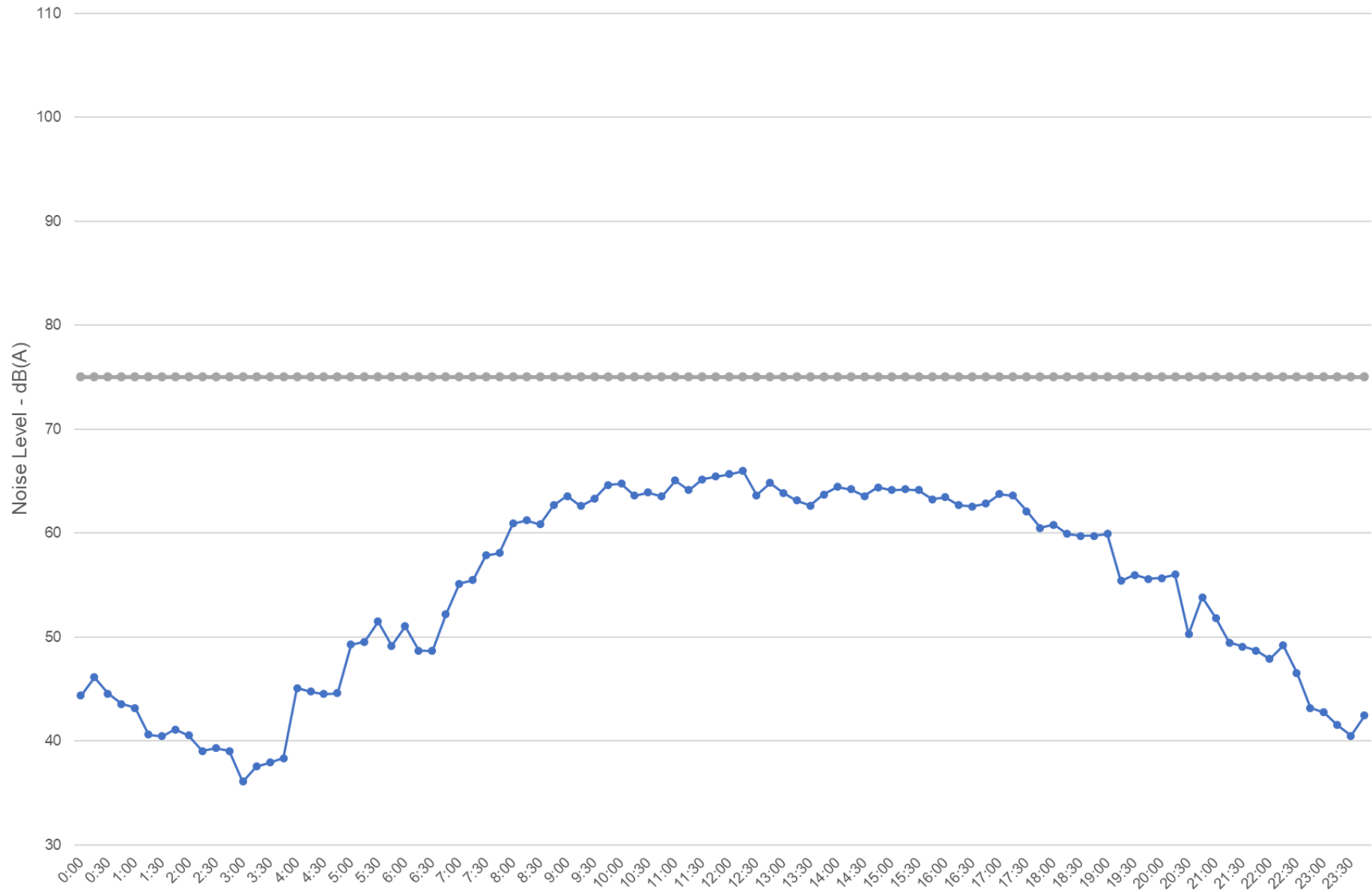
Noise Monitoring: 07/05/2022

—●— Leq —●— Highly Noise Effected



Noise Monitoring: 08/05/2022

—●— Leq —●— Highly Noise Effected



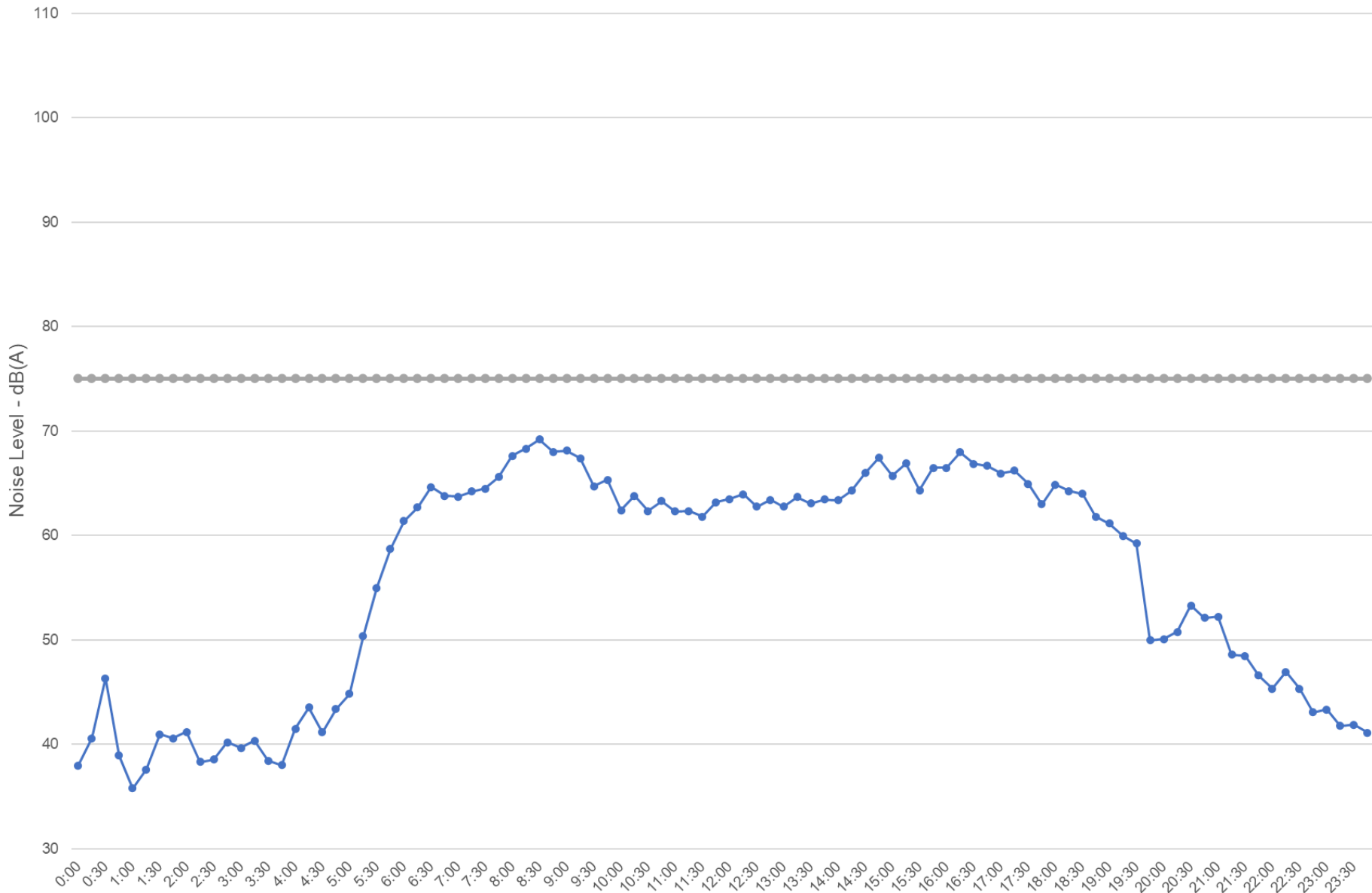
Noise Monitoring: 16/05/2022

—●— Leq —●— Highly Noise Effected



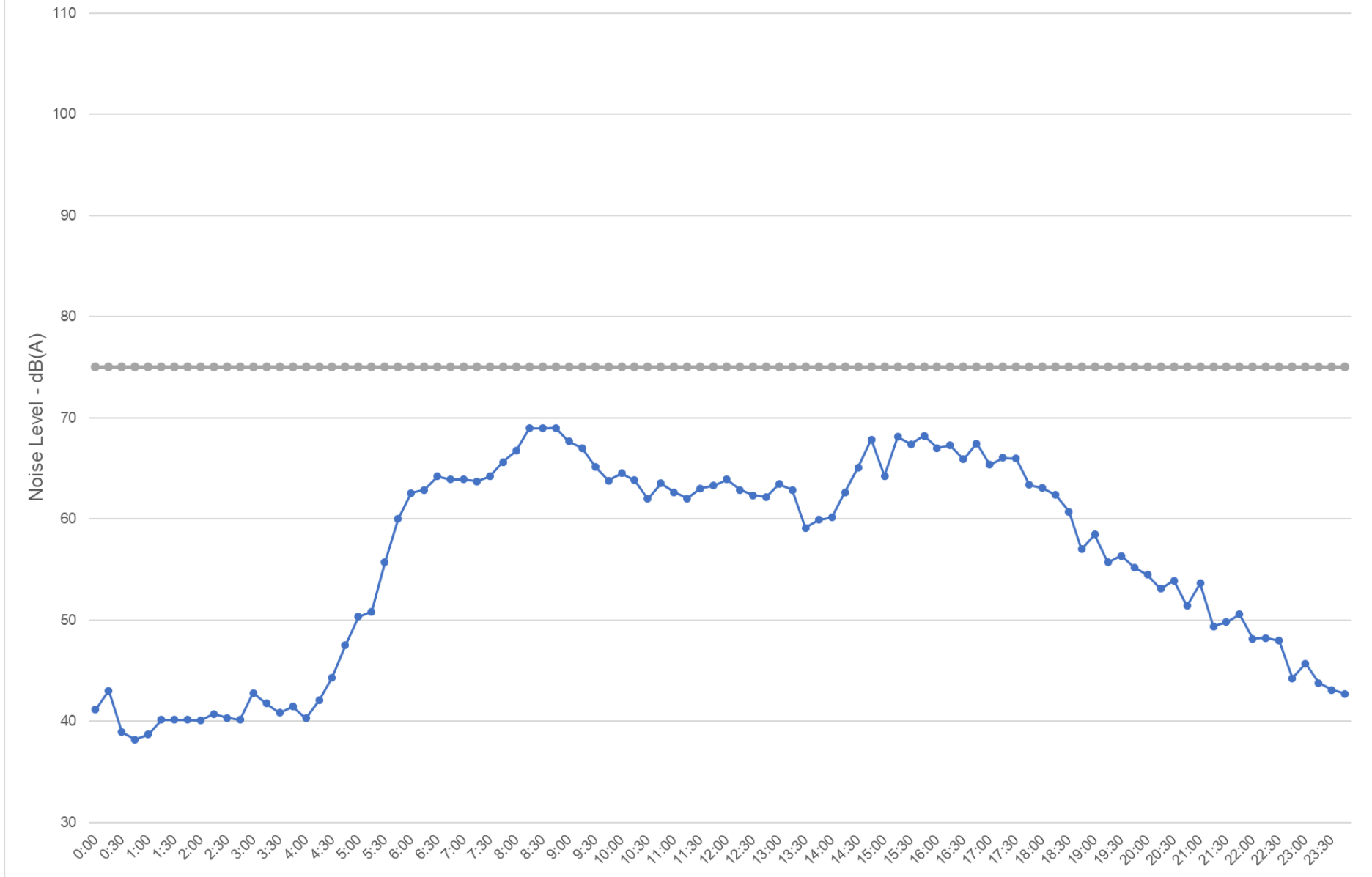
Noise Monitoring: 17/05/2022

—●— Leq —●— Highly Noise Effected



Noise Monitoring: 18/05/2022

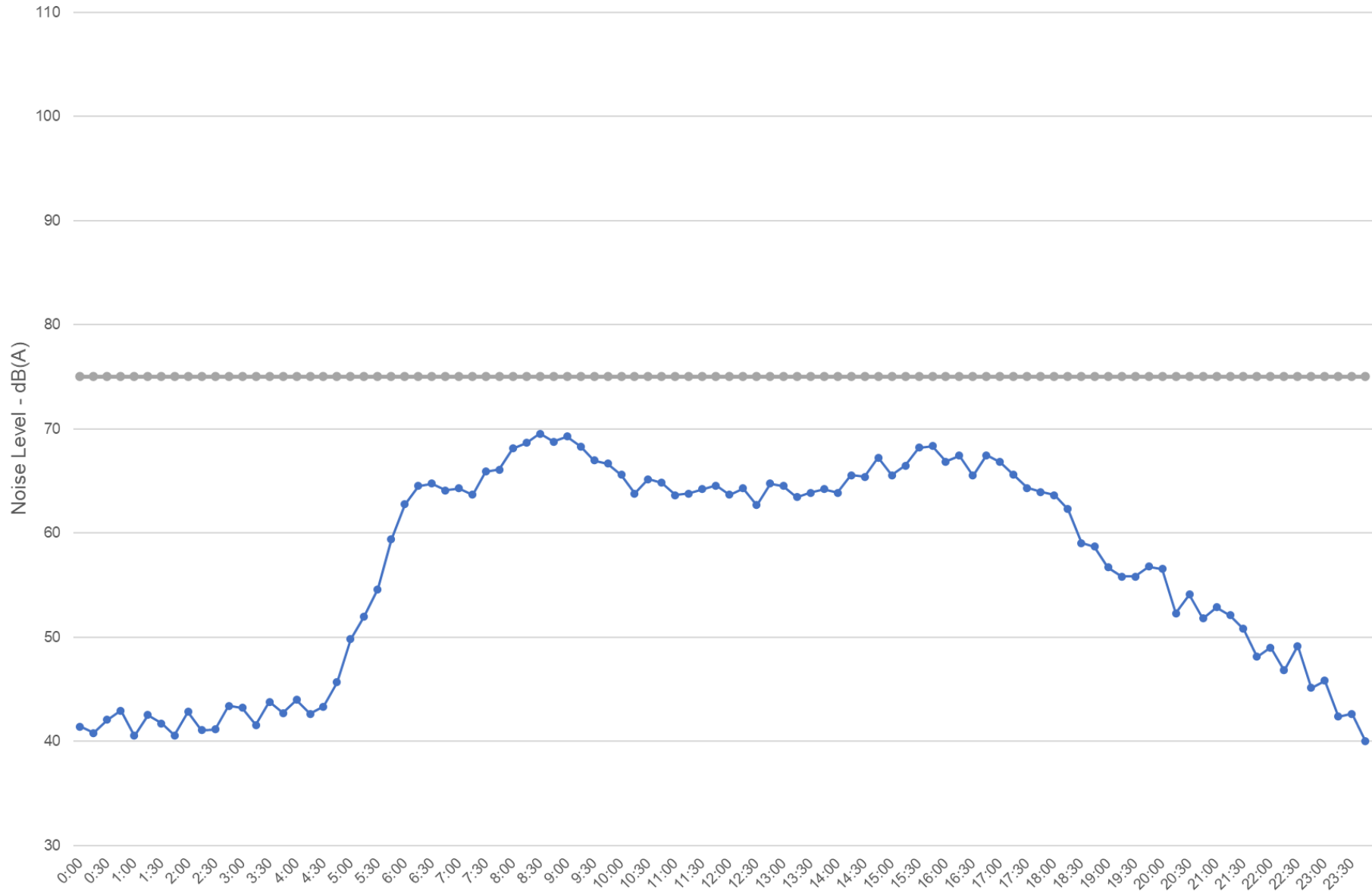
—●— Leq —●— Highly Noise Effected





Noise Monitoring: 19/05/2022

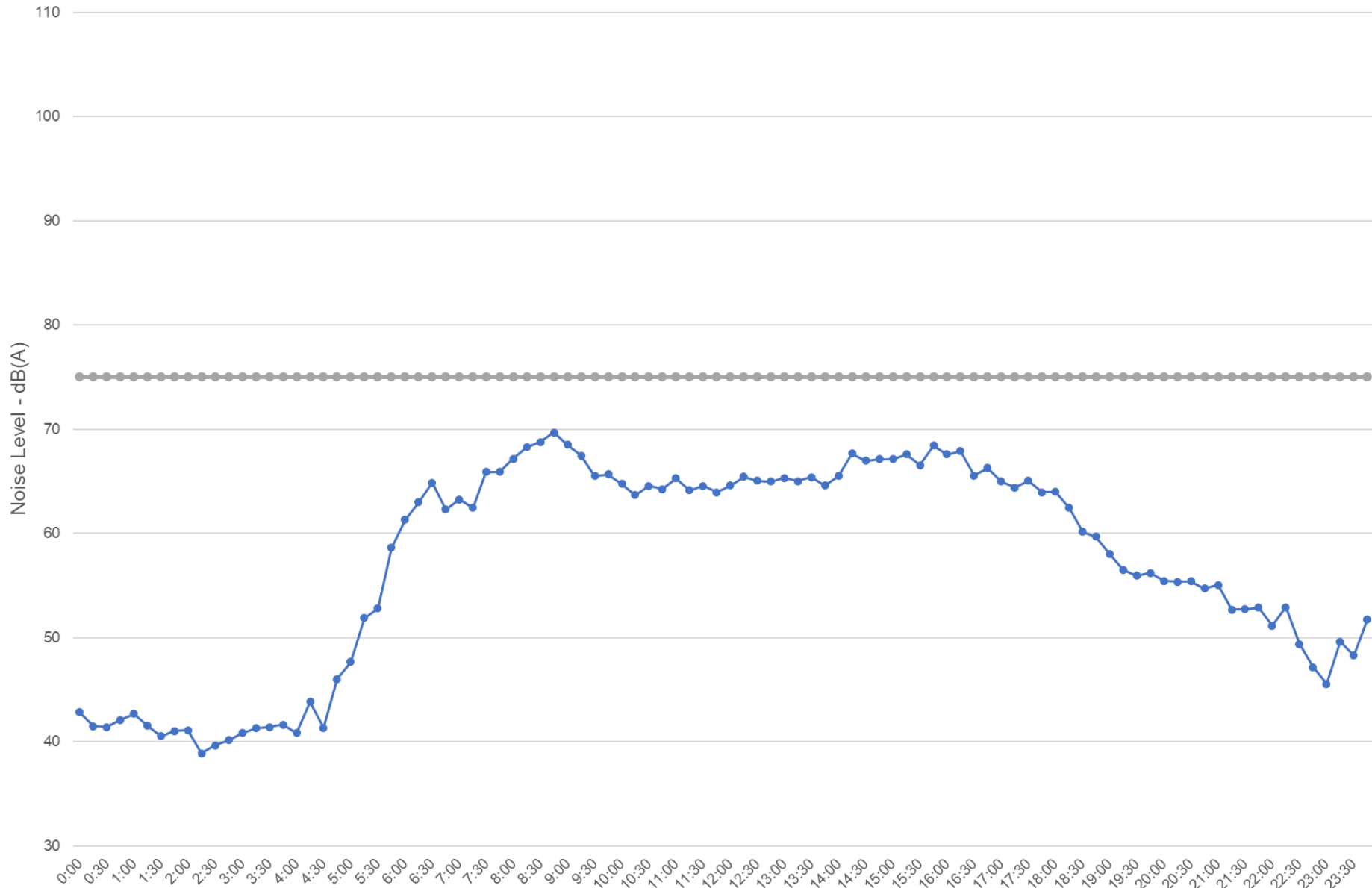
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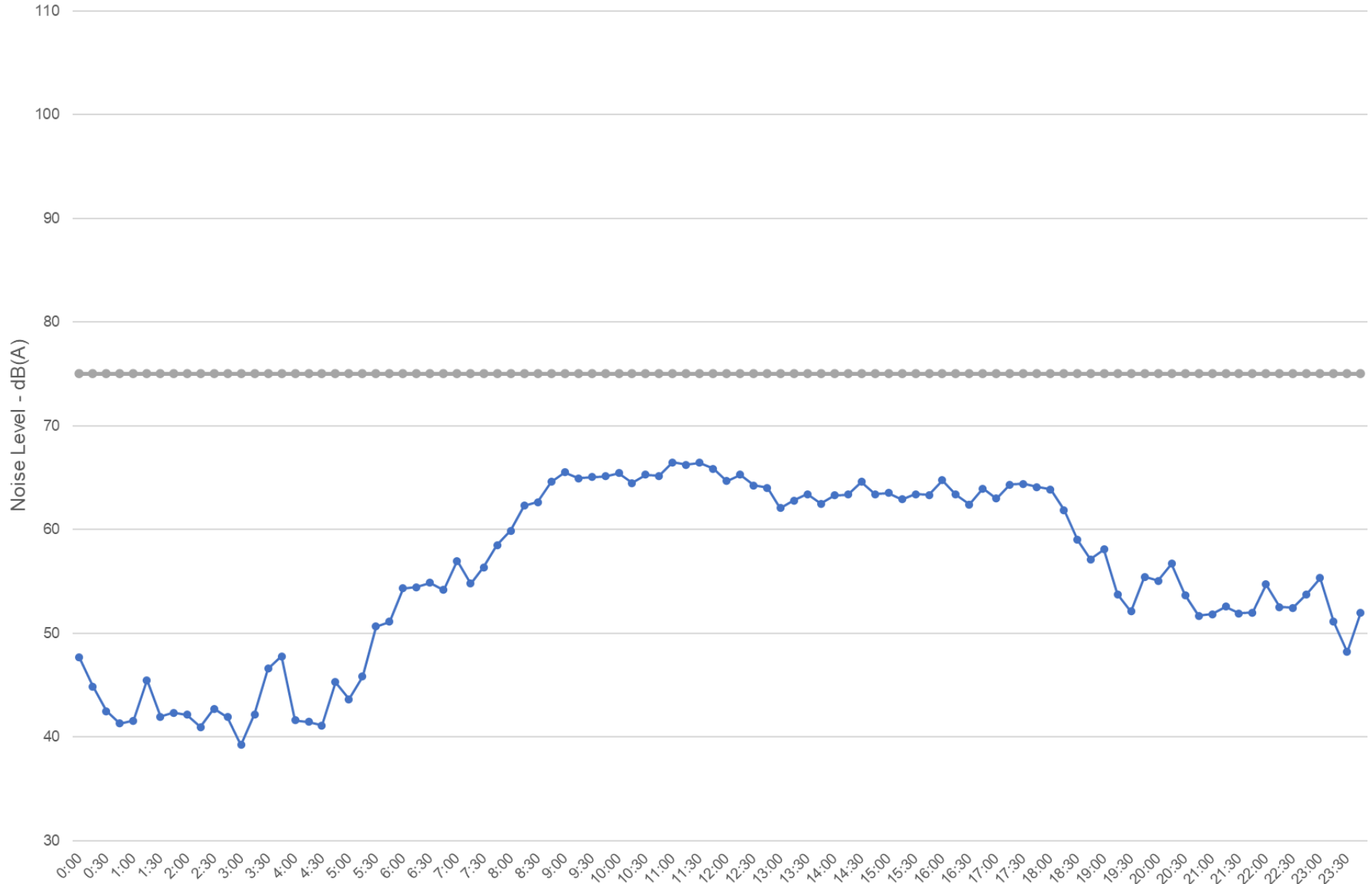
Noise Monitoring: 20/05/2022

—●— Leq —●— Highly Noise Effected



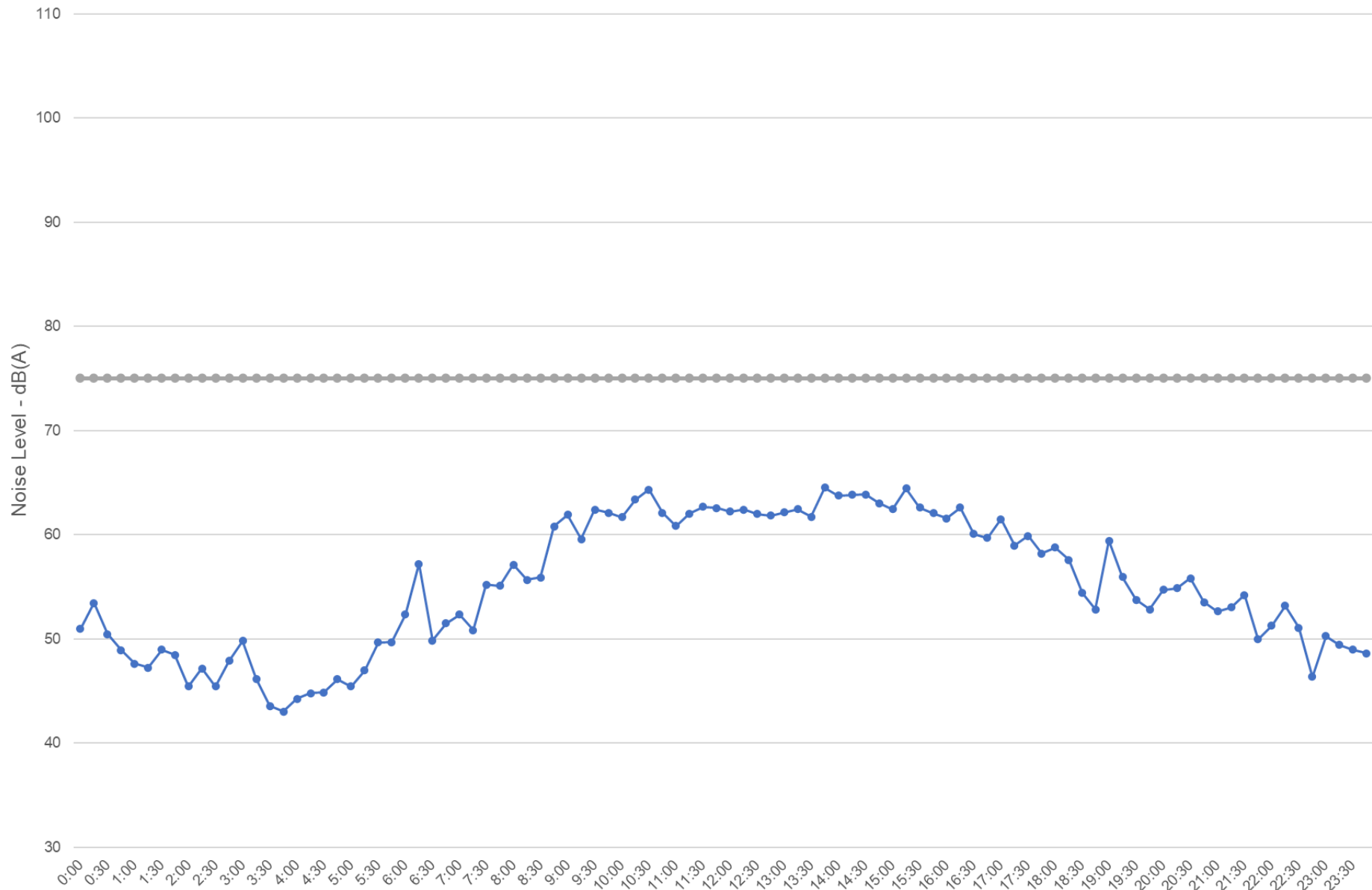
Noise Monitoring: 21/05/2022

—●— Leq —●— Highly Noise Effected

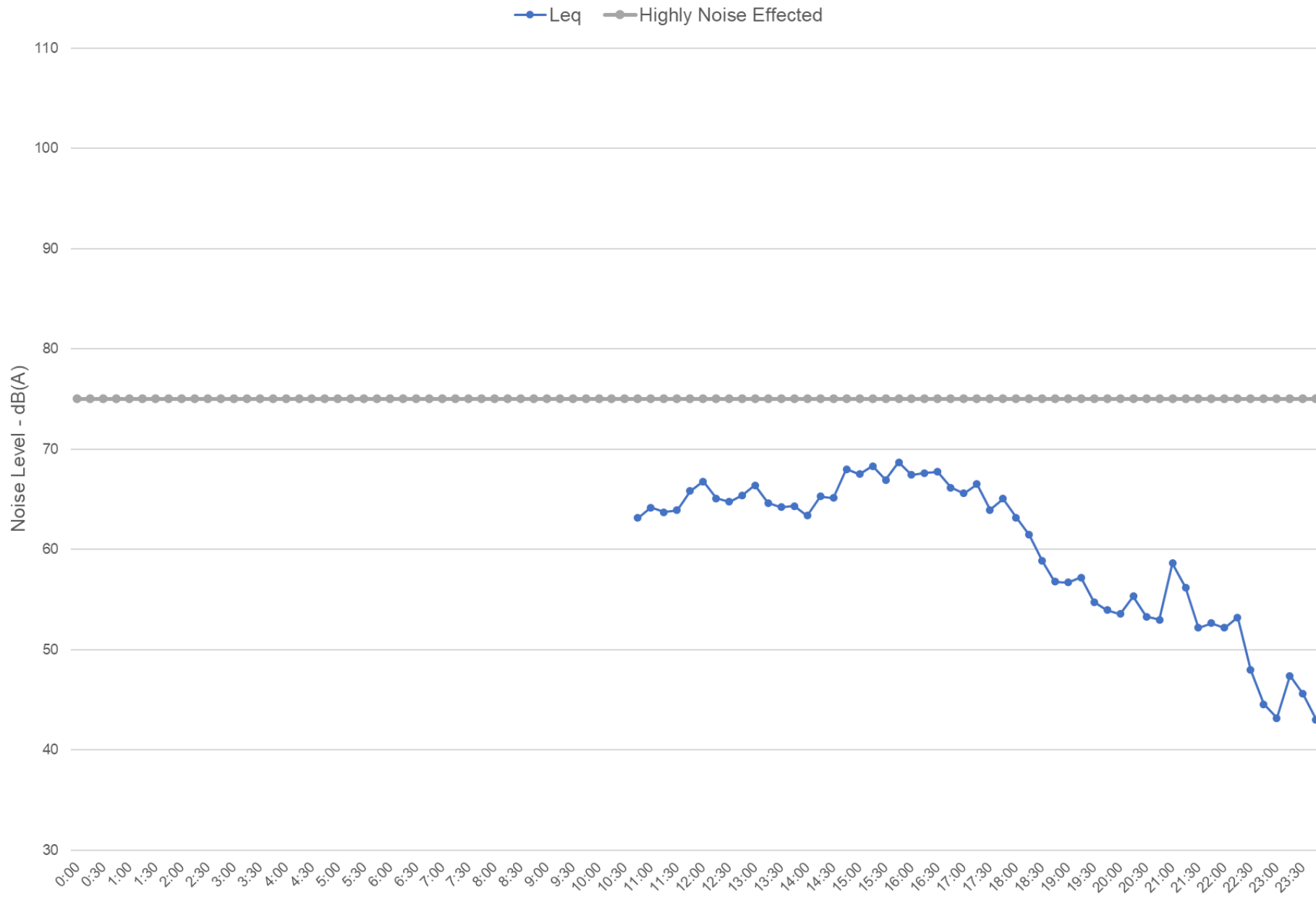


Noise Monitoring: 22/05/2022

—●— Leq —●— Highly Noise Effected



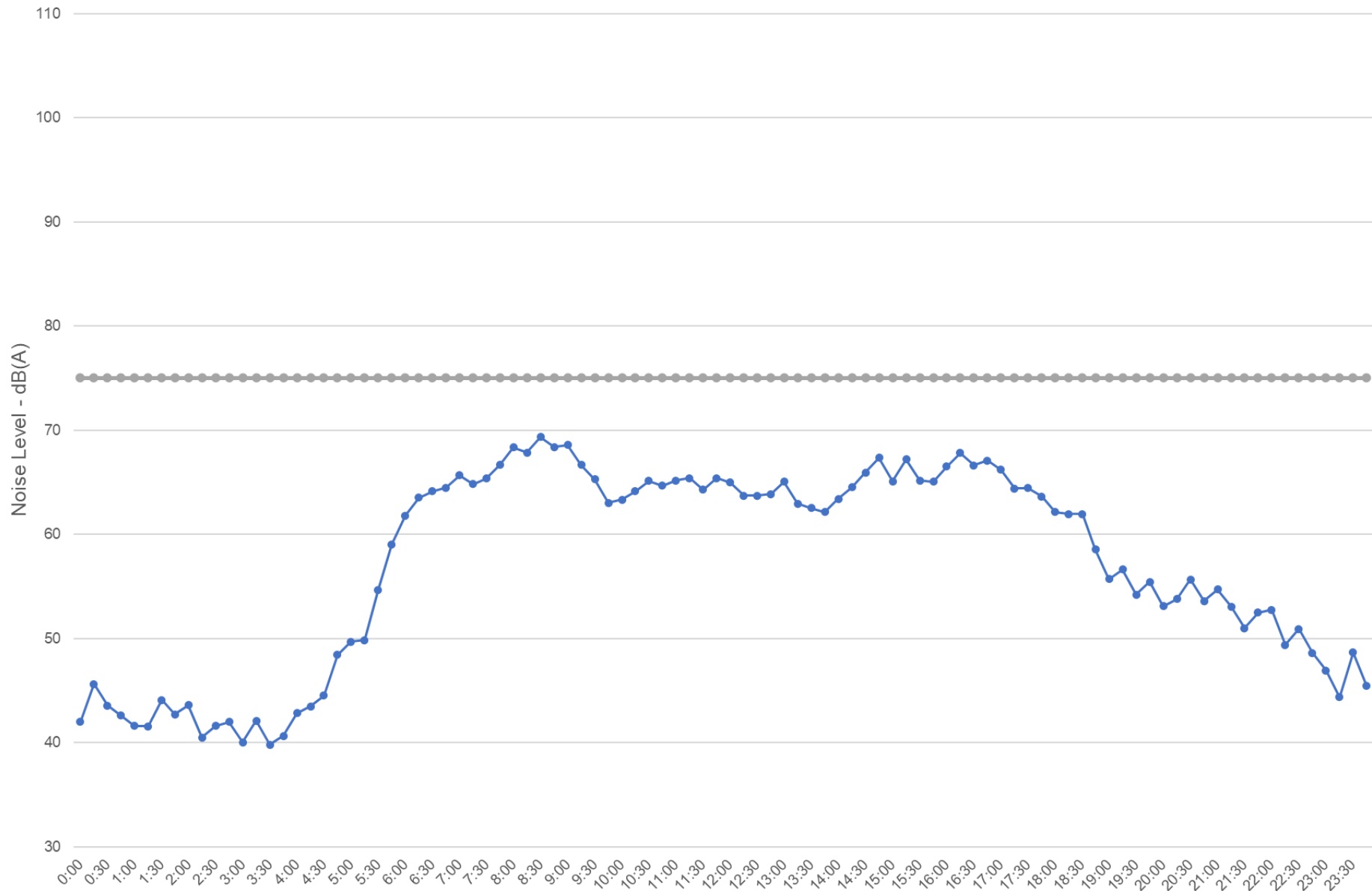
Noise Monitoring: 25/05/2022



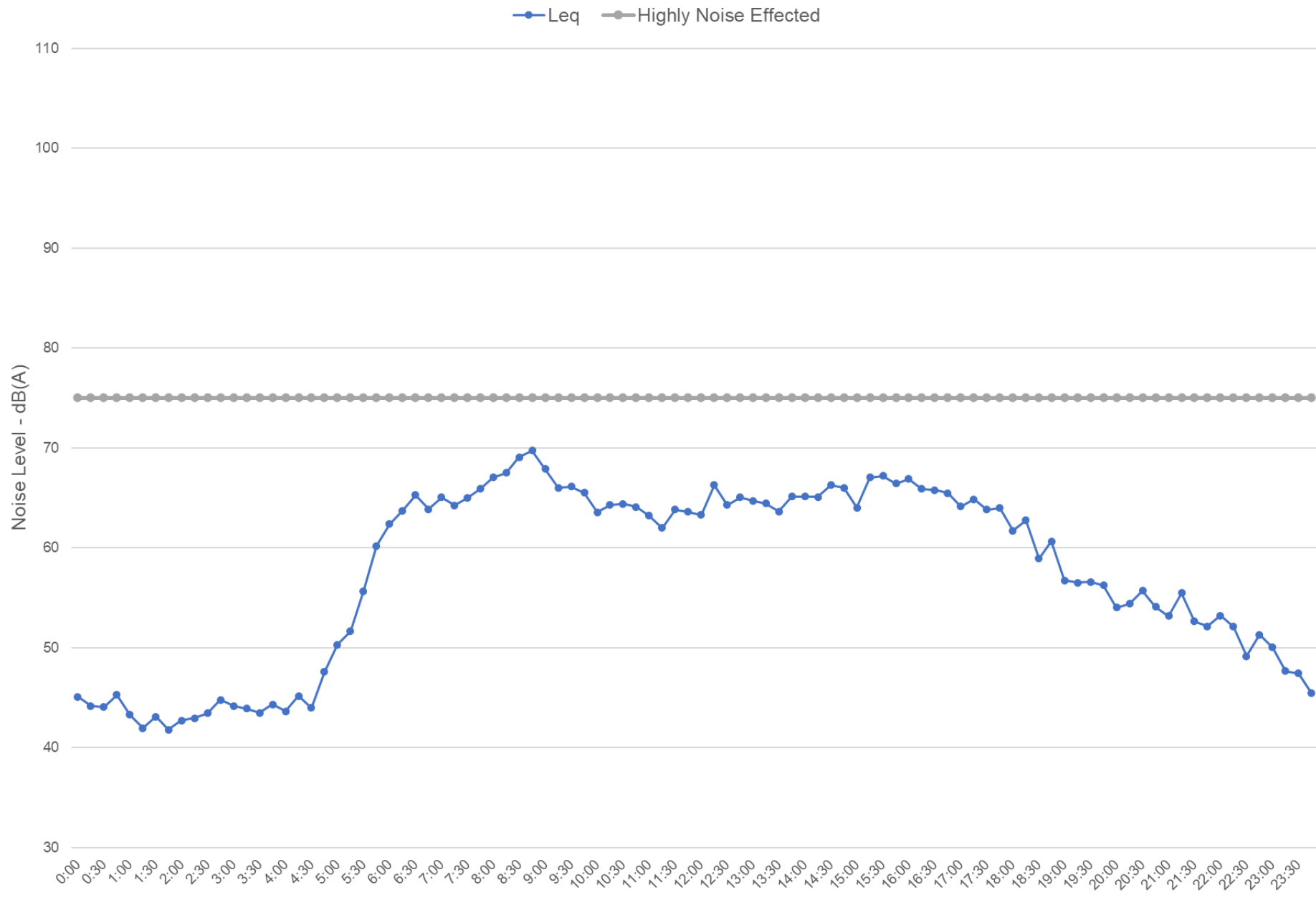


Noise Monitoring: 26/05/2022

—●— Leq —●— Highly Noise Effected

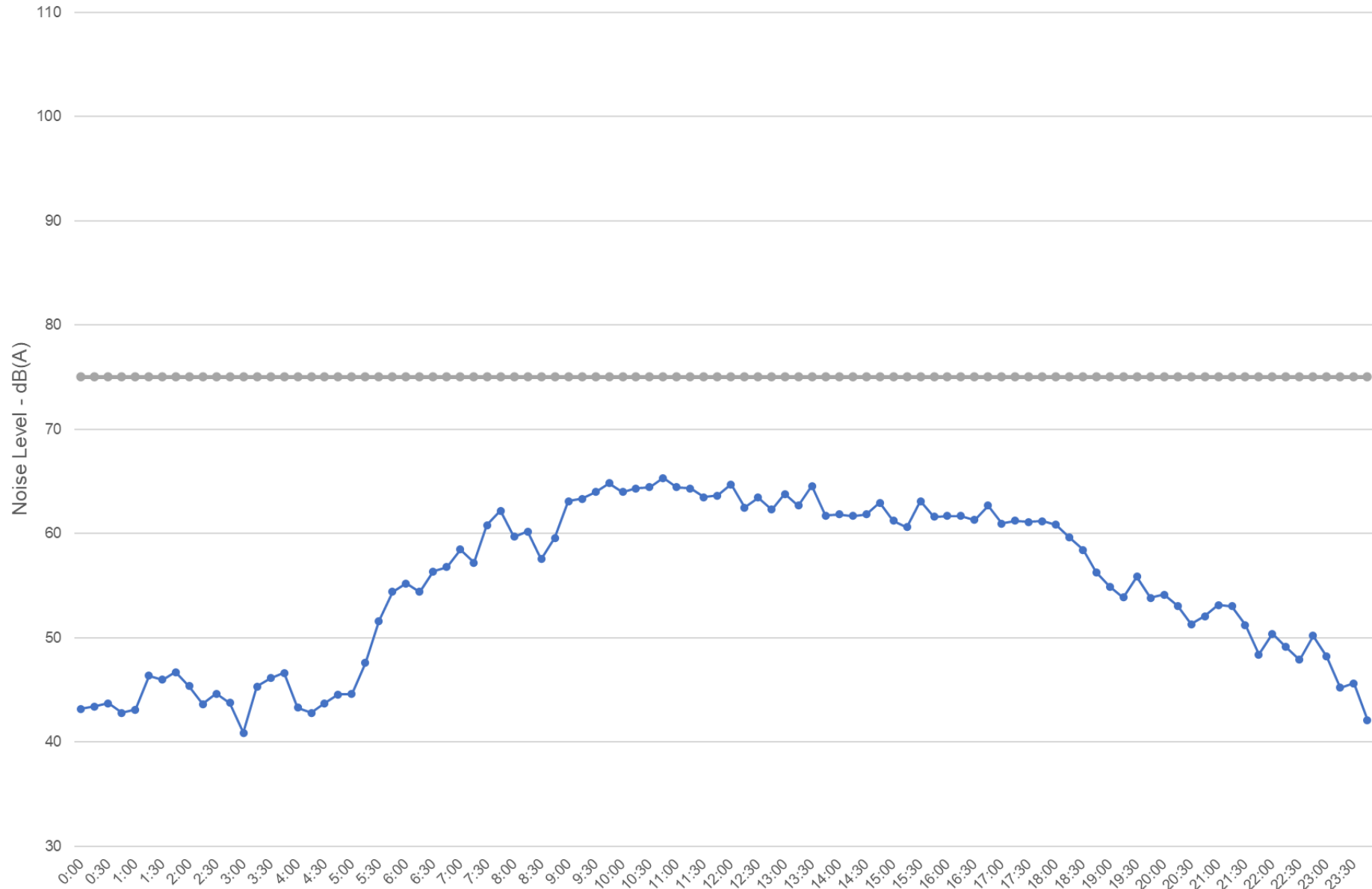


Noise Monitoring: 27/05/2022



Noise Monitoring: 28/05/2022

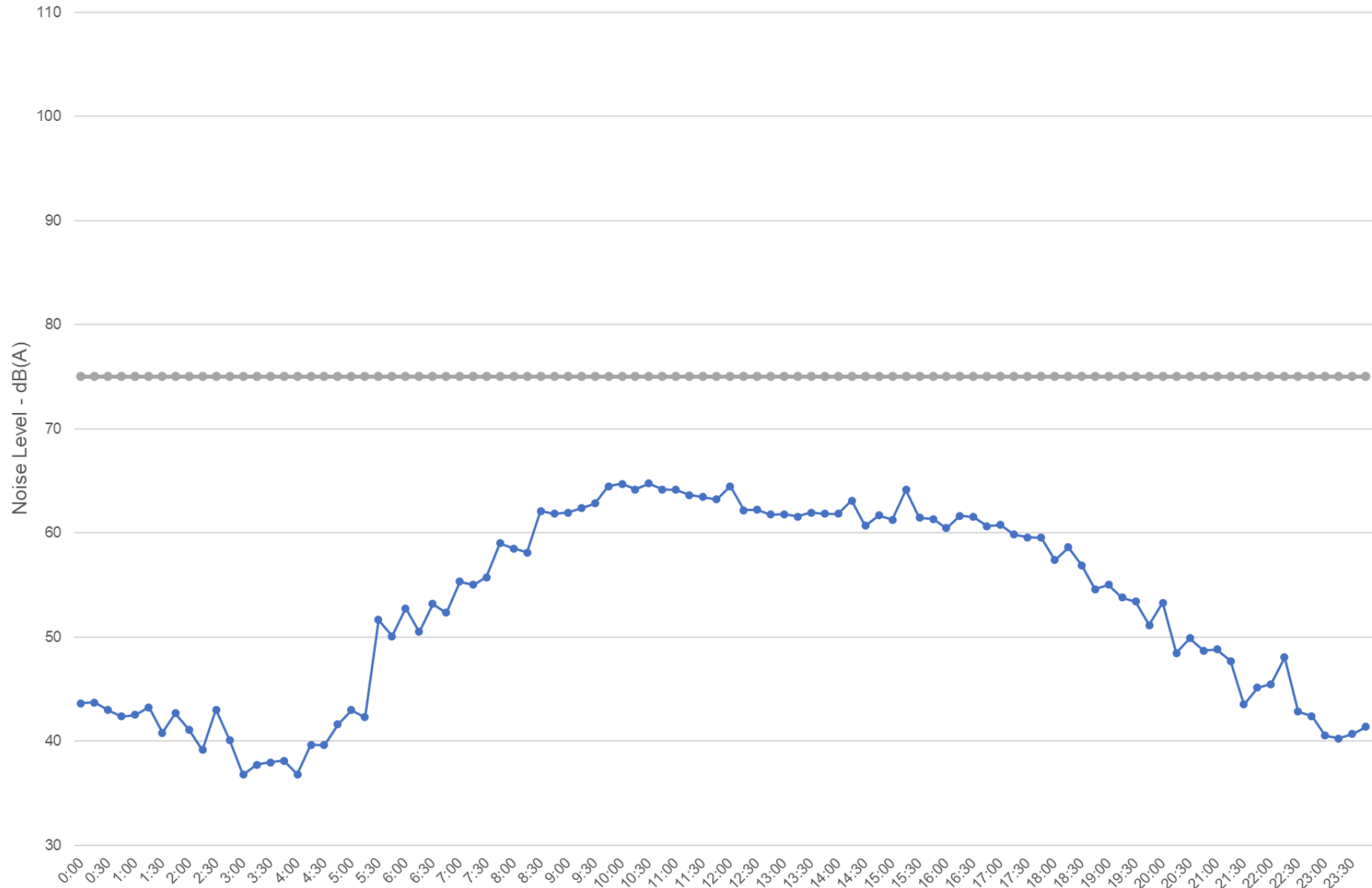
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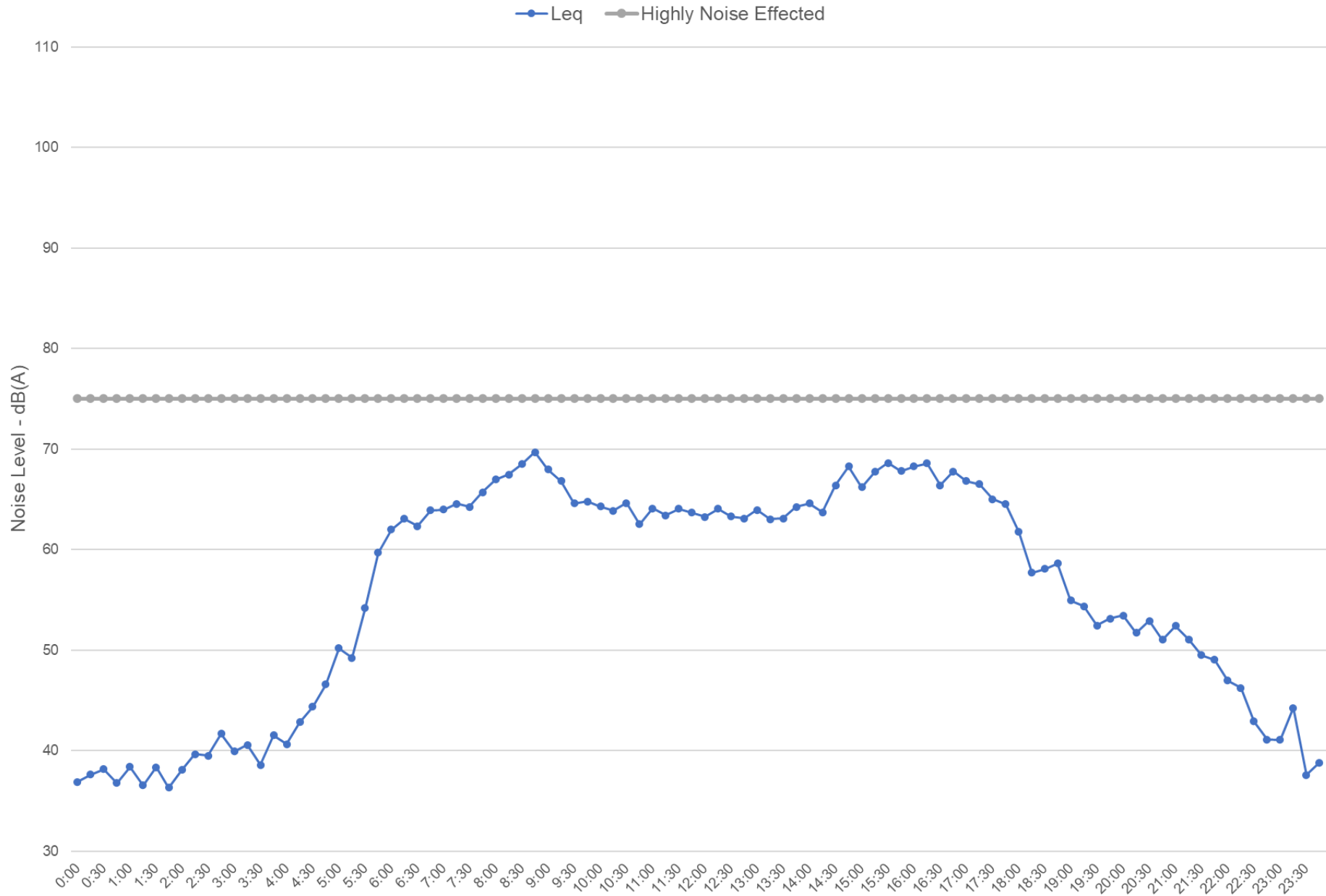


Noise Monitoring: 29/05/2022

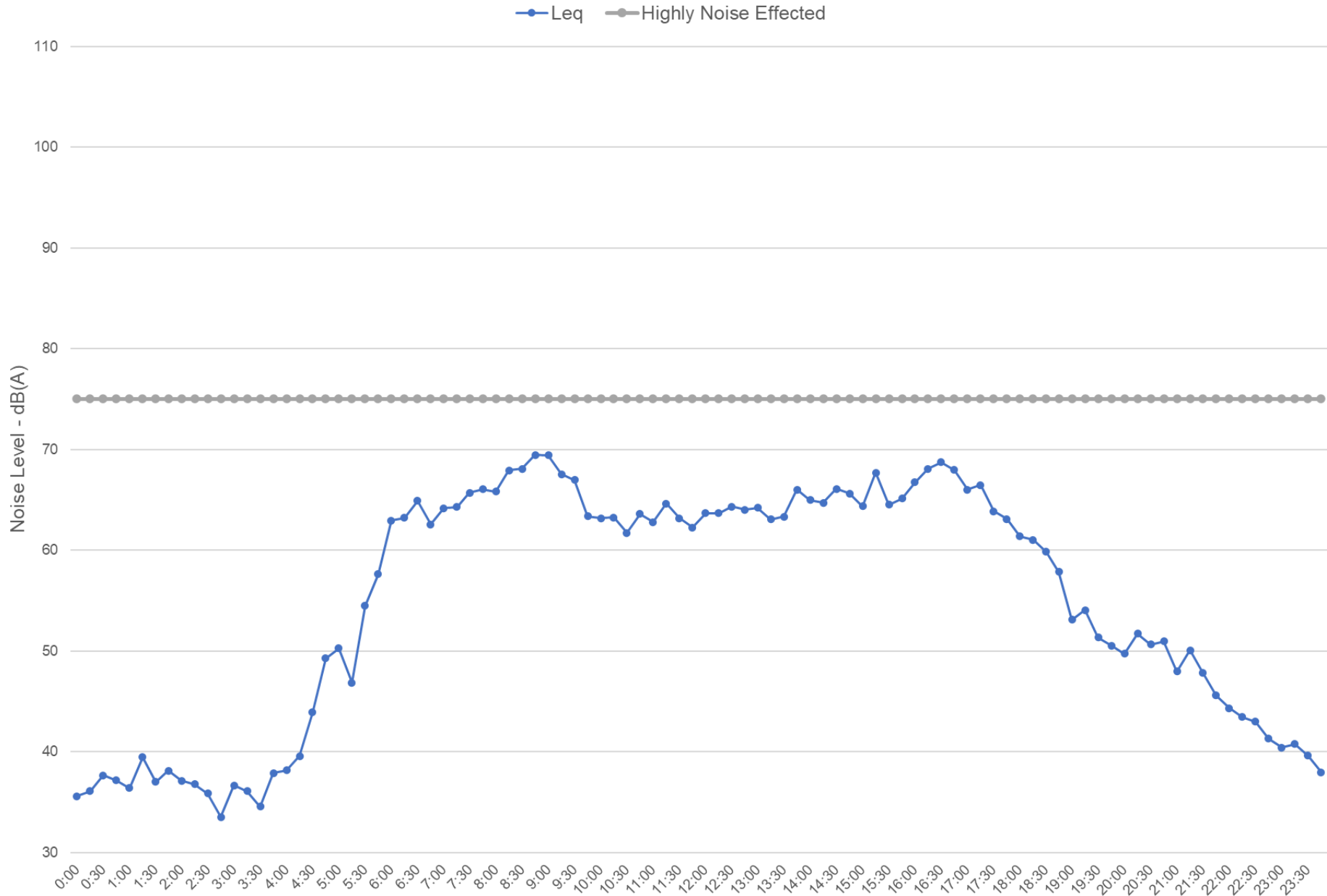
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Noise Monitoring: 30/05/2022



Noise Monitoring: 31/05/2022



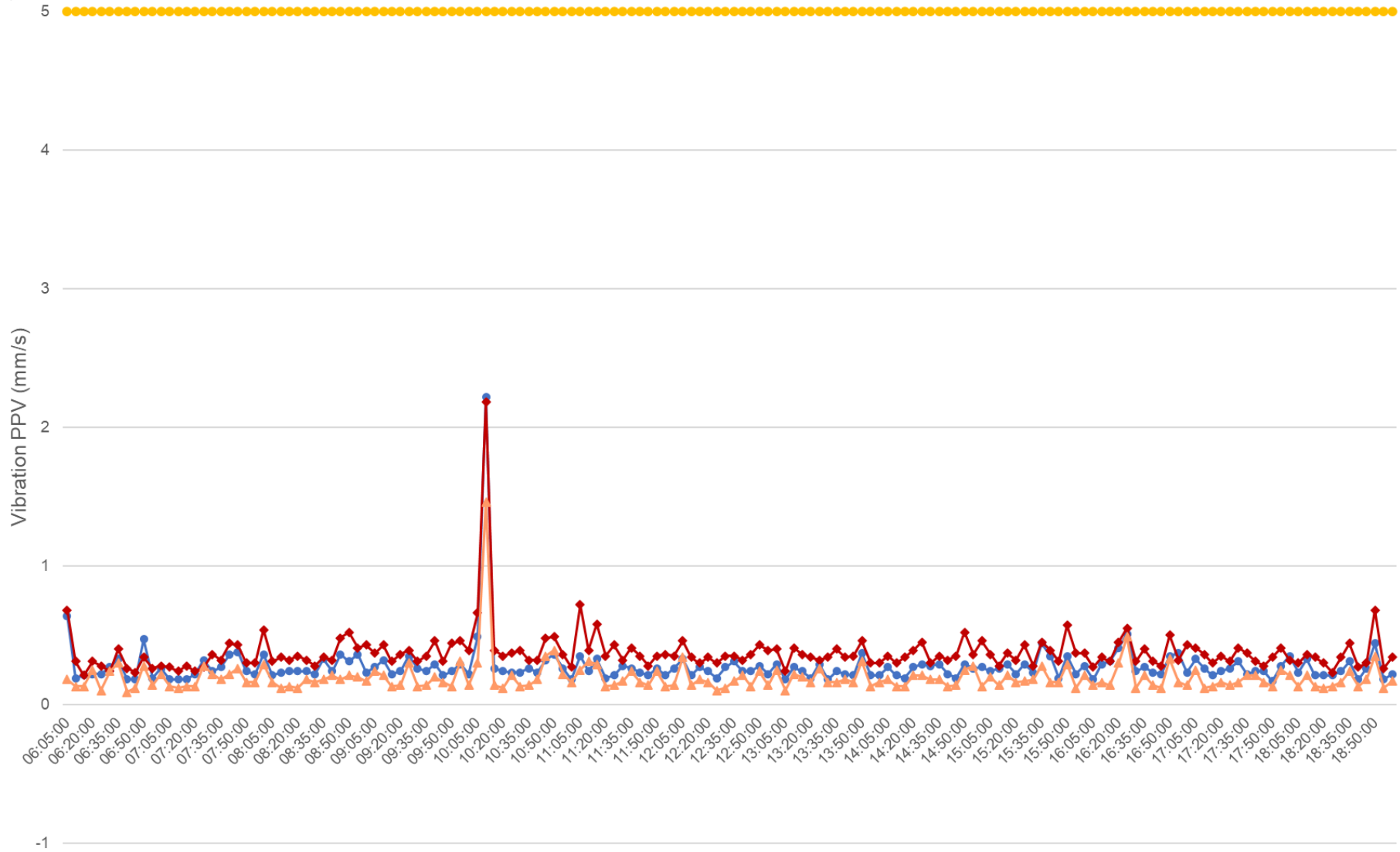
APPENDIX 2 – VIBRATION MONITORING RESULTS



ACOUSTIC LOGIC

Vibration Monitoring: 01/05/2022

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

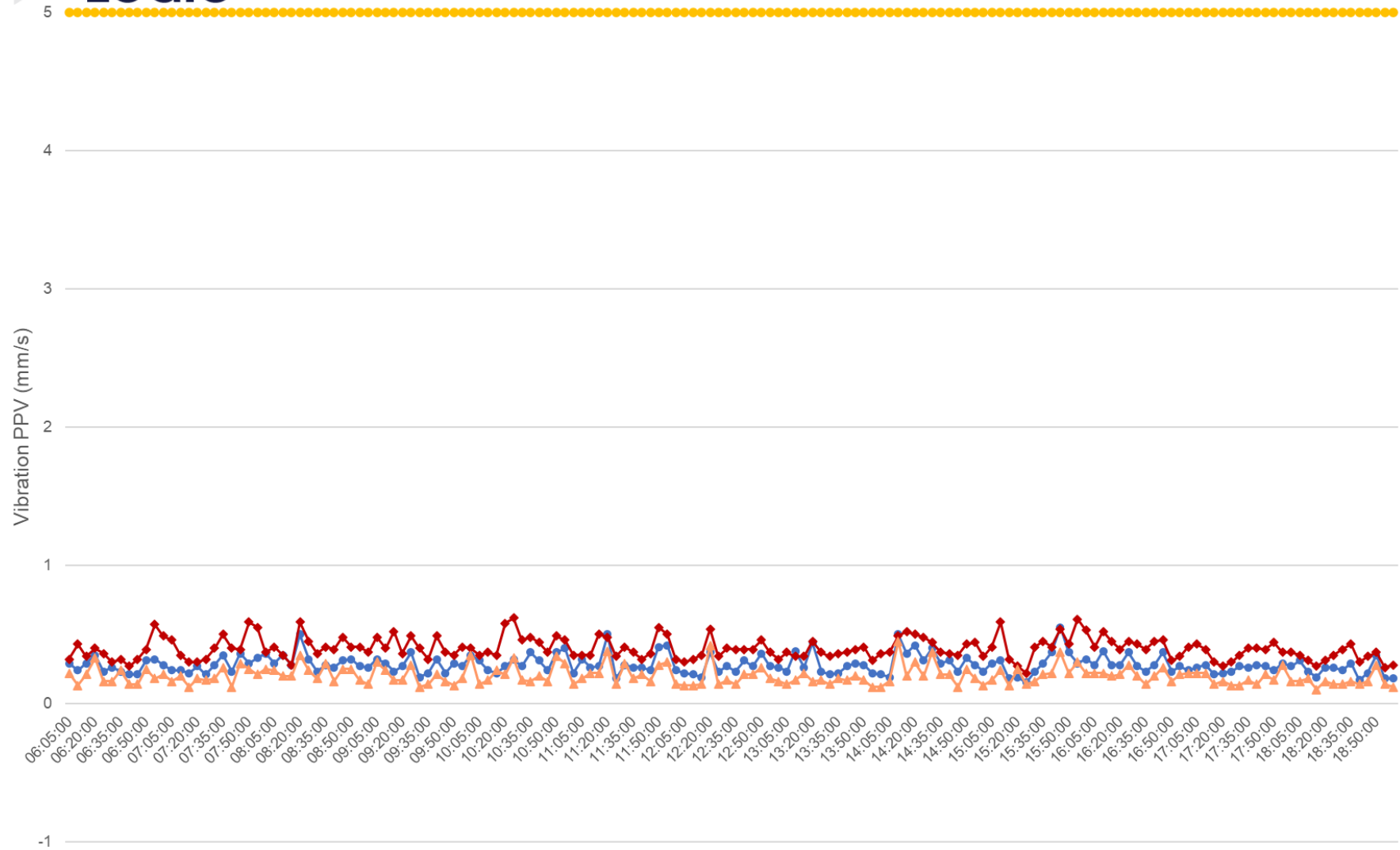




ACOUSTIC LOGIC

Vibration Monitoring: 02/05/2022

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

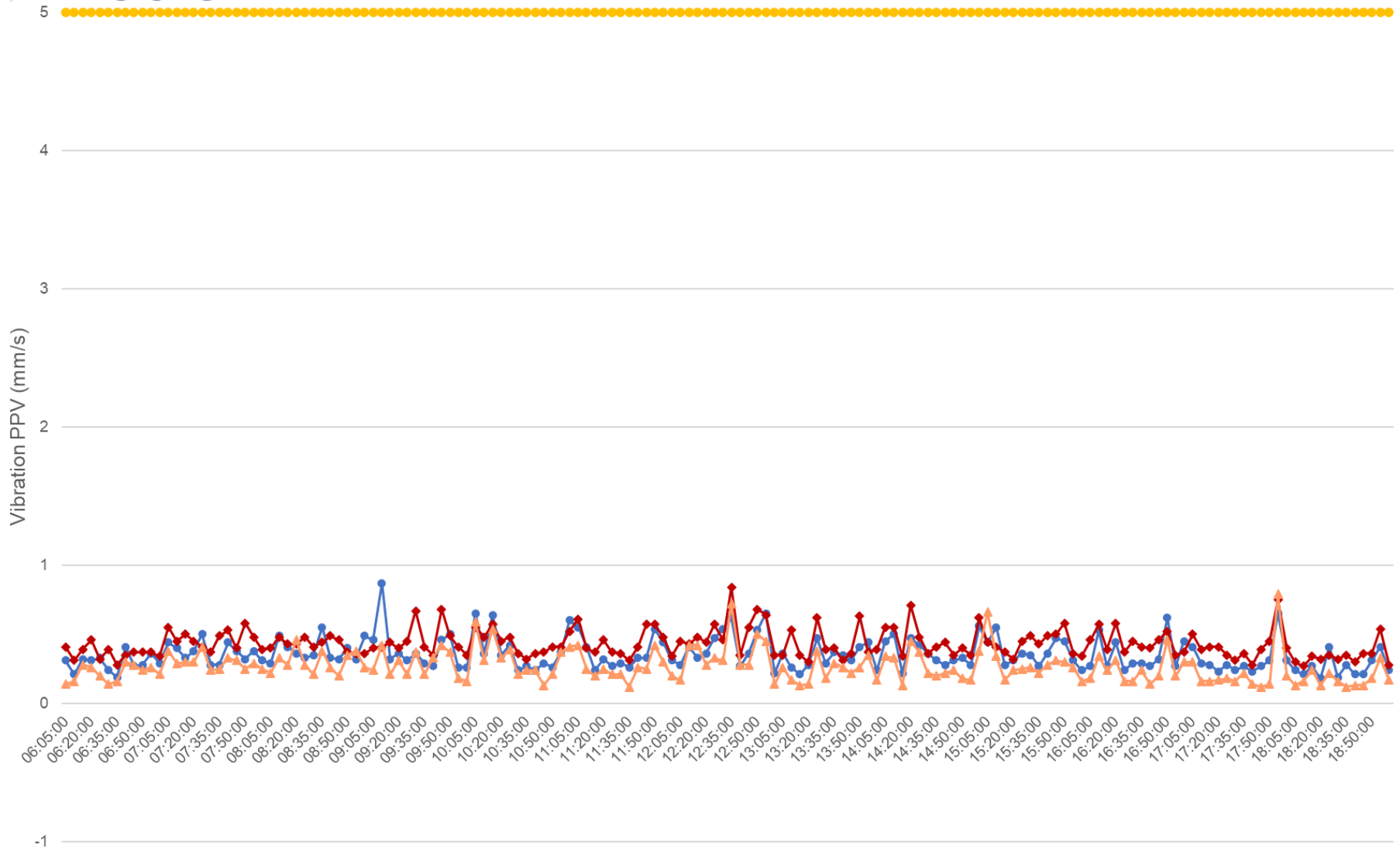




ACOUSTIC LOGIC

Vibration Monitoring: 03/05/2022

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

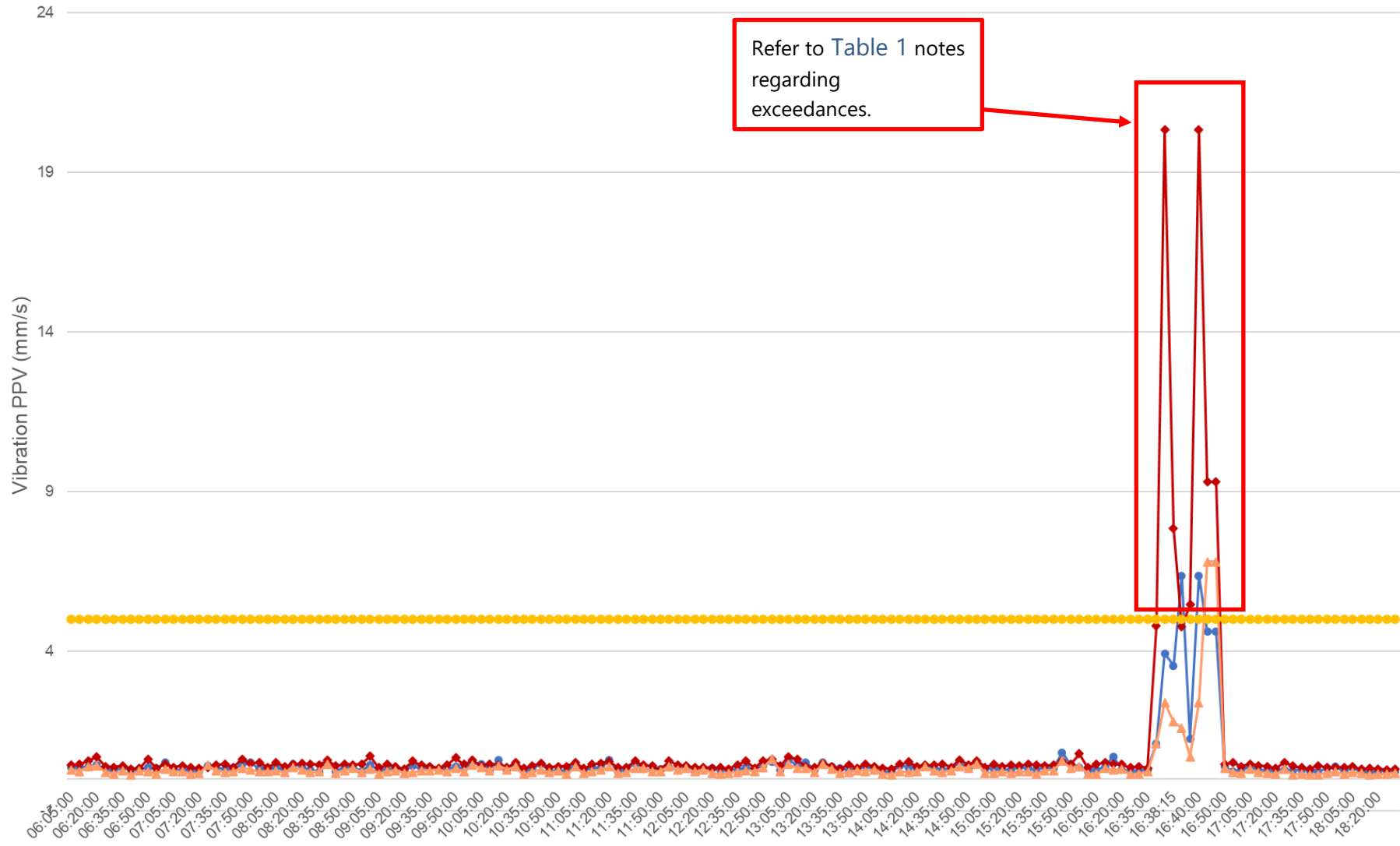




ACOUSTIC LOGIC

Vibration Monitoring: 04/05/2022

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

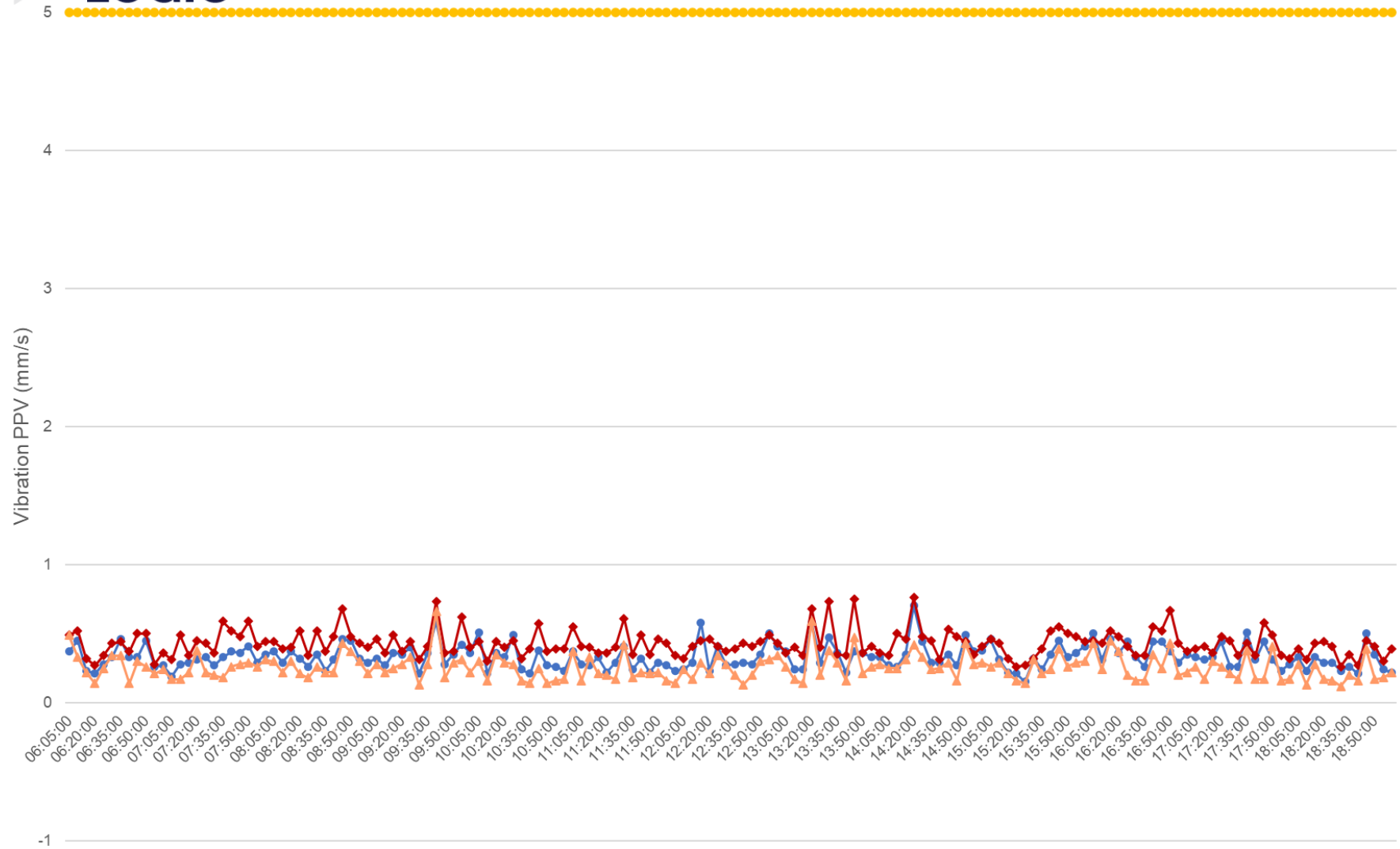




ACOUSTIC LOGIC

Vibration Monitoring: 05/05/2022

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

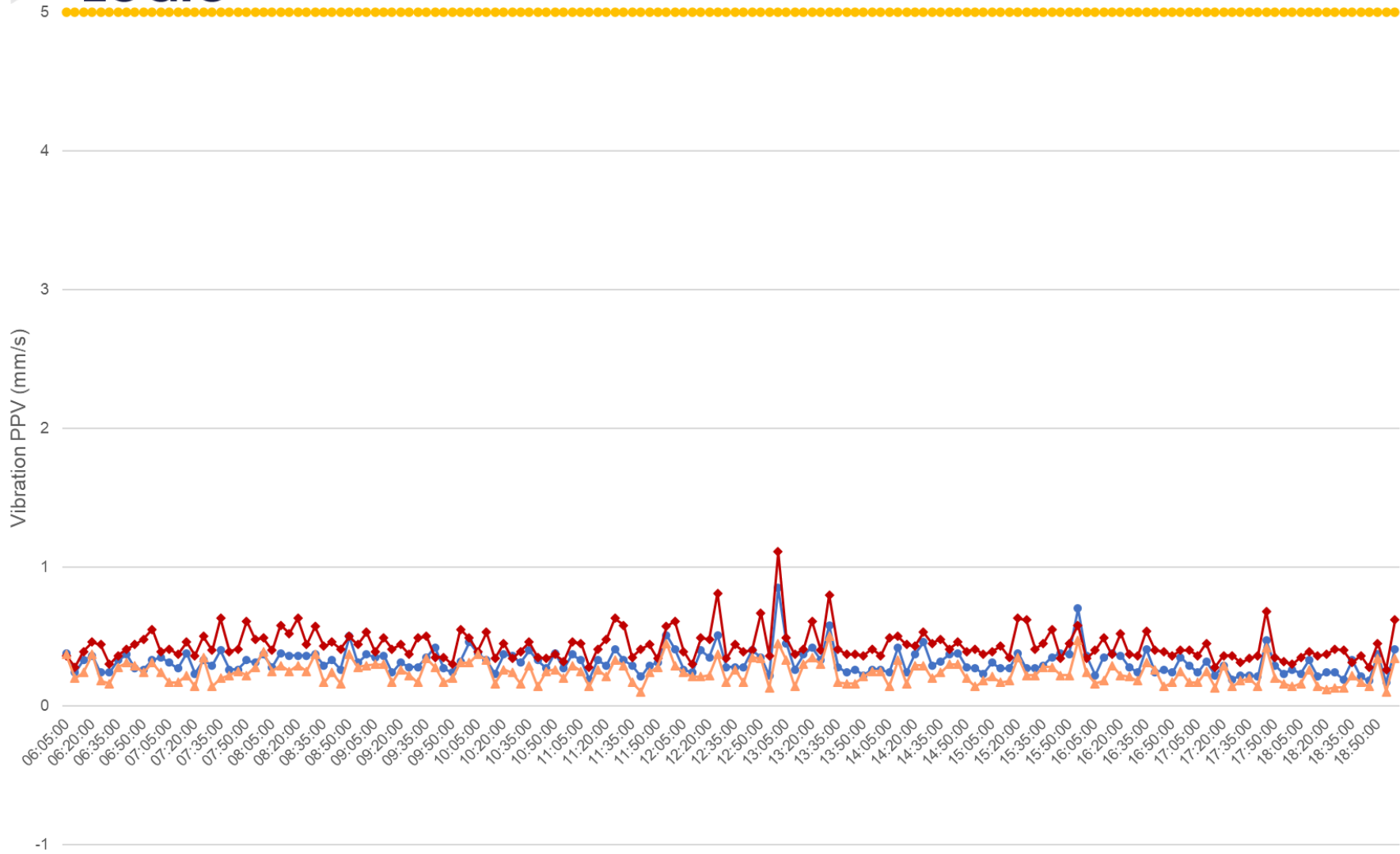




ACOUSTIC LOGIC

Vibration Monitoring: 06/05/2022

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

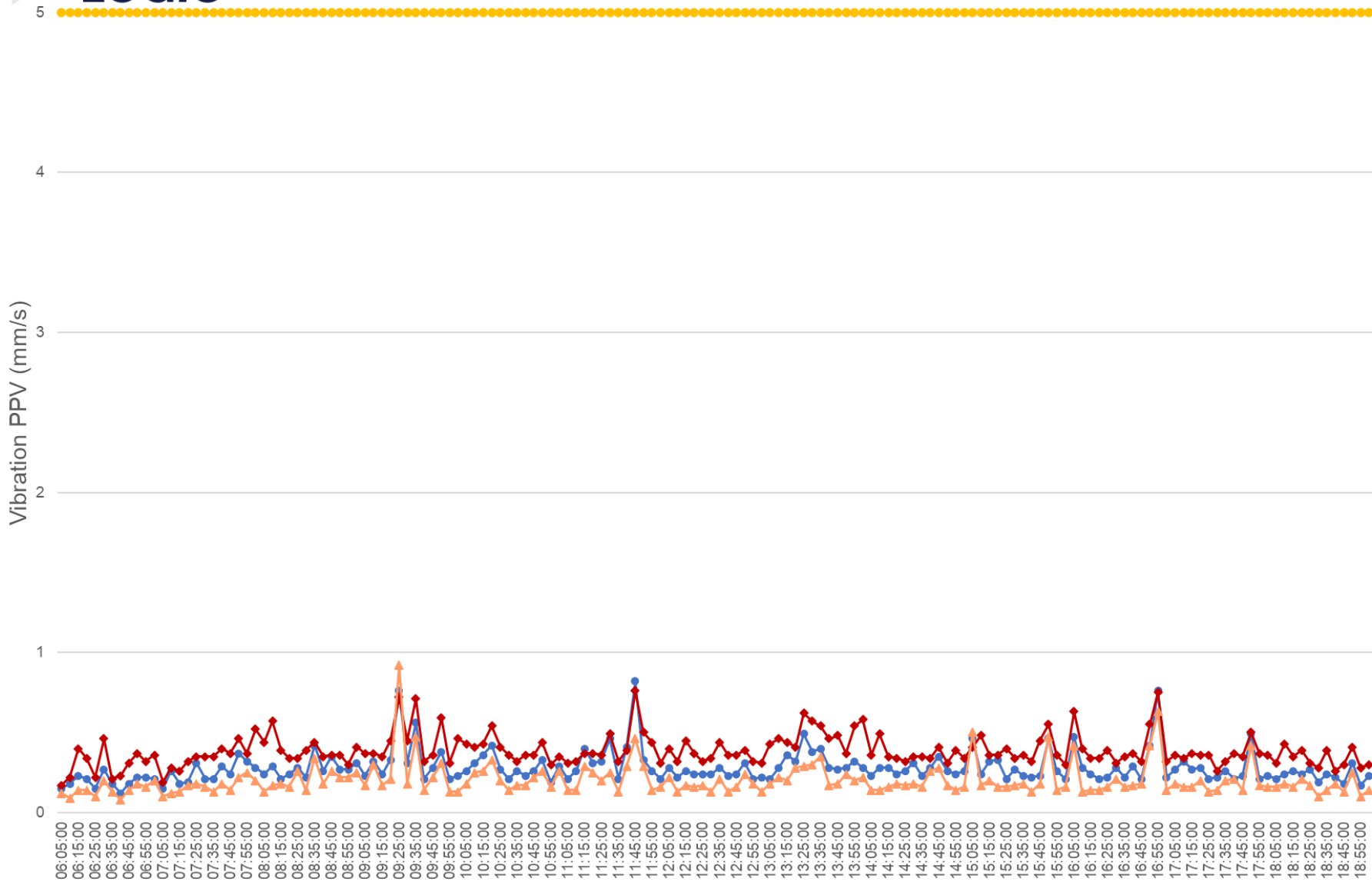




ACOUSTIC LOGIC

Vibration Monitoring: 07/05/2022

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

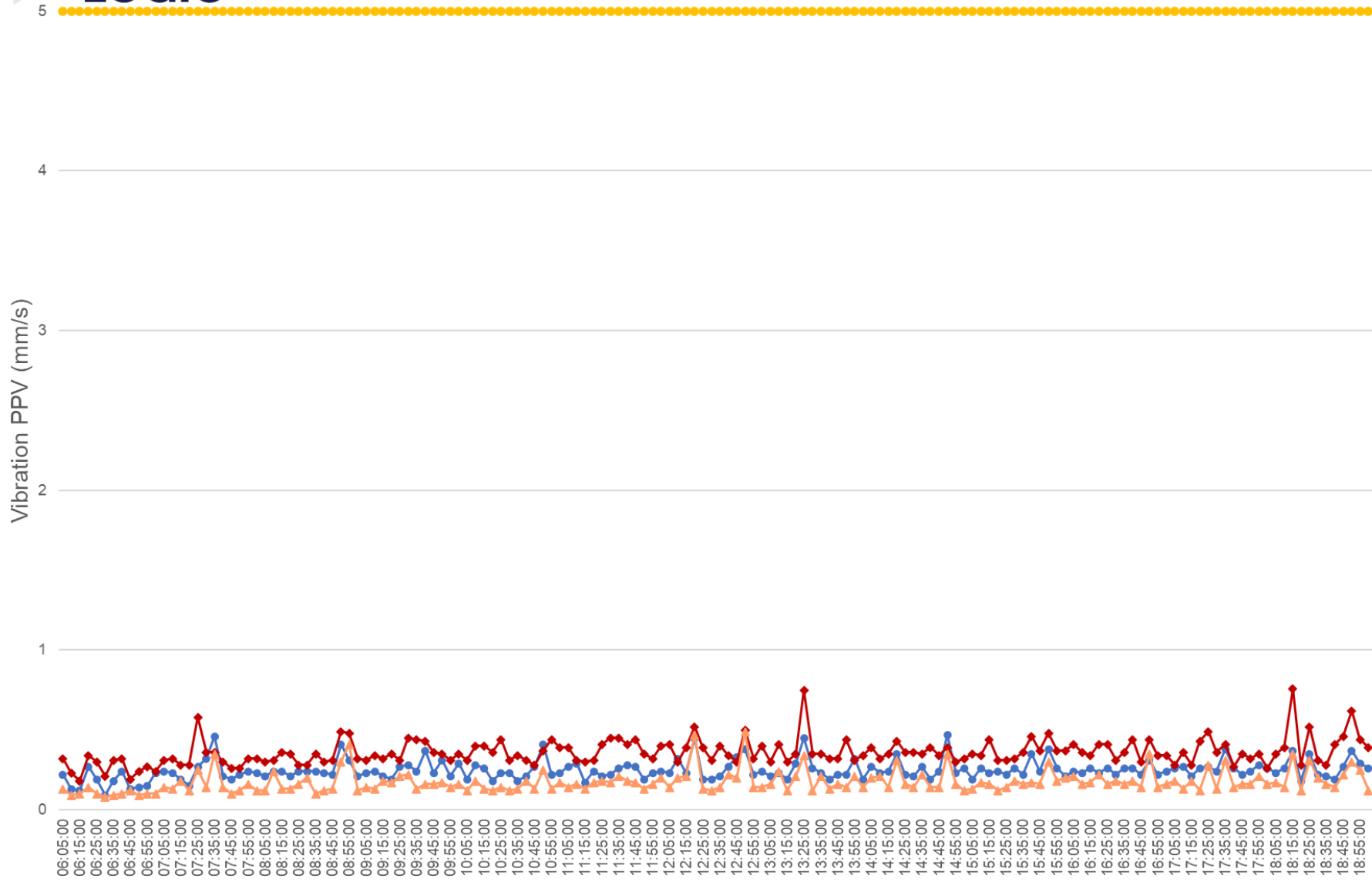




ACOUSTIC LOGIC

Vibration Monitoring: 08/05/2022

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

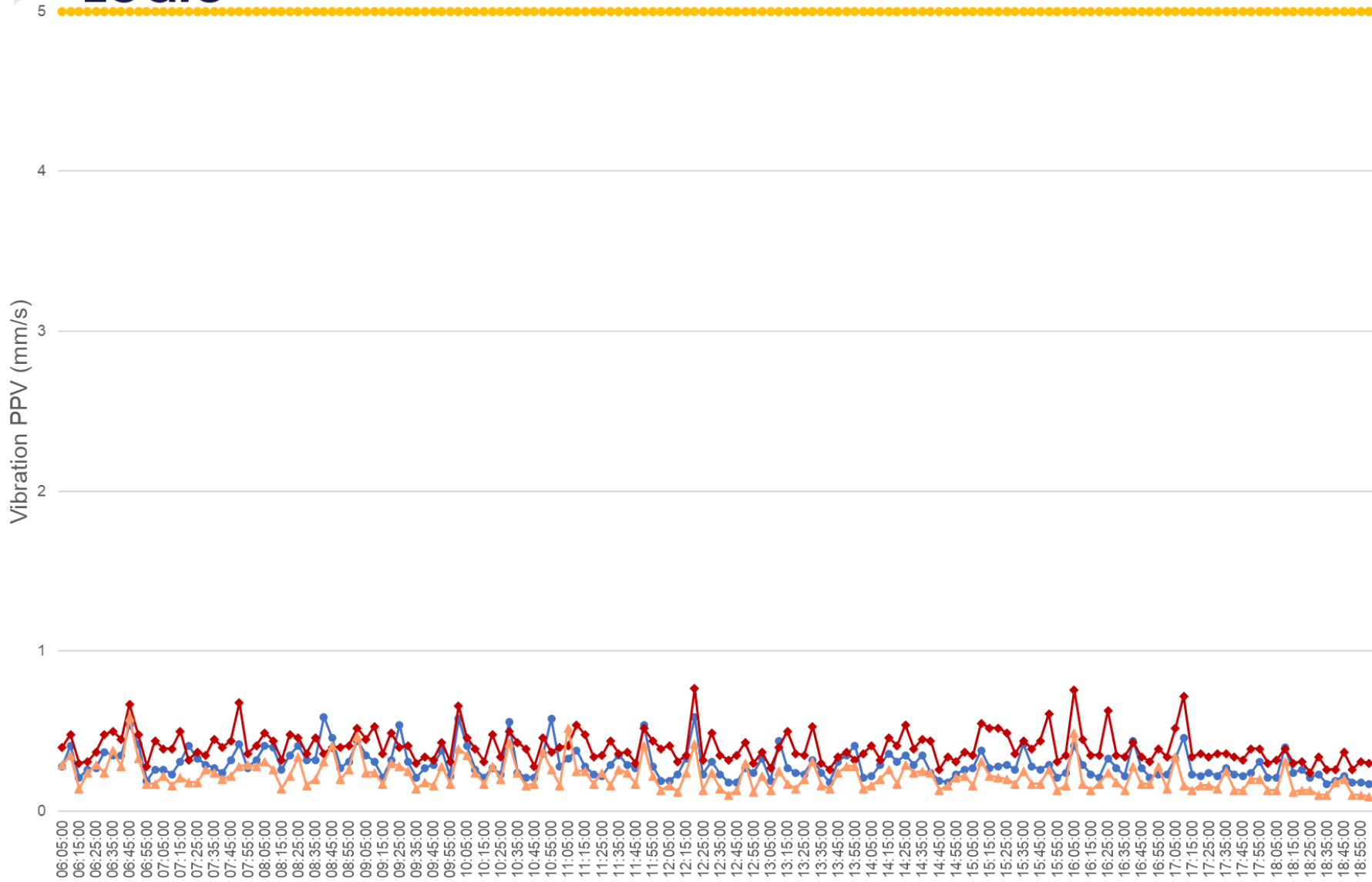




ACOUSTIC LOGIC

Vibration Monitoring: 09/05/2022

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

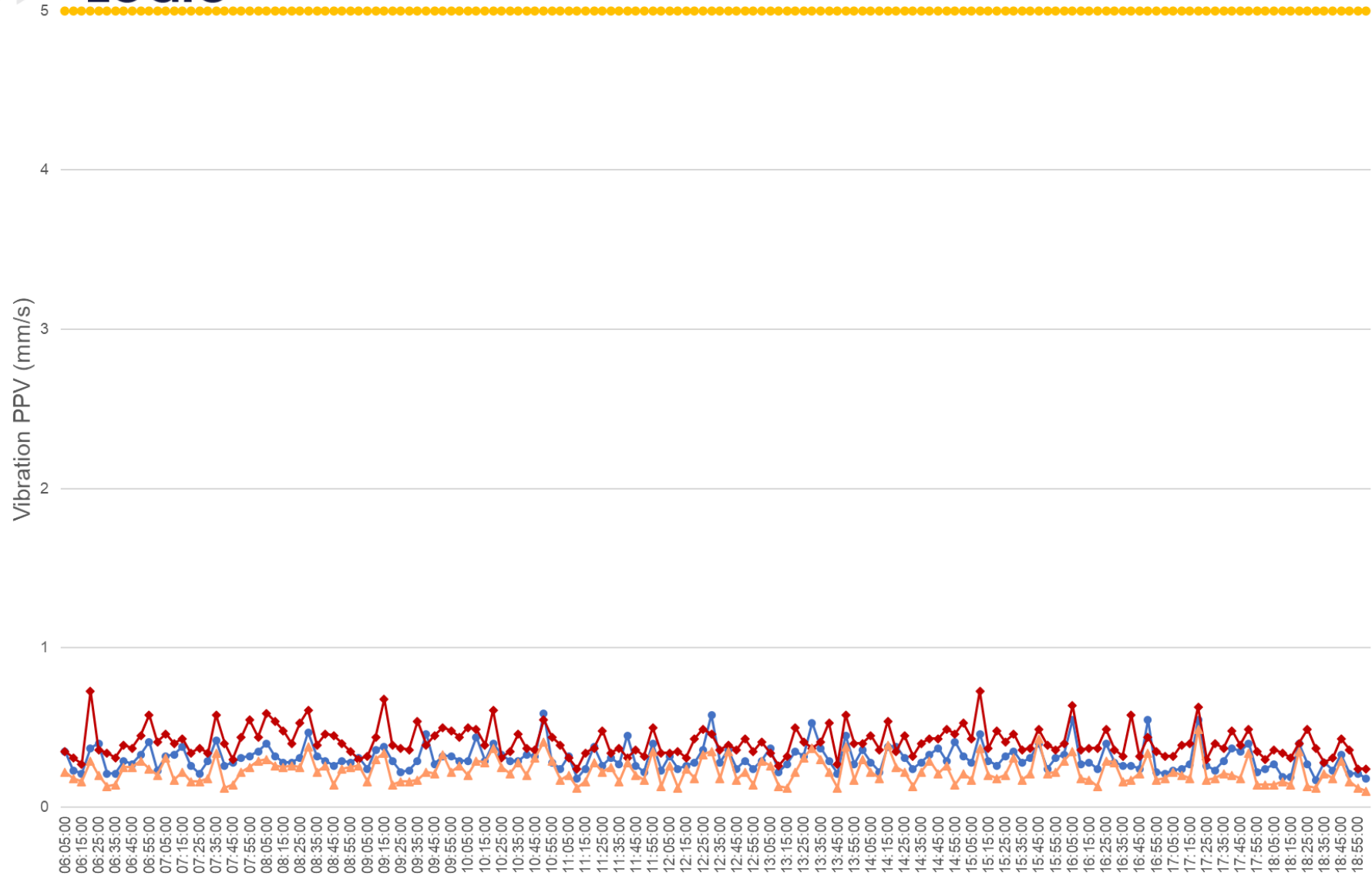




ACOUSTIC LOGIC

Vibration Monitoring: 10/05/2022

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

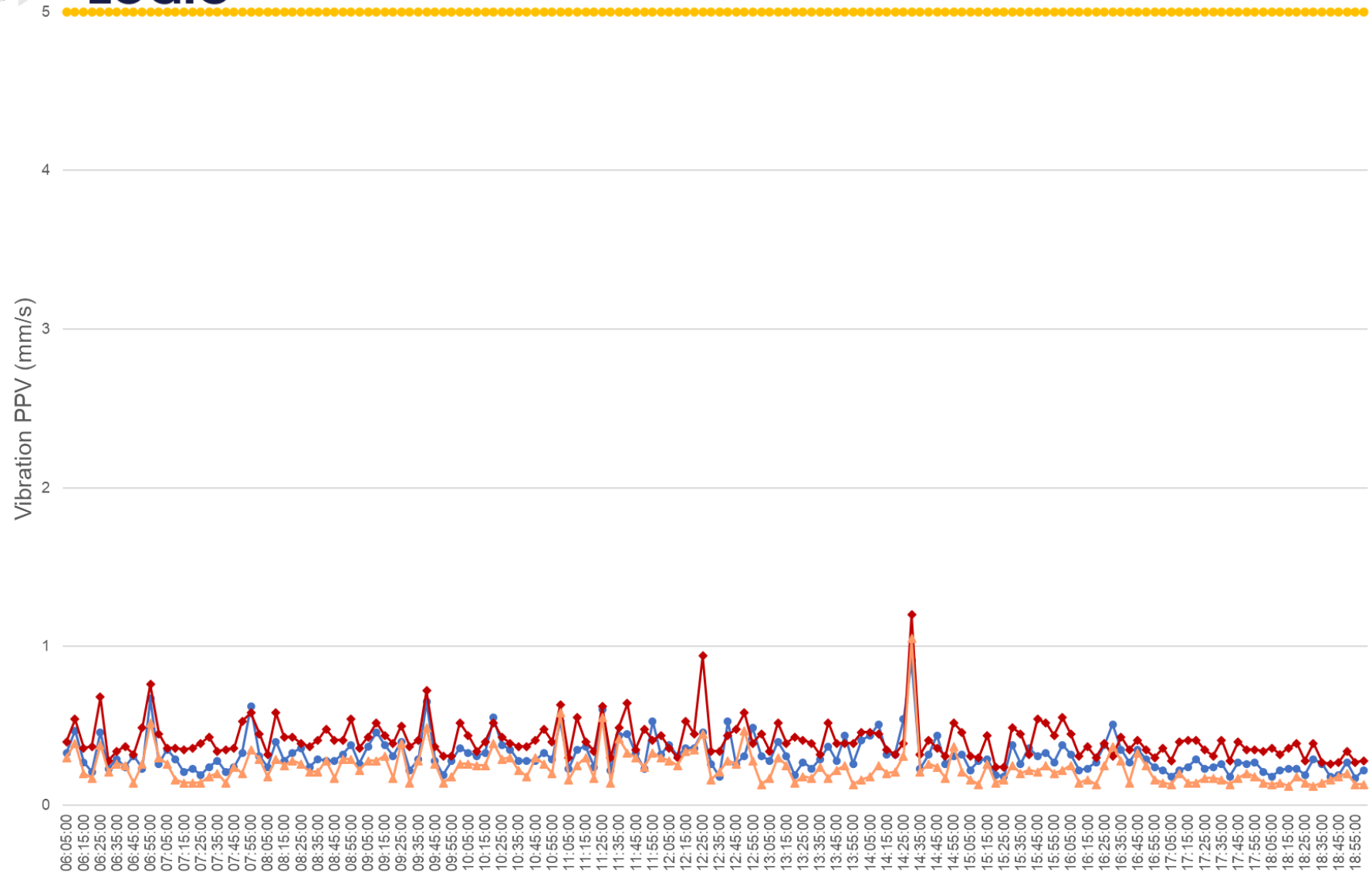




ACOUSTIC LOGIC

Vibration Monitoring: 11/05/2022

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

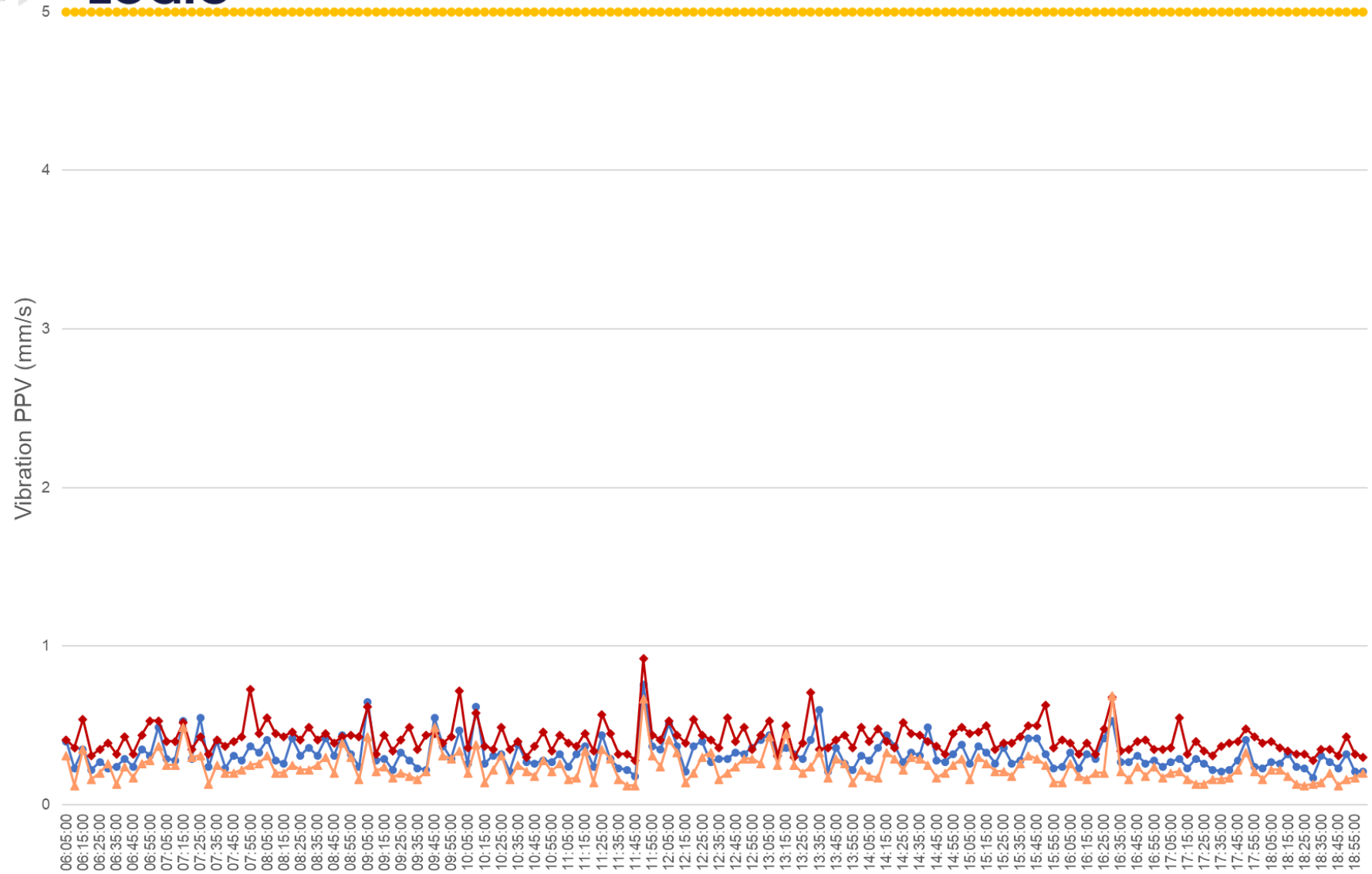




ACOUSTIC LOGIC

Vibration Monitoring: 12/05/2022

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

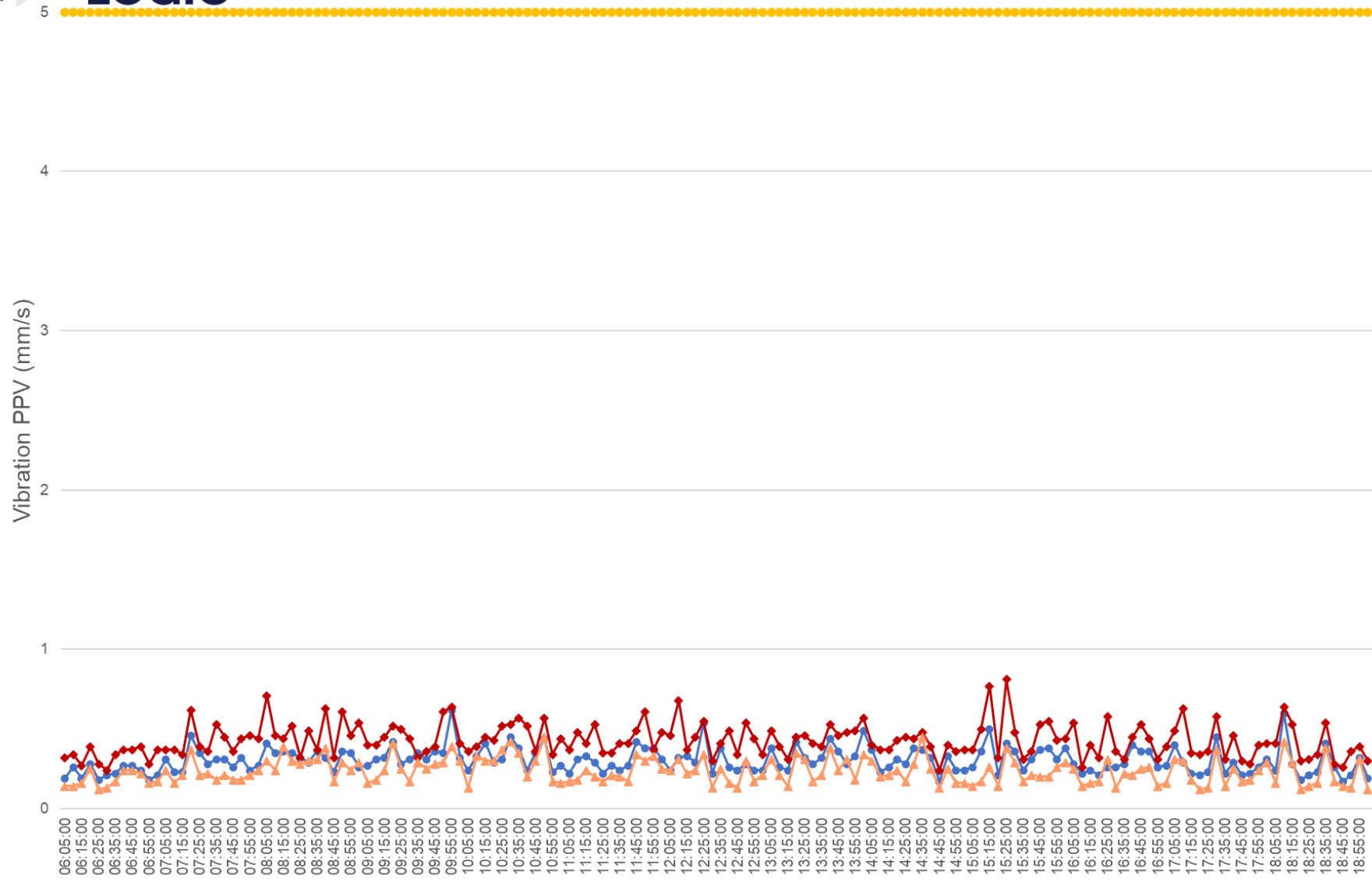




ACOUSTIC LOGIC

Vibration Monitoring: 13/05/2022

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

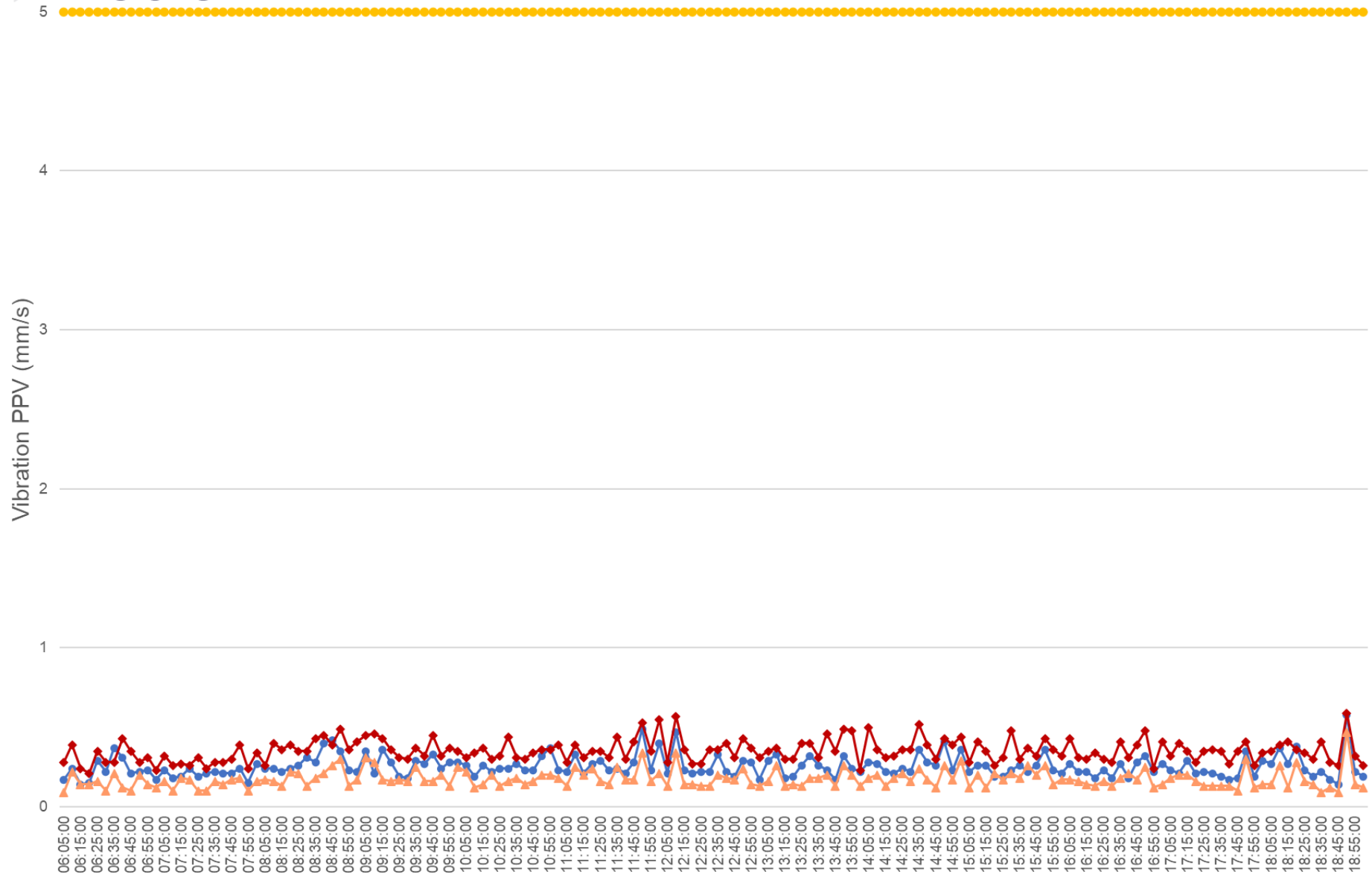




ACOUSTIC LOGIC

Vibration Monitoring: 14/05/2022

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

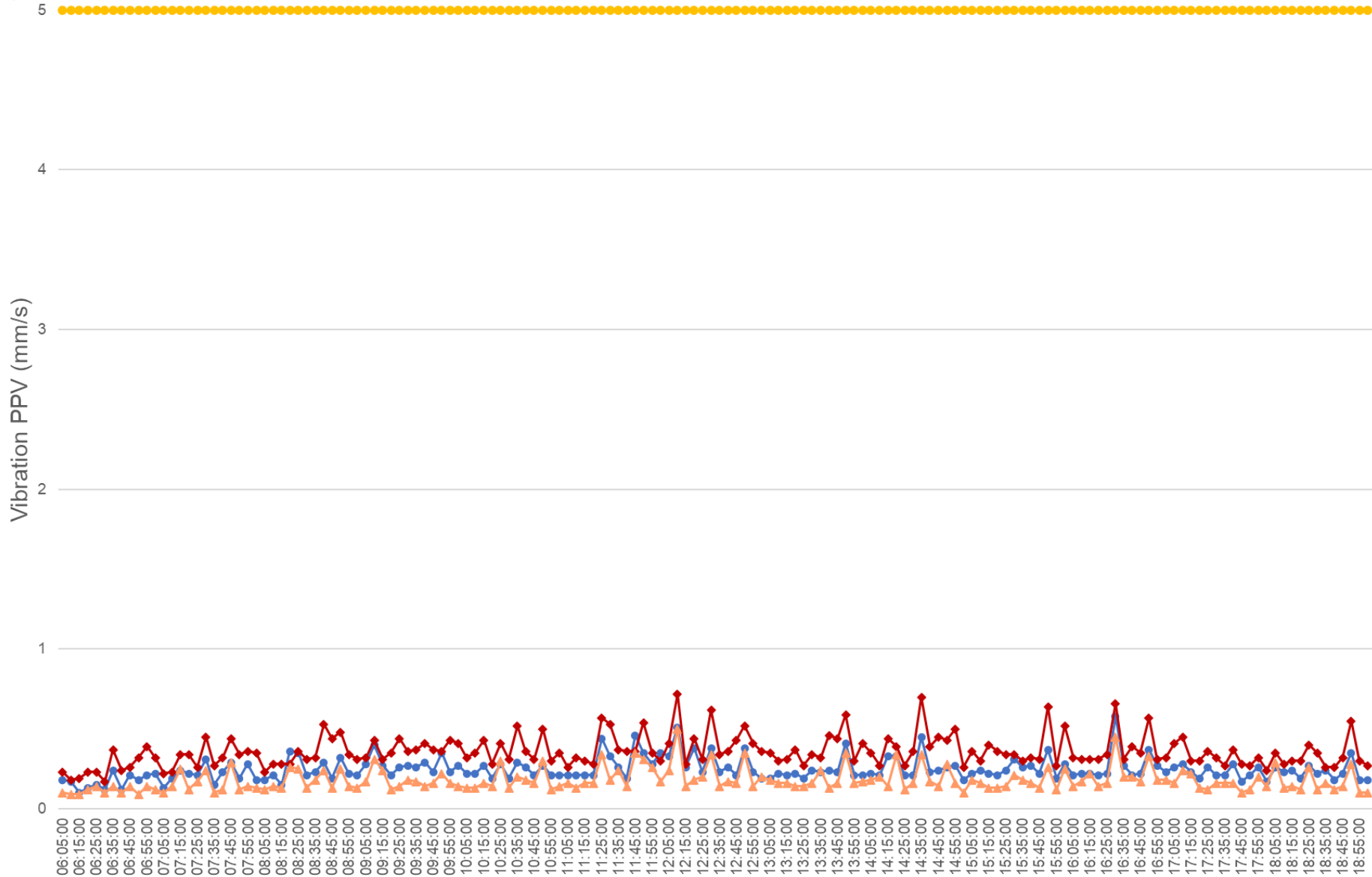




ACOUSTIC LOGIC

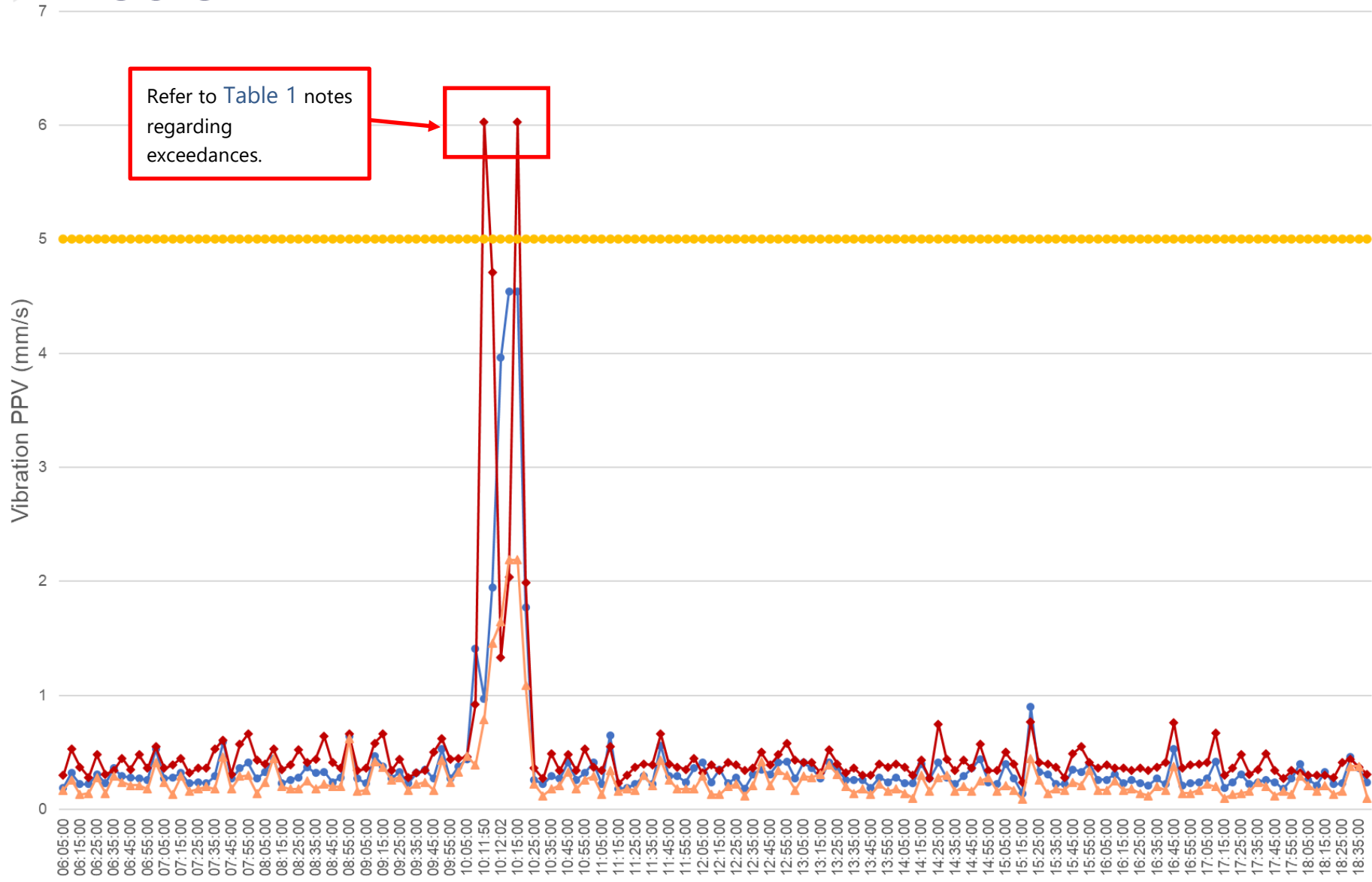
Vibration Monitoring: 15/05/2022

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





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

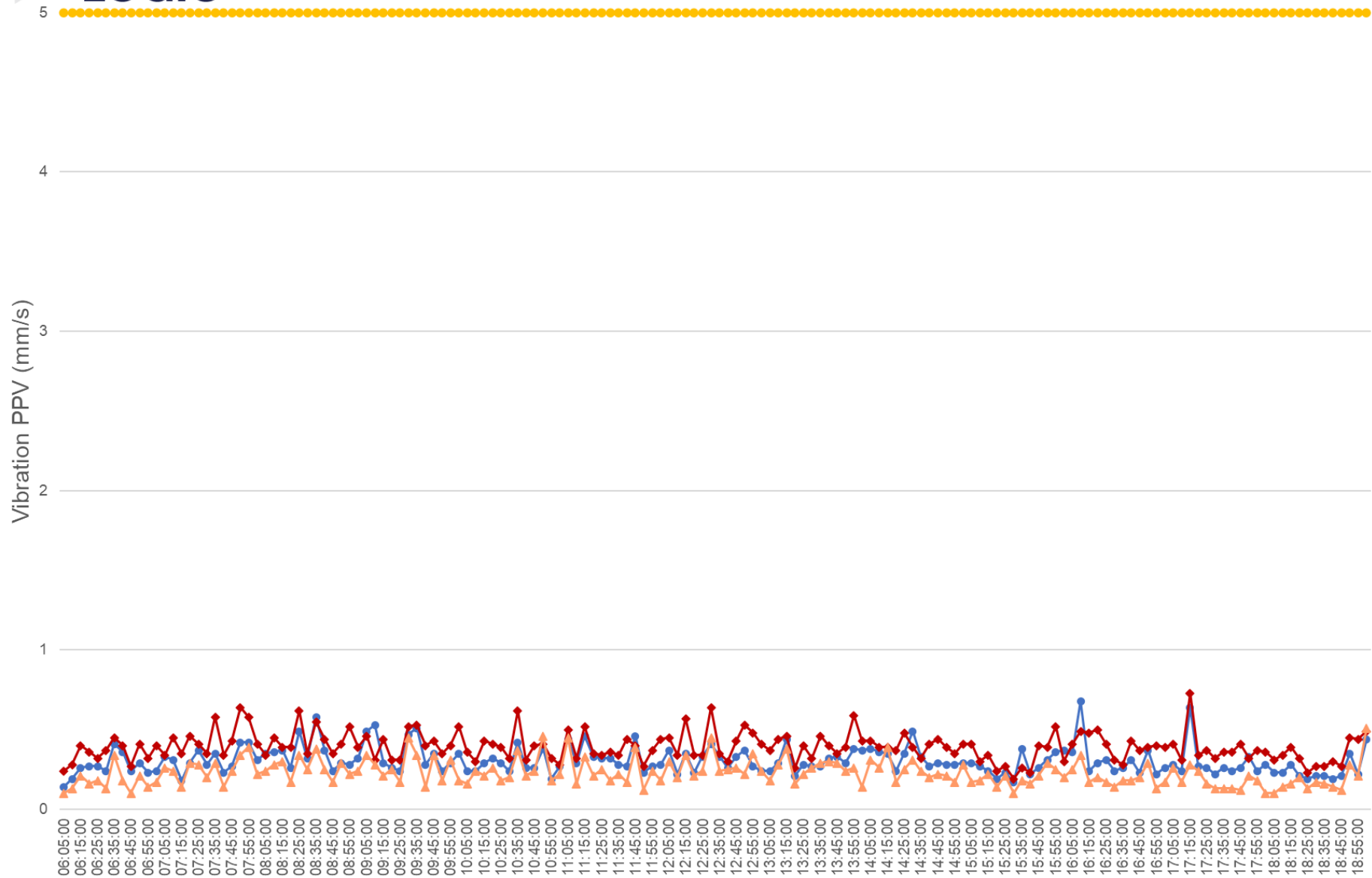




ACOUSTIC LOGIC

Vibration Monitoring: 17/05/2022

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

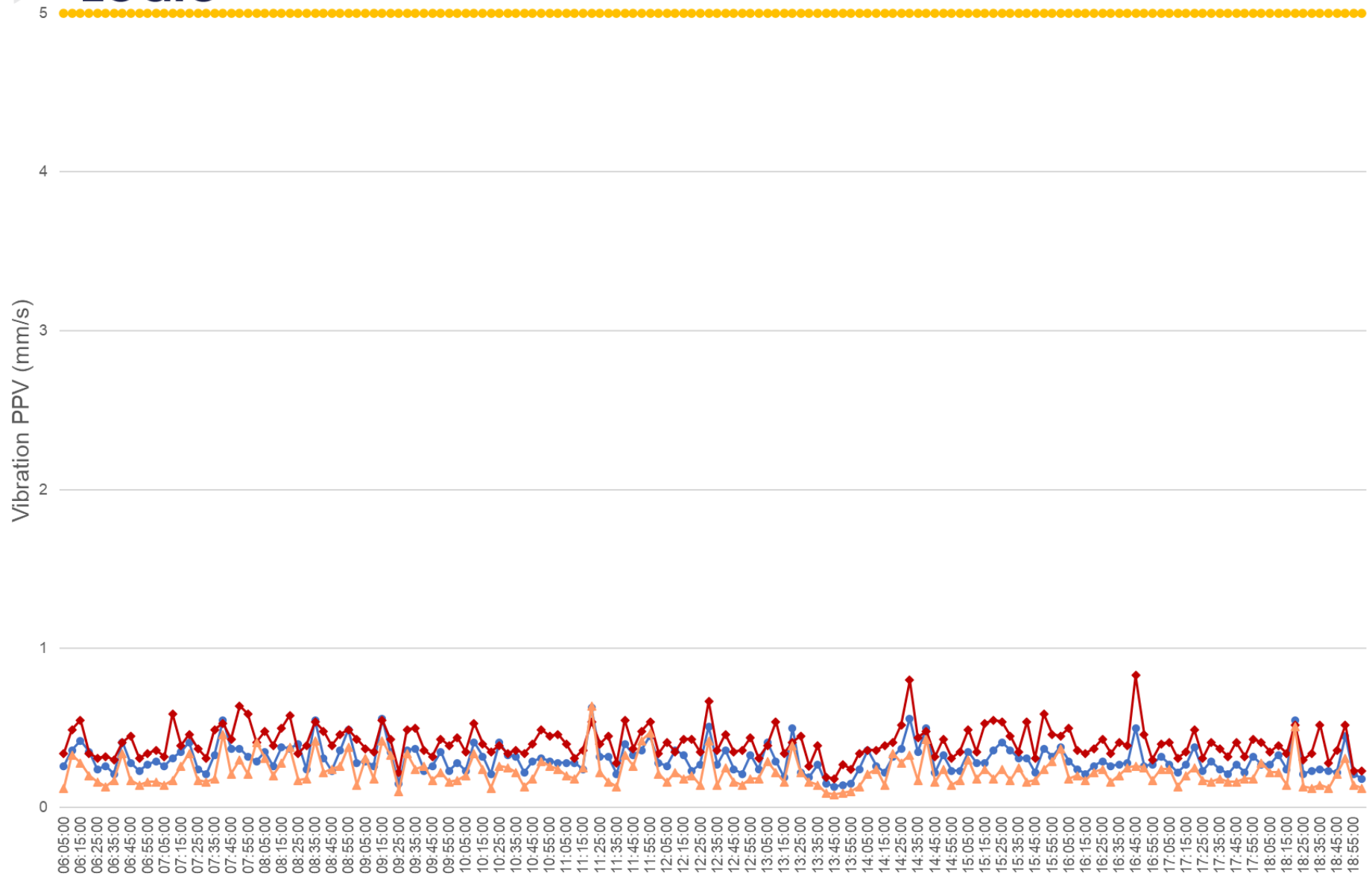




ACOUSTIC LOGIC

Vibration Monitoring: 18/05/2022

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

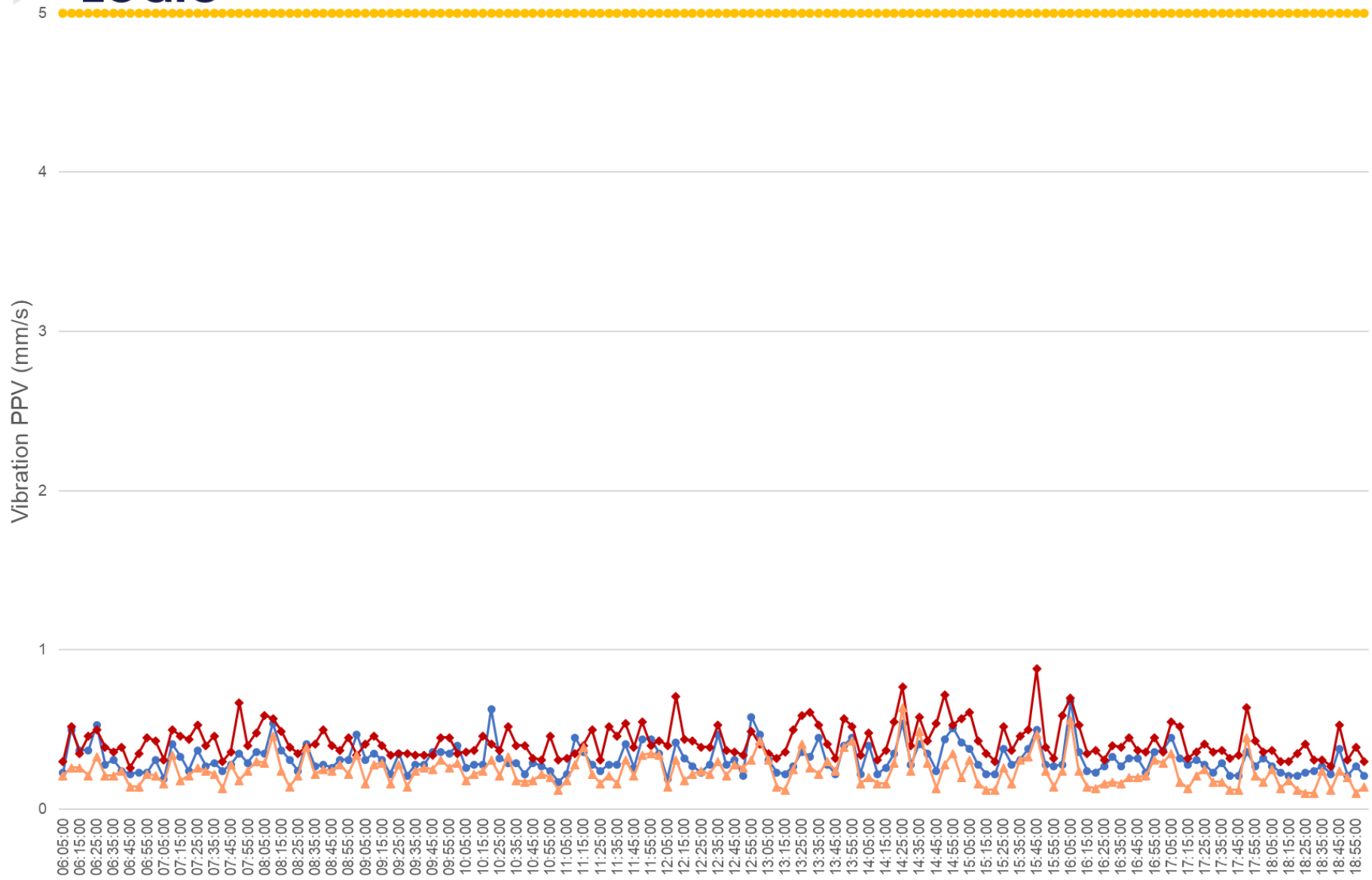




ACOUSTIC LOGIC

Vibration Monitoring: 19/05/2022

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

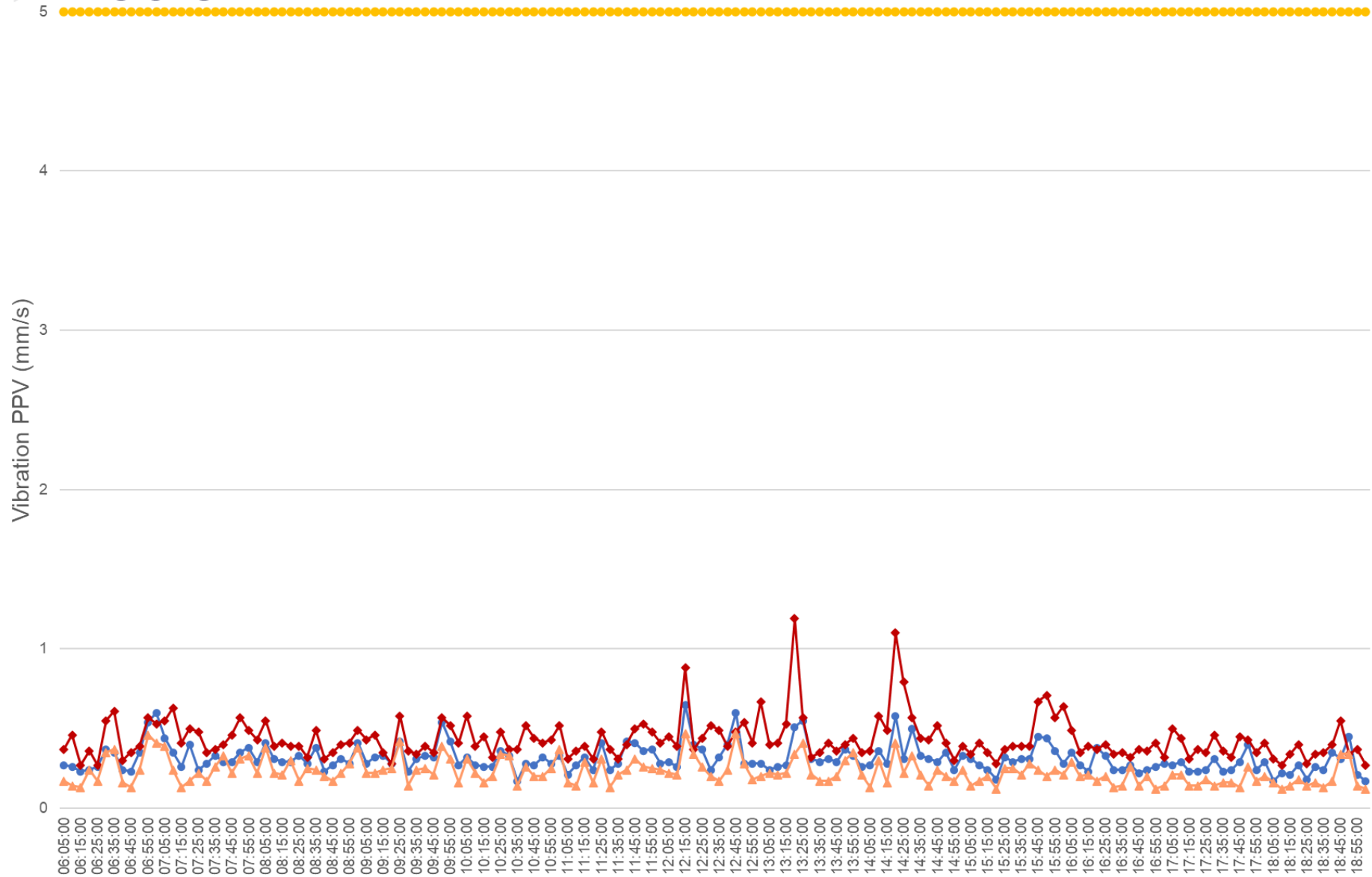




ACOUSTIC LOGIC

Vibration Monitoring: 20/05/2022

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

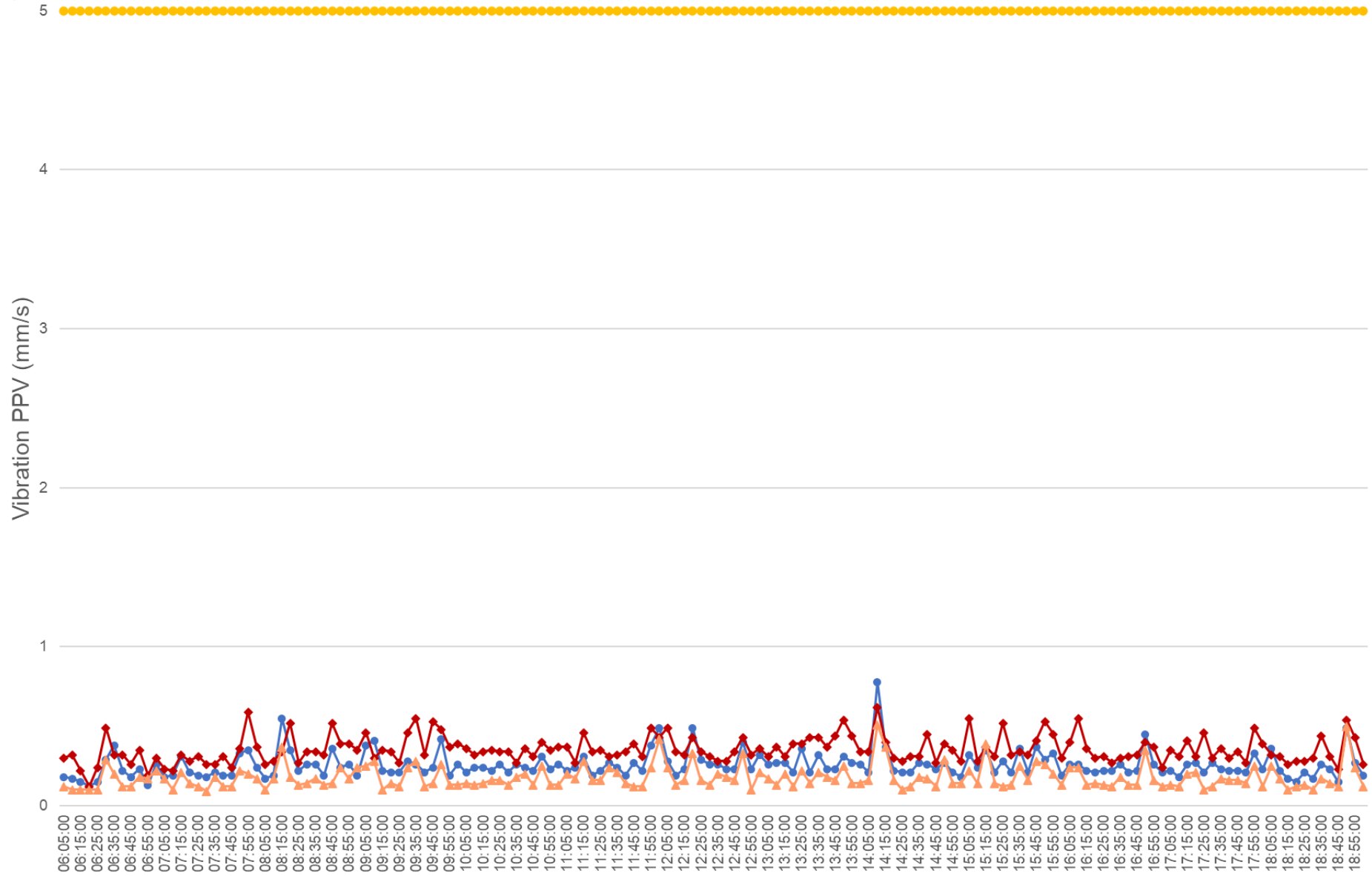




ACOUSTIC LOGIC

Vibration Monitoring: 21/05/2022

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

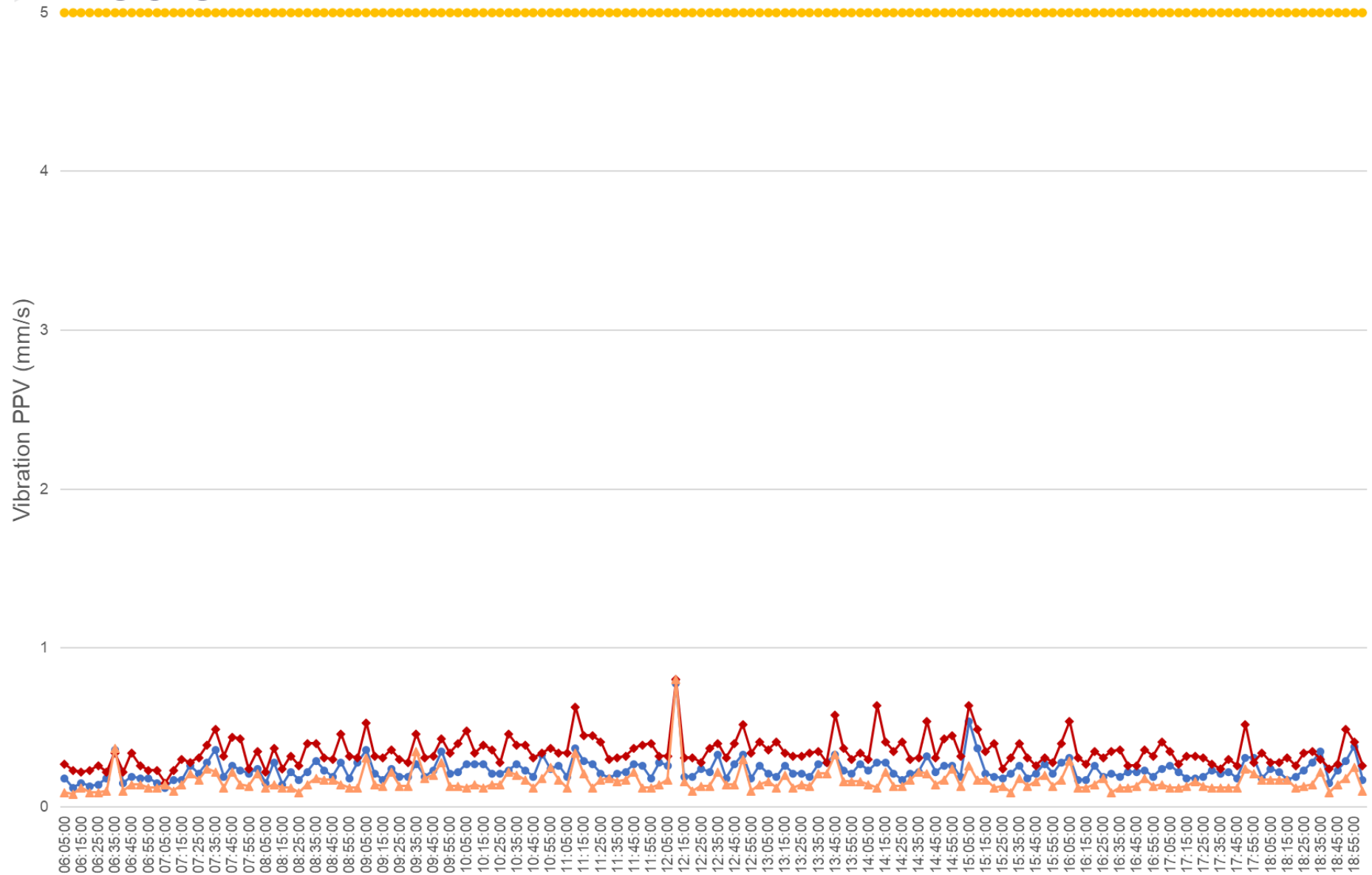




ACOUSTIC LOGIC

Vibration Monitoring: 22/05/2022

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

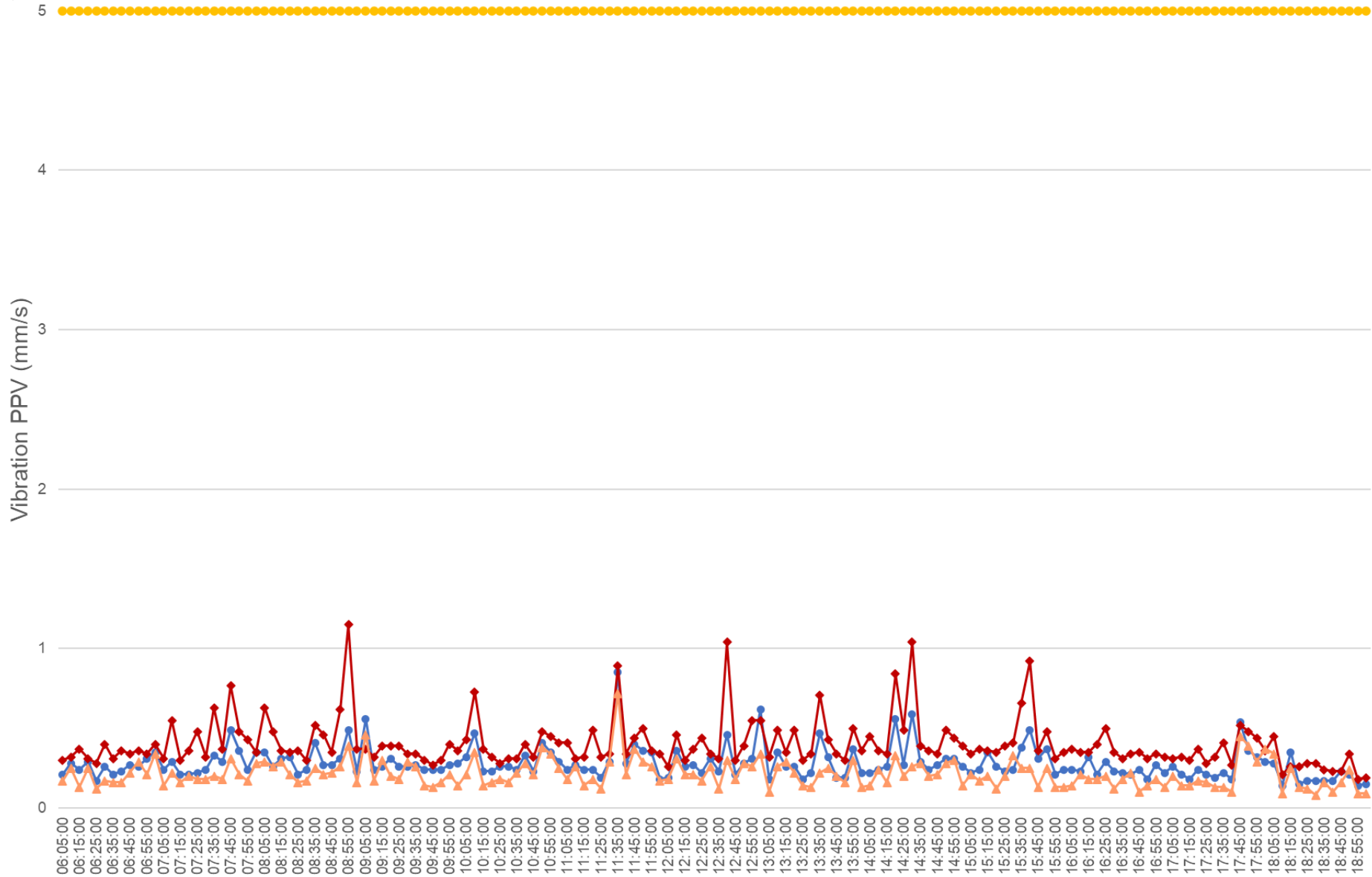




ACOUSTIC LOGIC

Vibration Monitoring: 23/05/2022

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

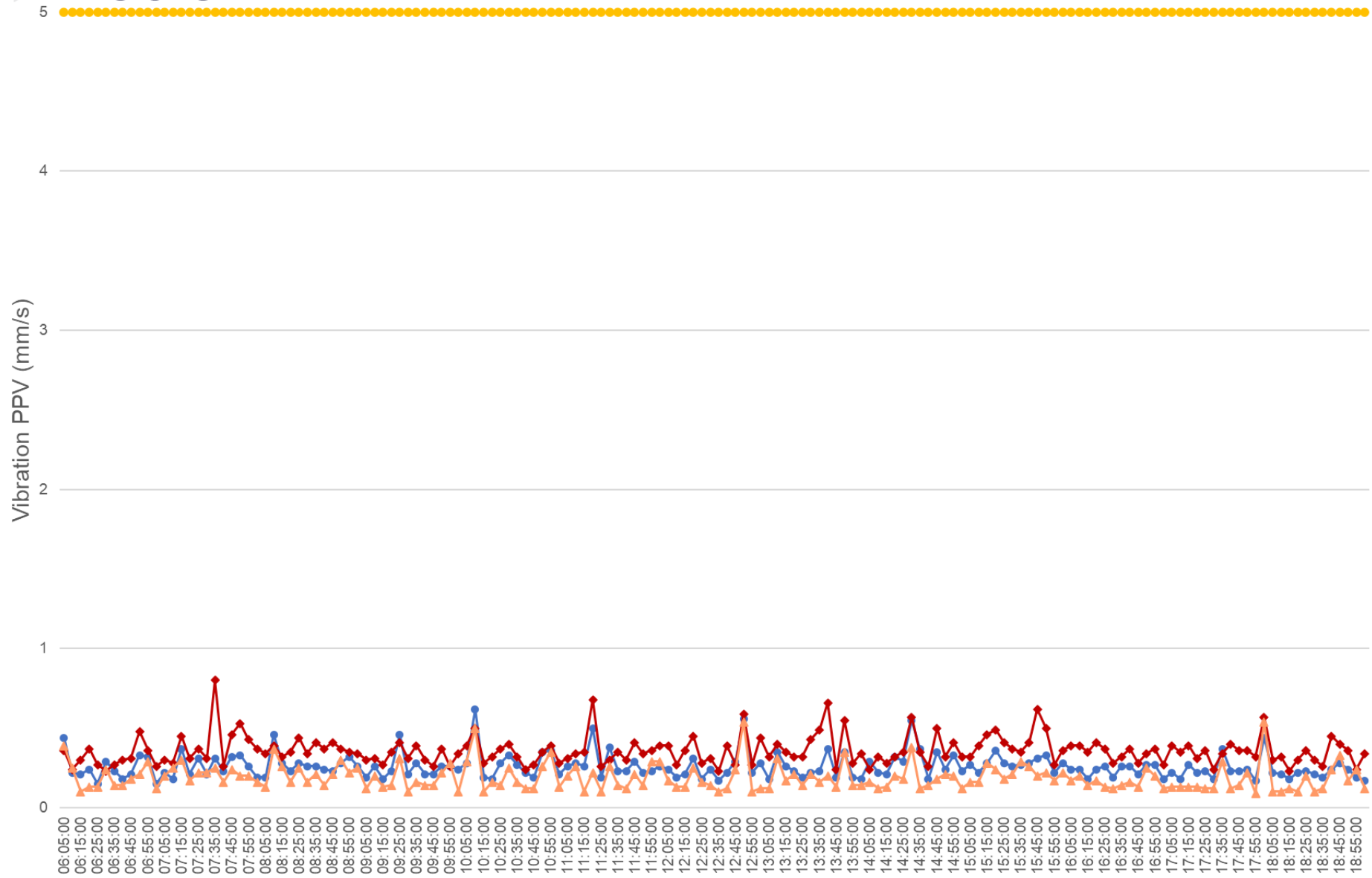




ACOUSTIC LOGIC

Vibration Monitoring: 24/05/2022

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

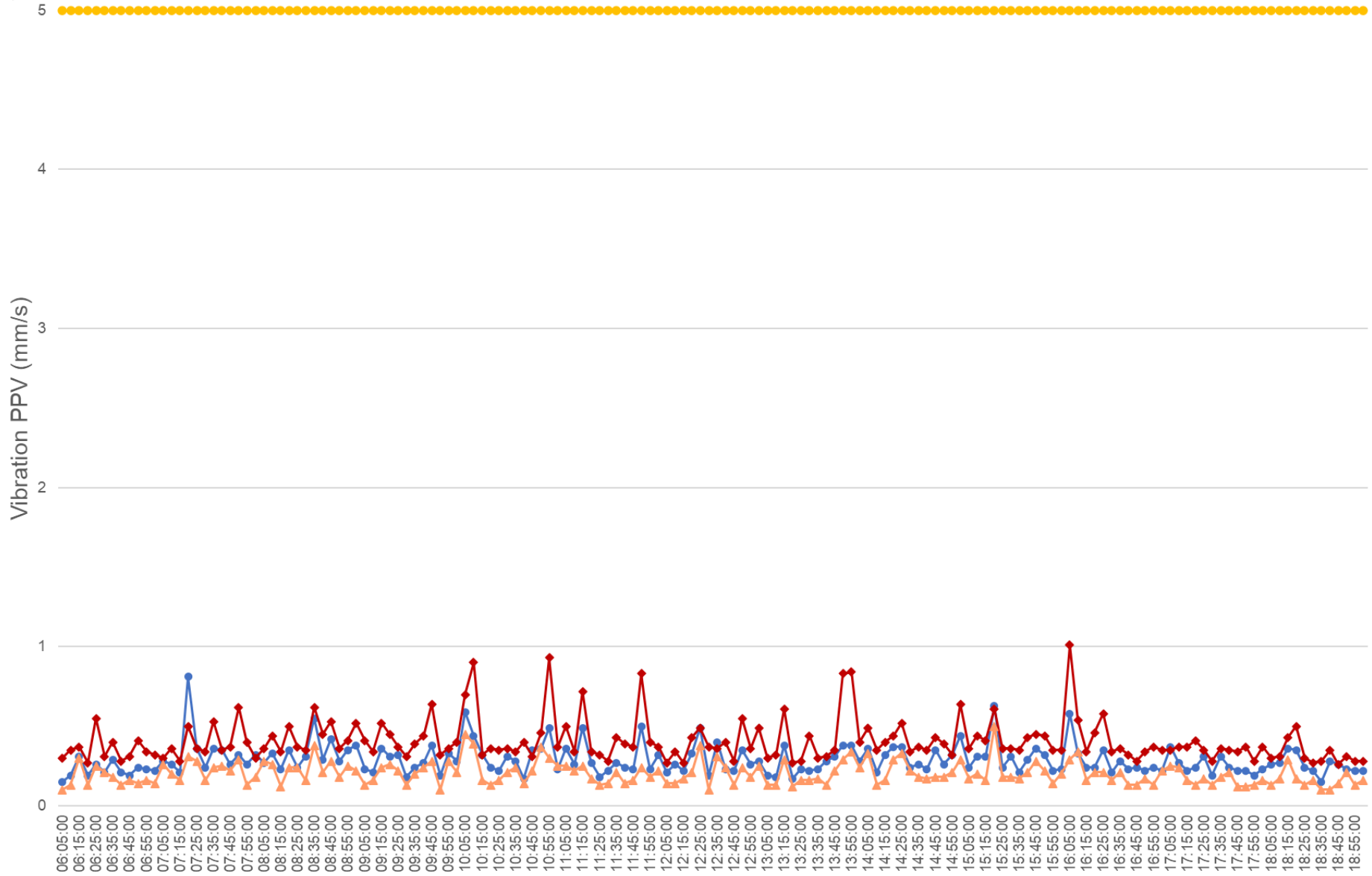




ACOUSTIC LOGIC

Vibration Monitoring: 25/05/2022

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

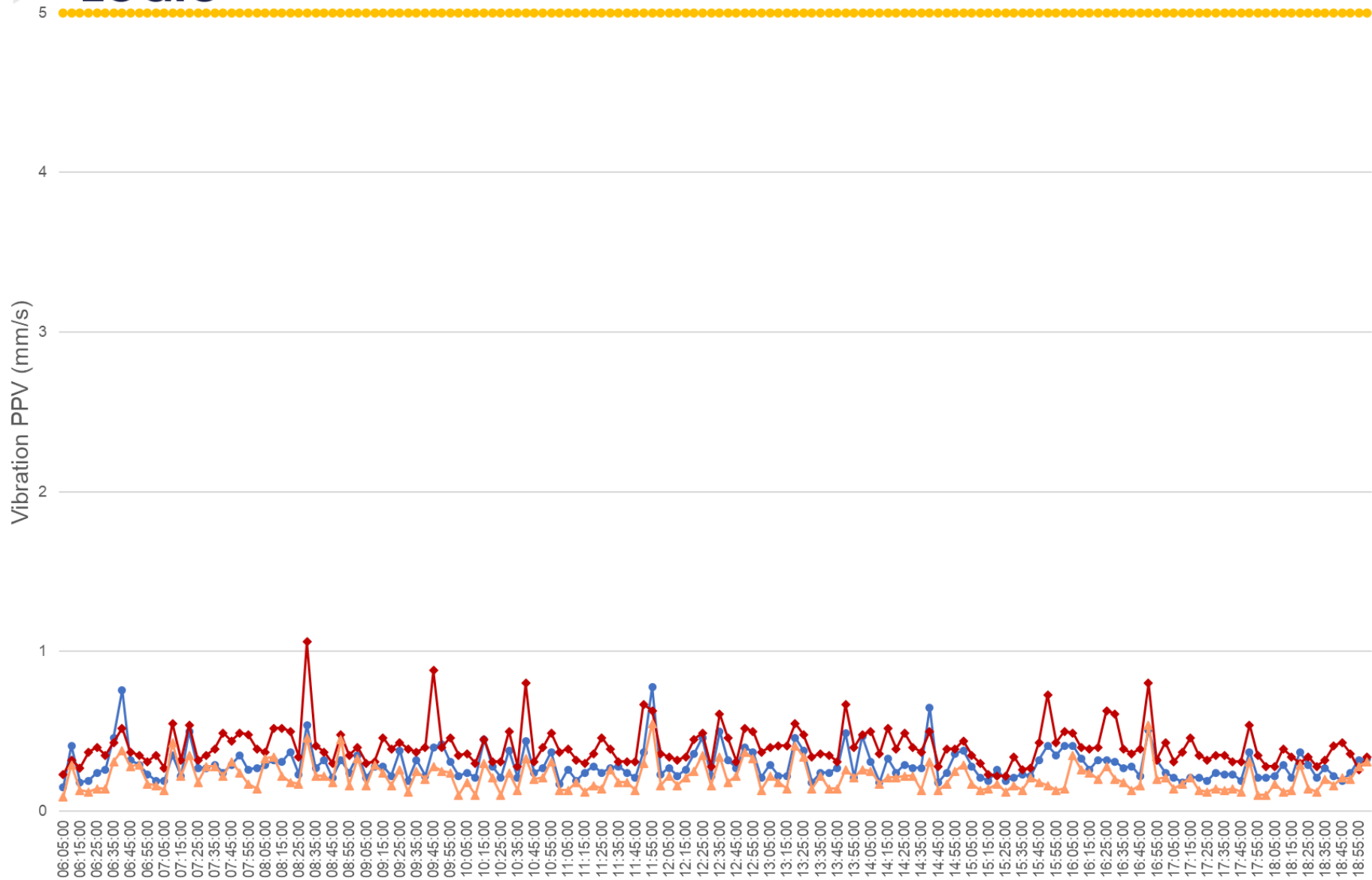




ACOUSTIC LOGIC

Vibration Monitoring: 26/05/2022

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

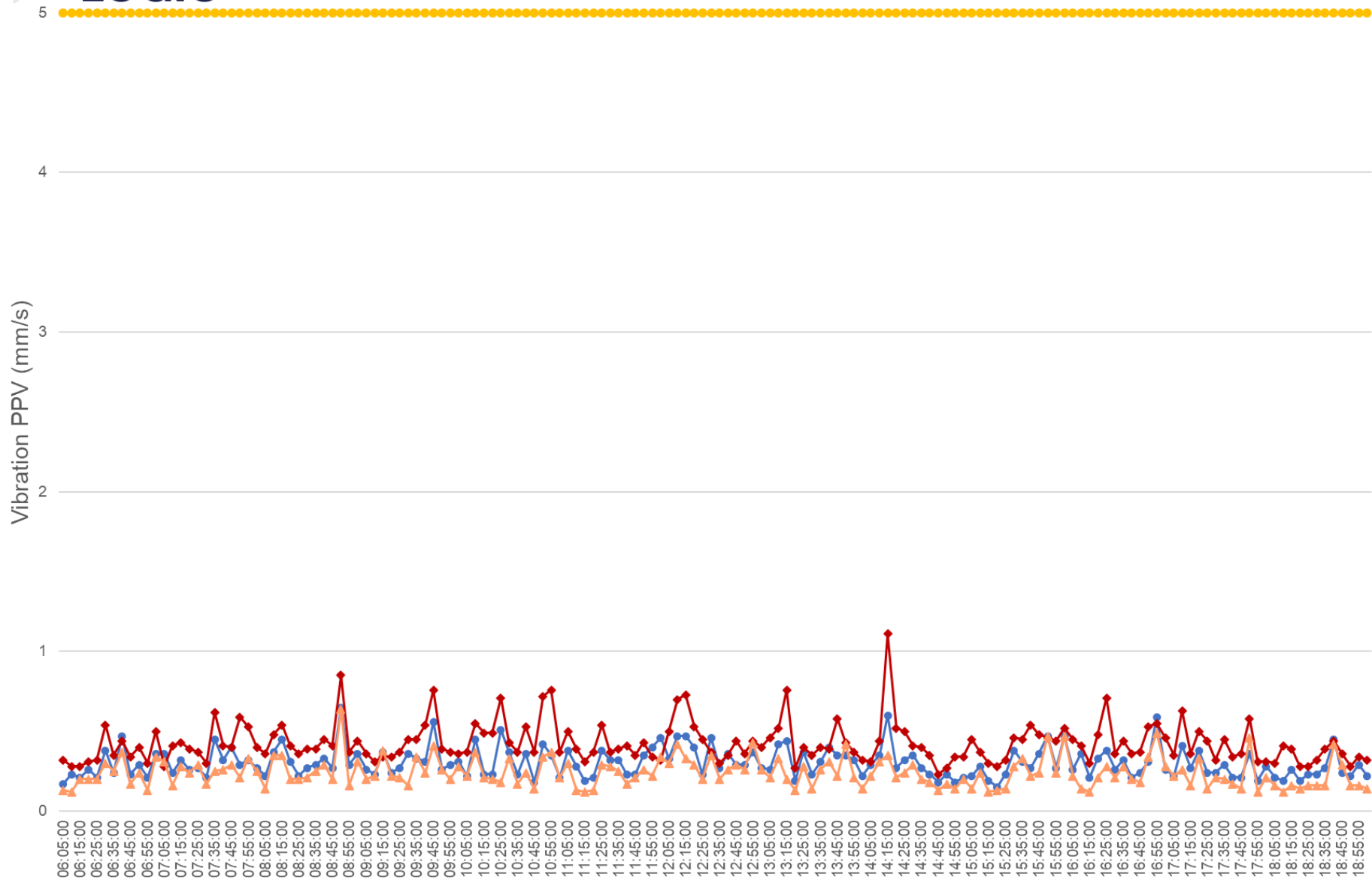




ACOUSTIC LOGIC

Vibration Monitoring: 27/05/2022

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

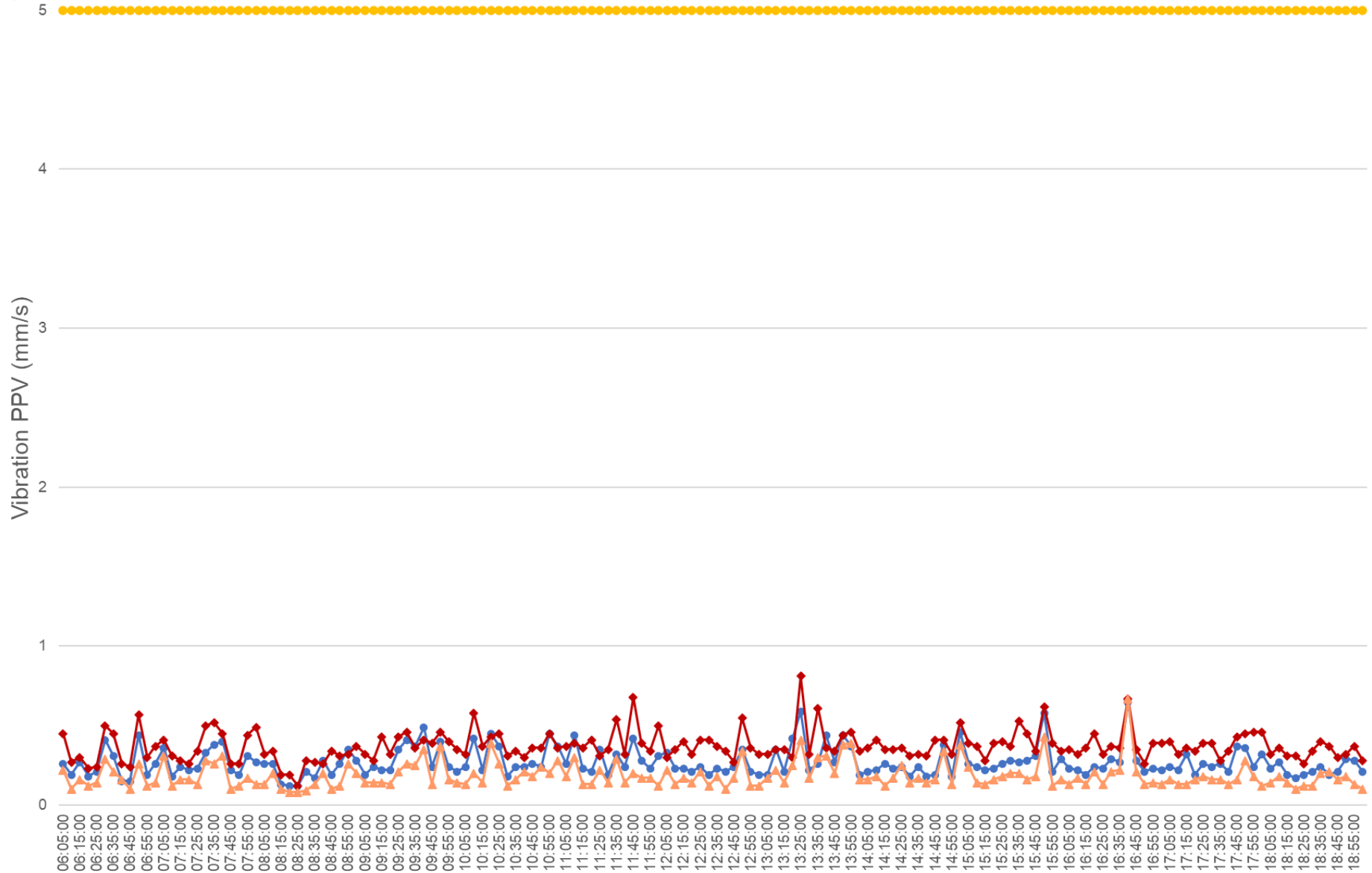




ACOUSTIC LOGIC

Vibration Monitoring: 28/05/2022

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

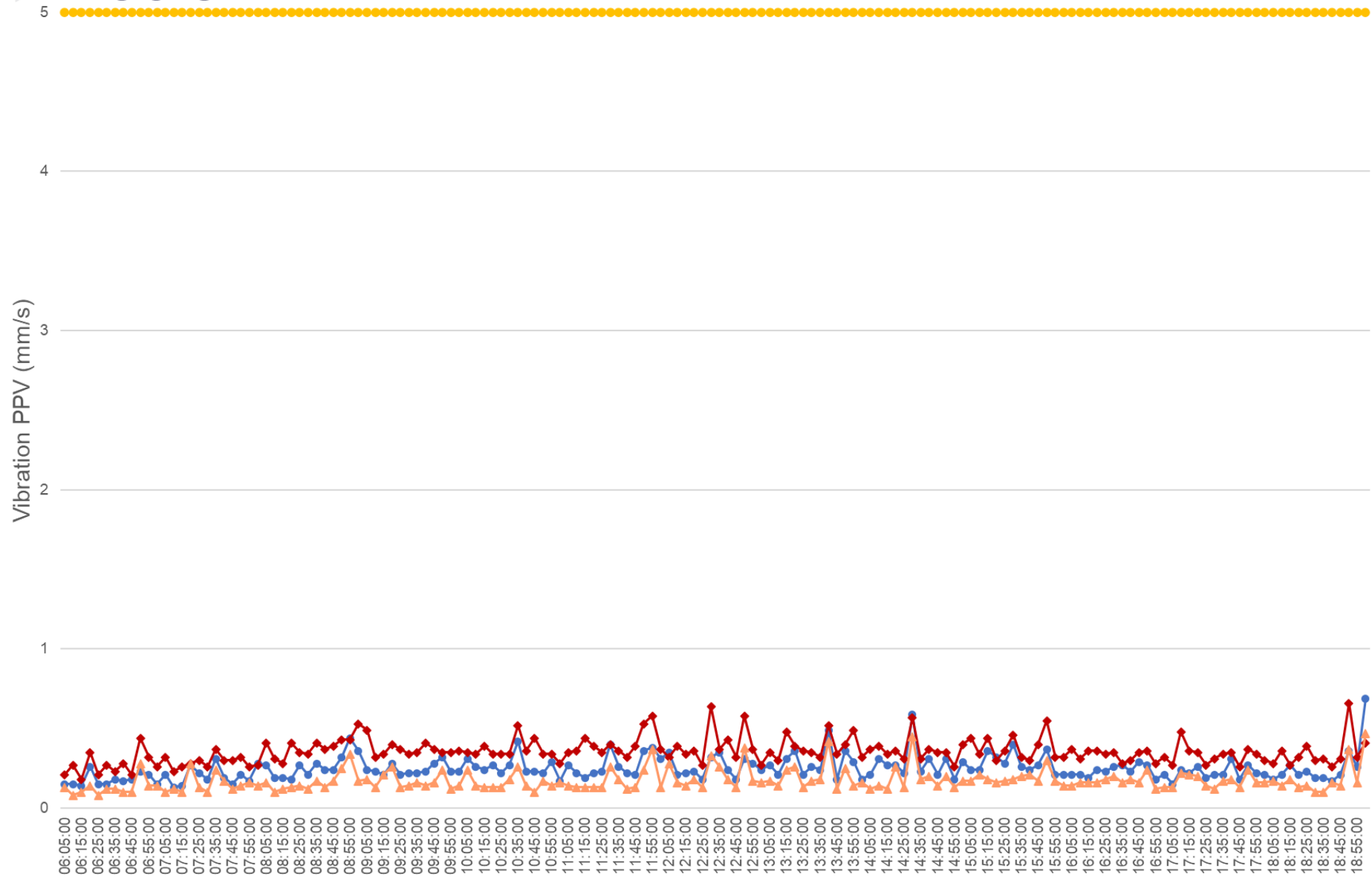




ACOUSTIC LOGIC

Vibration Monitoring: 29/05/2022

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

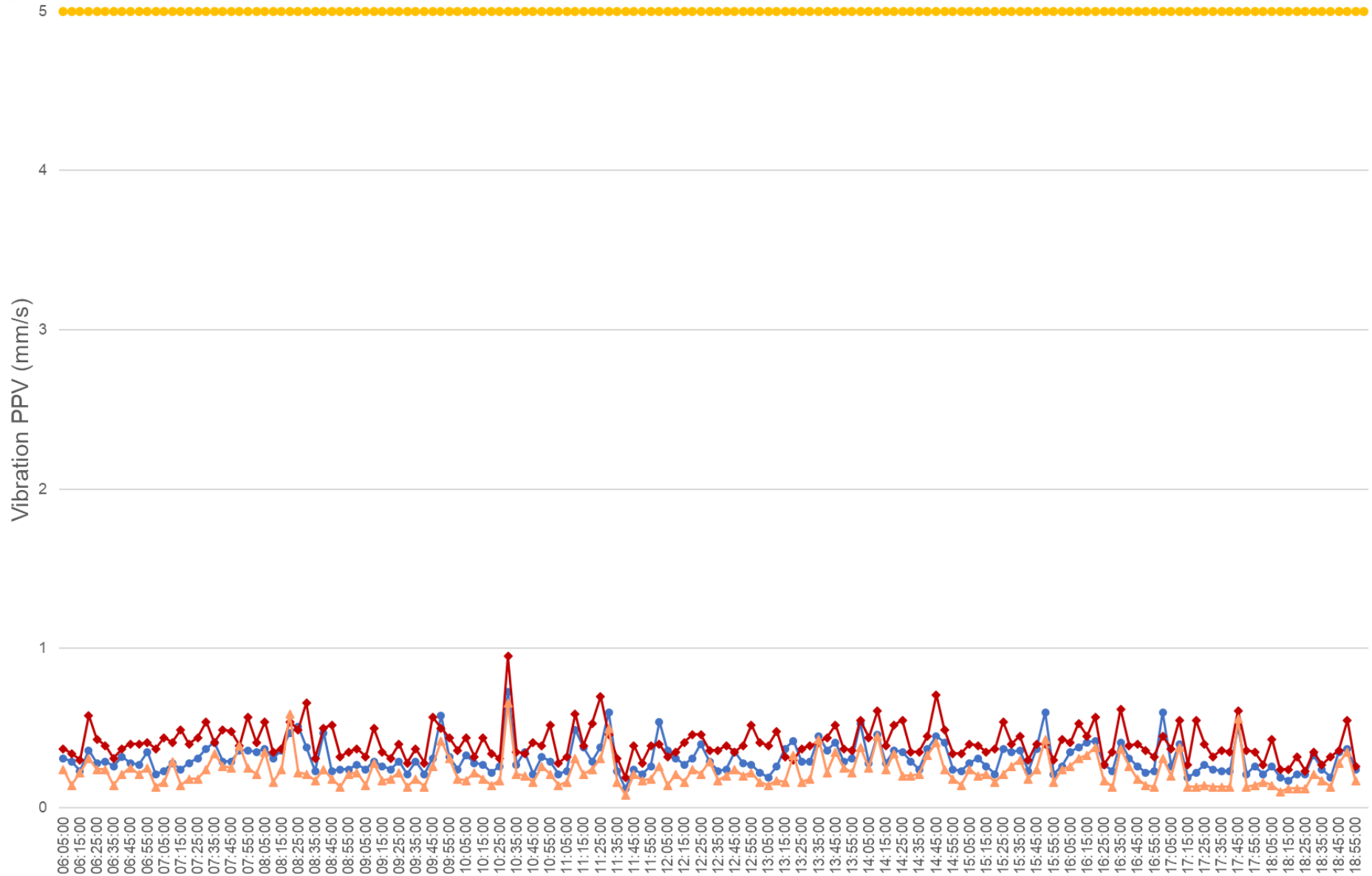




ACOUSTIC LOGIC

Vibration Monitoring: 30/05/2022

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

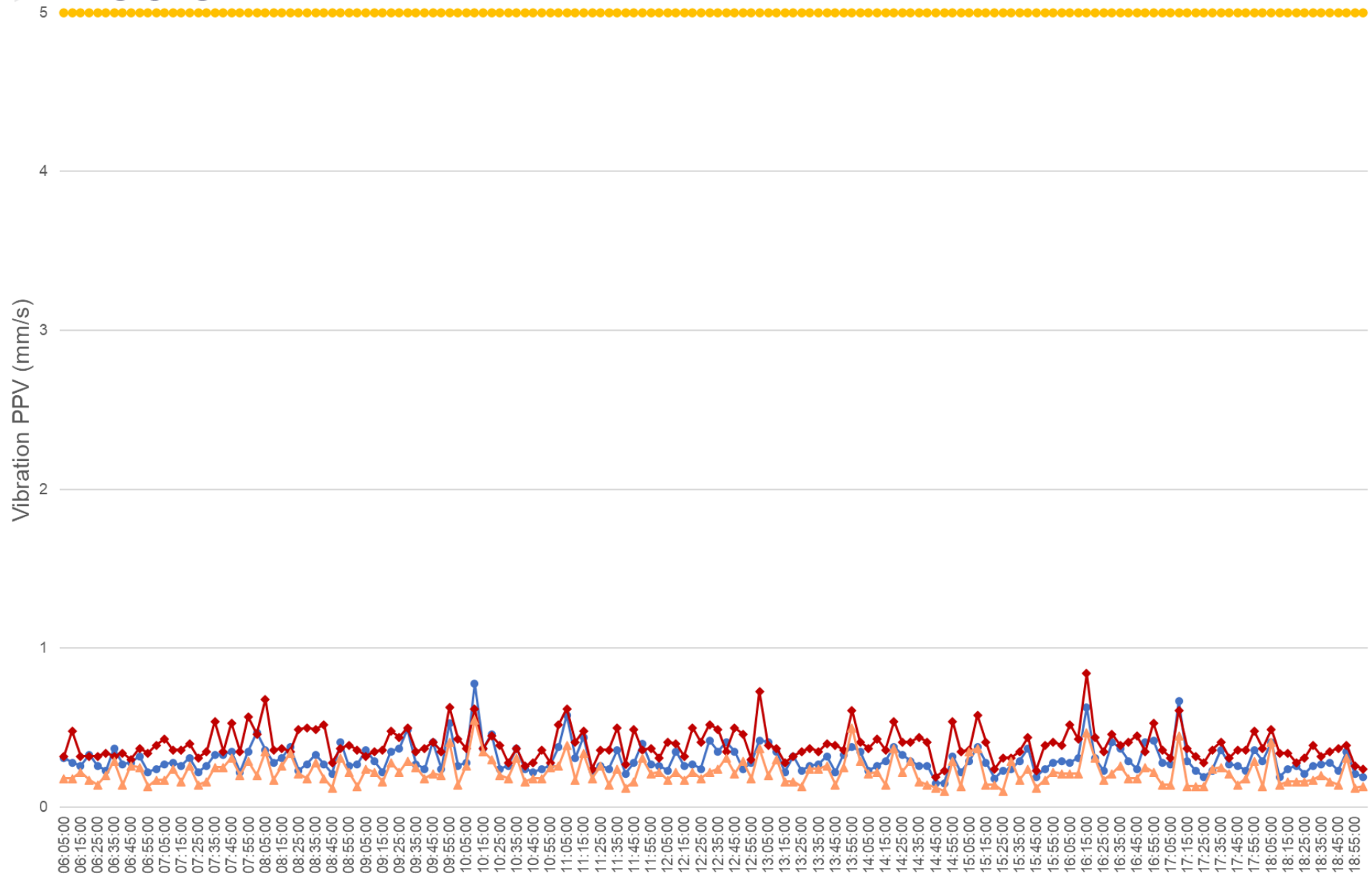




ACOUSTIC LOGIC

Vibration Monitoring: 31/05/2022

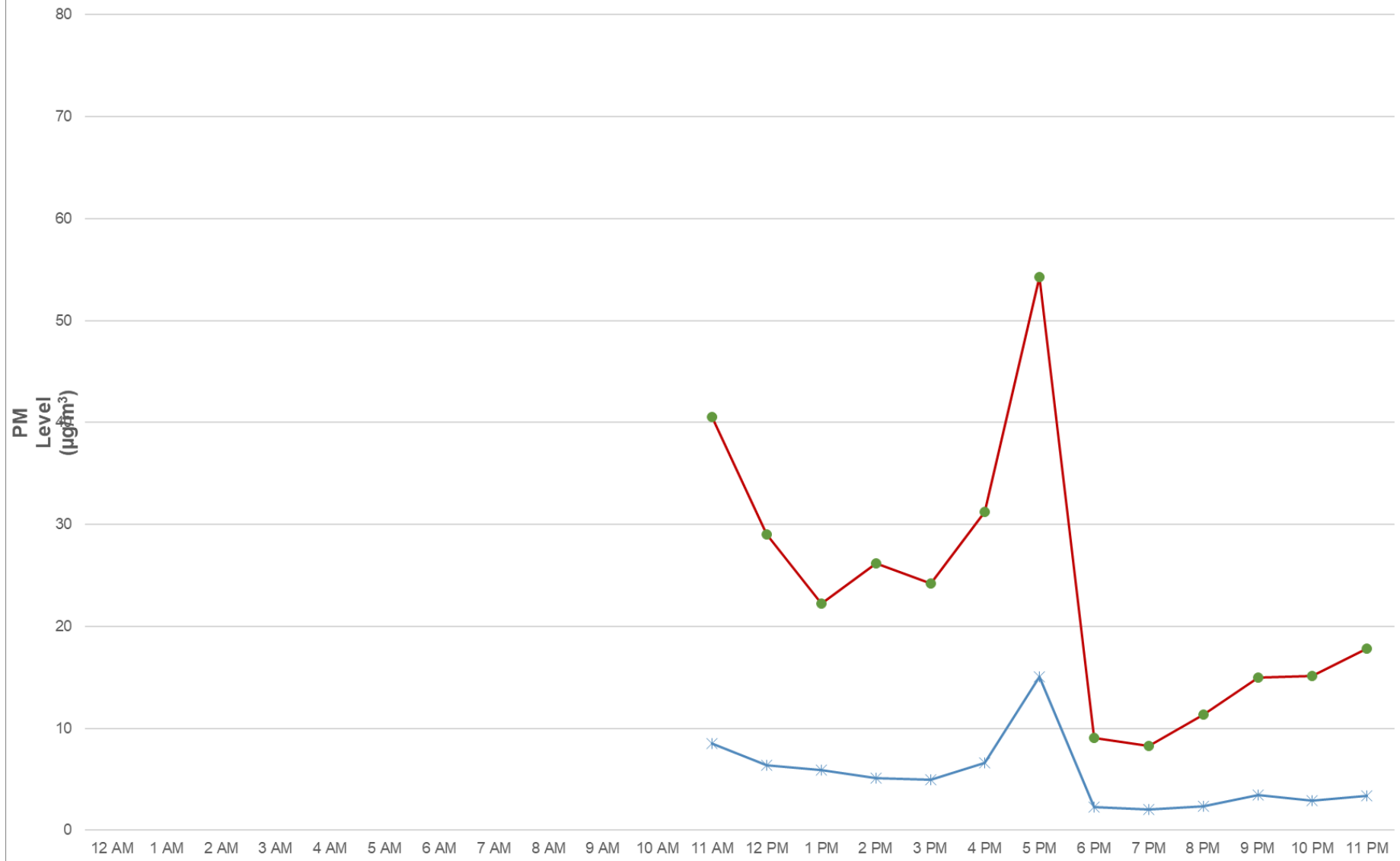
Radial (mm/s) Transverse (mm/s) Vertical (mm/s) Limit



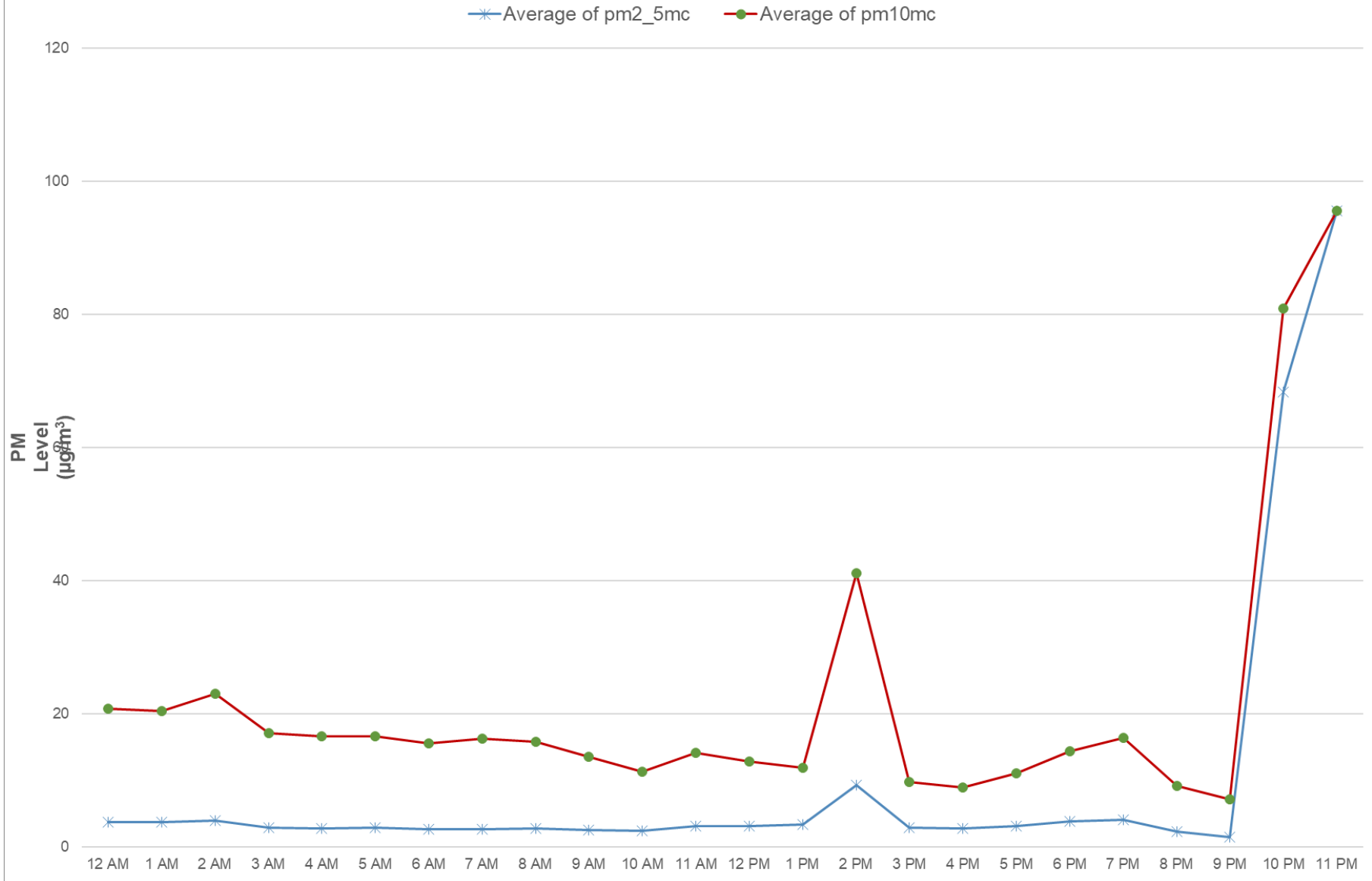
APPENDIX 3 – DUST MONITORING RESULTS

Dust Monitoring: 06/05/2022

* Average of pm2_5mc
 ● Average of pm10mc



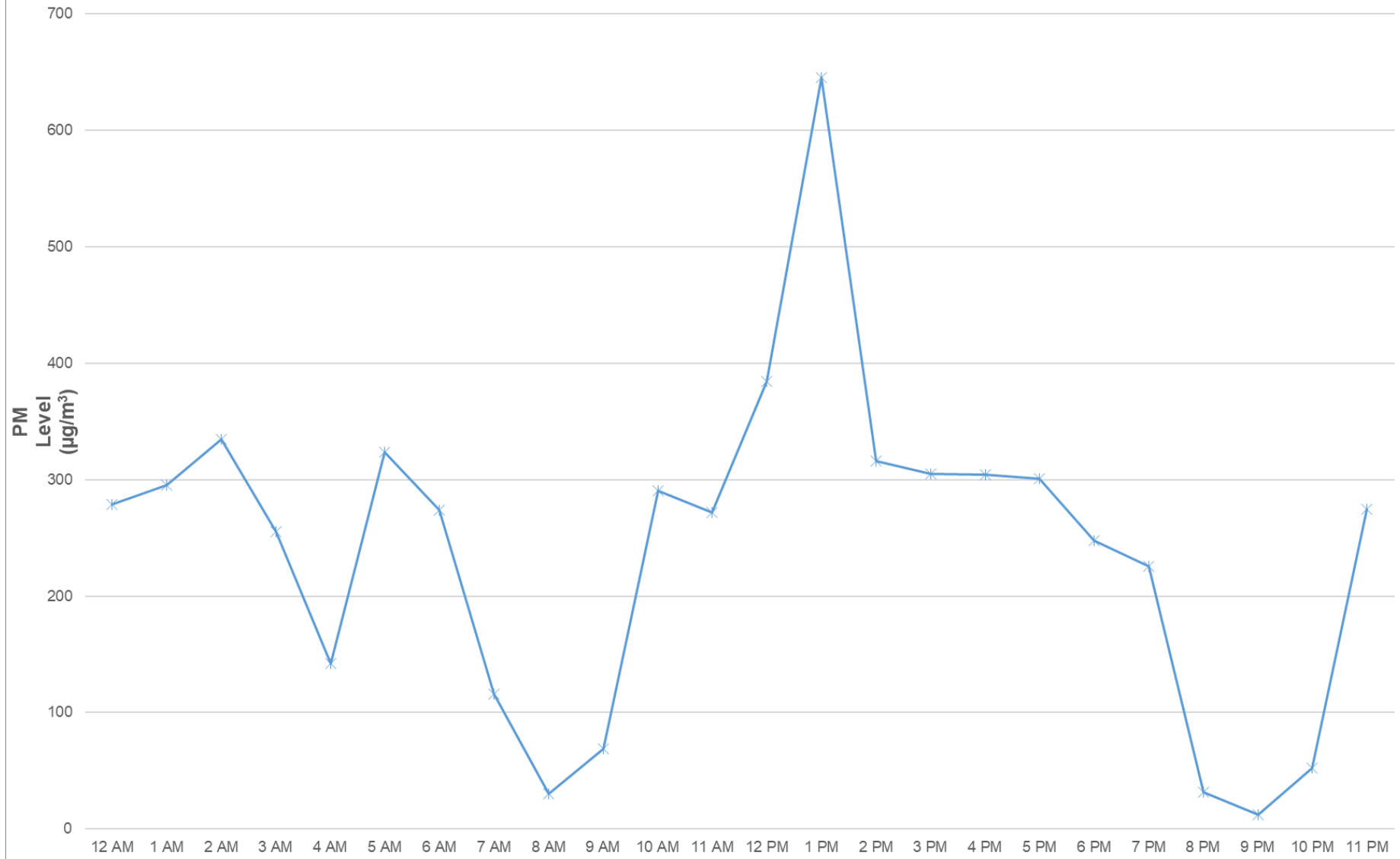
Dust Monitoring: 07/05/2022





Dust Monitoring: 08/05/2022

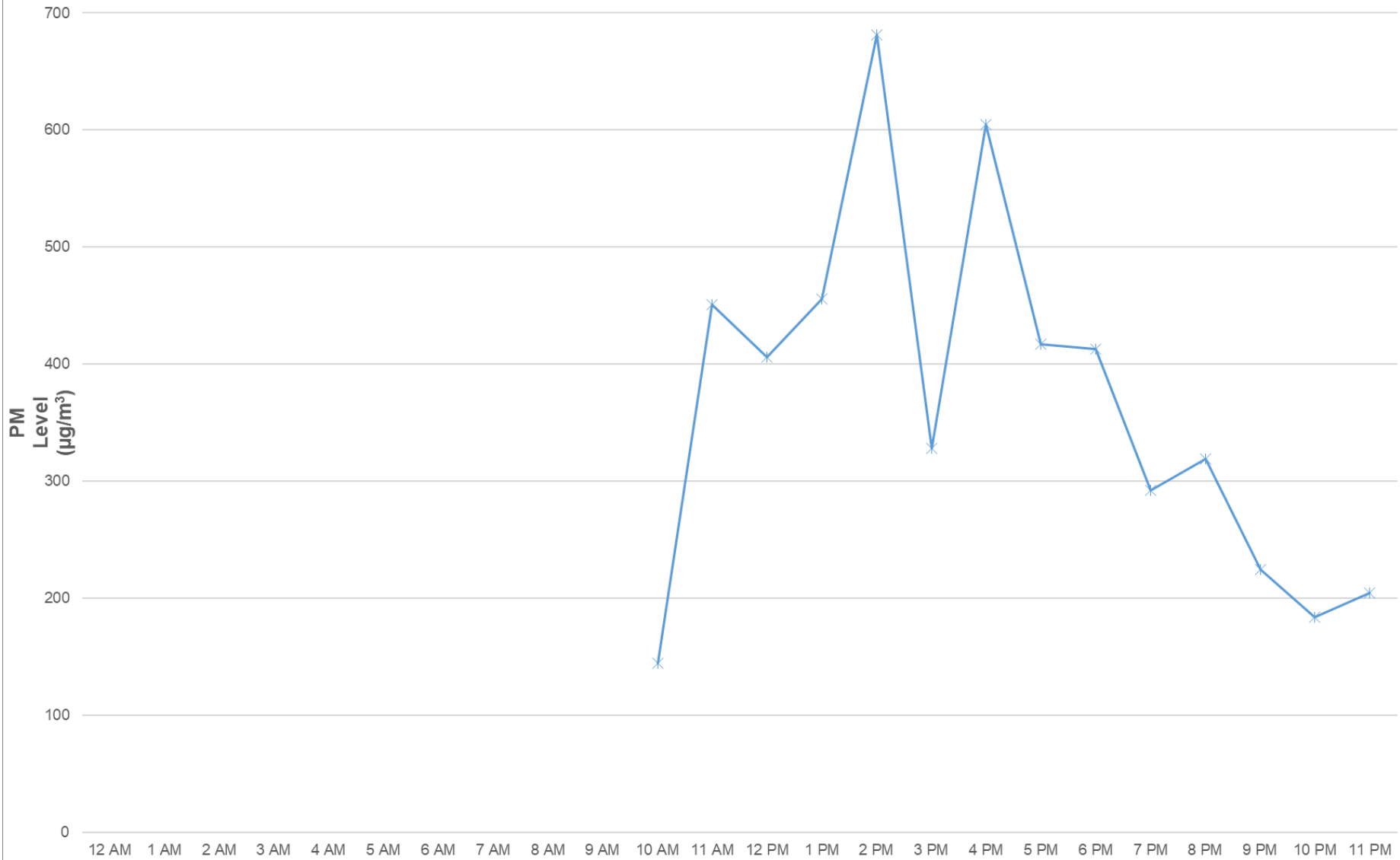
—*— Average of pm2_5mc and average of pm10mc





Dust Monitoring: 16/05/2022

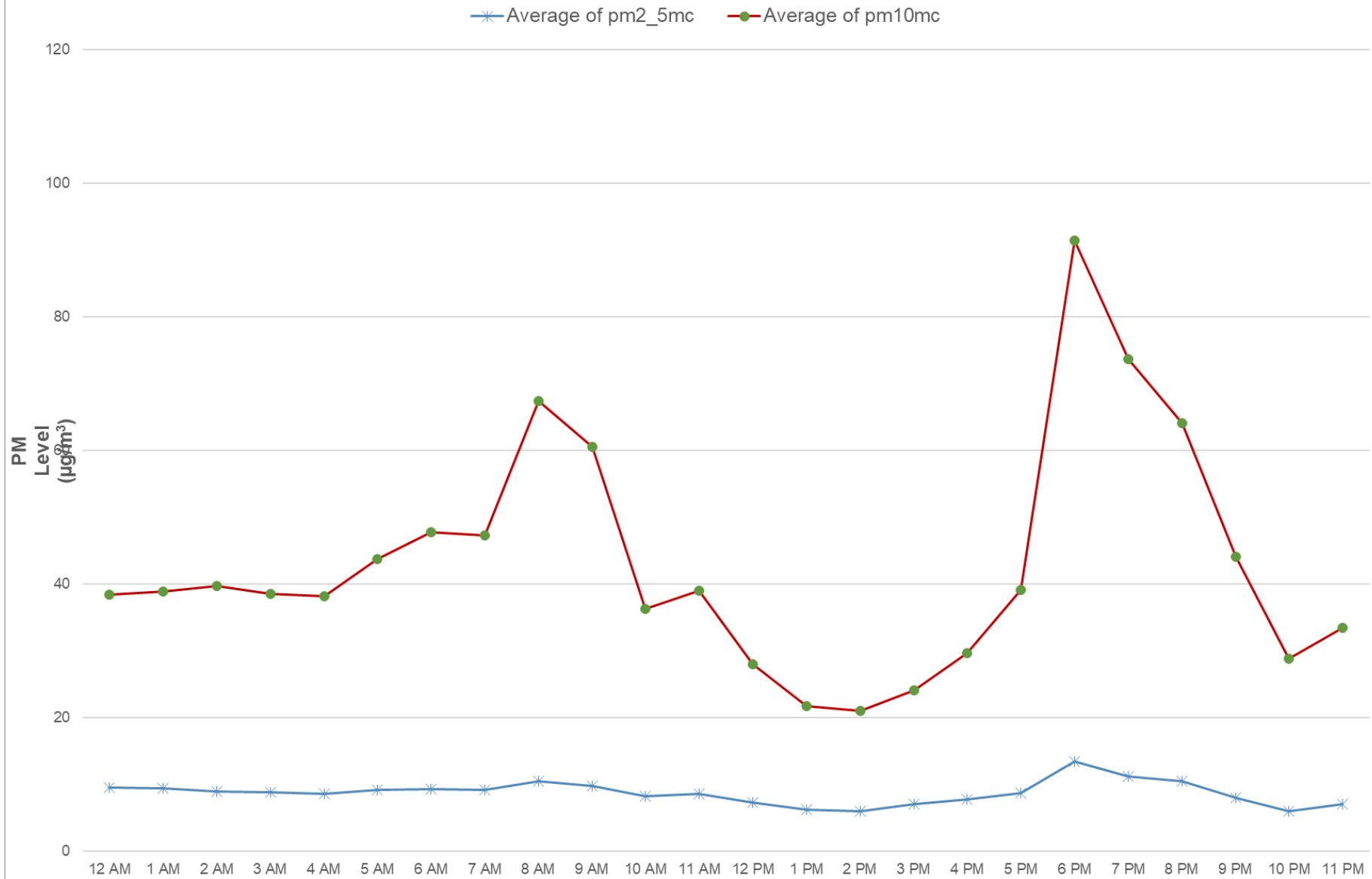
—*— Average of pm2_5mc and average of pm10mc



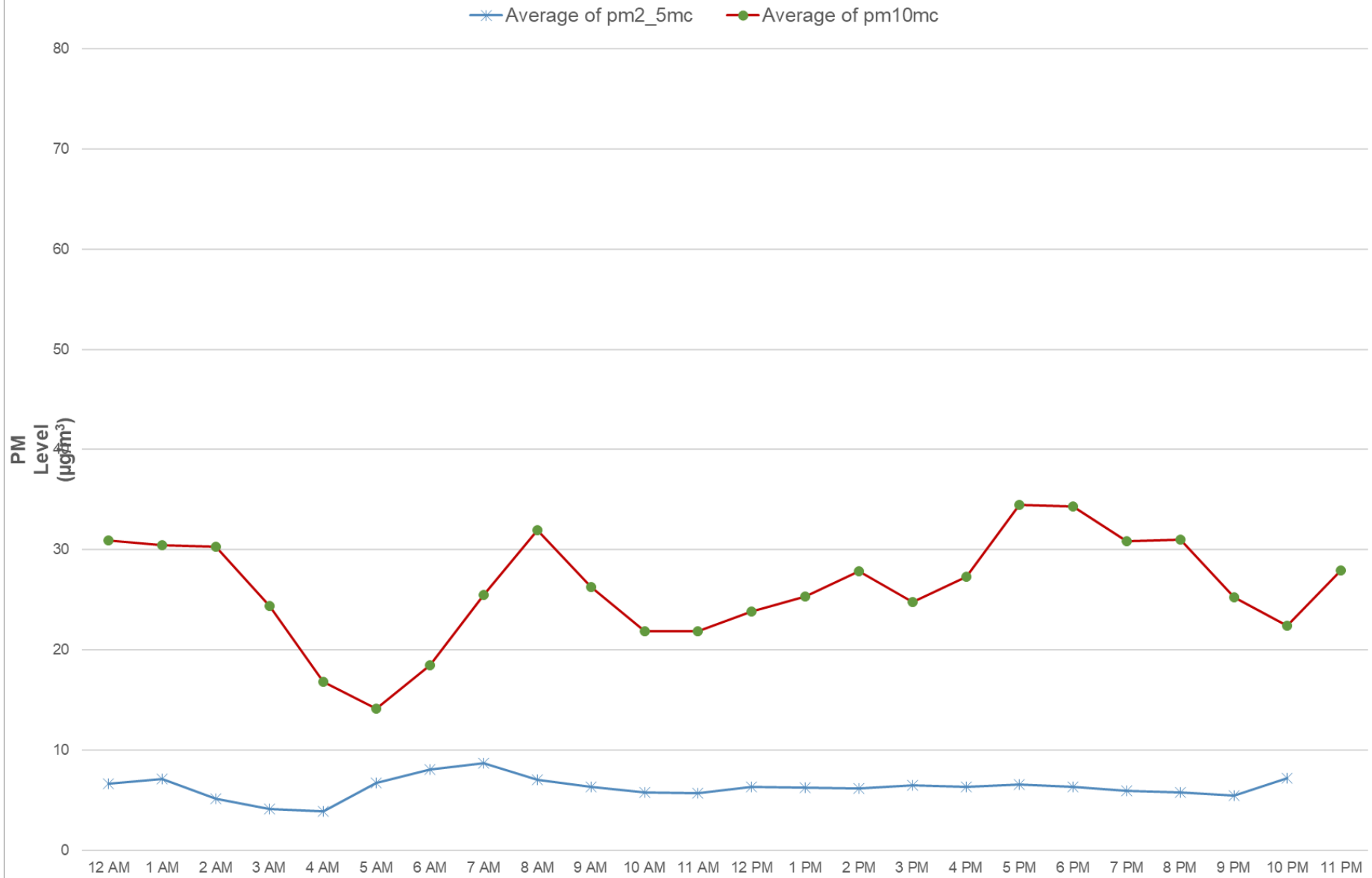
Dust Monitoring: 17/05/2022



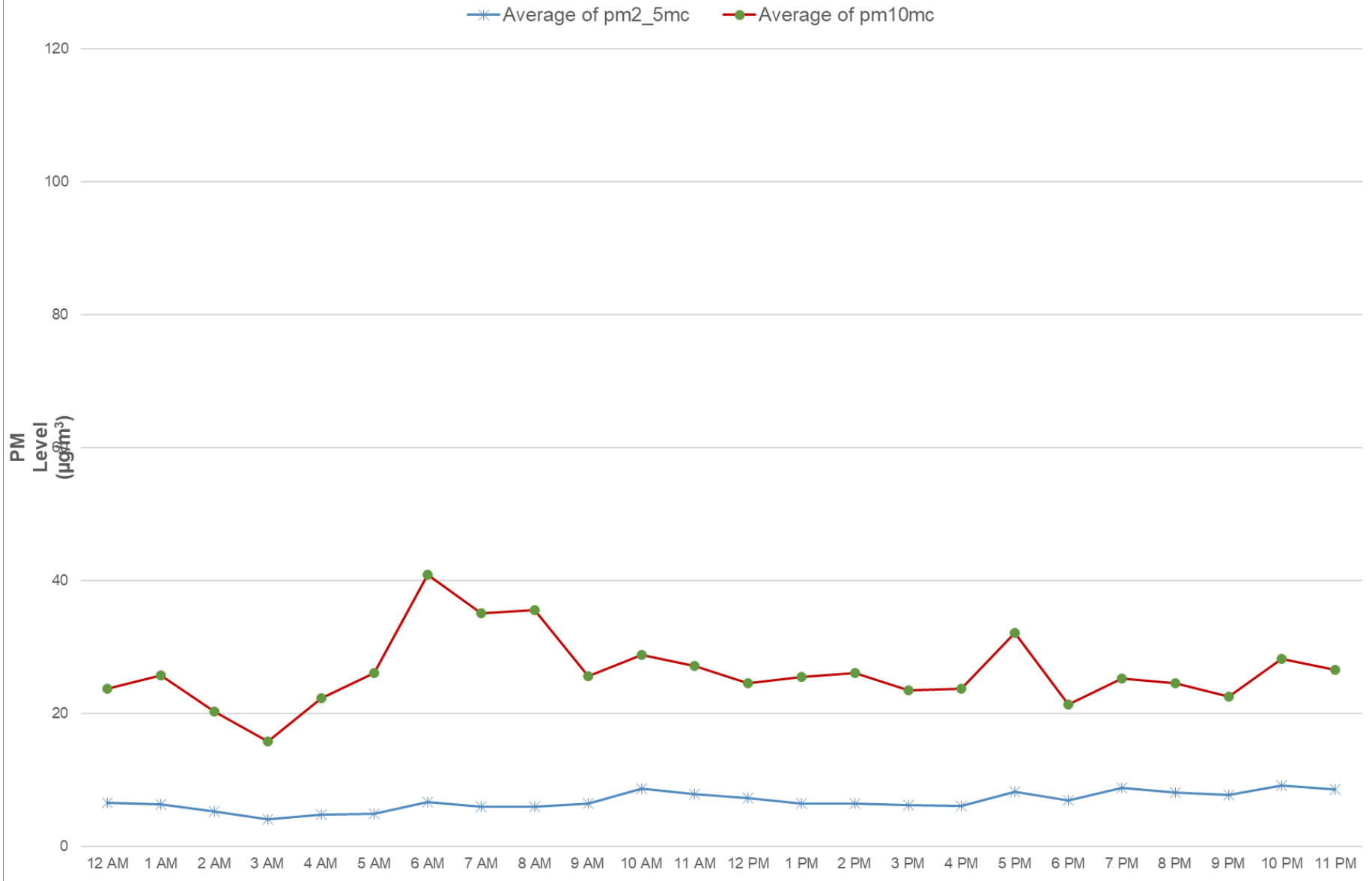
Dust Monitoring: 18/05/2022



Dust Monitoring: 19/05/2022

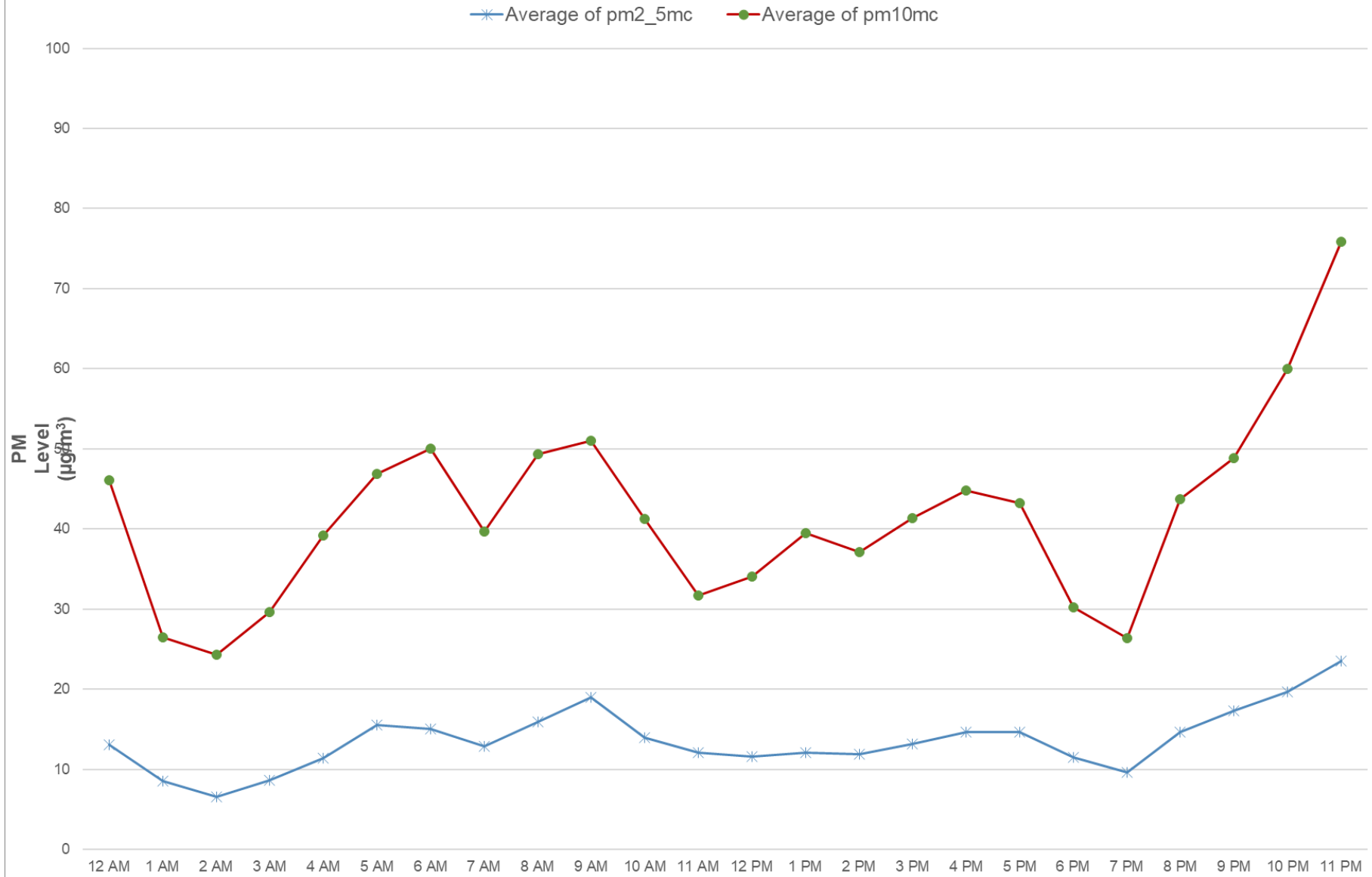


Dust Monitoring: 20/05/2022



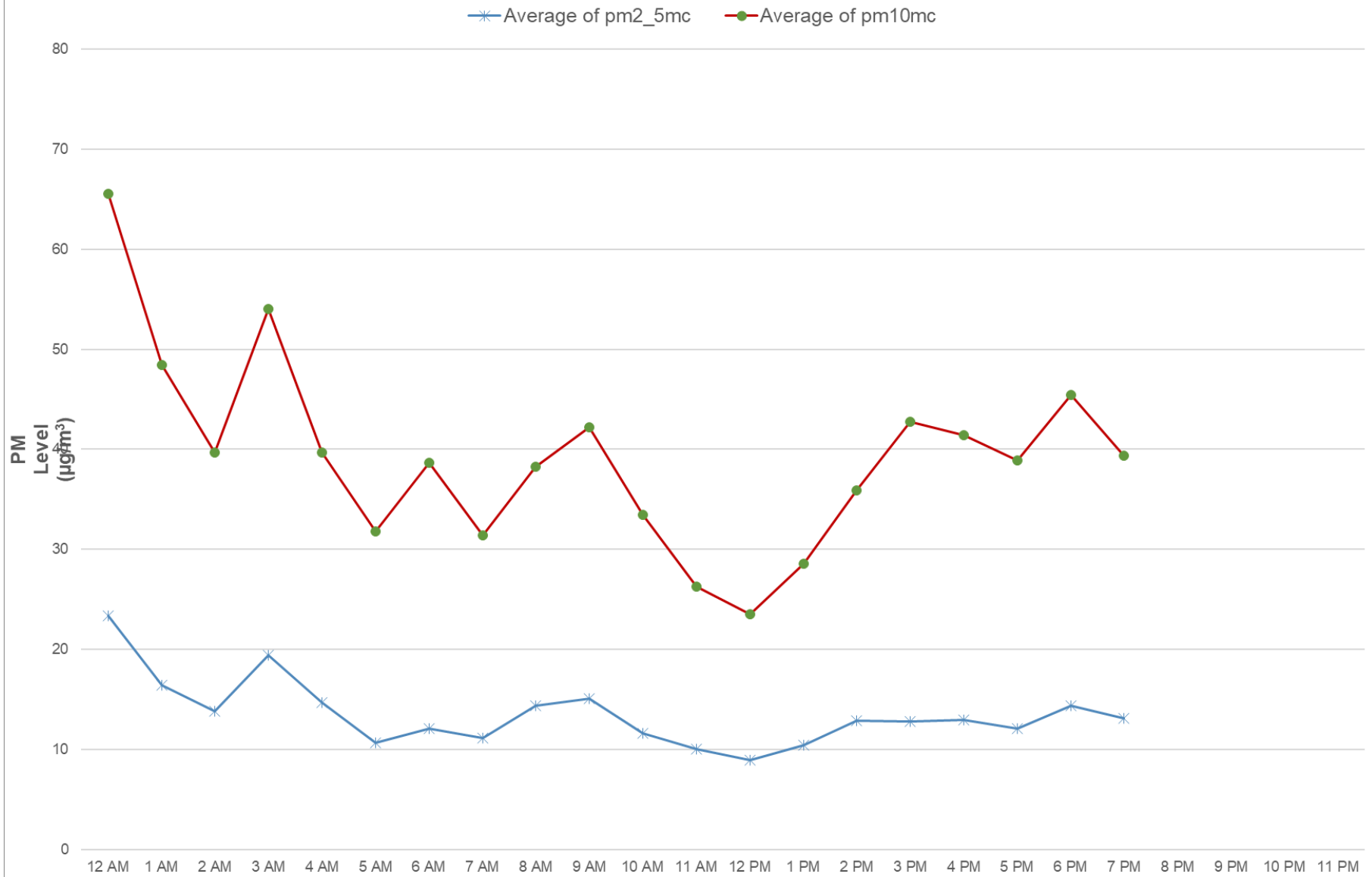


Dust Monitoring: 21/05/2022



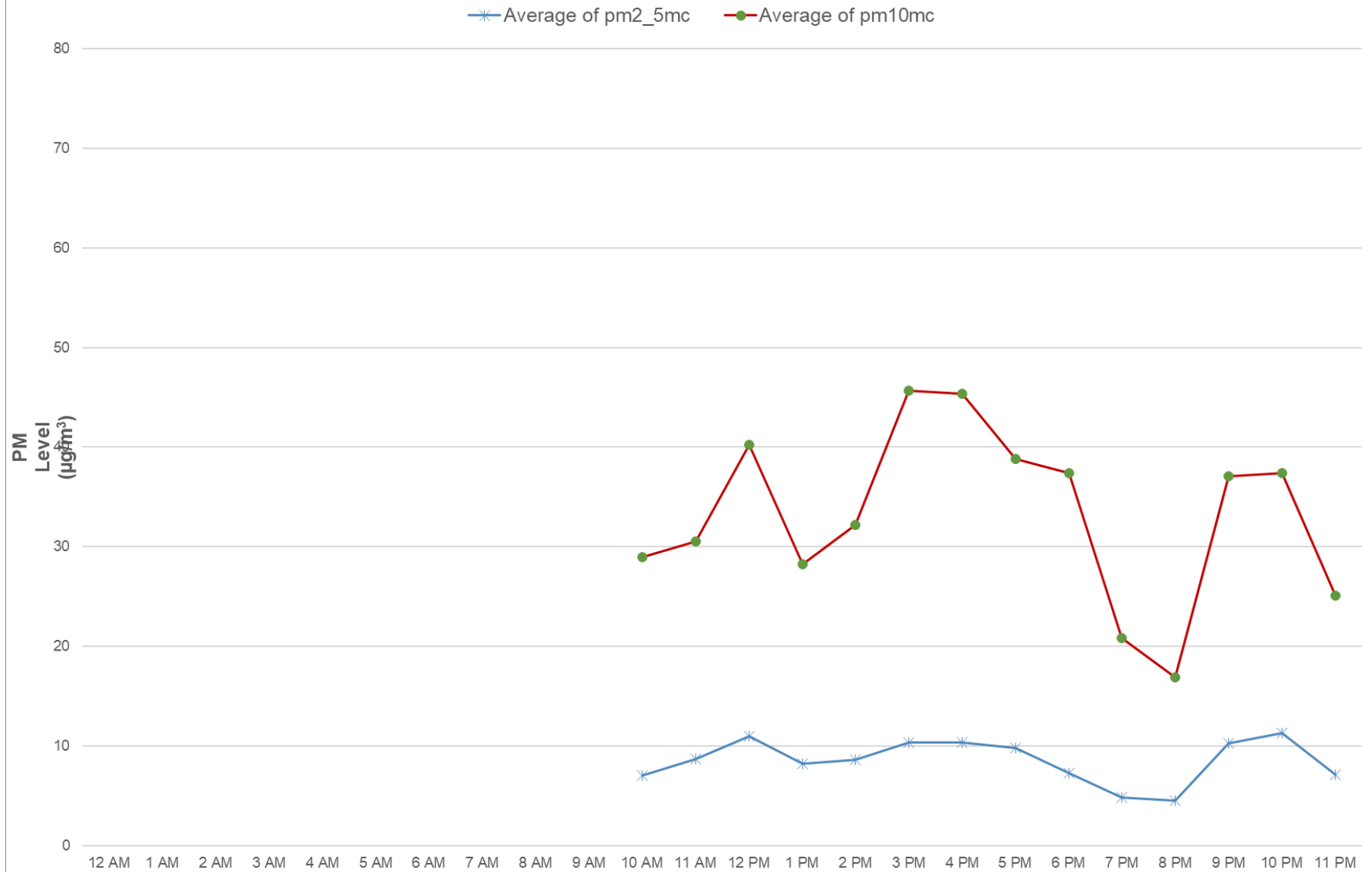


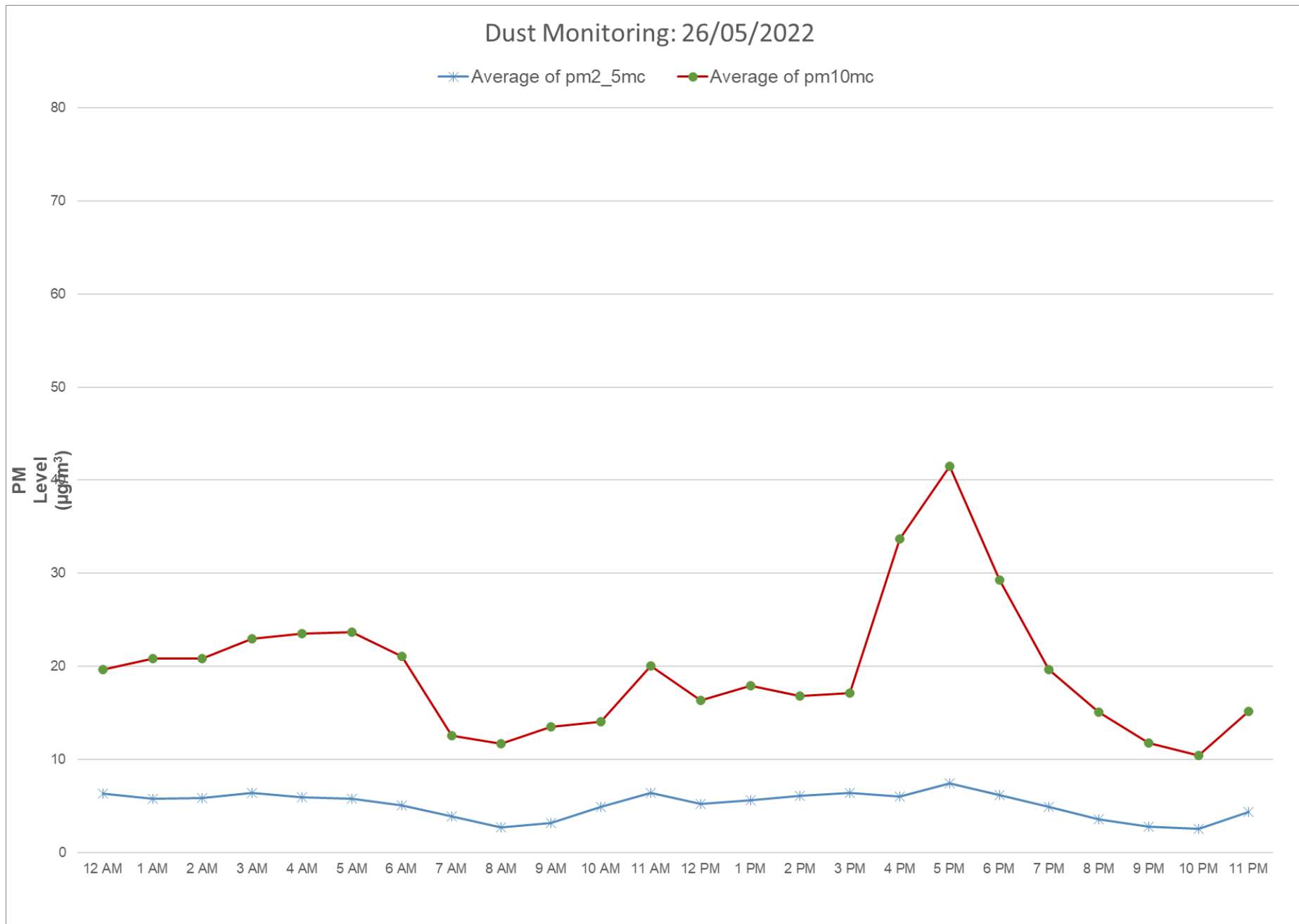
Dust Monitoring: 22/05/2022



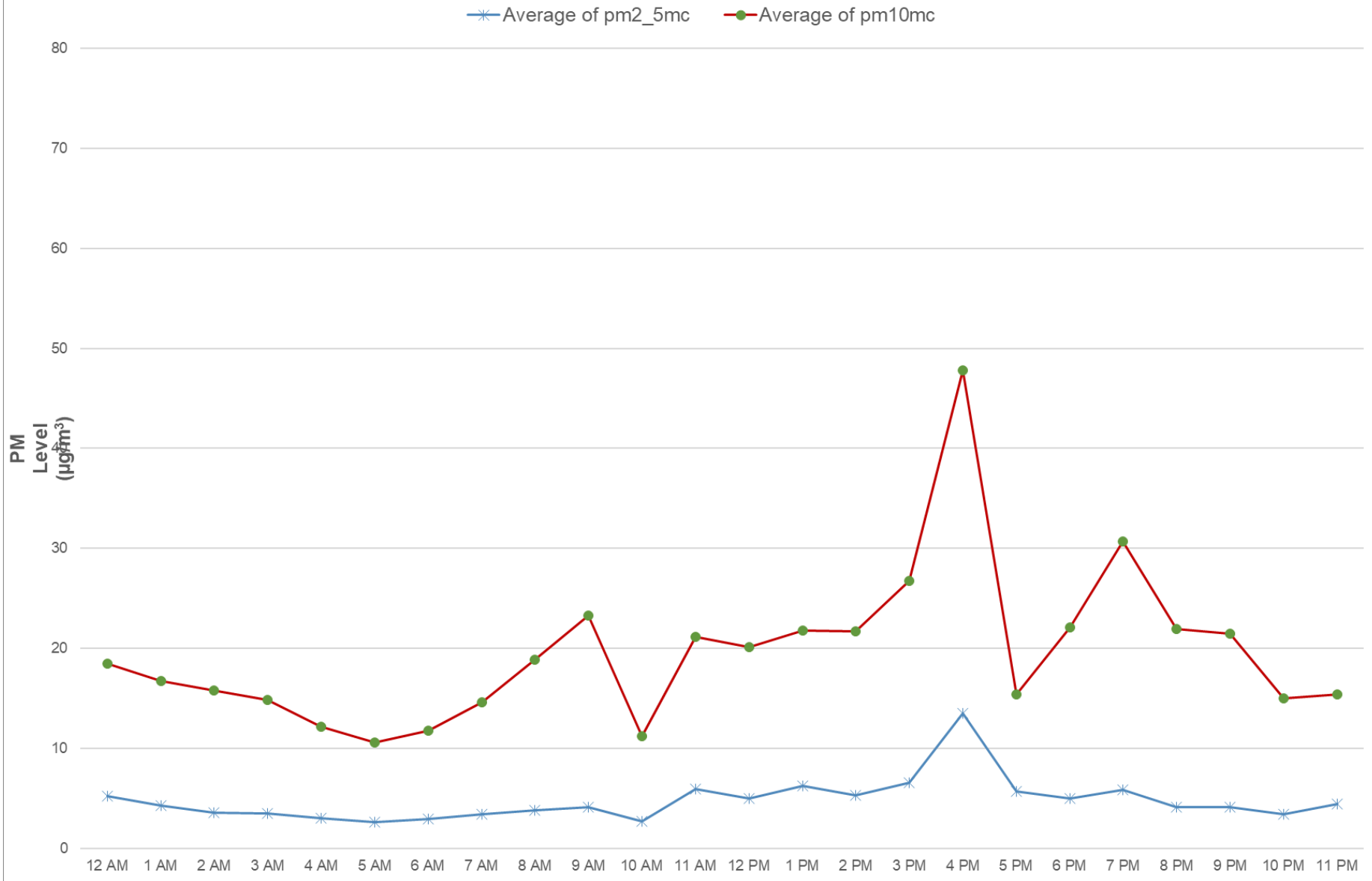


Dust Monitoring: 25/05/2022

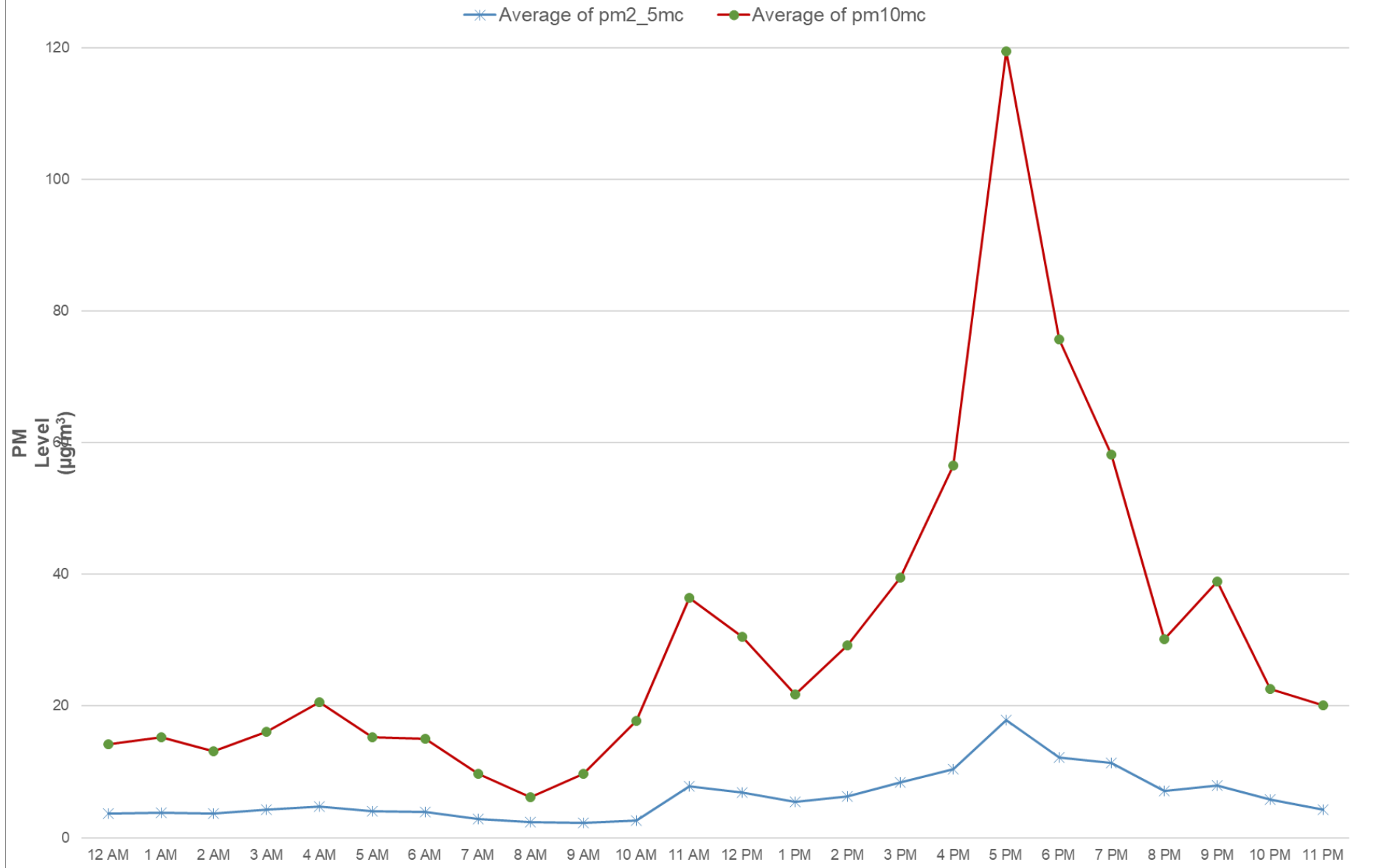




Dust Monitoring: 27/05/2022

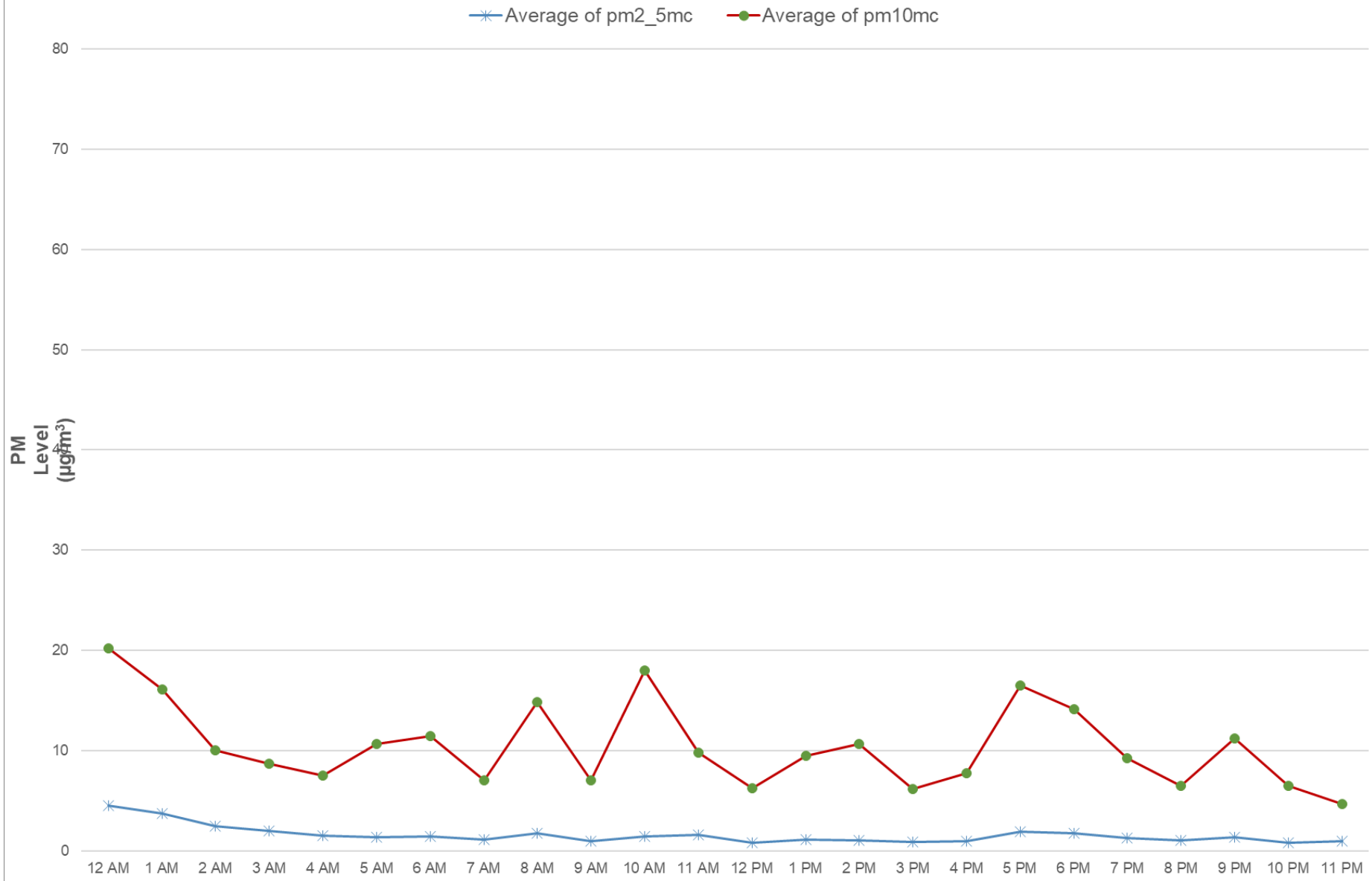


Dust Monitoring: 28/05/2022

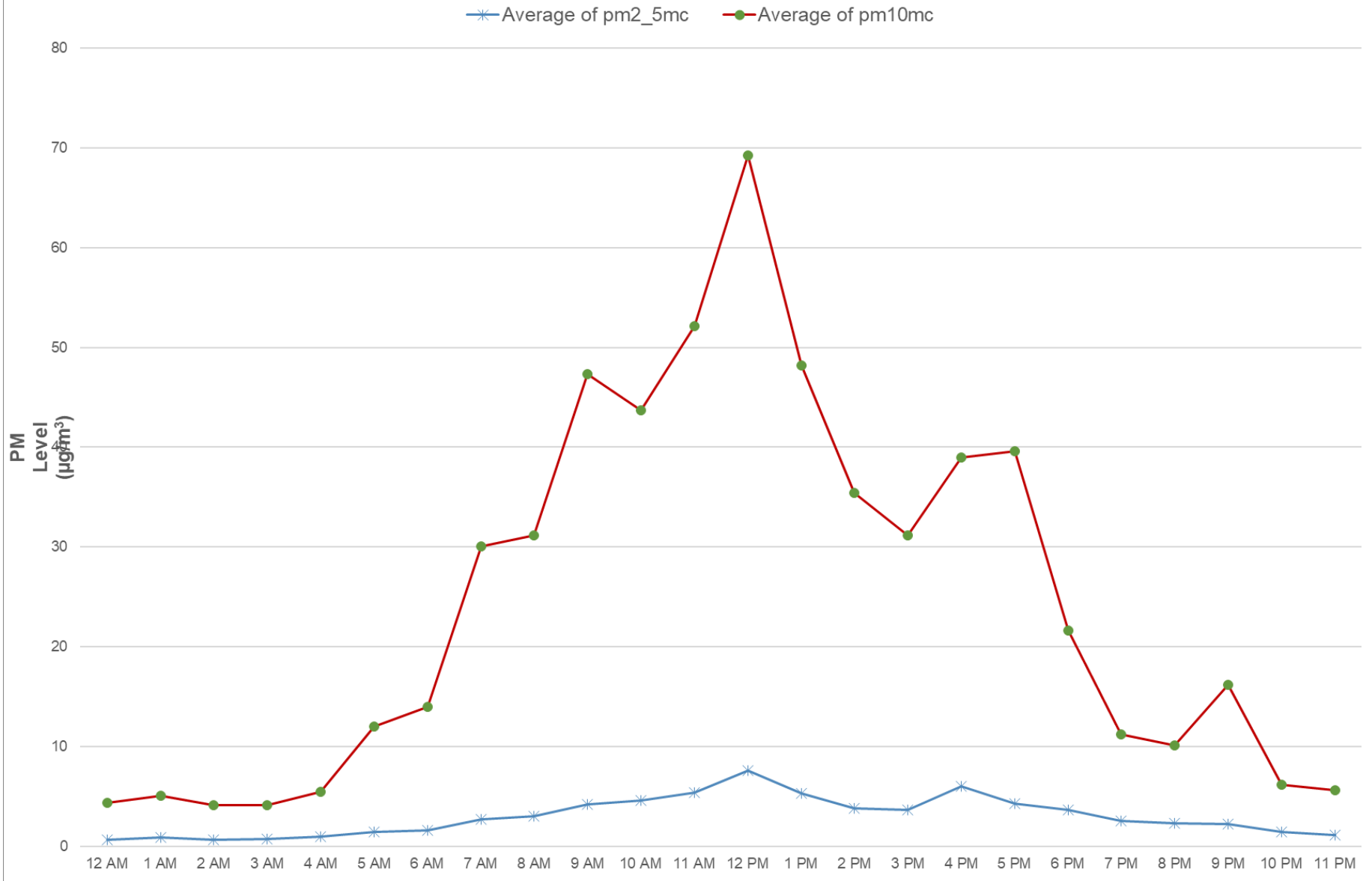




Dust Monitoring: 29/05/2022

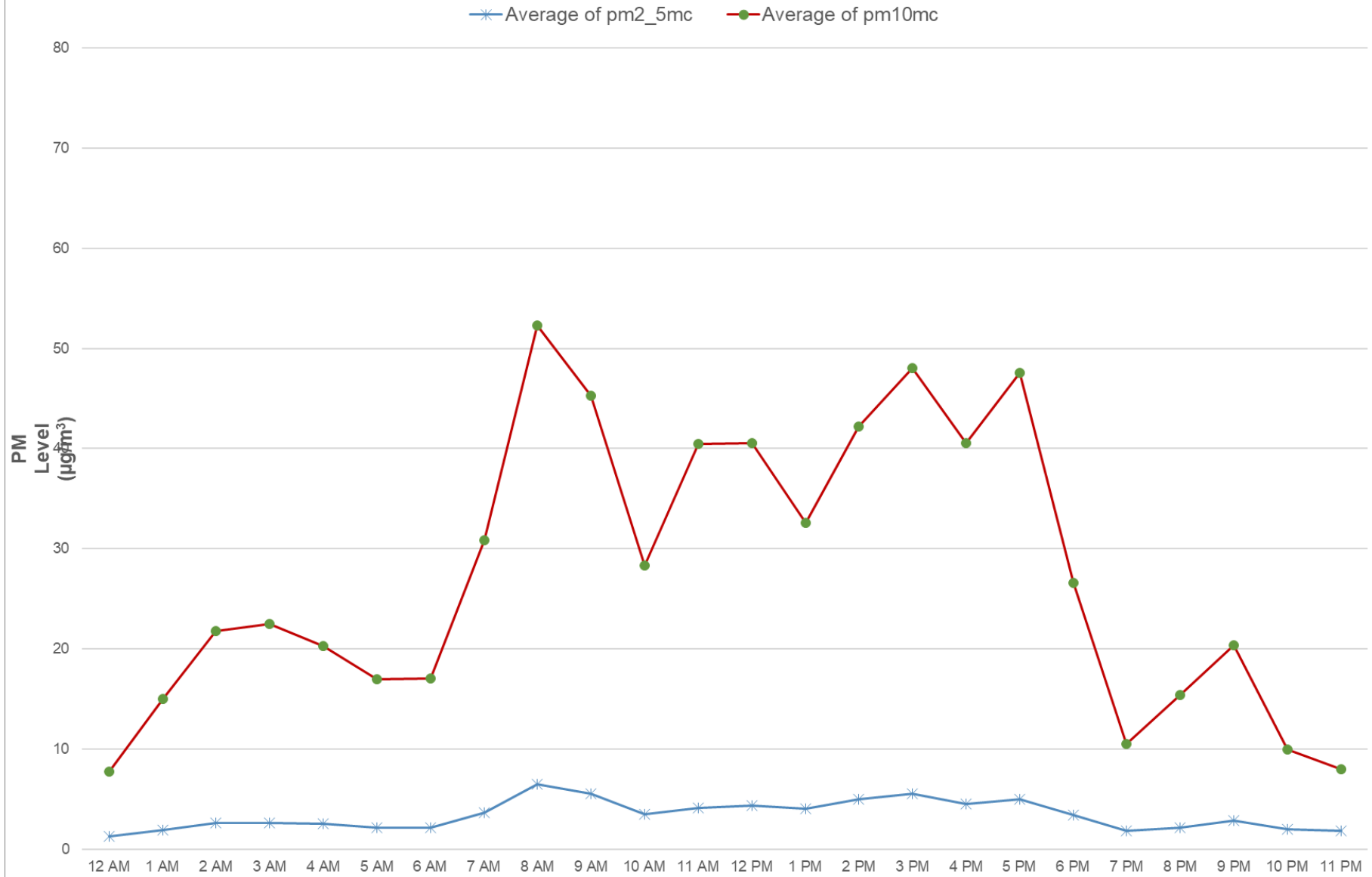


Dust Monitoring: 30/05/2022





Dust Monitoring: 31/05/2022



APPENDIX 4 – SITE PHOTO OF MONITORING LOCATION

