

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

February 2024



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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.



## 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 the February 2024 monitoring period 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](https://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 M7M12 Construction Noise and Vibration Monitoring Program (M712UDC-JHGRP-M7A-EN-PLN-000074).

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 3-1.

Table 3-1 Noise monitoring data

Location Description	Monitoring date	NCA	Attended or Continuous	Parameter	Measured value dB(A)	Goals and targets dB(A)	Project OOHW Compliance	Comments/Field Observations
24-26 Cecil Road, Cecil Park	1/02/2024	NCA35	Attended	LAeq (15 min)	56.6	47	Compliant	The dominant noise source was the traffic on Elizabeth Drive. Cecil Road and wildlife with trucks and cars driving past during the whole monitoring period. The works were not audible and did not contribute to the noise level. The results recorded were above the predicted noise levels due to traffic. JHG works compliant.
13 Nimbin Avenue, Hoxton Park	1/02/2024	NCA08	Attended	LAeq (15 min)	50.3	48	Compliant	The dominant noise sources were the traffic from M7. Construction noise was slightly audible but could only be heard intermittently. The results recorded were above the predicted noise levels due to traffic. JHG works compliant.
101 Wallgrove Road, Eastern Creek	1/02/2024	Commercial	Attended	LAeq (15 min)	66.7	74	Compliant	Dominant noise source was M7 traffic. Works were inaudible during the monitoring period. JHG works compliant.
24 Lightning Ridge Rd, Hinchinbrook	7/02/2024	M7NCA07	Attended	LAeq (15 min)	47.3	59	Compliant	Dominant noise source was the M7 traffic and local road traffic. Construction works were faintly audible intermittently. The noise results recorded were below the predicted noise level. JHG works compliant.
72 Inverell Avenue, Hinchinbrook	7/02/2024	M7NCA07	Attended	LAeq(15min)	44.7	71	Compliant	Dominant noise source was the M7 traffic and local road traffic. Line marking and traffic signage works were inaudible during the monitoring period. JHG works compliant.
31 Pegasus Avenue, Hinchinbrook	7/02/2024	M7NCA09	Attended	LAeq(15min)	47	49	Compliant	Dominant noise source was the M7 traffic, local road traffic and dog barking. Barrier installation works were inaudible during the monitoring period. JHG works compliant.
1 Duff Road, Cecil Park	8/02/2024	NCA 04	Attended	LAeq(15min)	64.2	38	Compliant	Dominant noise source was traffic along Elizabeth Drive and M7. Works were inaudible during the monitoring period. JHG works compliant.
18 Cecil Road, Cecil Park	8/02/2024	NCA35	Attended	LAeq(15min)	61.4	59	Compliant	Dominant noise source was traffic on Cecil Road and Elizabeth Drive. Works were audible during the monitoring period. The noise results recorded were above the predicted noise level due to traffic. JHG works compliant.
8a Skipton Lane, Prestons	8/02/2024	NCA 06	Attended	LAeq(15min)	53.6	59	Compliant	Dominant noise source was local traffic. Works were inaudible during the monitoring period. JHG works compliant.
20 Mavis Street, Rooty Hill	8/02/2024	M7NCA22	Attended	LAeq(15min)	46	57	Compliant	Dominant noise source M7 traffic and local road traffic. Construction works were faintly and intermittently audible. The noise results recorded were below the predicted noise level. JHG works compliant.
12-24 Derby Street, Rooty Hill	8/02/2024	M7NCA25	Attended	LAeq(15min)	46.8	52	Compliant	Dominant noise source M7 traffic and local road traffic. Construction works were faintly and intermittently audible. The noise results recorded were below the predicted noise level. JHG works compliant.

Environment Protection Licence Environment Monitoring Data



Location Description	Monitoring date	NCA	Attended or Continuous	Parameter	Measured value dB(A)	Goals and targets dB(A)	Project OOHW Compliance	Comments/Field Observations
18-20 Felton St, Horsley Park	9/02/2024	M7NCA20	Attended	LAeq(15min)	52.4	50	Compliant	Dominant noise source was local traffic and fireworks. Works were inaudible during the monitoring period. JHG works compliant.
727,7335 Wallgrove Road, Horsely Park	9/02/2024	M7NCA18	Attended	LAeq(15min)	69.6	52	Compliant	Dominant noise source was local traffic and insects. Works were inaudible during the monitoring period. JHG works compliant.
33 Isabel St, Cecil Hills	9/02/2024	NCA16B	Attended	LAeq(15min)	43.9	56	Compliant	Dominant noise source was local traffic. Works were audible during the monitoring period. Recorded noise levels were below the predicted noise level. JHG works compliant.
18-32 Burley Road, Horsley Park	9/02/2024	M7NCA18	Attended	LAeq(15min)	44.1	52	Compliant	Dominant noise source was insects and local traffic. Works were inaudible during the monitoring period. JHG works compliant.
13 Rossini Drive, Hinchinbrook	9/02/2024	M7NCA 09	Attended	LAeq(15min)	53.9	44	Compliant	Dominant noise source was local traffic and insects. Works were intermittently audible during the monitoring period. Recorded noise levels were above the predicted noise level due to dominant traffic noise. JHG works compliant.
6 Bird Walton Ave, Middleton Grange	9/02/2024	M7NCA10	Attended	LAeq(15min)	58.8	46	Compliant	Dominant noise source was local traffic and local residents. Works were inaudible during the monitoring period. JHG works compliant.
289, 293 Chandos Road. Horsley Park	10/02/2024	M7NCA21	Attended	LAeq(15min)	59	52	Compliant	Dominant noise source was local traffic and fireworks. Works were inaudible during the monitoring period. JHG works compliant.
763, 783 Wallgrove Road, Horsley Park	10/02/2024	M7NCA21	Attended	LAeq(15min)	56.4	52	Compliant	Dominant noise was local traffic. Recorded noise levels were above the predicted noise level due to dominant traffic noise. JHG works compliant.
80/82 Station Street, Rooty Hill	10/02/2024	M7NCA26	Attended	LAeq(15min)	48	47	Compliant	Dominant noise source was local traffic and insects. Recorded noise levels were above the predicted noise level due to dominant traffic noise. JHG works compliant.
145 Eskdale Street Minchinbury	10/02/2024	M7NCA23	Attended	LAeq(15min)	50.2	43	Compliant	Dominant noise source was local traffic, people & insects. Works were inaudible during the monitoring period. JHG works compliant.
23 Isabel Street, Cecil Hills	13/02/2024	NCA16b	Attended	LAeq(15min)	52.3	60	Compliant	Dominant noise source Elizabeth Drive traffic. Ambient noise was also monitored from M7 traffic. Works were audible during the monitoring period but measured below the predicted noise level. JHG works compliant.
18 Cecil Road, Cecil Park	13/02/2024	NCA35	Attended	LAeq(15min)	52.7	53	Compliant	Dominant noise source was M7, Wallgrove Road and Elizabeth Drive traffic. Works were inaudible during the monitoring period. JHG works compliant.
37-73 Wallgrove Road, Cecil Park	13/02/2024	NCA17	Attended	LAeq(15min)	65.3	63	Compliant	Dominant noise source was Wallgrove Road and M7 traffic. Construction works were audible but registered below the predicted noise level during breaks in traffic. JHG works compliant.

Location Description	Monitoring date	NCA	Attended or Continuous	Parameter	Measured value dB(A)	Goals and targets dB(A)	Project OOHW Compliance	Comments/Field Observations
12 Derby St, Rooty Hill	14/02/2024	NCA22	Attended	LAeq(15min)	51.2	53	Compliant	Dominant noise sources were local road traffic and ambient M7 traffic. Construction works were faintly audible. Recorded noise levels were below the predicted noise level but dominated by traffic. JHG works compliant.
145 Eskdale St, Minchinbury	14/02/2024	NCA23	Attended	LAeq(15min)	47.1	45	Compliant	Dominant noise source was Wallgrove Rd and M7 traffic. Works were inaudible during the monitoring period. JHG works compliant.
18 Cecil Road, Cecil Park	16/02/2024	NCA35	Attended	LAeq(15min)	64.1	72	Compliant	The dominant noise sources were the construction works. The results recorded were below the predicted noise levels and were compliant. JHG works compliant.
31 Isabel Street, Cecil Hills	16/02/2024	NCA16b	Attended	LAeq(15min)	57.2	58	Compliant	The dominant noise sources were the construction works. The results recorded were below the predicted noise levels and were compliant. JHG works compliant.
23 Isabel Street, Cecil Hills	21/02/2024	NCA16b	Attended	LAeq(15min)	49.6	57	Compliant	Dominant noise source was local traffic. Construction works were audible. The results recorded were below the predicted noise levels. JHG works compliant.
104b Station St, Rooty Hill	21/02/2024	NCA26	Attended	LAeq(15min)	51	66	Compliant	Dominant noise source was local traffic. Construction works were audible. The results recorded were below the predicted noise levels. JHG works compliant.
37-73 Wallgrove Road, Cecil Park	21/02/2024	NCA17	Attended	LAeq(15min)	62.8	54	Compliant	Dominant noise source was local traffic. Recorded noise levels were above the predicted noise level due to dominant traffic noise. JHG works compliant.
15 Woodley Crescent, Glendenning	22/02/2024	NCA32	Attended	LAeq(15min)	47.4	60	Compliant	Dominant noise source was local traffic. Construction works were audible. The results recorded were below the predicted noise levels. JHG works compliant.
24 Haleluka Crescent, Plumpton	22/02/2024	NCA28	Attended	LAeq(15min)	51.4	62	Compliant	Dominant noise source was local traffic. Recorded noise levels were above the predicted noise level due to dominant traffic noise. JHG works compliant.
3 Sperring Ave, Oakhurst	22/02/2024	NCA30	Attended	LAeq(15min)	48.8	57	Compliant	Dominant noise source was local traffic. Construction works were audible. The results recorded were below the predicted noise levels. JHG works compliant.
23 Waratah St, Rooty Hill	22/02/2024	NCA23	Attended	LAeq(15min)	43.7	41	Compliant	Dominant noise source was Wallgrove Rd and M7 traffic. Works were inaudible during the monitoring period. JHG works compliant.
29 Plumpton Road, Plumpton	22/02/2024	NCA31	Attended	LAeq(15min)	49.6	72	Compliant	Dominant noise source was local traffic. Construction works were audible. The results recorded were below the predicted noise levels. JHG works compliant.

Location Description	Monitoring date	NCA	Attended or Continuous	Parameter	Measured value dB(A)	Goals and targets dB(A)	Project OOHW Compliance	Comments/Field Observations
24 Haleluka Crescent, Plumpton	22/02/2024	NCA28	Attended	LAeq(15min)	51.4	60	Compliant	Dominant noise source was local traffic. Construction works were audible. The results recorded were below the predicted noise levels. JHG works compliant.
15 Darice Pl, Plumpton	27/02/2024	NCA28	Attended	LAeq(15min)	62.8	57	Compliant	Dominant noise source was local traffic. Recorded noise levels were above the predicted noise level due to dominant traffic noise. JHG works compliant.
12-14 Derby St, Rooty Hill	28/02/2024	NCA25	Attended	LAeq(15min)	53.1	50	Compliant	Dominant noise source was local traffic. Recorded noise levels were above the predicted noise level due to dominant traffic noise. JHG works compliant.
132 Station St. Rooty Hill	28/02/2024	NCA26	Attended	LAeq(15min)	47.2	58	Compliant	Dominant noise source was local traffic. Construction works were audible. The results recorded were below the predicted noise levels. JHG works compliant.
126 Dalmeny Drive, Prestons	28/02/2024	NCA01	Attended	LAeq(15min)	56.4	48	Compliant	Dominant noise source local road and M7 traffic. Works were inaudible during the monitoring period. JHG works compliant.
71 Myrtle Street. Prestons	28/02/2024	NCA05	Attended	LAeq(15min)	72.6	50	Compliant	Dominant noise source was local traffic. Recorded noise levels were above the predicted noise level due to dominant traffic noise. JHG works compliant.
8A Skipton Lane, Prestons	28/02/2024	NCA06	Attended	LAeq(15min)	49.7	72	Compliant	Dominant noise source was local traffic. Construction works were audible. The results recorded were below the predicted noise levels. JHG works compliant.
7 Altair Place, Hinchinbrook	28/02/2024	NCA09	Attended	LAeq(15min)	39.2	47	Compliant	Dominant noise source was local traffic. Construction works were audible. The results recorded were below the predicted noise levels. JHG works compliant.
1111-1114 Elizabeth Drive, Cecil Park	29/02/2024	NCA35	Attended	LAeq(15min)	61.8	47	Compliant	Dominant noise source was Wallgrove Rd and M7 traffic. Works were inaudible during the monitoring period. JHG works compliant.
13 Nimbin Avenue, Hoxton Park	29/02/2024	NCA08	Attended	LAeq(15min)	41.7	48	Compliant	Dominant noise source was M7 traffic. Works were inaudible during the monitoring period. JHG works compliant.
37-73 Wallgrove Road, Cecil Park	29/02/2024	NCA17	Attended	LAeq(15min)	60.6	50	Compliant	Dominant noise source was Wallgrove Rd and M7 traffic. Works were inaudible during the monitoring period. JHG 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.

## **3.2 Vibration monitoring**

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 German Standard DIN 4150 – Part 3 - “Structural Vibration Part 3: Effects of vibration in structures” structural thresholds for Air Shaft 3.

All works were deemed compliant as they complied with applicable criteria and are detailed in Table 3-2.

Table 3-2 Vibration monitoring data

Monitoring Location	Monitoring Date/Period	Attended or Continuous Monitoring	Measured VDV (m/s <sup>1.75</sup> )	VDV Target (m/s <sup>1.75</sup> )	VDV Compliant	Measured PPV (mm/s)	PPV Target (mm/s)	PPV Compliant	Comments/ Field Observations
Shaft 3 EDC Area	05/02/2024 – 29/02/2024	Continuous	N/A	N/A	N/A	5.98	20	Complaint	Works were monitored and found to be compliant with associated criteria.
31 Isabel Street (NCA16b)	16/02/2024	Attended	N/A	N/A	N/A	0.11	25	Complaint	Works were monitored and found to be compliant with associated criteria.
18 Cecil Road (NCA35)	16/02/2024	Attended	N/A	N/A	N/A	0.14	25	Complaint	Works were monitored and found to be compliant with associated criteria.

Note:

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

## 4 Discharge Water Quality Monitoring

Offsite discharge occurred during February 2024 from Sediment Basin 01 (AF9) and Sediment Basin 02 (Tank Road).

All discharges were compliant with the requirements of the project EPL (#21829) and are outlined in Table 4-1.

Table 4-1 Sediment basin discharge monitoring data for February 2024

Location	Date	Analyte	Units	Limit	Result	Comments
Sediment Basin SB-02 (Tank Road)	08/02/2024	pH	pH	6.5-8.5	<b>7.61</b>	Compliant with discharge criteria.
		Turbidity	NTU	50	<b>40</b>	
		Oil and grease	Visible	Not visible	<b>Not visible</b>	
Sediment Basin SB-01 (AF9)	09/02/2024	pH	pH	6.5-8.5	<b>7.77</b>	Compliant with discharge criteria.
		Turbidity	NTU	50	<b>39.5</b>	
		Oil and grease	Visible	Not visible	<b>Not visible</b>	
Sediment Basin SB-02 (Tank Road)	19/02/2024	pH	pH	6.5-8.5	<b>8.08</b>	Compliant with discharge criteria.
		Turbidity	NTU	50	<b>31</b>	
		Oil and grease	Visible	Not visible	<b>Not visible</b>	
Sediment Basin SB-02 (Tank Road)	21/02/2024	pH	pH	6.5-8.5	<b>7.84</b>	Compliant with discharge criteria.
		Turbidity	NTU	50	<b>48.4</b>	
		Oil and grease	Visible	Not visible	<b>Not visible</b>	
Sediment Basin SB-02 (Tank Road)	22/02/2024	pH	pH	6.5-8.5	<b>7.17</b>	Compliant with discharge criteria.
		Turbidity	NTU	50	<b>25.7</b>	
		Oil and grease	Visible	Not visible	<b>Not visible</b>	
Sediment Basin SB-01 (AF9)	26/02/2024	pH	pH	6.5-8.5	<b>8.5</b>	Compliant with discharge criteria.
		Turbidity	NTU	50	<b>49.3</b>	
		Oil and grease	Visible	Not visible	<b>Not visible</b>	