



Less trucks for the inner west

28th June 2018

CLEAN AIR FOR ALL VICTORIANS, VICTORIA'S AIR QUALITY STATEMENT

1. Introduction

The following submission is made on behalf of the Maribyrnong Truck Action Group (MTAG). MTAG is a resident-based community group campaigning to reduce truck numbers on residential streets in the inner western suburbs of Melbourne.

The submission focuses on the impacts of diesel pollution in Melbourne's inner west due to particulate emissions from trucks. The City of Maribyrnong has some of the country's highest levels of diesel pollution due to 22,000 trucks a day, driving within metres of homes, schools and child care centres.¹ These trucks service the Port of Melbourne, Australia's busiest container port, generating over 5 million truck movements each year on our narrow residential streets. Due to expansion of the Port of Melbourne, forward projections show that container trade will treble in the next 20 years.

Air quality monitoring conducted by the EPA in 2013 in Francis Street, Yarraville, showed air pollution levels are already higher than at any monitoring station in metropolitan Melbourne. Of most concern were the recorded levels of PM_{2.5}, which exceeded the annual advisory standard.² These ultra-fine particles are particularly dangerous to human health; they penetrate the walls of our lungs, make their way into the bloodstream and travel around our bodies, even getting into the brain.

The impacts of these trucks have had a devastating impact on the health of the communities of Footscray, Seddon, Kingsville and Yarraville. Health problems are consistent with heavy exposure to air pollution, including significant spikes in respiratory-related conditions such as asthma and early death from lung cancer. As these statistics demonstrate:

- Maribyrnong has the highest hospital admissions for respiratory ailments in Victoria for young people aged 3 to 19. The rate is 70% above the state average³ and up to 171% above the Australian average.⁴

¹ Vic Roads, Truck Curfews and the Inner West, <https://www.vicroads.vic.gov.au/business-and-industry/heavy-vehicle-industry/registration-permits-curfews-and-compliance/truck-curfews/truck-curfews-in-the-inner-west>

² EPA Victoria, Francis Street monitoring program – Final report, December 2013
<http://www.epa.vic.gov.au/~media/Publications/1546%201.pdf>

³ *Yarraville trucks linked to high asthma*, The Age Newspaper 2015

⁴ Australian Commission on Safety and Quality in Health Care data 2015

- Adolescent asthma rates in the City of Maribyrnong are 50% higher than the Victorian average.⁵
- Early death from lung cancer in the City of Maribyrnong is amongst the highest in Australia. We experience an age standardised rate of 49.4 when the Greater Melbourne rate is 23.3. This is despite our smoking rates being low.⁶

Other groups have also been sounding the alarm over air pollution in the City of Maribyrnong. In 2014, Environmental Justice Australia listed Yarraville in Australia's top twelve toxic hotspots for air pollution.⁷ In 2016, the Asthma Foundation of Victoria began a project called 'Puffing through the pollution' to support residents of Yarraville and the Maribyrnong LGA to better control and manage their asthma.

Studies have shown that communities living near ports have elevated rates of oropharyngeal cancer and certain lung cancers due to air pollution. People who breathe high levels of traffic-related air pollution have higher rates of cardiovascular disease, asthma and death, as well as reduced lung function.⁸ These studies would also apply to our situation, especially in the absence of any clean air initiatives such as a clean truck program or onshore power for idling ships.

If diesel emissions are allowed to rise exponentially with the projected increase in truck numbers, the health issues we are now facing will soon become a public health crisis.

⁵ Department of Education and Early Childhood Development, [Adolescent Community Profile](#), City of Maribyrnong 2010

⁶ Tolhurst, P., Lindberg, R., Calder, R., & de Courten, M. (2016). Australia's health tracker 2016: A report card on preventable chronic diseases, conditions and their risk factors: Tracking progress for a healthier Australia by 2025.

⁷ Clearing the Air: Why Australia Urgently Needs Effective National Air Pollution Laws. Environmental Justice Australia (2014)

⁸ Hricko, A., 2006, [Guest Editorial: Ships, Trucks, and Trains: Effects of Goods Movement on Environmental Health](#), U.S. National Library of Medicine, Environmental Health Perspectives,

2. Key Air Quality Issue to address in a Victorian Air Quality Strategy

MTAG believe that one of the key air pollution challenges facing Victoria is dealing with rising levels of diesel emissions. The use of diesel as a fuel has categorically been proven to be an environmental and public health disaster and must be addressed.⁹

Diesel is now a well established cause of lung cancer, with the World Health Organisation (WHO) classifying diesel as a class 1 carcinogen in 2012.¹⁰ There is a vast amount of medical evidence documenting other acute and chronic health effects from exposure to diesel exhaust. These include, but are not limited to, cardiovascular disease, stroke, cardiopulmonary disease, asthma, chronic obstructive pulmonary disease, hypertension, low birth weight babies as well as decreased lung development and function in children.¹¹

Children are particularly vulnerable to the impacts of diesel exhaust and fine particulate matter. Children exposed to higher amounts of traffic related air pollution are at a higher risk of developing asthma. Their lung growth is more likely to be stunted which is associated with a range of life-long detrimental cardio-respiratory health outcomes.¹²

Helena Molin Valdes, head of the United Nations' Climate and Clean Air Coalition has been quoted as saying "Soot from diesel vehicles is among the big contributors to ill health and global warming."¹³

In 2017 the president of the Australian Medical Association, Dr Tony Bartone, discussed the increasing body of evidence regarding significant health effects from diesel emissions, saying "We know that diesel emissions pose significant dangers to health. In particular, fine particles can contribute to asthma, as well as respiratory and circulatory illnesses."¹⁴

One only needs to look at the recent air pollution problems in cities like London and Paris to predict Melbourne's future if diesel emissions are allowed to rise unabated. In France and the United Kingdom, where eighty per cent of motorists drive diesel-powered cars, days of severe smog, where the elderly, children and asthmatics are advised to stay indoors have become more frequent and air pollution related health problems have increased dramatically.

⁹ The rise of diesel in Europe: the impact on health and pollution, 2015, John Vidal, <http://www.theguardian.com/environment/2015/sep/22/the-rise-diesel-in-europe-impact-on-health-pollution>

¹⁰ World Health Organisation, 2012, Press Release No 213 12 June, IARC Diesel Engine Exhaust Carcinogenic, http://www.iarc.fr/en/media-centre/pr/2012/pdfs/pr213_E.pdf

¹¹ Irina N. Krivoshto, BA, John R. Richards, MD, Timothy E. Albertson, MD MPH, PhD and Robert W. Derlet, MD, Journal of the American Board of Family Medicine, January – February 2008, "The Toxicity of Diesel Exhaust: Implications for Primary Care, <http://www.jabfm.org/content/21/1/55.full>

¹² The Effect of Air Pollution on Lung Development from 10 to 18 Years of Age, The New England Journal of Medicine, September 9, 2004, <https://www.nejm.org/doi/full/10.1056/NEJMoa040610>

¹³ Move is on to ban diesel cars from cities, <http://www.dw.com/en/move-is-on-to-ban-diesel-cars-from-cities/a-42747043>

¹⁴ Australia's love affair with diesel engines comes with a deadly legacy, January 12 2018, <https://www.news.com.au/technology/innovation/motoring/australias-love-affair-with-diesel-engines-comes-with-a-deadly-legacy/news-story/96bc8a6c3dd8522a3297ea7ae58d74e4>

The European Union's Environment Agency has reported that nitrogen oxides and fine particulate matter cause more than 430,000 premature deaths every year in the European Union, as well as exacerbate a range of health risks.¹⁵

Cities around the world are waking up to the detrimental health impacts of diesel pollution, stemming from a realisation that the fuel efficiencies they provide is not worth the air pollution and subsequent health problems they have caused. The growing number of cities and countries now planning to phase out diesel vehicles include:

- **France**, who started planning the phasing out of diesel vehicles in 2014 with the then Prime Minister, Manuel Valls saying "In France, we have long favoured the diesel engine. This was a mistake, and we will progressively undo that, intelligently and pragmatically."¹⁶
- **London**, who has introduced a Low Emission Zone in Greater London to encourage the oldest most polluting heavy diesel vehicles to become cleaner by only allowing trucks that are Euro 4 and higher. The Government is also preparing to introduce an Ultra Low Emission Zone in Central London by 2019 whereby trucks will have to be Euro 6 to travel in the zone without paying a charge. The Ultra-Low Emission Zone will be expanded to a greater area by 2021.
- **Hamburg**, who have begun only allowing Euro 6 vehicles on two streets that are heavy freight routes.¹⁷
- **Rome**, who is planning to ban diesel cars from the City Centre by 2024 with the Mayor, Virginia Raggi saying "if we want to intervene seriously, we have to have the courage to adopt strong measures".¹⁸
- **Madrid, Athens and Mexico City**, who are all banning diesel cars from their city centres by 2025.¹⁹

In Australia however the numbers of diesel vehicles have grown rapidly over the last ten years and now make up 25% of all vehicles on our roads. The Victorian Government must ensure that we don't get to Europe's point of severity before addressing this crucial public health issue.

¹⁵ European Environment Agency, 03 June 2016,

<https://www.eea.europa.eu/media/newsreleases/many-europeans-still-exposed-to-air-pollution-2015>

¹⁶ Drive.com.au, 'French diesel ban could be first nail in the coffin for pollution oil-burning engines', December 2, 2014, <http://www.drive.com.au/motor-news/france-wants-to-phase-out-diesel-cars-20141202-11yekb.html>

¹⁷ Hamburg becomes first German city to ban older diesel cars, 24 May 2018, The Guardian, <https://www.theguardian.com/world/2018/may/23/hamburg-first-german-city-ban-older-diesel-cars-air-quality-pollution>

¹⁸ Rome to ban diesel cars from city centre by 2024, The Guardian, 28 February 2018, <https://www.theguardian.com/environment/2018/feb/28/rome-to-ban-diesel-cars-from-city-centre-by-2024-italy>

¹⁹ Mexico City, Paris, Madrid, Athens to Ban Diesel Vehicles, Huffington Post, 12 May 2016, https://www.huffingtonpost.ca/2016/12/05/diesel-ban-4-cities_n_13431640.html

3. MTAG's suggestions for a Victorian Air Quality Strategy

3.1 Measures specific to trucks in the City of Maribyrnong:

3.1.1 Phase out old trucks

In 2014 the Truck Industry Council estimated in a submission to government on air quality that 50% of trucks in Australia's cities are pre-1995, with no exhaust emission standards. One pre-1995 truck engine emits sixty times the diesel particulate matter of a similar size and power engine in a post-2007 truck. These less reliable older trucks become too costly to maintain on long distance operations and 'typically these trucks are brought back into city operations around ports and construction sites'.²⁰

While the rest of the western world has a truck fleet with an average age of 5 - 9 years, the Australian truck fleet has an average age of 13.92 years.²¹ In the United States, many of these old and highly polluting trucks would have been upgraded or replaced by now through the US EPA's National Clean Diesel Campaign, aiming to reduce the pollution emitted from diesel engines.²²

In 2006 the Ports of Long Beach and Los Angeles implemented a Clean Trucks program which initially banned all pre-1989 trucks from entering the port. By 2012 all pre-2007 trucks were banned from the ports. In its first year, the program reduced the rate of port truck emissions by an estimated 70 percent. When the program was fully implemented in 2012, port truck emission were reduced by more than 80 percent.²³ This all happened during a period of significant growth at the ports.

With Australia's largest container port, Victoria must catch up to the rest of the developed world in phasing out older highly polluting trucks and replacing them with post-2007 trucks with modern strict emissions standards.

3.1.2 Fund innovations in alternative fuels for trucks

There has already been a huge shift towards sustainable and cleaner trucks around the world, particularly for short haul trips. These include electric trucks, hydrogen trucks and gas powered trucks. As the world moves away from fossil fuels it is essential that these low emission technologies are encouraged in Victoria.

3.1.3 Put more freight on rail

Victoria must commit to an ambitious target to get freight onto rail. This includes fast tracking the Port Rail Shuttle, ensuring that the intermodal hubs can be accessed from a freeway without trucks needing to travel through residential areas.

3.1.4 Implement more truck bans and curfews

Implement truck bans and curfews to stop non-local trucks rat running down residential streets, especially where there are schools, kindergartens and child care centres.

²⁰ Truck Industry Council submission to the Proposed variation to the National Environment Protection (Ambient Air quality) Measure in relation to the standards for particles, October 2014.

http://www.environment.gov.au/submissions/nepc/aaqnepm/55_truck_industry_council.pdf

²¹ Truck Industry Council website, <http://www.truck-industry-council.org/>

²² United States Environmental Protection Agency, National Clean Diesel Campaign Fact Sheet, <http://westcoastcollaborative.org/files/outreach/NationalCleanDieselCampaign.pdf>

²³ Port of Los Angeles, Clean Truck Program, https://www.portoflosangeles.org/ctp/idx_ctp.asp

3.1.5 Address land use issues that result in shipping containers being transported through residential areas

Move container yards to areas that won't require containers being transported through residential areas. This could mean moving them to industrial areas better serviced by rail and freeways. Container yards must also be moved to the old Footscray Market site, significantly reducing the distance the containers need to travel.

3.1.6 Implement air pollution protection measures at impacted schools

Thousands of children are heavily impacted by air pollution in the City of Maribyrnong while at school, kinder or child care. The US EPA provides strategies for school communities to reduce traffic-related pollution exposure at schools along corridors with significant trucking traffic.²⁴ The Victorian Government needs to fund schools on heavy trucking routes to implement similar mitigation measures to reduce the children's exposure.

In the City of Maribyrnong, relief from the trucks on four key truck routes won't come until 2022 when the West Gate Tunnel is built. Schools, kindergartens and child care centres on or near these routes need urgent measures implemented immediately. These could include installing air filtration systems, roadside barriers including vegetative barriers, establishing anti idling policies and disallowing non-Euro 5 trucks nearby.

The Victorian Government should instruct the EPA to develop a guideline that includes suggestions for reducing air pollution exposure when it already exists in heavy traffic routes.

3.1.7 Introduce air pollution buffer zones into the Victorian Planning Scheme

The Victorian Government should introduce controls into the Victorian planning scheme that can deal with point-source air pollution such as vehicle emissions. This could include buffer zones that can be applied to transport corridors where air quality standards do not meet agreed standards. At the very least, these buffers should restrict the development of new "sensitive uses" such as schools and child care centres within the buffer to minimise our most sensitive community members' exposure to vehicle pollution.

The Victorian Government should instruct the EPA to develop a guideline that recommends separation distances from heavy traffic pollution. This guideline can then inform the air pollution buffer zones that are introduced into the planning scheme.

Alternately, Victoria could adopt similar measures to the recommendations of the Californian Department of Education, who recommend a buffer of 450 metres from major roads to schools. This could also apply to child care centres and kindergartens.

A child care centre has recently been approved and is currently being built on Melbourne's most polluted intersection – the corner of Williamstown Road and Francis Street, Yarraville. There is little set back to the building from the road meaning thousands of trucks a day will run only metres from its front door and rooftop play area.

If air pollution buffer zones were in the Victorian Planning Scheme this would rightly never have been approved.

²⁴ US EPA Best Practices for Reducing Near-Road Pollution Exposure at Schools, <https://www.epa.gov/schools/best-practices-reducing-near-road-pollution-exposure-schools-publication>

3.1.8 Provide a way for the community to report smoky trucks

There is currently no official way for the community to report a smoky truck. The EPA used to offer this service, but now only caters to trucks less than 4.5 tonnes. In Melbourne's inner west, with 22,000 trucks a day, many of which are old and unroadworthy, this is a concern. MTAG has had to fill the gap, providing an online form which sends the information onto VicRoads.²⁵ We are told they will add the truck to a list of vehicles to look out for, and when intercepted they will assess it and deal with any roadworthy issues that may be causing the excessive smoke. However this is not at the level of investigation previously provided by the EPA and it absolutely should not be up to an unfunded volunteer community group to provide this service to the Victorian community.

3.2 Measures specific to the Port of Melbourne

Irrespective of infrastructure built to take trucks off residential streets, the City of Maribyrnong will still be adjacent to the Port of Melbourne and major freeways. Studies have shown that communities living near ports have elevated rates of oropharyngeal cancer and certain lung cancers. People who breathe high levels of traffic related air pollution have a higher rate of cardiovascular disease, asthma and death as well as reduced lung function.²⁶ The City of Maribyrnong will still suffer these health effects from the vast amount of diesel pollution emanating from the Port of Melbourne.

The US EPA has implemented a range of Clean Ports Initiatives to cut diesel emissions at American ports and protect those who work there and live nearby.²⁷ This combined with California's strong air pollution laws and some concerted efforts at specific ports such as the Ports of Long Beach and Los Angeles, have resulted in some highly significant and beneficial public health effects. Studies have proven that children in those impacted areas have improved lung function and lung capacity, indicating that the clean air measures have been effective.²⁸ As the Long Beach City Health Officer Dr. Mitchell Kushner says "These lower emission levels translate into major public health benefits and lead to a more vibrant and healthy community".²⁹

In 2017 the ports of Long Beach and LA announced their new Clean Air Action Plan, which builds on the work they have done since 2006 to slash pollution emanating from the ports. The new plan identifies strategies to reduce pollution from every source, including ships, trucks, trains,

²⁵ Maribyrnong Truck Action Group, Smoky trucks report, <http://mtag.org.au/smoky-trucks-report/>

²⁶ Hricko, A., 2006, Guest Editorial: Ships, Trucks, and Trains: Effects of Goods Movement on Environmental Health, U.S. National Library of Medicine, Environmental Health Perspectives, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1440794/>

²⁷ United States Environmental Protection Agency, National Clean Diesel Campaign, Ports & Marine, <http://www.epa.gov/cleandiesel/sector-programs/ports-overview.htm>

²⁸ W. James Gauderman, PhD. Robert Urman, M.S, Edward Avol, M.S, Kiros Berhane, PhD. Rob McConnell, MD, Edward Rappaport, MS, Roger Chang, PhD, Fred Lurmann, MS, and Frank Gilliland, MD, PhD, The New England Journal of Medicine, March 2015, 'Association of Improved Air Quality with Lung Development in Children, <http://www.nejm.org/doi/full/10.1056/NEJMoa1414123#t=articleTop>

²⁹ Port of Long Beach Surpasses Air Pollution Reduction Milestones Set for 2014, 2015, Stephanie Rivera, http://lbpost.com/business/trade-transportation/2000007289-port-of-long-beach-surpasses-air-pollution-reduction-milestones-set-for-2014?utm_content=buffer0e35a&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

cargo-handling equipment, and harbour craft.³⁰ Under the plan, most of the trucks servicing the port will be near-zero emissions by 2024 and zero-emissions by 2036.³¹

The Victorian Government must encourage and help fund and facilitate similar clean air initiatives at the Port of Melbourne including:

3.2.1 A Clean Trucks Program

As already discussed, the Truck Industry Council has estimated that 50% of trucks in Australia's cities are pre-1995, with no exhaust emission standards. One pre-1995 truck engine emits sixty times the diesel particulate matter of a similar size and power engine in a post-2007 truck. These less reliable older trucks become too costly to maintain on long distance operations and 'typically these trucks are brought back into city operations around ports and construction sites'.³²

Not only have the Ports of Long Beach and Los Angeles successfully banned all pre-2007 trucks from entering the port, drastically cutting pollution, they are now implementing much stronger measures as part of their Clean Air Action Plan. This includes a new Clean Trucks Program that uses fees on trucks entering port terminals and other mandates to phase out the oldest, dirtiest diesel trucks, transition to cleaner natural gas models, and ultimately switch to electric and other zero-emissions technologies by 2036.

Health benefits that come from upgrading the trucking fleet have been proven for the communities living near the Ports of Long Beach and L.A.³³

With Australia's largest container port, Victoria must catch up to the rest of the developed world in phasing out older highly polluting trucks and replacing them with post-2007 trucks with more modern emission standards.

3.2.2 Onshore Power

Every ship that currently docks at the Port of Melbourne idles on low-grade diesel for the duration of their time in port. Onshore power is an emissions control measure that provides a connection to the local landside grid, rather than utilising the ship's engines when at berth, preventing a large amount of diesel emissions entering the airshed and impacting on the health of nearby communities. Onshore power is now law in California.

3.2.3 Clean Shipping Programs

As part of the Ports of Long Beach and L.A.'s 2017 Clean Air Action Plan, financial incentives will be offered to ships with the newest engines or equivalent NO₂ reducing technology. Ships are also encouraged, through cheaper docking fees, to slow down in port, burning less fuel and resulting in fewer emissions. As far as we are aware, there are no incentives or programs to reduce pollution from shipping at the Port of Melbourne.

³⁰ San Pedro Bay Ports Clean Air Action Plan, <http://www.cleanairactionplan.org/>

³¹ L.A., Long Beach ports adopt plan to slash air pollution and go zero-emissions, November 2nd 2017, <http://www.latimes.com/local/lanow/la-me-ports-air-quality-20171102-story.html>

³² Truck Industry Council submission to the Proposed variation to the National Environment Protection (Ambient Air quality) Measure in relation to the standards for particles, October 2014. http://www.environment.gov.au/submissions/nepc/aagnepm/55_truck_industry_council.pdf

³³ Southern California's reduction in smog linked to major improvement in children's health, Science Daily, April 12, 2016, <https://www.sciencedaily.com/releases/2016/04/160412160352.htm>

3.2.4 The phasing out of diesel equipment

Pollution from all diesel operated cargo-handling equipment should be reduced to reduce impacts on neighbouring communities. As part of the Ports of Long Beach and L.A.'s 2017 Clean Air Action Plan, pollution at every source will be reduced. This includes all cargo-handling equipment, many of which are old and operate on diesel. Similar measures at the Port of Melbourne would help to protect nearby communities from diesel pollution.

3.3 Measures specific to road projects such as the West Gate Tunnel Project (WGTP):

Air pollution impacts must be taken more seriously when building major road projects such as the West Gate Tunnel Project (WGTP). The WGTP EES contained significant omissions around air quality mitigation measures including:

3.3.1 Tunnel filtration

The Environmental Effects Statements for road tunnels in Victoria must comprehensively examine the latest technologies around tunnel filtration and provide evidence that a range of suppliers have been approached for the most recent correct specifications and costs.

MTAG, in their submission to the WGTP EES, exposed the fact that the EES relied on out of date data on filtration with grossly misleading information around costs and efficiencies.³⁴ Dr. Lyn Denison, air quality scientist and advisor to the WGTP Inquiry and Advisory Committee, agreed with MTAG saying that the EES did not examine the most recent international material on tunnel filtration.

Other expert witnesses who called for filtration in the WGTP included Associate Professor Lou Irving, Director of Respiratory and Sleep Medicine at Royal Melbourne Hospital, Professor Garry Anderson, Director of the University of Melbourne Lung Health Research Centre and Dr. Diane Keogh, Air Quality Scientist at the Queensland University of Technology.

The Inquiry and Advisory Committee agreed with MTAG and the experts, recommending filtration for the WGTP.³⁵ It was extremely disappointing that the Government didn't accept this recommendation, stating that filtration "will do little to improve local air quality".

What this argument fails to take into account is the nature and composition of what is coming out of the ventilation stacks. The ventilation emissions would be almost entirely made up of vehicle emissions and therefore far more toxic than the equivalent amount of background particulate matter. Background particulate matter is primarily made up of dust and salt spray, not carcinogenic particulates from combustion engines. Removing this ventilated particulate matter from the airshed means removing the pollution that is most harmful to human health.

³⁴ MTAG submission to the West Gate Tunnel Project Environmental Effects Statement, 2017, http://mtag.org.au/wp-content/uploads/2017/07/WGTP-EES---MTAG-submission_FINAL_2017-1.pdf

³⁵ Inquiry and Advisory Committee Report, West Gate Tunnel Project, 23 October 2017, [http://dsewebapps.dse.vic.gov.au/Shared/ATSAttachment2.nsf/\(attachmentopen\)/F6B13ECBA228256FCA2581EF0075089F/\\$File/West+Gate+Tunnel+Project+IAC+Report.pdf](http://dsewebapps.dse.vic.gov.au/Shared/ATSAttachment2.nsf/(attachmentopen)/F6B13ECBA228256FCA2581EF0075089F/$File/West+Gate+Tunnel+Project+IAC+Report.pdf)

Without a filtration system, this toxic particulate matter will enter the airshed and inevitably someone, somewhere will breathe it in, no matter how much it is dispersed.

Even a small reduction in pollution is associated with significant health gains, particularly in areas of poor air quality. A road tunnel provides a unique opportunity to remove fine and ultrafine particles from Melbourne's airshed and the Victorian Government must not pass up the opportunity to reduce the burden of poor air quality in areas such as Melbourne's inner west.

3.3.2 Pollution barriers

Green pollution barriers must play a part in road planning to mitigate pollution impacts on nearby residents. There are many studies on the effectiveness of vegetative barriers, showing a high effectiveness at trapping pollution if the correct plant types are chosen and planted with the specific intent of reducing pollution. Studies have also proven the effectiveness of combining solid barriers with vegetation and effective combinations of vegetative and non-vegetative barriers should decrease ambient surface concentrations on the non-road side.

3.3.3 Buffers to sensitive land use

Road planning in Victoria should consider the impacts on sensitive land uses and apply more effective buffers to existing sensitive land uses. Victoria should adopt similar measures to the recommendations of the Californian Department of Education, who recommend a buffer of 450 metres from major roads to schools. This should also apply to child care centres and kindergartens.

Where buffer separation between new or expanded roads and sensitive land uses is not possible or practical, construction of the new road / road expansion should be contingent on the implementation of mitigation measures to reduce exposure to any resulting air pollution at sensitive land uses such as schools, kindergartens and child care centres on or near the route. These could include installing air filtration systems, or roadside barriers including vegetative barriers.

3.3.4 Monitoring near the tunnel portals

Victorian road tunnels must come with permanent air monitoring stations near both portals that deliver open, timely and transparent information to the public. It is imperative that monitoring is in place to ensure no breaches of the project's promise to "achieve zero portal emissions" are experienced. In the case of the WGTP, the public will not have confidence that a private company will volunteer reports of emission breaches. Any monitoring needs to be overseen by the Victorian EPA or other community approved entity and all data made live on the public record.

3.3.5 Clarity around ongoing monitoring

For major road projects such as the WGTP, clarity is required by the community around ongoing monitoring and mitigation actions for when air quality standards are breached.

3.4 General Air Quality Issues:

There are a number of more general air quality issues that need addressing:

3.4.1 Strengthen Victoria's air pollution laws

The best way to protect our health is to significantly strengthen Victoria's air pollution laws. Without the necessary legal framework to protect us it's difficult for the community to have faith that the measures required to protect our health will actually be implemented.

The 2013 Senate Inquiry into Air Pollution heard from many health and air pollution experts that our current air quality standards do not protect human health.³⁶

While it is commendable that Victoria is leading the way on the new standards, the process must be expatiated to ensure that the community is protected sooner.

3.4.2 Adopt an air pollution exposure reduction framework with specific reduction targets

Medical experts including the Australian Medical Association and the WHO report that air quality standards do not protect human health.³⁷ The Australian Medical Association made the recommendation in their submission to the 2013 Senate Inquiry into Air Pollution: "Air quality management policy should be based on reducing human exposure to air pollution, rather than simply complying with air quality standards. This requires linking air monitoring into pollutant reduction targets".³⁸

In 2014, Associate Professor Adrien Barnett of Queensland University of Technology quantified the number of deaths that would occur in Sydney, Melbourne and Brisbane if PM levels rose to the Air NEPM standards. He found that this would cause the deaths of an extra 6000 people each year and hospitalise a further 20,700 people per year.³⁹

For many pollutants such as diesel exhaust, health impacts occur at very low levels. Significant health benefits would occur if air pollution is improved over time below the NEPM standards, not kept at the standards.

Standards also do not take into account those more vulnerable to the effects of air pollution and the cumulative effect of exposure over a long period of time, for example a child spending seven years at a primary school on a major truck route.

Standards should not be seen as a level that can be 'polluted up to'. The only way to protect human health in susceptible communities and air pollution hot spots is to adopt an air pollution exposure reduction framework with specific reduction targets.

³⁶ Commonwealth of Australia, 2013, Senate Inquiry 'Impacts on health of air quality in Australia' http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Community_Affairs/Completed_inquiries/2010-13/airquality/report/index

³⁷ World Health Organization. (2006). Air quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide: global update 2005

³⁸ Australian Medical Association, Inquiry into the impacts on health of air quality in Australia

³⁹ Adrian G. Barnett, Australian and New Zealand Journal of Public Health, 30 September 2014, 'It's safe to say there is no safe level of air pollution', <http://onlinelibrary.wiley.com/doi/10.1111/1753-6405.12264/abstract>

3.4.3 Take ultrafine particles into account when measuring air pollution

There is enough current scientific evidence to demonstrate that ultrafine particles negatively impact health. As the world becomes more aware of the dangers of air pollution, Victoria must take a precautionary approach to future-proofing communities from exposure to ultrafine particles.

3.4.4 Improve the location of air monitors

Current monitoring under the Air NEPM is designed to measure the average air pollution that a community is exposed to. This does not show the true levels of air pollution where people are most heavily exposed, where pollution hot spots are or where vulnerable people work and live. For example, in the City of Maribyrnong, the air monitoring station is in a park in West Footscray and is not close to any major truck routes. Residents who live near the most polluted and impacted streets in the City of Maribyrnong cannot see what they are exposed to. The EPA needs to expand the state's permanent air pollution monitoring network, adding locations that are identified by community groups and other stakeholders as pollution hotspots.

3.4.5 Improve access to air monitoring data

The public needs improved access to EPA air monitoring data. Access to air pollution information in Victoria is grossly inadequate and somewhat meaningless. In NSW the public can search and download air pollution data sets for all of the EPA monitoring stations within a month of the data being collected. In Victoria however, we have to lodge a request for the data and it invariably takes many months, emails and phone calls to eventually get it.

Having access to live data only does not give a community any meaningful information. The public must be able to easily access historical data to properly assess the readings in their area and identify any trends and changes over time.

4. Conclusion

Australia is lagging behind the rest of the developed world in recognizing and reducing the health impacts of diesel emissions. The Victorian Air Quality Strategy is an opportunity to end the delays and commit to real actions that will make a difference to Victorian communities like Melbourne's inner west.

In summary, the actions that MTAG believes will help improve future air quality, particularly in the City of Maribyrnong, include:

1. Take steps to phase out diesel vehicles
2. Phase out old trucks
3. Fund innovation in alternative fuels for trucks
4. Put more freight on rail
5. Implement more truck bans and curfews
6. Address land use issues that result in shipping containers being transported through residential areas
7. Implement air pollution protection measures at impacted schools
8. Introduce air pollution buffer zones into the Victorian Planning Scheme
9. Provide a way for the community to report smoky trucks
10. Encourage and help fund and facilitate clean air initiatives at the Port of Melbourne
11. Address air quality mitigation measures associated with the West Gate Tunnel Project (WGTP), including: tunnel filtration; pollution barriers; buffers to sensitive land use; monitoring near the tunnel portals; and clarity around ongoing monitoring
12. Strengthen Victoria's air pollution laws
13. Adopt an air pollution exposure reduction framework with specific reduction targets
14. Take ultrafine particles into account when measuring air pollution
15. Improve the location of air monitors
16. Improve access to air monitoring data