EPL Environmental Monitoring Data

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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.

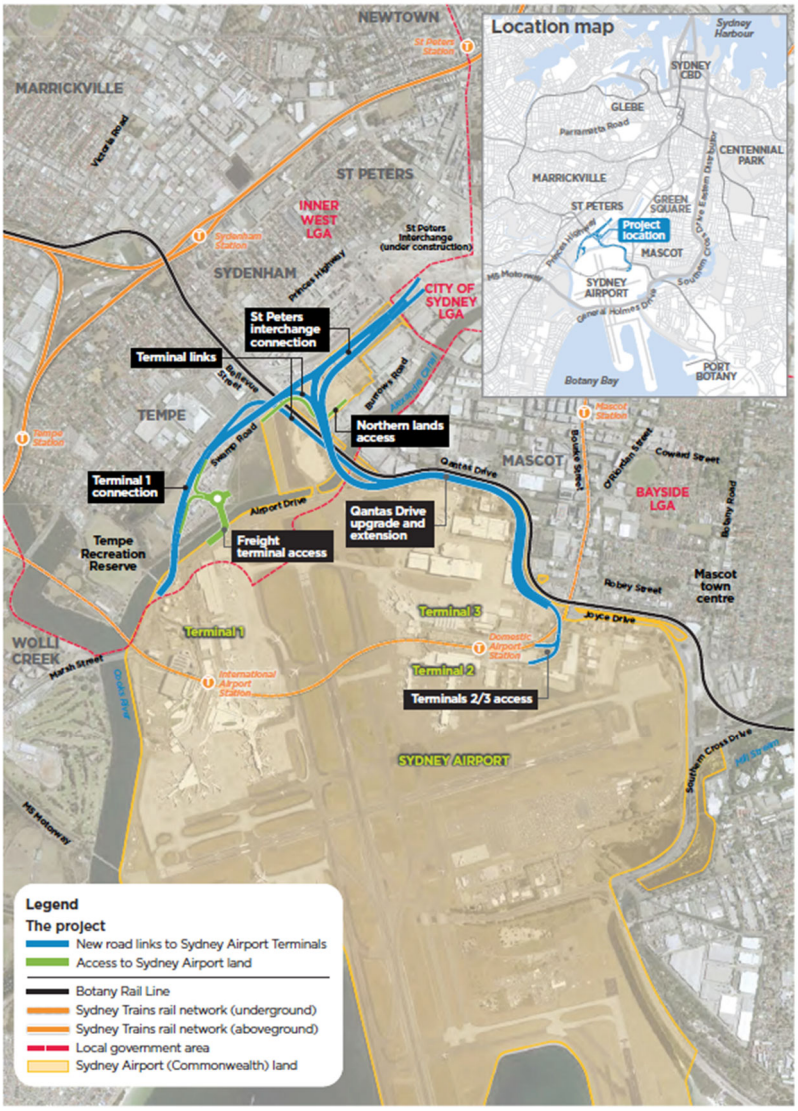

Figure 1: Project Overview

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 May 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 May 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/Field Observations
5 Fanning St, Tempe	12/05/2023	Attended	0.07	0.4	Yes	0.1	25	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 Velocity

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)	Project OOHW Compliance	Comments/Field Observations
2 Fanning Street, Tempe	03/05/2023	Attended	LAeq 15 min	56.1	42	Compliant	Background noise from wind through tree canopies from surrounding vegetation was the dominant noise source and reason for exceedance. Sydney Gateway works were not audible throughout the monitoring period. Sydney Gateway works compliant.
20 Barden Street, Tempe	03/05/2023	Attended	LAeq 15 min	47.5	41	Compliant	Background noise from wind through tree canopies from surrounding vegetation and traffic from Princes Highway were the dominant noise sources and reason for exceedance. Sydney Gateway works were not audible throughout the monitoring period. Sydney Gateway works compliant.
330 King St Mascot	06/05/2023	Attended	LAeq 15 min	65.8	40	Compliant	Traffic on O'Riordan Street was the dominant noise source and reason for exceedance. Sydney Gateway project works were not audible throughout the monitoring period. Sydney Gateway works compliant.
4 Talbot St, St Peters	06/05/2023	Attended	LAeq 15 min	61.3	53	Compliant	Background noise from shipping container terminal, aeroplanes and traffic on Princes Highway were the dominant noise source and reason for exceedance. Sydney Gateway project works were not audible throughout the monitoring period. Sydney Gateway works compliant.
2 Bellevue St, Tempe	06/05/2023	Attended	LAeq 15 min	55.4	50	Compliant	Background noise from aeroplanes and traffic on Princes Highway were the dominant noise source and reason for exceedance. Sydney Gateway works compliant with predicted noise levels.
5 Fanning St, Tempe	12/05/2023	Attended	LAeq 15 min	55.0	64	Compliant	Background noise from local fauna was the dominant noise source. Sydney Gateway works compliant with predicted noise levels.
6 Smith Street, Tempe	12/05/2023	Attended	LAeq 15 min	52.6	69	Compliant	Traffic on Smith Street was the dominant noise source. Sydney Gateway works compliant with predicted noise levels.
2 Bellevue St, Tempe	12/05/2023	Attended	LAeq 15 min	69.7	41	Compliant	Background noise from aeroplanes and traffic on Princes Highway were the dominant noise source and reason for exceedance. Sydney Gateway project works were not audible throughout the monitoring period. Sydney Gateway works compliant.
5 Wentworth Street, Tempe	18/05/2023	Attended	LAeq 15 min	48.9	41	Compliant	Background noise from wind rustling tree canopies and traffic on Princes Highway were the dominant noise source and reason for exceedance. Sydney Gateway project works were not audible throughout the monitoring period. Sydney Gateway works compliant.

12 Smith Street, Tempe	18/05/2023	Attended	LAeq 15 min	49.7	40	Compliant	Traffic on Princes Highway was the dominant noise source and reason for exceedance. Sydney Gateway project works were not audible throughout the monitoring period. Sydney Gateway works compliant.
2 Fanning Street, Tempe	25/05/2023	Attended	LAeq 15 min	54.8	42	Compliant	Traffic on Princes Highway and local police activities were the dominant noise source and reason for exceedance. Sydney Gateway project works were not audible throughout the monitoring period. Sydney Gateway works compliant.
6 Smith Street, Tempe	26/05/2023	Attended	LAeq 15 min	57.2	59	Compliant	Background noise from aeroplanes was the dominant noise source throughout the monitoring period. Sydney Gateway works compliant with predicted noise levels.

Note:

1. LAeq (15min) - The A-weighted equivalent continuous (energy average) A-weighted sound pressure level over a 15-minute period.
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	15/05/2023	Comments
pH	Ph Unit	7 - 8.5	8.02	Compliant
Turbidity	NTU	10	0.9	Compliant
Arsenic (iii)	mg/L	0.0023	<0.001	Compliant
Arsenic (V)	mg/L	0.0045	<0.001	Compliant
Barium (Dissolved)	mg/L	2	0.002	Compliant
Cadmium (dissolved)	mg/L	0.0055	<0.0001	Compliant
Copper (dissolved)	mg/L	0.003	<0.001	Complaint
Cobalt (dissolved)	mg/L	0.014	<0.001	Compliant
Nickel (dissolved)	mg/L	0.07	0.001	Compliant
Lead (dissolved)	mg/L	0.0066	<0.001	Compliant
Zinc (Dissolved)	mg/L	0.023	<0.005	Compliant
Manganese (dissolved)	mg/L	0.08	<0.001	Compliant
Boron	mg/L	5.1	0.62	Compliant
Iron (dissolved)	mg/L	0.3	<0.05	Compliant
Mercury (dissolved)	mg/L	0.0004	<0.0001	Compliant
Chromium (Trivalent)	mg/L	0.049	<0.01	Compliant
Chromium (hexavalent)	mg/L	0.02	<0.01	Compliant
Ammonia	mg/L	1.2	<0.1	Compliant
Nitrate + nitrite (oxidised nitrogen)	mg/L	0.015	<0.002	Compliant
Nitrogen (total)	mg/L	0.3	0.25	Compliant
Phosphorus (total)	mg/L	0.03	0.03	Compliant
TPH C10-C36 Fraction	µg/L	600	<50	Compliant
TPH C6-C9 Fraction	µg/L	150	100	Compliant
Ethylbenzene	µg/L	110	<2	Complaint
m-Xylene	µg/L	100	<2	Compliant
p-Xylene	µg/L	250	<2	Compliant
o-Xylene	µg/L	470	<2	Compliant
Naphthalene	µg/L	70	<5	Compliant
Anthracene	µg/L	0.4	<0.1	Compliant
Benzo(a)pyrene	µg/L	0.2	<0.05	Compliant
Fluoranthene	µg/L	1.4	<0.1	Compliant
Phenanthrene	µg/L	2	<0.1	Compliant
Perfluorooctane sulphonate (PFOS)	µg/L	0.13	<0.01	Compliant
Perfluorooctanoic acid (PFOA)	µg/L	220	<0.01	Compliant

Table 4: Landfill Gas Monitoring Results (10 May 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	6.6	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