

**From:** [Barry Watson](#)  
**To:** [airpollutioninquiry](#)  
**Subject:** Inquiry into Air Pollution  
**Date:** Thursday, 15 April 2021 3:57:01 PM  
**Attachments:** [NEL FOI Summary.pdf](#)  
[EES Table 85.pdf](#)  
[TEOM Correction.pdf](#)  
[Vicki Kotsirilos Paper.pdf](#)  
[NSW Pollution Deaths.docx](#)  
[FOE UK Deisel Pollution.docx](#)  
[Western Suburbs AQ.pdf](#)

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## **To: The Parliament of Victoria – Inquiry into Air Pollution in Victoria 15/4/2021**

### **Air Pollution from Vehicles on the North East Link (NEL) and Other Surface Roads**

As a general observation, residents and others who live within 500 m of a major emission source are at particular risk of compromised health. Those further away less so, but would by no means be safe.

This would mean that many thousands of residents who live in closer proximity to the Eastern Freeway & Greensborough surface roads, could have their respiratory health significantly impacted as a direct consequence of the NEL project. A substantial increase in vehicle numbers is predicted for the NEL project totaling approximately 280,000 per day on opening in 2027. One of the principal reasons for a heightened adverse health effect is the topography of the Eastern Freeway reservation and surrounding area. It is essentially a valley which entraps pollution under certain climatic conditions like low wind speed and temperature inversion. High roads pollution events occur mainly in the autumn and winter months. Monitoring of roads air quality should exclude other influences like bushfires, burn offs etc.

### **Measurements of Air Pollution**

It is of particular concern that the “NEL FOI Summary” attached above shows that the State Environmental Protection Policy (SEPP AAQ) for particulate emissions is being exceeded on the Eastern Freeway at current traffic levels. The fine particles daily exceedances days (9 no) are highlighted. Some of these may have been caused by fire smoke, but not all. In addition, we know that the measured TEOM PM 10 data is under-measured on high pollution days (see attachment “TEOM Correction”), but has been not corrected. This is an issue of concern because the true health impact of PM 10 monitoring is misleading. One would expect that this issue of inaccurate monitoring of PM 10 will be fixed and not allowed to continue into the future by our EPA. Of special note also, is the fact that no proper SEPP AQM impact study was done in the Environment Effects Statement for the NEL Project. The EPA chose to do a “quazie” air quality impact study in the EES (see attachment “EPA Tim Eaton”) which has only participated in a process to muddy the waters and hide the Legislated SEPP non-compliance that will be caused by the NEL project. A proper SEPP AQM impact study should have been done in the EES, and still needs to be done, as recommended by Dr Ian Cowan in his submission to the NEL Panel Hearing. Dr Cowan raised air quality matters as still being in contention in his NEL IAC Panel Report 9.1.2 (i) as follows:

- Assessment Criteria.
- Accuracy of emission estimates.
- Inclusion of gradients of surfaces roads.
- Dust Resuspension (Secondary Particles).
- Influence of the introduction of electric vehicles to the fleet on dust emission levels.
- Importance of conversion of NO to NO2.

- Assessment indicates potential for exceedance of in tunnel air quality standards.
- Requirement for space within the design for retrofitting of mitigation technology.

The North East Link Project is collecting air quality data at five locations on the North East Link corridor including at Bellevue Primary School in Balwyn North, Trinity College in Bulleen, at the corner of Middleborough Road and the Eastern Freeway, the corner of Lower Plenty Road and the Greensborough Bypass and at the corner of Grimshaw Street and the Greensborough Bypass.

Legislated under the State Environmental Protection Policy (SEPP AAQ), no daily exceedances for Particle Pollution PM 10 and PM 2.5 are permitted. PM 10 is particulate matter 10 micrometers or less in diameter and PM 2.5 is particulate matter 2.5 micrometers or less in diameter and are otherwise known as fine particles. It is worth noting here, that PM 1 ultra fine particles are considered the worst emerging “killer particulate” pollutant, but health studies need more time to verify this. The Victorian EPA are failing to activate the SEPP Intervention process when exceedances of air quality 24 hr limits occur near some roads and freeways. The World Health Organization say the only safe level of particle pollution is zero. The threat to human health posed by particulate matter lies in its ability to penetrate bodily functions. This is especially the case with PM 2.5 particulate matter which can penetrate the lungs more deeply and may even enter the blood stream. These particles precipitate a wide range of health conditions, including premature death in people with heart or lung disease, aggravated asthma, decreased lung function, and increased respiratory symptoms. People with heart or lung diseases, children and older adults are most likely to be adversely affected by exposure to particle pollution. The North East Link project is refusing to release the data collected at the five above-mentioned locations to the public on the tendentious grounds that it is "confidential". I have obtained this data under Freedom of Information request “NEL FOI Summary” attached. The FOI data is for the period May to August 2019. Significantly the worst air quality was shown to be at Bellevue Primary School in Balwyn North.

Temperature inversion and low wind make sections of the Eastern Freeway more prone to “daily high pollution events” when low wind and temperature inversion occur, particularly Autumn & Winter months. Air Quality pollution will increase along NEL surface roads because diesel pollution from trucks will increase x 2.5 times (see attachment “EES Table 85”). Global emissions targets and health impacts are further worsened by the removal of 25,000 mature trees.

### **Diesel Emissions Referenced from “Western Suburbs AQ” Attached**

The health impacts of diesel exhaust emissions are of particular concern. As noted, most trucks and other heavy road vehicles use diesel. Diesel exhaust emissions are a declared Group 1 carcinogen.

Diesel vehicles emit significantly more pollution (oxides of nitrogen and particulate matter) than petrol vehicles per kilometre travelled. There is no safe level of exposure to these substances. Diesel emissions have been implicated in elevated risks of lung, bladder, liver, stomach and other organ cancers, and in an elevated risk of cardiovascular disease. According to one recent study, one in ten lung cancers are now found to be caused by outdoor traffic pollution. Heavy vehicles in Francis Street Yarraville (Figure 5.1) shows PM10 and PM2.5, which are the only particulate matter components currently monitored by the EPA, account for a minority of particulate emissions from diesel. Approximately 80–95 per cent of diesel particulates are PM1 or ultrafine particulate matter (less than 1.0 micrometer in diameter). As noted in Chapter 1, these are particularly damaging to human health, readily penetrating deep into the respiratory tract and

from there into the bloodstream and the body's organs. Even short-term exposure to diesel exhaust emissions can generate acute irritation of the eyes, throat and bronchial tubes, neurophysiological symptoms such as light-headedness and nausea, and respiratory symptoms such as coughing and phlegm.

#### **“Australian Government Department of Environment & Energy – National Clean Air Agreement Nov 2016” - Clause 9.7 Western Australia – Clean Run Program**

- The Department of Environment Regulation's Clean Run program aims to improve air quality in Western Australia by reducing vehicle emissions. It consists of targeted initiatives to reduce vehicle emissions including on-road vehicle emissions testing and smoky vehicle reporting.
- A remote sensing device (RSD) is used to: determine average fleet emissions and vehicle fleet trends over time; detect high emitting vehicles; and raise awareness of vehicle emissions among drivers. Roadside monitoring with the RSD was undertaken over twelve days in March and April 2016, collecting samples from over 20,000 vehicles.

#### **Deaths Caused by Pollution from Vehicles**

[Attachment “NSW Pollution Deaths”](#) highlights nationally 1700 vs 1300 deaths from road accidents. Whilst all Australian States are initiating actions to reduce road deaths from vehicle accidents, not much is being done to reduce deaths from vehicle pollution. Refer also [“FOE UK Diesel Pollution” attachment](#).

#### **Attachment “Vicki Kotsirilos Paper”**

Associate Professor Dr Vicki Kotsirilos AM has done an extensive report into pollution impacting human health. This report looks at all forms of vehicle pollution in detail and references regulators and regulation impacting on human health.

#### **Mitigation**

- EPA Vic must do a proper legislated SEPP AQM impact study for all major projects. NEL impact study must be done now for surface roads, ie Eastern Freeway and Greensborough Rd. The EPA exist to protect environmental law. The EPA should not to be manipulated by State Government. Their air quality contribution to the NEL EES is seriously flawed when compared to a proper SEPP AQM. Human health impact is being downplayed at a time when 1700 people per year in Australia die from vehicle pollution.
- Environmental Performance Requirements (EPR's) for NEL compliance must be overseen by the EPA because the Independent Environmental Reports are confidential thus allowing complaints to be ignored by NELP as part of the compliance process. A complaints line to the EPA is essential, and one would hope the EPA do their job from there.
- On high pollution days, ban diesel vehicles. Diesel fuel is the big emitter of fine particles. EPA know when high pollution events will occur. A similar approach to fire ban days in summer is needed for vehicle high pollution days near roads.
- All air quality PM 10 monitoring data being collected at various locations around Melbourne must be corrected for under measurement by the TEOM instrument ([see “TEOM Correction” attachment](#)).
- NEL chimney stacks on all tunnels must be filtered to remove emissions for health and

2050 clean emissions targets.

- Diesel to fuel to have a tax, say 10 cents per litre to subsidize costs of manufacturing and purchasing electric or hydrogen vehicles in the short term. Longer term prices of vehicles should drop as production numbers increase.
- Mature trees must be retained to protect health and achieve the 2050 cleaner emissions target.
- Strengthen emissions policing of vehicles as per the WA Clean Run program. Vic EPA should be resourced to enforce this.
- Adopt the world wide expert opinion that roads and freeways should not be built in creek valleys.
- Construct orbital freight depots around Melbourne's fringe (North, West, South East). Freight on rail from there to port reduces trucks in Melbourne making roads safer and air cleaner.
- Construct rail projects like Doncaster Rail to reduce car dependence in lieu of expanding roads that promote car use.
- Australian diesel fuel to be made cleaner to comply with the European Standards in the short term, with a longer term plan to eradicate diesel fuel completely.
- EPA to actively research and advise the community on Ultra Air Fine Particles PM 1 as studies determine and prove health impacts.

**NOTES:**

- Confidentiality of the above submission is not required.
- An opportunity to speak to the Panel and expand in more detail is hereby requested.

**Barry Watson (Stop North East Link Member) 15/4/2021**

