



Environmental Monitoring Data

Project:	Sydney Metro City & Southwest– TSE Works
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01	14/03/2020	R. Muir	R. Muir	K. Vajda	For publication

Project Summary

The Sydney Metro City and Southwest 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. John Holland CPB Ghella (JHCPBG) have been contracted by Transport for New South Wales to design and construct the Tunnel and Stations Excavation Works Project (TSE Works) of the Sydney Metro City & Southwest between Chatswood and Sydenham. Figure 1 provides an overview of the Project.



Figure 1: Project Overview

Environmental Protection Licence and Reporting Requirements

John Holland Pty Ltd obtained the Environment Protection Licence (EPL No. 20971) from the NSW Environment Protection Authority for the Tunnel and Station Excavation (TSE) Works on behalf of the John Holland CPB Ghella (JHCPBG) Joint Venture. The licence is for construction works relating to Rail Systems Activities and Concrete Works as defined under Schedule 1 of the *Protection of the Environment Operations Act, 1997* (POEO Act).

The licence describes monitoring and reporting requirements for the TSE Works, and specifically provides discharge criteria for water treatment plant and sediment basin water quality. The following report details environmental monitoring undertaken during this reporting month conducted in accordance with the EPL.

The EPL can be found by following the link below to the EPA’s website:

<https://apps.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=185324&SYSUID=1&LICID=20971>

Discharge Water Monitoring

Testing and discharge was undertaken during this reporting period. Table 1 contains the discharge monitoring results.

Noise and Vibration Monitoring

Noise and vibration monitoring was undertaken during this reporting period. Table 2 contains the vibration monitoring results, and Table 3 contains the noise monitoring results.

Real-Time Noise and Vibration Monitoring

Real-time noise and vibration monitors were operating at Martin Place, Pitt Street and Victoria Cross during the March reporting period. Table 4.1 and 4.2 contains summarised real-time noise monitoring results and real-time vibration data is displayed in Table 5.

Table 1: Discharge Water Monitoring Data.

Monitoring Point	Identifier ¹	Dates Sampled	Parameter/ Criteria/ Measured Value						Oil & Grease (None Visible)	Comments
			pH (6.5 – 8.5)			Turbidity (<35 NTU)				
			Min	Max	Average	Min	Max	Average		
2	CD_2	01/03/2020 to 31/03/2020	7.0	8.3	7.7	0.0	6.5	0.4	Nil	Compliant
2	VC_3	01/03/2020 to 31/03/2020	6.8	8.5	7.6	0.4	14.8	1.5	Nil	Compliant
2	BN_2	01/03/2020 to 31/03/2020	6.5	8.5	7.4	0.0	35	9.8	Nil	Compliant
2	BL_2	01/03/2020 to 31/03/2020	7.1	8.2	7.8	0.3	34.9	15.8	Nil	Compliant
2	MDS_1	01/03/2020 to 31/03/2020	6.5	8.5	7.2	0.2	34.9	7.1	Nil	Compliant
2	PS-3	01/03/2020 to 31/03/2020	7.0	7.7	7.4	4.4	25	9	Nil	Compliant

¹ As per discharge point identified in Sydney Metro City and Southwest Temporary Basin and Water Treatment Discharge Point Schedule

Table 2: Vibration Monitoring Data.

Monitoring location	Monitoring Date	Attended or Continuous Monitoring	Measured VDV (m/s ^{1.75})	VDV Target (m/s ^{1.75})	VDV Compliant	Measured PPV (mm/s)	PPV Target (mm/s)	PPV Compliant
9-11 Nelson Street, Chatswood 14:08	23/03/2020	Attended	0.23	0.40	Y	0.74	25	Y
9-11 Nelson Street, Chatswood 14:18	23/03/2020	Attended	0.31	0.40	Y	0.98	25	Y
12 Hopetoun Ave, Chatswood	25/03/2020	Attended	0.17	0.40	Y	0.35	25	Y
9-11 Nelson Street, Chatswood	25/03/2020	Attended	0.37	0.40	Y	0.64	25	Y
6 Hopetoun Ave, Chatswood	25/03/2020	Attended	0.12	0.40	Y	0.22	25	Y

Table 3: Noise Monitoring Data

Monitoring Location (Noise-Catchment Area, Street, Suburb)	Monitoring Date	Attended or Continuous Monitoring	Parameter	Measured Value dB(A)	Goals / Targets dB(A)	Comments
MP_02, 19 Martin Place, Sydney	02/03/2020	Attended	LA _{eq} (15-min)	71.5	89	TSE Works compliant
MP_02, 19 Martin Place, Sydney	11/03/2020	Attended	LA _{eq} (15-min)	72.6	75	TSE Works compliant, traffic dominant noise source
PS_01, 189 Castlereagh Street, Sydney	12/03/2020	Attended	LA _{eq} (15-min)	68.6	68	TSE Works compliant, traffic dominant noise source
PS_01, 189 Castlereagh Street, Sydney	20/03/2020	Attended	LA _{eq} (15-min)	71.6	57	TSE Works inaudible, traffic dominant noise source
BN_03, 161 Kent Street, Millers Point	20/03/2020	Attended	LA _{eq} (15-min)	37.9	60	TSE Works compliant
CDS_03, 12 Hopetoun Ave, Chatswood	25/03/2020	Attended	LA _{eq} (15-min)	53.5	55	TSE Works compliant
CDS_03, 9-11 Nelson Street, Chatswood	25/03/2020	Attended	LA _{eq} (15-min)	53.8	76	TSE Works compliant

Table 4-1 Summary Table of Real Time Noise Data Compliance Compared Against EPL Condition E1.1.

Real-Time Noise Monitoring Results													
Date	65 Berry Street		Castlereagh Boutique Hotel		Edinburgh Casitle Hotel		50 Martin Place		50 McLaren St		60 Castlereagh Street (Basement)		
	Noise Limit	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
01/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
02/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
03/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
04/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
05/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
06/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
07/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
08/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
09/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
19/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
20/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
21/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
22/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
23/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
24/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
25/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
26/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
27/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
28/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
29/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
30/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
31/03/2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 4-2: Real-Time Noise Monitoring Data

Report for Condition E1.1 on 01/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	0	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	0	Yes
	Lower	39	1	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	3	Yes
Report for Condition E1.1 on 02/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	12	Yes
	Lower	39	30	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	2	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	12	Yes
	Lower	39	22	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	1	Yes

Report for Condition E1.1 on 03/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	24	Yes
	Lower	39	26	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	21	Yes
	Lower	39	31	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	0	Yes
Report for Condition E1.1 on 04/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	1	Yes
	Lower	39	36	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	1	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	8	Yes
	Lower	39	26	Yes
50 McLaren St	Upper	26	1	Yes
	Lower	39	8	Yes

Report for Condition E1.1 on 05/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	24	Yes
	Lower	39	26	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	9	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	10	Yes
	Lower	39	21	Yes
50 McLaren St	Upper	26	3	Yes
	Lower	39	12	Yes
Report for Condition E1.1 on 06/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	22	Yes
	Lower	39	22	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	9	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	3	Yes
	Lower	39	11	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 07/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	12	Yes
	Lower	39	14	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	0	Yes
	Lower	39	12	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	0	Yes
Report for Condition E1.1 on 08/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	0	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	0	Yes
	Lower	39	3	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 09/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	24	Yes
	Lower	39	29	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	1	Yes
60 Castlereagh St (Basement)	Upper	26	7	Yes
	Lower	39	20	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	7	Yes
Report for Condition E1.1 on 10/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	23	Yes
	Lower	39	30	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	1	Yes
60 Castlereagh St (Basement)	Upper	26	15	Yes
	Lower	39	23	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 11/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	26	Yes
	Lower	39	32	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	1	Yes
60 Castlereagh St (Basement)	Upper	26	10	Yes
	Lower	39	27	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	3	Yes
Report for Condition E1.1 on 12/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	26	Yes
	Lower	39	31	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	2	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	5	Yes
60 Castlereagh St (Basement)	Upper	26	6	Yes
	Lower	39	23	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 13/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	26	Yes
	Lower	39	32	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	11	Yes
	Lower	39	26	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	0	Yes
Report for Condition E1.1 on 14/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	12	Yes
	Lower	39	17	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	8	Yes
	Lower	39	20	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 15/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	0	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	0	Yes
	Lower	39	1	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	0	Yes
Report for Condition E1.1 on 16/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	26	Yes
	Lower	39	36	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	1	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	2	Yes
60 Castlereagh St (Basement)	Upper	26	7	Yes
	Lower	39	23	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 17/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	25	Yes
	Lower	39	36	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	2	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	2	Yes
60 Castlereagh St (Basement)	Upper	26	3	Yes
	Lower	39	8	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	0	Yes
Report for Condition E1.1 on 18/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	23	Yes
	Lower	39	32	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	24	Yes
	Lower	39	28	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	7	Yes

Report for Condition E1.1 on 19/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	17	Yes
	Lower	39	33	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	1	Yes
60 Castlereagh St (Basement)	Upper	26	24	Yes
	Lower	39	30	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	21	Yes
Report for Condition E1.1 on 20/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	23	Yes
	Lower	39	37	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	0	Yes
	Lower	39	6	Yes
50 McLaren St	Upper	26	1	Yes
	Lower	39	29	Yes

Report for Condition E1.1 on 21/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	8	Yes
	Lower	39	16	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	1	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	5	Yes
	Lower	39	7	Yes
50 McLaren St	Upper	26	4	Yes
	Lower	39	6	Yes
Report for Condition E1.1 on 22/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	0	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	0	Yes
	Lower	39	1	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	2	Yes

Report for Condition E1.1 on 23/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	26	Yes
	Lower	39	37	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	1	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	0	Yes
	Lower	39	1	Yes
50 McLaren St	Upper	26	1	Yes
	Lower	39	35	Yes
Report for Condition E1.1 on 24/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	26	Yes
	Lower	39	34	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	1	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	4	Yes
60 Castlereagh St (Basement)	Upper	26	3	Yes
	Lower	39	14	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	25	Yes

Report for Condition E1.1 on 25/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	24	Yes
	Lower	39	33	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	2	Yes
60 Castlereagh St (Basement)	Upper	26	5	Yes
	Lower	39	24	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	12	Yes
Report for Condition E1.1 on 26/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	24	Yes
	Lower	39	33	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	8	Yes
	Lower	39	24	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	7	Yes

Report for Condition E1.1 on 27/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	26	Yes
	Lower	39	35	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	14	Yes
	Lower	39	28	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	19	Yes
Report for Condition E1.1 on 28/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	4	Yes
	Lower	39	9	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	11	Yes
	Lower	39	19	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 29/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	0	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	0	Yes
	Lower	39	3	Yes
50 McLaren St	Upper	26	0	Yes
	Lower	39	2	Yes
Report for Condition E1.1 on 30/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	6	Yes
	Lower	39	31	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	4	Yes
60 Castlereagh St (Basement)	Upper	26	11	Yes
	Lower	39	22	Yes
50 McLaren St	Upper	26	2	Yes
	Lower	39	14	Yes

Report for Condition E1.1 on 31/03/2020				
Location	Noise Goal	15-min periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	22	Yes
	Lower	39	38	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Basement)	Upper	26	10	Yes
	Lower	39	20	Yes
50 McLaren St	Upper	26	1	Yes
	Lower	39	29	Yes

Real Time Noise Results Comments:

Compliance with condition E1.1 was met at all monitoring locations during the reporting period.

Note: Due to the ambient internal noise levels within 50 Martin Place (without construction) generally ranging between 60 dBA Leq(15min) and 70 dBA Leq(15min) during operation hours an alternative to noise level monitoring has been undertaken to measure compliance. To ensure compliance with condition E1.1 is achieved at all times rock braking activities adjacent to 50 Martin Place have been restricted to 6.5 hours per day.

Table 5: Real-Time Vibration Monitoring Data (Maximum recorded value per day)

Day	65 Berry Street, North Sydney	50 Martin Place, Sydney	60 Castlereagh Street (Basement), Sydney	Castlereagh Boutique Hotel	211-217 Castlereagh Street Sydney	50 McLaren Street, North Sydney
Criteria (mm/s)	25	7.5	25	7.5	25	25
01/03/2020	0.14	0.25	0.99	0.19	0.08	0.38
02/03/2020	0.94	0.31	2.13	0.4	3.01	0.78
03/03/2020	0.62	0.37	2.01	2.12	0.15	0.67
04/03/2020	1.56	0.93	9.01	2.6	0.92	0.89
05/03/2020	1.21	0.28	5.38	3.75	0.41	0.72
06/03/2020	0.79	0.28	2.65	3.27	0.41	0.7
07/03/2020	0.91	0.31	7.96	2.63	0.79	0.64
08/03/2020	0.16	0.25	1.85	3.41	1.12	0.11
09/03/2020	4.92	0.27	6.3	2.94	0.41	0.7
10/03/2020	1.93	1.01	5	7.48	0.38	0.81
11/03/2020	1.83	0.28	7.51	0.21	0.31	0.67
12/03/2020	3.18	0.25	5.06	1.47	0.4	0.64
13/03/2020	3.66	0.25	5.22	0.36	0.32	0.67
14/03/2020	3.55	0.25	2.68	2.71	0.15	0.64
15/03/2020	0.13	0.29	1.92	7.48	0.11	0.56
16/03/2020	4.57	0.26	3.16	2.85	0.79	0.64
17/03/2020	3.51	0.25	2.42	1.28	0.64	0.56
18/03/2020	5.48	0.31	4.03	0.42	1.93	57.04
19/03/2020	3.16	0.56	2.63	0.74	3.04	0.78
20/03/2020	1.82	0.25	1.75	0.74	3.12	0.78
21/03/2020	0.37	0.25	0.91	0.47	0.64	1.05
22/03/2020	0.11	0.25	1.19	0.07	0.11	0.29
23/03/2020	3.05	0.27	1.97	3.11	0.79	0.72
24/03/2020	3.21	0.3	4.3	1.56	1.51	0.86
25/03/2020	1.31	0.18	3.96	2.17	0.71	0.75
26/03/2020	2.53	0.49	2.94	2.42	0.52	1.14
27/03/2020	3.83	0.16	2.88	1.21	0.6	1.38
28/03/2020	2.57	2.34	5.28	2.28	0.28	0.89
29/03/2020	0.19	0.15	2.33	2.24	0.11	1.05
30/03/2020	4.63	2.26	3.37	1.21	0.28	0.89
31/03/2020	3.74	5.16	4.2	0.58	0.46	1

Real-Time Vibration Results Comments:

50 McLaren Street North Sydney

A Vibration alert was received on the 18 March 2020, with a maximum reading of 57.04mm/s. The vibration monitor was being relocated on site due to electrical supply issues by JHCPBG contractors at the time, this exceedance is deemed not to be associated with project construction activities.