HEALTH IMPACTS OF THE PROPOSED MORDIALLOC FREEWAY-AIR POLLUTION

By Beatriz Prieto
March 2019
SUBMISSION CONTENT

• Acknowledgement of Country.
• Introduction-WHO video (1’28”)
• Why the Mordialloc Freeway must not go ahead.
• Legal framework-International and National-
  THE GOVERNMENT’S COMMITMENTS
• Pollutants, motor vehicles and adverse health effects that the proposed Mordialloc Freeway will cause.
• Air Pollution and Adverse Health Effects of building the Mordialloc Freeway.
SUBMISSION CONTENT

• Air Pollution and **Adverse Health Effects of building the Mordialloc Freeway in CHILDREN AND TEENAGERS.**
• Air Pollution and Adverse Health Effects-**Distance does matter.**
• There are no safe levels of pollution.
• **Healthy and Efficient ALTERNATIVES to the proposed Mordialloc freeway and Governmental recommendations supporting these alternatives.**
• Conclusion-Please consider all the evidence presented during the hearing and abandon the proposed Mordialloc Freeway.
• References (please refer to the written submission for more detail)
• Gratitude to the EES Committee and to all those present.
WORLD HEALTH ORGANISATION (WHO)

• Video-

WHO: Breathe Life - How air pollution impacts your body.

https://youtu.be/t7MZE6ttPoA
WORLD HEALTH ORGANISATION (WHO)
WHY THE PROPOSED MORDIALLOC FREEWAY MUST NOT GO AHEAD

• Mordialloc Freeway will have a life-limiting and life threatening impact on the health of people. This has been proven by an exhaustive number of international and national medical and scientific evidence, as well as multiple governmental reports and studies.
WHY THE PROPOSED MORDIALLOC FREEWAY MUST NOT GO AHEAD

• The fwy is proposed to be built at less than 60m from houses, shops, schools, retirement villages, clinic and childcare.
  – Dingley commercial-25m
  – Waterways residential-30m
  – Aspendale Gardens residential-42 & 73m
WHY THE PROPOSED MORDIALLOC FREEWAY MUST NOT GO AHEAD

• The fwy is proposed to be built at less than 60m from houses, shops, schools, retirement villages, clinic and childcares.
  – Dingley residential-36m
  – Retirement Village Chelsea Heights-30m
  – Retirement Village Aspendale Gardens-32m
WHY THE PROPOSED MORDIALLOC FREEWAY MUST NOT GO AHEAD

• The Mordialloc Freeway is proposed to be built at less than 60m from houses, shops, schools, retirement villages, clinic and childcare.
  – Commercial Chelsea Heights-47m
  – Childcare Aspendale Gardens-32m
(Source: EES for the Mordialloc Fwy.)
EES omitted to mention this Childcare on the document.
WHY THE PROPOSED MORDIALLOC FREEWAY MUST NOT GO AHEAD

• Saving “ten minutes” of unproven time at the cost of people’s health and lives:
  – **CHILDREN**: asthma, reduce lung growth, cancers, respiratory and cardiac disease for the rest of a shorten life just because they live close to a fwy.
  – **ADULTS**: cardiovascular diseases, dementia and cancers that will lead them to a early death.
  – **PREGNANT WOMEN**: gestational diabetes and preclampsia.
WHY THE PROPOSED MORDIALLOC FREEWAY MUST NOT GO AHEAD

• Saving “ten minutes” of unproven time at the cost of people’s health and lives:
  – **UNBORN BABIES AND BABIES**: low birth weight, early birth, changes in the developing brain that might lead to autism, Attention Deficient Hyperactive Disorder (ADHD) and schizophrenia.
  – **TEENAGERS**: lung dysfunctions including asthma and cancer.
LEGAL FRAMEWORK- THE GOVERNMENT’S COMMITMENTS

• The World Health Organization states that:
  • “Air pollution is an invisible killer...It is the single biggest environmental health crisis we face.”
  • “To be able to breathe a clean air is a basic human right.” (WHO- Constitution, 1946)
  • “Our health is directly related to the health of the environment we live in.” (Dr. Tedros, Director-General of the WHO, 2018)
LEGAL FRAMEWORK-THE GOVERNMENT’S COMMITMENTS

• The Australian Government (Australian Institute of Health and Welfare) in 2018 support and affirms this strong link:
  “The health of the Australian population is linked to the state (or health) of our natural environment-the air we breathe, the water we drink and bathe in, and the soils our food grow in.” (Environment Protection Authority Victoria, 2018)
LEGAL FRAMEWORK- THE GOVERNMENT’S COMMITMENTS

The Governments and authorities have a duty of care, are responsible to protect public health and are accountable for it.
LEGAL FRAMEWORK- THE GOVERNMENT’S COMMITMENTS

• Australia has signed and ratified various International conventions and documents about biodiversity in the last few years:
  – 2030 Agenda for Sustainable Development. (UN, 2015)
  – Convention on the Conservation of Migratory Species (CMS)- UN Environment Program.
  – Paris Agreement (2015) under the United Nations Climate Change Convention (UNFCCC)- Australia is required to consider the health co-benefits.
LEGAL FRAMEWORK- THE GOVERNMENT’S COMMITMENTS

• At a National level, significantly important:
  – The National Clean Air Agreement (2015), by Environment Minister to address “...the impacts of air pollution on human and environmental health and to ensure the community continues to enjoy clean air.” In this agreement, it is acknowledge that air pollution is a “major human health concern” given the harming respiratory, cardiac effects and air pollution recognised to cause cancer in human population.
LEGAL FRAMEWORK- THE GOVERNMENT’S COMMITMENTS

• At a **National** level, significantly important:
  – The air quality framework is the **National Environment Protection Measure (Ambient Air Quality) (1998)**, that establishes a “…common National goal to aim for in order to best protect human health and well being from the adverse impacts of air pollution.

  According to the **Ambient Air Quality report (2011)**, **air pollution** is a significant **cause of death and illness** in the community.

  In **2003**, there were near **3000 deaths due to air pollution**. The majority of deaths were due to **heart disease**, followed by **lung cancer**. *(Australian Institute of Health and Welfare, 2016)*
POLLUTANTS, MOTOR VEHICLES AND ADVERSE HEALTH EFFECTS

• Motor vehicles are the major source of urban air pollution (EPA Victoria). Air pollutants emitted by cars and trucks have a serious adverse effect on human health:

  – **CARBON MONOXIDE** - Absorbed from the lung tissue in blood stream affecting lung function, high risk of precipitating heart attack, fatal arrhythmia, risk of sudden death. It can also lead to stroke, hypertension, in children cardiac disease and might also cause infant death syndrome.

MORTALITY AND INCREASED HOSPITAL ADMISSIONS DUE TO HEART DISEASE (Australia State of Environment report, 2016)
POLLUTANTS, MOTOR VEHICLES AND ADVERSE HEALTH EFFECTS

• Air pollutants emitted by cars and trucks have a serious adverse effect on human health:

  – **NITROGEN DIOXIDE**-Increased risk of respiratory disease like bronchitis, chronic fibrosis, emphysema and bronchopneumonia, leading to permanent changes in the lungs. Main sufferers include children with asthma and those with cardiorespiratory diseases.

HOSPITAL ADMISSIONS FOR RESPIRATORY AND CARDIOVASCULAR DISEASE (Australia State of Environment report, 2016)
POLLUTANTS, MOTOR VEHICLES AND ADVERSE HEALTH EFFECTS

- Air pollutants emitted by cars and trucks have a serious adverse effect on human health:

  - **PARTICULATES MATTER** - There are different groups (PM$_{10}$, PM$_{2.5}$, PM$_{0.1}$ or ultrafine particles). Enter to the lungs through inhalation, and certain groups access the bloodstream damaging vital organs in the body and blood vessels, causing premature death.

MORTALITY DUE TO CARDIOVASCULAR AND RESPIRATORY DISEASE. HOSPITAL ADMISSIONS FOR RESPIRATORY AND CARDIOVASCULAR DISEASE. DECREASE IN LUNG FUNCTION. (Australia State of Environment report, 2016)
POLLUTANTS, MOTOR VEHICLES AND ADVERSE HEALTH EFFECTS

- Air pollutants emitted by cars and trucks have a serious adverse effect on human health: (NOT INCLUDED IN THE EES AS A CLASS OF POLLUTANT)
  
  - **OZONE**- Acute chronic pulmonary diseases, reduce lung capacity, asthma and chronic obstructive pulmonary disease.
  
  - Not included in the EES, but highly important due to the climate change, Australia experiencing extreme heat and longer fire seasons (CSIRO Report, 2013)
  
  - As the weather heats up during the summer months, ground-level ozone pollution increases as pollutants react to heat and sunlight. Ozone levels often increase with hot weather, further worsening the air quality and ozone-related breathing issues.
    

MORTALITY DUE TO CARDIOVASCULAR AND RESPIRATORY DISEASE. HOSPITAL ADMISSIONS FOR RESPIRATORY AND CARDIOVASCULAR DISEASE. DECREASE IN LUNG FUNCTION. (Australia State of Environment report, 2016)
POLLUTANTS, MOTOR VEHICLES AND ADVERSE HEALTH EFFECTS

• Air pollutants emitted by cars and trucks have a serious adverse effect on human health:

  – **BENZENE**-It is an air pollutant that accelerates carcinogenicity and human health risks from polluted air. The International Agency for Research on Cancer (IARC) has classified benzene as carcinogenic to humans which increases significantly the risk of cancer in humans.
PARTICULATE MATTER (PM)

https://www.slideshare.net/Environmental-Initiative/yawn-measuring-the-public-health-impacts-of-air-pollution-in-minnesota (Director of Research, B.P. Yawn, Olmstead Medical Centre.)
PHYSIOLOGY OF PM INHALATION

How PM Enters YOUR Body

1. Particulate matter enters the body through the nose and mouth when we breathe.

2. The body eliminates most of the larger particles we inhale. Smaller particles like PM2.5 continue to the lungs.

3. PM2.5 can penetrate deep into the lungs, having serious health consequences for the lungs and heart.

How PM Damage YOUR Body

– Ultra-fine PM less than one-thousand the width of human hair are known to pass through the lungs into the bloodstream where the cause harm to the lungs, heart, brain and other vital organs, also causes inflammation that spreads throughout the body, according to Respiratory Physician Louis Irving.

– PM enters the blood and blood vessels contributing to hardening of the arteries and increasing the risk for heart attacks and strokes. (Community Assessment of Freeway Exposure, Tufts University.)
How PM Damage YOUR Body

Illustration: Air Pollution and Cardiovascular Health Dr. J. Langrish and Dr. Mark Miller, British Heart Foundation, UK
How PM Damage YOUR Body

- The previous statement is affirmed by the American Heart Association who also added that pollution have inflammatory effects on the heart which causes chronic cardiovascular problems, and aggravates existing cases.

- The Medical Journal of Australia (2002) reveals that in the Harvard “six cities” study and the American Cancer Society (ACS) found significant association between levels of PM and deaths due to cardiorespiratory diseases and lung cancer.

- Environment Protection Agency of Victoria (2012) states: “...the most severe effects in terms of the overall health burden include a significant reduction in life expectancy for the average population which is linked to long-term exposure to high levels of particulate matter (PM).”
How PM Damages YOUR Body
PM Pyramid of Health Effects

Air Pollution and Adverse Health Effects

– An extensive number of medical and scientific performed nationally and international, as well as governmental reports, state the evidence of the harmful effects of pollution on human health.

– The Environmental Protection Authority (EPA) on Effects of Ambient Air Pollution on Daily Mortality in Melbourne (1991-1996), concludes that one of the main sources of pollutants in Melbourne are motor vehicles, which “is associated with daily mortality.”

– In the nineties the deadly effects of vehicle pollutants were well known by government and local authorities, why did they allow housing development at less than 100 metres from a land reserved for a freeway?
Air Pollution and Adverse Health Effects

– Why did developers omit to inform the buyers of the plans of building a freeway just a few metres of their houses?
– Why did not local authorities inform and advise public of the plans of building a freeway and the risks for the public the air pollution of the freeway could have on their health?
– The harms to health of smoking and asbestos is well known for decades. Extensive advice from the authorities is continuously published. Why are the harms of air pollution not so well communicated to the public for it has been known for decades, as well?
– Air pollution is insufficiently recognised by the public and policy makers. What interest is there in maintaining the public ill-informed about what is so harmful for their health?
Air Pollution and Adverse Health Effects

– The renowned medical Journal *The Lancet* (2017), published a report, produced by forty environmental health experts, that affirm that pollution is the largest environmental cause of disease and premature death in the world today.


– According to the *Ambient Air Quality* report (2011), air pollution is a significant cause of death and illness in the community.

– The *Environmental Protection and Heritage Council* in the 2015 *Australia Multicity Study* (EPHC 2010a) states that there were significant impacts of air pollution on the morbidity and mortality of Australia’s population.
Air Pollution and Adverse Health Effects

— According to the European Centre for Environment and Health, in the study Quantification of the Health Effects of Exposure to Air Pollution (November, 2000), the health outcomes relevant for health impact assessment of air pollution are:

• **ACUTE OUTCOMES:**
  • Daily mortality
  • Respiratory hospital admissions
  • Cardiovascular hospital admissions
  • Emergency room visits for respiratory and cardiac problems
  • Primary care visits for respiratory and cardiac conditions
  • Use of respiratory and cardiovascular medications
  • Days of restrictive activity
  • Work absenteeism
Air Pollution and Adverse Health Effects

– According to the European Centre for Environment and Health, in the study Quantification of the Health Effects of Exposure to Air Pollution (November, 2000), the health outcomes relevant for health impact assessment of air pollution are:

• ACUTE OUTCOMES:
  • School days missed
  • Self-medication
  • Avoidance behaviour
  • Acute symptoms
  • Physiological changes, e.g.-in lung function
  • Physiological distress due to risk perception and noise from traffic
Air Pollution and Adverse Health Effects

– According to the European Centre for Environment and Health, in the study Quantification of the Health Effects of Exposure to Air Pollution (November, 2000), the health outcomes relevant for health impact assessment of air pollution are:

• CHRONIC DISEASE OUTCOMES:
  • Mortality (in infants and adults) form chronic cardio-respiratory disease
  • Chronic respiratory disease incidence and prevalence (including asthma, chronic obstructive pulmonary disease, chronic pathological changes)
  • Lung cancer
  • Chronic cardiovascular disease
Air Pollution and Adverse Health Effects

– According to the European Centre for Environment and Health, in the study Quantification of the Health Effects of Exposure to Air Pollution (November, 2000), the health outcomes relevant for health impact assessment of air pollution are:

• REPRODUCTIVE OUTCOMES:
  • Pregnancy complications (including fetal death)
  • Low birth weight
  • Pre-term delivery
Air Pollution and Adverse Health Effects

– In 2003, there were near 3000 deaths due to air pollution (Australian Institute of Health and Welfare, 2016). The majority of deaths were due to heart disease, followed by lung cancer. At this point, we can prove, once more how the medical and scientific evidence correlates with facts from reality.

– The health cost form mortality alone are estimated to be $24.3 billions per year (Australian State of the Environment, Australian Institute of Health and Welfare, 2015)

– The health impact and the effects on our already struggling health care system must be taken into consideration.
Air Pollution and Adverse Health Effects

– The Medical Journal of Australia (MJA, published 9th December 2002) commented about a review in The American Thoracic Society (ATS) who expanded its list of adverse health effects of air pollution, not only to hospital admissions, loss of lung function and mortality, but also diminished quality of life and symptoms that may interfere with daily activities.

– According to the WHO, what it is invisible to the eye can be life threatening for the population, air pollution is a silent killer.

– The International Agency for Research in Cancer (2013) confirmed that air pollution causes CANCER.
Air Pollution and Adverse Health Effects

BRAIN and CENTRAL NERVOUS SYSTEM (CNS): hardening of blood vessels leading to strokes. PM found in samples of brain CNS. Cognitive impairment.

RESPIRATORY SYSTEM: worsening of asthma, lung cancer and respiratory disease like emphysema and COAD.

CARDIOVASCULAR SYSTEM: worsening of heart disease, development of cardiac disease, including atherosclerosis, and heart attacks.

OTHER VITAL ORGANS: PM can get into the blood and pass into vital organs (liver, stomach, spleen, pancreas, intestines).

REPRODUCTIVE ORGANS: PM found in reproductive organs and unborn children.

Illustration: https://letscleartheairliverpool.co.uk/what-is-air-pollution/Liverpool City Council UK
Air Pollution and Adverse Health Effects
IN CHILDREN AND TEENAGERS

— WHAT LEGACY-BURDEN WILL THE MORDIALLOC FREEWAY LEAVE TO OUR CHILDREN AND FUTURE GENERATIONS?
Air Pollution and Adverse Health Effects
IN CHILDREN AND TEENAGERS

– The Asthma Australia statistics show that 1 in 9 Australians suffer from asthma. The cost of asthma was $28 billions in 2015 (Asthma Australia)

– The previous data is supported by the Australian Institute of Health and Welfare, that also stated that in 2015 there were 421 deaths due to asthma.

– The Australian Child Health and Air Pollution Study (May 2012) by the National Environment Protection Council states that asthma is the most common chronic disease in childhood in Australia, and children and infants are more particularly at risk from air pollution for these reasons:
Children and infants are more particularly at risk from air pollution for these reasons:

- Children retain more air pollution in the body and cannot excrete toxins.
- Infants and children inhale and retain larger amounts of air pollution per unit of body weight than adults.
- The narrow passages of children are very sensitive to constrictions caused by air pollution.
- Children’s normal growth (and lungs growth) may also be affected when exposed to pollutants.
- Children spend more time outdoors playing and doing sport activities, and therefore more expose to air pollutants.
Air Pollution and Adverse Health Effects
IN CHILDREN AND TEENAGERS

– The Australian Child Health and Air Pollution also states that recent evidence confirms the serious concerns about childhood morbidity and disability (Pharoah, Cooke, et al., 1990) and chronic diseases later in life, such as cardiovascular disease and diabetes (Robinson, 2001).

– Barnett et al. (2017) proved that exposure to air pollutants was associated with short-term increases in respiratory hospitalisations for children aged 0-14.

– Bowatte et al. (2017) found strong link between trafic-related air pollution and increased risk of asthma, wheezing and worsening function (Australian of Health and Welfare, 2018).
Air Pollution and Adverse Health Effects
IN CHILDREN AND TEENAGERS

– There is mounting evidence that there are chronic effects of air pollution on children’s respiratory health. As children’s lungs are still growing and developing, long term exposure to air pollution may result in pathophysiological changes that may continue into adult life. (Australian Child Health and Air Pollution, May 2012)

– The Health Effects Institute (2010) after reviewing 700 studies around the world, concluded that traffic pollution causes asthma in children, lung impaired function, premature death and cardiovascular disease and death from cardiac morbidity. They also stated that the most affected is a band within 500 metres distant from a freeway.
Air Pollution and Adverse Health Effects IN CHILDREN AND TEENAGERS

BRAIN can be damage by air pollution which may lead to neurodevelopmental disorders (ADHD, autism and schizophrenia)

RESPIRATORY SYSTEM: impaired lungs growth, respiratory disease (asthma or worsening or pre-existing condition, increase respiratory symptoms (coughing, wheezing, sneezing), ongoing admissions in hospital, loss school attendance/work attendance for parents, lung development impairment for life.

CARDIOVASCULAR SYSTEM: the heart, hormone and immunity system can be all harmed by air pollution.

OTHER VITAL ORGANS: PM enters the body when breathing through the lungs passes to the bloodstream reaching and damaging other vital organs.
Air Pollution and Adverse Health Effects

DISTANCE DOES MATTER

– A study conducted by Tufts University, measured the concentration of ultrafine particles every cubic centimetre of air. Within 100 metres (which is the distance of the proposed Mordialloc Freeway to ALL the houses, commercials, retirement villages, clinic and childcare) there were more than 120,000 ultrafine particles in every cubic centimeter of air. With distance, particles PM concentration dropped. Professor Doug Brugge, of Public Health and Community Medicine at Tufts University, concluded declaring that PM are more concentrate near the source. People who live, work or schools close to a freeway will disproportionately suffer their effects.
Air Pollution and Adverse Health Effects

DISTANCE DOES MATTER

– The American Lung Association affirms that research has found the strongest association to suffering the serious impact on health among those who lived closest to the roads.

– The American Heart Association states that people living near freeways are particularly at risk, contributing to cardiovascular illnesses and mortality.

  • **Short term exposure**-can increase the risk of heart attack, stroke, arrhythmias and heart failure.
  
  • **Long term exposure**-can cause atherosclerosis development and progression, high blood pressure, heart failure and diabetes.
Air Pollution and Adverse Health Effects
DISTANCE DOES MATTER

– According to Professor Brugge, it has been declared in abundant studies that the PM fine and ultrafine in elevated concentrations are detected next to freeways, having a significant exposure, and therefore more serious health problems.

– People will be even more exposed to the air pollution when in warm days the popular air condition system, evaporative cooling, draws outside air directly into living spaces.

– Many people, for many reasons, will not be able to move from their houses, therefore this project becomes also a case of social justice.
Air Pollution and Adverse Health Effects
THERE ARE NO SAFE LEVELS OF POLLUTIONS

– Ambient Air Quality report (2016) stated: “...the evidence for the influence of air pollutants on health has continued to mount.”

– The Australia State of the Environment, in its Heath Impacts of Air Pollution, Ambient Quality (2016), declares that the new evidence “...no longer supports the notion that there is a safe level for pollutant concentrations.”

– Moreover, the Australia Institute of Health and Welfare (2018) affirms that there is no safe threshold for health impacts, and continued improvement in air quality will result in continued health benefits.
Air Pollution and Adverse Health Effects
THERE ARE NO SAFE LEVELS OF POLLUTIONS

– Victoria’s Air Quality Statement (2018), states that “…poor air quality can have a serious impact of people’s health and quality of life, and has been linked to respiratory and cardiac health effects and premature mortality.”

– This report also states that “…adverse health effects from some pollutants may occur at lower concentrations levels than previously thought.” It is affirmed that some pollutants have been classified as a cause of producing cancer, according to the International Agency for Research in Cancer (IARC).
Air Pollution and Adverse Health Effects
THERE ARE NO SAFE LEVELS OF POLLUTIONS

– Medical Journal of Australia (MJA) in 2002 asserts that the adverse health effects occur even at exposure levels below those stipulated in current air quality guidelines, and it is unclear whether a safe threshold exits.

– Victorian Environment Protection Authority (EPA), in their submission to the EES Committee, stated that “There is well established scientific evidence that traffic related air pollution, even at concentrations well below the current air quality standards, is associated with adverse health effects.”
Air Pollution and Adverse Health Effects

THERE ARE NO SAFE LEVELS OF POLLUTIONS

– All these evidence impacts in people living, working and schooling close to the freeway, as well as pedestrians and cyclists using the proposed path designed for them.

– As professor Kotsirilos stated clearly in her presentation, there are 18 studies found health impacts on cyclists based on exposure to air pollutants.

– In relation with cyclists and pedestrians, the use of the side path next to the proposed Mordialloc Freeway/elevated freeway, supported by the evidence, may have adverse effects on the users’ health.
WITNESS OBSERVATIONS

• The air quality testing was mostly performed by an air monitor situated in Brighton, nowhere near to a freeway.

• Moreover, there is recent evidence that shows that air quality improves by closeness to the ocean. (D. Rose Rosenfeld, University of Jerusalem, 2015), therefore the measurements in the EES cannot be accurate nor credible, it has no relevance for the air quality studies for the proposed Modialloc Freeway.

• The Air Quality EES language is vague, not adequate and, at the very least, optimistic in their findings.
WITNESS OBSERVATIONS

• The use of terms such as: “in normal days”, “…dust is expected to be contain within 60m of the project boundary on normal days and within 100m during hot, dry days with strong winds.” People live within less than 60m of the freeway building site.

• “Nitrogen dioxide concentrations would be elevated within the project boundary.” It is indeed hard to believe that gases, dust and fine particles just stay put within project boundaries.

• It is hard to believe that extremely light gases and particles will not flow freely with minimal air (from a ground level surface and from an elevated freeway).

• It is hard to believe that people’s health, living, working and schooling at only 60 metres away, will not be serious affected during the construction with the dust, gases and air pollution from heavy machinery toxic diesel emissions, and when in use, by heavy trucks avoiding the Eastlink tolls.
WITNESS OBSERVATIONS

• The EES mentions that residents will have to “tolerate” every day, minimum 8 hours a day for two years of construction. Probably “suffer” would be a better terminology.

• Any Planners keen to swap their houses due to the “minimal health impacts” and disturbance of a freeway construction at less than 60m of houses? Would you let your children playing in the backyard during the process?

• Inadequate and inappropriate use of the word “buffer”, being the distance is less than 100m
WITNESS OBSERVATIONS

• The EES states that the proposed freeway will contribute to improved frustration levels in drivers. It seems to be the wrong positive cognitive reinforcement to reward dangerous driving.

• The EES also mentions that the freeway will improve air quality. It is hard to believe that a significant increase in quantity of vehicles (including heavy diesel trucks) to the area will contribute to an improvement in air quality across the different areas.
HEALTHY AND EFFICIENT ALTERNATIVES TO THE PROPOSED MORDIALLOC FREEWAY AND GOVERNMENTAL RECOMMENDATIONS

– There are alternatives for the Mordialloc freeway, many of those already thoroughly presented by other proponents.

– The National Environmental Protection Council in its Final Report of Australian Child Health and Air Pollution Study (May 2012) concludes stating the need for “…urban designs and transport demands strategies to lower and maintain those lower levels of ambient air pollutants.” And that, “The exposure-reduction approach, which aims to shift the exposure of the whole population, seems a reasonable way to reduce the whole community’s exposure to ambient air pollution.”
HEALTHY AND EFFICIENT ALTERNATIVES TO THE PROPOSED MORDIALLOC FREEWAY AND GOVERNMENTAL RECOMENDATIONS

– The Medical Journal of Australia (2002) states the need “...to do something about it.” One of the alternatives that suggests to “save lifes” is better urban designs and provide infrastructure and support to increase the use of a **improved public transport** as well as **walking and cycling**.

– These health and economic benefits would be important, it also would help to prevent chronic disease and improve public health reducing significantly the cost in public health needs and services.

– In European cities, people travel in public transport, cycle and walk, which have health benefits. Having a car is a matter of choice.
HEALTHY AND EFFICIENT ALTERNATIVES TO THE PROPOSED MORDIALLOC FREEWAY AND GOVERNAMENTAL RECOMENDATIONS

EUROPE- eBus strategy for 2020-increasing the number of high capacity electric buses in 25 cities in Europe

https://www.intelligenttransport.com/transport-news/21656/europe-electric-buses-report/
HEALTHY AND EFFICIENT ALTERNATIVES TO THE PROPOSED MORDIALLOC FREEWAY AND GOVERNMENTAL RECOMMENDATIONS

EUROPE-Underground- efficient and reliable public transport.

Please note the interconnection of the different lines and networks.
HEALTHY AND EFFICIENT ALTERNATIVES TO THE PROPOSED MORDIALLOC FREEWAY AND GOVERNMENTAL RECOMMENDATIONS
EUROPE-High Speed Trains- efficient and fast public transport. Easy connection between European cities, and cities in the same country.
HEALTHY AND EFFICIENT ALTERNATIVES TO THE PROPOSED MORDIALLOC FREEWAY AND GOVERNAMENTAL RECOMENDATIONS

– Mr. Capon, Professor of Planetary Health at University of Sydney, argues that moving towards less-polluting forms of energy and transport would deliver much needed savings to the Australian budget.

– Statements made about the need of more roads are an attempt to mislead society, who are unaware of the serious risks for their health and the other better alternatives for our health, our children and future generations.

– GOVERNMENT (PREMIER OF VICTORIA) SUPPORTING HEALTH AND PUBLIC TRANSPORT AS SOLUTION TO CONGESTED ROADS.
HEALTHY AND EFFICIENT ALTERNATIVES TO THE PROPOSED MORDIALLOC FREEWAY AND GOVERNMENTAL RECOMMENDATIONS

• Victoria’s Premier, the Hon. Daniel Andrews, states on his webpage:

  — ”We promised...invest in public transport...Because we’re a Government that puts people first.”

  — Mr. Andrews stated in public television, just a few days before the elections, that “...the most important thing is your health.”
HEALTHY AND EFFICIENT ALTERNATIVES TO THE PROPOSED MORDIALLOC FREEWAY AND GOVERNMENTAL RECOMENDATIONS


• “Our state is growing faster than any other. That’s why we have a plan to transform our public transport system, reduce congestion on our roads and improve safety for everyone.” PUBLIC TRANSPORT IS THE SOLUTION TO CONGESTED ROADS, BUILDING NEW ROADS IS NOT.

• “We’re also fixing the congested local roads that people use every day.” FIXING ROADS USED EVERY DAY, NO MENTION OF BUILDING NEW FREeways
ABANDON THE PROPOSED MORDIALLOC FREEWAY PROJECT

• THERE IS EXTENSIVE MEDICAL AND SCIENTIFIC EVIDENCE THAT PROVES THAT THE PROPOSED FREEWAY WILL SENTENCE ADULT AND CHILDREN TO A POOR QUALITY LIFE OF SICKNESS AND EARLY DEATH.

• THE PROPOSED FREEWAY, AT LESS THAN 60 METRES OF HOUSES, COMMERCIAL, SCHOOLS, RETIREMENT VILLAGES AND CHILDCARES WILL HAVE A SIGNIFICANTLY MAJOR IMPACT ON PEOPLES HEALTH.

• 100 METRES IS NOT A SAFE DISTANCE.

• THERE ARE NO SAFE LEVELS OF POLLUTION.
ABANDON THE PROPOSED MORDIALLOC FREEWAY PROJECT

• THIS IS AN OBSOLETE, SHORT-SIGHTED, TUNNEL VISION PROJECT THAT IS NOT IN CONCORDANCE WITH NATIONAL AND INTERNATIONAL LEGAL FRAMEWORKS, AND IGNORES GOVERNMENTAL REPORTS AND ADVICE.

• THE 9 KM MORDIALLOC FREEWAY IS A NO-WAY BACK PROJECT THAT WILL CAUSE A BURDEN OF HEALTH ISSUES, DISEASE AND PREMATURE DEATH TO THE PRESENT AND FUTURE GENERATIONS - TOO GREAT TO BE DISMISSED.

• THE OVERWHELMING EVIDENCE AND FACTS OF THE HARM THAT THE MORDIALLOC FREEWAY WILL CAUSE MUST NOT BE IGNORED WHEN THE GOVERNMENT HAS A DUTY OF CARE AND RESPONSIBILITY TO PROTECT PUBLIC HEALTH.
THANK YOU

By Beatriz Prieto
March 2019