

# Corrective and Preventative Action Report

EROA

CPAR # 000116

27/02/2017

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Rev	Date	Description	Prepared
01	27/02/2017	Corrective and Preventative Action Report	LJ

Name: EROA Pty Ltd

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Document Number

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Contract Number:

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Original Date of Issue : 13/02/2017

**(i) Name of the operator of the activity and the persons responsible for the activity**

Reported under the name Transcity JV. The Project Director of Legacy Way is Fraser Leishman.

**(ii) Name and telephone number of a designated contact person**

Project Director: Fraser Leishman 0449 673 551

Operations and Maintenance Manager: Scott Cain 07 3370 0611

Environmental Coordinator: Luke Jerdan 07 3370 0620

**(iii) Location of the release/ event**

The Western Ventilation Stack Outlet, as described in the Legacy Way Environmental Authority ERA51- EPPR02587314.

**(iv) Date and time of the release/ event**

The 1 hour criteria for the PM<sub>10</sub> at the Western Ventilation Stack Outlet was exceeded for the following times:

PM<sub>10</sub> – 1 hour – 1.597 mg/m<sup>3</sup> on 27/02/17 11:00am

PM<sub>10</sub> – 1 hour – 1.312 mg/m<sup>3</sup> on 27/02/17 12:00pm

**(v) Time the operator became aware of the release/ event**

The Control Room at Legacy Way was made aware of the exceedance via automated alert on 27/2/2017 at the time of the exceedance. Ventilation controls were implemented at the time of the event (a truck trailer fire) to manage the smoke generated from the fire.

The Operators informed the Environmental Coordinator later in the day on 27/2/2017 that an exceedance alert had been received. Their immediate priorities included managing the safety of tunnel users and the community, which included the air quality.

The exceedance was also confirmed to the Environmental Coordinator by Ecotech on 28/2/2017, and notification was then provided to DEHP on 28/2/2017.

**(vi) Suspected cause of the release/ event**

**Truck Trailer Fire**

On 27 February 2017, an incident occurred in the Legacy Way Tunnel involving a truck that had a fire in its trailer. At approximately 9:40am the Operators of the tunnel were alerted to a fire via the automatic detection system.

Smoke and flames issuing from the truck trailer were observed on the CCTV.

Procedures were followed to close the tunnel, including ventilation changed to manage the smoke.

The truck proceeded through the tunnel to the Western Freeway where the load of building waste still on fire was dumped onto the roadway. The emergency services attended to the truck. This occurred off site from Legacy Way.

During the event, the smoke was cleared from the tunnel via tunnel ventilation. The in-tunnel air quality sensors did not record an air quality exceedance, however, the Western Ventilation Stack (ventilation outlet) did record an exceedance of PM10, above the 1.0mg/m3 (1 hour) criteria. Please note that the ambient PM10 and PM2.5 air quality all remained within the 24 hour criteria as per the Environmental Authority (no exceedance of ambient air quality).

### vii) A description of the resulting effects of the release/ event

No exceedance of in-tunnel or ambient air quality

During the event, the smoke was cleared from the tunnel via tunnel ventilation. The in-tunnel air quality sensors did not record an air quality exceedance, however, the Western Ventilation Stack (ventilation outlet) did record an exceedance of PM10, above the 1.0mg/m3 (1 hour) criteria.

Please note that the ambient PM10 and PM2.5 air quality all remained within the 24 hour criteria as per the Environmental Authority (no exceedance of ambient air quality).

Please note that In-tunnel air quality did not exceed the 15 minute average criteria for any parameter. There was a spike in visibility, however, this remained under the specified criteria level.

### (viii) Results of any sampling or monitoring performed in relation to the release/ event

#### In Tunnel Air Quality

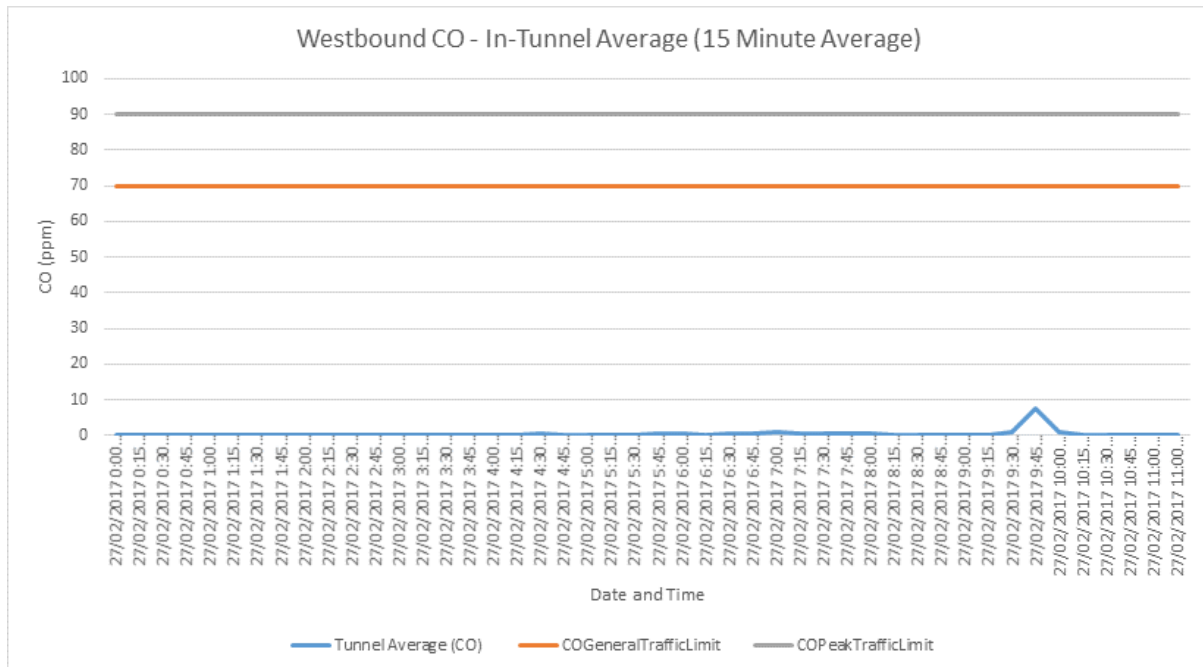


Figure 1 - Westbound In Tunnel CO (15 Minute)

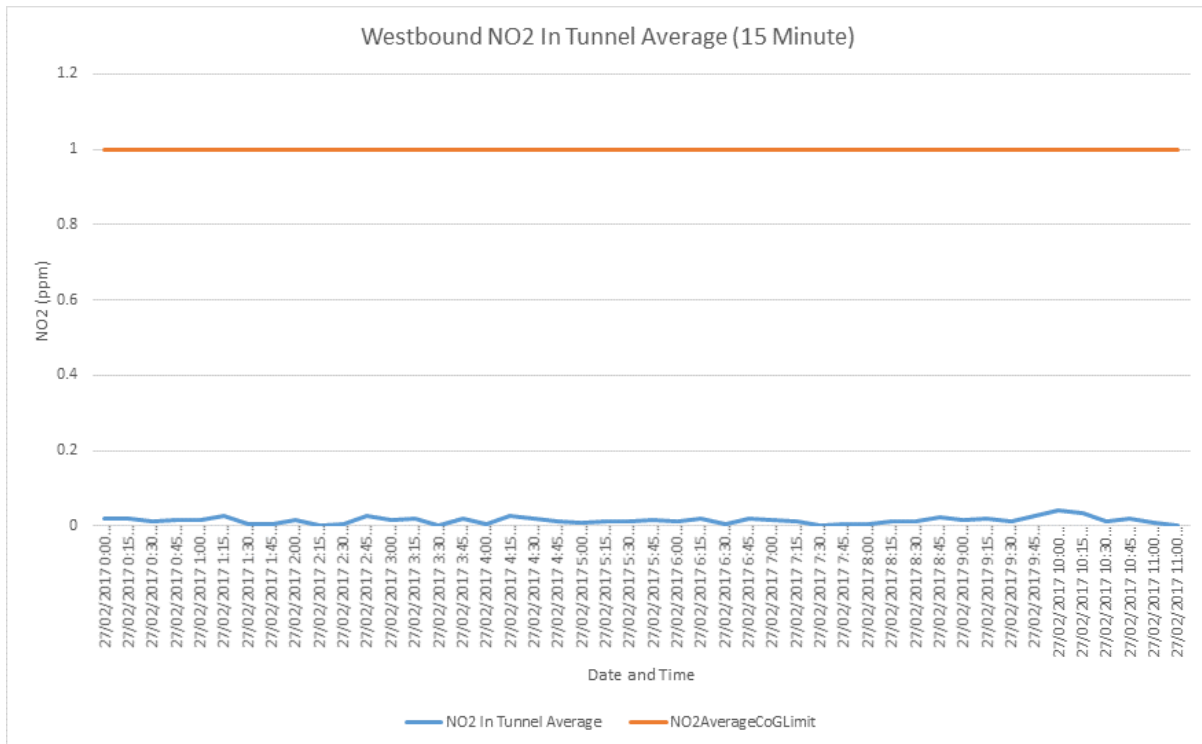


Figure 2 - Westbound In Tunnel NO2 (15 Minute)

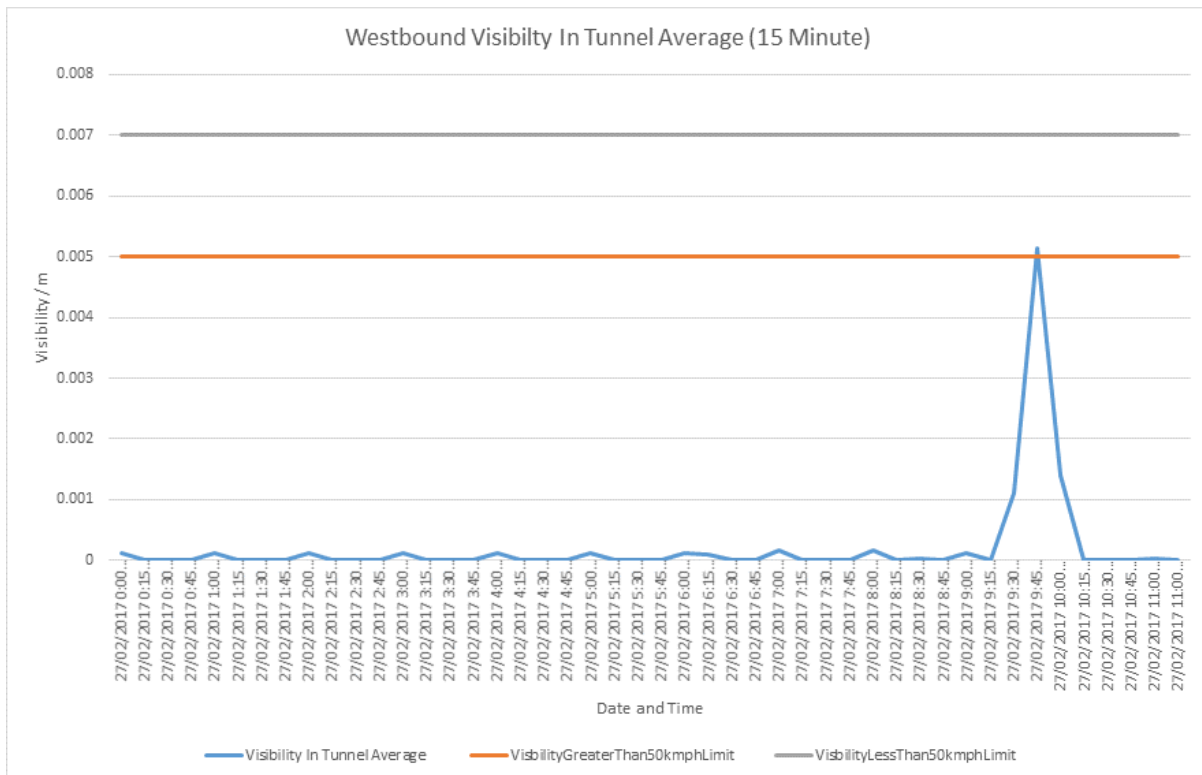


Figure 3 - Westbound In Tunnel Visibility (15 Minute)

The above visibility / m of 0.00514 is not an exceedance because the traffic speeds were below 50km/hr, which means that the limit for measuring an exceedance is 0.007 / m (per the Environmental Authority).

Site	Lane	Tag	CountTotal	AverageSpeed	MeanLength
Eastbound Entry		1 LIU1001_01	517	66.4	
		2 LIU1001_02	468	67.7	
Site3	Lane3	Tag2	CountTotal2	AverageSpeed2	MeanLength
Westbound Entry		1 LIU2001_03	42	9.5	
		2 LIU2001_04	82	16.4	
Site4	Lane4	Tag3	CountTotal3	AverageSpeed3	MeanLength
Eastbound Exit		1 LIU2001_01	708	63.6	
		2 LIU2001_02	267	67.6	
Site5	Lane5	Tag4	CountTotal4	AverageSpeed4	MeanLength
Westbound Exit		1 LIU1001_03	87	26.7	
		2 LIU1001_04	77	23.1	
Site2	Lane2	AverageSpeed1			
EastBound		340.6	66.5		
		600.5	41.74647887		
WestBound		1471.3	18.33802817		
		1333.3	20.46478873		

Figure 4 - Average Speeds Westbound between 9:45am and 10am (remained below 50km/hr)

### West Ventilation Stack Air Quality

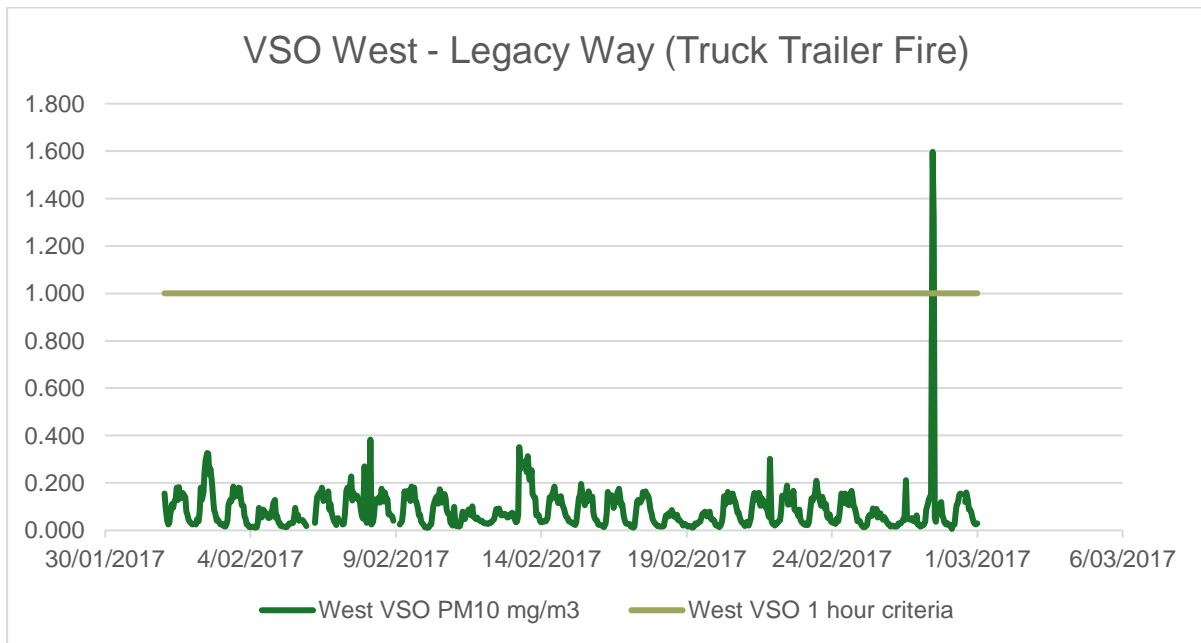


Figure 5 - VSO West Exceedance due to Truck Trailer Fire 27/2/2017

The above spike in the graph illustrates exceeding the PM10 1 hour criteria in the west ventilation stack outlet during the truck trailer fire incident. It is important to note that there was no exceedance of in-tunnel air quality, nor at the ambient air quality stations at the ends of the tunnel.

West VSO PM<sub>10</sub> – 1 hour – 1.597 mg/m<sup>3</sup> on 27/02/17 11:00am

West VSO PM<sub>10</sub> – 1 hour – 1.312 mg/m<sup>3</sup> on 27/02/17 12:00pm

Ambient Air Quality at Western Ambient Air Quality Stations

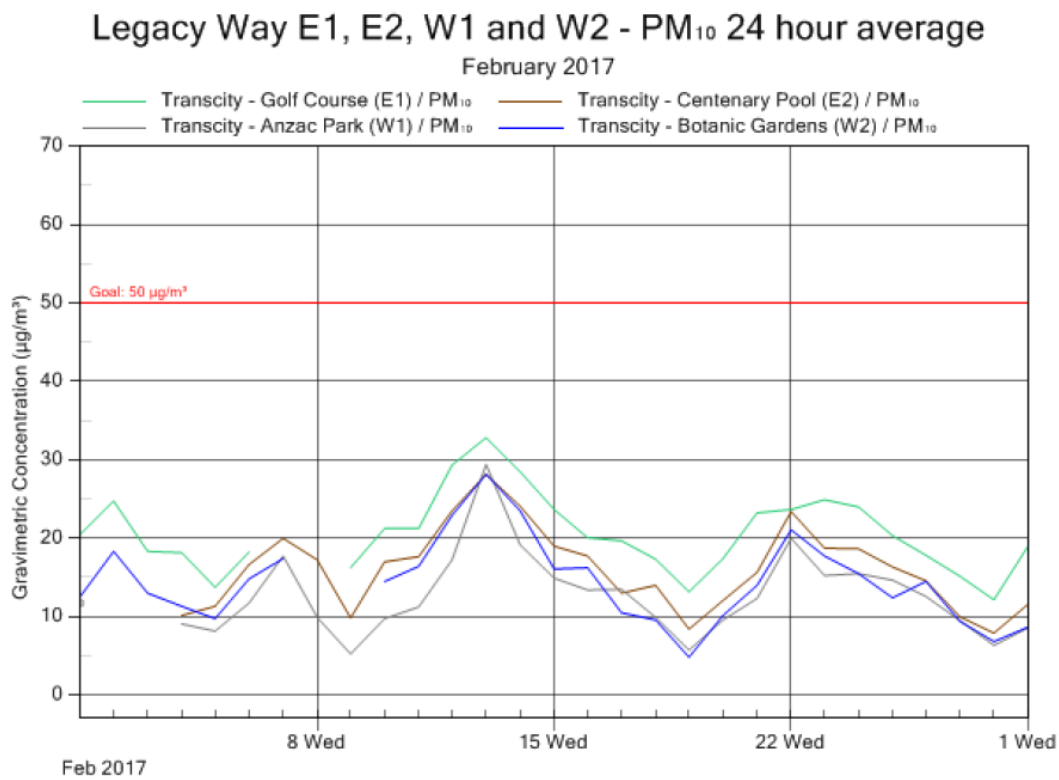


Figure 6 - Legacy Way (E1, E2, W1 and W2) PM10 graph for Feb 2017

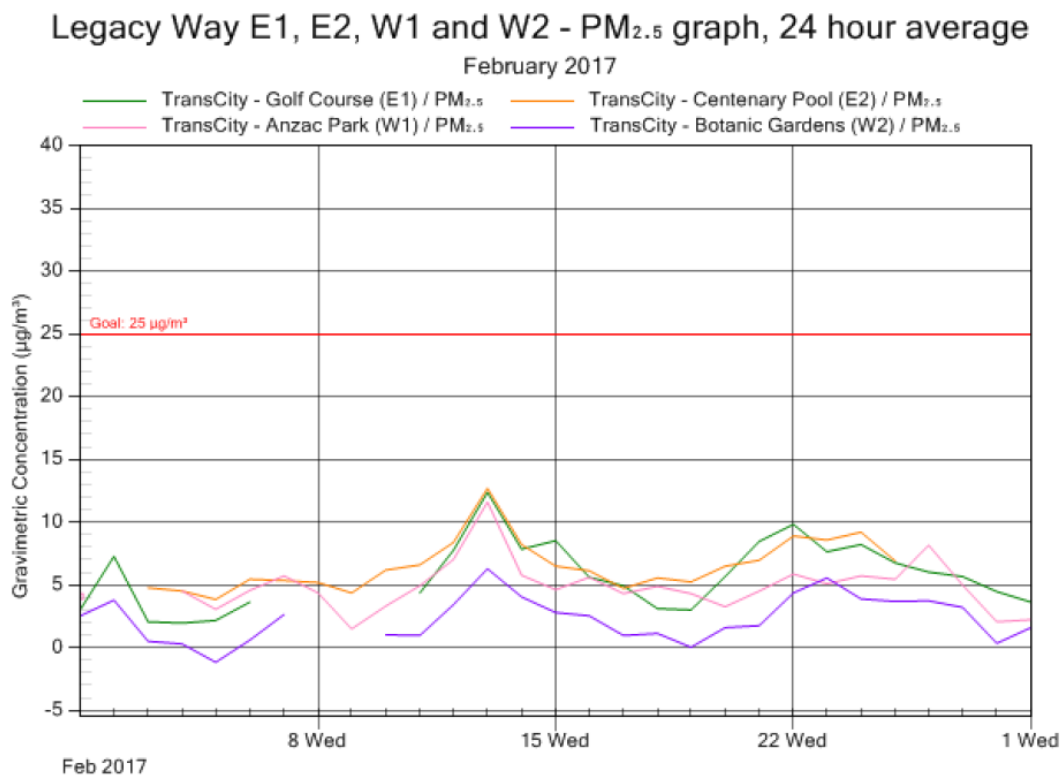


Figure 7 - Legacy Way (E1, E2, W1 and W2) PM2.5 graph for Feb 2017

### **(ix) Actions taken to mitigate any environmental harm (including environmental nuisance) caused by the release/ event**

This was a fire incident and was outside the normal operating conditions of the tunnel. Despite this, the monitoring results demonstrate that in-tunnel and ambient air quality was maintained within criteria levels specified in the Environmental Authority. The ventilation stack did exceed the 1 hour criteria for PM10, however, this has not resulted in exceedance of ambient or in-tunnel air quality.

A summary of actions taken during the event is as follows:

- On 27 February 2017, an incident occurred in the Legacy Way Tunnel involving a truck that had a fire in its trailer. At approximately 9:40am the Operators of the tunnel were alerted to a fire via the automatic detection system.
- Smoke and flames issuing from the truck trailer were observed on the CCTV.
- Procedures were followed to close the tunnel, including ventilation changed to manage the smoke.
- The truck proceeded through the tunnel to the Western Freeway where the load of building waste still on fire was dumped onto the roadway. The emergency services attended to the truck. This occurred off site from Legacy Way.
- During the event, the smoke was cleared from the tunnel via tunnel ventilation.

### **(x) Proposed action to prevent a recurrence of the release/ event, responsibility and timing for implementation.**

Road tunnels are designed to manage emergency situations such as vehicle fires. However when such an emergency occurs it is an unplanned and unexpected event and outside of the control of the Operator.

The response to managing a tunnel fire event assumes poor air quality, and ventilation systems are designed to extract / emit smoke out of the tunnels when they occur.