

# Environmental Monitoring Data

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## Document Approval

Rev.	Date	Prepared by	Reviewed by	Approved by	Remarks
01	09/04/2022	M Bapodara	R. Muir	R. Muir	For publication

## Project Summary

The Sydney Gateway Road Project (‘the Project’) is a new direct high-capacity road connection linking the Sydney motorway network at St Peters interchange, where the M4 and M8 motorways meet, with Sydney Airport’s domestic and international terminals and the Port Botany Precinct. John Holland Seymour Whyte have been contracted by Transport for New South Wales to design and construct the works for the Sydney Gateway Road Project. Figure 1 provides an overview of the Project.

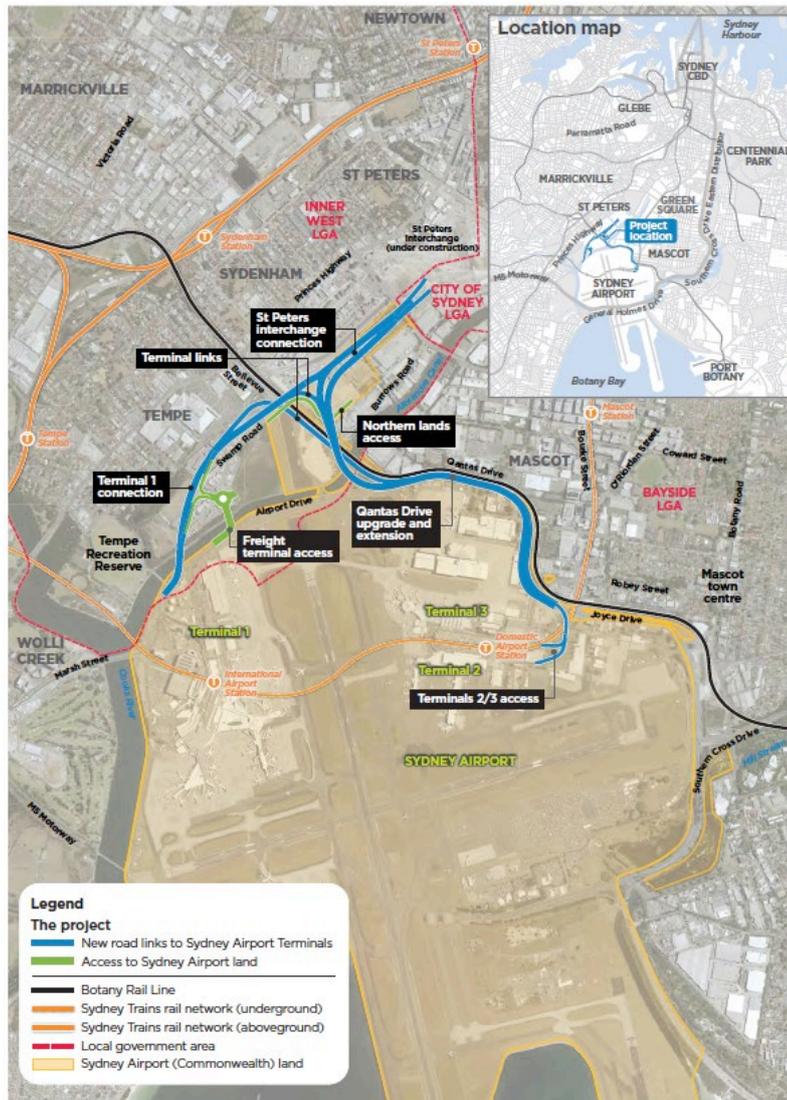


Figure 1: Project Overview

## Environmental Protection Licence and Reporting Requirements

John Holland Pty Ltd obtained the Environment Protection Licence (EPL No. 21524) from the NSW Environment Protection Authority for the Project on behalf of the John Holland Seymour (JHSW) Joint Venture. The licence is for construction works relating Scheduled Activities 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 Works. 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: [ViewPOEOLicence.aspx \(nsw.gov.au\)](http://ViewPOEOLicence.aspx(nsw.gov.au))

### **Noise and Vibration Monitoring**

Noise and vibration monitoring was undertaken during this reporting period. Table 1 contains the vibration monitoring results, and Table 2 contains the noise monitoring results.

Vibration monitoring results were recorded below the adopted structural damage criteria and therefore are considered compliant with the EPL. No further vibration readings were recorded more than the management limit.

Noise monitoring was undertaken on 17/03/2022 based on a noise complaint from day works. Monitoring results were found to be compliant with the predicted noise levels for the noise catchment.

### **Discharge Water Quality Monitoring**

Offsite discharge from the water treatment plant recommenced during March, three batch tests were undertaken prior to discharge followed by seven consecutive days of monitoring and one additional round of monitoring. All results were compliant with discharge criteria.

### **Landfill Gas and Gas Accumulation Monitoring**

Landfill gas and gas accumulation monitoring was undertaken during the March 2022 monitoring period. Results are summarised in Table 4 below.

Methane was recorded below the adopted criteria in all monitoring wells outside the landfill. Sample locations GW9A and GW14 recorded methane levels consistent with historic results, both GW9A and GW14 are located within the former landfill footprint.

Table 1: 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
SB71 piling	28/03/2022 – 30/03/2022	Continuous	NA	NA	NA	2.8	20	Yes

Table 2: 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
NCA_03, 4 Barden St, Tempe	17/03/22	Attended-	LAeq 15min	62.3	68.2	SG Work Compliant – traffic dominant noise source.

### Table 3: Discharge Monitoring Data

Discharged to Licence discharge point NL-01

Analyte	Units	Limit	Date <sup>1</sup>	Comments										
			28/2/22	28/2/22	28/2/22	1/3/22	2/3/22	3/3/22	4/3/22	5/3/22	6/3/22	7/3/22	18/3/22	
Ammonia	ug/l	1200	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	Compliant
Anthracene	ug/l	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Compliant
Arsenic (III)	ug/l	2.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Compliant
Arsenic (V)	ug/l	4.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Compliant
Barium (dissolved)	ug/l	2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Compliant
Benzo(a)pyrene	ug/l	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	Compliant
Boron	ug/l	5100	480	520	530	440	350	300	250	290	330	370	270	Compliant
Cadmium (dissolved)	ug/l	5.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Compliant
Chromium (hexavalent)	ug/l	20	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	Compliant
Chromium (trivalent)	ug/l	49	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	Compliant
Cobalt (dissolved)	ug/l	14	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	Compliant
Copper (dissolved)	ug/l	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	Compliant
Ethyl benzene	ug/l	110	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	Compliant
Fluoranthene	ug/l	1.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Compliant
Iron (dissolved)	ug/l	300	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	Compliant
Lead (dissolved)	ug/l	6.6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	Compliant
Manganese (dissolved)	ug/l	80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	Compliant
Mercury (dissolved)	ug/l	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Compliant
m-Xylene	ug/l	100	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	Compliant

Naphthalene	ug/l	70	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Compliant
Nickel (dissolved)	ug/l	70	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	Compliant
Nitrate + nitrite (oxidised nitrogen)	ug/l	15	<2	<2	<2	4	<2	<2	<2	<2	<2	<2	<2	Compliant
Nitrogen (total)	ug/l	300	90	80	90	100	110	110	110	40	120	120	170	Compliant
o-Xylene	ug/l	470	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	Compliant
Perfluorooctane sulphonate (PFOS)	ug/l	0.13	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	Compliant
Perfluorooctanoic acid (PFOA)	ug/l	220	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	Compliant
pH	pH	7-8.5	7.93	7.83	7.51	7.53	7.46	7.50	7.77	7.99	7.06	7.95	7.85	Compliant
Phenanthrene	ug/l	2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Compliant
Phosphorus (total)	ug/l	30	30	29	18	16	18	13	17	8	15	14	15	Compliant
p-Xylene	ug/l	250	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	Compliant
TPH C10-C36 Fraction	ug/l	600	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	Compliant
TPH C6-C9 Fraction	ug/l	150	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	Compliant
Turbidity	NTU	10	0.8	0.5	0.6	0.4	0.8	0.9	1.3	1.3	1.1	0.9	0.6	Compliant
Zinc (dissolved)	ug/l	23	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	Compliant

 Note: <sup>1</sup> Date sampled

Table 4: Landfill Gas Monitoring Results (11 March 2022)

EPA identification no.	Type of Monitoring Point*	Methane Limit	Results (Stabilised)
GW1A	Landfill Gas Monitoring <sup>1</sup>	1%v/v	0
GW2	Landfill Gas Monitoring <sup>1</sup>	1%v/v	0
GW3	Landfill Gas Monitoring <sup>1</sup>	1%v/v	0
GW4A	Landfill Gas Monitoring <sup>1</sup>	1%v/v	0
GW5A	Landfill Gas Monitoring <sup>1</sup>	1%v/v	0
GW6A	Landfill Gas Monitoring <sup>1</sup>	1%v/v	0
GW7	Landfill Gas Monitoring <sup>1</sup>	1%v/v	Destroyed unable to be sampled
GW8	Landfill Gas Monitoring <sup>1</sup>	1%v/v	Destroyed unable to be sampled
GW9A	Landfill Gas Monitoring <sup>2</sup>	N/A	22.5
GW11A	Landfill Gas Monitoring <sup>1</sup>	1%v/v	0
GW12	Landfill Gas Monitoring <sup>2</sup>	1%v/v	Destroyed unable to be sampled
GW13	Landfill Gas Monitoring <sup>1</sup>	1%v/v	Destroyed unable to be sampled
GW14	Landfill Gas Monitoring <sup>2</sup>	N/A	10
GW16	Landfill Gas Monitoring <sup>1</sup>	1%v/v	0
GW19A	Landfill Gas Monitoring <sup>1</sup>	1%v/v	0
GW22s	Landfill Gas Monitoring <sup>1</sup>	1%v/v	0
OSA1	Gas Accumulation Monitoring <sup>3</sup>	500ppm	<3
OSA2	Gas Accumulation Monitoring <sup>3</sup>	500ppm	<3
OSA3	Gas Accumulation Monitoring <sup>3</sup>	500ppm	<3
C3 Site Compound	Gas Accumulation Monitoring <sup>4</sup>	500ppm	<3

1. Outside the passive interception and venting trench
2. Inside the passive interception and venting trench
3. Gas accumulation monitoring within buildings located outside of the landfill boundary
4. Gas accumulation monitoring within buildings located onsite