



Environmental Monitoring Data

Project:	Sydney Metro City & Southwest– TSE Works
Document Number:	SMCSWTSE-JCG-TPW-EM-RPT-097369
Reporting Period:	January 2019
Date Published:	13 February 2019

Document Approval

Rev.	Date	Prepared by	Reviewed by	Approved by	Remarks
01	13/02/2019	D. Windnagel	R. Muir	R. Muir	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=153426&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 Barangaroo, Crows Nest, Martin Place, Pitt Street, and Victoria Cross during the December 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	Date Sampled	Event Based Monitoring (Y/N)	Parameter/ Criteria/ Measured Value			Comments
				pH (6.5 - 8.5)	Turbidity (<35 NTU)	Oil & Grease (None Visible)	
1	MD-01	01/01/2019	Y	7.1	12.46	Nil	Compliant
1	MD-01	02/01/2019	Y	7.1	13.18	Nil	Compliant
2	CD_02	02/01/2019	Y	7.8	15.78	Nil	Compliant
1	MD-01	03/01/2019	Y	7.2	7.28	Nil	Compliant
2	CD_02	03/01/2019	Y	7.8	8.88	Nil	Compliant
1	MD-01	04/01/2019	Y	7.2	3.63	Nil	Compliant
3	PS_03	04/01/2019	Y	7.19	0.78	Nil	Compliant
2	CD_02	04/01/2019	Y	8.1	6.96	Nil	Compliant
1	MD-01	05/01/2019	Y	7.1	7.85	Nil	Compliant
3	PS_03	05/01/2019	Y	7.23	1.2	Nil	Compliant
2	CD_02	05/01/2019	Y	7.5	9.45	Nil	Compliant
1	MD-01	06/01/2019	Y	7.1	9.17	Nil	Compliant
3	PS_03	06/01/2019	Y	7.26	1.24	Nil	Compliant
1	MD-01	07/01/2019	Y	7.1	10.97	Nil	Compliant
2	BN_02	07/01/2019	Y	6.8	1	Nil	Compliant
3	PS_03	07/01/2019	Y	7.28	1.3	Nil	Compliant
2	CD_02	07/01/2019	Y	8.1	8.58	Nil	Compliant
2	BL_02	07/01/2019	Y	7.2	1.3	Nil	Compliant
1	MD-01	08/01/2019	Y	7	12.53	Nil	Compliant
3	PS_03	08/01/2019	Y	7.13	5.49	Nil	Compliant
1	WL_01	08/01/2019	Y	6.86	7	Nil	Compliant

Monitoring Point	Identifier ¹	Date Sampled	Event Based Monitoring (Y/N)	Parameter/ Criteria/ Measured Value			Comments
				pH (6.5 - 8.5)	Turbidity (<35 NTU)	Oil & Grease (None Visible)	
2	CN_02	08/01/2019	Y	7.70	1.3	Nil	Compliant
2	CD_02	08/01/2019	Y	8.1	4.46	Nil	Compliant
3	PS_03	09/01/2019	Y	7.23	3.09	Nil	Compliant
1	WL_01	09/01/2019	Y	7.42	5.32	Nil	Compliant
1	MD-01	09/01/2019	Y	7.3	12.98	Nil	Compliant
3	PS_03	10/01/2019	Y	6.9	5.33	Nil	Compliant
1	WL_01	10/01/2019	Y	7.1	1.67	Nil	Compliant
1	MD-01	10/01/2019	Y	6.9	21.29	Nil	Compliant
3	PS_03	11/01/2019	Y	7.1	1.25	Nil	Compliant
1	WL_01	11/01/2019	Y	7	1.89	Nil	Compliant
1	MD-01	11/01/2019	Y	7.1	17.25	Nil	Compliant
2	CD_02	11/01/2019	Y	7.8	6.1	Nil	Compliant
3	PS_03	12/01/2019	Y	7	0.22	Nil	Compliant
1	WL_01	12/01/2019	Y	7	1.79	Nil	Compliant
1	MD-01	12/01/2019	Y	7.1	8.5	Nil	Compliant
2	CD_02	12/01/2019	Y	7.6	4.4	Nil	Compliant
1	MD-01	13/01/2019	Y	7	4.93	Nil	Compliant
2	CD_02	13/01/2019	Y	7.8	3.5	Nil	Compliant
3	PS_03	14/01/2019	Y	7	0.07	Nil	Compliant
1	MD-01	14/01/2019	Y	7.1	18.99	Nil	Compliant
2	CD_02	14/01/2019	Y	7.9	3	Nil	Compliant
3	PS_03	15/01/2019	Y	7	2.55	Nil	Compliant
1	MD-01	15/01/2019	Y	7	13.61	Nil	Compliant
2	CD_02	15/01/2019	Y	7.8	3.2	Nil	Compliant

Monitoring Point	Identifier ¹	Date Sampled	Event Based Monitoring (Y/N)	Parameter/ Criteria/ Measured Value			Comments
				pH (6.5 - 8.5)	Turbidity (<35 NTU)	Oil & Grease (None Visible)	
3	PS_03	16/01/2019	Y	7	1.41	Nil	Compliant
1	WL_01	16/01/2019	Y	7.3	2.33	Nil	Compliant
1	MD-01	16/01/2019	Y	7	8.43	Nil	Compliant
2	CD_02	16/01/2019	Y	7.7	2.9	Nil	Compliant
3	PS_03	17/01/2019	Y	7	0.1	Nil	Compliant
1	WL_01	17/01/2019	Y	7.3	2.03	Nil	Compliant
1	MD-01	17/01/2019	Y	7	18.51	Nil	Compliant
2	CD_02	17/01/2019	Y	7.8	2.8	Nil	Compliant
3	PS_03	18/01/2019	Y	7.6	0.18	Nil	Compliant
1	WL_01	18/01/2019	Y	7	3.58	Nil	Compliant
1	MD-01	18/01/2019	Y	7	23.31	Nil	Compliant
2	CD_02	18/01/2019	Y	7.6	5.2	Nil	Compliant
3	PS_03	19/01/2019	Y	7	13.75	Nil	Compliant
1	MD-01	19/01/2019	Y	7	10.41	Nil	Compliant
2	CD_02	19/01/2019	Y	7.4	5.5	Nil	Compliant
3	PS_03	20/01/2019	Y	7.3	1.56	Nil	Compliant
1	MD-01	20/01/2019	Y	6.8	2.03	Nil	Compliant
2	CD_02	20/01/2019	Y	7.5	6	Nil	Compliant
3	PS_03	21/01/2019	Y	7.51	0.18	Nil	Compliant
1	WL_01	21/01/2019	Y	6.73	5.38	Nil	Compliant
1	MD-01	21/01/2019	Y	7	21.63	Nil	Compliant
2	CD_02	21/01/2019	Y	7.5	5.7	Nil	Compliant
3	PS_03	22/01/2019	Y	7.51	0.18	Nil	Compliant
1	MD-01	22/01/2019	Y	7	17.14	Nil	Compliant

Monitoring Point	Identifier ¹	Date Sampled	Event Based Monitoring (Y/N)	Parameter/ Criteria/ Measured Value			Comments
				pH (6.5 - 8.5)	Turbidity (<35 NTU)	Oil & Grease (None Visible)	
1	WL_01	22/01/2019	Y	6.86	7	Nil	Compliant
2	CD_02	22/01/2019	Y	7.7	9.9	Nil	Compliant
3	PS_03	23/01/2019	Y	7.42	0.02	Nil	Compliant
1	WL_01	23/01/2019	Y	6.64	6.8	Nil	Compliant
1	MD-01	23/01/2019	Y	7	15.33	Nil	Compliant
2	CD_02	23/01/2019	Y	7.5	6.7	Nil	Compliant
3	PS_03	24/01/2019	Y	7.56	0.42	Nil	Compliant
1	WL_01	24/01/2019	Y	6.98	8.29	Nil	Compliant
1	MD-01	24/01/2019	Y	7	20.29	Nil	Compliant
2	CD_02	24/01/2019	Y	7.5	4.9	Nil	Compliant
3	PS_03	25/01/2019	Y	7.35	0.06	Nil	Compliant
1	WL_01	25/01/2019	Y	6.98	12.51	Nil	Compliant
1	MD-01	25/01/2019	Y	7	19.79	Nil	Compliant
3	VC_3	25/01/2019	Y	7.8	2.3	Nil	Compliant
2	CD_02	25/01/2019	Y	7.5	4.2	Nil	Compliant
3	PS_03	26/01/2019	Y	7.18	0.07	Nil	Compliant
1	MD-01	26/01/2019	Y	7.3	7.77	Nil	Compliant
2	CD_02	26/01/2019	Y	8	7.2	Nil	Compliant
3	PS_03	27/01/2019	Y	7.34	0.02	Nil	Compliant
1	MD-01	27/01/2019	Y	7.4	13.84	Nil	Compliant
2	CD_02	27/01/2019	Y	7.9	4.2	Nil	Compliant
3	PS_03	28/01/2019	Y	7.26	0.06	Nil	Compliant
1	MD-01	28/01/2019	Y	7	14.01	Nil	Compliant
2	CD_02	28/01/2019	Y	7.8	4.7	Nil	Compliant

Monitoring Point	Identifier ¹	Date Sampled	Event Based Monitoring (Y/N)	Parameter/ Criteria/ Measured Value			Comments
				pH (6.5 - 8.5)	Turbidity (<35 NTU)	Oil & Grease (None Visible)	
1	WL_01	29/01/2019	Y	6.57	9.47	Nil	Compliant
3	PS_03	29/01/2019	Y	7.25	0.21	Nil	Compliant
1	MD-01	29/01/2019	Y	7.3	20.48	Nil	Compliant
2	CD_02	29/01/2019	Y	7.9	5.8	Nil	Compliant
1	MD-01	30/01/2019	Y	7.2	17.82	Nil	Compliant
3	VC_3	30/01/2019	Y	7.7	4.1	Nil	Compliant
1	WL_01	30/01/2019	Y	6.64	5.03	Nil	Compliant
3	PS_03	30/01/2019	Y	7.85	0.56	Nil	Compliant
2	CD_02	30/01/2019	Y	7.3	4.08	Nil	Compliant
1	MD-01	31/01/2019	Y	7.6	4.39	Nil	Compliant
1	WL_01	31/01/2019	Y	6.69	5.29	Nil	Compliant
3	PS_03	31/01/2019	Y	7.3	0.08	Nil	Compliant
2	CD_02	31/01/2019	Y	7.5	3.7	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	Event Based Monitoring (Y/N)	Measured VDV (m/s ^{1.75})	VDV Target (m/s ^{1.75})	VDV Compliant	Measured PPV (mm/s)	PPV Target (mm/s)	PPV Compliant
BN_01, 25 Hickson Road, Barangaroo	23/01/2019	Attended	Y	0.03	0.4	Y	N/A	N/A	N/A

Table 3: Noise Monitoring Data

Monitoring Location (Noise-Catchment Area, Street, Suburb)	Monitoring Date	Attended or Continuous Monitoring	Event Based Monitoring (Y/N)	Parameter	Measured Value dB(A)	Goals / Targets dB(A)	Comments
MP_01, 27-39 Castlereagh Street, Sydney	09/01/2019	Attended	Y	LAeq 15 min	68.8	69	TSE Works Compliant. Traffic dominant noise source
MP_03, 23-25 O'Connell Street, Sydney	10/01/2019	Attended	Y	LAeq 15 min	66.4	80	TSE Works Compliant. Traffic dominant noise source
MP_01, 27-39 Castlereagh Street, Sydney	10/01/2019	Attended	Y	LAeq 15 min	67.0	75	TSE Works Compliant. Traffic dominant noise source
BN_03, 30 High Street, Barangaroo	11/01/2019	Attended	Y	LAeq 15 min	64.5	68	TSE Works compliant
CLD_03, 528 John St, Rydalmere	14/01/2019	Attended	Y	LAeq 15 min	55.8	53	TSE Works Compliant. Traffic dominant noise source
CLD_02, 57 John St, Rydalmere	14/01/2019	Attended	Y	LAeq 15 min	55.8	51	TSE Works Compliant. Traffic dominant noise source
CLD_03, 528 John St, Rydalmere	14/01/2019	Attended	Y	LAeq 15 min	53.5	53	TSE Works Compliant. Traffic dominant noise source
CDS_06, 344 Mowbray Road, Chatswood	14/01/2019	Attended	Y	LAeq 15 min	63.9	89	TSE Works compliant
CDS_06, 344 Mowbray Road, Chatswood	15/01/2019	Attended	Y	LAeq 15 min	66.1	74	TSE Works compliant
BN_03, 30 High Street, Barangaroo	15/01/2019	Attended	Y	LAeq 15 min	56.0	55	TSE Works Compliant. Traffic dominant noise source
BN_03, 30 High Street, Barangaroo	15/01/2019	Attended	Y	LAeq 15 min	53.7	55	TSE Works compliant
CDS_04, 335 Mowbray Road, Chatswood	15/01/2019	Attended	Y	LAeq 15 min	63.4	82	TSE Works compliant
CDS_04, 335 Mowbray Road, Chatswood	16/01/2019	Attended	Y	LAeq 15 min	65.0	67	TSE Works compliant
CLD_03, 528 John St, Rydalmere	16/01/2019	Attended	Y	LAeq 15 min	48.9	53	TSE Works Compliant
CLD_02, 57 John St, Rydalmere	16/01/2019	Attended	Y	LAeq 15 min	53.1	51	TSE Works Compliant. Traffic dominant noise source

Monitoring Location (Noise-Catchment Area, Street, Suburb)	Monitoring Date	Attended or Continuous Monitoring	Event Based Monitoring (Y/N)	Parameter	Measured Value dB(A)	Goals / Targets dB(A)	Comments
WS_01, 125 Raglan Street, Waterloo	16/01/2019	Attended	Y	LAeq 15 min	65.7	89	TSE Works compliant
VC_01, 100 Miller Street, North Sydney	16/01/2019	Attended	Y	LAeq 15 min	67.9	70	TSE Works compliant
CLD_03, 528 John St, Rydalmere	17/01/2019	Attended	Y	LAeq 15 min	48.0	53	TSE Works Compliant
CLD_03, 528 John St, Rydalmere	17/01/2019	Attended	Y	LAeq 15 min	49.1	53	TSE Works Compliant
CLD_02, 57 John St, Rydalmere	17/01/2019	Attended	Y	LAeq 15 min	54.2	51	TSE Works Compliant. Traffic dominant noise source
VC_01, 100 Miller Street, North Sydney	17/01/2019	Attended	Y	LAeq 15 min	62.1	60	TSE Works Compliant. Traffic dominant noise source
WS_02, 213 Cope Street, Waterloo	17/01/2019	Attended	Y	LAeq 15 min	57.4	52	TSE Works Compliant. Traffic dominant noise source
WS_04, 62-72 Botany Road, Waterloo	17/01/2019	Attended	Y	LAeq 15 min	70.3	52	TSE Works Compliant. Traffic dominant noise source
CN_03, 10-12 Clarke Street, Crows Nest	17/01/2019	Attended	Y	LAeq 15 min	61.5	52	TSE works compliant.
WS_01, 125 Raglan Street, Waterloo	17/01/2019	Attended	Y	LAeq 15 min	64.1	89	TSE works compliant.
CN_01, 545 Pacific Highway, Crows Nest	17/01/2019	Attended	Y	LAeq 15 min	67.2	73	TSE works compliant.
CDS_03, 9-11 Nelson Street, Chatswood	18/01/2019	Attended	Y	LAeq 15 min	53.2	54	TSE works compliant.
BN_03, 30 High Street, Millers Point	18/01/2019	Attended	Y	LAeq 15 min	55.1	55	TSE works compliant, Traffic dominant.
BN_03, 30 High Street, Millers Point	18/01/2019	Attended	Y	LAeq 15 min	55.6	66	TSE works compliant.
BN_03, 30 High Steet, Millers Point	18/01/2019	Attended	Y	LAeq 15 min	59.0	66	TSE works compliant.
BN_03, 125 Kent Street, Millers Point	18/01/2019	Attended	Y	LAeq 15 min	50.0	50	TSE works compliant.

Monitoring Location (Noise-Catchment Area, Street, Suburb)	Monitoring Date	Attended or Continuous Monitoring	Event Based Monitoring (Y/N)	Parameter	Measured Value dB(A)	Goals / Targets dB(A)	Comments
BN_03, 26 High Street, Barangaroo	18/01/2019	Attended	Y	LAeq 15 min	68.7	66	TSE Works compliant
BN_03, 40 High Street, Barangaroo	18/01/2019	Attended	Y	LAeq 15 min	68.5	66	TSE Works compliant
CDS_03, 9-11 Nelson Street, Chatswood	19/01/2019	Attended	Y	LAeq 15 min	53.2	54	TSE works compliant.
BN_03, 30 High Street, Millers Point	19/01/2019	Attended	Y	LAeq 15 min	54.5	66	TSE works compliant.
BN_03, 42 High Street, Barangaroo	21/01/2019	Attended	Y	LAeq 15 min	54.7	84	TSE Works compliant, adjacent site dominant noise source
BN_03, 44 High Street, Barangaroo	21/01/2019	Attended	Y	LAeq 15 min	56.9	52	TSE Works Compliant.
CDS_06, 344 Mowbray Road, Chatswood	22/01/2019	Attended	Y	LAeq 15 min	58.6	55	TSE Works Compliant. Traffic dominant noise source
WS_04, 62-72 Botany Road, Waterloo	22/01/2019	Attended	Y	LAeq 15 min	68.6	52	TSE Works Compliant. Traffic dominant noise source
CDS_03, 9-11 Nelson Street, Chatswood	22/01/2019	Attended	Y	LAeq 15 min	50.8	55	TSE Works compliant
CDS_06, 344 Mowbray Road, Chatswood	23/01/2019	Attended	Y	LAeq 15 min	76.1	89	TSE Works compliant
CDS_06, 344 Mowbray Road, Chatswood	23/01/2019	Attended	Y	LAeq 15 min	71.6	89	TSE Works compliant
VC_01, 100 Miller Street, North Sydney	24/01/2019	Attended	Y	LAeq 15 min	62.1	70	TSE Works compliant
BN_03, 44 High Street, Barangaroo	24/01/2019	Attended	Y	LAeq 15 min	57.7	74	TSE Works compliant
BN_03, 44 High Street, Barangaroo	24/01/2019	Attended	Y	LAeq 15 min	57.8	84	TSE Works compliant
VC_01, 100 Miller Street, North Sydney	25/01/2019	Attended	Y	LAeq 15 min	59.6	60	TSE Works compliant
CDS_06, 344 Mowbray Rd, Chatswood	29/01/2019	Attended	Y	LAeq 15 min	61.2	44	TSE works compliant, Traffic dominant.

Monitoring Location (Noise-Catchment Area, Street, Suburb)	Monitoring Date	Attended or Continuous Monitoring	Event Based Monitoring (Y/N)	Parameter	Measured Value dB(A)	Goals / Targets dB(A)	Comments
CDS_06, 345 Mowbray Rd, Chatswood	29/01/2019	Attended	Y	LAeq 15 min	61.2	44	TSE works compliant, Traffic dominant.
CDS_03, 2 Nelson Street, Chatswood	30/01/2019	Attended	Y	LAeq 15 min	48.2	55	TSE works compliant.
CDS_03, 06 Orchard Road, Chatswood	31/01/2019	Attended	Y	LAeq 15 min	57.5	79	TSE Works compliant

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

Date	Location & Noise Goal																					
	545 Pacific Hwy		10 to 12 Clarke Street		65 Berry Street		Castlereagh Boutique Hotel		Edinburgh Castle Hotel		50 Martin Place		25A Hickson Road		243 Miller Street		60 Castlereagh Street (Level 6 Internal)		60 Castlereagh Street (Level 4 External)		60 Castlereagh Street (Level 2 Internal)	
	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
01/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
02/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
03/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
04/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
05/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
06/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
07/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
08/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
09/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
10/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
11/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
12/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
13/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
14/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
15/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-

Date	Location & Noise Goal																						
	545 Pacific Hwy		10 to 12 Clarke Street		65 Berry Street		Castlereagh Boutique Hotel		Edinburgh Castle Hotel		50 Martin Place		25A Hickson Road		243 Miller Street		60 Castlereagh Street (Level 6 Internal)		60 Castlereagh Street (Level 4 External)		60 Castlereagh Street (Level 2 Internal)		
	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	
16/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
17/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
18/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-
19/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes	-	-	
20/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes	-	-	
21/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes	-	-	
22/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes	-	-	
23/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes	-	-	
24/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes	Yes	Yes	
25/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	Yes	Yes	
26/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	Yes	Yes	
27/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	Yes	Yes	
28/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	Yes	Yes	
29/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	Yes	Yes	
30/01/2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	Yes	Yes	
31/01/2019	Yes	Yes	Yes	Yes	Yes	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 01/01/2019				
Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	0	Yes
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	1	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	0	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Level 6)	Upper	26	0	Yes
	Lower	39	0	Yes
Report for Condition E1.1 on 02/01/2019				
Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	0	Yes
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	8	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	0	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Level 6)	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 03/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	0	Yes
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	2	Yes
	Lower	39	52	No
50 Martin Place	Upper	26	0	Yes
	Lower	39	0	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Level 6)	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 04/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	0	Yes
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	4	Yes
	Lower	39	33	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	0	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Level 6)	Upper	26	1	Yes
	Lower	39	1	Yes

Report for Condition E1.1 on 05/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	0	Yes
65 Berry St	Upper	26	0	Yes
	Lower	39	0	Yes
Castlereagh Boutique Hotel	Upper	26	1	Yes
	Lower	39	2	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	42	No
50 Martin Place	Upper	26	0	Yes
	Lower	39	0	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	3	Yes
60 Castlereagh St (Level 6)	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 06/01/2019

Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	0	Yes
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	1	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	0	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	2	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Level 6)	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 07/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	0	Yes
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	2	Yes
	Lower	39	26	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	0	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Level 6)	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 08/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	1	Yes
	Lower	39	2	Yes
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	1	Yes
	Lower	39	12	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	0	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Level 6)	Upper	26	1	Yes
	Lower	39	1	Yes

Report for Condition E1.1 on 09/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	4	Yes
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	4	Yes
	Lower	39	23	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	1	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Level 6)	Upper	26	9	Yes
	Lower	39	9	Yes

Report for Condition E1.1 on 10/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	13	Yes
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	9	Yes
	Lower	39	20	Yes
50 Martin Place	Upper	26	1	Yes
	Lower	39	2	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Level 6)	Upper	26	10	Yes
	Lower	39	10	Yes

Report for Condition E1.1 on 11/01/2019

Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	6	Yes
	Lower	39	14	Yes
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	13	Yes
	Lower	39	33	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	2	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Level 6)	Upper	26	2	Yes
	Lower	39	2	Yes

Report for Condition E1.1 on 12/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	8	Yes
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	5	Yes
	Lower	39	16	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	1	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	1	Yes
60 Castlereagh St (Level 6)	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 13/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	0	Yes
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	1	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	0	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Level 6)	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 14/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	8	Yes
	Lower	39	19	Yes
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	2	Yes
	Lower	39	14	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	5	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Level 6)	Upper	26	4	Yes
	Lower	39	4	Yes

Report for Condition E1.1 on 15/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	6	Yes
	Lower	39	18	Yes
65 Berry St	Upper	26	0	Yes
	Lower	39	0	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	2	Yes
Edinburgh Castle Hotel	Upper	26	3	Yes
	Lower	39	18	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	5	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Level 6)	Upper	26	6	Yes
	Lower	39	6	Yes

Report for Condition E1.1 on 16/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	3	Yes
	Lower	39	15	Yes
65 Berry St	Upper	26	0	Yes
	Lower	39	0	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	2	Yes
Edinburgh Castle Hotel	Upper	26	2	Yes
	Lower	39	19	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	9	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Level 6)	Upper	26	4	Yes
	Lower	39	4	Yes

Report for Condition E1.1 on 17/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	11	Yes
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	2	Yes
	Lower	39	39	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	3	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Level 6)	Upper	26	2	Yes
	Lower	39	2	Yes

Report for Condition E1.1 on 18/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	16	Yes
65 Berry St	Upper	26	0	Yes
	Lower	39	0	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	1	Yes
Edinburgh Castle Hotel	Upper	26	2	Yes
	Lower	39	29	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	3	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes
60 Castlereagh St (Level 6)	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 19/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	2	Yes
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	2	Yes
	Lower	39	10	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	4	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 20/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	0	Yes
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	1	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	0	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 21/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	15	Yes
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	2	Yes
	Lower	39	20	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	6	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 22/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	24	Yes
65 Berry St	Upper	26	0	Yes
	Lower	39	0	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	3	Yes
Edinburgh Castle Hotel	Upper	26	21	Yes
	Lower	39	33	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	5	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 23/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	7	Yes
	Lower	39	22	Yes
65 Berry St	Upper	26	0	Yes
	Lower	39	0	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	5	Yes
Edinburgh Castle Hotel	Upper	26	16	Yes
	Lower	39	42	No
50 Martin Place	Upper	26	0	Yes
	Lower	39	17	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	2	Yes

Report for Condition E1.1 on 24/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
60 Castlereagh St (Level 2)	Upper	26	3	Yes
	Lower	39	3	Yes
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	1	Yes
	Lower	39	27	Yes
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	12	Yes
	Lower	39	32	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	2	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 25/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
60 Castlereagh St (Level 2)	Upper	26	10	Yes
	Lower	39	10	Yes
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	4	Yes
	Lower	39	22	Yes
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	8	Yes
	Lower	39	48	No
50 Martin Place	Upper	26	0	Yes
	Lower	39	0	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 26/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
60 Castlereagh St (Level 2)	Upper	26	0	Yes
	Lower	39	0	Yes
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	1	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	0	Yes
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	2	Yes
	Lower	39	28	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	0	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	1	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	1	Yes

Report for Condition E1.1 on 27/01/2019

Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
60 Castlereagh St (Level 2)	Upper	26	0	Yes
	Lower	39	0	Yes
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	0	Yes
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	1	Yes
	Lower	39	39	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	0	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 28/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
60 Castlereagh St (Level 2)	Upper	26	0	Yes
	Lower	39	0	Yes
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	0	Yes
	Lower	39	0	Yes
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
50 Martin Place	Upper	26	0	Yes
	Lower	39	0	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 29/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
60 Castlereagh St (Level 2)	Upper	26	1	Yes
	Lower	39	1	Yes
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	6	Yes
	Lower	39	23	Yes
65 Berry St	Upper	26	0	Yes
	Lower	39	0	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	2	Yes
Edinburgh Castle Hotel	Upper	26	1	Yes
	Lower	39	26	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	0	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 30/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
60 Castlereagh St (Level 2)	Upper	26	9	Yes
	Lower	39	9	Yes
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	2	Yes
	Lower	39	21	Yes
65 Berry St	Upper	26	0	Yes
	Lower	39	0	Yes
Castlereagh Boutique Hotel	Upper	26	0	Yes
	Lower	39	1	Yes
Edinburgh Castle Hotel	Upper	26	0	Yes
	Lower	39	19	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	1	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes

Report for Condition E1.1 on 31/01/2019

Location	Noise Goal	15 minute periods in		Has condition been met?
		Permitted	Exceeded	
545 Pacific Highway	Upper	26	0	Yes
	Lower	39	0	Yes
10 to 12 Clarke Street	Upper	26	5	Yes
	Lower	39	20	Yes
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	1	Yes
	Lower	39	11	Yes
50 Martin Place	Upper	26	0	Yes
	Lower	39	0	Yes
25A Hickson Road	Upper	26	0	Yes
	Lower	39	0	Yes
243 Miller St	Upper	26	0	Yes
	Lower	39	0	Yes

Real Time Noise Analysis Results Comments:

Edinburgh Castle Hotel 03/01/2019

Real time noise monitor installed adjacent to Pitt St South site (Edinburgh Castle Hotel) logged a noise alarm as per E1.1. This notification triggers when there have been 39 logging periods (15 minutes each) at this site above 50dBA (minus corrections 0) between the working hours of 07:00-20:00 AEDT on 3 January. Currently, there have been 39 logging periods above 50dBA. Upon review of operations at Pitt St South, it was found that no works occurred on 3 January. Thus, no logging periods above 50dBA were attributable to TSE works, and thus an exceedance was not recorded on this occasion.

Edinburgh Castle Hotel 05/01/2019

Real time noise monitor installed adjacent to Pitt St South site (Edinburgh Castle Hotel) logged a noise alarm as per E1.1. This notification triggers when there have been 39 logging periods (15 minutes each) at this site above 50dBA (minus corrections 0) between the working hours of 07:00-20:00 AEDT on 5 January. Currently, there have been 39 logging periods above 50dBA. Upon review of operations at Pitt St South, it was found that works occurred between the hours of 08:00-13:00 on 5 January. It should be noted that only 20 logging periods may be possibly attributable to TSE works., and thus an exceedance was not recorded on this occasion.

Edinburgh Castle Hotel 23/01/2019

Real time noise monitor installed adjacent to Pitt St South site (Edinburgh Castle Hotel) logged a noise alarm as per E1.1. This notification triggers when there have been 39 logging periods (15 minutes each) at this site

above 50dBA (minus corrections 0) between the working hours of 07:00-20:00 AEDT on 23 January. Currently, there have been 39 logging periods above 50dBA.

Upon investigation of operations at Pitt Street South by the Construction, Environment & Community teams, the following was noted:

- the window of the room where the monitor is located was shut (note: as required)
- works ceased on site at 6.00pm
- at 6.00pm, 34 logging periods had been recorded above 50dBA on 23 January
- all respite periods specific for this site were observed
- there is a fan unit (attached to kitchen of Hotel) approx. 2m above the room where the monitor is located that emits a mechanical 'hum'
- Any additional logged periods beyond 6:00pm are attributed to non TSE works

It was concluded that an exceedance was not recorded on this occasion.

Edinburgh Castle Hotel 25/01/2019

Real time noise monitor installed adjacent to Pitt St South site (Edinburgh Castle Hotel) logged a noise alarm as per E1.1. This notification triggers when there have been 39 logging periods (15 minutes each) at this site above 50dBA (minus corrections 0) between the working hours of 07:00-20:00 AEDT on 25 January. Currently, there have been 39 logging periods above 50dBA.

Upon investigation of operations at Pitt St South by the Construction, Environment & Community teams, the following was noted:

- the window of the room where the monitor is located was shut (note: as required)
- it was found that works had ceased on site at 6.00pm
- at 6.00pm, 34 logging periods had been recorded above 50dBA on 25 January
- all respite periods specific for this site were observed
- there is a fan unit (attached to kitchen of Hotel) approx. 2m above the room where the monitor is located that emits a mechanical 'hum'
- Any additional logged periods beyond 6:00pm are attributed to non TSE works

It was concluded that an exceedance was not recorded on this occasion.

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

Day	22 Clarke Street, Crows Nest	10 to 12 Clarke Street, Crows Nest	65 Berry Street, North Sydney	243 Miller Street, North Sydney	25A Hickson Road, Millers Point	50 Martin Place, Sydney	60 Castlereagh Street (Basement), Sydney	60 Castlereagh Street (Level 6), Sydney	60 Castlereagh Street (level 4), Sydney	60 Castlereagh Street (level 2), Sydney	Castlereagh Boutique Hotel	211-217 Castlereagh Street, Sydney
Criteria	25	25	25	7.5	25	7.5	25	25	25	25	7.5	7.5
01/01/2019	1.43	0.16	0.08	1.08	0.11	0.23	0.21	0.14	-	-	0.24	0.09
02/01/2019	1.53	0.2	0.52	1	0.28	0.22	0.18	0.46	-	-	3.9	0.1
03/01/2019	1.76	0.19	0.4	1.34	0.08	0.24	0.85	1.17	-	-	1	0.09
04/01/2019	0.69	0.22	0.48	0.97	0.11	0.22	0.15	0.85	-	-	1.54	0.08
05/01/2019	0.88	0.35	0.27	0.45	0.13	0.24	0.15	0.14	-	-	1.52	0.1
06/01/2019	0.88	0.11	0.19	0.95	0.11	0.22	0.18	0.14	-	-	1.33	0.09
07/01/2019	0.76	0.16	0.55	1.1	0.08	0.29	1.49	0.46	-	-	1.14	1.39
08/01/2019	0.93	0.22	0.76	1.18	0.13	0.34	1.27	2.19	-	-	2.21	1.24
09/01/2019	1.24	0.27	0.72	0.66	0.08	0.5	1.05	3.28	-	-	1.89	0.58
10/01/2019	0.8	0.57	0.53	1.63	0.15	0.37	1.7	4.15	-	-	2.39	0.52
11/01/2019	0.73	0.49	1.12	0.54	0.11	0.24	1.13	2.19	-	-	5.37	0.69
12/01/2019	0.77	0.27	0.41	0.97	0.11	0.56	1.39	2.02	-	-	1.31	0.62
13/01/2019	0.68	0.19	0.16	0.76	0.21	0.22	0.15	0.22	-	-	1.9	0.09
14/01/2019	0.77	0.38	0.75	2.11	0.16	0.5	2.65	1.5	-	-	7.9	0.59
15/01/2019	1.03	0.68	0.64	2.68	0.25	0.42	1.7	3.14	-	-	2.36	0.98
16/01/2019	1.28	0.24	0.43	0.66	0.16	0.96	7.3	5.98	-	-	2.41	1.57
17/01/2019	1.31	0.27	0.43	1.11	0.11	0.39	1.47	1.31	-	-	7.83	0.4
18/01/2019	0.59	0.27	1.1	1.31	0.16	0.49	1.57	1.07	3.36	-	2.3	2.09
19/01/2019	0.75	0.18	1.04	1.26	0.11	0.39	1.34	-	2.3	-	2.81	0.55
20/01/2019	0.63	0.19	0.13	1.48	0.11	1.08	0.41	-	0.61	-	1.08	0.09
21/01/2019	1.77	0.6	1.67	1.68	0.11	0.5	3.22	-	3.45	-	8.35	0.92
22/01/2019	1.09	1.09	1.74	1.43	0.13	0.42	2.03	-	0.22	-	5.51	0.47
23/01/2019	1.07	0.49	0.96	0.97	0.11	0.45	3.45	-	-	-	3.63	0.69
24/01/2019	1.15	0.49	0.4	0.97	0.13	0.37	2.31	-	0.8	27.79	5.24	0.87
25/01/2019	0.8	0.51	0.35	1.2	0.08	0.5	1.62	-	-	1.06	5.78	1.07
26/01/2019	1.23	0.22	0.22	0.97	0.13	0.23	0.23	-	-	0.26	2.4	0.08
27/01/2019	0.87	0.19	0.19	0.76	0.11	0.21	0.15	-	-	0.24	2.63	0.08
28/01/2019	0.99	0.24	0.19	0.83	0.11	0.23	0.18	-	-	0.14	2.22	0.08
29/01/2019	1.53	0.27	0.27	1	0.11	0.22	0.39	-	-	0.24	3.88	0.43
30/01/2019	0.84	0.44	0.32	1.86	0.11	0.32	4.42	-	-	1.26	2.56	0.89
31/01/2019	0.61	0.31	0.37	0.11	0.11	0.61	1.85	-	-	0.87	2.65	0.79

Real-Time Vibration Results Comments:

Castlereagh Boutique Hotel 14/01/2019

Real time vibration monitor installed adjacent to Pitt St North site (Castlereagh Boutique Hotel) logged a vibration figure of 7.9mm/s (2:28pm, peak transverse) on 14 January 2019. The designated maximum allowable vibration figure for this site for cosmetic damage (7.5mm/s, on any axis).

An investigation was carried out between the senior environmental coordinator and the site superintendent, and it was found that the nearest works being conducted in this area were the tunnelling operation at the base of the Northern Access Shaft, approximately 20m below surface level (approx. 30m laterally, from monitoring point). Comms team liaised with Castlereagh Boutique Hotel to deduce if hotel staff have come in contact with

monitor. Hotel has confirmed that this was not the case. Investigation held with Acoustic Consultant, anomaly deemed not TSE related works.

Castlereagh Boutique Hotel 17/01/2019

Real time vibration monitor installed adjacent to Pitt St North site (Castlereagh Boutique Hotel) logged a vibration figure of 7.8mm/s (1:51pm, peak transverse) on 17 January 2019. The designated maximum allowable vibration figure for this site for cosmetic damage (7.5mm/s, on any axis).

An investigation was carried out between the senior environmental coordinator and the site superintendent, and it was found that the nearest works being conducted in this area were the tunnelling operation at the base of the Northern Access Shaft, approximately 20m below surface level (approx. 30m laterally, from monitoring point). Comms team liaised with Castlereagh Boutique Hotel to deduce if hotel has tampered with monitor. Hotel has confirmed that this was not the case. Investigation held with Acoustic Consultant, and anomaly deemed not TSE related works.

Castlereagh Boutique Hotel 21/01/2019

Real time vibration monitor installed adjacent to Pitt St North site (Castlereagh Boutique Hotel) logged a vibration figure of 8.1mm/s (1:39pm, peak transverse) on 21 January 2019. The designated maximum allowable vibration figure for this site for cosmetic damage (7.5mm/s, on any axis).

An investigation was carried out by the senior environmental coordinator, and it was found that these exceedances were not attributable to TSE works due to the nature of the vibration frequencies measured not being consistent with construction activities.

Level 2, 60 Castlereagh Street 24/01/2019

Notification alert for vibration at the Level 2, 60 Castlereagh Street vibration monitor was received on 24/01/2019. Maximum vibration level recorded was 27.79mm/s.

Site Environmental Coordinator was onsite moving the vibration monitor with the noise and vibration consultant at the time of the alert. It is therefore concluded that the high reading was due to moving and not related to TSE works.