Legacy Way in-tunnel air quality

Monthly trend report – June 2019

The table below sets out the in-tunnel air quality criteria for the Legacy Way tunnel as set out in the Environmental Authority (EPPR02587314).

- For the month of June 2019 an elevated visibility reading greater than the Visibility coefficient 0.005 m^{-1} was observed at sensor AQVx007 Eastbound on the 18th June at 2am with a reading of 0.0056. Refer to notes detailed below Figure 1. No other notifiable trends were observed.

Table 1: In-runnel air quality criteria

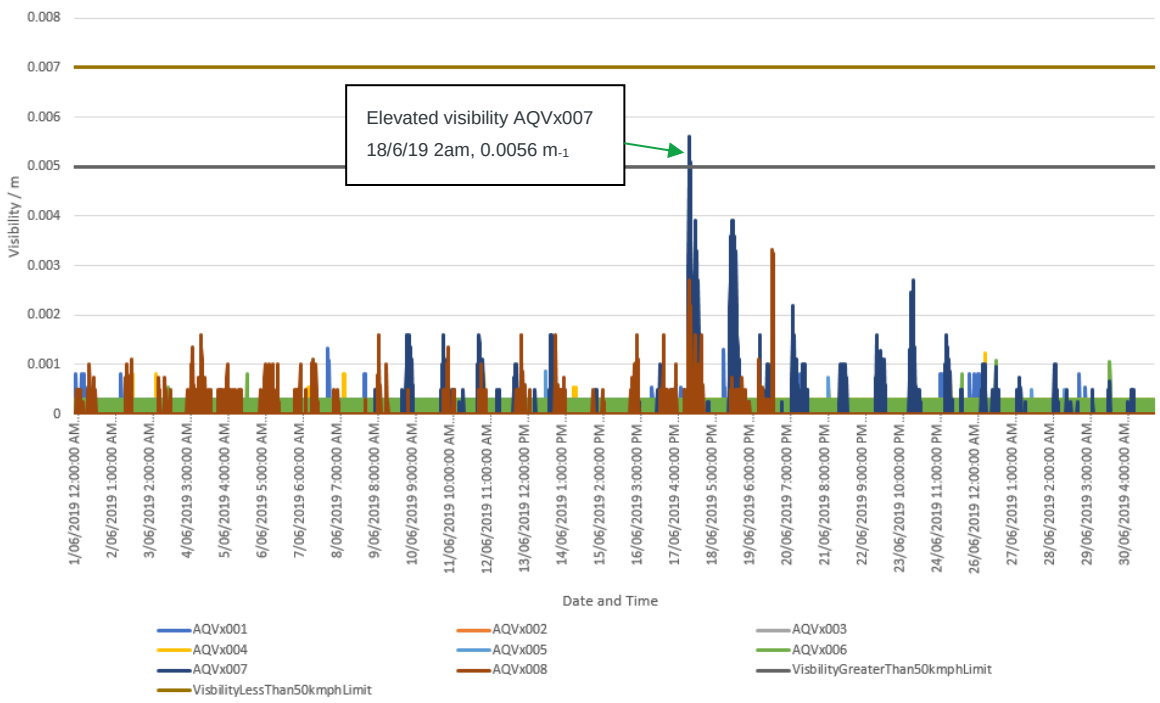
Parameter	Criteria
Carbon monoxide (CO)	70 ppm generally 90 ppm in peak traffic congestion
Nitrogen dioxide (NO_2)	1 ppm (average)
Visibility coefficient (K)	0.005 m^{-1} for free flowing traffic (greater than 50km/hr) 0.007 m^{-1} otherwise

Notes:

1. Monitoring and measuring protocols for each criteria as set out in the PIARC guidelines, as current January 2009.
2. Peak traffic congestion occures when traffic flows are less than 10 km/h.
3. Visibility coefficient (K-value) may fluctuate with peak conditions.

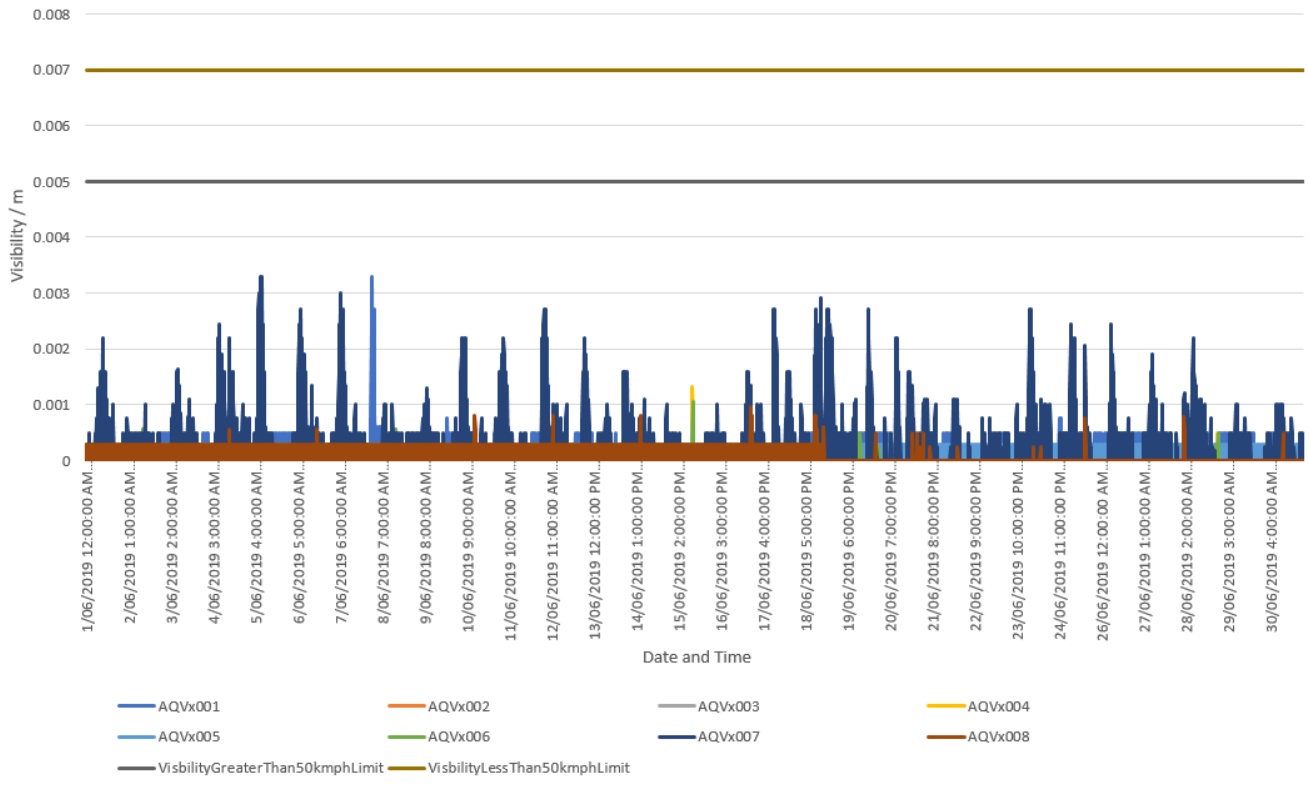
Visibility

Figure 1: In-tunnel visibility extinction coefficient – Eastbound (15 minute averaged data)



Notes: An elevated visibility reading greater than the Visibility coefficient 0.005 m^{-1} was observed at sensor AQVx007 Eastbound on the 18th June at 2am with a reading of 0.0056. Legacy Way control room operators received an air quality alert and increased the ventilation offset to 300m3/s. The readings stabilised to normal levels and the ventilation offset was re-adjusted. The elevated level is believed to have been related to the monthly Legacy Way tunnel maintenance closure that was occurring at the time.

Figure 2: In-tunnel visibility extinction coefficient – Westbound (15 minute averaged data)



Carbon monoxide

Figure 3: In-tunnel carbon monoxide (CO) concentrations – Eastbound (15 minute averaged data)

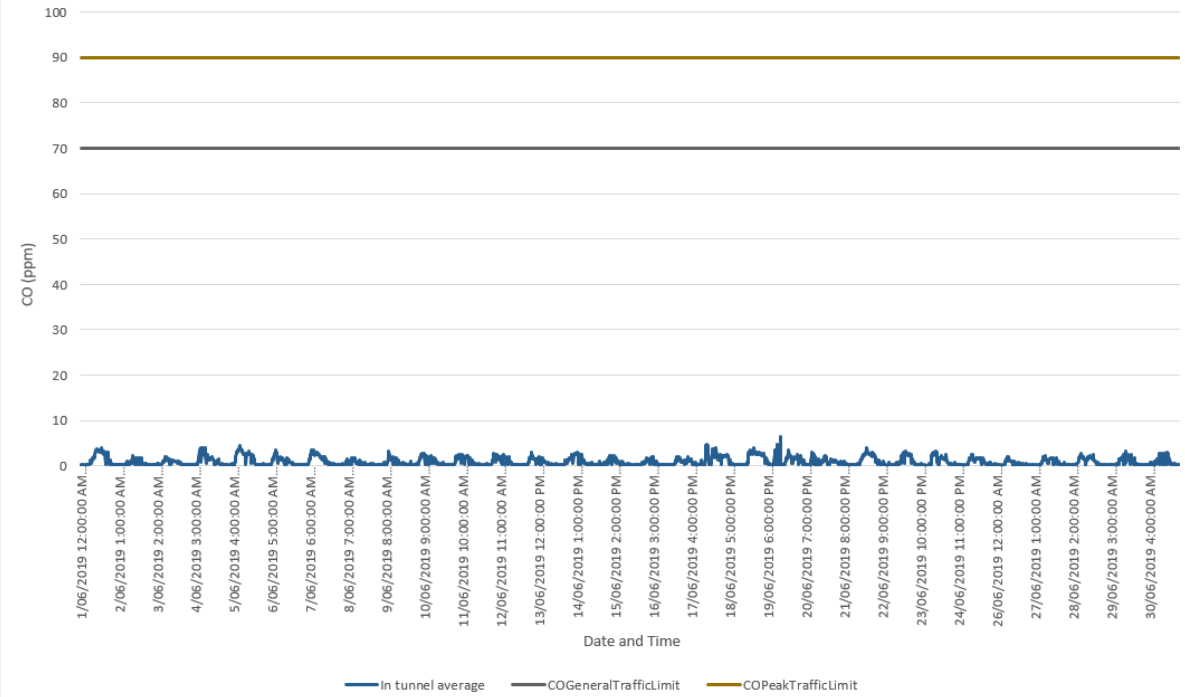
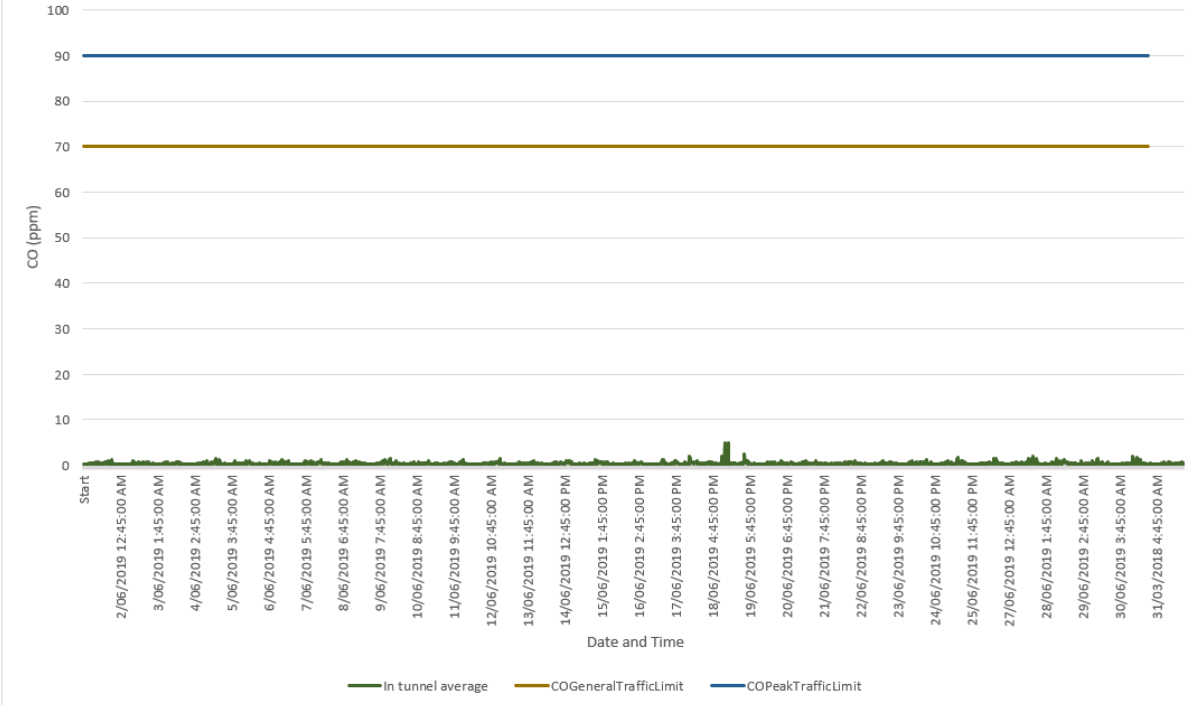


Figure 4: In-tunnel carbon monoxide (CO) concentrations – Westbound (15 minute averaged data)



Nitrogen dioxide

Figure 5: In-tunnel nitrogen dioxide (NO2) concentrations – Eastbound (15 minute averaged data)

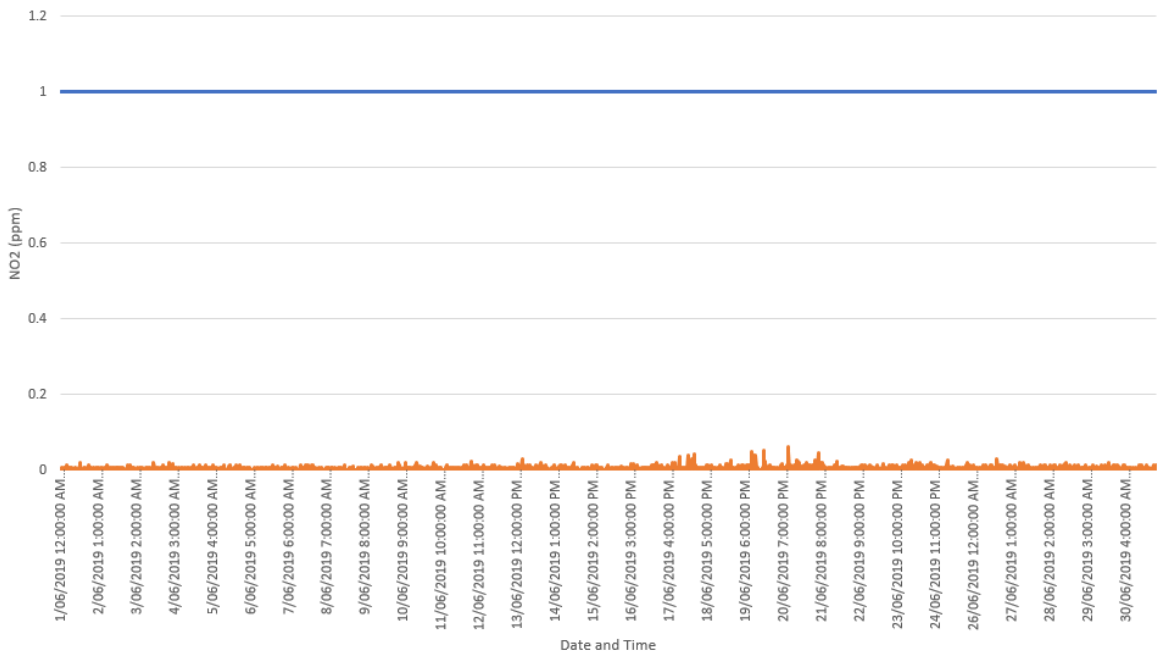


Figure 6: In-tunnel nitrogen dioxide (NO2) concentrations – Westbound (15 minute averaged data)