

Ambient PM10 Above-Limit Report

WestConnex M5E – Gipps Street, Bardwell Valley (formerly
CBMS)

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1. Ambient above-goal notification

Notification of Ambient above-goal reading WestConnex M5 East	
To be notified immediately to Project Company and TfNSW. Project Company is to notify DPIE, EPA and NSW Health within 1 business day.	
Date	02 October 2020
Time (start and finish)	0000hrs to 0000hrs
Relevant location	<input type="checkbox"/> T1 – Jackson Place <input type="checkbox"/> X1 – Wavell Parade
	<input type="checkbox"/> U1 – Thompson Street <input checked="" type="checkbox"/> CBMS – Gipps Street Lookout
	<input type="checkbox"/> M1 – West Botany Street <input type="checkbox"/> F1 – Flatrock Road
Relevant goal	<input type="checkbox"/> NO ₂ – One hour average of 0.12 ppm (245 µg/m ³)
	<input checked="" type="checkbox"/> PM ₁₀ – 24 hour average of 50 µg/m ³
Above-goal reading Detail the above-goal reading that was received	PM₁₀ CBMS: 51.67 µg/m ³
Duration Detail the duration of the above-goal reading or event	24hrs
Nature of event Detail nature of the event that contributed to the above-goal reading	The elevated PM ₁₀ concentrations across the six M5 East ambient monitoring stations are consistent with the Sydney East DPI&E ambient air quality network. NSW RFS have confirmed that planned hazard reduction burning of 30 ha of bushland is currently underway in Kur-ring-gai National Park. This is consistent with BOM weather observations, a prevailing north westerly wind was occurring throughout the day.
Was the data valid? If unknown at this stage, please indicate.	Data is yet to be validated.
Was there an extraordinary event as per the DUAP Condition 73/4 Protocol?	Yes.
Measures employed Detail measures employed to minimise the concentration levels	All ventilation outlet and in-tunnel monitoring results for the 02/10/2020 were below the limits specified.
Person responsible for notification	Name: Peter Redwin
	Position: Head of Operations and Maintenance
	Organisation: WestConnex Transurban

2. Introduction

The environmental performance of the WestConnex M5E tunnel is monitored by Ambient Air Quality Monitoring (AQM) stations capturing data for carbon monoxide, nitrogen dioxide, and particles less than 10µm (PM₁₀) at the following locations:

Jackson Place, Undercliffe

Thompson Street, Turella

Wavell Parade, Earlwood

Gipps Street, Bardwell Valley

West Botany St, Arncliffe

Flat Rock Rd, Bexley

From July 2020, air quality monitoring data for tunnel air quality can be found on the M5 East website (<https://www.linkt.com.au/sydney/using-toll-roads/about-sydney-toll-roads/m5-east/tunnel-air-quality>).

Historical Ambient air quality data (for 2015 to June-2020 and 2012 to June 2020), is found at Transport for NSW website (<https://www.rms.nsw.gov.au/about/environment/air/tunnel-air-quality/m5-east/index.html>).

An above goal air quality PM₁₀, reading of 51.67 µg/m³ was recorded on 2nd October 2020 at Gipps Street AQM station, Bardwell Valley (formerly known as CBMS). The PM₁₀ reading was greater than the ambient 24-hr average goal of 50 µg/m³.

Assessment of the incident has shown that the data is valid, unrelated to the M5 East Motorway and an extraordinary event caused the high level of PM₁₀ across all monitoring stations, with Gipps St readings reaching above the goal limit of 50 µg/m³.

3. Report Assessment vs DUAP Condition 73/4 protocol

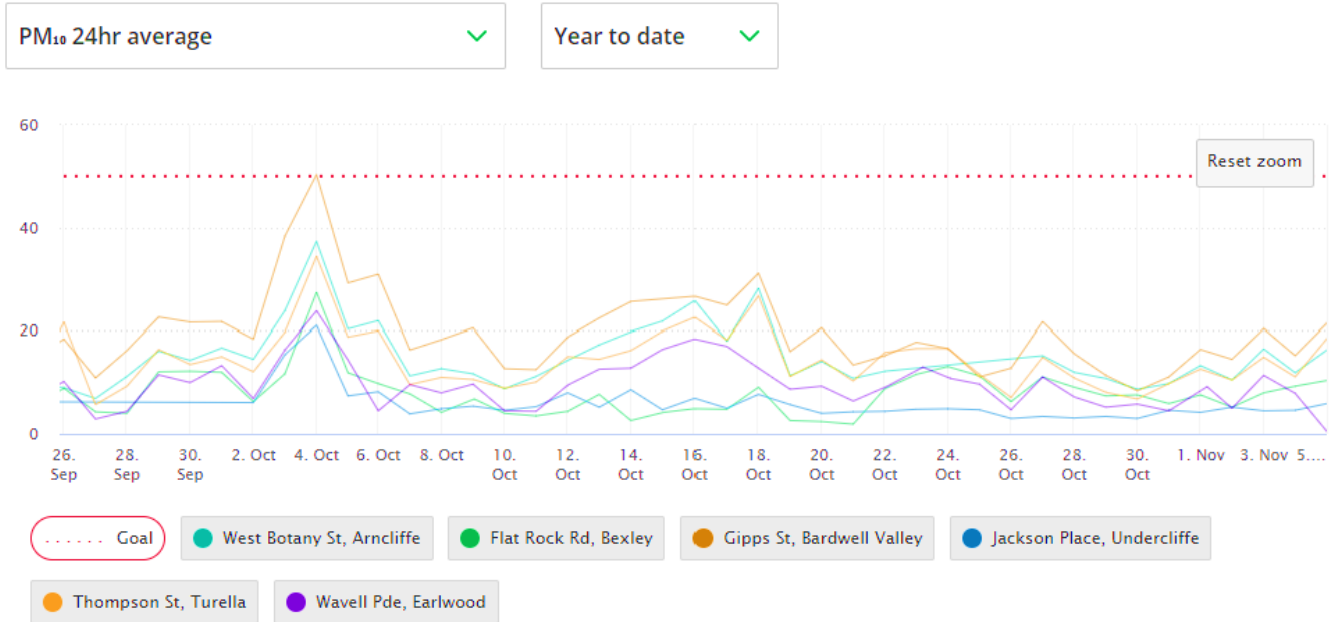
The following actions have been carried out in accordance with the M5 East Motorway DUAP Condition 73/4 Protocol:

1. Planning NSW and EPA were notified by e-mail within one day of the monitoring indicating that readings above the goal of the 24 hour PM₁₀ air quality goal had occurred (Section 1).
2. Quality validation of the data was undertaken from the Linkt air monitoring website confirming that the 24 hour average readings across all M5E ambient monitoring stations displayed an elevation in PM₁₀ levels on the 2nd October 2020 to 4th October, with only Gipps St reaching 51.67 µg/m³, above the 50 µg/m³ ambient air quality goal for fine particulates (PM₁₀) (Section 4). Confirmation that other monitoring stations in the Sydney Basin displayed a Sydney-wide event, and likely external cause.
3. Information obtained from The Bureau of Meteorology, Australian Government website with weather readings for the month of October 2020, validate weather conditions (wind directions) attributing to a likely extraordinary event (Section 5).

4. Obtaining confirmation from State Emergency Services that an external event, hazard reduction burning, at North Sydney region (Garigal National Park) had occurred.
5. Assessment was prepared for submission to EPA and AQCC as outlined in DUAP Element 4.

4. M5E Air Quality Monitoring Data

Figure 4.1 PM₁₀ readings across M5E air quality monitoring stations showing trending rise in PM₁₀ levels on 2nd October to 4th October 2020



5. BOM weather data October 2020

Figure 5.1: BOM data from 1st October through to 3rd October 2020 recoding west, north westly winds across Sydney.

		Temps		Rain	Evap	Sun	Max wind gust		9 am					3 pm							
Date	Day	Min	Max				Dir	Spd	Time	Temp	RH	Cld	Dir	Spd	MSLP	Temp	RH	Cld	Dir	Spd	MSLP
		°C	°C	mm	mm	hours		km/h	local	°C	%	g th		km/h	hPa	°C	%	g th		km/h	hPa
1	Th	14.4	25.5	2.6	3.8	9.2	E	39	13:04	19.2	70	1	WNW	6	1014.8	22.0	57	1	ENE	19	1014.5
2	Fr	11.6	24.7	0.2	3.8	11.3	N	31	19:35	18.1	75	0	WNW	13	1024.5	23.2	54	0	ENE	15	1021.9
3	Sa	12.9	25.2	0	7.2	11.2	NNE	48	17:56	20.2	61	0	WNW	11	1026.8	24.9	56	0	NE	24	1021.5
4	Su	15.8	24.8	0	7.6	11.1	NNE	52	17:30	17.5	91	4	E	4	1021.4	23.8	65	1	E	24	1017.2
5	Mo	17.2	33.7	0	8.8	11.4	S	70	22:32	23.5	47	1	N	22	1017.2	30.4	37	1	ENE	13	1013.6
6	Tu	15.2	19.8	0	10.0	0.0	SSW	54	03:01	16.3	88	7	SSW	17	1022.3	18.8	77	8	S	22	1021.0
7	We	16.2	21.5	0	2.0	0.0	SW	24	23:38	17.8	91	8	SW	7	1020.8	18.9	91	8	ESE	15	1018.5
8	Th	17.1	29.4	0.4	2.2	9.4	NNW	54	16:15	20.2	86	7	N	6	1011.8	24.7	65	6	ESE	6	1008.4
9	Fr	14.3	23.5	1.0	7.0	11.3	W	56	17:34	17.0	54	2	W	17	1014.6	22.5	32	2	WNW	24	1012.6
10	Sa	13.9	26.0	0	8.0	11.8	W	41	02:54	16.6	52	0	W	26	1019.4	23.4	35	1	E	24	1016.5
11	Su	13.4	28.2	0	8.6	9.1	NE	37	15:05	17.7	58	2	WNW	7	1021.6	26.6	35	6	NE	20	1018.2
12	Mo	17.0	25.3	0	7.2	8.5	SSE	37	23:09	19.2	85	6	WNW	11	1024.3	24.0	60	3	ESE	19	1021.0
13	Tu	14.8	28.8	0	7.6	11.9	S	48	20:00	17.8	86	0	WNW	11	1022.5	26.5	45	1	E	15	1020.2
14	We	16.7	23.5	0	7.8	11.2	S	39	00:05	18.7	73	5	SSE	24	1027.6	21.9	61	7	ESE	19	1025.0
15	Th	15.0	25.8	0	5.0	10.2	ENE	44	13:08	19.5	79	3	N	11	1021.0	24.6	57	1	NE	22	1014.7
16	Fr	18.1	19.7	0	8.6	0.5	SSW	59	05:43	18.2	81	7	SSW	30	1018.8	18.7	71	7	SSE	24	1019.6
17	Sa	15.6	26.3	0	3.4	4.7	NE	48	14:09	19.5	83	8	NE	15	1014.6	25.3	65	7	NE	26	1008.3
18	Su	18.0	26.2	1.8	5.8	4.0	SE	46	15:06	19.9	80	7	Calm		1010.3	23.2	54	7	ESE	22	1010.0
19	Mo	15.1	21.3	3.0	4.4	6.0	SE	33	13:01	16.0	90	6	S	15	1017.3	19.4	67	2	SE	20	1016.8
20	Tu	16.0	22.2	0	7.2	4.7	E	33	16:00	17.4	82	7	NNE	6	1019.6	20.5	70	4	E	17	1017.9
21	We	14.6	24.6	0.4	3.0	11.9	NE	46	14:47	18.6	75	2	NNE	13	1017.7	24.1	58	1	NE	24	1014.2
22	Th	16.0	26.3	0	8.0	7.5	NE	37	18:04	19.4	83	7	SE	7	1015.8	24.1	59	6	ESE	15	1013.9
23	Fr	18.1	25.7	0	2.8	9.9	NE	50	16:27	20.2	87	4	E	13	1014.4	24.1	70	7	ENE	22	1010.0
24	Sa	18.8	26.0	3.2	9.6	0.6	SSW	54	22:36	21.3	94	7	NNE	9	1005.9	21.9	90	8	N	7	1003.0
25	Su	14.0	15.2	19.0	6.4	0.0	S	63	20:53	14.0	88	8	S	28	1013.1	13.1	94	8	SSW	26	1014.0
26	Mo	12.5	16.6	43.2	2.6	0.0	SSE	76	03:58	15.2	82	8	SSE	43	1017.6	14.6	96	8	S	33	1017.5
27	Tu	13.9	20.5	12.4	3.4	5.0	S	52	08:14	16.4	78	8	S	24	1020.4	19.6	67	7	SSW	22	1018.6
28	We	13.5	20.0	0.2	4.2	3.5	SSE	31	14:10	16.4	80	7	W	17	1020.1	18.9	75	6	SSE	17	1016.2
29	Th	14.8	22.6	18.4	4.8	7.9	SW	35	03:44	16.4	91	8	SW	11	1013.8	21.1	59	2	SE	19	1010.4
30	Fr	12.8	24.7	0	4.0	10.4	ESE	30	15:59	17.1	87	3	WNW	11	1011.4	22.2	64	5	ESE	19	1010.1
31	Sa	16.9	25.4	2.6	7.2	4.9	SSW	52	12:26	17.8	99	7	ESE	6	1006.6	18.9	78	7	S	24	1007.7

6. FNSW Hazard Reduction Burning Confirmation

Figure 6.1 Confirmation from Fire and Rescue NSW website (<https://www.fire.nsw.gov.au/incident.php?record=833>) of hazard reduction burning, approximately 30 hectares of dense bushland, at Garigal National Park, East Killara NSW.

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HAZARD REDUCTION - KILLARA

Time of incident: 02 Oct 2020 - 8:30am

Today more than twenty firefighters from Fire and Rescue NSW will be conducting a large hazard reduction burn at Koola Park, on Koola Road, in the Garigal National Park, East Killara, with approximately 30 hectares of dense bushland to be burned.

Taking advantage of the optimal weather conditions, today's burn is a collaborative effort between Fire and Rescue NSW, NSW National Parkes and Wildlife and the Rural Fire Service.

Members of the public are advised that numerous walking trails are closed in the burn area. In addition, tracks adjacent to the hazard reduction (Pipeline, Rocky Creek and Kimberly Trails) are also closed.

Hazard reduction burns are a major priority for the state's fire authorities to assist in the preparation for the upcoming bush fire season. This area has been of concern for a sometime given its location and the density of the bushland.

Smoke may impact the area today and residents are advised to take the following precautions:

- Ensure windows and doors are closed to help prevent smoke entering their homes.
- Keep outdoor furniture under cover to prevent ember burns.
- Retract pool covers to prevent ember damage.
- Remove washing from clotheslines.
- Ensure pets have a protected area.
- Vehicles must slow down, keep windows up, turn headlights on.
- Sightseers must keep away from burns for their own safety.
- People with asthma or lung conditions are advised to reduce outdoor activities. If smoke levels are high and if shortness of breath or coughing develops, take your reliever medicine or seek medical advice.

If you spot a fire that is unattended, please call Triple Zero (000).

Figure 6.2: Google maps, Garigal National Park entrance (orange marker) located north east of M5E Gipps Street Bardwell Valley AMS (red marker). Prevailing west,north westerly winds on 2nd October 2020 would converge on Sydney south east regions.

