



# Environmental Monitoring Data

Project:	Sydney Metro City & Southwest– TSE Works
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## Document Approval

Rev.	Date	Prepared by	Reviewed by	Approved by	Remarks
01	11/12/2020	D. Windnagel	S. Anstee	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=191415&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, Victoria Cross and Pitt Street during the November 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 <sup>1</sup>	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	MD_03	1/11/2020 to 30/11/2020	6.6	8.4	7.5	0.3	34.8	16.4	Nil	Compliant
2	BL_02	1/11/2020 to 30/11/2020	7.1	8.4	7.6	0.0	31.1	7.4	Nil	Compliant
2	BN_02	1/11/2020 to 30/11/2020	6.7	8.5	7.5	0.3	15.9	1.8	Nil	Compliant
2	VC_03	13/11/2020	7.5	7.5	7.5	28	28	28	Nil	Compliant
2	VC_03	23/11/2020	8.0	8.0	8.0	20	20	20	Nil	Compliant

<sup>1</sup> 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 <sup>1.75</sup> )	VDV Target (m/s <sup>1.75</sup> )	VDV Compliant	Measured PPV (mm/s)	PPV Target (mm/s)	PPV Compliant
No vibration data <sup>1</sup>								

<sup>1</sup> No vibration monitoring undertaken in month of November 2020.

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
MDS_01, 65 Edinburgh Road, Marrickville	02/11/2020	Attended	LAeq (15 min)	65.5	48	TSE Works Compliant - Traffic Dominant Noise
VC_07, 79-81 Berry Street, North Sydney	03/11/2020	Attended	LAeq (15 min)	70.2	62	TSE Works Compliant - Traffic Dominant Noise
PS_02, 308 Pitt Street, Sydney	06/11/2020	Attended	LAeq (15 min)	67.2	73	TSE Works Compliant
PS_05, 137-139 Bathurst Street, Sydney	06/11/2020	Attended	LAeq (15 min)	72.9	70	TSE Works Compliant - Traffic Dominant Noise
VC_07, 79-81 Berry Street, North Sydney	12/11/2020	Attended	LAeq (15 min)	62.4	68	TSE Works Compliant - Traffic Dominant Noise
VC_07, 79-81 Berry Street, North Sydney	12/11/2020	Attended	LAeq (15 min)	62.0	57	TSE Works Compliant - Traffic Dominant Noise
VC_07, 79-81 Berry Street, North Sydney	27/11/2020	Attended	LAeq (15 min)	63.2	68	TSE Works Compliant - Traffic Dominant Noise
VC_07, 79-81 Berry Street, North Sydney	27/11/2020	Attended	LAeq (15 min)	63.0	57	TSE Works Compliant - Traffic Dominant Noise
MDS_02, 358 Edgeware Road, Newtown	24/11/2020	Attended	LAeq (15 min)	59.3	62	TSE Works Compliant - Traffic Dominant Noise

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	
	Noise Limit	Upper
01/11/2020	Yes	Yes
02/10/2020	Yes	Yes
03/10/2020	Yes	Yes
04/10/2020	Yes	Yes
05/10/2020	Yes	Yes
06/10/2020	Yes	Yes
07/10/2020	Yes	Yes
08/10/2020	Yes	Yes
09/10/2020	Yes	Yes
10/10/2020	Yes	Yes
11/10/2020	Yes	Yes
12/10/2020	Yes	Yes
13/10/2020	Yes	Yes
14/10/2020	Yes	Yes
15/10/2020	Yes	Yes
16/10/2020	Yes	Yes
17/10/2020	Yes	Yes
18/10/2020	Yes	Yes
19/10/2020	Yes	Yes
20/10/2020	Yes	Yes
21/10/2020	Yes	Yes
22/10/2020	Yes	Yes
23/10/2020	Yes	Yes
24/10/2020	Yes	Yes
25/10/2020	Yes	Yes
26/10/2020	Yes	Yes
27/10/2020	Yes	Yes
28/10/2020	Yes	Yes
29/10/2020	Yes	Yes
30/10/2020	Yes	Yes
31/10/2020	Yes	Yes

Table 4-2: Real-Time Noise Monitoring Data

<b>Report for Condition E1.1 on 01/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	8	Yes
<b>Report for Condition E1.1 on 02/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	25	Yes
<b>Report for Condition E1.1 on 03/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	29	Yes
<b>Report for Condition E1.1 on 04/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	5	Yes
	Lower	39	20	Yes
<b>Report for Condition E1.1 on 05/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	9	Yes

<b>Report for Condition E1.1 on 06/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	20	Yes
<b>Report for Condition E1.1 on 07/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	1	Yes
<b>Report for Condition E1.1 on 08/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	2	Yes
	Lower	39	2	Yes
<b>Report for Condition E1.1 on 09/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	21	Yes
<b>Report for Condition E1.1 on 10/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	11	Yes
	Lower	39	27	Yes

<b>Report for Condition E1.1 on 11/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	10	Yes
	Lower	39	24	Yes
<b>Report for Condition E1.1 on 12/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	8	Yes
	Lower	39	32	Yes
<b>Report for Condition E1.1 on 13/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	24	Yes
<b>Report for Condition E1.1 on 14/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	7	Yes
<b>Report for Condition E1.1 on 15/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	0	Yes

<b>Report for Condition E1.1 on 16/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	19	Yes
<b>Report for Condition E1.1 on 17/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	26	Yes
<b>Report for Condition E1.1 on 18/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	11	Yes
<b>Report for Condition E1.1 on 19/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	1	Yes
	Lower	39	25	Yes
<b>Report for Condition E1.1 on 20/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	5	Yes

<b>Report for Condition E1.1 on 21/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	2	Yes
<b>Report for Condition E1.1 on 22/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	0	Yes
<b>Report for Condition E1.1 on 23/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	12	Yes
<b>Report for Condition E1.1 on 24/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	2	Yes
	Lower	39	20	Yes
<b>Report for Condition E1.1 on 25/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	7	Yes

<b>Report for Condition E1.1 on 26/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	5	Yes
<b>Report for Condition E1.1 on 27/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	7	Yes
<b>Report for Condition E1.1 on 28/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	6	Yes
<b>Report for Condition E1.1 on 29/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	0	Yes
<b>Report for Condition E1.1 on 30/11/2020</b>				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	6	Yes

**Real Time Noise Results Comments:**

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

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

Day	65 Berry Street, North Sydney
Criteria (mm/s)	25
01/11/2020	0.28
02/11/2020	0.31
03/11/2020	1.42
04/11/2020	0.7
05/11/2020	0.65
06/11/2020	0.64
07/11/2020	0.35
08/11/2020	0.18
09/11/2020	0.52
10/11/2020	0.41
11/11/2020	0.45
12/11/2020	0.35
13/11/2020	0.34
14/11/2020	0.21
15/11/2020	1.93
16/11/2020	0.35
17/11/2020	1.72
18/11/2020	0.46
19/11/2020	0.4
20/11/2020	0.99
21/11/2020	0.24
22/11/2020	0.23
23/11/2020	0.35
24/11/2020	0.48
25/11/2020	0.36
26/11/2020	0.46
27/11/2020	0.45
28/11/2020	0.33
29/11/2020	1.93
30/11/2020	0.33