

M7-M12 Integration project
Environment Protection Licence –
Environmental Monitoring Data

November 2023



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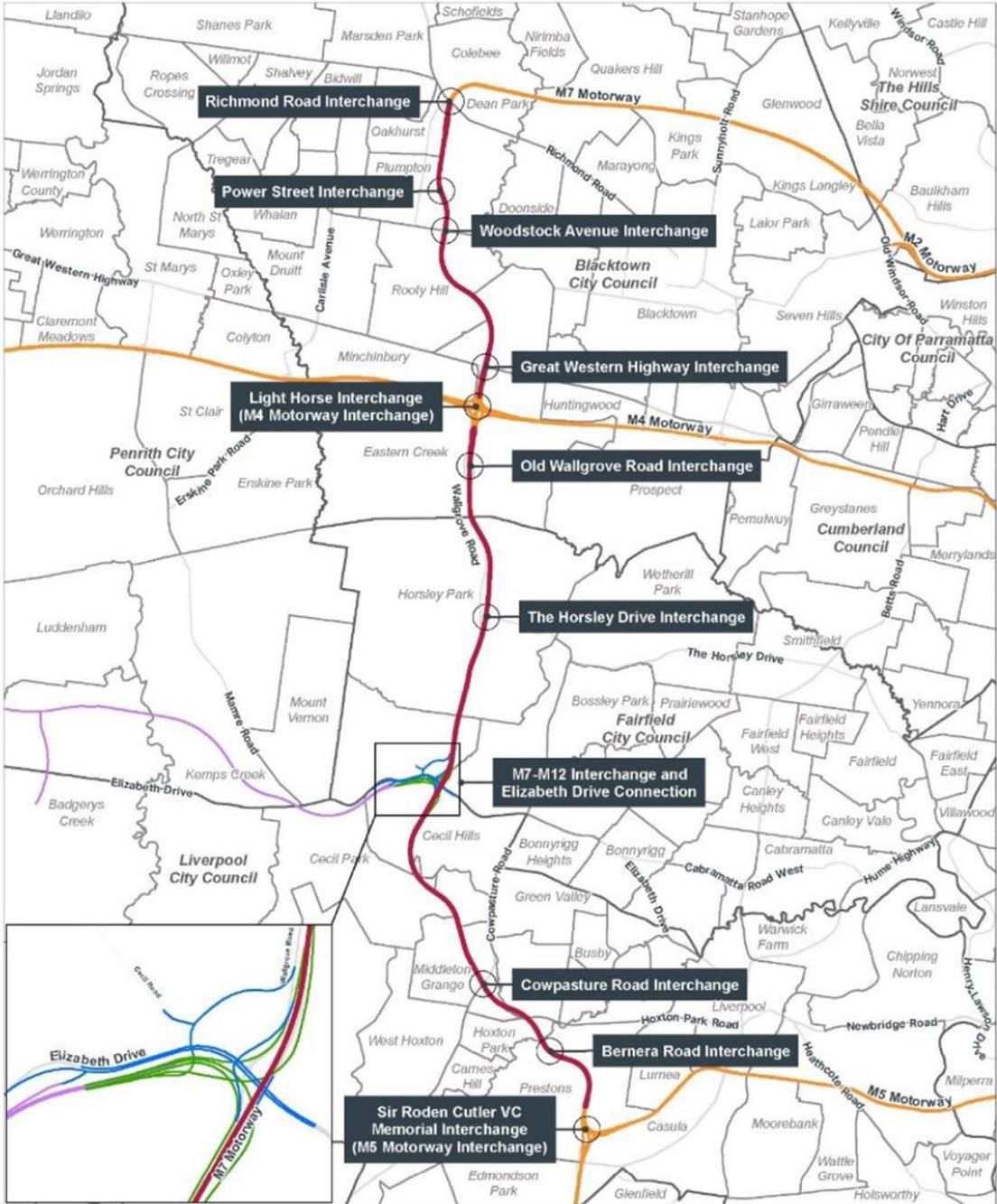
1 Project summary

The M7 Motorway (Modification 6 Widening; SSI-663-Mod-6) (M7 Widening) and the M12 East package of the M12 Motorway project (SSI 9364) will be delivered together under what is referred to as the M7-M12 Integration project (the project) (refer to Figure 1-1) by John Holland.

The M12 Motorway extends between the M7 Motorway at Cecil Hills and The Northern Road at Luddenham, over a distance of about 16 km. It will be delivered in multiple packages including the M12 West package, M12 Central package and M12 East package (this package is part of the M7-M12 Integration project). The M12 East package involves two components of work:

- Connecting Elizabeth Drive to the M12 Motorway and the upgrade of approximately two kilometres of Elizabeth Drive from east of Duff Road to 300 metres east of the M7 Motorway
- Providing a grade separated motorway to motorway connection between the M7 Motorway and M12 Motorway.

The M7 Widening project will enable the construction and operation of an additional lane in both directions within the existing median of the Westlink M7 for approximately 26 kilometres (km). Works will occur from about 140 metres (m) south of the Kurrajong Road overhead bridge at Prestons (southern end) to the Richmond Road interchange at Oakhurst/Glendenning (northern end), excluding widening through the Westlink M7/M4 Motorway (Light Horse) Interchange.



M7-M12 INTEGRATION PROJECT
LOCATION OVERVIEW



- Legend**
- M7 Widening
 - M7-M12 Interchange
 - Elizabeth Drive Connection
 - M12 Motorway
 - Existing motorway
 - Interchange
 - LGA boundary
 - Suburb boundary

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Figure 1-1 M7-M12 Integration project

2 Environmental Protection Licence and Reporting Requirements

John Holland Pty Ltd obtained the Environment Protection Licence (EPL No. 21829) from the NSW Environment Protection Authority for the project. The licence is for 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: epa.nsw.gov.au

3 Noise and vibration monitoring

3.1 Noise monitoring

Noise monitoring was undertaken during the reporting period in accordance with the requirements of the M12 East Construction Noise and Vibration Monitoring Program (M7M12UDC-JHGRP-M7A-EN-PRG-000002).

All works were deemed compliant as they complied with applicable criteria, monitoring was predominantly dominated by background noise sources such as local traffic and are detailed in Table 4-1.

3.2 Vibration monitoring

Continuous vibration monitoring was undertaken during the reporting period as vibration intensive works were undertaken near sensitive receivers specifically the Air Shaft 3 heritage item.

Continuous vibration real-time monitoring (EDC Fill 3) was conducted to monitor the vibration levels from construction activities being undertaken near the Air Shaft 3 heritage item.

Construction activities remained compliant with the specified 25 mm/s Peak Particle Velocity (PPV) structural threshold for Air Shaft 3.

Attended monitoring was also undertaken for baseline and HDD works at the Upper Canal Shaft along the EDC (Zone ED E2) on 13 & 14 November 2023. It was noted that heavy vehicles passing by Wallgrove Road caused a PPV value of approximately 1 mm/s with the vibration signals from HDD rig barely detectable.

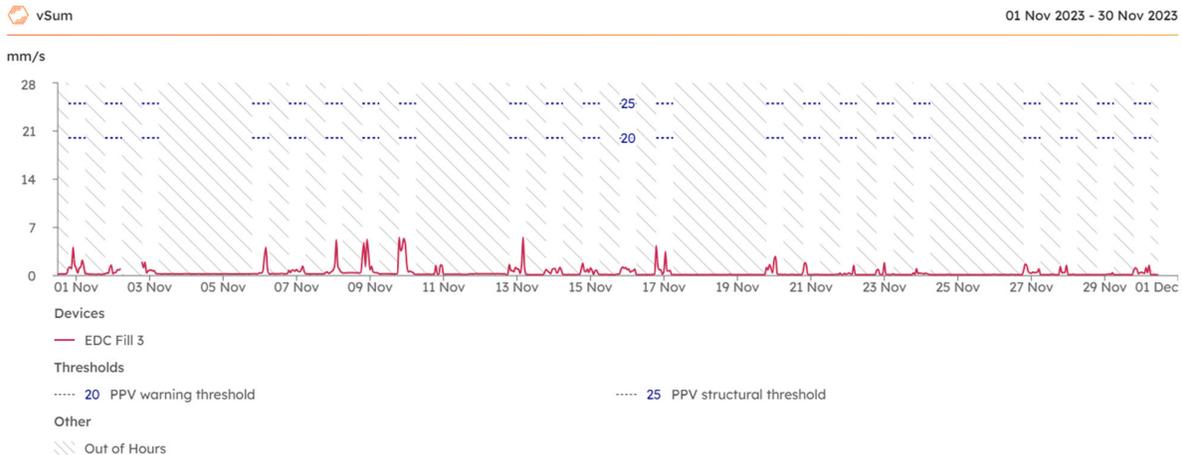


Figure 3-1 EDC Fill 3 vibration monitoring graph

4 Discharge Water Quality Monitoring

Offsite discharge occurred during November 2023 from Sediment Basin 01 (AF9).

All discharges were compliant with the requirements of the project EPL (#21829) and are outlined in Table 4-3.

Table 4-1 Noise monitoring data

Location Description	Monitoring date	Standard/ OOH Works	Attended or Continuous	Parameter	Measured value dB(A)	Goals and targets dB(A)	Project OOHW Compliance	Comments/Field Observations
33 Isabel Street Cecil Hills	1/11/2023	OOHW	Attended	LAeq (15min)	43	64	Compliant	M7-M12 works which comprised of Geotech drilling, temporary pavement and barrier Installation, were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth drive traffic. M7-M12 construction works were compliant.
37-73 Wallgrove Road	1/11/2023	OOHW	Attended	LAeq (15min)	57	57	Compliant	M7-M12 works which comprised of Geotech drilling, temporary pavement and barrier Installation, were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth drive traffic. M7-M12 construction works were compliant.
2,10 Kosovich Place Cecil Park NCA-03	1/11/2023	OOHW	Attended	LAeq (15min)	52.7	57	Compliant	M7-M12 works comprised of temporary pavement and barrier installation. M7-M12 construction works were compliant with the predicted noise levels.
37-73 Wallgrove Road	1/11/2023	OOHW	Attended	LAeq (15min)	53.5	56	Compliant	M7-M12 works comprised of temporary pavement and barrier Installation. M7-M12 construction works were compliant with the predicted noise levels.
33 Isabel Street Cecil Hills	1/11/2023	OOHW	Attended	LAeq (15min)	43.6	64	Compliant	M7-M12 works which comprised of Geotech drilling, temporary pavement and barrier Installation, were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth drive traffic. M7-M12 construction works were compliant.
15 Henrietta Close Cecil Hills	1/11/2023	OOHW	Attended	LAeq (15min)	33.6	40	Compliant	M7-M12 works which comprised of Geotech drilling, temporary pavement and barrier Installation, were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth drive traffic. M7-M12 construction works were compliant.
(NCA04) M12 - 1111-1114 Elizabeth Drive Cecil Park	2/11/2023	OOHW	Attended	LAeq (15min)	58.2	62	Compliant	M7-M12 works which comprised temporary pavement and barrier Installation, were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth drive traffic. M7-M12 construction works were compliant.
23 Isabel St, Cecil Hills	2/11/2023	OOHW	Attended	LAeq (15min)	45	64	Compliant	M7-M12 works which comprised of Geotech drilling, temporary Pavement and barrier Installation, were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth drive traffic. M7-M12 construction works were compliant
2089 Elizabeth Dr Cecil Park	2/11/2023	OOHW	Attended	LAeq (15min)	61.8	60	Compliant	M7-M12 works which comprised of tree removal, were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth drive traffic. M7-M12 construction works were compliant
2055 Elizabeth Dr Cecil Park	2/11/2023	OOHW	Attended	LAeq (15min)	53.6	62	Compliant	M7-M12 works which comprised of tree removal, were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth drive traffic. M7-M12 construction works were compliant

Environment Protection Licence Environment Monitoring Data



Location Description	Monitoring date	Standard/ OOH Works	Attended or Continuous	Parameter	Measured value dB(A)	Goals and targets dB(A)	Project OOHW Compliance	Comments/Field Observations
19 Kosovich Place Cecil Park	3/11/2023	OOHW	Attended	LAeq (15min)	38.1	40	Compliant	M7-M12 works which comprised of tree removal, and Geotech bore drilling were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth drive traffic. M7-M12 construction works were compliant
2089 Elizabeth Dr Cecil Park	3/11/2023	OOHW	Attended	LAeq (15min)	61.1	66	Compliant	M7-M12 works which comprised of tree removal, and Geotech bore drilling were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth drive traffic. M7-M12 construction works were compliant
2055 Elizabeth Dr Cecil Park	3/11/2023	OOHW	Attended	LAeq (15min)	60	62	Compliant	M7-M12 works comprised of tree removal, and Geotech bore drilling. M7-M12 construction works were compliant with the predicted noise levels.
5 Washington Way Cecil Park	3/11/2023	OOHW	Attended	LAeq (15min)	43	41	Compliant	M7-M12 works which comprised of tree removal, and Geotech bore drilling were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth drive traffic. M7-M12 construction works were compliant.
19 Kosovich Place Cecil Park	4/11/2023	OOHW	Attended	LAeq (15min)	44.8	40	Compliant	M7-M12 works which comprised of tree removal, and Geotech bore drilling were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Wallgrove Rd traffic. M7-M12 construction works were compliant
(NCA07) (M7) 34 Angeldool Street, Hinchinbrook	6/11/2023	OOHW	Attended	LAeq (15min)	50.4	49	Compliant	M7-M12 works which was service location NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 traffic. M7-M12 construction works were compliant.
NCA02 28 Cecil Road, Cecil Park	6/11/2023	OOHW	Attended	LAeq (15min)	45	53	Compliant	M7-M12 works comprised of tree removal. M7-M12 construction works were compliant with the predicted noise levels.
37-73 Wallgrove Road	6/11/2023	OOHW	Attended	LAeq (15min)	61.8	53	Compliant	M7-M12 works comprised of tree removal and NDD. M7-M12 construction works were compliant with the predicted noise levels.
33 Isabel Street Cecil Hills	7/11/2023	OOHW	Attended	LAeq (15min)	43.7	62	Compliant	M7-M12 works which comprised of service location NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth drive traffic. M7-M12 construction works were compliant
NCA02 17 Toulouse Street, Cecil Hills	7/11/2023	OOHW	Attended	LAeq (15min)	42.7	45	Compliant	M7-M12 works which comprised of barrier installation along M7 was inaudible throughout the monitoring period. The dominant noise sources were from the M7 traffic. M7-M12 construction works were compliant
(NCA07) (M7) 34 Angeldool Street, Hinchinbrook	7/11/2023	OOHW	Attended	LAeq (15min)	50	49	Compliant	M7-M12 works which comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 traffic. M7-M12 construction works were compliant
37-73 Wallgrove Road	7/11/2023	OOHW	Attended	LAeq (15min)	61.9	60	Compliant	M7-M12 works comprised of NDD. M7-M12 construction works were compliant with the predicted noise levels.
33 Isabel Street Cecil Hills	7/11/2023	OOHW	Attended	LAeq (15min)	45.3	59	Compliant	M7-M12 works comprised of NDD, sign installation, barrier placement were inaudible throughout the monitoring period. The dominant noise

Environment Protection Licence Environment Monitoring Data



Location Description	Monitoring date	Standard/ OOH Works	Attended or Continuous	Parameter	Measured value dB(A)	Goals and targets dB(A)	Project OOHW Compliance	Comments/Field Observations
								sources were from the M7 traffic. M7-M12 construction works were compliant
37-73 Wallgrove Road	8/11/2023	OOHW	Attended	LAeq (15min)	54.3	63	Compliant	M7-M12 works comprised of barrier installation. M7-M12 construction works were compliant with the predicted noise levels.
33 Isabel Street Cecil Hills	8/11/2023	OOHW	Attended	LAeq (15min)	45.7	59	Compliant	M7-M12 works comprised of barrier installation and sign installation were inaudible throughout the monitoring period. The dominant noise sources were from the M7 traffic. M7-M12 construction works were compliant.
30 Bangalow Pl Hoxton Park	9/11/2023	OOHW	Attended	LAeq (15min)	49.1	56	Compliant	M7-M12 works comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 traffic. M7-M12 construction works were compliant.
1 Wilson Rd Hinchinbrook	9/11/2023	OOHW	Attended	LAeq (15min)	56.5	53	Compliant	M7-M12 works comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 traffic. M7-M12 construction works were compliant.
19 Qantas Blvd Middleton Grange	10/11/2023	OOHW	Attended	LAeq (15min)	63.8	42	Compliant	M7-M12 works comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 traffic. M7-M12 construction works were compliant.
37-73 Wallgrove Road	10/11/2023	OOHW	Attended	LAeq (15min)	61	64	Compliant	M7-M12 works comprised of sign installation and steel wire removal. M7-M12 construction works were compliant with the predicted noise levels.
2,10 Kosovich Place Cecil Park NCA-03	10/11/2023	OOHW	Attended	LAeq (15min)	53	58	Compliant	M7-M12 works comprised of sign installation and steel wire removal. M7-M12 construction works were compliant with the predicted noise levels.
33 Isabel Street Cecil Hills	10/11/2023	OOHW	Attended	LAeq (15min)	46.7	55	Compliant	M7-M12 works comprised of sign installation and steel wire removal were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth Drive traffic. M7-M12 construction works were compliant.
NCA04 97 - 123 Wallgrove Road, Cecil Park	13/11/2023	OOHW	Attended	LAeq (15min)	61.3	64	Compliant	M7-M12 works comprised of concrete cutting Telstra Road. M7-M12 construction works were compliant with the predicted noise levels.
(NCA01) M12 - 13 Kosovich Place Cecil Park	13/11/2023	OOHW	Attended	LAeq (15min)	44.8	53	Compliant	M7-M12 works comprised of concrete cutting Telstra Road. M7-M12 construction works were compliant with the predicted noise levels.
(NCA06) 2 Aspen Close Prestons	14/11/2023	OOHW	Attended	LAeq (15min)	45.8	60	Compliant	M7-M12 works comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 traffic. M7-M12 construction works were compliant.
37-73 Wallgrove Road	14/11/2023	OOHW	Attended	LAeq (15min)	57.7	62	Compliant	M7-M12 works comprised of tree cutting. M7-M12 construction works were compliant with the predicted noise levels.
33 Isabel Street Cecil Hills	14/11/2023	OOHW	Attended	LAeq (15min)	44.7	67	Compliant	M7-M12 works comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth Drive traffic. M7-M12 construction works were compliant.
2,10 Kosovich Place Cecil Park NCA-03	14/11/2023	OOHW	Attended	LAeq (15min)	53.2	59	Compliant	M7-M12 works comprised of NDD and Telstra service works. M7-M12 construction works were compliant with the predicted noise levels.

Environment Protection Licence Environment Monitoring Data

Location Description	Monitoring date	Standard/ OOH Works	Attended or Continuous	Parameter	Measured value dB(A)	Goals and targets dB(A)	Project OOHW Compliance	Comments/Field Observations
8A Skipton Lane Preston	14/11/2023	OOHW	Attended	LAeq (15min)	43.1	56	Compliant	M7-M12 works comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 traffic. M7-M12 construction works were compliant.
(NCA07) (M7) 34 Angeldool Street, Hinchinbrook	14/11/2023	OOHW	Attended	LAeq (15min)	50.9	60	Compliant	M7-M12 works comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 traffic. M7-M12 construction works were compliant.
30 Woodley crescent	15/11/2023	OOHW	Attended	LAeq (15min)	44.8	62	Compliant	M7-M12 works comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 traffic. M7-M12 construction works were compliant.
24 Haleuka Crescent Plumpton	15/11/2023	OOHW	Attended	LAeq (15min)	47.3	62	Compliant	M7-M12 works comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 traffic. M7-M12 construction works were compliant.
(NCA04) M12 - 2081 Elizabeth Drive Cecil Park	16/11/2023	OOHW	Attended	LAeq (15min)	56.5	60	Compliant	M7-M12 works comprised of NDD and Telstra service works. M7-M12 construction works were compliant with the predicted noise levels.
18 Cecil Road Cecil Park	16/11/2023	OOHW	Attended	LAeq (15min)	60	57	Compliant	M7-M12 works comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth Drive traffic. M7-M12 construction works were compliant.
37-73 Wallgrove Road	16/11/2023	OOHW	Attended	LAeq (15min)	61.7	59	Compliant	M7-M12 works comprised of NDD and Geotech drilling. M7-M12 construction works were compliant with the predicted noise levels.
19 Kosovich Place Cecil Park	16/11/2023	OOHW	Attended	LAeq (15min)	42	53	Compliant	M7-M12 works comprised of NDD and Telstra service works. M7-M12 construction works were compliant with the predicted noise levels.
1 Kosovich Pl, Cecil Park	16/11/2023	OOHW	Attended	LAeq (15min)	52.4	57	Compliant	M7-M12 works comprised of NDD and Telstra service works. M7-M12 construction works were compliant with the predicted noise levels.
33 Isabel Street Cecil Hills	17/11/2023	OOHW	Attended	LAeq (15min)	48.4	66	Compliant	M7-M12 works comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth Drive traffic. M7-M12 construction works were compliant.
56 Station St Rooty Hill	17/11/2023	OOHW	Attended	LAeq (15min)	49.9	44	Compliant	M7-M12 works comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 traffic. M7-M12 construction works were compliant.
122 Hartington St Rooty Hill	17/11/2023	OOHW	Attended	LAeq (15min)	51.7	41	Compliant	M7-M12 works comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 traffic. M7-M12 construction works were compliant.
23 Isabel St, Cecil Hills	17/11/2023	OOHW	Attended	LAeq (15min)	49.9	47	Compliant	M7-M12 works comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth Drive traffic. M7-M12 construction works were compliant.
37-73 Wallgrove Road	18/11/2023	OOHW	Attended	LAeq (15min)	55.4	56	Compliant	M7-M12 works comprised of NDD. M7-M12 construction works were compliant with the predicted noise levels.
1 Kosovich Pl, Cecil Park	18/11/2023	OOHW	Attended	LAeq (15min)	48.6	43	Compliant	M7-M12 works comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Wallgrove Road traffic. M7-M12 construction works were compliant.

Environment Protection Licence Environment Monitoring Data

Location Description	Monitoring date	Standard/ OOH Works	Attended or Continuous	Parameter	Measured value dB(A)	Goals and targets dB(A)	Project OOHW Compliance	Comments/Field Observations
19 Kosovich Place Cecil Park	18/11/2023	OOHW	Attended	LAeq (15min)	40.9	43	Compliant	M7-M12 works comprised of NDD were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Wallgrove Road traffic. M7-M12 construction works were compliant.
(M7NCA09) 46 Corvus Road, Hinchinbrook	20/11/2023	OOHW	Attended	LAeq (15min)	44	49	Compliant	M7-M12 works comprised of NDD and concrete cutting works. M7-M12 construction works were compliant with the predicted noise levels.
33 Isabel Street Cecil Hills	21/11/2023	OOHW	Attended	LAeq (15min)	44	62	Compliant	M7-M12 works comprised of NDD and Geotech drilling were inaudible throughout the monitoring period. The dominant noise sources were from the M7 and Elizabeth Drive traffic. M7-M12 construction works were compliant.
2055 Elizabeth Dr Cecil Park	21/11/2023	OOHW	Attended	LAeq (15min)	58	55	Compliant	M7-M12 works comprised of asphalt rectification works at Tank Road entry. M7-M12 construction works were compliant with the predicted noise levels.
(M7NCA06) 8A Skipton Lane, Prestons	21/11/2023	OOHW	attended	LAeq (15min)	47.3	53	Compliant	M7-M12 works comprised of NDD and permeability testing were inaudible throughout the monitoring period. The dominant noise sources were from the M7 traffic. M7-M12 construction works were 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 4-2 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	Comments/ Field Observations
HDD rig vibration monitoring – EDC near Upper Canal	13/11/2023	Attended	Nil	Nil	Nil	1.29	3	Yes	Works were monitored and found to be compliant with structural criteria.
HDD rig vibration monitoring – EDC near Upper Canal	14/11/2023	Attended	Nil	Nil	Nil	1.57	3	Yes	Works were monitored and found to be compliant with structural criteria.

Note:

1. VDV – Vibration Dose Value
2. PPV – Peak Particle Velocity

Table 4-3 Sediment basin discharge monitoring data for November 2023

Location	Date	Analyte	Units	Limit	Result	Comments
Sediment Basin SB-01 (AF9)	8/11/2023	pH	pH	6.5-8.5	7.71	Compliant with discharge criteria.
		Turbidity	TSS	50	45.7	
		Oil and grease	Visible	Not visible	Not visible	
Sediment Basin SB-01 (AF9)	27/11/2023	pH	pH	6.5-8.5	7.49	Compliant with discharge criteria.
		Turbidity	TSS	50	42.0	
		Oil and grease	Visible	Not visible	Not visible	