



Water Monitoring Data - Monthly Summary

Month and Year	August 2024	<div><div></div><div>LAING O'ROURKE</div></div> <div><div>JOHN HOLLAND</div></div>							
Project	Sydenham Metro upgrade								
EPL License No.	21147								
EPL Weblink	https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=21147&id=21147&option=licence&searchrange=licence&range=POEO%20licence&prp=no&status=issued								
Specific EPL monitoring conditions	M2 - Requirement to monitor concentration of pollutants discharged								
Monitoring Location	Number of times monitored during the month	Eventbased monitoring (Y/N)	Parameter eg. TSS, pH	Unit eg mg/L	Minimum valuefor month	Maximum valuefor month	AllowableMaximum limit	AllowableMinimum limit	Comment
South WestMetroCorridor Waterways									No activities requiring water monitoring



Noise Monitoring Data - Monthly Summary

Month and Year	August 2024	 	
Project	Sydenham Metro upgrade		
EPL license No.	21147		
EPL Weblink	https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=21147&id=21147&option=licence&searchrange=licence&range=POEO%20licence&prp=no&status=Issued		
Specific EPL monitoring conditions	M7.1 - Noise monitoring		

Reference Number	Monitoring Location (Catchment, Type & Address)	Date	Period	Construction Activities	Main source of noise	Highest LAeq in work period at Monitoring Location (dBA)	Predicted noise level LAeq, 15min at resident (dBA)	Compliant	Comments
1	Location a (NCA 01 – HEX246) 38m N of 25 Leofrene Avenue, Marrickville. Continuous Monitoring	24/08/2024 To 25/08/2024	Night 22:00 to 7:00 (Modeled from 18:00 to 7:00)	General track related construction activities	<ul style="list-style-type: none"> Excavators 3T, 6 and 13T (inc jack hammer attachments) Balloon tyre dump trucks (Hydrema) Light vehicles Trucks Payloader Handheld powered and non-powered tools Vac Trucks EWPTelehandler Front-end loader Concrete truck and line pump Portable Generators Compressors Compactor Bogie Water pumps 4T Dump Site lights Mobile Crane 	<ul style="list-style-type: none"> Highest ambient LAeq in period at Monitoring Location is 69 Excluding freight train/aircraft identified at the following time: <ul style="list-style-type: none"> 24 Aug 2024: 23:37 25 Aug 2024: 00:09; 01:30; 01:59; 03:10 & 06:30 Highest construction related LAeq in work period at Monitoring Location is 64 	69	YES	<ul style="list-style-type: none"> RBL: 33 dBA The calculated construction related highest LAeq in work period (64 dBA) is lower than the predicted level (69 dBA) Predicted noise levels (night shift works) in this area triggered offers for Respite. Actual noise levels (Night shift works) in this area triggered offers for Respite. No additional mitigation measures required.
2	Location b (NCA 02 – HEX630) 11m N of 51A Ewart Lane, Dulwich Hill Continuous Monitoring					63	68	YES	<ul style="list-style-type: none"> RBL: 33 LAeq15min below predictions. Noise monitor detect highest LAeq15min value of 63 dBA due to general construction noise between the hours 22:00 to 07:00. The Highest LAeq in work period (63 dBA) is lower than the predicted level (68 dBA) Predicted noise levels (Night shift works) in this area triggered offers for Respite.
3	Location c (NCA 02 – HEX631) 11m N of 81 Ewart Street, Dulwich Hill Continuous Monitoring					<ul style="list-style-type: none"> Highest ambient LAeq in period at Monitoring Location is 74 Excluding freight train/aircraft identified at the following time: <ul style="list-style-type: none"> 25 Aug 2024: 00:05; 01:57; 03:38 & 06:18. Highest LAeq (exc extraneous noise) at Monitoring Location is 71 Due to the monitoring location being 13m from the source of the noise and sensitive receiver being 26m from the source of the noise, the calculated construction related highest LAeq at the sensitive receiver (Actual Noise level) is 65 	70	YES	<ul style="list-style-type: none"> RBL: 33 dBA The calculated construction related highest LAeq in work period (65 dBA) is lower than the predicted level (70 dBA) Predicted noise levels (night shift works) in this area triggered offers for Respite. Actual noise levels (Night shift works) in this area triggered offers for Respite. No additional mitigation measures required.
4	Location d (NCA 04 - HEX426) 15m S of 10-12 Broughton Street, Canterbury Continuous Monitoring					<ul style="list-style-type: none"> Highest ambient LAeq in period at Monitoring Location is 74 Excluding freight train/aircraft identified at the following time: <ul style="list-style-type: none"> 24 Aug 2024: 22:45; 23:43. 25 Aug 2024: 00:58; 01:22; 01:54; 03:15; 03:41 Highest LAeq (exc extraneous noise) at Monitoring Location is 64 Due to the monitoring location being 15m from the source of the noise and sensitive receiver being 30m from the source of the noise, the calculated construction related highest LAeq at the sensitive receiver (Actual Noise level) is 58 	64	YES	<ul style="list-style-type: none"> RBL: 35 dBA The calculated construction related highest LAeq in work period (58 dBA) is lower than the predicted level (64 dBA) Predicted noise levels (night shift works) in this area triggered offers for Respite. Actual noise levels (Night shift works) in this area triggered offers for Respite. No additional mitigation measures required.
5	Location e (NCA 07 - HEX505) 4m E of 1 Hall St, Belmore Continuous Monitoring					63	70	YES	<ul style="list-style-type: none"> RBL: 35 dBA LAeq15min below predictions. Noise monitor detect highest LAeq15min value of 63 dBA due to general construction noise between the hours 22:00 to 07:00. The Highest LAeq in work period (63 dBA) is lower than the predicted level (70 dBA) Predicted noise levels (Night shift works) in this area triggered offers for Respite.
6	Location f (NCA 08 – HEX242) 47m N of 63 The Boulevard, Lakemba Continuous Monitoring					63	68	YES	<ul style="list-style-type: none"> RBL: 41 dBA LAeq15min below predictions. Noise monitor detect highest LAeq15min value of 63 dBA due to general construction noise between the hours 22:00 to 07:00. The Highest LAeq in work period (63 dBA) is lower than the predicted level (68 dBA) Predicted noise levels (Night shift works) in this area triggered offers for Respite.
7	Location g (NCA 10 – HEX616) 56m SW of 41 Urunga Parade, Punchbowl Continuous Monitoring					<ul style="list-style-type: none"> Highest ambient LAeq in period at Monitoring Location is 73 Highest LAeq is triggered by unexpected intermittent, shot duration metal works 5 m away from the noise monitoring location. Excluding metal works identified at the following time: <ul style="list-style-type: none"> 25 Aug 2024: 05:00 - 06:30. Highest LAeq (exc extraneous noise and metal work) at Monitoring Location is 60 Due to the unexpected metal being 5 m away from the noise monitoring location, and the sensitive receiver being 60m from the source of the noise, the calculated construction related highest LAeq at the sensitive receiver (Actual Noise level) is 51 	61	YES	<ul style="list-style-type: none"> RBL: 41 dBA The calculated construction related highest LAeq in work period (58 dBA) is lower than the predicted level (64 dBA) Predicted noise levels (night shift works) in this area triggered offers for Respite. Actual noise levels (Night shift works) in this area triggered offers for Respite. No additional mitigation measures required.
8	Location h (NCA 12 – HEX419) 177m NW of 2 A West Terrace, Bankstown Continuous Monitoring					<ul style="list-style-type: none"> Highest ambient LAeq in period at Monitoring Location is 69 Due to the monitoring location being 25m from the noise source and sensitive receiver being 195m from the noise source, the calculated construction related highest LAeq at the sensitive receiver (Actual Noise level) is 51 	56	YES	<ul style="list-style-type: none"> RBL: 42 dBA The calculated construction related highest LAeq in work period (51 dBA) is lower than the predicted level (56 dBA) Predicted noise levels (night shift works) in this area not triggering offers for Respite. Actual noise levels (Night shift works) in this area not triggering offers for Respite. No additional mitigation measures required.

Reference Number	Monitoring Location (Catchment, Type & Address)	Date	Period	Construction Activities	Main source of noise	Highest LAeq in work period at Monitoring Location	Predicted noise level LAeq, 15min at resident	Compliant	Comments
1	Location a (NCA 01 – HEX246) 38m N of 25 Leofrene Avenue, Marrickville. Continuous Monitoring	14/07/2024	Day to Evening 7:00 to 15:00	General track related construction activities	<ul style="list-style-type: none"> Excavators 3T, 6 and 13T (inc jack hammer attachments) Balloon tyre dump trucks (Hydrema) Light vehicles Trucks Payloader Handheld powered and non-powered tools Vac Trucks EWPTelehandler Front-end loader Concrete truck and line pump Portable Generators Compressors Compactor Bogie Water pumps 4T Dump Site lights Mobile Crane 	<ul style="list-style-type: none"> Highest ambient LAeq in period at Monitoring Location is 69 Excluding freight train/aircraft identified at the following time: <ul style="list-style-type: none"> 07:55; 08:21; 10:18; 10:38; 13:13 & 13:45 Workers identified walking and talking close to the noise monitor at 08:37. The noise monitor record shows the LAeq15min for 08:30 – 08:45 is 69.9 dBA. The source of the noise is 2 m from the monitor and 20 m from the nearest resident. The calculated construction related highest LAeq at the sensitive receiver (Actual Noise level) is 49. Highest construction related LAeq in work period at Monitoring Location is 66 	68	YES	<ul style="list-style-type: none"> RBL: 38 dBA The calculated construction related highest LAeq in work period (66 dBA) is lower than the predicted level (58 dBA) Predicted noise levels (Day shift works) in this area triggered offers for Respite. Actual noise levels (Day shift works) in this area not triggering offers for Respite. No additional mitigation measures required.
2	Location b (NCA 02 – HEX630) 11m N of 51A Ewart Lane, Dulwich Hill Continuous Monitoring					65	71	YES	<ul style="list-style-type: none"> RBL: 38 dBA LAeq15min below predictions. Noise monitor detect highest LAeq15min value of 65 dBA due to general construction noise between the hours 07:00 to 22:00. The Highest LAeq in work period (65 dBA) is lower than the predicted level (71 dBA) Predicted noise levels (Day shift works) in this area triggered offers for Respite.
3	Location c (NCA 02 – HEX831) 11m N of 81 Ewart Street, Dulwich Hill Continuous Monitoring					74	75	YES	<ul style="list-style-type: none"> RBL: 38 dBA LAeq15min below predictions. Noise monitor detect highest LAeq15min value of 74 dBA due to general construction noise between the hours 07:00 to 22:00. The Highest LAeq in work period (74 dBA) is lower than the predicted level (75 dBA) Predicted noise levels (Day shift works) in this area triggered offers for Respite.
4	Location d (NCA 04 – HEX429) 15m S of 10-12 Broughton Street, Canterbury Continuous Monitoring					<ul style="list-style-type: none"> Highest ambient LAeq in period at Monitoring Location is 69 Due to the monitoring location being 15m from the source of the noise and sensitive receiver being 30m from the source of the noise, the calculated construction related highest LAeq at the sensitive receiver (Actual Noise level) is 63 	62	YES	<ul style="list-style-type: none"> RBL: 40 dBA The calculated construction related highest LAeq in work period (63 dBA) is higher than the predicted level (62 dBA) Predicted noise levels (Day shift works) in this area did not trigger offers for Respite. Actual noise levels (Day shift works) in this area did not trigger offers above the Respite limit. No additional mitigation measures required.
5	Location e (NCA 07 – HEX505) 4m E of 1 Hall St, Belmore Continuous Monitoring					<ul style="list-style-type: none"> Highest ambient LAeq in period at Monitoring Location is 73 Due to the monitoring location being 1m from the source of the noise and sensitive receiver being 5m from the source of the noise, the calculated construction related highest LAeq at the sensitive receiver (Actual Noise level) is 59 	72	YES	<ul style="list-style-type: none"> RBL: 41 dBA The calculated construction related highest LAeq in work period (59 dBA) is lower than the predicted level (72 dBA) Predicted noise levels (Day shift works) in this area triggered offers for Respite. Actual noise levels (Day shift works) in this area not triggering offers for Respite. No additional mitigation measures required.
6	Location f (NCA 08 – HEX242) 47m N of 63 The Boulevard, Lakemba Continuous Monitoring					70	68	YES	<ul style="list-style-type: none"> RBL: 47 dBA LAeq15min above predictions. Noise monitor detect highest LAeq15min value of 70 dBA due to general construction noise between the hours 07:00 to 22:00. The Highest LAeq in work period (70 dBA) is lower than the predicted level (68 dBA) Predicted noise levels (Day shift works) in this area did not trigger offers for Respite. Actual noise levels (Day shift works) in this area not triggering offers for Respite. No additional mitigation measures required
7	Location g (NCA 10 – HEX816) 56m SW of 41 Urunga Parade, Punchbowl Continuous Monitoring					<ul style="list-style-type: none"> Highest LAeq in work period at Monitoring Location is 67 Highest LAeq is triggered by unexpected intermittent, shot duration metal works 5 m away from the noise monitoring location. Excluding metal works identified at the following time: <ul style="list-style-type: none"> 25 Aug 2024: 07:00 - 09:45 Highest LAeq (exc extraneous noise and metal work) in work period at Monitoring Location is 61 Due to the unexpected metal works being 5 m away from the noise monitoring location, and the sensitive receiver being 60m from the source of the noise, the calculated construction related highest LAeq at the sensitive receiver (Actual Noise level) is 45 	61	YES	<ul style="list-style-type: none"> RBL: 47 dBA The calculated construction related highest LAeq in work period (61 dBA) is equal to the predicted level (61 dBA) Predicted noise levels (Day shift works) in this area did not trigger offers for Respite. Actual noise levels (Day shift works) in this area did not trigger offers above the Respite limit. No additional mitigation measures required.
8	Location h (NCA 12 – HEX419) 177m NW of 2 A West Terrace, Bankstown Continuous Monitoring					<ul style="list-style-type: none"> Highest LAeq in work period at Monitoring Location is 65 Due to the monitoring location is 25m from the noise source and sensitive receiver is 195m from the noise source, the calculated construction related highest LAeq at the sensitive receiver (Actual Noise level) is 47 	58	YES	<ul style="list-style-type: none"> RBL: 54 dBA The calculated construction related highest LAeq in work period (47 dBA) is below the predicted level (58 dBA) Predicted noise levels (Day shift works) in this area did not trigger offers for Respite. Actual noise levels (Day shift works) in this area did not trigger offers above the Respite limit. No additional mitigation measures required.

Vibration Monitoring Data - Monthly Summary

Month and Year	August 2024	<div><div></div><div>LAING O'ROURKE</div></div> <div><div></div><div>JOHN HOLLAND</div></div>							
Project	Sydenham Metro upgrade								
EPL license No.	21147								
EPL Weblink	https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=21147&id=21147&option=licence&searchrange=licence&range=POEO%20licence&prp=no&status=Issued								
Specific EPL monitoring conditions	M7.2 - Vibration monitoring								
Monitoring Location	Number of times monitored during the month	Attended or continuous monitoring	Eventbased monitoring (Y/N)	Parameter eg.PPV	Unit	Minimum value for month	Maximum value for month	Goals/Targets	Comment
South WestMetroCorridor	2	Attended	Y	PPV	mm/s	0.000063	0.000989	7.5 mm/s	Demolition of Bankstown Toilet Block (21/08/2024) & demolition of Bankstown former Parcel Office & Drainage (24/08/2024). It is noted that from the data set this max appears to be a spike, likely unrelated to the works - potentially from checking on monitor battery. In general, several peaks where observed generated by trains approaching and leaving the station as well from construction (i.e., when concrete saw was being operated) around 0.000063 & 0.000989 mm/s.