



Environmental Monitoring Data

Project:	Sydney Metro City & Southwest– TSE Works
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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 Victoria Cross during part of the December reporting period. The noise and vibration monitor at Victoria Cross (65 Berry St) was left in place but handed over to the follow-on Contractor on the 11/12/2020. 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.

Identifier ¹	Monitoring Dates	Parameter/ Criteria/ Measured Value						Oil & Grease (None Visible)	Comments
		pH (6.5 – 8.5)			Turbidity (<35 NTU)				
		Min	Max	Average	Min	Max	Average		
MD_05	1/12/2020 to 21/12/2020 ²	6.6	8.4	7.1	0.3	33.0	11.6	Nil	Compliant
BL_02	1/12/2020 to 11/12/2020 ³	7.5	8.4	7.8	1.8	30.7	5.9	Nil	Compliant
BN_03	1/12/2020 to 30/12/2020	6.9	8.5	7.3	0.1	16.4	1.9	Nil	Compliant

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

² WTP not operating during site shutdown period. No water was discharged offsite during this period.

³ Bligh Street was handed over to follow on contractor on 11/12/2020 and the discharge point subsequently removed from the 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
No vibration data ¹								

¹ No vibration monitoring was undertaken in the month of December 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
BN_02, 64 High St, Barangaroo	01/12/2020	Attended	LAeq (15 min)	52.8	54	TSE Works Compliant
MDS_02, 358 Edgeware Road, Newtown	02/12/2020	Attended	LAeq (15 min)	61.5	57	TSE Works Compliant - Traffic Dominant Noise
MDS_02, 358 Edgeware Road, Newtown	02/12/2020	Attended	LAeq (15 min)	55.7	57	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	
Noise Limit	Upper	Lower
01/12/2020	Yes	Yes
02/12/2020	Yes	Yes
03/12/2020	Yes	Yes
04/12/2020	Yes	Yes
05/12/2020	Yes	Yes
06/12/2020	Yes	Yes
07/12/2020	Yes	Yes
08/12/2020	Yes	Yes
09/12/2020	Yes	Yes
10/12/2020	Yes	Yes
11/12/2020	Yes	Yes

Table 4-2: Real-Time Noise Monitoring Data

Report for Condition E1.1 on 01/12/2020				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	3	Yes
Report for Condition E1.1 on 02/12/2020				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	0	Yes
	Lower	39	4	Yes
Report for Condition E1.1 on 03/12/2020				
Location	Noise Goal	15 minute periods in exceedance		Has condition been met?
		Permitted	Exceeded	
65 Berry St	Upper	26	5	Yes
	Lower	39	10	Yes
Report for Condition E1.1 on 04/12/2020				
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
Report for Condition E1.1 on 05/12/2020				
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

Report for Condition E1.1 on 06/12/2020				
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
Report for Condition E1.1 on 07/12/2020				
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
Report for Condition E1.1 on 08/12/2020				
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
Report for Condition E1.1 on 09/12/2020				
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
Report for Condition E1.1 on 10/12/2020				
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
Report for Condition E1.1 on 11/12/2020				
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

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
01/12/2020	0.35
02/12/2020	0.32
03/12/2020	1.05
04/12/2020	0.46
05/12/2020	0.2
06/12/2020	0.43
07/12/2020	0.39
08/12/2020	0.28
09/12/2020	0.43
10/12/2020	0.26
11/12/2020	0.24

Real Time Vibration Results Comments:

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