



Environmental Monitoring Data

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01	09/02/2023	A. Wray	J. Paul	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.

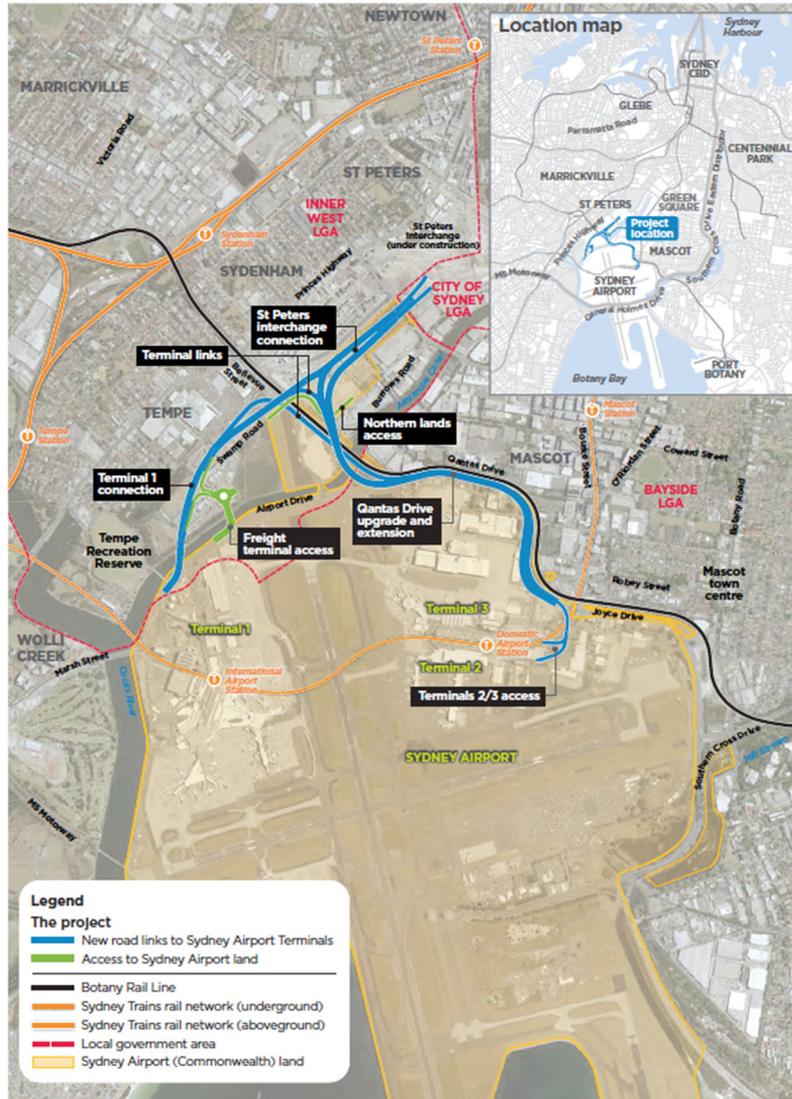


Figure 1: Project Overview

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 \(nsw.gov.au\)](https://www.epa.nsw.gov.au/ViewPOEOLicence.aspx)

Noise and Vibration Monitoring

Vibration

Vibration monitoring was undertaken during the reporting period, all works were deemed compliant. Table 1 contains the vibration monitoring data. Results were recorded below the adopted structural damage criteria on all occasions.

Noise

Noise monitoring was undertaken during the reporting period for works conducted under L4.3 of the Project EPL. All works were deemed compliant as the dominant noise source was determined to be caused by background noise sources, specifically local traffic, aircraft movements.

Noise monitoring was also undertaken during the reporting period for works conducted under L4.9 of the Project EPL. All works were deemed compliant with predicted noise levels. The dominant noise source was determined to be caused by background noise sources, specifically local traffic, however Project works were audible for short durations during the monitoring period. Table 2 contains the noise monitoring results.

Discharge Water Quality Monitoring

Offsite discharge from the 30L/s WTP occurred during January 2023. All discharges were compliant. See Table 3 for sample results.

Landfill Gas and Gas Accumulation Monitoring

Landfill gas and gas accumulation monitoring was undertaken during the January 2023 monitoring period. Results are summarised in Table 4 below.

Table 1: 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	Comment
6 Wentworth Street, Tempe	17/01/23-17/01/23	Attended	0.091	0.4	Yes	0.14	20	Yes	Works were monitored and found to be compliant with structural criteria and human comfort criteria.
2 Station Street, Tempe	17/01/23-17/01/23	Attended	0.280	0.4	Yes	0.43	20	Yes	Works were monitored and found to be compliant with structural criteria and human comfort criteria.
1 Station Street, Tempe	25/01/23-25/01/23	Attended	0.098	0.4	Yes	0.15	20	Yes	Works were monitored and found to be compliant with structural criteria and human comfort criteria.

Note:

1. VDV – Vibration Dose Value
2. PPV – Peak Particle

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_08 – 118 Robey Street, Mascot	11/01/2023	Attended	LAeq 15min	65.2	59	Traffic noise from O’Riordan St is the dominant noise source. Several Shipping container trucks passed during the sampling period causing the elevated LAeq. Sydney Gateway works were audible for a short duration of the monitoring period, however traffic remained the dominant noise. Sydney Gateway works compliant with predicted noise levels.
NCA_08 – 131 Baxter Road, Mascot	11/01/23	Attended	LAeq 15min	51.2	63	Traffic noise from O’Riordan St is the predominant noise source. Sydney Gateway works were audible for a short duration of the monitoring period, however traffic remained the dominant noise. Sydney Gateway works compliant with predicted noise levels.
NCA_08 – 118 Robey Street, Mascot	17/01/23	Attended	LAeq 15min	60.7	59	Background noise of traffic along O’Riordan Street was the dominant noise source throughout the monitoring period. Sydney Gateway works were audible for a short duration of the monitoring period, however traffic remained the dominant noise. Sydney Gateway works compliant with predicted noise levels.
Stamford Hotel	18/01/23	Attended	LAeq 15min	62.4	75	Background noise of traffic along O’Riordan Street was the dominant noise source throughout the monitoring period. BRD was working between the monitoring location and Sydney Gateway works. Both BRD works and Sydney Gateway works were audible for a short duration of the monitoring period, however traffic remained the dominant noise. Sydney Gateway works compliant with predicted noise levels.
Mantra Hotel	18/01/23	Attended	LAeq 15min	66.5	78	Traffic noise from Qantas Drive is the dominant noise source. Several trucks passed during the sampling period causing the elevated LAeq. Sydney Gateway works were audible for a short duration of the monitoring period, however traffic remained the dominant noise. Sydney Gateway works compliant with predicted noise levels.
NCA_03 – 2 Barden St, Tempe	25/01/23	Attended	LAeq 15min	61.1	66	Routine monitoring. Sydney Gateway works inaudible. Dominant noise sources were airplanes and traffic passing by on both South Street and Barden Street, Tempe. Sydney Gateway works compliant.

Note:

1. LAeq (15min) - The A-weighted equivalent continuous (energy average) A-weighted sound pressure level of the construction works under consideration over a 15-minute period and excludes other noise sources such as from industry, road, rail and the community.
2. dBA - Decibels using the A-weighted scale measured according to the frequency of the human ear

Table 3: WTP Discharge Monitoring Data

Analyte	Units	Limit	Date 10/01/23	Comments
Ammonia	ug/l	1200	34	Compliant
Anthracene	ug/l	0.4	<0.1	Compliant
Arsenic (III)	ug/l	2.3	1	Compliant
Arsenic (V)	ug/l	4.5	<1	Compliant
Barium (dissolved)	mg/l	2	<1	Compliant
Benzo(a)pyrene	ug/l	0.2	<0.05	Compliant
Boron	ug/l	5100	890	Complaint
Cadmium (dissolved)	ug/l	5.5	0.1	Compliant
Chromium (hexavalent)	ug/l	20	<1	Compliant
Chromium (trivalent)	ug/l	49	<1	Compliant
Cobalt (dissolved)	ug/l	14	<1	Compliant
Copper (dissolved)	ug/l	3	<1	Compliant
Ethyl benzene	ug/l	110	7	Compliant
Fluoranthene	ug/l	1.4	<0.1	Compliant
Iron (dissolved)	ug/l	300	70	Compliant
Lead (dissolved)	ug/l	6.6	<1	Compliant
Manganese (dissolved)	ug/l	80	<1	Compliant
Mercury (dissolved)	ug/l	0.4	<0.1	Compliant
m-Xylene	ug/l	100	35	Compliant
Naphthalene	ug/l	70	<0.1	Compliant
Nickel (dissolved)	ug/l	70	<1	Compliant
Nitrate + nitrite (oxidised nitrogen)	ug/l	15	14	Compliant
Nitrogen (total)	ug/l	300	210	Compliant
o-Xylene	ug/l	470	8	Complaint
Perfluorooctane sulphonate (PFOS)	ug/l	0.13	<0.01	Compliant
Perfluorooctanoic acid (PFOA)	ug/l	220	<0.01	Compliant
pH	pH	7-8.5	8.17	Compliant
Phenanthrene	ug/l	2	<0.1	Compliant
Phosphorus (total)	ug/l	30	5	Compliant
p-Xylene	ug/l	250	35	Compliant
TPH C10-C36 Fraction	ug/l	600	<50	Compliant
TPH C6-C9 Fraction	ug/l	150	150	Compliant
Turbidity	NTU	10	0.4	Compliant
Zinc (dissolved)	ug/l	23	<5	Compliant

Table 4: Landfill Gas Monitoring Results (24 January 2023)

EPA identification no.	Type of Monitoring Point*	Methane Limit	Results (Stabilised)%	Comment
GW1A	Landfill Gas Monitoring ¹	1%v/v	0	Compliant
GW2	Landfill Gas Monitoring ¹	1%v/v	0	Compliant
GW3	Landfill Gas Monitoring ¹	1%v/v	0	Compliant
GW4A	Landfill Gas Monitoring ¹	1%v/v	0	Compliant
GW5A	Landfill Gas Monitoring ¹	1%v/v	0	Compliant
GW6A	Landfill Gas Monitoring ¹	1%v/v	0	Compliant
GW7	Landfill Gas Monitoring ¹	1%v/v	-	Destroyed unable to be sampled
GW8	Landfill Gas Monitoring ¹	1%v/v	-	Destroyed unable to be sampled
GW9	Landfill Gas Monitoring ¹	1%v/v	0	Compliant
GW9A	Landfill Gas Monitoring ²	N/A	-	Unable to be sampled
GW11A	Landfill Gas Monitoring ¹	1%v/v	0	Compliant
GW12	Landfill Gas Monitoring ²	1%v/v	-	Destroyed unable to be sampled
GW13	Landfill Gas Monitoring ¹	1%v/v	-	Destroyed unable to be sampled
GW14	Landfill Gas Monitoring ²	N/A	5.5	Compliant
GW16	Landfill Gas Monitoring ¹	1%v/v	0	Compliant
GW17	Landfill Gas Monitoring ¹	1%v/v	0.4	Compliant
GW19A	Landfill Gas Monitoring ¹	1%v/v	0	Compliant
GW22s	Landfill Gas Monitoring ¹	1%v/v	0	Compliant
JHSW-LFG02	Landfill Gas Monitoring ¹	1%v/v	0	Compliant
OSA1	Gas Accumulation Monitoring ³	500ppm	<3	Compliant
OSA2	Gas Accumulation Monitoring ³	500ppm	<3	Compliant
OSA3	Gas Accumulation Monitoring ³	500ppm	<3	Compliant
C3 Site Compound	Gas Accumulation Monitoring ⁴	500ppm	<3	Compliant

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