

Construction Monitoring Report March 2023 – August 2023

Sydney Metro City & Southwest - Line-wide Works

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1. Introduction

1.1 **Project Summary**

The Sydney Metro City & Southwest (SMCSW) is the second portion of the new standalone rail network known as the Sydney Metro, which is Australia's largest public transport infrastructure project and a priority rail project for the NSW Government. The project will extend Sydney Metro Northwest to the CBD and beyond to Bankstown. The project is being delivered through a suite of contracts for the tunnels, stations, Line-wide infrastructure and systems. Line-wide is a key component of the SMCSW, with works taking place over the full length of the project as shown in Figure 1 below:



Figure 1: Line-wide Locations

1.2 Planning Approval Requirements

The Sydney Metro Authority received planning approval to construct the project from the Department of Planning and Environment. The Conditions of Approval CSSI 7400 cover the works from Chatswood to Sydenham and the Conditions of Approval CSSI 8256 cover the works from Marrickville to Bankstown.

A Construction Environmental Management Plan and sub-plans were developed for the project to address all environmental aspects, including construction monitoring. Approval of the plans enabled commencement of construction on 4 March 2020. The plans for the Line-wide works were developed to address the requirements of both planning approvals in each plan or sub-plan. Construction monitoring requirements are detailed in the Soil, Water and Groundwater Management Sub-Plan C2B and the Construction Noise and Vibration Management Plan – C2B. The plans can be accessed at the CPB Sydney Metro City & Southwest Line-wide Works Project website:

https://www.cpbcon.com.au/en/our-projects/2018/sydney-metro-line-wide-works

The objectives for this report are to provide construction monitoring results for the seventh 6 months of works on the Line-wide Project, from the start of March 2023 to the end of August 2023. This report is provided for information to the Department of Planning and Environment. It is intended to address the requirements of Conditions C16 of CSSI 7400 and C14 of CSSI 8256.



2. Water Quality Monitoring

The Soil, Water and Groundwater Management Sub-Plan C2B requires that water quality monitoring will be undertaken for controlled discharges offsite to watercourses and stormwater drainage to ensure compliance with discharge criteria. The discharge criteria are shown in the Table 1 below:

Table 1: Surface Water Quality Criteria for discharging off premises

	Meas	Discharge			
Parameter pH Total Suspended Solids Oil and Grease	Percentile Concentration Limit	centile Sample Method & Units centration Limit Frequency		Criteria	
рН	100	Probe/ grab sample Prior to discharge	рН	6.5-8.5	
Total Suspended Solids	100	Probe/ grab sample Prior to discharge	mg/L	<50	
Oil and Grease	Not visible	Visual Prior to discharge mg/L		Not visible	

In March 2023, the EPA varied EPL 21423 condition M2 by increasing the analytical list for the Chatswood water treatment plants discharge point 1 and requested results be reported quarterly. However, the discharge point 1 criteria is unchanged as shown in Table 2 below.

Parameter	Meas	Discharge		
	PercentileSample Method &Concentration LimitFrequency		Units	Criteria
рН	100	Probe/ grab sample Prior to discharge	рН	6.5-8.5
Total Suspended Solids	100	Probe/ grab sample Prior to discharge	mg/L	<50
Oil and Grease	Not visible	Visual Prior to discharge	mg/L	Not visible

Table 2: Chatswood Water Treatment Plant Discharge Criteria (Point 1)

In March 2023, the EPA issued a licence variation, which introduced new discharge concentration limits for the Marrickville water treatment plants discharge point 2 and requested results be reported quarterly. As shown in Table 3 below.

	Meas	Discharge			
Parameter	PercentileSample Method &Concentration LimitFrequency		Units	Criteria	
рН	100	Probe/ grab sample Prior to discharge	рН	6.5-8.5	
Turbidity	100	Probe/ grab sample Prior to discharge	NTU	35	
Turbidity	90	Probe/ grab sample Prior to discharge	NTU	10	
Oil and Grease	Not visible	Visual Prior to discharge	mg/L	Not visible	

 Table 3: Marrickville Water Treatment Plant Discharge Criteria (Point 2)



Parameter	Meas	Discharge		
	Percentile Sample Method & Units Concentration Limit Frequency		Units	Criteria
Chromium (hexavalent)	100	Probe/ grab sample Prior to discharge	e/ grab sample r to discharge mg/L	
Copper (dissolved)	100	Probe/ grab sample Prior to discharge	mg/L	0.003

To comply with EPL condition 21423 M3.3, sampling is undertaken at the source (influent/input) and the discharge point (effluent/output) at both the Chatswood and Marrickville water treatment plants.

There were no exceedances at discharge point 1 or point 2 between March and August 2023 (refer to Appendix B and C). Quarterly results were reported to the EPA within two weeks of the sampling event, as required.

2.1 **Permit to Dewater**

Systems Connect have an internal Permit to Dewater system, which ensures compliance with discharge criteria at all times. Monitoring is done prior to each dewatering event. The Systems Connect Permit to Dewater and Water Quality Monitoring Register is provided in Appendix A. This demonstrates that discharge criteria were met for all discharges.

2.2 Water Treatment Plant

On 1 August 2020, Systems Connect took possession of a portion of the Chatswood Dive site from the Tunneling and Station Excavation Contractor. The portion contained the Chatswood Water Treatment Plant, which was operated by Systems Connect in the reporting period. The WTP processed and treated surface water from the Chatswood Dive site, and tunnel water between Barangaroo and the Chatswood Dive. The Chatswood Water Treatment Plant was decommissioned on the 28th of June 2023, and discharge point 1 was removed from the EPL #21423 on the 3rd of August 2023.

From November 2021, the Water Treatment Plant at Marrickville became operational. This WTP takes water from the tunnels between Barangaroo and the Marrickville Dive. From 28th June 2023 the Marrickville WTP began processing water from the tunnels between the Chatswood Dive and the Marrickville Dive

A WTP Checklist is completed by the WTP operator daily (working days), where a range of WTP observations, parameters and chemical levels are noted. This includes water discharge parameters required for regulatory compliance. The compliance results from the checklists completed during the reporting period are described in 4 below:

WTP	Date	рН	Turbidity (NTU)	Oil and Grease
Chatswood	1/03/2023 to 28/06/2023	6.9 - 8.5	0 - 16.2	None visible
Marrickville	1/03/2023 to 31/08/2023	7.1 - 8.14	0.3 - 10	None visible

Table 4: WTP Compliance Results

At each water treatment plant under Systems Connect control, the discharge parameters pH, TSS and NTU are to be sampled monthly. Results demonstrating compliance are provided in Appendix B. As part of the March 2023 EPL licence variation, additional quarterly discharge water monitoring requirements were introduced for the Chatswood Water Treatment Plant and the Marrickville Water Treatment Plant. These quarterly discharge water monitoring results are provided in Appendix C.



2.3 Receiving Water Monitoring

The Soil, Water and Groundwater Management Sub-Plan C2B requires that monitoring of receiving waters will occur quarterly, while WTPs are active and in SC control. Monitoring parameters are provided in 5 below:



Table 5: Surface Water Quality Parameters

Parameter	Sample Method	Analytical method	ANZECC ^{1, 2} Criteria (freshwater) ⁸	ANZECC ^{1, 3} Criteria (marine water) ⁷	Trigger Values	Action
Temperature (°C)	Probe	Field Analysis	>80%ile ⁴ <20%ile ⁴		Results are >	
Dissolved Oxygen (%Sat)	Probe	Field Analysis	Lower Limit: 85 Upper Limit: 110	Lower Limit: 90 Upper Limit: 110	than the baseline 80th percentile	Environment Coordinators to
Turbidity (NTU)	Probe	Field Analysis	6-50	0.5-10		re-test to confirm results. Environment Coordinator is to undertake
Oil and Grease	Visual analysis, then grab sample if required	Visual Assessment Lab Analysis	-	-	Visible oil and grease	an inspection of the Works and propose actions where required Note: There is a delay in receiving the results from grab samples. Environment
Conductivity (µS/cm) ⁶	Grab Sample and Probe	Field Analysis Lab Analysis	125 – 2200	-		Coordinator to obtain further grab samples for testing to confirm results. Environment Coordinator to undertake an
Total Suspended Solids (TSS: mg/L)			-	-	Results are >	establish what activities had been undertaken prior to the tests being
Iron (mg/L)	Grab Sample	Lab Analysis	0.35	-	than the baseline	undertaken and propose actions where required.
Manganese(mg/L)			1.7	0.8		
рН	Grab Sample and Probe	Field Analysis Lab Analysis	Lower Limit: 6.5 Upper Limit: 8.0	Lower Limit: 8.0 Upper Limit: 8.4		

Notes:

¹95% protection level – most commonly applied to ecosystems that could be classified as slightly to moderately disturbed.

²ANZECC (2000) guidelines for the protection of freshwater aquatic ecosystems

³ANZECC (2000) guidelines for the protection of marine aquatic ecosystems

⁴ Default trigger value for each ecosystem-type

⁵ There is insufficient data at this stage to derive a reliable value for iron. The current Canadian guideline has been used.

⁶ Conductivity will not be tested at monitoring points at estuarine/marine catchments.

⁷ Applicable to monitoring location SW-AC-01 and SW-SC-02

⁸ Applicable to monitoring location SW-SC-01

- No data available



Only the receiving waters downstream of the Chatswood WTP and Marrickville WTP were applicable for monitoring during this period. All other WTPs are being operated by other Sydney Metro contractors. The two monitoring sites downstream of the Chatswood WTP are both in the Scotts Creek/Middle Harbour Catchment. The sampling point downstream of the Marrickville WTP is in the Alexandra Canal. Sampling points are described in 6 below:

Site ID	Site interaction	Relative location	Catchment	Sampling address	Easting	Northing	Туре
SW- SC- 01	Receiving waters from Chatswood WTP discharges.	Downstream	Scotts		330586	6245923	Freshwater
SW- SC- 02	Monitoring location active while the Chatswood WTP is active and in SC control.		Creek / Middle Harbour	Access via North Arm Track, North Arm Road, Chatswood	332788	6246304	Marine
SW- AC- 01	Receiving waters from Marrickville WTP discharges. Monitoring location active while the Marrickville WTP is active and in SC control.	Downstream	Alexandra Canal	Access via bicycle track from the end of Coward Street, Mascot	331342	6244783	Marine

Table 6: Sampling Point Information

The results of the receiving water monitoring are provided in Appendix D.



3. Noise and Vibration

The Construction Noise and Vibration Management Plan – C2B includes the Construction Noise and Vibration Monitoring Program. This program requires that the results of construction noise and vibration monitoring be reported every six months. The results for this monitoring period are included in this report.

3.1 Noise Monitoring

Section 8.1.4 of the CNVMP states that: "Attended monitoring of construction noise levels will be undertaken as follows:

- At the first opportunity following the commencement of construction activity to confirm the effectiveness of actions and measures determined in CNVIS process
- Repeated as described in the CNVIS, as part of the audit cycle to ensure that noise and vibration levels in the adjacent community remain consistent with the predicted levels in the CNVIS
- Where appropriate in response to a noise related complaint(s) (determined on a case-by-case basis)
- During sensitive periods (i.e. night works)
- As directed by an authorised officer of the EPA.

Monitoring would be undertaken at the potentially most exposed receivers in proximity to construction activities. Noise monitoring locations should be consistent with the distances/ locations identified in the CNVIS and will consider factors including:

- The location of previous monitoring sites
- The proximity of the receiver to a worksite
- The sensitivity of the receiver to noise
- Background noise levels
- The expected duration of the impact."

Summary results of attended noise monitoring conducted by Systems Connect in the reporting period are provided in Appendix E (Systems Connect Noise Monitoring Register), demonstrating compliance with project requirements, including the above extract from the management plan.

Noise monitoring equipment details, including make, model, serial number, last calibration date and NATA testing facility, are provided in Appendix F.

Further details are collected for each field reading, including time, duration, meteorological conditions and extraneous noise sources during reading. Samples of Noise Monitoring Record Sheets are provided in Appendix G. Others are available on request.

3.2 Vibration Monitoring

The Construction Noise and Vibration Management Plan – C2B explains that: "the requirement for real time vibration monitoring will be determined on a site-by-site basis and identified in the CNVIS for LW worksites between Chatswood and Sydenham. Real time vibration monitoring will be deployed to manage vibration impacts from 'high risk' sites, where the CNVIS vibration predictions identify there is a high risk of annoyance (or potential building damage) from construction vibration."

During the reporting period, there were no locations that required vibration monitoring.



Appendix A: Systems Connect Permit to Dewater and Water Quality Monitoring Register

Systems Connect LWW Permit to Dewater and Water Quality Monitoring Register

Permit to Dewater	Date	Location	Detailed Monitoring Location	Single or Continuous	Reason	Discharge Point	Water Quality Analyser	рН	Turbidity NTU	Oil & Grease
Permit to Dewater LWW-244	4/03/2023 - 4/04/2023	Chatswood Dive WTP	N/A	Continuous	For discharge approval	Chatswood WTP Discharge Point 1	NA	NA	NA	NA
Permit to Dewater LWW-245	10/03/2023 - 10/04/2023	Marrickville WTP	N/A	Continuous	For discharge approval	Marrickville WTP Discharge Point 2	NA	NA	NA	NA
Permit to Dewater LWW-246	4/04/2023 - 4/05/2023	Chatswood Dive WTP	N/A	Continuous	For discharge approval	Chatswood WTP Discharge Point 1	NA	NA	NA	NA
Permit to Dewater LWW-247	10/04/2023 - 10/05/2023	Marrickville WTP	N/A	Continuous	For discharge approval	Marrickville WTP Discharge Point 2	NA	NA	NA	NA
Permit to Dewater LWW-248	21/04/2023	Campsie BPS	Anzac Street	Single	For discharge approval	Roadside stormwater gutter	Horiba U-52	7.76	33.4	None Visible
Permit to Dewater LWW-249	26/04/2023	Campsie BPS	Gould Street	Single	For discharge approval	Roadside stormwater gutter	Horiba U-52	8.06	32.7	None Visible
Permit to Dewater LWW-249	26/04/2023	Campsie BPS	South Parade	Single	For discharge approval	Roadside stormwater gutter	Horiba U-52	7.56	46.9	None Visible
Permit to Dewater LWW-250	4/05/2023 - 4/06/2023	Chatswood Dive WTP	NA	Continuous	For discharge approval	Chatswood WTP Discharge Point 1	NA	NA	NA	NA
Permit to Dewater LWW-251	10/05/2023 - 10/06/2023	Marrickville WTP	N/A	Continuous	For discharge approval	Marrickville WTP Discharge Point 2	NA	NA	NA	NA
Permit to Dewater LWW-252	4/06/2023 - 4/07/2023	Chatswood Dive WTP	N/A	Continuous	For discharge approval	Chatswood WTP Discharge Point 1	NA	NA	NA	NA
Permit to Dewater LWW-253	10/06/2023 - 10/07/2023	Marrickville WTP	N/A	Continuous	For discharge approval	Marrickville WTP Discharge Point 2	NA	NA	NA	NA
Permit to Dewater LWW-254	10/07/2023 - 10/08/2023	Marrickville WTP	N/A	Continuous	For discharge approval	Marrickville WTP Discharge Point 2	NA	NA	NA	NA
Permit to Dewater LWW-255	10/08/2023 - 10/09/2023	Marrickville WTP	N/A	Continuous	For discharge approval	Marrickville WTP Discharge Point 2	NA	NA	NA	NA



Appendix B: Monthly WTP Sampling

Monthly Water Quality Monitoring - Chatswood WTP

CHW2 Discharge point

Date	Time	Sample ID	рН	Total Suspended Solids (mg/L)	Turbidity (NTU)
22/03/2023	10:30	CHW2	7.95	<5	2
24/04/2023	12:57	CHW2	8.02	<5	0.6
25/05/2023	16:05	CHW2	7.71	<5	4.2
23/06/2023	11:11	CHW2	7.35	12	5.6

Monthly Water Quality Monitoring - Marrickville WTP

MKV-O Discharge point

Date	Time	Sample ID	рН	Turbidity (NTU)	Cr	Cu
22/03/2023	8:15:00 AM	MKV-O	8.04	1.3	<0.001	<0.001
27/04/2023	9:10:00 AM	MKV-O	8.04	1.5	<0.001	<0.001
22/05/2023	9:10:00 AM	MKV-O	7.89	2.3	<0.001	<0.001
29/06/2023	9:05:00 AM	MKV-O	7.22	4.1	<0.001	<0.001
27/07/2023	8:30:00 AM	MKV-O	7.58	1.7	<0.001	<0.001
18/08/2023	8:35:00 AM	MKV-O	7.61	2.3	< 0.001	<0.001



Appendix C: Quarterly Water Monitoring Results

Quarterly Discharge Water Monitoring Results – Chatswood

			Sampling dat	e 22/03/2023	Sampling date 23/06/2023		
Pollutant	Units of measure	Limit of Reporting	Input	Output (WTP discharge)	Input	Output (WTP discharge)	
pH Value	pH Unit	0.01	8.37	7.95	9.67	7.35	
Suspended Solids (SS)	mg/L	5	82	<5	6	12	
Turbidity	NTU	0.1	106	2	3.4	5.6	
Hydroxide Alkalinity as CaCO3	mg/L	1	<1	<1	<1	<1	
Carbonate Alkalinity as CaCO3	mg/L	1	8	<1	57	<1	
Bicarbonate Alkalinity as CaCO3	mg/L	1	176	202	31	77	
Total Alkalinity as CaCO3	mg/L	1	183	202	88	77	
Sulfate as SO4 - Turbidimetric	mg/L	1	67	343	29	98	
Chloride	mg/L	1	217	2410	55	124	
Calcium	mg/L	1	38	53	28	30	
Magnesium	mg/L	1	10	85	2	6	
Sodium	mg/L	1	172	1430	50	103	
Potassium	mg/L	1	21	96	8	13	
Aluminium	mg/L	0.01	<0.01	<0.01	0.14	0.04	
Arsenic	mg/L	0.001	0.002	<0.001	<0.001	<0.001	
Cadmium	mg/L	0.0001	< 0.0001	<0.0001	<0.0001	<0.0001	
Chromium	mg/L	0.001	0.002	0.002	0.002	<0.001	
Copper	mg/L	0.001	0.003	0.002	0.002	0.003	
Lead	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	
Manganese	mg/L	0.001	<0.001	0.002	<0.001	0.073	
Nickel	mg/L	0.001	<0.001	0.001	<0.001	0.002	
Zinc	mg/L	0.005	<0.001	< 0.005	< 0.005	0.023	
Iron	mg/L	0.05	<0.005	< 0.05	< 0.05	< 0.05	
Fluoride	mg/L	0.1	0.4	0.4	0.3	0.4	
Ammonia as N	mg/L	0.01	0.15	0.03	0.11	0.18	
Nitrite as N	mg/L	0.01	0.17	0.06	0.04	0.03	
Nitrate as N	mg/L	0.01	2.02	2.29	1.43	0.93	
Nitrite + Nitrate as N	mg/L	0.01	2.19	2.35	1.47	0.96	
Total Kieldahl Nitrogen as N	mg/L	0.1	1.2	0.8	0.4	1.4	
Total Nitrogen as N	mg/L	0.1	3.4	3.2	1.9	2.4	
Total Phosphorus as P	mg/L	0.01	1,19	<0.01	0.07	0.02	
Reactive Phosphorus as P	mg/L	0.01	1.03	0.01	0.07	<0.01	
Total Anions	meg/L	0.01	11.2	79.2	3.91	7.08	
Total Cations	meq/L	0.01	10.7	74.3	3.94	6.8	
Ionic Balance	%	0.01	1.98	3.17	0.35	1.97	
TPH C6 - C9 Fraction	μg/L	20	<20	<20	<20	<20	
TPH C10 - C14 Fraction	μg/L	50	<50	<50	<50	<50	
TPH C15 - C28 Fraction	μg/L	100	<100	<100	<100	<100	
TPH C29 - C36 Fraction	μg/L	50	<50	<50	<50	<50	
TPH C10 - C36 Fraction (sum)	μg/L	50	<50	<50	<50	<50	
TRH C6 - C10 Fraction	μg/L	20	<20	<20	<20	<20	
TRH C6 - C10 Fraction minus BTEX	μg/L	20	<20	<20	<20	<20	
(F±) TRH >C10 - C16 Fraction	ug/I	100	<20	<100	<100	<100	
TPH SC16 - C24 Eraction	μg/L	100	<100	<100	<100	<100	
TRH $>C34 = C40$ Eraction	με/ι	100	<100	<100	<100	<100	
TRH >C34 - C40 Fraction (sum)	μg/L	100	<100	<100	<100	<100	
TRH $>C10 - C16$ Fraction minus	μg/L	100	<100	<100	<100	<100	
Naphthalene (F2)	μg/L	100	<100	<100	<100	<100	
Benzene	μg/L	1	<1	<1	<1	<1	

Toluene	μg/L	2	<2	<2	<2	<2
Ethylbenzene	μg/L	2	<2	<2	<2	<2
meta- & para-Xylene	μg/L	2	<2	<2	<2	<2
ortho-Xylene	μg/L	2	<2	<2	<2	<2
Total Xylenes	μg/L	2	<2	<2	<2	<2
Sum of BTEX	μg/L	1	<1	<1	<1	<1
Naphthalene	μg/L	5	<5	<5	<5	<5
1.2-Dichloroethane-D4	%	0.1	113	110	106	103
Toluene-D8	%	0.1	108	103	95.2	94.2
4-Bromofluorobenzene	%	0.1	109	105	83.5	80.8
Oil and Grease	Visible	-	None visible	None visible	None visible	None visible
* Refer to Table 2 for applicable of	dischage criteria					

Quarterly Discharge Water Monitoring Results – Marrickville

			Sampling dat	e 27/04/2023	Sampling dat	e 27/07/2023
Pollutant	Units of measure	Limit of Reporting	Input	Output (WTP discharge)	Input	Output (WTP discharge)
pH Value	pH Unit	0.01	8.92	8.04	7.52	7.58
Turbidity	NTU	0.1	12	1.5	228	1.7
Chromium	mg/L	0.001	0.002	<0.001	<0.001	<0.001
Copper	mg/L	0.001	0.002	<0.001	0.003	<0.001
Zinc	mg/L	0.005	<0.005	<0.005	0.031	0.008
Ammonia as N	mg/L	0.01	1.64	1.1	1.94	1.55
Nitrate as N	mg/L	0.01	1.02	1.81	0.88	0.98
Total Nitrogen as N	mg/L	0.1	4.8	4.2	4.6	3.4
Total Phosphorus as P	mg/L	0.01	0.16	0.07	0.07	0.01
Oil and Grease	Visible	-	None Visible	None Visible	None Visible	None Visible
* Refer to Table 3 for applicable	e dischage crit	eria				



Appendix D: Receiving Water Monitoring Results

Quarterly Downstream Surface Water Quality Monitoring - Chatswood

				Field Results						Lab Results				
Date	Time	Sample ID	Temperature (C)	Dissolved Oxygen (%)	Turbidity (NTU)	Conductivity (mS/cm)	Conductivity (μS/cm)	рН	Oil & Grease (Y/N)	Total Suspended Solids (mg/L)	Iron (Fe)	Manganese (Mn)	рН	Oil & Grease (mg/L)
22/03/2023	10:50:00 AM	SW-SC-01	19.9	86.6	3.2	0.273	273	8.49	N	<5	<0.05	0.002	7.78	Not tested
22/03/2023	11:22:00 AM	SW-SC-02	22.4	63.6	5.6	41.6	41600	7.21	N	7	<0.05	0.016	7.8	Not tested
23/06/2023	9:29:00 AM	SW-SC-01	13.21	70.8	22.4	0.353	353	6.56	N	<5	<0.05	0.021	6.82	Not tested
23/06/2023	10:12:00 AM	SW-SC-02	12.82	70.5	32.7	10.9	10900	6.53	N	9	<0.05	0.01	7.02	Not tested

Quarterly Downstream Surface Water Quality Monitoring - Marrickville

				Field Results						Lab Results				
Date	Time	Sample ID	Temperature (C)	Dissolved Oxygen (%)	Turbidity (NTU)	Conductivity (μS/cm)	рН	Oil & Grease (Y/N)	Total Suspended Solids (mg/L)	рН	Magnesium (mg/L)	Iron	Oil & Grease (mg/L)	
27/04/2023	9:10:00 AM	SW-AC-01	21.1	44.2	23.3	35600	7.75	N	12	7.75	757	< 0.05	Not Tested	
27/07/2023	10:53:00 AM	SW-AC-01	15.62	83.2	61.8	33300	8.14	N	50	7.57	804	<0.10	Not Tested	



Appendix E: Systems Connect Noise Monitoring Register

Systems Connect LWW Noise Monitoring Register

Date	Location	Detailed Monitoring Location	NCA	Predicted Noise Level	Measured L _{Aeq}	Comments
10/03/2023	Barangaroo Shaft	1-5 Towns Place, Millers Point	BN_02	80	68	Below predicted, LW works compliant
10/03/2023	Barangaroo Shaft	1-5 Towns Place, Millers Point	BN_02	69	77	Traffic noise dominant, LW works compliant
26/03/2023	Northern Connection	13 Hopetoun Avenue, Chatswood	CDS_04	74	53	Below predicted, LW works compliant
26/03/2023	Northern Connection	2A Gordon Avenue, Chatswood	CDS_03	68	51	Below predicted, LW works compliant
29/03/2023	SMTF-S	76 Unwins Bridge Road, Marrickville	MDS_04	53	67.5	Traffic noise dominant, LW works compliant
29/03/2023	SMTF-S	76 Unwins Bridge Road, Marrickville	MDS_04	53	67.7	Traffic noise dominant, LW works compliant
13/04/2023	Northern Connection	11-13 Hopetoun Avenue, Chatswood🛛	CDS_04	62	41	Below predicted, LW works compliant
13/04/2023	Northern Connection	1-3 Gordon Avenue, Chatswood	CDS_03	65	48	Below predicted, LW works compliant
13/04/2023	Northern Connection	7-11 Nelson Street, Chatswood	CDS_03	62	42	Below predicted, LW works compliant
16/04/2023	SMTF-S	360 Edgeware Street, Newtown	MDS_02	91	57	Below predicted, LW works compliant
16/04/2023	Marrickville Station	3 Warburton Street, Marrickville	S2B_01	60	61	Traffic noise dominant, LW works compliant
16/04/2023	Marrickville Station	11 Warburton Street, Marrickville	S2B_01	60	62	Traffic noise dominant, LW works compliant
20/04/2023	Northern Connection	2 Nelson Street, Chatswood	CDS_03	40	39	Below predicted, TSOM works compliant
23/04/2023	Dulwich Hill - Zone 6	92 Ewart Street, Dulwich Hill	S2B_02	57	59	Traffic noise dominant, LW works compliant
23/04/2023	Dulwich Hill - Zone 6	98 Ewart Street, Dulwich Hill	S2B_02	56	60	Traffic noise dominant, LW works compliant
23/04/2023	Lakemba TSS	17 The Boulevarde, Lakemba	S2B_08	69	61	Below predicted, LW works compliant
23/04/2023	Lakemba TSS	12 The Boulevarde, Lakemba	S2B_08	70	65	Below predicted, LW works compliant
23/04/2023	Campsie TSS	3 Wifred Avenue, Campsie	S2B_06	59	57	Below predicted, LW works compliant
23/04/2023	Dulwich Hill TSS	20 Randall Street, Marrickville	S2B_02	68	59	Below predicted, LW works compliant
23/04/2023	Belomore Compound	101-105 Bridge Road, Belmore	S2B_07	71	58	Below predicted, LW works compliant
23/04/2023	Belomore Compound	8 Railway Parade, Belmore	S2B_07	62	52	Below predicted, LW works compliant
7/05/2023	Lakemba - Zone 21	65 Railway Parade, Lakemba	S2B_08	53	52	Below predicted, LW works compliant
7/05/2023	Lakemba - Zone 21	53 Railway Parade, Lakemba	S2B_08	59	53	Below predicted, LW works compliant
7/05/2023	Lakemba - Zone 21	54 Railway Parade, Lakemba	S2B_08	60	55	Below predicted, LW works compliant
7/05/2023	Marrickville Station	11 Warburton Street, Marrickville	NCA_01	60	67	Non LW construction noise dominant, LW works compliant
7/05/2023	Marrickville Station	346A Illawarra Road, Marrickville	NCA_01	50	58	Non LW construction noise dominant, LW works compliant
7/05/2023	Marrickville Station	2 Arthur Street, Marrickville	NCA_01	50	55	Non LW construction noise dominant, LW works compliant
10/05/2023	Chatswood Dive	344 Mowbray Road, Artarmon	CDS_06	79	67.1	Below predicted, LW works compliant.
10/05/2023	Chatswood Dive	342 Mowbray Road, Artarmon	CDS_06	76	62.6	Below predicted, LW works compliant.
10/05/2023	Chatswood Dive	182-190 Hampden Road, Artarmon	CDS_06	60	59.3	Below predicted, LW works compliant.

6/07/2023	Canterbury Station	2 Broughton Street, Canterbury	S2B_04	50	54.8	Traffic noise dominant, LW works compliant
6/07/2023	Canterbury Station	3 Broughton Street, Canterbury	S2B_04	50	63.2	Traffic noise dominant, LW works compliant
6/07/2023	Dulwich Hill Station	11 Bedford Crescent, Dulwich Hill	S2B_02	61	42.2	Below predicted, LW works compliant.
6/07/2023	Dulwich Hill Station	7 Bedford Crescent, Dulwich Hill	S2B_02	61	53.3	Below predicted, LW works compliant.
6/07/2023	Dulwich Hill Station	1 Bedford Crescent, Dulwich Hill	S2B_02	60	55.2	Below predicted, LW works compliant.
15/08/2023	Chatswood	344 Mowbray Road, Artarmon	CDS_06	58	71.4	Traffic noise dominant, LW works compliant
15/08/2023	Chatswood	342 Mowbray Road, Artarmon	CDS_06	56	69.7	Traffic noise dominant, LW works compliant



Appendix F: Noise Monitoring Equipment Details

RION Tracking and Calibration Records

Note that calibration of the noise monitors are due every two years, while the calibration of the calibrators are due yearly.

Bag No.	Make	Model	Device Serial Number	Previous Calibration Date	External Calibration Due Date	Place of Calibration
	DION	NL-42	00509242	5/09/2022	5/09/2024	Acoustic Research Lab
1 RIO	RION	NC-75 - Portable Calibrator	34202225	5/09/2022	5/09/2023*	Acoustic Research Lab
2	DION	NL-42	01000278	23/03/2022	23/03/2024	Acoustic Research Lab
2	RION	NC-75 - Portable Calibrator	34212953	13/04/2023	13/04/2024	Acoustic Research Lab
2	DION	NL-42	00269685	7/07/2022	7/07/2024	Acoustic Research Lab
3	RION	NC-75 - Portable Calibrator	00970021	14/08/2023	14/08/2024	Acoustic Research Lab
		NL-42	00469907	18/08/2022	18/08/2024	Acoustic Research Lab
4	RION	NC-75 - Portable Calibrator	34502426	18/08/2022	18/08/2023*	Acoustic Research Lab
	RION	NL-21	00877037	29/09/2022	29/09/2024	Acoustic Research Lab
5	Pulsar	Model 105	98618	Calibrator purchased 10/11/2022	10/11/2023	Acoustic Research Lab



Sound Calibrator

IEC 60942:2017

Calibration Certificate

Calibration Number C22727

Client Details	Systems Connect						
	Level 3, 116 Miller Street						
	North Sydney NSW 2060						
Equipment Tested/ Model Number :	Pulsar Model 105						
Instrument Serial Number :	98618						
Atmosp	heric Conditions						
Ambient Temperature :	23.4°C						
Relative Humidity :	51%						
Barometric Pressure :	100.99kPa						
Calibration Taskaisian . I yoly Isiswal	Coordonn Chooles Dhonych Dony						
Campration Technician : Lucky Jaiswai	Secondary Check: Dhanush Bohu						
Calibration Date: 10 Nov 2022	Report Issue Date : 10 Nov 2022						
Approved Signatory : Holdens Ken Williams							
Approved Signatory :	Ken Williams						
Approved Signatory : Characteristic Tested Reference	HE Chams Ken Williams						
Approved Signatory : Characteristic Tested R Generated Sound Pressure Level H	Ken Williams esult Pass						
Approved Signatory :Characteristic TestedRGenerated Sound Pressure LevelHFrequency GeneratedH	Ken Williams esult Pass Pass						
Approved Signatory :Characteristic TestedRGenerated Sound Pressure LevelHFrequency GeneratedHTotal DistortionH	Ken Williams esult Pass Pass Pass						
Approved Signatory :Characteristic TestedRGenerated Sound Pressure LevelHFrequency GeneratedHTotal DistortionH	Ken Williams esult Pass Pass Pass Pass Pass						
Approved Signatory :Characteristic TestedRGenerated Sound Pressure LevelHFrequency GeneratedHTotal DistortionHNominal LevelNominal	Ken Williams esult Pass						
Approved Signatory :Characteristic TestedRGenerated Sound Pressure LevelHFrequency GeneratedHTotal DistortionHNominal LevelNominal941	Ken Williams esult Pass						
Approved Signatory : Characteristic Tested Regardless Generated Sound Pressure Level H Frequency Generated H Total Distortion H Nominal Level Nominal 94 1 The sound calibrator has been shown to conform to the class 1 re the sound pressure level(s) and frequency(ies) stated, for	Ken Williams esult Pass						
Approved Signatory : Characteristic Tested Regardless Generated Sound Pressure Level H Frequency Generated H Total Distortion H Nominal Level Nominal 94 1 The sound calibrator has been shown to conform to the class 1 re the sound pressure level(s) and frequency(ies) stated, for Uncertain	Ken Williams esult Pass						
Approved Signatory : Characteristic Tested Regardless Generated Sound Pressure Level H Frequency Generated H Total Distortion H Nominal Level Nominal 94 1 The sound calibrator has been shown to conform to the class 1 re the sound pressure level(s) and frequency(ies) stated, for Uncertain Specific Tests Uncertain	Williams Ken Williams esult Pass Pass Pass Pass Pass Pass Pass Pass Pass Pass Pass Pass Pass Pass Oo0 93.98 1000.30 Pass quirements for periodic testing, described in Annex B of IEC 60942:2017 for the environmental conditions Pass						

±0.13% ±1.9% Frequency Relative Humidity Distortion $\pm 0.20\%$ Barometric Pressure ±0.014kPa

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

This calibration certificate is to be read in conjunction with the calibration test report.

Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172.

Accredited for compliance with ISO/IEC 17025 - Calibration.



The results of the tests, calibrations and/or measurements included in this document are traceable to SI units.

NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration and inspection reports.

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Acoustic Unit 36/14 Loyalty Rd Research North Rocks NSW AUSTRALIA 2151 Ph: +61 2 9484 0800 A.B.N. 65 160 399 119 abs Pty Ltd www.acousticresearch.com.au

Sound Level Meter

IEC 61672-3:2013

Calibration Certificate

Calibration Number C22543

Client Detai	ls Syst	ems Connect Line-Wide	
	Lev	el 1, 116 Miller Street	
	Nor	th Sydney NSW 2060	
	NOI	ui Sydney NSW 2000	
Equipment Tested/ Model Number	: Rioi	n NL-42EX	
Instrument Serial Number	: 004	69907	
Microphone Serial Number	• 162	461	
Dre emplifier Serial Number	. 602	10	
Pre-ampinier Serial Number	: 002	12	
Firmware Version	: 1.7		
Pre-Test Atmospheric Conditions		Post-Test Atmospheric Condit	ions
Ambient Temperature : 22.4°C		Ambient Temperature :	24°C
Deletive Humidity . 12.10		Deletive Humidity	4104
Relative fulling: 42.3%		Relative fullially :	4170
Barometric Pressure : 100.53kPa		Barometric Pressure :	100.49kPa
Calibration Technician : Lucky Jaiswal		Secondary Check: Rhys Gravell	e
Calibration Date : 18 Aug 2022		Report Issue Date : 19 Aug 2022	2
Approved Signatory	: <i>1</i> E	Dams	Ken Williams
Clause and Characteristic Tested	Result	Clause and Characteristic Tested	Result
12: Acoustical Sig. tests of a frequency weighting	Pass	17: Level linearity incl. the level range con	ntrol N/A
13: Electrical Sig. tests of frequency weightings	Pass	18: Toneburst response	Pass
14: Frequency and time weightings at 1 kHz	Pass	19: C Weighted Peak Sound Level	Pass
15: Long Term Stability	Pass	20: Overload Indication	Pass
16: Level linearity on the reference level range	Pass	21: High Level Stability	Pass
	7	8	

The sound level meter submitted for testing has successfully completed the class 2 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed.

However, no general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1:2013 because evidence was not publicly available, from an independent testing organisation responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013 and because the periodic tests of IEC 61672-3:2013 cover only a limited subset of the specifications in IEC 61672-1:2013.

Uncertainties of Measurement -						
Acoustic Tests	ic Tests Environmental Conditions					
125Hz	$\pm 0.13 dB$	Temperature	$\pm 0.1^{\circ}C$			
1kHz	±0.13dB	Relative Humidity	$\pm 1.9\%$			
8kHz	$\pm 0.14 dB$	Barometric Pressure	$\pm 0.014 kPa$			
Electrical Tests	$\pm 0.13 dB$					

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

This calibration certificate is to be read in conjunction with the calibration test report.



Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172. Accredited for compliance with ISO/IEC 17025 - Calibration.

The results of the tests, calibrations and/or measurements included in this document are traceable to SI units.

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Sound Calibrator

IEC 60942:2017

Calibration Certificate

Calibration Number C22544

Clie	nt Details Systems Co	onnect Line-wide		
	Level 1, 11	6 Miller Street		
	North Sydr	ev NSW 2060		
	i tortir bydi	ey 115 11 2000		
Equipment Tested/ Model 1	Number: Rion NC-7.	5		
Instrument Serial	Number : 34502426			
	Atmospheric Condit	ons		
Ambient Temp	erature: 24.5°C			
Relative H	umidity : 40.9%			
Barometric I	Pressure: 100.48kPa			
Calibration Technician : Lucky Jaisw	val Se	ondary Check:	Rhys Gravelle	
Calibration Date : 18 Aug 202	2 Ren	ort Issue Date ·	19 Aug 2022	
Cumpration Date : 10 Mag 202		·	19 1146 2022	
Approved Si	gnatory :	ans	Ken Williams	
Characteristic Tested	Result			
Generated Sound Pressure Level	Pass			
Frequency Generated	Pass			
Total Distortion	Pass			
Nominal Level	Nominal Frequency	Measured Leve	el Measured Frequency	
94	1000	94.05	1000.00	
The sound calibrator has been shown to conform to the class 1 requirements for periodic testing, described in Annex B of IEC 60942:2017 for the sound pressure level(s) and frequency(ies) stated, for the environmental conditions under which the tests were performed.				
	Uncertainties of Measurem	ent -		
	Environmental Conditions			
Specific Tests	Environmenta	l Conditions		

±0.13% ±1.9% Frequency Relative Humidity Distortion $\pm 0.20\%$ Barometric Pressure ±0.014kPa

Accredited for compliance with ISO/IEC 17025 - Calibration.

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

This calibration certificate is to be read in conjunction with the calibration test report.

Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172.



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Acoustic Unit 36/14 Loyalty Rd Research North Rocks NSW AUSTRALIA 2151 Ph: +61 2 9484 0800 A.B.N. 65 160 399 119 abs Pty Ltd www.acousticresearch.com.au

Sound Level Meter

IEC 61672-3:2013

Calibration Certificate

Calibration Number C22577

Client Detai	ls Syst	ems Connect Line-wide J	V	
	Leve	el 1–116 Miller Street		
	Nor	th Sudney NSW 2060		
	NOI	III Sydney NSW 2000		
Equipment Tested/ Model Number	: Rior	n NL-42		
Instrument Serial Number	: 0050	09242		
Microphone Serial Number	·: 186	793		
Pre-amplifier Serial Number	· · 008	57		
Firmwara Varsian	20			
Filmware version	2.0			
Pre-Test Atmospheric Conditions		Post-Test Atmosp	heric Conditi	ons
Ambient Temperature : 21°C		Ambient Ter	nperature :	22.3°C
Relative Humidity • 51.4%		Relative	Humidity ·	50.1%
Dependencia Drogguna : 101.21/De		Donomotni	Droggung	101 261 Do
Barometric Fressure : 101.5KFa		Darometri	r ressure :	101.20KFa
Calibration Technician : Lucky Jaiswal		Secondary Check:	Shaheen Boaz	2
Calibration Date : 5 Sep 2022		Report Issue Date :	5 Sep 2022	
Approved Signatory	: HE	Clims		Ken Williams
Clause and Characteristic Tested	Result	Clause and Character	istic Tested	Result
12: Acoustical Sig. tests of a frequency weighting <i>Pa</i>		17: Level linearity incl. the	level range cor	ntrol N/A
13: Electrical Sig. tests of frequency weightings <i>Pa</i>		18: Toneburst response	-	Pass
14: Frequency and time weightings at 1 kHz	Pass	19: C Weighted Peak Soun	d Level	Pass
15: Long Term Stability	Pass	20: Overload Indication		Pass
16: Level linearity on the reference level range	Pass	21: High Level Stability		Pass
		2		

The sound level meter submitted for testing has successfully completed the class 2 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed.

However, no general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1:2013 because evidence was not publicly available, from an independent testing organisation responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013 and because the periodic tests of IEC 61672-3:2013 cover only a limited subset of the specifications in IEC 61672-1:2013.

Uncertainties of Measurement -						
Acoustic Tests	ic Tests Environmental Conditions					
125Hz	$\pm 0.13 dB$	Temperature	$\pm 0.1^{\circ}C$			
1kHz	±0.13dB	Relative Humidity	$\pm 1.9\%$			
8kHz	$\pm 0.14 dB$	Barometric Pressure	$\pm 0.014 kPa$			
Electrical Tests	$\pm 0.13 dB$					

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

This calibration certificate is to be read in conjunction with the calibration test report.



Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172. Accredited for compliance with ISO/IEC 17025 - Calibration.

The results of the tests, calibrations and/or measurements included in this document are traceable to SI units.

NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration and inspection reports.



Sound Calibrator

IEC 60942:2017

Calibration Certificate

Calibration Number C22578

Client Det	ails Systems Co	nnect Line-wide JV		
	Level 1, 116	5 Miller Street		
	North Sydn	w NSW 2060		
	North Sydn	Cy 115 W 2000		
Equipment Tested/ Model Numb	er: Rion NC-75			
Instrument Serial Numb	er: 34202225			
Atm	ospheric Conditi	ons		
Ambient Temperatu	re : 22°C			
Relative Humidi	ty : 50.1%			
Barometric Pressu	re : 101.26kPa			
Calibration Technician : Lucky Jaiswal	Sec	ondary Check: S	haheen Boaz	
Calibration Date: 05 Sep 2022	Rep	ort Issue Date : 5	5 Sep 2022	
American Simulation (D)				
Approved Signato	y. Jerselan	nes	Ken winnams	
Characteristic Tested	Result			
Generated Sound Pressure Level	Pass			
Frequency Generated	Pass			
Total Distortion	Pass			
Nominal Level Nom	inal Frequency	Measured Level	Measured Frequency	
94	1000	04.24	1000.00	
	1000	94.24	1000.00	
	1000	94.24	1000.00	
The sound calibrator has been shown to conform to the class	1 requirements for per	iodic testing, described in	n Annex B of IEC 60942:2017 for	
The sound calibrator has been shown to conform to the class the sound pressure level(s) and frequency(ies) stated	1 requirements for per , for the environmental	iodic testing, described in conditions under which	n Annex B of IEC 60942:2017 for the tests were performed	
The sound calibrator has been shown to conform to the class the sound pressure level(s) and frequency(ies) stated Unce	1 requirements for per , for the environmental rtainties of Measureme	94.24 iodic testing, described in conditions under which nt -	n Annex B of IEC 60942:2017 for the tests were performed	
The sound calibrator has been shown to conform to the class the sound pressure level(s) and frequency(ies) stated Unce Specific Tests	1 requirements for per , for the environmental rtainties of Measureme Environmental	94.24 iodic testing, described in conditions under which nt - Conditions	n Annex B of IEC 60942:2017 for the tests were performed	

±0.13% ±1.9% Frequency Relative Humidity Distortion $\pm 0.20\%$ Barometric Pressure ±0.014kPa

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

This calibration certificate is to be read in conjunction with the calibration test report.

Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172.

Accredited for compliance with ISO/IEC 17025 - Calibration.



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Acoustic Unit 36/14 Loyalty Rd Research North Rocks NSW AUSTRALIA 2151 Ph: +61 2 9484 0800 A.B.N. 65 160 399 119 abs Pty Ltd www.acousticresearch.com.au

Sound Level Meter

IEC 61672-3:2013

Calibration Certificate

Calibration Number C22626

Client Details		tems Connect Line-Wide	
	Lev	el 1, 116 Miller Street	
	Nor	th Sydney NSW 2060	
	INOI	ui Sydney NSW 2000	
Equipment Tested/ Model Number	:: Rio	n NL-21	
Instrument Serial Number	:: 008	77037	
Microphone Serial Number	: 116	410	
Pre-amplifier Serial Number	: 244	34	
Firmware Version	• N/A		
	• • • • • •	-	
Pre-Test Atmospheric Conditions		Post-Test Atmospheric Condit	ions
Ambient Temperature : 25.5°C		Ambient Temperature :	24.8°C
Relative Humidity : 50.5%		Relative Humidity :	51.5%
Barometric Pressure : 100.62kPa		Barometric Pressure :	100.63kPa
Calibration Technician : Lucky Jaiswal		Secondary Check: Dylan Selge	
Calibration Date : 29 Sep 2022		Report Issue Date : 30 Sep 2022	
Annroved Signatory	·	- Coi	Ken Williams
Approved Signatory	· JEL	lams	Ken winnanns
Clause and Characteristic Tested	Result	Clause and Characteristic Tested	Result
12: Acoustical Sig. tests of a frequency weighting	Pass	17: Level linearity incl. the level range con	ntrol Pass
13: Electrical Sig. tests of frequency weightings <i>Pa</i>		18: Toneburst response	Pass
14: Frequency and time weightings at 1 kHz	Pass	19: C Weighted Peak Sound Level	Pass
15: Long Term Stability	Pass	20: Overload Indication	Pass
16: Level linearity on the reference level range	Pass	21: High Level Stability	Pass

The sound level meter submitted for testing has successfully completed the class 2 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed.

However, no general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1:2013 because evidence was not publicly available, from an independent testing organisation responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013 and because the periodic tests of IEC 61672-3:2013 cover only a limited subset of the specifications in IEC 61672-1:2013.

Uncertainties of Measurement -						
Acoustic Tests	ic Tests Environmental Conditions					
125Hz	$\pm 0.13 dB$	Temperature	$\pm 0.1^{\circ}C$			
1kHz	±0.13dB	Relative Humidity	$\pm 1.9\%$			
8kHz	$\pm 0.14 dB$	Barometric Pressure	$\pm 0.014 kPa$			
Electrical Tests	$\pm 0.13 dB$					

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

This calibration certificate is to be read in conjunction with the calibration test report.



Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172. Accredited for compliance with ISO/IEC 17025 - Calibration.

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Sound Level Meter

IEC 61672-3:2013

Calibration Certificate

Calibration Number C22458

Client Detai	ls Syst	tems Connect Line-wide	
	Lev	el 1, 116 Miller Street	
	Nor	th Sydney NSW 2060	
	1101	an by aney 11517 2000	
Equipment Tested/ Model Number	: Rio	n NL-42EX	
Instrument Serial Number	: 002	69685	
Microphone Serial Number	: 162	015	
Pre-amplifier Serial Number		72	
Tre-amplifier Berlar Number	• 500	12	
Pre-Test Atmospheric Conditions		Post-Test Atmospheric Condit	ions
Ambient Temperature : 25.8°C		Ambient Temperature :	25.1°C
Relative Humidity : 48.5%		Relative Humidity :	51%
Barometric Pressure : 99.82kPa		Barometric Pressure :	99.8kPa
Calibration Technician : Lucky Jaiswal		Secondary Check: Dhanush Bon	iu
Calibration Date: 7 Jul 2022		Report Issue Date : 11 Jul 2022	
Approved Signatory	:	fund	Juan Aguero
Clause and Characteristic Tested	Result	Clause and Characteristic Tested	Result
12: Acoustical Sig. tests of a frequency weighting	Pass	17: Level linearity incl. the level range con	ntrol N/A
13: Electrical Sig. tests of frequency weightings Pa		18: Toneburst response	Pass
14: Frequency and time weightings at 1 kHz Pa		19: C Weighted Peak Sound Level	Pass
15: Long Term Stability	Pass	20: Overload Indication	Pass
16: Level linearity on the reference level range	Pass	21: High Level Stability	Pass
· · ·			

The sound level meter submitted for testing has successfully completed the class 2 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed.

However, no general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1:2013 because evidence was not publicly available, from an independent testing organisation responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013 and because the periodic tests of IEC 61672-3:2013 cover only a limited subset of the specifications in IEC 61672-1:2013.

	Uncertainties of Measurement -					
Acoustic Tests Environmental Conditions						
125Hz	±0.13dB	Temperature	$\pm 0.1^{\circ}C$			
1kHz	$\pm 0.13 dB$	Relative Humidity	$\pm 1.9\%$			
8kHz	$\pm 0.14 dB$	Barometric Pressure	$\pm 0.014 kPa$			
Electrical Tests	$\pm 0.13 dB$					

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.



This calibration certificate is to be read in conjunction with the calibration test report.

Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172. Accredited for compliance with ISO/IEC 17025 - Calibration.

The results of the tests, calibrations and/or measurements included in this document are traceable to SI units.

NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration and inspection reports.



Sound Calibrator

IEC 60942:2017

Calibration Certificate

Calibration Number C22459

Client Details	Systems Connect Line-wide
	Level 1, 116 Miller Street
	North Sydney NSW 2060
Equipment Tested/ Model Number :	Rion NC-75
Instrument Serial Number :	00970021
Atmosp	heric Conditions
Ambient Temperature :	25.1°C
Relative Humidity :	50.5%
Barometric Pressure :	99.81kPa
Calibration Technician : Lucky Jaiswal	Secondary Check: Dhanush Bonu
Calibration Date: 07 Jul 2022	Report Issue Date : 11 Jul 2022
A	
Approved Signatory :	Juan Aguero
Characteristic Tested Re	sult
Generated Sound Pressure Level P	ass
Frequency Generated P	ass
Total Distortion F	ass
Nominal Level Nominal	Frequency Measured Level Measured Frequency
94 1	94.10 1000.00
The sound calibrator has been shown to conform to the class 1 red	uirements for periodic testing, described in Annex B of IEC 60942:2017 for
the sound pressure level(s) and frequency(ies) stated, for	he environmental conditions under which the tests were performed

		Uncertainties of Measurement -	
Specific Tests		Environmental Conditions	
Generated SPL	$\pm 0.10 dB$	Temperature	$\pm 0.1^{\circ}C$
Frequency	±0.13%	Relative Humidity	$\pm 1.9\%$
Distortion	$\pm 0.20\%$	Barometric Pressure	$\pm 0.014 kPa$

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

This calibration certificate is to be read in conjunction with the calibration test report.

Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172.

Accredited for compliance with ISO/IEC 17025 - Calibration.



The results of the tests, calibrations and/or measurements included in this document are traceable to SI units.

NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration and inspection reports.

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Sound Calibrator

IEC 60942:2017

Calibration Certificate

Calibration Number C22627

Client Deta	ails Systems Connect Line-Wide				
	Level 1, 116 Miller Street				
	North Sydney NSW 2060				
	- · · · · · · · · · · · · · · · · · · ·				
Equipment Tested/ Model Numbe	er: Pulsar Model 100B				
Instrument Serial Numbe	er: 42148				
Atmo	ospheric Conditions				
Ambient Temperatur	re: 24.7°C				
Relative Humidit	t v : 51.5%				
Barometric Pressur	re: 100.64kPa				
Calibration Technician : Lucky Jaiswal	Secondary Check: Dylan Selge				
Calibration Date : 29 Sep 2022	Report Issue Date : 30 Sep 2022				
Annuousd Signator	Kon Williama				
Approved Signator	Y: Hollans Ken williams				
Characteristic Tested	Result				
Generated Sound Pressure Level	Pass				
Frequency Generated	Fail				
Total Distortion	Pass				
Nominal Level Nomin	nal Frequency Measured Level Measured Frequency				
94	1000 93.86 1008.47				
94	1000 93.81 1008.70				
104	1000 103.79 1009.23				
104	1000 103.78 1009.30				
The sound calibrator submitted for periodic testing did not successfully complete the class 1 tests of IEC 60942:2017. The sound calibrator does not conform to the requirements of IEC 60942:2017.					
Specific Tests	rainties of Measurement -				
Generated SPL +0 10dB	Temperature $+0.1^{\circ}C$				
Frequency +0.13%	Relative Humidity +1.9%				
Distortion ±0.20%	Barometric Pressure ±0.014kPa				
All uncertainties are derived at th	the 95% confidence level with a coverage factor of 2.				

This calibration certificate is to be read in conjunction with the calibration test report.

Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172.

Accredited for compliance with ISO/IEC 17025 - Calibration.



The results of the tests, calibrations and/or measurements included in this document are traceable to SI units.

NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration and inspection reports.



Acoustic Unit 36/14 Loyalty Rd North Rocks NSW AUSTRALIA 2151 Ph: +61 2 9484 0800 A.B.N. 65 160 399 119 Labs Pty Ltd www.acousticresearch.com.au

Sound Level Meter IEC 61672-3:2013 **Calibration Certificate**

Calibration Number C22181

Client Details	s Syste	ms Connect Line-wide	
	Level	1, 116 Miller Street	
	North	Sydney NSW 2060	
	1.010		
Equipment Tested/ Model Number :	Rion	NL-42	
Instrument Serial Number :	0100	0278	
Microphone Serial Number :	1890	06	
Pre-amplifier Serial Number :	0194	1	
The uniprinter seriar (amount)			
Pre-Test Atmospheric Conditions		Post-Test Atmospheric Condition	ons
Ambient Temperature : 25°C		Ambient Temperature :	24.5°C
Relative Humidity : 52%		Relative Humidity :	43.7%
Barometric Pressure : 99.9kPa		Barometric Pressure :	99.91kPa
Calibration Technician : Lucky Jaiswal		Secondary Check: Max Moore	
Calibration Date: 23 Mar 2022		Report Issue Date : 23 Mar 2022	
		2.	
Approved Signatory :	Bi	Clams	Ken Williams
Clause and Characteristic Tested R	esult	Clause and Characteristic Tested	Result
12: Acoustical Sig. tests of a frequency weighting	Pass	17: Level linearity incl. the level range con-	trol N/A
13: Electrical Sig. tests of frequency weightings	Pass	18: Toneburst response	Pass
14: Frequency and time weightings at 1 kHz	Pass	19: C Weighted Peak Sound Level	Pass
15: Long Term Stability	Pass	20: Overload Indication	Pass
16: Level linearity on the reference level range	Pass	21: High Level Stability	Pass

The sound level meter submitted for testing has successfully completed the class 2 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed.

However, no general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1:2013 because evidence was not publicly available, from an independent testing organisation responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013 and because the periodic tests of IEC 61672-3:2013 cover only a limited subset of the specifications in IEC 61672-1:2013.

		Uncertainties of Measurement -		
Acoustic Tests		Environmental Conditions		
125Hz	$\pm 0.13 dB$	Temperature	±0.1°C	
1 kHz	$\pm 0.13 dB$	Relative Humidity	$\pm 1.9\%$	
8kHz	$\pm 0.14 dB$	Barometric Pressure	$\pm 0.014 kPa$	
Electrical Tests	$\pm 0.10 dB$			

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

This calibration certificate is to be read in conjunction with the calibration test report.



Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172. Accredited for compliance with ISO/IEC 17025 - Calibration.

The results of the tests, calibrations and/or measurements included in this document are traceable to SI units.

NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration and inspection reports.



Appendix G: Noise Monitoring Record Sheet Samples

Systems Connect	Systems RENZO TONIN Repred to achieve Noise Monitoring Record Sheet			
DATE:	23-April-2023	MAIN ACTIVITY Office roof cleaning with high pressure washer		
CONDUCTED BY:	Lachlan Woolf	LOCATION OF WORKS: Belmore		
METEROLOGICAL CONDITIONS:		Clear sky; air temperature 17°C, wind speed <5 m/s, relative humidity 88%		
DAY, EVENING OR NIGHT I	PERIOD?	Day (OOH)		
MAKE / MODEL:	NTi XL2	SERIAL NUMBER:	A2A-19156-E0	
TIME WEIGHTING:	FAST / SLOW	FREQUENCY WEIGHTING:		A/ C/FLAT
FIELD CALIBRATION:	93.9	POST CALIBRATION CHEC	K:	93.9
COMMUNITY NOTIFICATIONS GONE OUT FOR THE W		ORKS?	YES	
LIGHT SPILL into residences?		-		
Are noise mitigation measures installed?		-		

		MONITORING LOCATION 1			
LOCATION:	101-105 Bridge Road, Belmo	101-105 Bridge Road, Belmore			
ACTIVITIES:	Office roof cleaning with high	Office roof cleaning with high pressure washer			
PROPOSED PLANT (as per OOHW application)	EWP, pressure washer (30M	Pa and nozzel 1.2mm)			
MEASURED PLANT:	EWP, pressure washer				
START TIME	END TIME	RBL (dBA)	NML (dBA)	NCA	
9:33	9:48	41	46	S2B_07	
L _{Aeq} (dBA)	L _{AFmax} (dBA)	L _{AFmin} (dBA)	L _{A10} (dBA)	L _{A90} (dBA)	
58	73	41	65	46	
PREDICTED NOISE LEVEL (dBA): 71					
LAeq ABOVE PREDICTED NOISE LEVEL: -13					
Measured noise level with	no construction activity (if a	pplicable)	LAF	44	
MONITORING COMMENTS 09:34 Pressure washer (LAF 65) 09:35 Pressure washer and EWP quacker (LAF 64) 09:36 Pressure washer (LAF 65) 09:37:10 No audible construction activity (LAF 44) 09:38:15 Bangs and slams from within the site (LAF 59) 09:39 Loud bang (LAF 72) 09:40:05 EWP movement quacker (LAF 56) 09:41 EWP movement quacker (LAF 56) 09:42:15 EWP idling (LAF 48) 09:43:20 Workers sweeping on roof (LAF 48-52) 09:47:53 Workers sweeping and EWP movement quacker (LAF 55) 09:47:53 Workers sweeping and EWP movement quacker (LAF 50) 09:47:53 Workers sweeping and EWP movement quacker (LAF 55-57) The ambient noise environment was primarily influenced by movement alarms from the EWP and intermittent use of the pressure washer. The background noise environment at this location is influenced by distant road traffic along The Boulevard and Bridge Road. Loud noise events can be attributed to bangs and slams on site. The measured LAeq is less than the predicted built This events and the attributed to bangs and slams on site. The measured tare is less than the predicted built the summary standard bang the pressure washer were the distributed by influenced by and site the measured tare is less than the predicted built the total bangs and slams on site. The measured tare is less than the predicted built the total bangs and slams on site. The measured tare is less than the predicted built the total bangs and slams on site. The measured tare is less than the predicted bangs and slams on site. The measured tarefit aloug tare is less than the predicted ban					

MONITORING LOCATION 2				
LOCATION:	8 Railway Parade, Belmore			
ACTIVITIES:	Office roof cleaning with high	pressure washer		
PROPOSED PLANT (as per OOHW application)	EWP, pressure washer (30M	Pa and nozzel 1.2mm)		
MEASURED PLANT:	EWP, pressure washer			
START TIME	END TIME	RBL (dBA)	NML (dBA)	NCA
10:06	10:21	41	46	S2B_07
L _{Aeq} (dBA)	L _{AFmax} (dBA)	L _{AFmin} (dBA)	L _{A10} (dBA)	L _{A90} (dBA)
52	67	44	56	47
PREDICTED NOISE LEVEL	(dBA):	62		
Laeq ABOVE PREDICTED	NOISE LEVEL:	-10		
Measured noise level with	no construction activity (if a	pplicable)		
MONITORING COMMENTS 10:07 EWP idling (LAF 47) 10:08 EWP movement (LAF 54) 10:09:47 Birds chirping (LAF 65) 10:10:30 EWP idling (LAF 48) 10:12 Birds chirping (LAF 55) 10:12 Birds chirping (LAF 55) 10:13:20 Pressure washer (LAF 54) 10:14:48 Pressure washer (LAF 54) 10:14:48 Pressure washer (LAF 54) 10:17:36 EWP idling (LAF 47) 10:19:24 EWP movement (LAF 53) 10:20:42 EWP movement (LAF 53) 10:20:42 EWP movement (LAF 53) The ambient noise environment was primarily influenced by EWP movement and intermittent use of the pressure washer. The background noise environment at this location is influenced by natural sounds i.e. birds. Loud noise events can be attributed to birds chirping near the monitoring location. The measurement nervind				

DIAGRAMS AND PHOTOS - LOCATION 1 Insert: Photo of works being monitored Map showing monitoring location or Screenshot of GPS Location Monitoring Location

DIAGRAMS AND PHOTOS - LOCATION 2

Insert:

Photo of works being monitored
Map showing monitoring location or Screenshot of GPS Location



Systems Connect RENZO TONIN A A S S O CLATES Inspired to coliver				
DATE:	23-April-2023	MAIN ACTIVITY	Tiling	
CONDUCTED BY:	Lachlan Woolf	LOCATION OF WORKS:	Lakemba	
METEROLOGICAL CONDITIONS:		Clear sky; air temperature 17°C, wind speed <5 m/s, relative humidity 93%		
DAY, EVENING OR NIGHT I	PERIOD?	Day (OOH)		
MAKE / MODEL:	NTi XL2	SERIAL NUMBER:	A2A-19156-E0	
TIME WEIGHTING:	FAST / SLOW	FREQUENCY WEIGHTING:		A / C / FLAT
FIELD CALIBRATION:	93.7	POST CALIBRATION CHEC	К:	93.7
COMMUNITY NOTIFICATIONS GONE OUT FOR THE W		ORKS?	YES	
LIGHT SPILL into residences?		-		
Are noise mitigation measures installed?		-		

		MONITORING LOCATION 1			
LOCATION:	17 The Boulevard, Lakemba	17 The Boulevard, Lakemba			
ACTIVITIES:	Tiling				
PROPOSED PLANT (as per OOHW application)	OOH-295: Telehandler (x2), E	EWP, generator, handheld grin	ider, handheld grout/mixer, han	nd tools	
MEASURED PLANT:	Generator, handheld grinder				
START TIME	END TIME	RBL (dBA)	NML (dBA)	NCA	
8:50	9:05	47	52	S2B_08	
L _{Aeq} (dBA)	L _{AFmax} (dBA)	L _{AFmin} (dBA)	L _{A10} (dBA)	L _{A90} (dBA)	
61	79	50	67	52	
PREDICTED NOISE LEVEL	. (dBA):	69			
LAeq ABOVE PREDICTED	NOISE LEVEL:	-9			
Measured noise level with	no construction activity (if ap	oplicable)			
MONITORING COMMENTS08:51 Car passby (LAF 71) 08:51:47 Generator hum (LAF 52) 08:52:36 Car passbys (LAF 70) 08:54:29 Car passbys (LAF 69) 					

The ambient noise environment at the monitoring location was primarily influenced by road traffic along the The Boulevard and
generator hum from within the site. The background noise environment at this location is influenced by road traffic and aircraft
noise. Loud noise events can be attributed to heavy vehicle passbys (e.g. buses). The measured LAeq is less than the predicted
noise level. This can be attributed to less plant operating than proposed as well as the grinding activity occuring intermittently
and with indirect line of sight to the monitoring location.

		MONITORING LOCATION 2		
LOCATION:	12 The Boulevard, Lakemba			
ACTIVITIES:	Tiling			
PROPOSED PLANT (as per OOHW application)	OOH-295: Telehandler (x2),	EWP, generator, handheld grin	ider, handheld grout/mixer, ha	nd tools
MEASURED PLANT:	Handheld grinder			
START TIME	END TIME	RBL (dBA)	NML (dBA)	NCA
9:07	9:22	47	52	S2B_08
L _{Aeq} (dBA)	L _{AFmax} (dBA)	L _{AFmin} (dBA)	L _{A10} (dBA)	L _{A90} (dBA)
65	80	42	70	50
PREDICTED NOISE LEVEL	(dBA):	70		
Laeq ABOVE PREDICTED	NOISE LEVEL:	-5		
Measured noise level with	no construction activity (if a	pplicable)	LAF	43-45
MONITORING COMMENTS	09:08:35 Car passbys (LAF 62) 09:08:51 Handheld grinding (LA 09:09:23 Handheld grinding (LA 09:09:54 Bus passby (LAF 76) 09:10:40 Handheld grinding (LAF 60) 09:12 Handheld grinding (LAF 60) 09:12 Handheld grinding (LAF 60) 09:13 Handheld grinding (LAF 60) 09:14 No audible construction a 09:14:50 Bus passby (LAF 70) 09:15:04 Handheld grinding (LA 09:15:46 Bus passby (LAF 72) 09:16:43 Handheld grinding (LA 09:17:27 Bus passby (LAF 78) 09:18:12 Bus passby (LAF 77) 09:18:50 Handheld grinding (LA 09:19:39 Handheld grinding (LA 09:20:09 Bus passby (LAF 76) 09:20:48 No audible construction The ambient noise environmen intermittent handheld grinding natural sounds (i.e. birds). Loud than the predicted noise level.	F 61-66) F 63-67) F 66-69) 6-70) 6-68) activity (LAF 45) F 63-67) F 66-69) F 66-69) F 66-69) on activity (LAF 43-44) t at the monitoring location was p activity. The background noise er I noise events can be attributed to This can be attributed to less plan	primarily influenced by road traff nvironment at this location is infl p heavy vehicle passbys (e.g. bus t operating than proposed as we	fic along the The Boulevard and uenced by road traffic and es). The measured LAeq is less ell as the grinding activity

DIAGRAMS AND PHOTOS - LOCATION 1

Insert:

Photo of works being monitored
Map showing monitoring location or Screenshot of GPS Location



DIAGRAMS AND PHOTOS - LOCATION 2 Insert: Photo of works being monitored Map showing monitoring location or Screenshot of GPS Location Railway The Br **Monitoring Location** The Boulevarde

Systems Noise Monitoring Record Sheet				
DATE:	13-April-2023	MAIN ACTIVITY NC WK41 Possessions Works		(5
CONDUCTED BY:	Angus Hannelly	LOCATION OF WORKS: Within Northern Connection rail corridor		ail corridor
METEROLOGICAL CONDITIONS:		Cloudy; air temperature 13°C, wind speed <5 m/s, relative humidity 50%		
DAY, EVENING OR NIGHT	PERIOD?	Night		
MAKE / MODEL:	NTi XL2	SERIAL NUMBER:	A2A-20889-E0	
TIME WEIGHTING:	FAST / SLOW	FREQUENCY WEIGHTING:		A / C / FLAT
FIELD CALIBRATION:	94	POST CALIBRATION CHEC	K:	94
COMMUNITY NOTIFICATIONS GONE OUT FOR THE WO		ORKS?		
LIGHT SPILL into residences? -				
Are noise mitigation measures installed?		Exisiting noise walls along the rail corridor shielded the measured works		

		MONITORING LOCATION 1		
LOCATION:	11-13 Hopetoun Avenue, Cha	atswood		
ACTIVITIES:	Punchlisting works in dive			
PROPOSED PLANT (as per OOHW application)	Hand tools (power tools), 2 x	EWPs, 1x 6t Hi Rail Excavator	^r & Battery powered task lighti	ing
MEASURED PLANT:	1 x EWP			
START TIME	END TIME	RBL (dBA)	NML (dBA)	NCA
0:00	0:15	41	46	CDS_04
L _{Aeq} (dBA)	L _{AFmax} (dBA)	L _{AFmin} (dBA)	L _{A10} (dBA)	L _{A90} (dBA)
41	49	35	43	36
PREDICTED NOISE LEVEL	(dBA):	62		-
LAeq ABOVE PREDICTED	NOISE LEVEL:	-21		
Measured noise level with r	no construction activity (if a	oplicable)		
MONITORING COMMENTS 00:00 - 00:15 EWP Movement, Audible for roughly 20 seconds out of every minute (LAF 40-42) 00:00 - 00:15 Road Traffic (LAF 38-40) 00:01 Car passby (LAF 55) 00:03 Train passby (LAF 62) 00:09 Train passby (LAF 61) 00:13 Train passby (LAF 62-64) The ambient noise environment at this location was influenced by distant road traffic along Orchard Road. Loud noise events can be attributed to train passbys. The measured LAeq is less than the predicted noise level. It was noted that there is a permanent noise wall between the monitoring location and the rail corridor. Furthermore, only 1 EWP was operating during the measurement. There were less plant and equipment operating during the measurement than what was modelled				

		MONITORING LOCATION 2		
LOCATION:	1-3 Gordon Avenue			
ACTIVITIES:	Punchlisting works in dive			
PROPOSED PLANT (as per OOHW application)	Hand tools (power tools), 2 x	EWPs, 1x 6t Hi Rail Excavato	r & Battery powered task lighti	ing
MEASURED PLANT:	-			
START TIME	END TIME	RBL (dBA)	NML (dBA)	NCA
0:23	0:38	50	55	CDS_03
L _{Aeq} (dBA)	L _{AFmax} (dBA)	L _{AFmin} (dBA)	L _{A10} (dBA)	L _{A90} (dBA)
48	65	33	49	35
PREDICTED NOISE LEVEL	(dBA):	65		
Laeq ABOVE PREDICTED	NOISE LEVEL:	-17		
Measured noise level with r	no construction activity (if a	oplicable)		
MONITORING COMMENTS 00:23 - 00:38 Road Traffic (LAF 40-50) 00:24 Train passby (LAF 60) 00:29 Train passby (LAF 59-63) 00:33 Train passby (LAF 65) 00:33 Train passby (LAF 65) The ambient noise environment at this location was influenced by distant road traffic along the Pacific Highway. Loud noise events can be attributed to train passbys. The measured LAeq is less than the predicted noise level. It was noted that there is a permanent noise wall between the monitoring location and the rail corridor. Furthermore, no construction activity was audible during the measurement period (it was confirmed on site that works were occuring).				

MONITORING LOCATION 3					
LOCATION:	7-11 Nelson Street				
ACTIVITIES:	Punchlisting works in dive				
PROPOSED PLANT	Hand tools (power tools) 2 x EWPs 1x 6t Hi Rail Excavator & Battery powered task lighting				
(as per OOHW application)					
MEASURED PLANT:	-				
START TIME	END TIME	RBL (dBA)	NML (dBA)	NCA	
0:44	0:59	50	55	CDS_03	
L _{Aeq} (dBA)	L _{AFmax} (dBA)	L _{AFmin} (dBA)	L _{A10} (dBA)	L _{A90} (dBA)	
42	58	33	44	62	
PREDICTED NOISE LEVEL (dBA):		62	-		
Laeq ABOVE PREDICTED NOISE LEVEL:		-20			
Measured noise level with no construction activity (if applicable)					
MONITORING COMMENTS 00:44 - 00:59 Road Traffic (LAF 38-44) 00:48 Train passby (LAF 60) The ambient noise environment at this location was influenced by distant road traffic along the Pacific Highway. Loud noise events can be attributed to train passbys. The measured LAeq is less than the predicted noise level. It was noted that there is a permanent noise wall between the monitoring location and the rail corridor. Furthermore, no construction activity was audible during the measurement period (it was confirmed on site that works were occuring).					

DIAGRAMS AND PHOTOS - LOCATION 1

Insert: - Photo of works being monitored - Map showing monitoring location or Screenshot of GPS Location



DIAGRAMS AND PHOTOS - LOCATION 2

Insert: - Photo of works being monitored - Map showing monitoring location or Screenshot of GPS Location









APPROVAL CITY & SOUTHWEST ACOUSTICS ADVISOR

Review of	Construction Monitoring Report March - August 2023	Document reference:	Construction Monitoring Report March - August 2023
Prepared	Carl Fokkema		Sydney Metro City & Southwest –
by:	Alternate Acoustics Advisor		Line-wide Works
Date of	11 October 2023		N21063
issue:			SMCSWLWC-SYC-CSW-EM-REP-
			020988
			Dated 6 October 2023
			Revision 1

As approved Alternate Acoustics Advisor for the Sydney Metro City & Southwest project, I have reviewed and provided comment on the Construction Monitoring Report March – August 2023 Sydney Metro City & Southwest – Line-wide Works Document No. SMCSWLWC-SYC-CSW-EM-REP-020988 dated 6 October 2023, as required under A27 (d) of the project approval conditions (SSI 15-7400).

The Line-wide CMR is to be submitted to the Department of Planning and Environment in accordance with Condition of Approval C16 (CSSI 7400), C14 (CSSI 8256) and monitoring requirements of the Construction Noise and Vibration Management Plan C2B.

I have reviewed the monitoring report and am satisfied that my comments have been adequately addressed, and that it meets the requirements for construction noise and vibration monitoring for Line-wide. I endorse the report.

le

Carl Fokkema, City & Southwest Alternate Acoustics Advisor