IN THE MATTER OF THE WEST GATE TUNNEL INQUIRY AND ADVISORY COMMITTEE (IAC)

BETWEEN:

WESTERN DISTRIBUTOR AUTHORITY

Proponent

MELBOURNE CITY COUNCIL

Council

SUBMISSIONS OF COUNSEL ASSISTING THE IAC
THE IMPACT OF THE WGT PROJECT ON BROOKLYN

INTRODUCTION

1. These submissions summarise aspects of the EES, EES Technical Reports and evidence relating to the impacts of the project on the suburb of Brooklyn and raise mitigation options for the IAC's consideration.

2. These submissions are informed in part by the evidence of the WDA's own experts who, overwhelmingly, recommend that measures are taken to mitigate the impacts of that truck traffic on Millers Road.

3. A (non-exhaustive) list of potential mitigation measures is provided at the end of these submissions.

TRUCK NUMBERS

4. The EES Transport Report defines a "truck" as follows:

> Light and heavy commercial vehicles are referred to as 'trucks'. This is based on the Austroads vehicle classification system, where a truck is Austroads classification 3 to 12.

5. The EES uses the terms "trucks", "heavy vehicles" and "heavy commercial vehicles" in different contexts. These submissions generally refer to "trucks", but in some cases the words "heavy vehicles" are used. The model used to forecast traffic volumes is just that – a model – and hence may either under or over-estimate numbers. Accordingly the truck volumes referred to in the EES and in these

submissions, and the impacts calculated based upon those volumes - should be viewed as approximate/indicative.

6. The EES predicts that:[1]

   a) approximately 4,750 trucks would be removed from Francis Street and 1,250 from Somerville Road;

   b) truck volumes along Buckley Street would reduce by around 3,000; and

   c) there would be 1,500 fewer trucks travelling along Moore Street and 300 fewer trucks using Hudsons Road.

7. Project Note 66 notes the Minister for Roads and Road Safety announced two further truck bans for Blackshaws Road between Grieve Parade and Melbourne Road and Hudsons Road between Melbourne Road and Booker Street on 28 August 2017.

8. The project will result in a significant benefit by removing trucks from those local streets.

9. However, the EES predicts that there will be increased trucks movements on other routes.

10. Millers Road currently carries about 4,000 trucks per day.[2]

2031 Forecasts

11. The EES predicts a range of 12,100 to 14,800 “heavy vehicles” per day on Millers Road for 2031 with the project,[3] with smaller heavy vehicle volume increases on other local and arterial roads in the suburbs of Brooklyn, Altona North, South Kingsville and Spotswood.

12. The EES predicts that there will be an increase of 7,000 trucks per day on Millers Road at 2031 over the base case ie as a result of the project.[4] This represents more than a doubling of trucks on Millers Road as a result of the project at 2031.

13. The Air Quality Assessment contains forecasts for 2031 for Millers Road comparing base case to project case, and appears to take the upper range given in the

---

[1] EES Summary report p 16

[2] Figure 67: 2016 truck volumes (two-way, 24-hour weekday volumes) p 116 Technical Report A Part 1

[3] Figure 215 of Technical Report A Part 1.

[4] Figure 214 of Technical Report A Part 1.

Transport Report.[5] The data is broken down into heavy and light commercial vehicles. The data in those tables can be summarized as follows:

		Cars	LCV	HCV	tot Truck	TOTAL
Base 2031	**NB**	14400	1500	2600	4100	18500
	SB	14900	1300	1900	3200	18100
	TwoWay	**29300**	**2800**	**4500**	**7300**	**36600**
Project 2031	**NB**	13000	2000	5900	7900	20900
	SB	14000	1700	5200	6900	20900
	TwoWay	**27000**	**3700**	**11100**	**14800**	**41800**

14. Project note 51 predicts that the volume of trucks on Millers Road will comprises 35% of all vehicles forecast for Millers Road at 2031.[6]

2022 Forecasts

15. The Air Quality Assessment contains forecasts for 2022 for Millers Road comparing base case to project case.[7] The data in those tables can be summarized as follows:

		Cars	LCV	HCV	Total Truck	TOTAL
Base 2022	**NB**	12700	1300	2200	3500	16200
	SB	13000	1200	1600	2800	15800
	TwoWay	**25700**	**2500**	**3800**	**6300**	**32000**
Project 2022	**NB**	11800	1700	4600	6300	18100
	SB	12300	1500	4200	5700	18000
	TwoWay	**24100**	**3200**	**8800**	**12000**	**36100**

16. If the predictions in that table are correct, then upon opening of the tunnel there will be an increase of 5700 trucks per day on Millers Road, to a total of 12,000 trucks per day, which represents an approximate doubling of truck numbers.

[5] Tables 33 to 34 of Appendix G of Technical Appendix G

[6] Project Note 57, as taken from Figures 169 and 215 of Technical Report A.

[7] Tables 31 to 32 of Appendix G of Technical Appendix G

THE WDA EVIDENCE AND THE VICROADS SUBMISSION

17. If the two truck only-toll gantries on the West Gate Freeway (located to the east and west of Millers Road) are reduced to a single toll point (east of Millers Road), rather than an increase of 7,000 trucks per day, the proponent forecasts that there will be an increase of 4,000 trucks per day over the 'no project' case.[8] However, that still results in some 9,100 – 11,800 trucks per day on Millers Road.[9]

18. Mr Kiriakidis, the WDA's traffic expert, supported "removal of [the] toll point between Grieve Parade and Millers Road interchanges"[10] and gave evidence that the revised daily truck volume estimated in Project Note 1 delivers "a more comfortable level" and that "subject to its adoption", he was "comfortable with the outcome" on Millers Road (or words to that effect).

19. Mr Kiriakidis also recommended "supplementary analysis for western end of the corridor for the intersection nodes either side of the Grieve Parade and Millers Road interchanges (pp 60-61)".[11]

20. Mr Barlow recommended in response to "concerns about increased noise and access to Millers Road" that:[12]

> Consideration should be given to:
>
> — Acoustic attenuation for those properties abutting Millers Road.
>
> — The creation of a controlled intersection or other road improvements to enable safe access to Millers Road

21. Mr Stead gave evidence that "implementation of 1 truck toll point (as per Project Note 1) would be beneficial for the impact on Millers Road".[13]

22. Dr Mandke, the WDA's social expert, commented on the difficulty in assessing cumulative effects (noise, air pollution etc) and advised that certain impacts which had a residual risk rating of medium or high needed further mitigation or management, including amenity changes on Millers Road, Hyde St and Williamstown Road.[14]

---

[8] Project Note 1.

[9] 12,100 – 14,800 (as per Figure 215 minus 3,000 trucks per day as per Project ote 1.

[10] Document 74 item 13.

[11] Document 74 item 1.

[12] Slide 23, document 31

[13] Conclave item 3, document 28.

[14] Slide 18, document 103.

23. The VicRoads submission supported removal of the toll point. The submission states:[15]

> 6. In making these submissions, VicRoads is acutely aware of its obligations under the Transport Integration Act. That Act requires VicRoads to work collaboratively with other transport agencies and public bodies to ensure that the road system operates as part of an integrated transport system that meets the needs of all users. This includes:
>
> …
>
> (c) **providing access to support social well-being and liveable communities**.
>
> 7 Having regard to these matters, **VicRoads invites the IAC to recommend:**
>
> **(a) a reduction in the number of tolling points by removing the toll point on the West Gate Freeway between Grieve Parade and Millers Road**;
>
> (b) a further study (if the IAC considers it appropriate) of intersections on Millers Road to determine if upgrades are necessary, provided that the study and any action taken in reliance on it are limited to enhancing the existing and proposed function of Millers Road and are treated as part of the Project and the responsibility of the WDA and/or the relevant proponent;
>
> …
>
> **45. VicRoads strongly supports a reduction in the proposed number of toll points on the West Gate Freeway. In particular, the toll point that is proposed between Grieve Parade and Millers Road should be removed.** This will reduce the likelihood of toll avoidance, incentivise the use of the West Gate Freeway to carry freight traffic, deincentivise the use of residential streets and reduce the forecast truck volumes on Millers Road, north of the West Gate Freeway.
>
> …
>
> 66. Hobsons Bay CC submits that the circumstances of the residents of Brooklyn are peculiar by virtue of the particular disadvantage experienced by them. The IAC might consider, therefore, that some noise attenuation is appropriate to mitigate the particular disadvantage experienced by Brooklyn residents. If that were the view taken by the IAC, VicRoads would not oppose a recommendation in favour of noise attenuation measures, provided that it is made clear that any attenuation measure is to be undertaken as part of the Project and is the responsibility of the WDA and/or the relevant proponent. This is consistent with the submission made by Hobsons Bay CC, and would not necessarily undermine the fact that there is no formal policy support for the adoption of such measures.
>
> …
>
> (footnotes omitted)

[15] Document 111

24. VicRoads also indicated it was "willing to review" both the Cypress Avenue/Millers Road and Primula Avenue/Millers Road intersections to "determine if any works to those intersections are necessary to mitigate the traffic impacts of the Project".[16]

THE SUBURB OF BROOKLYN

25. Millers Road is zoned General Residential on its western side between the West Gate Freeway and Geelong Road. It is within the suburb of Brooklyn. Brooklyn is an area of higher disadvantage in the municipality of Hobsons Bay.[17] Brooklyn has a SEIFA score of 3 (out of 10).[18] Key considerations identified for Brooklyn in the Social Impact Assessment in the EES are as follows: [19]

> Key considerations identified in demographics, policy and consultation
>
> □ There is currently a lack of public open space in Brooklyn.
>
> □ The community experiences relative disadvantage, therefore access to affordable recreation opportunities is important.
>
> □ There are culturally and linguistically diverse groups in the community, with the main languages spoken other than English including Italian, Vietnamese and Cantonese.
>
> □ Well maintained pedestrian infrastructure is important for local accessibility, with 5.7 per cent of residents having a disability and 12.8 per cent being over 70 years.

WHAT DID THE EES SAY?

26. Objective 4 of the project is to:[20]

> Improve community amenity on local streets in the inner west
>
> - To reduce freight on local streets
> - To improve safety on local streets.

27. The reference to “local roads” in the project objective appears to have been interpreted as including arterial roads abutted by residential development given that some of the roads targeted by the project for truck removal are arterial roads (such as Francis St).

---

[16] Para 69 and 74.

[17] Technical Report L p 40

[18] Table 76 (p271) of Tech Report L

[19] Page 41 of Tech Report L

[20] EES Summary Report p 10

28. It also appears that the "inner west", as that term is used in the project objective and in the EES, excludes Brooklyn. The EES proceeds on the basis that:[21]

> The project would enable the Victorian Government to extend 24-hour truck bans in the inner west, removing up to 9,300 trucks from residential streets.

29. The Transport Report states:

7.8.3 Truck changes across the inner west

The West Gate Tunnel Project and new truck curfews and bans are expected to provide a net reduction in trucks travelling through inner west roads. Approximately 9,300 trucks would be removed from the east-west inner west roads as shown in Table 147.

Table 147: Truck changes across the inner west

Road	Estimated changes in truck volumes
Moore Street	-1,500
Buckley Street	-3,000
Somerville Road	-1,250
Francis Street	-4,750
Hudsons Road	-300
Williamstown Road	+1,500
Total	-9,300

In summary, approximately 13,200 to 16,200 trucks would use the West Gate Tunnel Project, 8,000 trucks would be taken off the West Gate Bridge and 9,300 off local roads, as shown in Table 148. Note that the sum of the three numbers would not add up to zero for the following reasons:

- Some trucks that travel on inner west roads also travel on the West Gate Bridge in the same trip. A truck removed from the inner west may also be removed from the West Gate Bridge
- A small proportion of truck trips would have redistributed to other roads (such as CityLink or the M80 Ring Road) due to capacity on those road links.

Table 148: Summary of truck redistribution

Location	Estimated changes in truck volumes
Inner West	-9,300
West Gate Freeway	-8,000
West Gate Tunnel	+13,200 to 16,200

As part of managing these likely changes, the Victorian Government and VicRoads are currently investigating a range of treatments, separately to the West Gate Tunnel Project, to improve north-south connectivity between the industrial areas of Brooklyn and Tottenham and the West Gate Freeway corridor.

[21] eg EES Summary report p 2

30. The fact that the 7,000 trucks forecast to be added to Millers Road was not acknowledged in those parts of the EES relating to the "inner west" is an issue of concern to both the Council and to the community.[22]

BENEFITS OF THE PROJECT ON BROOKLYN

31. Both the project benefits and the project detriments are relevant to the IAC's integrated assessment of the impact of the proposal on the community of Brooklyn.

32. A positive feature of the project identified by the EES, having regard to the key considerations identified in the Social Impact Assessment for Brooklyn, is the DDA compliant pedestrian walkway at Rosala Avenue (see PER-004 Urban Design Plan) proposed to replace the non-compliant bridge.[23]

33. There are also additional noise walls and higher noise walls proposed to meet the Project Specific Noise Objective for sensitive receptors in the immediate vicinity of the freeway, and off reservation treatments proposed where the noise walls will not meet the Project Specific Noise Objective set out in NVP1A[24]. It appears that those acoustic treatments will benefit the residents of Brooklyn who have an interface to the freeway. Off reservation acoustic treatment will be required to some of the southern-most dwellings on Millers Road to comply with the Project Specific Noise Objective,[25] noting that the Project Specific Noise Objective only applies to the freeway and the first 100m of Millers Road.

34. The Project provides various missing links along the Federation trail, which should benefit the Brooklyn residents. The BRAG group[26] and Hobsons Bay[27] argue that there should be a connection provided from the Federation trail to the West Gate Punt Ferry Service. The Project Fact Sheet[28] (attached) appears to indicate that such a link is being provided by this project. To the extent that there remain missing links, the IAC may wish to consider recommending that the Urban Design Plans are amended to provide those links.

---

[22] See for example, submission by Spotswood South Kingsville Residents Group Inc at p 12, Document 212.

[23] Tech Report L p 8.

[24] Version 5 of the EPRs

[25] See Technical Report H p 125; see also Tech Report H summary p x.

[26] Submission 289

[27] Document 196 para 64

[28] West Gate Tunnel Walking and Cycling Fact Sheet June 2017

35. The Project will provide greater access to the CBD for residents of Brooklyn who use private vehicles (at least once they are out of Brooklyn and onto the freeway itself, noting that the residents of Brooklyn argue that access to the Freeway will become more problematic as a result of the project). The tunnel will provide an alternative route to the CBD, especially in the event of incidents on the West Gate bridge.

DETRIMENTAL IMPACTS OF THE PROJECT ON BROOKLYN

36. Without mitigation, the increase in truck volumes on Millers Road will result in:

    a) increased noise;

    b) increased air pollution;

    c) decreased levels of vehicular access to and from the Brooklyn residential precinct which is bounded by Geelong Road to the north, the West Gate Freeway to the south, Millers Road to the east and an industrial area to the west; and

    d) decreased safety, especially for cyclists using Millers Road.

37. These issues are discussed below.

38. In addition, some members of the Brooklyn community will be adversely impacted by the use of Lynch's reserve for construction.[29] Like three of the other construction compounds identified in the map book (the New St compound and the compounds to the immediate north and south of the Freeway next to Melbourne/Williamstown Road), the Lynch's reserve compound has (quite an extensive) interface with residential receptors.

[29] WDA-WGTP-PCP-008

39. The EES predicts that construction impacts could occur for up to 4 years at these compounds.[30]

40. All of the noise experts gave evidence to the effect that it will be important for these impacts to be managed through the plans called up by the EPRs to ensure that construction impacts are minimized.

41. The community will also lose mature trees along the West Gate freeway corridor, as shown in the following except from Figure 49 of the Ecology Report – Technical Report F (trees impacted by the proposal are shown in red):

42. Some replacement planting is proposed in the Brooklyn area along the freeway corridor, in particular in Lynch reserve, as shown in the landscape plans:

[30] Table 13.1 Volume 2 EES.

43. The Social Impact Assessment Tech Report L states that there will be a "permanent loss of 2,953m2 (34%) public open space Lynch Road Reserve, Brooklyn" but that a new shared use path would be provided through the reserve. That reserve is encumbered by overhead power lines, but nevertheless does still represent an area of open space for the Brooklyn residents. The permanent reduction in open space for the residents of Brooklyn must be assessed in the context of the findings of the EES set out above that there is currently a lack of open space in Brooklyn.

Noise

44. Chapter 2 of the EES states at 13-53:

> Increases above 2 dB(A) as a result of the project are predicted at:
> • Simcock Avenue (Between Booker Street and Stephen Street)
> • Millers Road (North of West Gate Freeway)
> • Hyde Street (Between West Gate Freeway and Francis Street).
>
> Traffic noise increases on Simcock Avenue are unlikely to impact sensitive receptors as the closest residencies are located over 300 metres away. However a number of residential buildings north of the West Gate Freeway are located on Millers Road and Hyde Street.
>
> Noise emissions from these roads are predicted to increase as a result of changed traffic volumes, particularly the increase in the number of heavy vehicles. **Residents adjacent to these roads may experience increased annoyance as a result of the increased noise levels**.

> Noise mitigation would be provided for dwellings within 100 metres of the freeway on roads interchanging with the freeway to the level that would have occurred had the project not occurred (EPR reference NVP1).
>
> (emphasis added)

45. Table 79 of Tech Report N sets out the predicted increase compared with the no project scenario as follows as it relates to Millers Road north of the freeway:

Table 79 Predicted change in noise levels on parallel traffic routes outside the study corridor

Road	Section	Predicted change in noise level $L_{A10(18hr)}$ dB	
		2022	2031
Millers Road	North of WGF	**3.4**	**2.1**

46. Presumably the:

a) 3.4 dBA increase arises principally from the addition of the 5700 trucks per day upon the project opening in 2022 to the forecast 6300 trucks per day predicted to be using that road at that time; and

b) 2.1 dBA increase arises principally from the addition of the 7000 trucks per day at 2031 to the base case volume of approx. 7,000 truck per day-

(see earlier analysis of truck volumes).

47. The City of Hobsons Bay submission states that the residents of Millers Road, Brooklyn already experience noise levels of up to 70dB(A). However the EES does not appear to contain any data about the current or expected noise levels for Millers Road beyond 100 m to the north of the interchange, other than setting out the expected "change" from base to project case.

48. Even though an increase of more than 2dBA is predicted (2.1 dBA at 2031, and 3.4 dBA at 2022), no noise mitigation is proposed beyond 100 m of the West Gate Freeway interchange in the EES.

49. Mr Stead's witness statement said :

> Increases in noise levels are expected on Millers Road and Hyde Street where there is an increase in truck volumes expected as a result of the project. However, no additional treatment above that proposed in the EES is considered necessary in accordance with the VicRoads Noise policy and the Project Specific Noise Objective.
>
> …
>
> Millers Road is expected to have +4,500 vehicles per day (+7000 trucks) with the Project in 2031. This is expected to increase the 2031 L10,18hr noise level by 2.1 dB over the no project case and 3.4 dB increase for the year 2022. Refer to Figure 29 and 30 of Technical Report H for additional information.

> …
>
> The change in noise from traffic on Millers Road is expected to be noticeable. As noted above, the VicRoads Noise Policy does not require noise mitigation for Millers Road.
>
> …

50. In summary, Mr Stead's reasons for not requiring "off reservation" treatment for noise was that it is not required under the VicRoads Noise Policy.

51. Mr Stead gave evidence that if Project Note 1 is implemented then the change in noise will be 1.3dBA for 2031. As the IAC is aware, I have requested that the WDA inform the IAC of the impact of Project Note 1 on the 2022 predicted change.

52. In light of the predicted 3.4 dBA increase, the IAC may wish to consider whether acoustic mitigation should be provided.

53. Further, Project Note 66, issued on 1 September 2017 states:

> The details of further incentives for the transport and logistics industry to use the West Gate Tunnel are currently under consideration:
>
> - Shuttle rates - Project Co. will be required to implement multi-trip toll discount incentives to encourage transport companies that undertake multiple trips on the new toll road infrastructure (the West Gate Freeway and Tunnel) on a daily basis to use the new direct route to the port
> - Trip capping - Project Co. will be required to implement trip capping which is the maximum toll price for a single uninterrupted trip across different toll roads (not EastLink)
> - **Night time discounts – Project Co. will be required to implement night time trip discounts to encourage transport companies to use the West Gate Tunnel during night-time periods with discount rate and periods to be determined.**

54. The IAC may wish to consider whether these incentives may further exacerbate noise at residential receptors along Millers Road at night time.

55. There are a range of off reservation noise mitigation measures potentially available for dwellings along Millers Road that could be implemented by the project. This is clearly demonstrated by the fact that such mitigation will be required for the houses on Millers Road near the freeway interchange as acknowledged in Tech Report H as follows[31]:

[31] At x.

Predicted noise levels at a small number of buildings facing the West Gate Freeway are predicted to exceed the project noise objective (EPR NVP1 Part (a)) by up to 3 dB(A). These building are located in the following areas:

- Altona North Chapel
- Residential buildings located east of Millers Road on Beevers Street
- Residential buildings located between Lynch Road and Richards Court
- Residential buildings located adjacent to Millers Road on Primula Avenue
- Residential buildings located at the northern extent of Derham Street in Spotswood.

Increasing the dimensions of the noise barriers proposed for these locations has not been considered as a practical option. Options for attenuation may include treatments to buildings such as fresh air ventilation systems to allow for windows to be closed, new glazing, the upgrade of doors and/or door seals and the sealing of wall vents. Further modelling of the noise attenuation requirements would be undertaken during the detailed design stage of the project to confirm the specific noise mitigation measures adopted.

Air Quality and Health

56. All health experts who attended the health conclave (Dr Wright, Associate Professor Louis Irving, Professor Gary Anderson and Dr Victor Kabay) agreed that:[32]

> There is no safe level of exposure or safe lower limit of exposure for many of the air pollutants, including particulate matter (PM10, PM2.5) and NO2.
>
> Agree pollutants including particulates cause lung cancer and adverse cardiovascular health effects, damage respiratory health, and increase mortality. These effects can, variously, occur after both acute and chronic exposures.

57. Technical Report G predicts that the project is likely to improve air quality for many local streets through a reduction in truck traffic:[33]

> Overall for the twelve roads evaluated in 2022, nine show a decrease or no change in the maximum 24 hour average PM10 concentration for the project scenario, while three (West Gate Freeway, Millers Road and Geelong Road) show an increase. For PM2.5, nine roads show a decrease or no change with the project, while three (Blackshaws Road, Millers Road and Geelong Road) show an increase.
>
> For 2031, ten roads show a decrease or no change in the maximum 24 hour average PM10 concentration for the project scenario, while two (Blackshaws Road and Millers Road) show an increase. For PM2.5, nine roads again show a decrease or no change with the project while three (Blackshaws Road, Millers Road and Geelong Road) show an increase.

58. As with noise, while it is predicted that there will be air quality improvements on some roads (principally within the City of Maribyrnong), particulate concentrations

---

[32] Health Conclave Report, Document 71, item 1

[33] Executive Summary of Technical Report G

along both Geelong Road and Millers Road are predicted to increase as a result of the project.

59. Table 82 of Technical Report G predicts that the maximum receptor concentration on Millers Road will equal or exceed both the SEPP 24 hour and annual criteria for PM_{10} and the SEPP annual criteria for $PM_{2.5}$ at 2031 with the project. The extent of the project contribution for PM_{10} (with background included) is explained by Mr Fleer as follows:[34]

> Tables 81 and 82 of Technical Report G show that the maximum impacted receptor on Millers Road is predicted to experience a 3.3 to 4.9 per cent increase in the maximum 24 hour average PM_{10} concentration and a 5.3 per cent increase in annual average PM_{10} concentration in 2022 and 2031.

60. Table 82 of Technical Report G predicts the maximum impacted receptor on Millers Road (with background included) to experience a 22.4 per cent increase in the maximum 24 hour average $PM_{2.5}$ concentration and a 15.1 per cent increase in annual average $PM_{2.5}$ concentration in 2031.[35] In particular, the project is predicted to take the annual $PM_{2.5}$ concentrations from 7.3 to 8.4 ug/m^3 in circumstances where the SEPP (AAQ) objective is 7 ug/m^3 from 2025.[36]

61. Mr Morris submitted that there are some elements that made the modelling exercise conservative, namely:[37]

    a) background pollutant concentrations for 2022 (anticipated year of project opening) and 2031 were assumed to remain at levels recorded during the period 2009 to 2013; and

    b) vehicle emission factors for 2022 and 2031 were assumed to remain at levels predicted for 2020.

62. It appeared to be common ground that the second factor is a conservative factor.

63. However, there was competing evidence in relation to the first factor, with a number of experts suggesting that the impacts should have been assessed having regard to local air quality data.

64. The comparison between the Footscray data and data from the five local air monitoring stations, tabled at the hearings, showed a "statistical difference"

---

[34] Document 151 p 5 item 20.

[35] See attachment to this submission

[36] See attachment to this submission

[37] Document 184

between those data sets and the Footscray data.[38] In particular, the differences between the Primula Avenue, Brooklyn and Don McLean Reserve data and the Footscray data are notable.

65. Mr Fleer explained that the way he did the modelling was to take the Footscray background data and then added the total contribution from the roads, not just the additional project contribution. He explained that it would be 'double counting' to use the elevated concentrations from the roadside monitoring locations (for modelling purposes) because those concentrations already account for traffic from the roads.[39]

66. While Mr Fleer's logic is sound for the roadside monitoring stations, the data from July 2010 – December 2015 referred to in Technical Appendix G taken at Brooklyn Reserve is not roadside data.[40] That data appears to indicate that air quality in Brooklyn may be worse than the Footscray background data set used for the air quality assessment.

67. Accordingly, the modelled results may not be "conservative" when it came to use of the background data for Brooklyn.

68. Dr Denison raised a concern about the model not including brake and tyre wear. The contribution of brake and tyre wear can be significant, as shown in the table below.[41]

Surface roads (exhaust & non-exhaust)

Additional modelling conducted to assess inclusion of non-exhaust emission factors, with higher maximum PM_{10} and $PM_{2.5}$ concentrations predicted.

Year	2022				2031			
Road	PM_{10} (µg/m³) 24 hour average		$PM_{2.5}$ (µg/m³) 24 hour average		PM_{10} (µg/m³) 24 hour average		$PM_{2.5}$ (µg/m³) 24 hour average	
	Base	Project	Base	Project	Base	Project	Base	Project
Francis St - Exhaust	61	60	11	9.1	61	60	11	9.4
Francis St - Exhaust & non-exhaust	72	69	18	15	74	70	19	16
West Gate Fwy - Exhaust	62	63	12	12	63	63	13	13
West Gate Fwy - Exhaust & non-exhaust	77	80	24	26	79	83	27	29
Intervention Level	60	60	36	36	60	60	36	36

Legend	Decrease	Increase	No Change

[38] Document 49 p 9.

[39] Document 49.

[40] Figures 27 and 28 Technical Report G

[41] Document 95.

69. No analysis was done for Millers Road with the addition of brake and tyre wear. Mr Fleer acknowledged that if brake and tyre wear had been included in the assessment, there would be an increase in the predicted number and extent of exceedences (ie an increase in the concentrations of particulates above SEPP intervention levels) for Millers Road.

70. Both the SEPP (AAQ) and SEPP (AQM) are less than helpful in providing a clear framework for assessment of road projects.

71. The EPA's position appears to be that road projects should be assessed against the SEPP (AQM) intervention levels (which are higher than the SEPP (AAQ) objectives).[42] However, Schedule B of SEPP (AQM)[43] which sets out the intervention levels says that intervention levels are used to assess local or neighbourhood air quality monitoring data as described in clause 27 of the Policy to determine whether the beneficial uses set out in Clause 9 of the Policy are being protected. The document does not say so explicitly, but the implication is that, if the intervention levels are being exceeded, then action should be taken to improve air quality. The "action" that should be taken under clause 27 appears to be "action" by the EPA to require "protection agencies" to do certain things, such as develop a neighbourhood environment improvement plan (NEIP). So the policy itself does not, in terms, require the project proponent to take any specified action.

72. How should the IAC deal with a situation where there is already poor ambient air quality (ie exceeding the SEPP AAQ objectives or SEPP AQM intervention levels) as a result of a combination of sources in certain areas impacted by the project, and the project adds an incremental amount of pollution to that environment?

73. The IAC is faced with competing views on how it should respond:

    a) acknowledge that the project contribution represents a reasonably small proportion of the overall concentration of particulates and that there are places where the impact is beneficial and other places where it is detrimental, and on that basis conclude that mitigation is not required; or

    b) adopt the approach that where the objectives in SEPP AAQ or the intervention levels in SEPP AQM are likely to be exceeded, and the project is a not insubstantial contributor to those concentrations, some form of mitigation ought to be undertaken.

---

[42] Tech Report G p 33.

[43] Document 176 p 27

74. Clearly the project proponent cannot be held responsible for the problem of poor air quality in Brooklyn (or other locations). However, the IAC may wish to consider whether the project should mitigate effects on particular residences most affected by the project (eg the Millers Road residences).

75. In so far as specific mitigation on Millers Road is concerned, various witnesses have given evidence about potential mitigation measures available to reduce human health impacts from particulates eg screens (or high front fences/walls), vegetation (including vegetation on a front fence/wall), mechanical ventilation, increased distance between the road and sensitive receptors. The IAC will recall Associate Professor Louis Irving's evidence on this topic.

Access and Safety

76. Brooklyn residents have told the IAC that it is difficult to enter and leave their homes due to the surrounding road network.

77. Project Note 16 contains the WDA's response to the IAC's request for an assessment of the intersection performance on the intersection of Millers Road and Cypress Avenue. The SIDRA analysis shows an average delay in the PM peak of 213 sections with a DOS of 0.928.

78. Perceptions of safety having regard to the addition of 7,000 trucks per day have also been raised by Brooklyn residents ie they may not feel as comfortable turning into Millers Road in the absence of a signalized intersection.

79. While the IAC has been told that safety assessments will be done as a matter of course for the project roads, the IAC has not been told that a safety assessment will be done for impacted roads, such as Millers Road.

80. Further, there does not appear to have been an assessment undertaken of the impact of the project on cyclists using Millers Road.

81. Ms Partenio explored the possibility of an alternative cycle route with Mr O'Brien. His view was that use of Cawley Road (with improvements to and extension of the pavement), and/ or the existing freight rail line reserve (subject to there being enough space) were potential options.

82. Associate Professor Louis Irving gave evidence about the effects of particulates on people exercising, such as cyclists.

83. The IAC may wish to consider a recommendation that the proponent be required to investigate and construct a safe and convenient alternative cycle route, should it

find that the current route on Millers Road will no longer be suitable as a result of the project.

POTENTIAL MITIGATION MEASURES

84. Various witnesses have raised the prospect of alternative routes being used between the industrial precinct and the freeway. The IAC has the benefit of extensive evidence and submissions on:

    a) whether it would be appropriate to put a truck ban on Millers Road and force trucks to use Grieve Parade; or

    b) construct the Paramount Road connection.[44]

85. The IAC will need to carefully consider those submissions and the evidence.

86. Absent such a solution, the evidence overwhelmingly suggests that the most effective mitigation measure is the removal of the toll point to the west of Millers Road.

87. The IAC may wish to consider recommending that the project should not proceed in the absence of that toll point being removed. The IAC may also wish to consider the potential mechanism for that recommendation to be implemented and may wish to take submissions on that issue from relevant parties. For instance, one option may be for the Incorporated Document to deal with the issue and require a planning scheme amendment to enable the toll point to be re-instated.

88. The IAC may also consider recommending that measures are taken to mitigate the residual impact of the project on the community of Brooklyn. Potential mitigation measures raised during the course of the hearings include:

    a) the provision of solid front fences with landscape (creepers);

    b) additional landscape in front of and/or behind the fences (ie in private yards);

    c) the provision of acoustic protection in a form that also provides air quality benefits such as mechanical ventilation;

    d) removal and re-routing of the bicycle lane to a convenient and safe location;

    e) further landscaping of the verge between the road and the footpath in consultation with Council and VicRoads;

---

[44] See Mr Symons Appendices to his Evidence Statement Figures 4.1- 4.2.

f) upgraded access eg signalized intersections as determined by a corridor study to provide reasonable levels of access;

g) monitoring in accordance with the following advice of the air quality conclave:[45]

> "It was agreed by Iain Cowan, Frank Fleer, Graeme Starke and Paul Torre that the scope of ambient air quality monitoring conducted following project opening should include PM10 and PM2.5 at an appropriate location on Millers Road."

89. In addition, it was the evidence of Dr Mandke that she supported the proposal that there be a new EPR requiring the

> contractor to establish a Community Involvement and Participation Plan that assists building social interaction, connectedness and cohesiveness throughout the construction period which could include running community events, festivals, sponsorships of local sporting clubs, and the establishment of community support grants.
>
> A community grant program should operate during construction of the Project to fund community support activities and small capital works targeting community, sporting and recreation facilities as defined in the social impact assessment.

90. The IAC may wish to take submission from the WDA as to whether it may be appropriate to recommend that the community of Brooklyn be considered in particular for the community grant program given the extent of the potential impacts on that community as a result of the project.[46]

Juliet Forsyth

Owen Dixon Chambers West

---

[45] Document 70, section 2 item 4.

[46] See eg pp 216-217 Technical Report L.

Notes:

1. Total particulate PAHs
2. Benzo(a)pyrene as a marker for PAHs

Table 82: Millers Road - Maximum receptor concentrations (with background) - 2031

Pollutant	Averaging period	Units	Criteria		Base			Project			Change
					Background	Incremental	Total	Background	Incremental	Total	
PM_{10}	24 hour	$\mu g/m^3$	60	SEPP(AQM)	58	2.9	**61**	58	5.5	**64**	4.9%
	Annual	$\mu g/m^3$	20	SEPP(AAQ)	18	1.3	19	18	2.5	20	5.3%
$PM_{2.5}$	24 hour	$\mu g/m^3$	36	SEPP(AQM)	6.6	3.2	9.8	6.6	5.6	12	22.4%
	Annual	$\mu g/m^3$	7	SEPP(AAQ)	6.1	1.2	**7.3**	6.1	2.3	**8.4**	15.1%
CO	1 hour	mg/m^3	36	SEPP(AQM)	0.086	0.67	0.76	0.064	0.86	0.93	22.4%
	8 hour	mg/m^3	11	SEPP(AAQ)	0.086	0.33	0.42	0.086	0.35	0.44	4.8%
NO_2	1 hour	$\mu g/m^3$	288	SEPP(AQM)	86	54	140	68	120	190	35.7%
	Annual	$\mu g/m^3$	62	SEPP(AAQ)	21	5.6	27	21	9.8	31	14.8%
Benzene	1 hour	$\mu g/m^3$	75	SEPP(AQM)	8.0	13	21	8.0	16	24	14.3%
	Annual	$\mu g/m^3$	10	Air Toxics NEPM	2.8	1.2	4.0	2.8	1.2	4.0	0.0%
Toluene	1 hour	$\mu g/m^3$	1880	SEPP(AQM)	47	26	73	47	31	78	6.8%
	24 hour	$\mu g/m^3$	4113	Air Toxics NEPM	47	7.4	55	47	7.8	55	0.0%
	annual	$\mu g/m^3$	411		25	2.4	27	25	2.5	27	0.0%
Ethylbenzene	1 hour	$\mu g/m^3$		NA	5.2	9.5	15	5.2	11	17	13.3%
Xylene isomers	1 hour	$\mu g/m^3$	2080	SEPP(AQM)	22	25	47	22	30	52	10.6%
	24 hour	$\mu g/m^3$	1185	Air Toxics NEPM	22	7.1	29	22	7.5	30	3.4%
	Annual	$\mu g/m^3$	948		7.6	2.3	9.9	7.6	2.4	10.0	1.0%
1,3-Butadiene	1 hour	$\mu g/m^3$	110	SEPP(AQM)	0.48	2.7	3.1	0.48	3.2	3.7	19.4%