Public Works Committee

Inquiry into the Impact of the Western Harbour Tunnel and Beaches Link

Hearing 17 September 2021

Supplementary questions

Questions for Asthma Australia and Lung Foundation

1. *Can you confirm that schools across the project footprint are modeled to receive a higher dose of air pollution as a result of this project?*

As noted in our submission, there is strong evidence that demonstrates the immediate and long-term adverse effects of traffic related air pollution on humans; highlighting a greater magnitude of impact than previously thought, and showing that there is no safe lower limit of exposure.

Asthma Australia and Lung Foundation Australia have not conducted modelling into the schools across the project footprint, and therefore recommend the committee redirect this question to other submitters who have provided the committee with detailed information about the effects of air pollution on schools.

2. *What are the impacts of diesel emissions on people and especially children?*

Exposure to pollutants early in life can increase a child's future risk of disease and can lead to lifelong negative health consequences. A child who is exposed to unsafe levels of pollution early in life can therefore potentially suffer illness for the remainder of their life.

Exposure to pollutants in the air threatens the health of people of all ages, in every part of the world, in both urban and rural areas, but it affects the most vulnerable among us—children—in unique ways. Children are at greater risk than adults from the many adverse health effects of air pollution, owing to a combination of behavioural, environmental and physiological factors:

- children are uniquely vulnerable and susceptible to air pollution, especially during foetal development and in their earliest years
- children's lungs, organs and brains are still maturing
- children breathe faster than adults, taking in more air and, with it, more pollutants
- children live closer to the ground, where some pollutants reach peak concentrations; and
- children may spend much time outside, playing and engaging in physical activity in potentially polluted air.[i]

Children have a longer life expectancy than adults, which means that latent disease mechanisms have more time to emerge and affect their health. Children's bodies, and especially their lungs, are rapidly developing and therefore more vulnerable to inflammation and other damage caused by pollutants.[ii]

In the womb, the developing foetus is vulnerable to their parent's exposure to pollutants which can impose latent health risks.

There is compelling evidence that exposure to air pollution damages the health of children in numerous ways. The evidence summarised in the World Health Organisation report *Air Pollution and Child Health: Prescribing clean air* presents information from a scoping review of relevant studies published within the past 10 years and

input from dozens of experts around the world.[iii] It found that air pollution is linked to a number of adverse birth outcomes specific to children (such as stillbirth and low birth weight), and other outcomes such as infant mortality, neurodevelopmental disorders, childhood obesity, lung function, asthma, and childhood cancers. There is broad and accepted evidence that air pollution can also worsen pre-existing conditions like asthma, and can lead to other outcomes such as stroke, heart disease, respiratory disease and lung cancer.

a. *Can you confirm that the project will increase diesel emissions around children?*

Asthma Australia and Lung Foundation Australia have not conducted independent research that goes to whether the project will increase diesel emissions around children. However, as set out in our submission, we take this opportunity to reiterate that it is likely that the project will lead to an increase in air pollution, both during construction and through its use. This will likely include an increase in diesel pollution, which can have both an immediate and long-term detrimental impact to both child health and the health of the broader community.

3. *Can dust from construction sites transmit contamination to children and if so what are your health concerns?*

Common sources of air pollution in Australia are woodfire heater/fire smoke, smoke from bushfire and hazard reduction burns, motor vehicle exhausts, industry and dust. Others include emissions from coal fired power stations, metal smelting and general industry.

As noted in response to Question 2, air pollution can be particularly detrimental to children in both the short and long term.

In 2015, air pollution was estimated to be associated with over 2,500 deaths (1.6% of all deaths) in Australia.[iv] Short-term and ongoing exposure to air pollutants such as particulate matter (PM2.5 and PM10) and other pollutants and their sources are found in Australian homes and communities, and can lead to increases in chronic lung diseases including asthma, heart diseases, stroke, and cancer.

In our submission, we outlined measures that should be employed to supress and monitor dust contamination, should the project proceed.

4. *Do you think it was appropriate that the Chief Health Officer was only asked to comment on the stack contribution to human health, especially given the proximity of the project to children, contamination concerns and evidence to show an 18% increase in traffic overall?*

a. *Do you think whole-of-project health outcomes should be assessed?*

As noted in our submission:

> *We have concerns about this project, not only regarding its viability as a method of 21st Century transport but, as the New South Wales Government has determined, its construction phase. We encourage the NSW Department of Planning, Industry and Environment to conduct further enquires and analysis to ensure the best possible strategies are in place to protect the respiratory health of workers and residents, both during the construction of the tunnel and its ongoing use. This includes measuring air quality, not in accordance with the current industry standards, but in accordance with health-based standards. It also includes conducting health impact assessments to identify safe levels of pollution in advance of the tunnel being built, and an investigation into introducing vehicle caps so that safe levels of pollution is not exceeded.*

5. *Do you think the transition to electric vehicles will counteract the increase of pollution from diesel vehicles and volume by the time the project is due to open in 2027?*

It is important to acknowledge that the damage that may be done to the health of the community, in particular infants and children, will not be reversible. Damage sustained early in life has life-long consequences. While

we strongly encourage and support a commitment to transition from combustion engines—including diesel vehicles—to electric vehicles, it cannot be said that the future change will offset the potential damage to health to the community now. Therefore, we encourage strong action to protect air quality now.

We support the recommendations in Environmental Justice Australia's People's Clean Air Action Plan for NSW which details the impacts of vehicle emissions and makes practical recommendations to reduce their pollution. In that plan, the EJA stated:

> *Vehicle emissions can be reduced by other mechanisms, including by implementing Euro 6 standards for passenger and light vehicles, and Euro V1 standards for heavy vehicles. The EU has consistently reviewed its vehicle emissions standards of both petrol and diesel vehicles to drive down NOx emissions. The most recent standard imposed an emission reduction limit for light diesel vehicles of 56 percent, from 0.18 g/km (Euro 5 Standard) to 0.08 g/km (Euro 6). A significant factor in the success of reducing NOx emissions from vehicles is using fuels with very low sulfur content. Europe commenced phasing-in virtually sulfur-free petrol and diesel fuels – less than 10ppm – in 2005. Australia currently implements the less-stringent Euro 5 standards for light and heavy vehicles. The Ministerial Forum on Vehicle Emissions is currently undertaking a review to consider whether Australia should adopt the Euro 6 Standards for light vehicle and Euro VI standards for heavy vehicles. Fuel standards are set the federal level, however the Ministerial Forum on Vehicle Emissions review is a good opportunity for the NSW government to make submissions on the necessity of adopting the Euro 6 standards.*[v] (citations omitted)

6. *Article 24 of the Convention on the Rights of the Child, states that all children are entitled to "the enjoyment of the highest attainable standard of health." Do you think this project delivers that?*

As outlined in our submission, there are several measures that must be taken to ensure that this project, if it proceeds, protects the health of people exposed to the air pollution it causes, both during construction and through its ongoing use.

It is notable that recently, the United Nations Human Rights Council recognised for the first time, that a clean, healthy and sustainable environment is a human right.[vi] This adds further weight to the importance of protecting children and, more broadly now, all adults from the harms of air pollution, including diesel emissions. In support of these international rights, the end product of this project will enable healthier environments, but what we discourage is the oversight of air pollution exposure in the present, as the potential health impacts can be life-long.

7. *If there are other alternatives in terms of active and public transport in dense residential school zones, do you think the government should explore them before continuing with this project?*

As noted in our submission, when large road projects—such as this one—have the potential to significantly alter a community's air pollution exposure, every possible alternative and all mitigation strategies must be comprehensively considered.

We also noted that we support transport and associated infrastructure for communities that is clean and green and believe that in the 21st Century, our governments must consider and support policies and projects that use technology to create a cleaner future.

For these reasons, we consider that if there are other alternatives in terms of active and public transport in dense residential school zones, the Government should explore these before continuing with this project.

References

[i] World Health Organization (WHO), 2018. *Air pollution and child health: prescribing clean air. Summary*. Geneva: WHO.
[ii] Ibid
[iii] Ibid
[iv] Australian Institute of Health and Welfare (AIHW), 2019. *Australian Burden of Disease Study: impact and causes of illness and death in Australia 2015*. Australian Burden of Disease series no. 19. Cat. no. BOD 22. Canberra: AIHW.
[v] Lipska, B. et al (2020) *People's Clean Air Action Plan for New South Wales*, Environmental Justice Australia, available online: https://www.envirojustice.org.au/wp-content/uploads/2021/02/NSW-Clean-Air-Action-Plan2021.pdf.
[vi] See: https://news.un.org/en/story/2021/10/1102582.