



# 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
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## 1. 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

## 2. 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/SearchResult.aspx?SearchTag=licence&searchrange=licence&range=licence>

### **3. Discharge Water Monitoring**

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

### **4. 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.

Table 1: Water Monitoring Data.

Monitoring Point	Identifier <sup>1</sup>	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	CD_02	01/06/2018	Y	8.3	20.0	Nil	WTP Commissioning. Discharge approved.
1	BL_02	02/06/2018	Y	8.2	19.8	Nil	Discharge approved.
1	BL_02	04/06/2018	Y	7.7	13.6	Nil	Discharge approved.
1	CD_02	04/06/2018	Y	7.8	25.0	Nil	WTP Commissioning. Discharge approved.
1	BL_02	05/06/2018	Y	8.4	17.1	Nil	Discharge approved.
1	BN_01	05/06/2018	Y	7.5	10.0	Nil	Discharge approved.
1	CD_02	05/06/2018	Y	7.2	25.0	Nil	WTP Commissioning. Discharge approved.
1	MD-01	05/06/2018	Y	7.2	10.3	Nil	WTP Commissioning. Discharge approved.
1	BL_02	06/06/2018	Y	8.5	28.5	Nil	Discharge approved.
1	BN_01	06/06/2018	Y	7.8	30.0	Nil	Discharge approved.
1	CD_02	06/06/2018	Y	6.6	30.0	Nil	WTP Commissioning. Discharge approved.
1	MD-01	06/06/2018	Y	6.7	21.6	Nil	WTP Commissioning. Discharge approved.
1	CD_02	07/06/2018	Y	7.2	30.0	Nil	WTP Commissioning. Discharge approved.
1	MD-01	07/06/2018	Y	6.7	1.7	Nil	WTP Commissioning. Discharge approved.
1	BL_02	08/06/2018	Y	8.0	25.0	Nil	Discharge approved.
1	CD_02	09/06/2018	Y	8.2	25.0	Nil	WTP Commissioning. Discharge approved.

Monitoring Point	Identifier <sup>1</sup>	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	09/06/2018	Y	7.7	8.1	Nil	WTP Commissioning. Discharge approved.
1	BL_02	12/06/2018	Y	7.6	25.0	Nil	Discharge approved.
1	CD_02	12/06/2018	Y	7.9	30.0	Nil	WTP Commissioning. Discharge approved.
1	MD-01	12/06/2018	Y	7.9	5.9	Nil	WTP Commissioning. Discharge approved.
1	CN_01	13/06/2018	Y	6.5	10.0	Nil	Discharge approved.
1	CD_02	13/06/2018	Y	7.9	30.0	Nil	WTP Commissioning. Discharge approved.
1	BL_02	15/06/2018	Y	8.0	28.0	Nil	Discharge approved.
1	MD_01	15/06/2018	Y	8.0	7.0	Nil	WTP Commissioning. Discharge approved.
1	CD_02	16/06/2018	Y	6.9	25.0	Nil	WTP Commissioning. Discharge approved.
1	CD_02	18/06/2018	Y	6.8	25.0	Nil	WTP Commissioning. Discharge approved.
1	BN_01	19/06/2018	Y	8.1	27.0	Nil	Discharge approved.
1	CD_02	19/06/2018	Y	6.6	30.0	Nil	WTP Commissioning. Discharge approved.
1	MD_01	19/06/2018	Y	8.4	29.1	Nil	WTP Commissioning. Discharge approved.
1	CD_02	20/06/2018	Y	6.6	25.0	Nil	WTP Commissioning. Discharge approved.
1	MD_01	20/06/2018	Y	8.2	23.1	Nil	WTP Commissioning. Discharge approved.
1	CN_01	21/06/2018	Y	6.7	20.0	Nil	Discharge approved.
1	BN_01	21/06/2018	Y	7.0	22.0	Nil	Discharge approved.

Monitoring Point	Identifier <sup>1</sup>	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	CD_02	21/06/2018	Y	7.5	30.0	Nil	WTP Commissioning. Discharge approved.
1	CN_02	22/06/2018	Y	6.5	0.5	Nil	WTP Commissioning. Discharge approved.
1	BL_02	22/06/2018	Y	8.3	27.6	Nil	WTP Commissioning. Discharge approved.
1	MD_01	22/06/2018	Y	8.2	16.6	Nil	WTP Commissioning. Discharge approved.
1	BL_02	23/06/2018	Y	6.6	12.6	Nil	WTP Commissioning. Discharge approved.
1	CD_02	23/06/2018	Y	7.2	25.0	Nil	WTP Commissioning. Discharge approved.
1	CD_02	25/06/2018	Y	7.5	25.0	Nil	WTP Commissioning. Discharge approved.
1	BL_02	26/06/2018	Y	6.5	10.1	Nil	WTP Commissioning. Discharge approved.
1	BN_01	27/06/2018	Y	7.4	5.0	Nil	Discharge approved.
1	CD_02	27/06/2018	Y	7.9	25.0	Nil	WTP Commissioning. Discharge approved.
1	BL_02	27/06/2018	Y	7.4	5.0	Nil	Discharge approved.
1	MD_01	27/06/2018	Y	8.1	12.3	Nil	WTP Commissioning. Discharge approved.
1	BN_01	28/06/2018	Y	8.0	25.0	Nil	Discharge approved.
1	BL_02	28/06/2018	Y	7.7	4.7	Nil	WTP Commissioning. Discharge approved.
1	BL_02	28/06/2018	Y	6.9	15.0	Nil	WTP Commissioning. Discharge approved.
1	CD_02	28/06/2018	Y	7.3	25.0	Nil	WTP Commissioning. Discharge approved.

Monitoring Point	Identifier <sup>1</sup>	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	28/06/2018	Y	8.1	27.1	Nil	WTP Commissioning. Discharge approved.
1	CD_02	29/06/2018	Y	7.9	29.6	Nil	WTP Commissioning. Discharge approved.
1	CN_02	29/06/2018	Y	6.5	0.5	Nil	On-going WTP Commissioning. Discharge approved.
1	WL_01	29/06/2018	Y	7.0	10.0	Nil	WTP Commissioning. Discharge approved.
1	MD_01	29/06/2018	Y	7.8	6.3	Nil	WTP Commissioning. Discharge approved.
1	MD_01	30/06/2018	Y	7.8	4.4	Nil	WTP Commissioning. Discharge approved.

<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	Event Based Monitoring (Y/N)	Measured Value (mm/s)	Goals / Targets (mm/s)	Comments
VC_07, 105 Miller Street, Victoria Cross	04/06/2018	Attended	Y	0.19	7.50	TSE works compliant.
MP_03, 66 Hunter Street, Sydney	14/06/2018	Continuous	Y	0.29	7.50	TSE works compliant.
WS_03, 60 Botany Rd, Waterloo	22/06/2018	Attended	Y	0.33	7.50	TSE works compliant.
BN_03, High Street Wall	22/06/2018	Attended	Y	0.59	2.50	TSE works compliant.
MP_03, 66 Hunter Street, Sydney	25/06/2018	Continuous	Y	0.17	7.50	TSE works compliant.
MDS_01, 338 Edgeware Rd, Marrickville	28/06/2018	Attended	Y	0.08	25.00	TSE works compliant.

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
BN_07, 26A Lime Street, Barangaroo	01/06/2018	Attended	Y	LAeq 15 min	67.4	57	TSE works compliant. Traffic dominant noise source.
MDS_04, 360 Edgeware Road, Marrickville	04/06/2018	Attended	Y	LAeq 15 min	59.4	57	TSE works compliant. Traffic and pedestrian noise source dominant.
MDS_04, 360 Edgeware Road, Marrickville	04/06/2018	Attended	Y	LAeq 15 min	56.2	57	TSE works compliant.
BN_03, 30 High Street, Millers Point	05/06/2018	Attended	Y	LAeq 15 min	48.4	55	TSE works compliant.
MDS_02, 358 Edgeware Road, Newtown	12/06/2018	Attended	Y	LAeq 15 min	65.8	57	TSE works compliant. TSE works inaudible.
BN_03, 30 High Street, Millers Point	12/06/2018	Attended	Y	LAeq 15 min	55.7	40	TSE works compliant. TSE works inaudible.
CDS_06, 340 Mowbray Road, Chatswood	13/06/2018	Attended	Y	LAeq 15 min	64.8	57	TSE works compliant. Traffic dominant noise source.
MDS_02, 330 Edgeware road, Marrickville	15/06/2108	Attended	Y	LAeq 15 min	67.7	43	TSE works compliant. Traffic dominant noise source.
MDS_04, 78 Unwins Bridge Road, St Peters	15/06/2018	Attended	Y	LAeq 15 min	72.1	55	TSE works compliant. Traffic dominant noise source.
MDS_02, 336 Edgeware Road, Newtown	15/06/2018	Attended	Y	LAeq 15 min	49.0	38	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
MDS_02, 330 Edgeware Road, Newtown	15/06/2018	Attended	Y	LAeq 15 min	67.7	43	TSE works compliant. Traffic dominant noise source.
MDS_01, 65 Edinburgh Road, Marrickville	16/06/2018	Attended	Y	LAeq 15 min	69.5	52	TSE works compliant. Traffic dominant noise source.
MDS_01, 65 Edinburgh Road, Marrickville	16/06/2018	Attended	Y	LAeq 15 min	69.4	52	TSE works compliant. Traffic dominant noise source.
MP_02, 17 Castlereagh Street, Sydney	18/06/2018	Attended	Y	LAeq 15 min	65.4	71	TSE works compliant.
BN_02, 6 Argyle Place, Millers Point	20/06/2018	Attended	Y	LAeq 15 min	56.9	65	TSE works compliant.
BN_03, 30 High Street, Millers Point	20/06/2018	Attended	Y	LAeq 15 min	54.0	55	TSE works compliant.
MP_01, 27-39 Castlereagh Street, Sydney	20/06/2018	Attended	Y	LAeq 15 min	66.1	75	TSE works compliant.
VC_02, 15 Angelo Street, Victoria Cross	20/06/2018	Attended	Y	LAeq 15 min	65.8	76	TSE works compliant.
VC_07, 199 Miller Street, Victoria Cross	20/06/2018	Attended	Y	LAeq 15 min	67.9	80	TSE works compliant.
VC_02, 15 Angelo Street, Victoria Cross	21/06/2018	Attended	Y	LAeq 15 min	61.3	66	TSE works compliant.
VC_07, 199 Miller Street, Victoria Cross	21/06/2018	Attended	Y	LAeq 15 min	67.6	70	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
VC_07, 199 Miller Street, Victoria Cross	21/06/2018	Attended	Y	LAeq 15 min	67.2	80	TSE works compliant.
VC_02, 15 Angelo Street, Victoria Cross	21/06/2018	Attended	Y	LAeq 15 min	67.3	76	TSE works compliant.
MDS_01, 4 Unwins Bridge Road, St. Peters	21/06/2018	Attended	Y	LAeq 15 min	70.4	48	TSE works compliant. TSE works inaudible.
MDS_04, 78 Unwins Bridge Road, St Peters	21/06/2018	Attended	Y	LAeq 15 min	69.8	58	TSE works compliant. TSE works inaudible.
MDS_04, 330 Edgeware Road, Marrickville	21/06/2018	Attended	Y	LAeq 15 min	65.6	58	TSE works compliant. TSE works inaudible.
MDS_01, 65 Edinburgh Road, Marrickville	21/06/2018	Attended	Y	LAeq 15 min	66.8	58	TSE works compliant. TSE works inaudible.
VC_02, 15 Angelo Street, Victoria Cross	22/06/2018	Attended	Y	LAeq 15 min	65.5	66	TSE works compliant.
VC_07, 199 Miller Street, Victoria Cross	22/06/2018	Attended	Y	LAeq 15 min	69.7	70	TSE works compliant.
MDS_01, 65 Edinburgh Road, Marrickville	22/06/2018	Attended	Y	LAeq 15 min	68.3	58	TSE works compliant. TSE works inaudible.
MDS_04, 330 Edgeware road, Marrickville	22/06/2018	Attended	Y	LAeq 15 min	65.0	58	TSE works compliant. TSE works inaudible.
MDS_04, 78 Unwins Bridge Road, St Peters	22/06/2018	Attended	Y	LAeq 15 min	69.8	58	TSE works compliant. TSE works inaudible.

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
MDS_01, 4 Unwins Bridge Road, St. Peters	22/06/2018	Attended	Y	LAeq 15 min	71.6	48	TSE works compliant. TSE works inaudible.
MP_01, 27-39 Castlereagh Street, Sydney	23/06/2018	Attended	Y	LAeq 15 min	69.6	60	TSE works compliant. TSE works inaudible.
MDS_01, 65 Edinburgh Road, Marrickville	23/06/2018	Attended	Y	LAeq 15 min	69.0	58	TSE works compliant. TSE works inaudible.
MDS_04, 78 Unwins Bridge Road, St Peters	23/06/2018	Attended	Y	LAeq 15 min	71.2	58	TSE works compliant. TSE works inaudible.
MDS_02, 358 Edgeware Road, Newtown	25/06/2018	Attended	Y	LAeq 15 min	63.9	57	TSE works compliant. TSE works inaudible.
VC_07, 199 Miller Street, North Sydney	25/06/2018	Attended	Y	LAeq 15 min	71.2	74	TSE works compliant.
VC_02, 15 Angelo Street, North Sydney	25/06/2018	Attended	Y	LAeq 15 min	66.7	67	TSE works compliant.
VC_07, 199 Miller Street. North Sydney	25/06/2018	Attended	Y	LAeq 15 min	68.2	74	TSE works compliant.
CDS_06, 344 Mowbray Road, Chatswood	25/06/2018	Attended	Y	LAeq 15 min	71.5	90	TSE works compliant.
CDS_06, 344 Mowbray Road, Chatswood	25/06/2018	Attended	Y	LAeq 15 min	72.9	90	TSE works compliant.
WS_02, 213 Cope Street, Waterloo	25/06/2018	Attended	Y	LAeq 15 min	60.1	82	Emergency works. 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
CDS_06, 344 Mowbray Road, Chatswood	26/06/2018	Attended	Y	LAeq 15 min	69.8	75	TSE works compliant.
VC_07, 199 Miller Street, North Sydney	26/06/2018	Attended	Y	LAeq 15 min	67.9	74	TSE works compliant.
MP_02, 17 Castlereagh Street, Sydney	26/06/2018	Attended	Y	LAeq 15 min	70.3	71	TSE works compliant.
MP_01, 27-39 Castlereagh Street, Sydney	26/06/2018	Attended	Y	LAeq 15 min	68.3	75	TSE works compliant.
MP_01, 27-39 Castlereagh Street, Sydney	26/06/2018	Attended	Y	LAeq 15 min	66.5	75	TSE works compliant.
MP_02, 17 Castlereagh Street, Sydney	26/06/2018	Attended	Y	LAeq 15 min	70.0	71	TSE works compliant.
VC_07, 199 Miller Street, North Sydney	26/06/2018	Attended	Y	LAeq 15 min	70.9	74	TSE works compliant.
VC_07, 199 Miller Street, North Sydney	27/06/2018	Attended	Y	LAeq 15 min	67.9	74	TSE works compliant.
MP_02, 17 Castlereagh Street, Sydney	27/06/2018	Attended	Y	LAeq 15 min	65.5	70	TSE works compliant.
BN_03, 36 High Street, Millers Point	27/06/2018	Attended	Y	LAeq 15 min	56.8	60	TSE works compliant.
MDS_02, 338 Edgeware Road, Newtown	28/06/2018	Attended	Y	LAeq 15 min	64.1	68	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
MP_01, 27-39 Castlereagh Street, Sydney	28/06/2018	Attended	Y	LAeq 15 min	67.0	75	TSE works compliant.
MDS_02, 336 Edgeware Rd, Newtown	28/06/2018	Attended	Y	LAeq 15 min	64.1	68	TSE works compliant.
MP_02, 17 Castlereagh Street, Sydney	29/06/2018	Attended	Y	LAeq 15 min	66.0	70	TSE works compliant.
BN_03, 36 High Street, Millers Point	29/06/2018	Attended	Y	LAeq 15 min	53.2	50	TSE works compliant. Traffic dominant noise source.
BN_03, 30 High Street, Millers Point	29/06/2018	Attended	Y	LAeq 15 min	60.7	62	TSE works compliant.
BN_03, 2 High Street, Millers Point	29/06/2018	Attended	Y	LAeq 15 min	62.7	72	TSE works compliant.
BN_02, 24 Munn Street, Millers Point	29/06/2018	Attended	Y	LAeq 15 min	67.9	74	TSE works compliant.
MDS_01, 65 Edinburgh Road, Marrickville	30/06/2018	Attended	Y	LAeq 15 min	71.1	62	TSE works compliant. Traffic dominant noise source.
MDS_02, 330 Edgeware Road, Marrickville	30/06/2018	Attended	Y	LAeq 15 min	67.9	68	TSE works compliant.
MDS_01, 65 Edinburgh Road, Marrickville	30/06/2018	Attended	Y	LAeq 15 min	71.5	65	TSE works compliant. Traffic dominant noise source.
MDS_02, 330 Edinburgh Road, Marrickville	30/06/2018	Attended	Y	LAeq 15 min	74.2	68	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
MDS_04, 108 Unwins Bridge Road, St Peters	30/06/2018	Attended	Y	LAeq 15 min	72.7	69	TSE works compliant. Traffic dominant noise source.
BN_03, 30 High Street, Millers Point	30/06/2018	Attended	Y	LAeq 15 min	58.3	50	TSE works compliant. Traffic dominant noise source.
BN_03, 30 High Street, Millers Point	30/06/2018	Attended	Y	LAeq 15 min	56.6	50	TSE works compliant. Traffic dominant noise source.