EPL Environmental Monitoring Data

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Document Approval

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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.

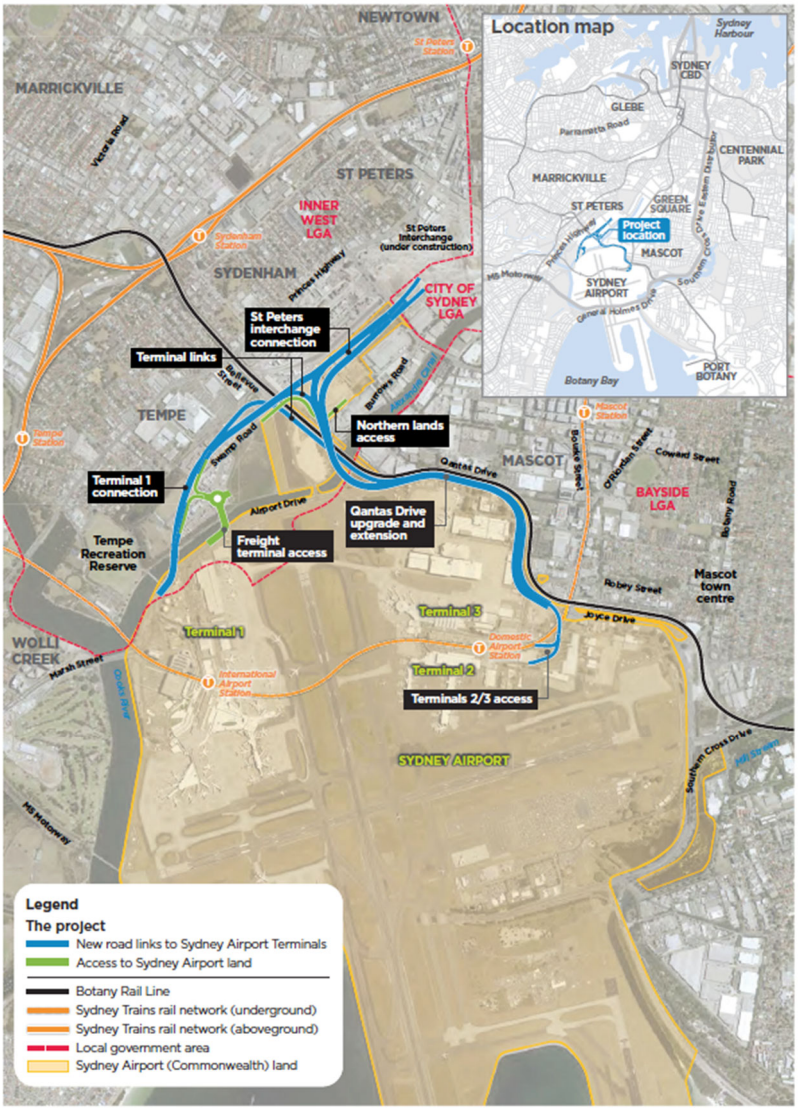

Figure 1: Project Overview

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 March 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 March 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
SB71/The ponds	01/03/2023	Attended	N/A	N/A	N/A	0.24	6	Yes	Works were monitored at the heritage sandstone wall along Alexandra Canal and found to be compliant with structural criteria.
SB51/Airport Drive	02/03/2023	Attended	N/A	N/A	N/A	0.27	6	Yes	Works were monitored at the heritage sandstone wall along Alexandra Canal and found to be compliant with structural criteria.
SB51/Airport Drive	03/03/2023	Attended	N/A	N/A	N/A	0.16	6	Yes	Works were monitored at the heritage sandstone wall along Alexandra Canal and found to be compliant with structural criteria.
2 Hart St, Tempe	09/03/2023	Attended	0.19	0.4	Yes	0.29	25	Yes	Works were monitored and found to be compliant with structural criteria and human comfort criteria.
25 Burrows Road, St Peters - Boral site	16/03/2023	Attended	N/A	N/A	N/A	0.69	6	Yes	Works were monitored and found to be compliant with structural criteria and human comfort criteria.
SPI/Canal Road	23/03/2023	Attended	N/A	N/A	N/A	0.21	25	Yes	Works were monitored and found to be compliant with structural criteria and human comfort criteria.
SPI/Canal Road	28/03/2023	Attended	N/A	N/A	N/A	2.67	6	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_03 - 2 Hart St, Tempe	09/03/2023	Attended	LAeq 15 min	66.4	66	Traffic passing and background noise from Tempe Lands Park were the dominant noise source and reason for exceedance. Sydney Gateway project works were not audible throughout the monitoring period. Sydney Gateway works compliant.
NCA_02 - 3 Bellevue Street, Tempe	10/03/2023	Attended	LAeq 15 min	51.4	48	Traffic passing on Princes Highway and shipping container movement were the dominant noise source and reason for exceedance. Sydney Gateway project works were not audible throughout the monitoring period. Sydney Gateway works compliant.
NCA_02 - 12 Terry Street, Tempe	10/03/2023	Attended	LAeq 15 min	57.1	45	Traffic passing 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.
NCA_03 – 1 Hart Street, Tempe	11/03/2023	Attended	LAeq 15 min	49.5	44	Traffic passing on Princes Highway and wildlife were the dominant noise source and reason for exceedance. Sydney Gateway works compliant within predicted noise levels.
NCA_03 – 9 Wentworth Street, Tempe	11/03/2023	Attended	LAeq 15 min	47.4	44	Traffic passing on Princes Highway and wildlife were the dominant noise source and reason for exceedance. Sydney Gateway works compliant within predicted noise levels.
NCA_03 – 3 Fanning Street, Tempe	12/03/2023	Attended	LAeq 15 min	50.7	44	Traffic passing on Princes Highway and wildlife were the dominant noise source and reason for exceedance. Sydney Gateway works compliant within predicted noise levels.
NCA_01 – 2 Fanning Street, Tempe	12/03/2023	Attended	LAeq 15 min	49.3	44	Traffic passing on Princes Highway and wildlife were the dominant noise source and reason for exceedance. Sydney Gateway works compliant within predicted noise levels.
NCA_02 - 4 Bellevue Street, Tempe	24/03/2023	Attended	LAeq 15 min	70.9	57	Traffic passing on Princes Highway and aeroplanes were the dominant noise source and reason for exceedance. Sydney Gateway project works were not audible throughout the monitoring period. Sydney Gateway works compliant.
NCA_03 - 5 Wentworth Street, Tempe	24/03/2023	Attended	LAeq 15 min	62.4	59	Traffic passing on Princes Highway was the dominant noise source and reason for exceedance. Sydney Gateway works compliant within predicted noise levels.
NCA_02 - 4 Bellevue Street, Tempe	27/03/2023	Attended	LAeq 15 min	50.7	55	Traffic passing on Princes Highway and shipping container movement were the dominant noise source and reason for exceedance. Sydney Gateway works compliant within predicted noise levels.
NCA_02 - 3 Bellevue Street, Tempe	28/03/2023	Attended	LAeq 15 min	52.6	42	Traffic passing on Princes Highway and aeroplanes were the dominant noise source and reason for exceedance. Sydney Gateway works compliant within predicted noise levels.
NCA_02 - 4 Bellevue Street, Tempe	28/03/2023	Attended	LAeq 15 min	54.8	55	Traffic passing on Princes Highway and shipping container movement were the dominant noise source and reason for exceedance. Sydney Gateway works compliant within predicted noise levels.
NCA_02 - 3 Bellevue Street, Tempe	29/03/2023	Attended	LAeq 15 min	51.2	42	Traffic passing 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.

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	14/03/23	Comments
Ammonia	ug/l	1200	<100	Compliant
Anthracene	ug/l	0.4	<0.1	Compliant
Arsenic (III)	ug/l	2.3	2	Compliant
Arsenic (V)	ug/l	4.5	2	Compliant
Barium (dissolved)	mg/l	2	0.003	Compliant
Benzo(a)pyrene	ug/l	0.2	<0.05	Compliant
Boron	ug/l	5100	540	Complaint
Cadmium (dissolved)	ug/l	5.5	<0.1	Compliant
Chromium (hexavalent)	ug/l	20	<10	Compliant
Chromium (trivalent)	ug/l	49	<10	Compliant
Cobalt (dissolved)	ug/l	14	<1	Compliant
Copper (dissolved)	ug/l	3	<1	Compliant
Ethyl benzene	ug/l	110	<2	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	<2	Compliant
Naphthalene	ug/l	70	<5	Compliant
Nickel (dissolved)	ug/l	70	2	Compliant
Nitrate + nitrite (oxidised nitrogen)	ug/l	15	13	Compliant
Nitrogen (total)	ug/l	300	290	Compliant
o-Xylene	ug/l	470	<2	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	7.55	Compliant
Phenanthrene	ug/l	2	<0.1	Compliant
Phosphorus (total)	ug/l	30	16	Compliant
p-Xylene	ug/l	250	<2	Compliant
TPH C10-C36 Fraction	ug/l	600	<50	Compliant
TPH C6-C9 Fraction	ug/l	150	90	Compliant
Turbidity	NTU	10	1.6	Compliant
Zinc (dissolved)	ug/l	23	<5	Compliant

Table 4: Landfill Gas Monitoring Results (13 March 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	3.8	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