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.

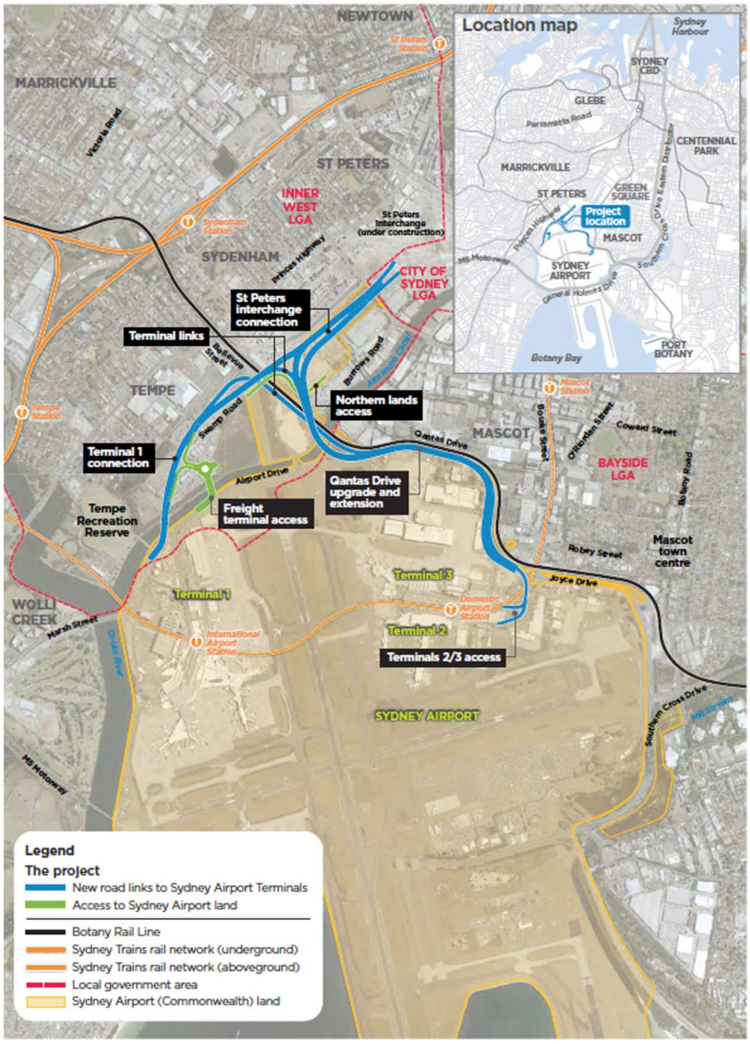

Figure 1: Project Overview

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 to road construction 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 occurred during July 2023 via Tradewaste agreement only. The 30 L/s WTP was decommissioned during July and subsequently a new discharge permit was not issued, and no sampling event occurred. The June sampling data is outlined in Table 3.

Landfill Gas and Gas Accumulation Monitoring

No subsurface landfill gas and gas accumulation monitoring was undertaken during the July 2023 monitoring period as sampling requirements are quarterly, the next round of sampling will be reported in the August 2023 EPL Monitoring Data Report.

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 Smith Street, Tempe	06/07/2023	Attended	0.08	0.4	Yes	0.13	25	Yes	Works were monitored and found to be compliant with structural criteria and human comfort criteria.
3 Bellevue Street, Tempe	06/07/2023	Attended	0.08	0.4	Yes	0.13	25	Yes	Works were monitored and found to be compliant with structural criteria and human comfort criteria.
3 South Street, Tempe	14/07/2023	Attended	0.08	0.4	Yes	0.13	25	Yes	Works were monitored and found to be compliant with structural criteria and human comfort criteria.
2 Bellevue Street, Tempe	14/07/2023	Attended	0.27	0.4	Yes	0.41	25	Yes	Works were monitored and found to be compliant with structural criteria and human comfort criteria.
5 Wentworth Street, Tempe	20/07/2023	Attended	0.36	0.4	Yes	0.55	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
5 Smith Street, Tempe	06/07/2023	Attended	LAeq 15 min	59.1	69	Compliant	Traffic from Smith Street and aeroplanes were the dominant noise sources. Sydney Gateway works were compliant with predicted noise levels.
3 Bellevue Street, Tempe	06/07/2023	Attended	LAeq 15 min	58.9	62	Compliant	Traffic from Princes Highway was the dominant noise source. Sydney Gateway works were inaudible throughout monitoring period. Sydney Gateway works compliant.
5 Grove Street, St Peters	11/07/2023	Attended	LAeq 15 min	52.2	33	Compliant	Traffic from Princes Highway was the dominant noise source and reason for exceedance. Sydney Gateway works were inaudible throughout monitoring period. Sydney Gateway works compliant.
24-26 Mary Street, St Peters	11/07/2023	Attended	LAeq 15 min	64	33	Compliant	Traffic from Princes Highway was the dominant noise source and reason for exceedance. Sydney Gateway works were inaudible throughout monitoring period. Sydney Gateway works compliant.
3 South Street, Tempe	14/07/2023	Attended	LAeq 15 min	61.7	67	Compliant	Traffic from South Street and background noise from neighbourhood were the dominant noise sources. Sydney Gateway works were compliant with predicted noise levels.
4 Talbot Street, St Peters	14/07/2023	Attended	LAeq 15 min	70.1	57	Compliant	Traffic from Talbot Street and Princes Highway were the dominant noise sources and reason for exceedance. Sydney Gateway works were inaudible throughout monitoring period. Sydney Gateway works compliant.
2 Fanning Street, Tempe	18/07/2023	Attended	LAeq 15 min	61.7	38	Compliant	Aircraft activities were the dominant noise source and reason for exceedance. Sydney Gateway works were inaudible throughout monitoring period. Sydney Gateway works compliant.
6 Smith Street, Tempe	18/07/2023	Attended	LAeq 15 min	76.7	38	Compliant	Aircraft activities were the dominant noise source and reason for exceedance. Sydney Gateway works were inaudible throughout monitoring period. Sydney Gateway works compliant.
5 Wentworth Street, Tempe	20/07/2023	Attended	LAeq 15 min	65.6	62	Compliant	Traffic from South Street and Wentworth Street were the dominant noise sources and reason for exceedance. Sydney Gateway works were inaudible throughout monitoring period. Sydney Gateway works compliant.
2 Fanning Street, Tempe	20/07/2023	Attended	LAeq 15 min	67.3	62	Compliant	Traffic from South Street and Fanning Street were the dominant noise source and reason for exceedance. Sydney Gateway works were compliant with predicted noise levels.

2 Barden Street, Tempe	26/07/2023	Attended	LAeq 15 min	56.7	42	Compliant	Aeroplanes were the dominant noise sources throughout the monitoring period and reason for exceedance. Sydney Gateway works were inaudible throughout monitoring period. Sydney Gateway works compliant.
6 Wentworth Street, Tempe	26/07/2023	Attended	LAeq 15 min	51.1	38	Compliant	Aeroplanes were the dominant noise sources throughout the monitoring period and reason for exceedance. Sydney Gateway works were inaudible throughout monitoring period. Sydney Gateway works compliant.

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	19/06/2023	Comments
pH	pH Unit	7 - 8.5	7.73	Compliant
Turbidity	NTU	10	1.6	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	0.59	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	0.27	Compliant
Phosphorus (total)	mg/L	0.03	0.02	Compliant
TPH C10-C36 Fraction	µg/L	600	<50	Compliant
TPH C6-C9 Fraction	µg/L	150	120	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