Environmental Monitoring Data

Project:	Sydney Gateway Project
Document Number:	SGWPW-JHSW-NWW-EN-RPT-059267
Reporting Period:	February 2023
Date Published:	09 March 2023

Document Approval

Rev.	Date	Prepared by	Reviewed by	Approved by	Remarks
01	09/03/2023	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.

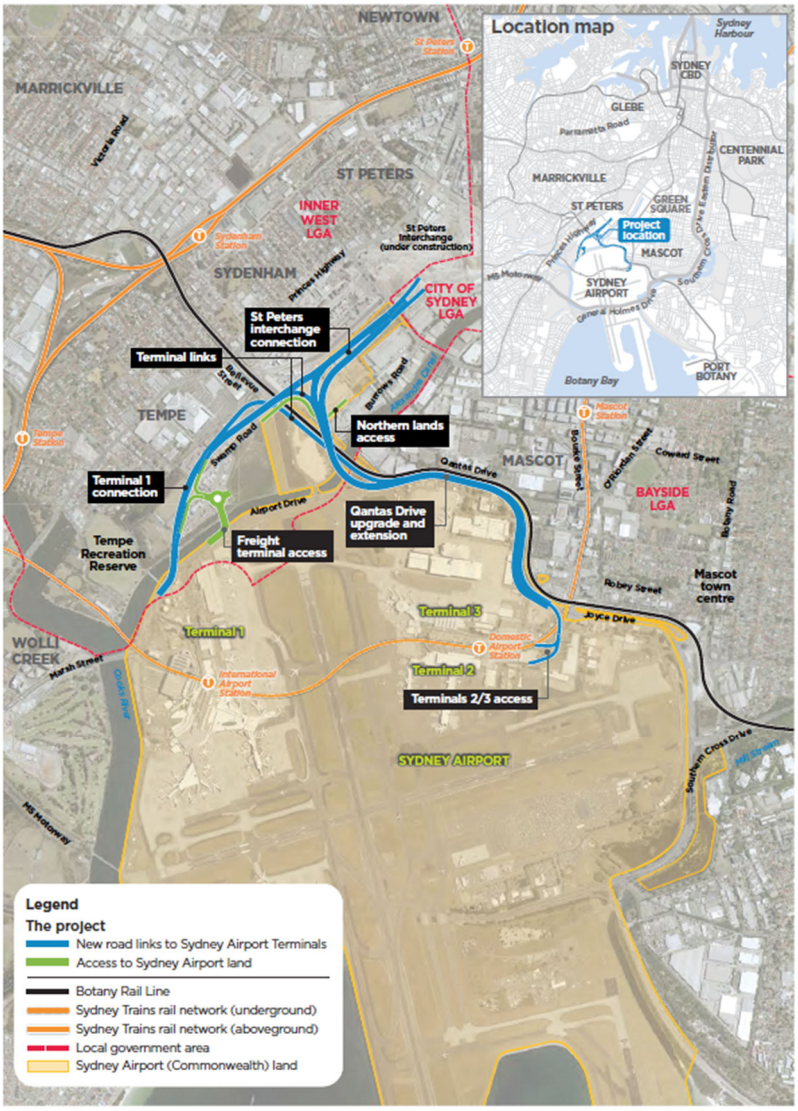

Figure 1: Project Overview

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)

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, all works were deemed compliant as the noise sources were predominantly dominated by background noise sources, local traffic and aircraft movements. Table 2 contains the noise monitoring results.

Discharge Water Quality Monitoring

Offsite discharge from the 30L/s WTP occurred during February 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 February 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
3 Barden Street, Tempe	03/02/2023	Attended	0.10	0.4	Yes	0.16	25	Yes	Works were monitored and found to be compliant with structural criteria and human comfort criteria.
Desal Pipeline	08/02/2023	Attended	N/A	N/A	N/A	4.7	20	Yes	Works were monitored and found to be compliant with structural criteria for the desalination pipeline.
6 Smith St, Tempe	10/02/2023	Attended	0.16	0.4	Yes	0.24	25	Yes	Works were monitored and found to be compliant with structural criteria and human comfort criteria.
SB71 – Alexandra Canal Heritage Structure	22/02/2023	Attended	N/A	N/A	N/A	0.1	6	Yes	Works were monitored and found to be compliant with heritage structural criteria.
SB71 – Alexandra Canal Heritage Structure	24/02/2023	Attended	N/A	N/A	N/A	0.11	6	Yes	Works were monitored and found to be compliant with heritage structural criteria.
SB51 – Alexandra Canal Heritage Structure	28/02/2023	Attended	N/A	N/A	N/A	0.4	6	Yes	Works were monitored and found to be compliant with heritage structural 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_03 - 5 Wentworth Street, Tempe	01/02/2023	Attended	LAeq 15min	57.5	45	Dominant noise source was traffic and aeroplanes. Sydney Gateway works compliant with predicted noise levels.
NCA_02 - 4 Bellevue Street, Tempe	03/02/2023	Attended	LAeq 15min	59.0	53	Dominant noise source was traffic from Princes Hwy, aeroplanes, and trucks in and out of the Salvation Army Store. Sydney Gateway works compliant with predicted noise levels.
NCA_02 - 3 Bellevue Street, Tempe	03/02/2023	Attended	LAeq 15min	61.2	53	Sydney Gateway works inaudible. Dominant noise source was aeroplanes and MCS shipping container movements. Sydney Gateway works compliant.
NCA_03 - 2 Hart St, Tempe	03/02/2023	Attended	LAeq 15min	71.3	52	Sydney Gateway works inaudible. Dominant noise source was background noise (crickets and other insects) from Tempe Lands Park. Sydney Gateway works compliant.
NCA_03 - 3 Barden Street, Tempe	10/02/2023	Attended	LAeq 15min	67.1	65	Dominant noise source was aeroplanes and background noise (crickets and other insects) from Tempe Lands Park. Sydney Gateway works compliant with predicted noise levels.
NCA_08 – 124 High St, Mascot	10/02/2023	Attended	LAeq 15min	66.2	41	Sydney Gateway works inaudible. Dominant noise source was traffic passing on O'Riordan Street and aeroplanes passing overhead. Sydney Gateway works compliant.
NCA_06a – 260 Coward Street Mascot	10/02/2023	Attended	LAeq 15min	73.1	40	Sydney Gateway works inaudible. Dominant noise source was traffic passing on Coward St and Kent Road as well as aeroplanes passing overhead. Sydney Gateway works compliant.
NCA_03 - 5 Wentworth Street, Tempe	16/02/2023	Attended	LAeq 15min	68.7	66	Dominant noise source was aeroplanes, local traffic and background noise (crickets and other insects) from Tempe Lands Park. Sydney Gateway works compliant with predicted noise levels.
NCA_03 - 2 Fanning Street, Tempe	16/02/2023	Attended	LAeq 15min	63.1	66	Dominant noise source was aeroplanes, local traffic and background noise (crickets and other insects) from Tempe Lands Park. Sydney Gateway works compliant with predicted noise levels.

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	13/02/23	Comments
Ammonia	ug/l	1200	11	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	1070	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	8	Compliant
Fluoranthene	ug/l	1.4	<0.1	Compliant
Iron (dissolved)	ug/l	300	<50	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	12	Compliant
Naphthalene	ug/l	70	<5	Compliant
Nickel (dissolved)	ug/l	70	<1	Compliant
Nitrate + nitrite (oxidised nitrogen)	ug/l	15	8	Compliant
Nitrogen (total)	ug/l	300	230	Compliant
o-Xylene	ug/l	470	9	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	7.74	Compliant
Phenanthrene	ug/l	2	<0.1	Compliant
Phosphorus (total)	ug/l	30	10	Compliant
p-Xylene	ug/l	250	12	Compliant
TPH C10-C36 Fraction	ug/l	600	<50	Compliant
TPH C6-C9 Fraction	ug/l	150	140	Compliant
Turbidity	NTU	10	0.6	Compliant
Zinc (dissolved)	ug/l	23	<5	Compliant

Table 4: Landfill Gas Monitoring Results (20 February 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	Compliant
GW16	Landfill Gas Monitoring[1]	1%v/v	0	Compliant
GW17	Landfill Gas Monitoring[1]	1%v/v	0	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