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ACOUSTICAL CERTIFICATE

NOISE TESTING OF MAINFREIGHT WAREHOUSING AT

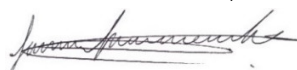
50 YARRAWA STREET, PRESTONS NSW

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ACOUSTICAL CERTIFICATE
NOISE TESTING OF MAINFREIGHT WAREHOUSING AT
50 YARRAWA STREET, PRESTONS NSW

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1.0 CONSULTANT'S BRIEF

Koikas Acoustics was requested to conduct noise testing of the Mainfreight Warehousing at 50 Yarrowa Street, Prestons NSW.

Noise measurements were undertaken of the operation of the Mainfreight Warehousing to 22 Michelago Circuit, Preston (EPA identification 1) and 23 Coffs Harbour Avenue, Hoxton Park (EPA identification 2) on Friday 14th March 2025.

The measured noise levels were assessed against the noise criteria outlined in the Environment Protection License (No. 21221) issued by the NSW EPA.

This report should be read in conjunction with the previous EPL Noise Assessment (Reference No.: S10905-R1) conducted by Hibbs & Associates Pty Ltd.



2.0 ACOUSTICAL REQUIREMENTS

2.1 ENVIRONMENT PROTECTION LICENSE 21221

The relevant acoustic requirements have been extracted from the Environment Protection License (No. 21221) issued by the NSW EPA.

P1.2 The following points referred to in the table below are identified in this licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.

<i>Noise/Weather</i>		
EPA identification no.	Type of monitoring point	Location description
1	Noise monitoring	Michelago Circuit at 22 Michelago Circuit, Prestons NSW
2	Noise monitoring	Coffs Harbour Avenue at 23 Coffs Harbour Ave, Hoxton Park NSW

L2 Noise limits

L2.1 Noise generated at the premises that is measured at each noise monitoring point established under this

licence must not exceed the noise levels specified in Column 4 of the table below for that point during the corresponding time periods specified in Column 1 when measured using the corresponding measurement parameters listed in Column 2.

POINT 1

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Day, Evening, Night	LAeq (15 minute)	-	37
Night	Night-LA1 (1 minute)	-	45

POINT 2

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Day, Evening, Night	LAeq (15 minute)	-	39
Night	Night-LA1 (1 minute)	-	45

L2.2 For the purpose of the above table:

- a) 'Day' is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sunday and Public Holidays.
- b) 'Evening' is defined as the period from 6pm to 10pm Monday to Sunday.
- c) 'Night' is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sunday and Public Holidays.

L2.3 Noise from the premises must not exceed the noise emission criterion specified in L2.1 at any residential or other sensitive receptors not associated with the activities except as expressly provided by this licence.

L2.4 To determine compliance with condition L2.1 noise must be measured at, or computed for, EPA identification Points 1 and 2 as specified in condition P1.2. A modifying factor correction must be applied for tonal, impulsive or intermittent noise in accordance with the NSW Industrial Noise Policy.

L2.5 The noise emission limits identified in this licence apply under all meteorological conditions except for any of the following:

- a) Wind speeds greater than 3m/s at 10 metres above ground level; or
- b) Stability category F temperature inversion conditions and wind speeds greater than 2 m/s at 10 metres above ground level;
- or
- c) Stability category G temperature inversion conditions.



2.2 NOISE MONITORING LOCATIONS

Attended noise surveys were taken of the operation of the Mainfreight Warehousing on Friday 14th March 2025 between 11.30 am and 1:30 pm. Noise measurements were undertaken for two 15-minute periods at each of the residential premises. See Figure 1 for the monitoring locations.

Noise measurements were undertaken simultaneously at the western side (Location 3) and the eastern side (Location 4) of the Mainfreight Warehousing and:

- 22 Michelago Circuit, Preston (EPA identification 1), or
- 23 Coffs Harbour Avenue, Hoxton Park (EPA identification 2).

Noise level measurements were taken with three (3) NATA-calibrated Type 1 NTi XL2 sound level meters. The instruments were set up to measure sound pressure levels as 'A' frequency weighting and 'Fast' time response. The sound level meter microphone was placed 1.5 metres above the ground in free-field conditions.

The meter was field-calibrated before and after the measurements with a Larson Davis CAL200 precision acoustic calibrator. No system drift was observed. Meteorological conditions were conducive to obtaining reliable noise data, in that wind conditions were calm, it was not raining, and the temperature was stated as 34°C.

An FFT and tonal analysis was conducted in XL2 Data Explorer in accordance with ISO 1996-2:2007. The FFT and tonal analysis provide a means of assessing the presence of tones in a noise spectrum and defining a tonal adjustment to apply to the L_{Aeq} noise level to essentially act as a penalty to account for the perceived increase in annoyance/offensive quality. Under Annex C of ISO 1996-2:2007, the tonal adjustment has been included.

The following weather observations were obtained from the nearest BOM weather station at Holsworthy Aerodrome AWS (Station Number 66161) for the measurement period on Friday 14th March 2025:

- 0 mm of rainfall
- Wind speed of 9 km/hr or 2.5 m/s and wind direction was north-east
- Temperature of 34 °C
- Relative humidity was 36 %





Figure 1. Subject site and monitoring locations – Image sourced from Six Maps



Figure 2. Monitoring location 1 (22 Michelago Circuit, Preston) – Image taken by Koikas Acoustics



Figure 3. Monitoring location 2 (23 Coffs Harbour Avenue, Hoxton Park) – Image taken by Koikas Acoustics



Figure 4. Monitoring location 3 (western area of Mainfreight Warehousing) – Image taken by Koikas Acoustics



Figure 5. Monitoring location 4 (eastern area of Mainfreight Warehousing) – Image taken by Koikas Acoustics

2.3 CALCULATED NOISE SURVEY RESULTS

The measured noise levels for the operation of the Mainfreight Warehousing at the most noise-affected residential receiver locations are presented in Table 1.

Table 1. Measured noise level [dB]												
Location	Time	L _{Amax}	L _{A10}	L _{Aeq}	L _{A90}	Tonal Adjustment	Reference – Western area (Location 3)			Reference – Eastern area (Location 4)		
							L _{A10}	L _{Aeq}	Tonal Adjustment	L _{A10}	L _{Aeq}	Tonal Adjustment
Location 2: 23 Coffs Harbour Ave	12:00 pm to 12:15 pm	66	48	46	41	+3	68	68	+4	61	64	+0
	12:15 pm to 12:30 pm	66	55	51	44	+1	62	59	+0	60	59	+1
Location 1: 22 Michelago Cct	12:43 pm to 12:58 pm	76	61	57	45	+0	68	63	+2	63	62	+3
	12:58 pm to 1:13 pm	70	61	57	44	+0	63	60	+4	74	69	+2

Notes:

- The tonal adjustment of up to +3 dB at 22 Michelago Circuit was not from the Mainfreight Warehousing and, as such, should not been applied to the measured noise level.
- The ambient noise levels were dominated by distant road traffic noise and mechanical plant from nearby industrial premises.
- Noise from the Mainfreight Warehouse was not audible at both 22 Michelago Circuit, Preston (EPA identification 1) with an ambient background noise level of L_{A90,15mins} 44 dB and at 23 Coffs Harbour Avenue, Hoxton Park (EPA identification 2) with an ambient background noise level of L_{A90,15mins} 41 dB .
- A 29 db noise reduction is required from Location 3 to achieve the adopted noise criterion of L_{Aeq,15mins} 39 dB at Location 2 (23 Coffs Harbour Ave). Monitoring Location 2 (23 Coffs Harbour Ave) is approximately 316 meters away from monitoring Location 3 (western area of the subject site), and is obstructed by multiple buildings providing significant shielding.
- A 26 db noise reduction is required from Location 4 to achieve the adopted noise criterion of L_{Aeq,15mins} 37 dB at Location 1 (22 Michelago Cct). Monitoring Location 1 (22 Michelago Cct) is approximately 778 meters away from Monitoring Location 4 (eastern area of the subject site), and is obstructed by multiple buildings providing significant shielding.
- Furthermore, the noise modelling conducted in the previous EPL Noise Assessment (Reference No.: S10905-R1) conducted by Hibbs & Associates Pty Ltd predicts the noise levels to be within the allowable noise limits of the Environment Protection License (No. 21221). The operation of the Mainfreight Warehousing has not changed.

Based on the noise measurements conducted on Friday 14th March 2025, the noise requirements outlined in the Environment Protection License (No. 21221) are expected to be satisfied.



3.0 CONCLUSION

Koikas Acoustics was requested to conduct noise testing of the Mainfreight Warehousing at 50 Yarrowa Street, Prestons NSW.

Based on our noise measurements conducted on Friday 14th March 2025, the operation of the Mainfreight Warehousing was found to be within the acoustic requirements outlined in the Environment Protection License (No. 21221) for 22 Michelago Circuit, Preston (EPA identification 1) and 23 Coffs Harbour Avenue, Hoxton Park (EPA identification 2).

The noise from the Mainfreight Warehouse was inaudible at 22 Michelago Circuit, Preston (EPA identification 1) and 23 Coffs Harbour Avenue, Hoxton Park (EPA identification 2). This is consistent with the evidence that Mainfreight Warehouse has received no complaints to date.

Furthermore, the noise modelling conducted in the previous EPL Noise Assessment (Reference No.: S10905-R1) conducted by Hibbs & Associates Pty Ltd predicts the noise levels to be within the allowable noise limits of the Environment Protection License (No. 21221). The operation of the Mainfreight Warehousing has not changed.



APPENDIX A

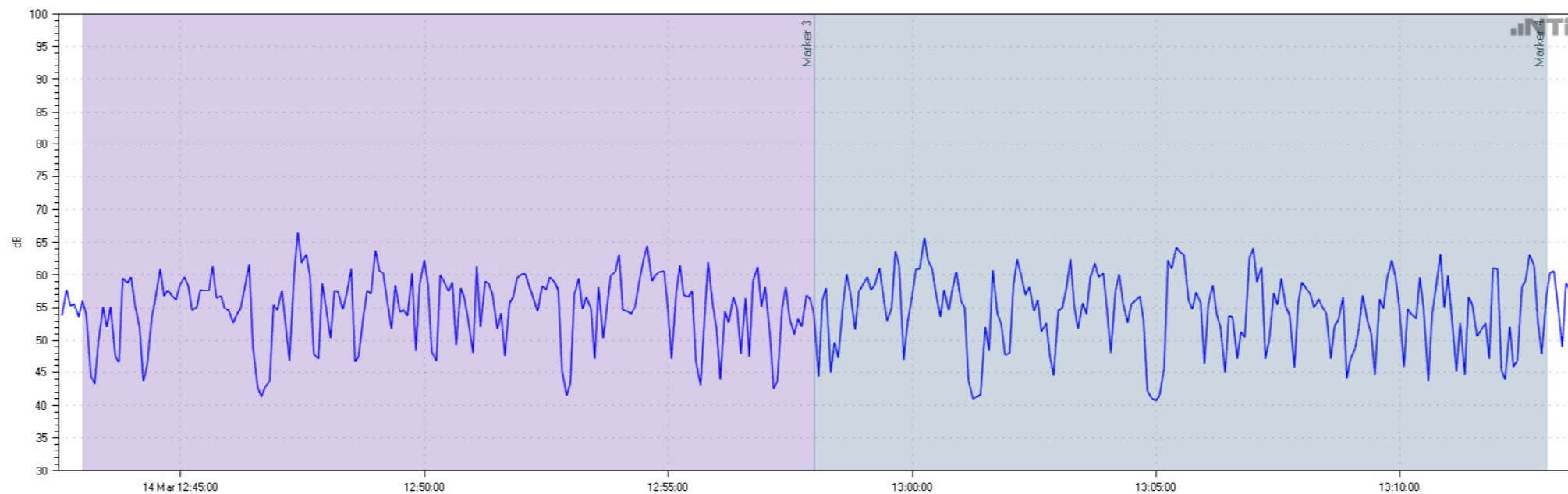
A P P E N D I X A

APPENDIX A

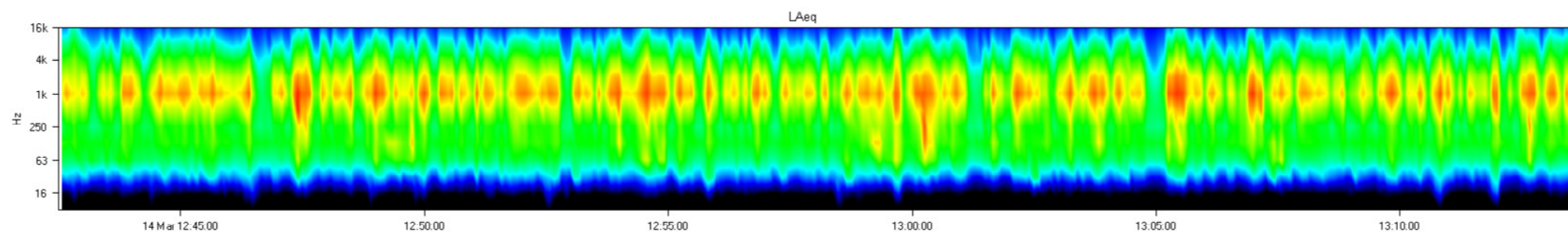
Monitoring location 1 (22 Michelago Circuit, Preston)

Start: 2025-03-14 12:42:34

End: 2025-03-14 13:13:34.1



— LAeq_dt



Results

Type	Start	Duration	LAeq [dB]	LAFmax @Σ31.5..8k [dB]	LAeq				
					5.0% [dB]	10.0% [dB]	50.0% [dB]	90.0% [dB]	95.0% [dB]
Recorded	2025-03-14 12:42:34	00:31:00.1	57.2	75.5					
Project Result		00:31:00.1	57.2	75.5	62.5	61.0	54.5	44.7	43.2

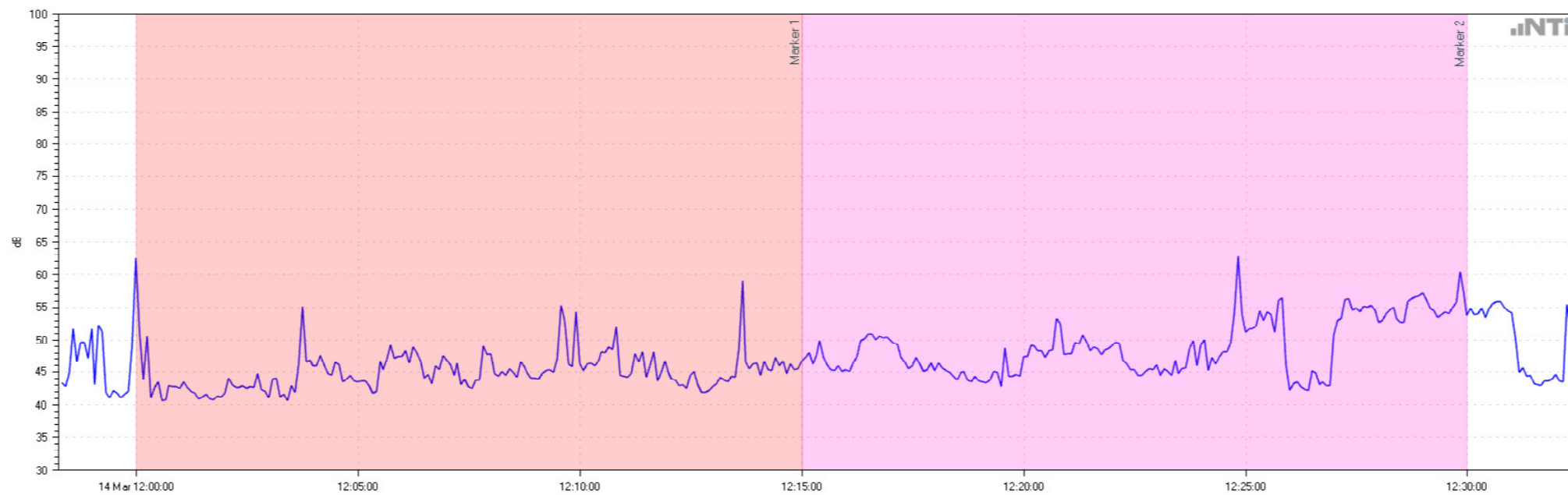
Markers

Type	Start	Duration	LAeq [dB]	LAFmax @Σ31.5..8k [dB]	LAeq				
					5.0% [dB]	10.0% [dB]	50.0% [dB]	90.0% [dB]	95.0% [dB]
Marker 3 (1)		00:15:00	57.2	75.5	62.2	60.9	54.8	44.9	43.2
Marker 4 (1)		00:15:00	57.2	70.0	62.7	61.1	54.0	44.4	43.0
Unmarked		00:01:00.1	57.0	64.2	61.4	60.9	55.1	48.3	46.9

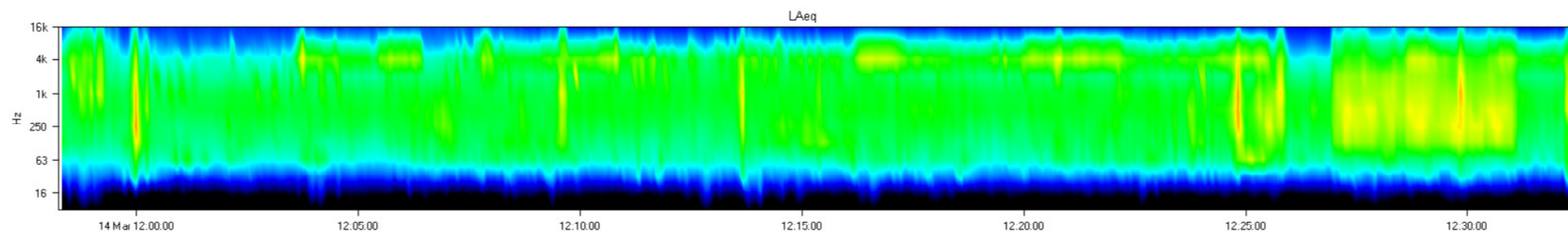
Monitoring location 2 (23 Coffs Harbour Avenue, Hoxton Park)

Start: 2025-03-14 11:58:16

End: 2025-03-14 12:32:24.6



— LAeq_dt



Results

Type	Start	Duration	LAeq [dB]	LAFmax @Σ31.5..8k [dB]	LAeq				
					5.0% [dB]	10.0% [dB]	50.0% [dB]	90.0% [dB]	95.0% [dB]
Recorded	2025-03-14 11:58:16	00:34:08.6	49.8	69.6					
Project Result		00:34:08.6	49.8	69.6	55.5	54.0	45.3	42.0	41.3

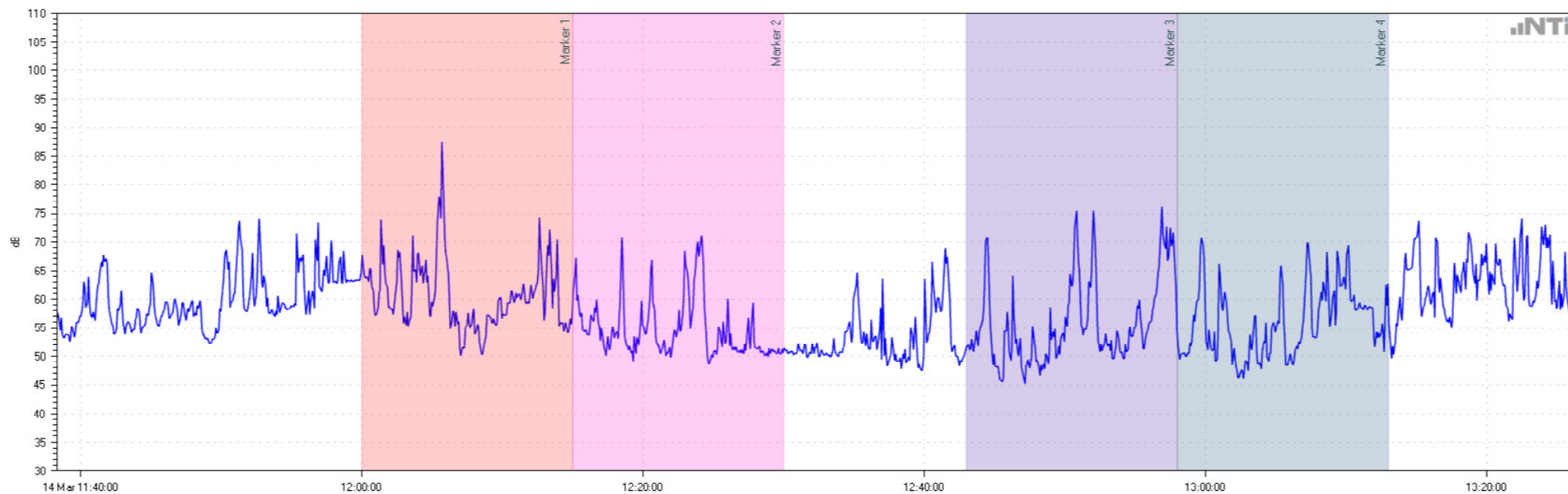
Markers

Type	Start	Duration	LAeq [dB]	LAFmax @Σ31.5..8k [dB]	LAeq				
					5.0% [dB]	10.0% [dB]	50.0% [dB]	90.0% [dB]	95.0% [dB]
Marker 1 (1)		00:15:00	46.4	66.1	49.4	47.9	44.1	41.4	40.8
Marker 2 (1)		00:15:00	51.2	66.4	56.2	54.9	47.6	43.5	42.9
Unmarked		00:04:08.6	51.9	69.6	56.2	55.3	44.7	41.6	40.9

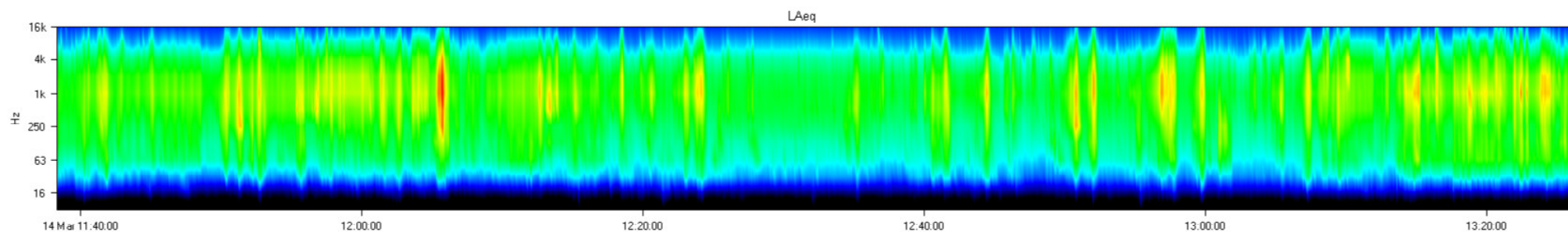
Monitoring location 3 (western area of Mainfreight Warehousing)

Start: 2025-03-14 11:38:20

End: 2025-03-14 13:26:12.8



— LAeq_dt



Results

Type	Start	Duration	LAeq [dB]	LAFmax @Σ31.5..8k [dB]	LAeq				
					5.0% [dB]	10.0% [dB]	50.0% [dB]	90.0% [dB]	95.0% [dB]
Recorded	2025-03-14 11:38:20	01:47:52.8	63.6	95.5					
Project Result		01:47:52.8	63.6	95.5	69.1	66.1	56.5	49.6	48.4

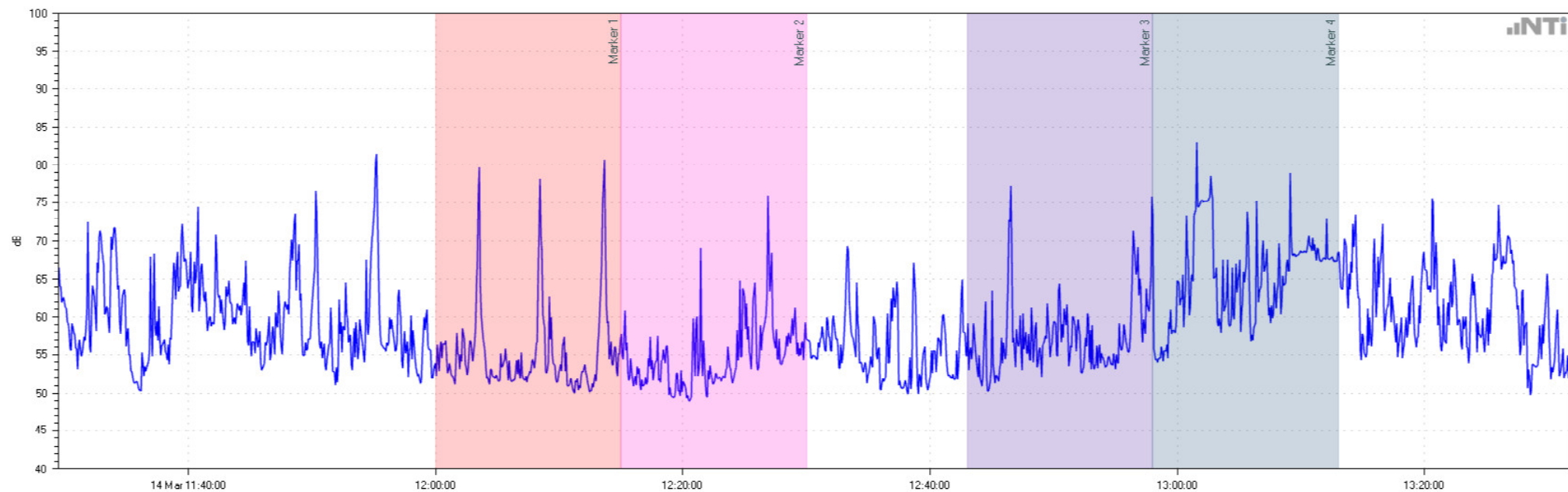
Markers

Type	Start	Duration	LAeq [dB]	LAFmax @Σ31.5..8k [dB]	LAeq				
					5.0% [dB]	10.0% [dB]	50.0% [dB]	90.0% [dB]	95.0% [dB]
Marker 1 (1)		00:15:00	67.9	95.5	70.9	67.9	59.3	53.7	51.9
Marker 2 (1)		00:15:00	59.3	76.6	66.5	61.9	52.6	49.7	49.2
Marker 3 (1)		00:15:00	63.4	79.0	70.7	67.7	52.9	47.6	46.5
Marker 4 (1)		00:15:00	60.1	78.8	66.6	63.0	54.3	48.1	47.3
Unmarked		00:47:52.8	62.9	84.4	69.0	66.4	58.1	50.1	49.3

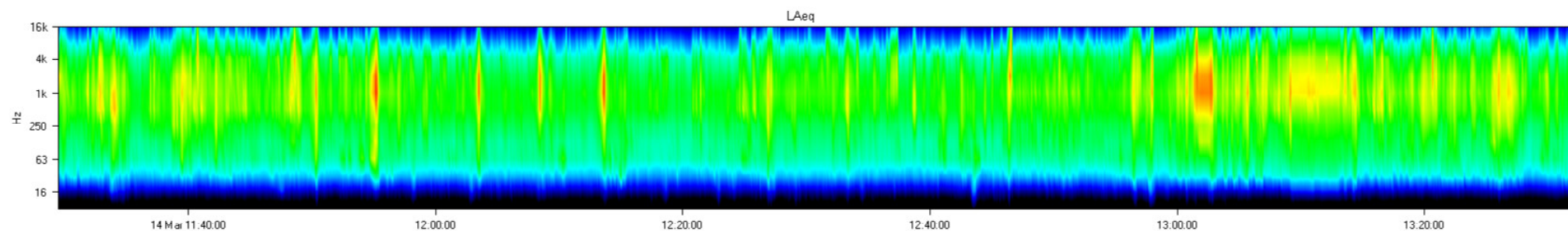
Monitoring location 4 (eastern area of Mainfreight Warehousing)

Start: 2025-03-14 11:29:34

End: 2025-03-14 13:31:49.3



— LAeq_dt



Results

Type	Start	Duration	LAeq [dB]	LAFmax [dB]	LAeq				
					5.0% [dB]	10.0% [dB]	50.0% [dB]	90.0% [dB]	95.0% [dB]
Recorded	2025-03-14 11:29:34	02:02:15.3	64.6	88.4					
Project Result		02:02:15.3	64.6	88.4	69.7	67.4	56.0	51.3	50.5

Markers

Type	Start	Duration	LAeq [dB]	LAFmax [dB]	LAeq				
					5.0% [dB]	10.0% [dB]	50.0% [dB]	90.0% [dB]	95.0% [dB]
Marker 1 (1)		00:15:00	64.0	88.3	65.4	60.5	53.0	50.8	50.3
Marker 2 (1)		00:15:00	58.7	80.3	62.8	59.7	53.4	49.9	49.3
Marker 3 (1)		00:15:00	61.9	85.4	65.8	62.6	54.7	51.9	51.2
Marker 4 (1)		00:15:00	69.4	88.4	75.2	74.3	65.4	55.7	54.5
Unmarked		01:02:15.3	63.8	87.5	69.1	66.6	57.0	51.9	50.9