# CLEM7 in-tunnel air quality

## Monthly trend report – June 2019

The table below sets out the in-tunnel air quality criteria for the Clem 7 tunnel as set out in the Coordinator General's Report.

• For the month of June 2019 no notable trends have emerged.

Table 1: In-tunnel air quality criteria

Parameter	Criteria
Carbon monoxide (CO)	70 ppm generally 90 ppm in peak traffic congestion
Nitrogen dioxide (NO <sub>2</sub> )	1 ppm (average)
Visibility coefficient (K)	0.005 m <sub>-1</sub> for free flowing traffic (greater than 50km/hr) 0.007 m <sub>-1</sub> otherwise

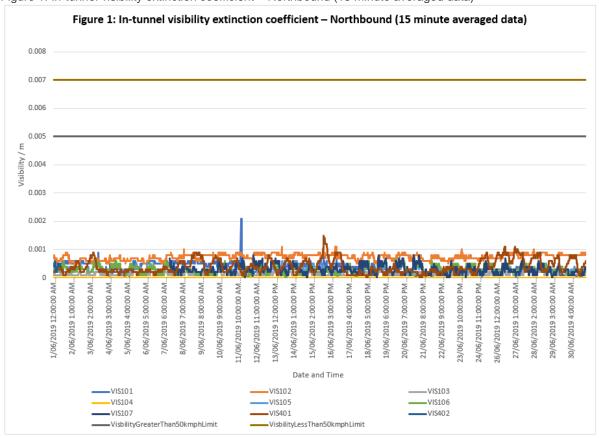
#### Notes:

- Monitoring and measuring protocols for each criteria as set out in the PIARC guidelines, as current December 2012.
- Tunnel sensor average concentrations reported for Carbon Monoxide and Nitrogen Dioxide
- 3. Peak traffic congestion occurs when traffic flows are less than 10 km/h.
- 4. Visibility coefficient (K-value) may fluctuate with peak conditions.

#### **CLEM7 IN-TUNNEL AIR QUALITY**

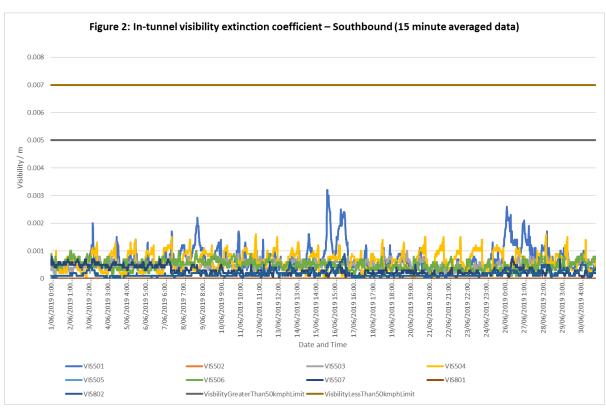
## Visibility

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



VIS107 data invalidated between 1/6/19 and 7/6/19 due to high baseline.

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



### Carbon monoxide

Figure 3: In-tunnel Carbon Monoxide (CO) Concentrations - Northbound (15 minute averaged data)

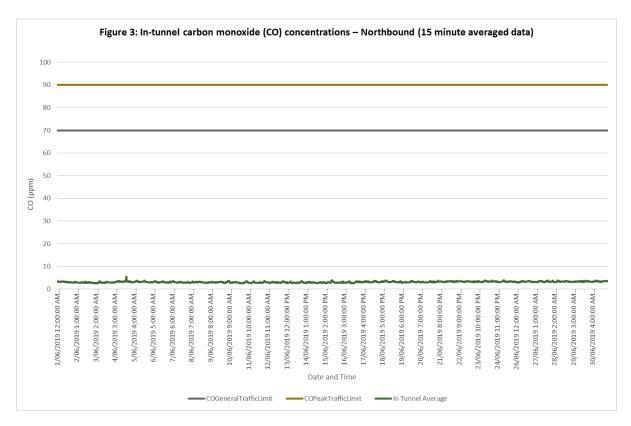
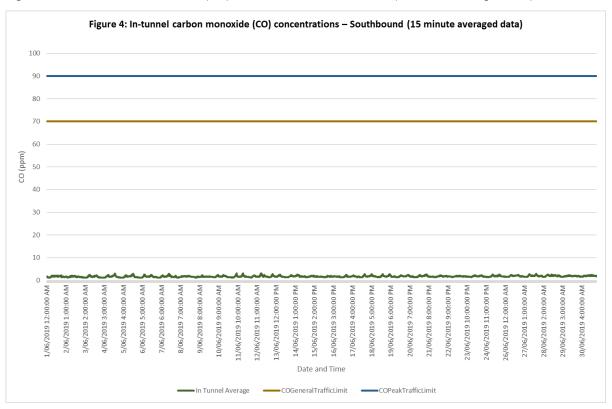


Figure 4: In-tunnel Carbon Monoxide (CO) Concentrations - Southbound (15 minute averaged data)



#### **CLEM7 IN-TUNNEL AIR QUALITY**

## Nitrogen dioxide

Figure 5: In-tunnel Nitrogen Dioxide (NO<sub>2</sub>) Concentrations - Northbound (15 minute averaged data)

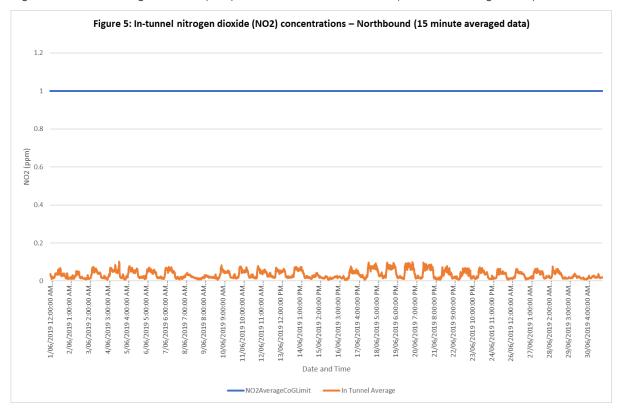


Figure 6: In-tunnel Nitrogen Dioxide (NO<sub>2</sub>) Concentrations - Southbound (15 minute averaged data)

